

Digital Analog Converters

Theta Generation VIII Series 2 Digital-to-Analog Converter/Preamp

Written by Jason Victor Serinus

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Introduction

Many moons ago, in March 2003, Secrets published one of the first reviews of Theta's then state-of-the-art two-channel DAC/preamp, the Generation VIII (aka Gen. VIII). Close to six years later, after umpteen advances in digital chip technology, Theta has released a significant, Series 2 upgrade to the original Gen. VIII. The upgrade, which can either be easily installed at home or purchased as part of a new unit, renders such significant improvements to the sound of the Gen. VIII as to demand a new review.

Specifications

- Design: Two-channel DAC/Preamp with new 24/192 DAC chip
- Digital Inputs: 6 (2 RCA, 1 BNC, 1 AES/EBU, 1 Toslink, 1 Open for Optional AT&T)
- Analog Inputs: 2 Stereo Pairs, One RCA, One Balanced XLR
- Analog Outputs: 2 Balanced XLR (L/R) and 2RCA
- RS-232 External Control from Crestron®, AMX®
- D/A Conversion: 24-bit Ladder (8x Oversampling). 2 DACs per Channel (Differential Operation)
- Dynamic Range: 132 dB
- MFR: 20 Hz - 20 kHz, ± 0.1 dB
- THD+N, Analog Input Section: Less than 0.0007% (Digital), 0.0005% (Analog) @ 1KHz, at 3V Output Level
- THD+N, Balanced Output: Less than 0.0007% (Digital), 0.0005% (Analog) @ 1KHz, at 3V Output Level
- THD+N, Single-ended Output: Less than 0.0015% (Digital and Analog) @ 1KHz, at 3V Output Level
- Dimensions: 5" H x 17 5/8" W x 17 3/4" D
- Weight: 29 Pounds
- Price: \$13,500 USA for the Generation VIII Series 2; \$1,875 USA for Upgrade from the Gen VIII

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Much water has flowed under the proverbial bridge since the Gen. VIII first came on the scene. In Theta's case, the water almost took the bridge with it, as the company stopped issuing new products and let others sink from its roster while it slowly shifted hands from founder and digital design pioneer Neil Sinclair to new owner Morris Kessler of ATI.

Thankfully, Theta is in good hands. Dave Reich remains General Manager and Design Engineer, and Dave Kerstetter continues to develop and improve Theta's digital designs. After several years of treading water, the company is moving full steam ahead on several fronts. And thus we end our water analogies.

While this review will focus on the major improvements bestowed by the Gen. VIII Series 2 upgrade, it will also touch on exciting forthcoming upgrades to the Casablanca multi-channel processor, Dreadnaught amplifier, and other products. For most of my listening, I used Theta's top-of-the-line, now discontinued Carmen II transport. The photo that follows shows both the Carmen II and the Gen. VIII on my rack.

Installing the Upgrade

While I was able to install the Series 2 upgrade at home, guided by Theta's instructions and a little help on the phone, I had Theta's permission to do so. The upgrade must be performed either by the dealer or international rep; otherwise, the Gen. VIII must be returned to the factory to ensure proper installation and to maintain any warranty in effect.



Theta recommends 100 hours of break-in time. Since Gen. VIIIs do not sound their best until they are warmed up and played for 72 hours straight – I never leave the unit unplugged for more than 60 seconds when changing equipment around – break-in takes but one day longer than warm-up. Just turn off your amp(s), load your transport with a break-in CD, and run it on repeat for a little over four days. You can of course listen to music anytime during the break-in period, and monitor the improvements. Just remember that leaving the Gen. VIII Series 2 in standby mode is not the same thing as playing a break-in CD through it for four days straight with the volume turned way up.

Upgrade Specs and Improvement

The Gen. VIII Series 2 is a fully differential balanced DAC featuring custom-designed, software-programmable digital filters feeding two digital-to-analog converters per channel, one for each phase. Theta claims that its linear power supplies ensure clean power resulting in ultra-

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low noise, and that its proprietary “Jitter Jail” technology eliminates most digital distortion. (I use the Jitter Jail during playback).

