Copper magazine is a free publication made possible by its publisher, PS Audio. We make every effort to uphold our editorial integrity and strive to offer honest content for your enjoyment.
Opening Salvo

This issue will be a little different than usual, produced somewhat on-the-fly from THE Show-Newport. We hope you enjoy the pics and stories from the show, in addition to columns from some of our usual contributors, and additional features by Paul McGowan and Ken Kessler.

We’re trying something new in this issue, starting off with our lead story rather than the columns first—in a new feature called My Turn. Let us know what you think of this as a tweak to our format.

I’d like to thank Seth Godin for all his contributions to Copper, including the magazine’s name. This issue’s “Hobgoblin” will be the last, as Seth is always on the move. I am both grateful and amazed that Seth wrote for us as long as he did, given how busy he is.

Thanks, Seth--all the best to you, always.
Garbage Sounds

Hundreds of hours behind the wheel of all manner of CD’s really allows you to hear more “right”, or a better average overall experience than a one CD or one song wonder stereo.

Those comments that, “I play this CD” as a reference is probably the biggest mistake you can make. Or, fast A to B transitions. Your brain gets so unsettled you can’t hear jack nothing. You may feel double blind A-B dares are “truthful” but no way, not me. Your brain is like a capacitor or inductor, it takes time to go from one state to another and become “linear” again. Hunan systems are entirely non-linear. Hit your arm, HARD. It doesn’t hurt at all initially and then ZOWE it does! Then, it tapers off sometime after that. Your brain is the same, it does NOT process information or sounds in a step function manner. Give yourself some TIME.

Another major fault is not understanding how we hear. Your ears are the most linear from 80-85 dB, where the stereo “blooms”. It isn’t the stereo, it’s YOU that blooms. Too soft and low frequencies go to crap, and too loud and you get hearing suppression across the board and dynamics get “compressed” to save your hearing…or try to. It can take twenty minutes to un-compress your head from a blast, too. Shut your eyes and start low in volume on up till it sound “right”. You’ll open your eyes to 80-85 dB every time.

I listen for 90 minutes on a CD full of GARBAGE sounds (The Best of Herman’s Hermits!) and GOOD stuff (The ONE) and everything in between before I decide something is better. Maximizing the spread between good and bad is an indicator of neutrality as the colorations don’t try to pull all the sonic pallets into a uniform experience somewhere in the middle. White noise in the office dies this; more noise makes less noise!

A really good component doesn’t technically sound “good” on everything. The source is laid out more as it is and you get an innate sense of finally hearing the recording. If it has bass (Any Tracy Chapman CD or five for Fighting CD) you’ll hear it. If it doesn’t (Paul Simon, SONGBOOK) you won’t. Listen awhile and be PATIENT while the pallet fills in. Add bass to SONGBOOK and woofers will hit the floor later on. Changing the balance of the subs midway through and you lost ALL your reference. You are learning nothing about accuracy, but only what you like, not the same thing.
If you read the users “review” of the cable, you’ll see he heard exactly right, but picked a coloration over neutrality. Happens all the time but people can’t identify their prejudice. This is like going to school. I’m still an undergrad. Some people are terrific at separating rights from likes. I have some methods that I use that might not be for everyone, but they work for me and are near automatic when I listen.

I enjoy many stereo’s and quickly adapt to their strengths, and to not their faults. But, that uncanny ability to expose midrange texture is what I’m after over propulsion in the bass or other attributes. I know this, though.

Regards,
Galen Gareis
Principal Product Engineer
Belden Americas Division

Richard Beers

Thanks, Bill, for the appreciation of Richard Beers, a man well worth appreciating. At shows he was ever present, ever calm, always (or often) with a witty word to say, despite the stress of show management.

I have just one story to relate. Back in the good ol’ days of St. Tropez, when Bob Crump was still alive, a number of us would congregate after the show outside his room to gab and make merry and consume beer and pizza, Bob’s treat. That number always included, besides ringmaster Brian Walsh, myself and John Curl who together once memorably surprised everyone including ourselves by raising our voices to sing along with The Wreck of the Edmund Fitzgerald, which Bob had put on the system. Anyway, Richard dropped by and remarked on what fun we all seemed to be having. But would he join us? Maybe later.

