



Last meeting

By Jerry Pomeroy

Spinning Out of Control

By Jerry Pomeroy

As members walked in the door they noticed different speakers. A set of Genesis 7.1f speakers were damaged during shipping. Rather than cut them up, Genesis offered them to the club. Simply put, the 7.1 full range is like the clubs 7.1 with an amplified integrated subwoofer in each freestanding cabinet. Gary offered this set to the club and we voted to accept them. We will sell the old set of 7.1's via silent auction. There will probably be some other equipment coming out of the cabinet for that event as well.

More details to come!

The August meeting had enough Turntables to keep your head spinning along with your LPs. The premise of the meeting was to allow direct comparison between different TT and cartridges. Just days before the meeting, the cantilever on one of the two Audio Technica OC9 cartridges was found seriously skewed. This destroyed the possibility of comparing the same TT with different cartridges set up for optimum sound. Instead, we used two cartridges based on the Denon DL103R.

We started the evening with a brief description of the belt driven

turntables and cartridges. Gary's Roksan represents a ridged design table. If the plinth is vibrated, so is the platter and tone arm base. The Lynn LP12 is a suspended design allowing vibrations at the plinth to be diminished before it reaches the platter bearing and tone arm base.

Support for turntables is critical for both suspended and non-suspended designs. Due to the nature of the beast, the two designs will respond differently to transmitted vibration. Gary loaned us two Acrylic stands for the tables. Acrylic

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absorbs and diffuses energy so these stands are very dead and resist resonance. Either one or all of the playback systems may have sounded better on the floor, though we didn't try it. The best sounding place I found at home to put my LP12 on is a wall shelf. Joe puts his on the floor.

Both of the LP12s had Lynn Ekos tone arms. The Roksan had a Naim Arrow arm. The Arrow is a Unipivot bearing design which acts similar to a marble in a round bottom bowl. The weight on the ball forces it to the lowest point, yet is still free to move in any direction. The Ekos arms utilize gimbal design bearings. A gimbal is simply two axial bearings; one vertical and the other horizontal.

The bearing is critical. It must allow free movement of the tone arm in all directions. It also must be smooth and not chatter. It requires four really good bearings to make a gimbal and only one for a unipivot. A trade off with a Unipivot bearing is they inherently rock from side to side. Graham tonearms designs now have implemented a magnet as a dampening system to stabilize the arm.

When considering a tonearm bearing and free movement, remember the pick up is at the end of a 9" lever, so any rough movement at the fulcrum is magnified thus translates into the stylus bouncing in the record groove. Free movement is a big issue in tonearm design. Just briefly, I want to mention Tangential or linear tracking designs. The big trick is to move the mass of the tone arm on a linear bearing surface in-board and outboard freely as the record plays. A well-designed linear tracker can do this and eliminate tracking angle errors caused by pivoting arms. Mike Lavigne's Rockport is an excellent example. Another type of free movement design is Bill Firebaugh's Well Tempered Audio Turntable. It uses a golf ball

suspended in Viscous Silicon. Bill brought his prototype to the club a few years ago. Unfortunately I missed that meeting, so I can't comment about how good it sounded. I was told it was exceptional!



The cartridge has the job of changing mechanical energy to electrical. The stylus is attached to the cantilever which has the important job of moving the coils next to the magnets in the body. This makes a balanced electrical impulse. The Lyra Parnassus and the Peter Lederman modified Denon cartridge both have Boron cantilevers while the Magic Diamond has ruby. Low mass, rigidity and resonance are important criteria in cantilever design. The term "Burn In", related to phono cartridges, is applicable because the suspension for the cantilever will become more compliant as it moves. This may manifest itself in speed, detail and bass output. I have read that most phono cartridges have an optimal life of about 1,000 hrs. Generalizations are exactly that. A cartridge is worn out (at least for you) when you find another you like better. It makes sense that pivot point and rubber surrounding the cantilever will age and deteriorate. The Modified Denons had less than 50 hours at the time of the meeting while the Parnassus probably had over 1,000 hours and many years on it.

We were unable to round up the tables in advance of the meeting for a comparison. Consequently, no one knew how great the differences

would be or if they would even be detectable during a club meeting. On one of the few rainy days in August, the equipment for the meeting arrived in four different vehicles. If you were to add up the cost of the three record playback systems from cartridge to phonostage, the cost was about \$50K.