The Series 2’s digital input section accepts 32KHz, 44.1KHz, 48KHz, 88.2KHz, and 96KHz signals. D/A conversion is 24-bit Ladder (8x oversampling). There are two DACs per channel for true differential operation. All DSP processing is 24bit with 56bit accumulator. Balanced output impedance is 25 Ohms, and single-ended output impedance is 12 ohms. The volume control is Theta’s proprietary switched resistor network, and operates in the analog domain. The digital filter is an 8x oversampling Theta proprietary FIR filter running on Motorola 56362 DSP. Power requirements are 117 VAC, 50-60 Hz, 50 watts maximum, with all options installed. Fuse @ 100 & 110V = 630mA, Fuse @ 220V = 3/8A. Note that I use an after-market IsoClean audiophile grade fuse, which to these ears delivers a significant increase in musical detail for relatively low cost.

For help in understanding the many improvements to the Gen. VIII Series 2, I spoke with Dave Reich, Theta’s General Manager and Design Engineer. Reich got his start in the high-end industry at Dayton-Wright Industries, a Toronto-based company that made electrostatic loudspeakers. He eventually founded Classé Audio in Toronto, where he focused on analog components. (The DR in old Classé models stands for Dave Reich).

After building up Classé for 10 years, Reich took some time off, then spent four years with McCormack Audio in San Diego. When McCormack was sold to Conrad-Johnson, Reich, in his own words, “very quickly got scooped up by Theta, because they wanted to add analog amplifiers to their line. It was a very good fit.” As well as managing Theta, Reich has been the man responsible for Theta’s Dreadnaught, Citadel, and Enterprise amplifiers.

Below are the improvements that Theta claims from the Series 2 upgrade. Dave’s verbatim commentary is included in quotations marks:

1. New 24/192 DAC chip.
2. Up to 132 dB dynamic range (a 15 dB improvement over the Generation VIII).
3. Over 3X differential output current: “DACs are more than anything current devices rather than voltage devices. So current levels are very critical. There’s now three times the amount of current available as it heads to the output of the DAC chip. I’ve always been big on current, whether it’s at the amp or the chip level. I think it allows the device to convert the bits with greater accuracy and ease.”
4. Stop-band attenuation of –130 dB (a 48 dB improvement over the Generation VIII): “That’s the built-in filter that shuts down the high-frequency bad stuff that we don’t want getting in there. It’s doing that much more efficiently, and probably generating less aliasing frequencies that might end up in the audio band generated from much higher frequencies. That translates into less noise, distortion, and hard digital edge.”
5. Pass-band ripple +/- 0.00001 dB (a 200X improvement over the Generation VIII): “That has to do with the rejection of noise on the supply, or even noise carried along on the digital signals. It’s doing it a lot more cleanly.”

6. Fully differential DAC follower op-amp with 150MHz bandwidth (a 70 MHz improvement over the Generation VIII): “We’re using a better op-amp following the DAC. It sounds better to us, and measures way better because it’s so much faster. It works with more ease, and is able to handle more of what’s coming along without generating any of its own spurious noise or distortion.

“An op-amp is an integrated circuit, made up of a lot of transistors, that allows you to do many, many things. It gives you good isolation at the input and reasonably low output impedance. Sometimes you can approach ideal specifications in them for input and output impedance and other factors. Op amps have come light years compared to where they were in the old days. There are more than a handful of them that sound so good that most designers want to be using them as opposed to discreet transistors.

“A DAC follower generally means an op amp that you’ll put after the DAC to set the signal to go to the output without loading down the DAC. The main purpose is to not load down the DAC, so you want a fairly high impedance there that presents an easy load to the DAC and isolates what the DAC has to do, so that it keeps it constant no matter what you might be hooking up externally to the DAC.”

7. Four new discrete analog digitally controlled volume cards with zero offset nulling: “We now use the volume control card which we use in our other products – anywhere we need level control – be it in our Casablanca processor or our DACs. We came up with this card a long time ago. It’s basically a set of discreet resistors that are controlled by digital switches. At any given time, the signal is only going through a pair of resistors. That’s pretty much as good as you can get to control level.

