



February meeting

By Jerry Pomeroy

Get DAC, Get DAC, Get DAC to where you once belong: by Jerry Pomeroy

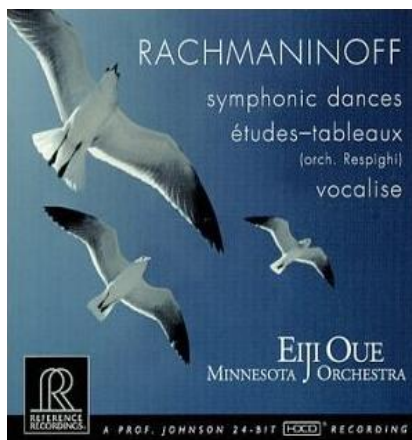
Thanks to Club member John Stone who put forth the concept of a DAC comparison last year. It took a slot in the schedule and some planning to put the shoot out on the calendar, lots of details remained. Unlike Laundry soap commercials on TV it is critical any comparison at the club be conducted as fairly as possible. Conditions that favor "A" over "B" should be disclosed. It is important to note that just because

you were unable to tell the difference doesn't mean there isn't any; it means you were unable to establish a difference between "A" & "B" at that time, during that event in that system. Numerous reasons exist that will affect your ability to distinguish things at that time; such outside influence as someone mowing the lawn or the furnace kicking in, it could be something as sinister as the clothes dryer or your health. I remember having a hearing test once and feeling fine at the time. While driving home with the car window open, I was burning up with fever; I missed the next three days of work.

My next hearing test showed considerably better hearing, my ability to distinguish high frequencies got better. All may not agree as to what is the best way to achieve a level playing field but if the conditions are disclosed all contenders are in the same ball park. An example of this would be; when we compare speakers to make it fair they need to be presented at the same volume, that sounds simple; NOT. How do you measure the volume, sound pressure level? A or C frequency weighted? Should we do some complex octave averaging and at what volume, when

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you think about it the variables seem nearly endless. It is possible to have indisputable data and a conclusion that may not have much basis in reality. Example: every day we have less darkness, the sunrise is earlier and the sunset later, if you doubt this you can check the paper or time it yourself. Based on the data it is clear to see we are running out of darkness.



John Stone and Gary Koh came to my house on a Sunday afternoon and worked out the details, I suggested meeting at my house in Auburn as I have the same *Genesis 160* integrated amp as the club, and the same *Istotek* power isolation system we would use for the meeting. I brought the club's SACD player home so we could use it as a transport. Experience has taught me if I can't tell a difference at home in the sweet spot, it will be nearly impossible in a group environment with people spread out around the room. Having orchestrated A/B comparisons in the past I was concerned about conducting an A/B/C comparison and having time to compare the Hi-res stuff to get a feel for the "state of the art" inside of two hours. We dropped all suggestions of an A/B/C/D/E comparison; I was still concerned about time at the meeting.

We chose to place the DACs upright on *FIM* platforms, utilizing the feet provided by the manufacturer, The *Weiss* and *Stello* were placed on the same platform and the *Oritek* on the top shelf was

solo, these three were on Gary's Acrylic rack. The *Sony 777ES* and *Playback Design* were on the club's equipment rack. It is possible but unlikely this configuration would yield the best possible sound for all specimens. This brings up the concept of presenting all the equipment in what could be considered "it's best sounding configuration" or should they all be set up the same regardless of how they sound.

We passed out evaluation forms to remind members of things to consider up front rather than after they were on the 3rd DAC. Criteria listed for consideration; Dynamics, Resolution, Soundstage, Bass Weight, High Frequency Detail and Harmonic Richness. Below this list was an open area for comments. The objective of these forms was not to find a winner or a loser. We intended the forms to help members keep track of their own thoughts through the evening.