After Bob died, the party shifted to Brian Cheney’s VMPS room, which was indoors so we felt unhappily subdued. After Brian died our merry group adjourned to the Big Dog Brewpub, long a favorite haunt of mine. Before one of those events I invited Richard over, with little hope he would have time for us. “Are
you still the same group who used to meet outside Bob Crump’s?” he asked. Oh, yes.

And appear he did. And sat down to dinner and drinks on us, he did too. Good times, good times.

PS Thanks to Bill also for the excellent series on Acoustic Research. Most of those events happened around me during my time in Boston (and a couple years earlier in Iowa) and it has been a real pleasure to be reminded of them, and all in proper sequence! There was one glaring omission, however: AR’s unique community outreach with their AR Showrooms in Harvard Square, Cambridge, and Grand Central Station, New York. No sales were conducted, only demonstrations of product. And thereby too, demonstrations to the largely oblivious public of what “high fidelity” was really about.

Clark Johnsen

The AR Series

I enjoyed your series on Acoustic Research very much. There’s a lot more of course that can be said about it. As luck would have it, I own a pair of Teledyne AR9s, in fact it’s been the main speakers in my best sound system since I acquired them over 30 years ago. Originally I didn’t like them. Like nearly all of my speakers I had to re-engineer them to sound the way I wanted them to. It was AR’s ultimate bass maker. It also was the result of AR throwing in the towel on getting a 3 way system to work satisfactorily over the entire audible range. This is why they added an 8” lower midrange. As dynamic drivers are inherently resonant devices usually having a useful range of no more than about 2 ½ to 3 octaves, covering all 10 octaves was just too much for a 3 way system especially considering that AR 12” speakers reach the lowest depths of bass with very low distortion. AR9 not only restricted dispersion in its upper midrange with a semihorn but also in its treble recessing the dome slightly. This compromised treble dispersion and while a concession to market tastes, it was IMO a step backwards. AR always had problems with treble reproduction as did virtually all other manufacturers. Only their problem was different. The treble was always too muted, not loud enough to be in balance with the rest of the system. Although it has ferrofluid and can handle more power than AR 2ax or AR3a, those speakers proved to have superior treble when properly equalized. That’s how Allison pulled off his live versus recorded demos with AR3s (I attended two of them.) He simply boosted the treble on his Dynaco PAS3X preamp. Having restored a pair of AR2axs I changed my opinion of them. When properly equalized, they beat
KLH Model 6 (I’ve got two pairs of those) every which way there is. Dispersion when placed in the corner of a room at a 45 degree angle is uniform throughout the entire room. That dome is not recessed. Its bass is also superior to KLH Model 6. It’s the only speaker I did not have to re-engineer except for equalization.

AR9 incorporated some of Roy Allison’s best ideas about bass. There’s a great writeup about it by Tim Holl on Classic Speaker Pages web site. Allison was the man behind AR3a, at the time a world standard that replaced the prior world standard AR3. But AR3a’s treble dispersion was not good enough for him, hence AR LST. Were it only power handling capacity at issue, he’d have been able to build it in a rectangular box instead of angled side panels. AR had to hire Ken Kantor to make up for the enormous loss it suffered as he blew out countless LST tweeters playing rock so loud he probably should have had Cerwin Vega speakers instead.

Ken Kantor built the last iteration of AR3, the AR303. Was it better than AR3a or AR 10 pi? That’s a matter of opinion. Kantor assisted in the design of the 1259 woofer manufactured by Fostex. He used it in his NHT 3.3. In a playoff against Teledyne AR9 it proved about equal to it even though it was one woofer against two. Both had better bass than LST. The 1259 is an acoustic suspension woofer with a plastic cone. Its drawbacks are that it must be used as a subwoofer and it requires a box twice the volume of the AR 12” design. Like AR9 it will produce outstanding bass. Madisound offered the original version and later their own version. Neither are available any longer as far as I can tell.

Soundmind
For audiophiles and record collectors, an audio show is a little like a trip to a museum combined with a shopping spree. Different styles of gear are like different types of art: don’t like Impressionists? Then how about 20th-century Surrealists? At the audio show there are similar divisions: massive solid-state vs. single-ended tube amps; tiny little monkey-coffin speakers vs. big ol’ horns; reel-to-reel decks vs. servers, and on and on.