“We did a new layout for the Gen. VIII, and added an adjustment to reduce any spurious DC that was floating around. It was always very low, but now we can make it even lower. That increases your symmetry and creates what we find greater realism in the soundstage.”

Future Upgrades to the Gen. VIII and the Theta Line

In the dialogue that follows, Reich shares exciting information about new upgrades to the Theta line:

JVS: What about more upgrades to the Gen. VIII? Are we talking another year before they’re issued?

DR: There could be future upgrades, because the technology is changing so quickly.

What prompted the Series 2 upgrade were the new and better DACs that came along. It wasn’t that long after the initial Gen. VIII was released that Kerstetter began working on the Series 2 revision. He worked on many different versions, tweaking it constantly until finally we were able to release it earlier this year. Perhaps it could have come out somewhat sooner, but the original Gen. VIII was doing so well that we didn’t feel the need to rush the new one to market.

There isn’t anything in the works for the Gen. VIII that we’re trying to achieve at this moment. Most of our efforts are being concentrated on upgrading the Casablanca. There are things we’ve talked about that we could perhaps do one day, but they’re not on the priority list right now.

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JVS: Can the Gen. VIII handle 24/176.4 and 24/192 files?

DR: No, only because it's limited by a receiver chip that's on its own little board. That's one of the things we're looking at changing, which would take it up to 176.4 and 192.

JVS: You're the company that pioneered separates, yet you no longer have a separate transport in your line to mate with the Gen. VIII.

DR: We're working with a few OEM manufacturers who themselves are working on blu-ray players. We've toyed a lot with possibly coming out with another DVD player to fill the hole that the Compli universal player left, or perhaps issuing a CD-only player. But our marketing research could not justify it

Target prices appear to be dropping in order to do significant sales. So for us, the next transport would be an all-around player with blu-ray. The ones we're waiting for are not quite ready. It would do blu-ray backwards to anything and everything else that DVD players have always done. That includes SACD.

JVS: But you don't have a DAC that enables you to do SACD.

DR: Correct. The player would provide an analog output that would go to a multi-channel preamp.

JVS: This suggests that Theta might eventually issue a universal player that could play SACDs. But given the price range, would that SACD player be able to compete with the sound quality you can currently get from bluebook CD through the Gen. VIII Series 2? That was the problem you had several years ago, when you were trying to develop an SACD upgrade for the original Gen. VIII. When you used the now-discontinued Compli as a transport, and connected it to the Gen. VIII via your proprietary megalinque, well-recorded bluebook CDs sounded so good that it was hard to get SACDs to sound significantly better.

DR: That's certainly an issue. Things are so market driven these days that it makes it difficult for the small manufacturer. I'll give you an example. There was one large company that deals with very high-tech stuff. We were going along with them, working on a blu-ray player platform until they asked how many tens of thousands of units we would take each month. So it's difficult, and getting harder. We have to keep up with the technology, but there aren't a lot of companies that are very accommodating these days to ones who want to push the edge of the art. But we're still trying.

Obviously, we don't want to just repackage a cheap player. It's not something we can do.

JVS: Would a new multi-format player offer a proprietary megalinque from your new transport to the Gen. VIII, as you once intended to provide via the discontinued Compli, so that you'd get better sound than would an aftermarket digital cable?

DR: I don't think so.

JVS: Do you have any way of installing a USB input on the Gen. VIII?

DR: It's one of the things we're looking at, but it's a ways away.

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JVS: How about firewire and HDMI?

DR: We have no plans for either on the Gen. VIII. When the HDMI project is complete on the Casablanca, however, we will have a new digital output that will provide a solution for Gen. VIII owners. For Gen. VIII owners who want to go the whole way, they could use four digital outputs into four Gen. VIIIs for 7.1 high-def. The sound will be pretty spectacular.