During set up, we realized we had two LP12s and only one power supply (Lingo) and one phonostage (Linto). So we would not be able to play both of the LP12 systems at the same time nor did we have two of a kind phono stages. This would seriously handicap the dueling Linns. Realizing that we would now have to change cables from different tables to the same phonostage, it somewhat negated using the Linto phonostage. We just went for what would demonstrate the greatest difference in detail. After the first few tracks on the Linto, we used the FM Acoustics 122 Phono stage. First on deck was listening to the Roksan/Arrow and the LP12/Ekos, both with modified Denon cartridges. The two tables sounded radically different through the Linto and especially the FM Acoustics. I didn't take notes so I don't want to assign differences from my memory. The sound was completely different and almost everyone felt they could hear a difference. I remember thinking there was a large difference. It wasn't so much detail as it was sound texture and presentation. It sounded like another mix.

We pulled out the Roksan and put in the second LP12 with the Lyra Parnassus. Since we only had one power supply, the second LP 12 was cold and really didn't get a chance to warm up. It is unfair to pin all the sound difference on the phono cartridge. It took a few songs and the Lyra started to open up, but I don't think we ever got the table and

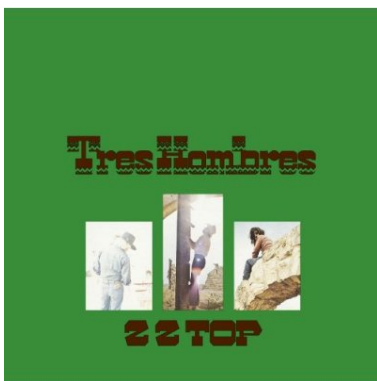
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was warmer and less detailed sounding than the harder mat that Joe had. TT mats are a subject for another day. We should have several at the upcoming September tweaks meeting. We had some time at the end so the suggestion was made to listen to the Hagerman Bugle Boy phono stage. After listening to the FM Acoustics phonostage all evening, I wasn't sure how this would go over. The FM Acoustics 122 Phono stages are made one at a time and carry a hefty price tag. Expect to pay about

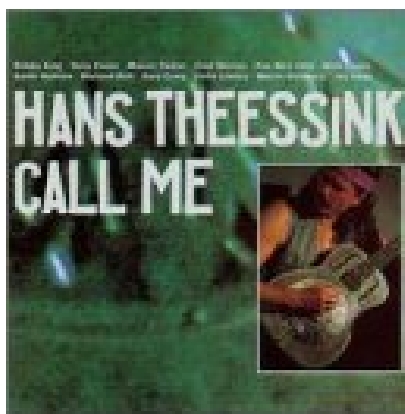
cartridge used to moving that evening.

There was a lot less detail in the cold Lyra LP12 compared to the Magic Diamond LP12. I thought the bass was better in the Parnassus. In the past, I had taken my LP12 with the Audio Technica OC9 over to Joe's and performed a side by side comparison with his LP12 and Lyra, I always liked his Parnassus, as it had tighter bass and more detail. The first thing I noticed after replacing the OC9 with the Magic Diamond was the increased detail over the OC9. What I missed was the bass. I suspect the lack of bass in the MD is a result of not being burned in. Since the meeting, I played with the VTA and weight a bit and got more detail



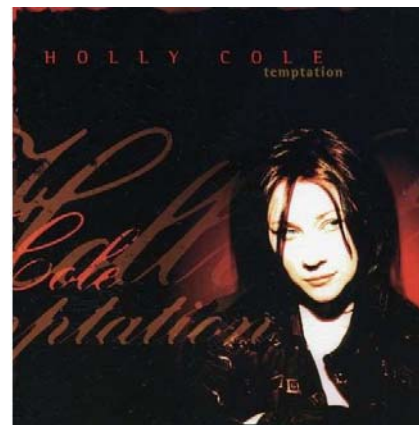
out of the MD but I am still dissatisfied with the bass. I would like to put several more hours on it and see what happens.

We moved platter mats around a bit too. The Linn felt mat

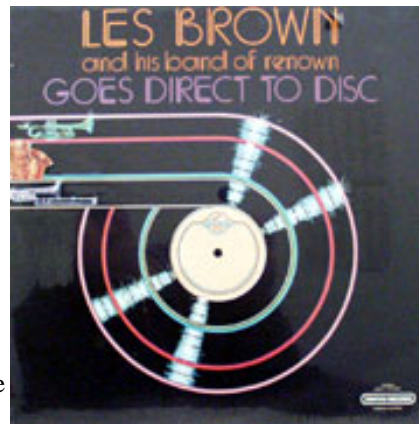


\$15,000 for one new. The Hagerman uses two 9-volt batteries and cost \$150 a year ago. Hagerman no longer list the 60Db gain version pre assembled so you need to buy the kit plans and parts for about \$80. At 1/100 the cost, the little battery powered circuit board did very well. I had two Duracell copper tops in the Hagerman and it sounded good. It was comparatively shy on detail, but very good. Seems there is a lot to getting off the power grid. Gary claims that different battery types will change the sound. This would be a fun experiment. If a member wants to borrow the Hagerman and report what different batteries sound like, let me know.