THE Show-Newport at the Hotel Irvine has grown to be a sizeable show indeed: 149 separate rooms, 19 of which are big ballrooms or meeting rooms, in addition to several marketplace areas, including the gymnasium-sized The Marketplace. It’s a lot of ground to cover, and one’s feet will know it.
Newport is also notable for the non-audio attractions founder Richard Beers added in order to entice a broader audience than the standard audio demographic: an attractive hotel with a wide variety of food and drink options, and plenty of places to sit; a variety of exotic, expensive cars, both new and old, parked in several areas on the hotel grounds; a variety of food trucks offering something other than standard hotel fare; and dozens of hours of music from genuinely capable musicians. You’ll see more women and teens here than at many shows; while there is no dedicated headphone area like RMAF’s Can Jam, there are a number of personal listening brands clustered together in The Marketplace, and another 10 or so are grouped together in other exhibit rooms.

People-watching is always excellent in Orange County; the number of really attractive, clearly-affluent human beings is both fascinating and a little intimidating to lesser beings like me. And once the June Gloom morning haze dissipates, the weather couldn’t be better: highs in the 70s with a breeze from the coast. It all adds up to a spectacular venue.

Room by room coverage quickly becomes mind-numbing for both writer and reader, so I’ll limit myself to a few observations. Vibe of the show was generally upbeat, but talking with other colleagues in the biz yielded a string of comments about a slow business climate which several folks said was worse than the collapse of 2007-2008. That’s pretty sobering.

In spite of that, the number of speakers priced above $50,000 a pair shows no sign of declining. In contrast to the giants from Wilson, Kyron Audio, Kharma, Magico, Focal, MBL,
YG and others, one could hear genuinely good sound from inexpensive speakers from ELAC, Audioengine and others. Andrew Jones’ demos of coax-equipped standmounts and floorstanders were constantly packed, due both to excellent sound and The Professor’s entertaining patter.

The two sources most used by younger listeners, turntables and DAPs (digital audio players) continue to proliferate. Turntables ranged from inexpensive models from Music Hall, TEAC, Sony, Pro-ject up to tables from Basis, Triangle Art, Doehmann, Grand Prix, Kronus and a number of other units with prices in five- and six-figures.

Digital players started at a few hundred dollars and ranged up to players from Questyle, Sony, Astell & Kern and others, at prices over (sometimes WELL over) a kilobuck.

Tubes were well represented by VTL, ARC, Raven, Manley, Zesto Audio, Prima Luna, VAC, and others; in counterpoint, massive solid-staters from Dan D’Agostino, Continuum, Mark Levinson and others filled floors of many rooms.

A beautiful venue and glorious weather go a long way to overcoming the fears and trepidation of
some of the industry pros. A touching and well-attended memorial for founder Richard Beers on Friday night proved that industry folk not only love what they do, but love their colleagues---some of them, anyway.

It was an exciting, entertaining, and exhausting weekend. For those who missed it: there’s always next year.
Avante Garde Loudspeakers

Legendary audio engineer Allen Sides showed these 105-dB efficient speakers from Ocean Way.
An impressive system shown by with components from D’Agostino, Wilson, Nordost, and others.

Stereophile crew at breakfast:
L-r: Sasha Matson; violinist Peter Clark; Thomas J. Norton; Jason Serinus; John Atkinson.
When Is It Time For The Next One?

By Seth Godin

The most famous line about making comedy gets quoted a lot. Lorne Michaels says, “Saturday Night Live doesn’t go on at 11:30 because it’s ready. It goes on at 11:30 because it’s 11:30.”

The lesson is supposed to be that you shouldn’t indulge your fear by insisting on perfect. Perfect is, of course, the enemy of the good, and shipping your work and keeping your promises are essential attributes for the professional.

But there’s a flipside.

The flipside is that sometimes, profit-hungry, growth-focused companies ship things merely because it’s 11:30.

That new and improved thing is new, but is it really improved?

The fact is that most audio companies have high overhead and most audiophiles are ungrateful curs, unwilling to actively support the very companies that they claim they want to support. We seek out B stock and used deals and better prices and cheaper stuff, or at the very least, the shiny stuff that is the flavor of the day and the cover of the month.