Each track was played on each DAC. The 4th time the track was played always utilized the first DAC so each was heard in direct comparison with the other two, Gary Told everyone the last was the first. We changed the order of the DACs on each track, from questions asked at the meeting it seems we failed to highlight that DAC1 may not be the same DAC in each musical selection; I humbly apologize to anyone who started the comparison and was frustrated because we didn't make this clear.

Another challenge that presented itself was source and choice of the interface. In an effort to make the differences between the DACs as obvious as possible we decided to utilize the highest resolution source we could get. After using the *777ES* as a transport and Gary's laptop it seemed obvious to John, Gary and I the files on the server sounded far superior to the optical transport on the Sony. The common interface on these DACs was Toslink, this was available on Gary's Laptop and

server; it seemed the obvious choice. Toslink has a format data limitation of 2 channels @ 24/48, we could use it during the first round of 16/44 material but not during the latter high resolution. In order to familiarize attendees with the music and system improvements we decided to utilize the club's *Sony 777ES* as a baseline and called it a 4 on a scale of 10. The major improvement made to the club's system for the event was the power upgrade. That evening the system power was from an *Istotek Nova* and *Titan*.

Very important to any equipment comparison is what you use as a comparative platform. We chose 3 selections of music: Rachmaninov-*Symphonic Dances* as a classical selection, *Freddie* from Kent Poon's *Audiophile Jazz Prologue III* for Jazz and *When I Dream* by Carol Kidd for a female vocal. The selection of the "comparative platform" is also important. It is just so easy to pick your favorite music and only listen to it but what happens when you play another selection that is very dynamic, has more or less bass or was recorded with lots of reverb, these factors will certainly contribute to selecting your favorite.

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With all this said a large concern was listener fatigue. How long would all this take being done at a meeting?

The planned event went faster than anticipated, we had expected to complete the first portion around 8:45 and we were done around 8:20PM. The ability to move thru all quickly was greatly aided by everyone's cooperation in keeping chatter and distractions to a minimum. This was the quietest meeting I can remember, this environment helps tremendously when I try and choose equipment. This efficiency availed time for discussion and voicing of impressions; we also disclosed what DACs were being played when during the comparisons.

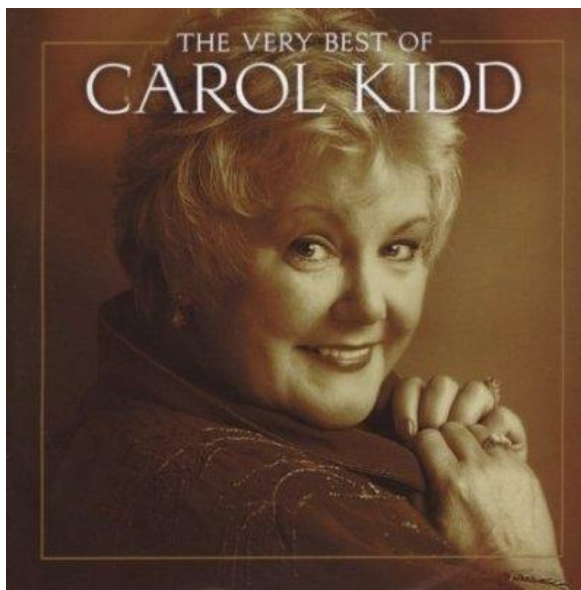
No formal survey was taken but I got the feeling most felt they could hear different characteristics of the 3 DACs. Personally I felt the *Oritek* was the easiest to spot because it was less dynamic than the other two. All of these DACs were very good, as noted by others who suggested that our *777ES* is old and tired. The subject of getting a new CD player for club is vast and wasn't the subject of the meeting so rather than get side tracked we needed to move on. If anyone has a spare state of the art player lying around we won't turn down the donation.

The last half of the meeting would showcase some of the best sounding digital music we have ever heard at a meeting.