This was a comparison of different record player systems I have never seen assembled before. It was a lot of fun. Each table was drastically different, but now I don't know what sound I like the best. The



only definitive conclusion about turntables I arrived at that evening was, If I had the space, money and time I would have multiple tables. Mike Lavigne figured this out a couple years ago and has augmented his Rockport with a second and third table. We failed to keep a list of what albums were played so this is from memory; Holy Cole: Temptation, Les Brown: Les Brown and his Band of Renown Goes Direct to Disc, ZZ Top: Tres Hombres, Hans Theessink: Call Me and Paul Simon: There Goes Rhymin Simon.



I remember the first time I went to Genesis and heard the prototype 7.1f. After about an hour, I dished out my comments. Gary removed a driver, brought out the postal scale and increased the amount of insulation in the cabinet. What a difference a few ounces can make. These floor standers don't have gut-wrenching bass but they integrate exceptionally well. It was really cool having some input concerning a speaker design. The Full range version of the 7.1 has an upgraded crossover that eliminated the wild impedance issues that were a hallmark of Arnie Nudell speaker designs. Face it, few amplifiers can effectively drive a two-ohm load and sound good doing it; hence the Genesis I60 and M60 were born. An easier load is a good thing, especially when someone brings in another amplifier to try on the club speakers.

Hopefully everyone got to see and hear these at the March meeting sourced from the Genesis server. The club now has a set of these that were damaged in shipping, at least cosmetically. This should get rid of some bass integration problems we have at club meetings, resulting from rushed set ups. These speakers have great potential and certainly aren't the limiting factor in the system. This will no doubt drive a few changes in the clubs system. We can store the floor standers in the same place behind the door, we just won't need the stands anymore. We will sell the old 7.1s via silent auction along with some other equipment we have, more on this as we work out the details. I want to thank Genesis and shipping insurance for the new set of speakers.

The Sept. 10th meeting is all about tweaks. I usually think of a tweak as something that indirectly affects the sound of a system. Some are directly in the signal path and others aren't. Rationally, some ideas are obvious while others seem completely illogical. There is a website

dedicated to the subject: <http://www.audiotweaks.com>. I have heard some profound differences but couldn't explain why. Those we can't explain and don't seem to make a difference, we call snake oil, especially if someone is selling it for a lot of money. When I first tried tip toes, I couldn't hear a difference. I was fast to label these expensive cones as snake oil, now I have a much higher resolution system and I recognize the value in resonance control in equipment. What may have a profound effect in one system may not make much difference in a similar system in a different environment. While unseen, the level of Radio Frequency Interference (RFI) and static can vary quite a bit depending if you live across the street from a radio station broadcast tower.

One tweak that just sounds crazy is to expose your CD to a fluorescent light for about a minute before you play it. You need to hold the CD within a couple of inches. You can also try a regular incandescent light bulb. The guy who told me this said the effect lasts about one hour. If you have two of the same CD you might try this and let us know at the meeting if you thought it made a difference.

We have some tweaks to try and some we can only explain at the meeting. If you have a tweak that worked for you and can bring the stuff to demonstrate it or just discuss it, please do. Try to have an open mind. If it doesn't cost anything, just give it a try. Bring a pen and paper, take notes and improve your system for little to no cost.

Upcoming Meetings

On Sept 26th, we will host a DIY get together in the basement of the church. If you have something audio related you built and want some comments, this is your chance to

share it with others. This is not a contest but a chance to listen to stuff people built, including amplifiers and speakers from the contest last year. There should be two audio systems set up to demonstrate equipment. We will also have some tables set up for you to trade audio related equipment like CDs, records, components, accessories and related hardware. There will be some snack food available at the event as we will start at 10AM and rap up about 4PM.

Pacific Northwest Audio Society is proud to announce Steve McCormack will be guest speaker at the **October 8th meeting**. Steve has a long history of tweaking audio stuff from amplifiers, preamps and CD players. Starting in 1998 his designs have been distributed by Conrad Johnson, in the last few years he has been on his own with SMC Audio. Arrive early if you want a good seat.