Without a cycle of new and improved, most companies we like and depend on would disappear. We’ve certainly seen what happens to the designer who says, “my work is a classic, we’re not going to make new stuff.” He fades away.

And this, of course, is our punishment for insisting on specs and features and hype. Mostly hype. I know that we insist on it because I see it working, again and again and again. I’m guilty too.

The relentless Schumpeteresque cycle of creative destruction brought us all of the wonderful, best-in-the-history-of-the-world-or-at-least-lately, that we enjoy today. But it also creates a regular cycle of dissatisfaction, demonically making our stereo suddenly sound worse, even though we didn’t touch it, merely because the next cycle is here.

Can we end the cycle? Not in my lifetime.

What we can do, though, is insist.
Hey, Mr. Stereo Maker--it’s almost 11:30, better make sure your stuff is worth shipping.

Seth Godin is the author of 18 books that have been bestsellers around the world and have been translated into more than 35 languages. He writes about the post-industrial revolution, the way ideas spread, marketing, quitting, leadership and most of all, changing everything. You might be familiar with his books Linchpin, Tribes, The Dip and Purple Cow.
QUIBBLES
AND BITS

By Richard Murison

One of the most useful metaphors for understanding some of the issues involved in representing audio waveforms using numbers is tides. It is interesting to imagine spending a leisurely day sitting by the harbor front, watching the tide come and go, figuring out what its period is, and just how far in and out (or up and down if you prefer) the water goes. What exactly would I have to measure, and how often would I have to measure it, in order to come up with an accurate description?

Clearly, after observing for a short while, it would not be hard to deduce that the period must be of the order of several hours. So a measurement every hour should more than suffice. But as each appointed hour approaches, another problem becomes evident. At any instant in time, waves of various sizes come lapping in and out, and the water level rises and falls accordingly. Over a period of a few seconds the water can rise and fall by up to several feet. So a reading measured precisely on the hour may give one value, but if re-measured one second later would give something totally different, and totally different again a second after that. Likewise, if I moved ten yards to either side, readings taken at the same instant may be significantly different at each of the different locations. Which – if any – of those readings would be the correct one?

After an hour of careful observation, common sense might tell you that those troublesome local variations tend to average out over time. If I take a whole bunch of different readings and average out the results, the averaging effect will tend to eliminate the natural variation, and the result will be a more accurate and meaningful measure of the actual tidal level. In audio terms, the tidal variation is the signal, and the local waves which disturb the surface are the noise. Because the noise is at a higher frequency than the signal, by averaging it out we can effectively eliminate it.

So how do I make that work? I wanted to take a reading every hour, but instead of taking just one reading I instead take several over the course of the hour and average them out. Let’s look at that a little more closely. How am I actually taking my measurement? The technique I am using is to lower a measuring stick into the water and see how far up the stick the water goes. Now, my stick has big marks every foot, smaller marks every inch, and yet smaller ones every tenth of an inch. Every single reading, I carefully note down the position of the water mark to an accuracy of one-tenth of an inch. My
measurement notebook is soon crammed with columns of figures in precise detail.

Very quickly, I get bored by this. After a while I start to ignore the tenths of an inch. Then I start to ignore the inches themselves and just measure to the nearest foot. And a strange thing happens. When I get round to doing the averaging, the answers work out to be more or less the same. It seems that, when averaging out noise, the more measurements you have, the less precise the individual measurements need to be. The result of the averaging, however, turns out to be quite a precise number. If I have enough individual samples, it can be accurate down to a hundredth or less of an inch. Of course, if I replaced my measuring stick with one that had a mark every ten feet then it would no longer work because I am no longer picking up any variation whatsoever that can be averaged out. In other words, there is a certain minimum measurement precision that I need – one that is just sensitive enough to show variation from reading to reading – but increasing the precision beyond that yields a reduced payoff.

So that leaves me with two strategies to choose between for my tidal-measurement project. I can spend an hour gathering low-precision measurements once a minute, then each hour I will average them out and note the answer as a high-precision number in my notebook, one high-precision number per hour. Or I can instead just store the raw low-precision once-a-minute numbers themselves, and recreate the underlying tidal data as and when I need it.