JVS: I'm sure it will be. But poor slobs like me, with only a single Gen. VIII Series 2 to our name, still won't have a way to get two-channel sound from the new transport that would at least equal if not certainly surpass the sound you were able to get from the Compli/Gen. VIII combo connected via the megalinque.

How far along are you with the Casablanca upgrade?

DR: We're neck deep in it right now. I've been laying out new boards that our digital design team is coming up with one after the other. It's going to be packed full of new boards, and it will be pretty spectacular. I'm not exactly sure when it will be ready, but we're going full speed on it as our main focus.

At the same time, since for me working on amps is a pleasure, I have found some time to work on our amps. We will have the Dreadnaught III in production by or shortly after CES. It's very exciting. I've relayed out the audio card. I expect the technology we're putting into the Dreadnaught III will work its way into the other models.

We're using a new output device, which is really nice because semi-conductor companies don't focus very much on analog output devices these days. But Motorola has. They've taken an already great-sounding, existing output device, redone its die chip, and added a diode that allows you to track your bias incredibly accurately. It's enabled me to completely revise the bias circuit in the Dreadnaught. It actually simplifies the circuit so that your audio path is more straightforward and your bias tracking is spot on. It's sounding great.

The Dreadnaught is a modular amp that can be configured for anywhere from one to ten channels. It's rated at 225w with the single-channel module, has a basic price of \$4,500 for a two-channel 225w model, and costs extra for each additional module. 225w times five is the most common basic configuration, and costs \$8,875. There's also a lower power two-channel stereo model that's 1002 and costs \$4,625. A popular 7.1 surround configuration includes three 225w modules and four 100w modules; it costs \$9,375.

When I initially asked the folks at Theta what difference the Series 2 upgrade would make, they said something like, "It takes everything you like about the sound of the Gen. VIII and makes it a whole lot better." Having now lived with the upgrade for a good six months, I heartily concur.

The difference between before and after is striking. Shortly before the Series 2 upgrade was released, I hosted a Bay Area Audiophile Society (BAAS) demo at Casa Bellecci-Serinus of Reference Recordings' new high-resolution HRx discs. When Prof. Keith O. Johnson, Marcia Martin, Tim Marutani, and their RR entourage came to set up several days in advance, we had to decide which DAC to use. While I of course offered my original Gen. VIII, Keith brought along as an alternative the new Berkeley Audio Designs Alpha DAC (BADA DAC), which was designed by the same team he worked with at Pacific Microsonics.

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When we compared the two machines, there was no question that the Alpha DAC produced more bass. This surprised me, because Theta has always been prized for the strength and quality of its bass.

“The Gen. VIII uses old technology,” Johnson told me. “The BADA DAC has a much newer DAC chip.”

Not long after I installed the Series 2 upgrade, BAAS hosted a four-DAC comparison session (aka “The Great DACD Shootout of 2008”) at my place. The DACs were the Theta Gen. VIII Series 2, BADA DAC, Weiss Medea, and Bel Canto DAC-III. Most present thought that the bass of the Gen. VIII Series 2 at least equaled if not surpassed that from the BADA DAC. That’s how much of an improvement in bass delivery the Series 2 upgrade has made.

But that’s not the only improvement. Immediately after installing and breaking in the upgrade for 100 hours, I noticed increased depth, deeper colors, and a more realistic (lifelike) presentation. The soundstage was bigger, more involving, more alive, and certainly more dynamic. Not only did percussion have more weight, it also sounded louder on initial impact, with greater slam.

Again and again, I’d play familiar orchestral recordings, and delight in the fact that timpani thwacks that had previously sounded unduly submerged and compressed now emerged with far more realistic visceral and emotional impact. Whether listening to the Bobo Stenson jazz trio, mezzo Lorraine Hunt Lieberson sing Handel with orchestra, Brazilian vocalist Rosa Passos and bassist Ron Carter perform bossa nova, or a string quartet, I found myself far more deeply drawn into the music. The presentation sounded several major steps closer to the real thing.