The High Road or the Higher Road – by Gary L Koh

With the easy availability of high-resolution music – 24bit/ 88.2kHz or

24bit/96kHz on HDTracks, 24bit/176.4kHz on HRx and even 24bit/192kHz on DVD-ROM, we thought that it would be interesting and useful to introduce this latest technology to the club members. So, we agreed that we would do some comparisons, and also do some playback of high resolution music on the two DACs that we had that were truly capable of the highest rez; the *Weiss Minerva* and the *Play Back Designs MPS-5*.



The problem with “high resolution playback” was that there is so much misinformation out there. For example, while the *Stello* was able to decode 24bit/96kHz, its input USB chipset was only capable of 24bit/48kHz. Most USB send/receive chipsets are only capable of up to 24/48. Hence, “high resolution” via USB is an oxymoron until new chipsets become available.

Optical Toslink, on the other hand, come from technologies developed for computer fiber optic networking, and the most “ordinary” are capable of at least 1MHz. Unfortunately, the best optical interfaces I had were USB driven, and thus limited by the USB to 24/48. Other computer to S/PDIF interfaces I had all were not

sufficiently transparent. So, the high-rez part of the evening posed a dilemma for me. While I had the files on my music server, how do I get it out to the DACs?

In a roundabout way, the solution we finally settled on un-leveled the playing field a little. The *Weiss Minerva*, in addition to being a Firewire DAC, was also capable of being the computer to AES/EBU interface for resolutions up to 24/192. And this was what we eventually settled on for the high-resolution comparison.

Since we wanted to keep the comparison to three DACs, we used 24/96 as the resolution. This was the top resolution on the *Stello DAC100*. A track from *Blueport Jazz, Autumn Serenade* was picked.

After that, we did quick comparisons of various resolutions of the same music through the two top DACs. The first track was *You've Got A Friend* from *Audiophile Jazz Prologue III*. We played first the 16/44.1 version, then the 24/96 and

finally the 24/192 versions. I believe that all members heard the difference as we went up the resolution scale. For me, the biggest leap was going from 16/44.1 to 24/96.

Then, we played *Dance of the Tumblers* by Rimsky-Korsakov from *Tutti!* at 16/44.1 and then from the HRx sampler disc at 24/176.4. Again, the improvement in resolution was easily heard.

With the formal proceedings over, we proceeded to member's requests. There was a lot of curiosity over the direct A/B comparison between the two DACs since both the *Weiss* and the *Playback Designs* were the state of the art in the latest technology.

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We compared them at 16/44.1 and also at higher resolutions.

The *Playback Designs* internally up samples, whereas the *Weiss* did not and at 16/44.1, the *Playback Designs* sounded significantly better than the *Weiss*. However, I felt that the *Playback Designs* performed better at 24/176.4 but the *Weiss* did better at 24/192. This may have been due to the different technology used internally.

In all, it was an ear-opening evening, and just gives us a hint of what is to come in digital, and the future is rosy!



Industry Update

By Jerry Pomeroy

Pioneer will lay off 10,000 employees and get out of the TV business. The company will be out of the video display business by the end of 2010, they are going down the lucrative path of licensing technology. Rumor has it, Pioneer contracted with Sharp to produce future Blu-ray players; this will make the BDP-09 the last player made in house by the company.

Plasma displays; Pioneer and Vizio will get out of the plasma business,

there was a rumor LG would drop the gas displays and focus on LCD, the company has since debunked this rumor and intends on selling 3 million plasma sets this year.

Magnolia Audio and Video have closed the Southcenter and Lynwood store, Bellevue and Roosevelt locations remain open. It was sad to see a staple in Tukwilla close. I remember buying my first Nakamichi cassette deck from the Southcenter almost 30 years ago.

Circuit City: Going, Going, Gone. Once the second largest electronics retailer in the US closed the Tukwilla store at the end of February, all stores to be closed by the end of March. Analysts predict Best Buy, Wall Mart and Costco will pick up the rough 10 billion annual sales of the beleaguered chains business.