This, in a nutshell, is pretty much how all digital audio is created. Low resolution measurements are taken once every “minute” and are averaged out every “hour” to produce high resolution values which are stored. Those once-an-hour high precision numbers are our PCM samples, corresponding to the 16-bit numbers stored every 1/44,100th of a second in a CD-standard audio file. The actual low-resolution once-a-minute measurements are made not using a measuring stick with the inch and tenths-of-inch marks scrubbed off, but using circuit called a Sigma Delta Modulator (SDM) which is ferociously complex, but cheap to manufacture in volume if implemented on an IC. The high-resolution PCM samples are obtained not by simple averaging, but by passing the output of the SDM through a low-pass filter, also contained within the IC. It’s been done this way for over 25 years now.

Today, we have another option. That is to forget about passing the low-resolution data points through a low-pass filter and saving the output as PCM samples. Instead, we just save the low-resolution data points themselves. Once the data gets into the DAC, only there does it get passed through a low-pass filter, and the output of that filter is the original analog audio signal itself. This approach was first commercially adopted by Sony and Phillips for use in their ballyhooed but ultimately botched SACD product. Here the low-resolution samples have a resolution of just 1-bit, and those 1-bit samples are taken 2,822,400 times a second (which happens to be 64 x 44,100). The name they gave to that format was “Direct Stream Digital”, better known as DSD. You may have heard of it…

Richard Murison enjoyed a long career working with lasers, as a researcher, engineer, and then as an entrepreneur. This enabled him to feed his life-long audiophile habit. Recently, though, he started an audiophile software company, BitPerfect, and consequently he can no longer afford it. Even stranger, therefore, that he has agreed to serve in an unpaid role as a columnist, which he writes from Montreal, Canada.
How Many Shows Are Too Many?

By Bill Leebens

The title, referring to audio shows, is a bit of a trick question. A true cynic might say, “any is too many”, while an inveterate spectator might say, “you can’t have too many shows.” As is often the case, the “correct” answer is more a matter of perspective than something carved into the stone walls of Petra.

I enjoy audio shows, in spite of my column kvetching about CES (please—everybody kvetches about CES). But that’s irrelevant. The real question is, do shows have worth for the industry? If so, how much? And at what point is the field saturated?

We’ve just had the sixth edition of THE Show-Newport. Historically, Newport has been very busy, with both a large number and variety of exhibitors, as well as a large and diverse group of attendees. The standard complaint about audio shows is, “I see the same old fat white guys at every show”, and there is truth in that. You’d have seen old fat white guys—including me—at Newport.

But in addition to us walking loaves of Wonder bread, you’d also have seen younger people, females, kids, and a wide variety of nationalities and pigmentations. Not just the old-guy knit shirts and Dockers, but all manner of incomprehensible t-shirts, ‘do’s, and piercings.

This is a good thing. This is, in fact, a vital thing, necessary for the survival of the tribe. And there’s more good news: man-buns weren’t seen as often as in the past.

There is a lot of fatalism in the audio biz, lots of talk about a dying demographic and so on. I’ve been guilty of it myself: there may be a perverse appeal in feeling oneself to be a part of a valiant, doomed group. It’s easy to understand how one could feel that way; we recall the “glory days” of the ’70’s when every dorm room had a stereo, every commercial district, a stereo joint. And yet: we go on. The primary buyer base remains mid-‘30’s to about 65, just as it has for decades. Oldies may die off or leave, but they are nonetheless being replaced by younger folk moving in.
Whether those younger buyers want the same products we’re used to, is another matter. We’ve got two
generations that have grown up with personal computers, and one generation raised with iPods and
iPhones: they expect versatility and portability above all else. Giant speakers and half-ton amps have
little appeal for them.

So: if you were to appeal to incoming newbies and show off new products to replace those big ol’ boxes
that past generations loved…how and where would you do it?

During the last several years, sections devoted to headphones and personal audio have appeared at
regular ol’ audio shows, and we’ve also seen stand-alone headphone shows from Head-Fi and other
sponsors, popping up all over the world. That’s the market segment where there was action and growth;
and those shows draw large, young crowds. Beats may elicit looks of contempt from audiophiles, but
they generated interest in headphones, and have made a lot of money.