One way to clarify the extent to which the upgrade has improved the sound of the Gen. VIII Series 2 is to return to the four-DAC comparison mentioned above, and reference comparison with the Bel Canto DAC-III (\$2,500). The latter is a fine product. But whether playing the opening of Richard Strauss’ Alpine Symphony (hybrid SACD, Royal Concertgebouw Orchestra, Mariss Jansons cond.), Rachmaninoff: Symphonic Dances (24/88.2 and 16/44 versions, Reference Recordings), Jane Selkya & Chris Kee: “Slow Day” (hybrid SACD, Blue Coast Collection), Dave Matthews Band: “All Along the Watchtower” (Live at Red Rocks), or Patricia Barber: “Alfie” (not yet published 24/88.2 remastering by Paul Stubblebine), the Theta Gen. VIII Series 2’s sound was noticeably more transparent, colorful, and three-dimensional (especially on the high resolution tracks). It simply had more life to it.

To these ears, the Bel Canto sounded like an excellent hi-fi product. The new Theta went beyond hi-fi; it consistently drew me in and made music. With the Bel Canto, I observed. With the Theta, I became deeply involved. To me, that explains the large price difference between the two.

Of course, I have not heard all the DAC competition out there. Though far more costly products from dcs have sometimes left me cold when playing standard CD, I have yet to hear them in my reference system, let alone pit them against the Theta Gen. VIII Series 2. Nor have I tried players from Esoteric, the upgrade mods to same offered by Alex Peychev and others, Wadia, or the host of newer DACs and CD players that are receiving consistently excellent reviews.

I did hear the Weiss Medea as part of the DAC shootout, and preferred the Theta. As for the much-vaunted Benchmark DAC1 USB, which I own, the Theta bests it in every way, especially in the quality of their preamp sections. The Theta’s preamp is far more transparent, colorful, and lifelike. I’m constantly astounded by reviews that suggest the Benchmark DAC1 USB is as good

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as it gets. While I derive great pleasure from it on my upstairs computer system – it is astoundingly good at its price point, and deserves its Class A ratings – the far more costly Theta Gen. VIII Series 2 is a superior product.

The DAC separate I have heard that most gives the Gen. VIII Series 2 a run for the money is the Berkeley Audio Designs Alpha DAC. In the brief head-to-head comparisons we conducted during the two DAC comparison sessions, I was mightily impressed with the width of the BADA DAC's soundstage, the warmth and smoothness of its highs, and the realism of its presentation. Whether its extra smoothness on high-pitched sounds is a sign of softness, or indication of less artificial digital edge, I cannot say for certain without listening again for an extended period of time on an even more revealing set of speakers. If I can again obtain a BADA DAC, I hope to perform the comparison after a new set of full-range speakers arrives at Casa Bellecci-Serinus for review.

Regardless, the BADA DAC is not a full-functioning preamp. It lacks the Theta's two sets of inputs (one coaxial, the other XLR) for tuners and other devices. It thus will not suit audiophiles who want to run other components through their DAC without investing in a separate outboard preamp and additional cables

In addition, inserting an additional component and cables into the chain often degrades sound and lessens transparency. The Theta enables you to entirely eliminate a separate preamp. With one less component in the chain, and one less set of interconnects and power cables and supports to purchase, you not only achieve greater transparency, but also save a lot of money. That helps justify the Theta's greater cost.

On the plus side, the BADA DAC does have its own volume control (as do the Theta and Benchmark), which allows you to eliminate an outboard preamp if there are no other components (e.g. a tuner or blu-ray player) that you wish to connect. It also decodes high-resolution 176.4 and 192 kbps files, which the Theta cannot do short of another upgrade that could be a year or more away. Until the Theta can process files up to 192 kbps, and is able to accept USB and/or firewire inputs, it will not be fully competitive with newer, high-quality DACs that are more computer-friendly.

Computer Interface Using the Bel Canto USB Link 24/96

More and more audiophiles are shifting from physical CDs and SACDs to digital media files stored on computers and media servers. Computer playback also allows you to download and play high-res 24/96 files currently available from HDTracks and a few other sites. One reason for the Benchmark DAC1 USB's popularity is its ability to playback 16/44.1 and 24/96 files stored on computers.