Isotek Systems: Unfortunately the company that manufactured my current AC line conditioning system has closed its doors in December, but may be resuming production under new management. There are still a few products around but becoming rare as the days go by.

VizionWare has also closed their doors. In my opinion these were the best HDMI cables I have ever tried. I have no doubt that in a couple of years someone will put out a cable this good unfortunately it will probably be with a substantial price increase. This has been my recommended HDMI cable for the last year, I really don't look forward to picking another to recommend. If you can find one, I suggest you buy it.

Sony and other manufactures will introduce new/updated Display models July thru Sept rather than in the fall. Moving up the release of new models in an attempt to boost sales during the summer slump. Bargain hunters may find deals this spring

rather than in the fall. As a whole the new Sony models will be up in price.

BD common licensing: The BD group is establishing a new common licensing company that will enable manufactures to do one stop royalty/licensing. If you wish to build a BDP you would need license from CD, DVD and BD groups since all of these are part of the BD format playback, the idea is one stop shopping like Fred Myer. I found these future prices on Cnet for royalties: \$9.50 for a BDP, \$14 for a BDR, read only disc 11 cents and rewritable disc 15 cents. These patent pools get rather involved and not all companies will join.

DTV delay: the discontinuing of Over The Air (OTA) analog broadcast was slid from Feb 17 to June 12th. The latest four-month delay was said to give consumers more time for transition to the new ATSC broadcasting format. Over 400 stations have already converted to exclusive ATSC broadcast; Neilson says 5 million U.S households are still unprepared; one has to ask how many don't want OTA anyway. OTA is still the best image you can get short of Blu-ray. Converter boxes have long been available regardless of the fed coupons.

VHS; The video format that ushered movie collections into most homes is nearly extinct. If you still have a VHS deck and want tapes for it you had better stock up, after 28 years all the major suppliers have stopped manufacturing and shipping the tapes into the USA. JVC introduced the Video Home System in 1976; the Beta format war was soon to follow. Laserdisc remained the favorite of videophiles till March of 1997 when DVD was launched. DVD rentals surpassed VHS for the first time in 2003. Any product that can hold market share a quarter of a century deserves some recognition, that is

Industry Update Cont.

over twice as long as DVD has even been around. DVD was the last major home video format of NTSC and will bridge the transition to the new digital standard for TV; ATSC.

Meridian has purchased Soloos

Oppo will release the BDP-83, their first Blu-ray player this January. MSRP has yet to be announced but will be \$499-\$599. Based on the performance of the companies DVD players, expect great imaging from BDs and DVDs, although very good for the money the audio quality of their players always left a bit to be desired.

Pioneer Elite BDP-09 should be released this January with it's full array of Wolfson DACs, I expect this to be the best sounding BD player

Panasonic has now produced over 300 million TVs. This specially marked set was completed on the assembly line in early October. The company claims to be the first to achieve this many TVs produced.

Netflix raises per month charge \$1 for unlimited use of Blu-Ray disc rentals.

The Auto computer really got going in the 80s. You will soon be able to buy a Saab and adjust your seat, lock your doors, change radio stations (and more) from your Sony/Erickson mobile phone. I will be interested in such features when I can zap the traffic away on I-90.

Sony announced a new format called Blu-Spec CD. This is a 16/44 music CD that will play in a red-book player. The "Blu" refers to the master being burned with the shorter wavelength blue laser, the same as in a Blu-ray burner. They will also utilize a higher quality

polymer disc than a standard CD to reduce the block error rate. The format will launch in the USA on Dec 24 with 60 titles. This is a CD format, not the audio format for Blu-Ray anticipated in BD profile 3.0.

Title Track

By Jerry Pomeroy

I can hardly believe it is March already. It seems just a short time ago I was knee deep in my house project including Sewer and a HVAC system. Spring is fast approaching, and this means I am running out of excuses and time to finish the yard after the great dig last fall. Every time I look out the front window I am reminded of the movie *Dune* and the giant worm paths on Arrakis.