The (perhaps obvious) fact is that in order to get newbies in the door, you have to have a door. The best
door we can offer is one that opens wide to reveal products that will attract a younger crowd, and that
means headphones and personal audio, demoed and talked up by peers. The more of all those that you
can gather in one place, the better, and the more folks you are likely to attract.

Does that mean that eventually all these buyers will become the salvation of monolithic living room
systems? A small percentage will move up, but the experiences are very different. How many players
of Madden ’16 will play in the NFL? The comparison may not be apt, but I would guess the percentages
are about the same: not huge.

There are more regional audio shows than there were a few years ago. While it may make it tougher on
manufacturers---I recall hearing a well-known sales manager moaning, “no…NOT MORE SHOWS!!”, a
few years ago---it offers more opportunities to showcase not just products, but the industry. The subject
was analyzed from all angles a few years ago in Stereophile.

Lest we complain about the 2016 show-schedule…take a look at this 1958-1959 schedule. Those were
likely small-scale shows like many headphone meets, and probably selling events, as well. Maybe we
can learn from practices of the past.

**Bill Leebens** is Editor of Copper and Director of Marketing at PS Audio. He has been in and out of the
audio business for over 40 years. Each time he returns to it, he becomes more cynical. He does not
intend to go quietly.
Stop Me If You’ve Heard This

By Dan Schwartz

Stop me if you’ve heard this. I say that because this may have become conventional thinking in our circles in recent years, but I haven’t heard much about it.

Brian Zolner, who designs for Bricasti, first suggested something like this to me. We were discussing sample rates and what they mean musically. He suggested that what we were actually hearing when we listen to various sample rates was the output filters of the digital stage.

Now, I know that’s obvious. “Duh”, you say. “That’s always what we hear.” But think about what it implies. It means that both camps in the digital debate might be correct; that it’s both a floor wax and a dessert topping[1].

We insist that we hear an easier-to-listen-to, more analog, or more acoustically analogous, sound when we hear higher sample rates. Some of them insist that’s an illusion, and they cite a greater knowledge of what goes into digital audio. We know it’s not that – we hear it. “Use your ears!” we insist. They insist that their numbers are correct (“Nyquist wasn’t wrong!”), and that they are perfectly adequate for reproducing music. We think they must be deaf or something.

This may be an example of confirmation bias on their part, but maybe they’re not entirely incorrect in hearing adequate sampling. And what I’m suggesting is that although what we hear is real, maybe the explanation for it doesn’t negate what they insist is true. All those little marvels like delicate harmonics and sounds and reverb tails may be made audible by the absence of hard filters on the output, and not by the sampling rates themselves.

In practical effect, it’s still sort of a moot point, because even though we may not be hearing the effect of a finer gradation of sampling, but rather the less obnoxious effects of the filters that higher sampling makes possible, it still takes that higher rate to accomplish it. But that may – I say MAY – not always be the case.

And wouldn’t it be nice to settle the argument once and for all time, in both side’s favors?
[1] It’s an old SNL skit

**Dan Schwartz** is a parent, sort of a husband, and has been a musician of some years, having played on quite a few records - and even a few good ones. He’s recorded or played with Rosanne Cash, Bob Dylan, Jon Hassell, Brian Eno, Bernie Leadon, Dave Navarro, Linda Perry, Sheryl Crow, Stan Ridgeway, and was a member of the Tuesday Night Music Club. In his spare time, he used to write for Harry and Sallie at the absolute sound and the Perfect Vision. Professionally, he keeps trying to leave music, but it keeps coming to get him.
Short Attention Span Theater

By Lawrence Schenbeck

I remember this from high school: I couldn’t sit still and listen to music. Anyway I don’t recall ever doing it. If I’m going to be totally honest, I have to admit I’m still having trouble.

I would put on a record. Miles or Monk, Brubeck or Beethoven. Dylan and his second album, the one where he’s walking down a Village street in week-old snow with Suze Rotolo. Doesn’t matter, I could not stay in the room. I dressed, I straightened up my bedroom (a little), brushed my teeth, whatever. I could hear the music. Was I listening?