Sunday October 18th 10AM to 4PM there will be a record and CD trading event at the Seattle Center, these are great fun.

The November 12th meeting is the annual HD video meeting. Since last year there have been several Blu-ray disc releases of classical music performances. Last year I had almost all of the concerts available on BD. Currently there are about 176 music videos available in the US, I can no longer keep up.

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This price includes a small hard drive, not SSD. I decided to forgo the solid-state memory in my own unit initially as it is so expensive. If I can keep the system running and am happy with the performance, changing the drive is a simple but pricy upgrade. I hear rumors of the next generation of SSD coming out this fall. Expect it to be more robust, heaper and larger than what is currently available.

Toshiba ended the high def disc cold war accepting market defeat in February of 2008. At the time the company announced they would concentrate on the future of high def, focusing on downloads, flash-drive and wireless encryption delivery, Blu-ray was out of the question. Fifteen months later the Japanese company announced it would join the lucrative Blu-Ray Disc Player (BDP) market by the end of this year. Specific models and features have not been announced. With the recent finalization of *managed copy* agreement this would be a good opportunity introduce BD recorders to North America.

Panasonic has offered \$4.3 billion to purchase Sanyo

According to Consumer Electronic Association 53% of all U.S. households have HDTVs

LG will introduce a new 15" Organic Light Emitting Diode (OLED) TV to North America in early 2010 and should be followed by a 40" display.

3DTV: Sony will announce a new 3-D LCD display this month, beating LG, Panasonic and Samsung to the punch. View sonic is releasing 120 Hz LCD display that will flicker between left and right image at 60 Hz each. Coupled with shutter glasses, you have a 3D image. Other 3D formats include Red/Blue and polarized light as used in theaters with two projectors. Currently there is no standard for consumer grade 3-D imaging. In the first few days of September, the Blu-ray Disc Association (BDA) announced it plans to take the lead in 3DTV. They hope to establish what will become the de-facto standard for the next big hardware sales step for display manufacturers. Few details were released, but the BD software will include 3D and 2D versions. Warner Entertainment has been working on 3D content for

home use. A company spokesman said it would be viable in 2011. Without content there will be no format, lack of studio support was a major factor in the demise of HD-DVD.

Title Track Aug 09

Title Track: by Jerry Pomeroy

How odd, 3 weeks ago I would have been sweating at 75 degrees, now I'm looking for my sweatpants to stay warm at the same temperature. In January, the stores couldn't keep snow shovels in stock, now they are out of fans. The "pet rock" made millions. It was a boxed rock with instructions. Envision the clubs first commercially viable product; instruction for utilizing snow shovels as fans and fans as snow blowers. If anyone decides to pursue this idea you may want to do an extensive warning/hazard section.

Cooler days prevail as the temperature in my house has dipped into the low 70s. I was able to light up the tubes for the first time in a week today. As of yet, it is still too hot to fire up the Exemplar CD player, as it takes hours to warm up. So instead, I am using the Oppo BDP as a CD player. I think it sounds OK for a \$500 player and it makes considerably less heat than the tube based analog stage in the big CD player.

The August meeting is on Turntables. The plan is to compare two like tables with different cartridges and two different tables with the same cartridge. You can decide for yourself what makes the biggest difference in sound quality, the table/arm or the cartridge. We also have a few different phonostages that we can compare on one table in the last half of the meeting. Hopefully we will have lots of time to spin the vinyl you bring.

Sept 10th we tweak. This has almost become an annual subject. It is so much fun. One of the things we talked about having at this meeting are turntable mats. Everyone claims you will realize a new depth in your LPs, better detail and will gain a new appreciation for John Denver LPs if you just use their mat. It makes sense that a record will vibrate differently when played on felt vs. Carbon fiber. There should be several other things demonstrated at the meeting. Think of the best one you ever heard and be prepared to at least tell us about it.

The guest speaker for the October 8th meeting will be Steve McCormack. Steve and Gary Koh will be back from *the Rocky Mt Audio Fest* with their collaborative state of the art Pre-amp.

Steve has been pushing the edge of high-end audio for years. He started selling audio in 1975. He didn't have an engineering degree but could modify with his ears. After making several successful amplifier modifications at the store, he moved to California and started "Mod Squad". Shortly there after, he sent out some pointed cones to his friends and started marketing the original tip toes. This is a meeting you won't want to miss, arrive early to get a good seat.