First on the agenda for the March meeting is the election of officers: President, VP, and Treasure, all terms are for a year. If you would like to serve in an official capacity and or feel you have a certain skill set that will cement the club

in history consider running for an office. The Presidents job is to keep the club going, he is the CEO, VP stands in for the President when he is unavailable to run the meetings and the treasure collects dues, pays bill and keeps our financial records. The club is ran by the Executive Committee that is comprised of all the officers and committee heads. If you would like more info please contact one of the officers.

The 3/12 meeting will feature club treasure and owner of *Genesis Advanced Technologies* Gary Koh, demonstrating some of *Genesis*' new products. This is your chance to experience the new *Genesis Reference Amplifier* and the evolution of the 7.1 speaker that shed the stand and now has a seamlessly inte-

grated subwoofer; the new model is designated 7.1F. Joe Pittman the local *Genesis* dealer will also be at the meeting. Prior to starting *Kosmic* Joe was club VP then Editor for the newsletter. Both Gary and Joe have spent allot of time improving audio via resonance control and will probably have some insights and practical applications for all. Beside the new equipment Gary will bring the best sounding digital music I have ever heard. Gary's music files are simply the best. A couple years ago I once again relinquished the preeminent audio source in my system to my turntable, CD player is second. Gary gave me a CD about a year ago, it is still my reference and since then his files have gotten better. Bruce will also donate some music files to the evening. After break DJ Gary will spin what you bring, so dig out your best sounding CDs.

If you haven't paid your \$60 dues for the year, you will want to at this next meeting, we have a special deal for paid members; details at the meeting.

The April 9th meeting is scheduled off site at Andrews House due to meeting conflict with the church. A trip to Andrew house is always fun, in the last two years he has built a tremendous system including a Forsell turntable. Andrew has gotten into tweaks over the last year and has several that will make a believer out of skeptics. Andrew is currently in Siberia working on a power plant, no telling what audio stuff he will come back with.

Bruce Brown has been editing and distributing our club newsletters, we are always looking for members willing to work on the newsletter. Articles from different members will add spice and variance to our publications. Who doesn't have a favorite disc, music that enriches your life, you could write a short review and share it with all of us.

The question of how an LP is made has begged for a few hours of research to satisfy my curiosity. It only makes sense if it interest me then others in the club should find it intriguing also. Here are a few things I learned in my research, I don't claim to have a great understanding of the process but it is good enough to quench my curiosity.

After mastering, the LP process begins by making a lacquer Master (LM), one LM is cut for each side of the record on a cutting lathe. The cutting lathe is basically a heavy-duty linear tracking turntable that etches the information into a lacquer disc instead of extracting it. The source could either be direct to disc, tape or some other storage media.

The LM is coated with a conductive finish then electro plated with a nickel alloy, this can only be done once. There are a couple different processes to achieve the plating; not being a chemist it lost me. The metal is removed form the LM, this is referred to as the Metal Master (MM). Note: the MM is the first inverse (negative) of the grove pattern hence the term Father Stamper. If the MM is used to make vinyl records this is called a two-step LP process. This will yield the most direct LP and best sound. As with any production mould, it wears and picks up residual waste from the stamping process as it is used, this results in the stamped product quality drifting from the first pressing. A production run of this nature is very quantity limited.

The two-step process was expanded to allow for mass production of LPs by making inverse copies of the metal master by electro plating in much the same way the MM was made. This positive MM or Mother stamper is a positive of the record grove so it can't be used for stamp-

ing. The mother can be electro plated several different times to achieve multiple child stampers.

DMM; Direct Metal Master is another process where the master is cut directly onto a copper disc. The advantage to this method is the copper is conductive, this allows electro plating without having to put a conductive coating on the lacquer.