I use the Benchmark DAC1 USB in my upstairs system. Fed by my iMac via a Belkin USB 2.0 cable, and playing through AudioEngine 5 self-powered speakers, it makes mighty fine music. (It sure helps that I'm using a Nordost Valhalla power cable on the Benchmark, interconnects from Harmonic Technologies, and WireWorld Gold Eclipse speaker wire). My little computer system can't hold a candle to the main system downstairs, but it sounds a helluva lot better than most of the systems you encounter in people's homes these days.

Unfortunately, as mentioned above, the Gen. VIII and most other older DACs lack a USB or Firewire input. To address the problem, Bel Canto has recently released a convenient, lightweight USB Link 24/96 that allows users convert USB computer outputs to SPDIF. The link uses native

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drivers supplied with either Mac or Windows operating systems, and comes supplied with a Stereovox XV2 BNC cable and RCA adapter to connect to any DAC. It is also self-powered by the computer's USB output, and does not need a separate power source.



I've begun to experiment with connecting my Apple Powerbook G4 to the Gen. VIII Series 2 using the Bel Canto USB Link 24/96 and my standard Belkin USB 2.0 cable. Because I'm concerned that the BNC to RCA adapter supplied by Bel Canto will compromise sound, I'm doing straight BNC to the Theta, using either an old Nirvana 1.5 meter BNC digital cable or the supplied Stereovox XV2 BNC cable to connect to the Theta's BNC input. (I will also be trying a BNC cable from DH Labs in the near future). My goal is to see if I can get at least as good if not better sound from files I've burned onto my computer from well-recorded CDs as from playing the same CDs through Theta Carmen II transport and Nordost Valhalla AES/EBU digital cable.

As of this writing, I am still in the experimental stage. For example, I just learned that Spotlight search feature on Mac computers can compromise sound quality, and should be turned off. I have yet to try that and hear the difference. Before long, I will receive a WireWorld USB 2.0 A-B flat cable to try instead of the Belkin. Hence, my comments are preliminary, and should not be taken as my final word on the Bel Canto USB Link 24/96. Once I finish my experiments, I will update this review via the Comments section.

After listening to a number of tracks, including the first five minutes of Anne Sophie Mutter's sensational new recording of Sofia Gubaidulina's violin concerto *In tempus praesens* (DG), the superb *Dialoghi* piano/cello recital from Elinor Frey & David Fung (Yarlung Records), and baritone Matthias Goerne's most recent Schubert recital (Harmonia Mundi), I find myself happier with standard CD playback through the Theta Carmen II transport. Whether listening for air, glistening highs, richness of midrange, bass slam, or overtones, the CD playback supplies more information and sounds more musical.

Since this flies in the face of an abundant amount of literature that extols computer playback over CD playback, I can only speculate that one or more of the following is affecting sound quality: (a) the Spotlight search function is a major culprit; (b) iTunes itself is an imperfect media server, which comparison to the Amarra Server shown in select rooms at CES 2009 suggests is the case; (c) the USB and BNC cables I'm using with the Bel Canto link are not the equal of my Nordost Valhalla AES/EBU digital cable; (d) the fact that I use my Powerbook for writing, scanning, email, and other functions rather than exclusively for music playback has introduced various factors into the interface that compromise sound quality; and/or (e) the Bel Canto link is a less than ideal interface. Clearly, more experimentation is in order.

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What I can't play through my transport are 24/96 files. In the coming weeks, I will be downloading a few of those from HDTracks.com, and using the Bel Canto link to play them back through the Gen. VIII Series 2. My hope is that they will sound at least as good if not better than the physical CDs in my library. Again, look for my comments down the road.

Conclusions

Theta's Series 2 upgrade to the Gen. VIII DAC/preamp elevates it to world-class status. Audiophiles hoping to achieve near-analog quality playback from redbook CDs and 24/96 files owe it to themselves to either upgrade an existing Gen. VIII, or audition a new Gen. VIII Series 2 at home. Just be sure to run the unit for 72 hours straight, or 100 hours if it is not fully broken-in, before engaging in critical listening. Mated with an excellent front end, quality cabling and power treatment, and amplification powerful enough to fully communicate the unit's wide dynamic range, the Theta Gen. VIII Series 2 is about as good as it gets.