The audio product that garners the most interest this year in the audio community is the music server. The product that popularized instant music access was the iPod. The advantage of having your music stored in files and accessible via computer is convenience. You cannot only have instant access, but you can take your entire collection with you. With a MP3 player, you can have your entire digital music collection at home, in the car, jogging or almost anywhere you go, unless you are into skin diving.

Let's face it, Sony or any other mass marketing company doesn't develop products with the interest of members from the Pacific Northwest Audio Society in mind. Sony and Microsoft would like to sell millions of their gaming consoles each year. The big dollar return is in sales of software such as games or music. Since most people use music as a background, the concept of quality "realistic" sound is just something you buy at Radio Shack. Quality has been the big hang-up for audiophiles to adopt this file based music system in their homes. I wouldn't consider a server till they could sound better than my CD player, no ifs, ands or buts

Server quality has arrived! When we did the DAC shoot-out, I had Gary's DAC hooked up in my system at home and it was clearly better than my CD player. Seems one of the hardest things to get right in a File system verses spinning media is pace/rhythm. This quality is one often overlooked or unnoticed unless you are hearing music you are familiar with. The emotion of the music is gone and it sounds like it is going slower. Your mind gets bored so it is hard to stay focused on listening. If you have experienced this phenomenon, you know what I am talking about. Seems the more things are turned on in a server the greater the errors appear related to pace and jitter. It has just been in the last cou-

ple of years that a few servers have surpassed this issue. I think John Tucker's was the first server I heard that was really engaging. There are several now. The second big issue that catapulted servers into audiophile systems is resolution. This is simply how many dots comprise the line or how big the gaps are between them.

One of the physical challenges of a computer used for audio is the noise produced by its fans. Heat dissipation is critical. Fortunately there isn't much processing power used for simple two-channel audio. The large and lucrative gaming market has driven the need for faster processors and better heat dissipation. Audiophiles benefit by having computer parts available designed to dissipate lots of heat. We aren't making much in this application, so it is much easier to get rid of. It is important to remember, as the temperature rises in most conductors, so does the resistance. The solution is to "heat sink" everything and spin large fans slowly.

Gary presented two options in building a server, one being to utilize a small case such as the Shuttle like he did or make the leap into a full size case (ATX), and select all the components moving toward the ultimate performance machine. Case fans and power supply are the big noisemakers in the finished product, so it is important to select these carefully. The amount of fans, location and size are all determined by the limitations of the case so the selection of the housing is very important.

Two additional heat generating fan-loving items remain in the case, the CPU itself and the power supply. There are large fan-less power supplies that will work fine in this application. You just have to track them down and pay for them. There are cooling systems for the CPU that depend largely on heat sinks and have fans to augment the cooling. When I get all my computer

parts and try to assemble them in the case, I will discover if all my components fit.

One of the comparisons Gary did at the meeting was a file played from hard drive, then the same file sourced from (SSD) solid state. Most people in the room said they could hear the difference and felt the solid state was superior. The solid state memory is about fifteen times the cost of a conventional hard drive and has a very limited number of times it can be recorded on, but like all things related to computers, the price is coming down and durability is getting better. Another comparison that Gary did for me at Genesis was to turn off the Plug and Play of windows. This makes the system less stable. If anything is plugged in or disconnected while your computer is set like this, the computer won't recognize it. We discussed demonstrating this at the club but felt the environment wasn't secure enough to pull this one off. When the plug and play was disabled, music had definition and that pace/rhythm I talked about at the beginning of this article.

Gary presented a white paper at the meeting containing descriptions of components required to build a server. I started researching and ordering parts to assemble a server in an ATX desktop case. If all goes well, within the next couple weeks I will have one assembled to verify all the parts fit in the case. I tried to select components that contained heat sinks so I could run fans at the slowest speed possible, Heat sinks on the RAM and on the CPU take up allot of space.

If you are interested in building a server, missed the meeting or just forgot to sign up on the ping-pong table, please send me an Email and I will put you on the list. Expect to spend around \$1200 by the time you buy everything, including the Microsoft Media Server software.

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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.

Lynx Studio Two-B PCI Soundcard, 2 in—6 out, Great for HTPC or Music server. Pulled from working PC from our studio. AD/DA up to 200kHz! Includes box and cables. Read more about it here: http://www.lynxstudio.com/product_detail.asp?i=12#

Asking \$450

Please contact Bruce @425-369-1392

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
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.

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Equipment: Vacant—Volunteers?

Refreshment: Vacant—Volunteers?

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.

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Audio Society**

Bringing Audio Enthusiasts Together Since 1978

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