At the time I had maybe twenty LPs. Played them over and over. Must’ve listened here and there. I can remember this: the one time I know I listened—to Prokofiev’s Symphony No. 5 with Leinsdorf and the Boston Symphony—my friend told me I was apparently deep into satori, the Buddhist state of awakening. He was so struck by the singularity of this event that he had to reach for a term we would have known only through Jack Kerouac.

And now I’m coming clean, admitting that listening with deep concentration for more than five minutes is still hard for me.

I blame Seth Godin.

Not for my inability, though. It’s a piece he wrote about how he likes having the CD booklet or whatever when he’s playing a record, because reading the notes makes the music sound better. That’s me. I’ll do anything to avoid just sitting there, focused on the music.

I check the toe-in of my speakers. I consider, once again, the degree to which off-axis positioning of the tweeters may help or hurt. Or whether the illusion of depth should be a primary or merely secondary consideration in setup. Whether the noise floor is lower or higher today. (Should’ve turned on the system and waited at least an hour!) Et cetera, et cetera.

Fellow sufferers (you know who you are), it is possible to alleviate this condition. Here are things that
work for me:

1. Go to a live music event. Depending on the event—classical chamber recitals are good—you will be trapped in a room with other people who are ostensibly there to listen as well. The performers will march (or trapse or boogie) onstage, acknowledge you (perhaps), and get down to business, the very business you’re supposedly there to transact as well. You’ve paid real money to listen to them. They’re only going to do this once. They’ll be pissed off if you take a phone call, get up to use the bathroom, talk loudly to your seatmate, go out for a snack, etc. etc. They’ll let you know. (I love this about classical performers, incidentally. They’ve gotten downright militant about morons and their cell phones.) The more frequently you go to live events, the more you’ll get used to thinking of music as something you should focus on.

2. When you’re home, listen to something new. I am fortunate to be on the receiving end of promo copies, downloads, streaming audio, and such, much of it provided gratis from various labels and distributors. It gives me a nearly endless supply of New Sounds. Granted, much of this endless supply is not top-notch. It quickly wears out its welcome. Then I go on to something else. But once in a while, that new item is just matchless. I’m drawn in completely. I find myself bowled over by the music, by the incredible imaging, by the silky-velvet sound of the strings, by the exquisite counterpoint, by the kinetic flow, the musicality. This happened yesterday when I was auditioning a new concerto album from Christian Tetzlaff: Dvořák, Suk, Helsinki PO, multichannel hi-res. Wonderful music-making. I listened all the way through the Suk Fantasy that opens the album, twenty minutes’ worth of music! For me that’s an achievement.

3. When you’re home, listen to something old. Here’s what I don’t mean: you probably have half a dozen recordings with which you routinely audition new speakers, new room setups, new preamps, whatever. You know every moment on those records, both horizontally and vertically. We’re not talking about those records.

Here’s what I do mean: you probably have stuff on your shelves that you haven’t thrown away yet, or given to your friends or the Goodwill store or the local public library. But it’s not like you’ve heard it lately. Go through your collection and find something you really loved or hated twelve years ago. You haven’t listened to it since. Pull it out, put it on. How do you like it now, Mr. Music Expert? My guess is that you’ll hear things to which you were once oblivious, hear odd problems in the music or the mix, or hear—nothing at all. Best case scenario, you’ll love it. Worst case scenario, you’ll learn a little something about yourself or the music.

4. Do some comparative listening. How often do you make A-B comparisons within your collection, facing off one performer against another or constructing a career retrospective? (How did she handle that twenty years ago? How has his style changed over a decade or two or three?) You’ll be surprised at what you pick up on. I am faced with this task regularly, because I routinely get new recordings of the Same Old Same Old. Recently I sat down with six different sets of the Bach Violin Concertos, three comparatively recent, three older. When I emerged from that session, my ears and mind were sharper, I knew these pieces better, and I knew which recording I preferred, head-and-shoulders. (It’s the Freiburger Barockorchester’s recent reading for Harmonia Mundi.)

Okay, try these tricks. See if any of them help build your attention span. It’s fun to be able to focus,
especially when everything in *anno domini 2016* is working against you. Good luck. Let me know what else helps. We can do this!