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Jason Victor Serinus System Information:

Main Reference System:

Digital Front End

Theta Carmen II CD/DVD transport

Theta Gen 8 Series 2 DAC/Preamp

(Benchmark DAC-1 USB when Apple G4 Titanium Powerbook is in use on the main system, plus a Bel Canto 24/96 USB link)

Amplification

VTL 450W tube monoblock prototypes with KT-88 tubes

Jadis DA-7 Luxe with GE 5751 Jan and Jan Philips 5814A tubes and cable from Pierre Gabriel

Loudspeakers

Talon Khorus X speakers MK. IV (with latest upgrade and Bybee Quantum Noise Purifiers)

Four Bybee Golden Goddess Super Effect Speaker Bullets, two on each speaker

Cabling

Nordost Odin single-ended and balanced interconnects

Nordost Valhalla AES/EBU digital interconnect

Nordost Odin bi-wired speaker cable

Nordost Odin power cable on the Thor Power Distribution System

Nordost Valhalla Power Cables on other components

Belkin USB 2.0 and Nirvana and Stereovox BNC cables for the Bel Canto 24/96 USB link

Power

Nordost Thor Power Distribution System

IsoClean or other audiophile grade fuses in most components

Dedicated line for system

Analog

Clearaudio Emotion turntable with Satisfy arm

Soundsmith "The Voice" phono cartridge

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Benz MC-Gold phono cartridge
Classe 6 phono preamp with better umbilical cord
Symposium Platform under turntable

Accessories

Finite Elemente Cerapuc supports
Marigo Mystery Feet
Ganymede ball bearing supports
Michael Green brass Audiopoints
Audiophile grade fuses in all equipment.
Acoustic Resonators
Michael Green Deluxe Ultrarack, Basic Racks and Corner Tunes
Shakti stones on transport, DAC, amps, etc.
Four Shakti Hallographs
Echo Buster and Corner Busters
Bedini Quadra Beam and Dual Beam Ultraclarifiers
Marigo Signature 3-D Mat v2;
Ayre demagnetizing CD
Various CD sprays

Main System Room Dimensions

Living room is 24.5' deep, 21.4' wide in the listening area. It's big enough to accommodate 16 members of the Bay Area Audiophile Society, positioned in four rows of four seats each. The distance from the front door to the end of the dining room is 37'. Sound extends far to the left and right of the speakers thanks to an 8.33' wide archway into the dining room opposite the right channel speaker. Ceilings are 9' high with heavy wooden crossbeams, each 17" in height. Heavy curtains cover windows behind the sound system. Floors are hardwood and carpet in front of the system, and hardwood elsewhere. Walls in the living room are a combination of plaster and wood, with a large granite fireplace in the rear. The dining room is all plaster. There is RoomTune and Echo buster treatment in corners, and either an Echo Buster or heavy tapestry at the two side wall first order reflection points.

Upstairs Second System:

Genesis I-60 Integrated amp
Von Schweikert VR-4jr. speakers bi-wired with Nordost Valhalla
Proton 26" non-HD anything but flat decidedly undigital TV
Basic Pioneer DVD player
ExactPower EP15A equipped with outlets from Sound Applications and other mods
Nordost Valhalla bi-wired speaker cable
Assortment of WireWorld Gold Eclipse 5, Harmonic Tech Magic One, and Nordost Valhalla interconnects
Elrod EPS-2 Signature and AudioPrism SuperNatural S2 power cables
Ganymede ball bearing supports

Desktop Computer System

Apple iMac G5
Benchmark DAC-1 USB
Audio Engine 5 self-powered speakers
Nordost Valhalla and/or Elrod EPS-2 Signature power cabling
Harmonic Tech Magic One interconnect

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WireWorld Gold Eclipse speaker cable
Ganymede Ball Bearing supports
Shakti stone