At some point before stamping the sharp edges on a negative are polished as to not be so sharp, this is done to aid vinyl flow when pressing, if this isn't done it will result in vinyl starvation in the grooves; they appear as little air bubbles in the LP. The stamper is then center punched, this is a manual process done by aligning three points on the "end of side" circle groove at the center of the disc (run out area). My point is the hole is not tooled concentric with the groove at the time the stamper is made. Hence the famous *Nakamichi Dragon* TT that corrects for offset holes in records.

The actual process of stamping is done in a hydraulic press using a preheated vinyl blob, by heating the stampers (molds) the vinyl pushes out into all the grooves. A record can be pressed out at a rate of 25 seconds per LP from these machines. After the pressed vinyl has cooled the excess can be trimmed off the outside of the disc.



The only thing left is to package it.

There are so many places in this process that allow for variance in the end product I am amazed records sound as good as they do. I have begun to understand why there can be such a sound quality discrepancy between each disc.

Treasurer's Update

Expenses for the past year was normal - lease for the meeting space, rental of the P.O. box, some CDs bought as give-a-ways to encourage attendance, and a projection screen for use at the November meeting. Refreshments and snacks for all the meetings have been donated by Jerry, and we have been running on a shoestring. As a result, we have just over \$4,000 in the club coffers.

The Society derives its only income from member's fees, so I would urge our newsletter readers who have not paid up your 2009 dues yet to please so. You don't need to come for every meeting to be a member. You don't even need to come to any meetings to express your support for the good work that the society does in bringing us all better music reproduction. So, get your check books out and make a check out for this year's dues and send it to us. Address on the last

Classified Ads

Ads are free to members and will run for three consecutive issues unless renewed. Please limit ads to make, model, short description, condition, MSRP, asking price, contact information.

Gallo Reference 3.1 speakers

Black and stainless with black base. Great for 2 channel audio or home theatre.

Very good condition. New \$3400 asking \$1800
Call Ken at 425-785-7517

Club discounts

Northwest Sinfonietta

The Northwest Sinfonietta (a classical chamber orchestra) provides discounts to members of our club for performances of the 2007-2008 season. The regular single ticket price of \$38 will be only \$20 per person per performance at the door (or by phone or mail). Just tell them or note on your order that you are a member of the PNWAS. Information and order forms are also available at their website: www.nwsinfonietta.org.

Kosmic

www.kosmic.us
Contact Joe Pittman
206-878-3833

Pro Sound and Vision

Contact George H. Pro
425-889-9499, 425-445-3308 (cell)

Revolution Power

[Www.revolutionpower.com](http://www.revolutionpower.com)
Contact: Ken Garza

Visitors Welcome!

Meetings are held on the second Thursday of every month at 7:30 p.m. at 4545 Island Crest Way, Mercer Island, WA 98040.

PNWAS Mission Statement

- ◆ To bring together people with a common interest in music reproduced at its best, for their mutual edification and pleasure.
- ◆ To facilitate the exchange and dissemination of accurate data concerning audio equipment and musical recordings.
- ◆ To promote, sponsor, and cultivate the highest quality reproduction of music in the home.
- ◆ To encourage maintenance of high standards in the performance, recording and transmission of music.

PNWAS Objectives

1. Provide a forum for meeting other audiophiles and exchanging information on musical recordings and audio equipment.
2. Demonstrate and compare equipment and recordings.
3. Give members opportunities to become familiar with the techniques of audio manufacturing,

testing, repair, recording, broadcasting, etc.

4. Explore related avenues as the membership deems appropriate.

Club website

www.audiosociety.org

E-mail

info@audiosociety.org

U.S. Mail

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Annual dues

\$60 due each January. New members pay a prorated \$5 per month for remainder of year.

Executive Committee

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Editorial

Editorial submissions are welcome.

Content must be audio-related or of general interest to the club in plain text or Word document format without automation (macros or scripts). We reserve the right to edit for style, content, and length.

Editorial deadline: two weeks before meeting date.

Publishing any editorial material is contingent upon the approval of the Executive Committee.

Disclaimer

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