**Lawrence Schenbeck** was born on a mountaintop in Tennessee. In spite of that, he became a historical musicologist. He is the author of two books, many more scholarly articles, and countless liner notes, music reviews, and “casuals.” He lives in the Atlanta area with his family and too much music, Tchaikovsky being the least of it. Literally.
BEHIND THE GLASS

By Duncan Taylor

“The duende, then, is a power, not a work. It is a struggle, not a thought. I have heard an old maestro of the guitar say, ‘The duende is not in the throat; the duende climbs up inside you, from the soles of the feet.’ Meaning this: it is not a question of ability, but of true, living style, of blood, of the most ancient culture, of spontaneous creation.”

-- Federico Garcia Lorca

Duende is a term based in Spanish folklore, expanded upon and explained by Mr. Lorca to describe the death spirit that resides inside artists and creators. “Everything that has black sounds in it, has duende,” says Lorca.

One of his points about duende is that there is a constant struggle to maintain and benefit from duende, without letting it overwhelm. The struggle is likened to a dance or hand-to-hand combat “on the rim of the well,” indicating a precariousness and the potential to be overcome and lose all.

Here in Boulder, there is an accomplished trio of acoustic musicians that call themselves “Rim of the Well.” Two of the three musicians in the group called us up one day, and asked if they could play for us in the studio. It turns out these two often play as a duo as well, and in the time since our recording, they’ve gone on a tour of Europe together.

The more we became familiar with this duo, the more we felt like music royalty was coming to visit. Steve Mullins plays flamenco guitar in this group, accompanied on marimba by the University of Colorado’s Professor of Percussion, Douglas Walter. Steve is known as a pioneer of a new musical instrument called the Banjola, and wrote the first instructional book about how to play the 9-string instrument. Steve expertly plays just about anything with strings, and has done time in the professor role at both CU and our nearby community college. He maintains eight or nine musical groups in which he plays and composes, and he’s played with some of the greatest flamenco guitarists in the world.
Doug Walter is likewise extremely accomplished, and has one more high level degree in music than Steve does, for a total of five. He trained initially at North Texas State University (just like my dad), which is widely known for its cutting edge music program. He recorded a grammy-nominated album with the UNT 1:00 Lab Band and has seen some of the biggest stages in the world from the performing side.

You’ll notice in the video below Doug uses the double-mallet style of playing the marimba. During my setup with the band, Doug told me he studied with Gary Burton, and the double-mallet style is influenced by him. Not bad company!

I just love the deep, purple tones of a marimba played with sensitivity. But, recording the rich and elusive sound however was tricky, especially since my live room was a relatively dead room in a random office in a newspaper building in a random business park.

As a continuing side note, I’ll point out that my recording techniques were often due to the room we had to work with. I firmly believe the quality of a recording has to do with the quality of the music and the musicians. In my videos you won’t see much Neumann porn, but you will see experts of craft on display. The least I can do is stay out of the way, and if I can present the recording in nearly as rich a way as it was presented live, I know I’ve done a good job.

The physical size of the marimba presents my first problem. How do I get the same volume on the ends of the instrument that I do in the middle? If I mic the marimba from a distance, is it possible to get everything I want in the sound?

Ultimately because the room wasn’t much help for the sound of the duo, I chose to present the marimba in stereo, with the register spread left-to-right in the soundstage. I backed off the instrument a foot, and had the mics positioned a foot and a half above the ends of the marimba, with capsules aimed at a mutual point in the middle of the instrument.

This isn’t a bad way to record a marimba - it’s fairly balanced and receives a good amount of sonic energy. Notably, done this way I enjoyed a rich bottom end on the marimba sound, and that perfectly complemented Steve’s high frequency-rich flamenco guitar playing.

I would have liked to do more with Steve’s guitar, but everyone was in a rush, and I knew I could get most of what I wanted at the usual 12th-fret mic position with a small diaphragm microphone. Doug’s marimba mics picked up a bit of the guitar for ambiance, and after placing the guitar mic, the balance sounded close to what I was hoping for.

Excellent musicians like Steve and Doug will mix themselves. I am reminded of Pat Metheny’s philosophy of volume when I’m recording musicians who can mix themselves. Pat says that most of the time he consciously plays at 50% volume to give himself plenty of room for dynamics and expression.

I usually ask players to give me a moment of full volume in a sound check, but I’ve grown to understand that full volume doesn’t mean full volume until the take is live and the recording is rolling. I gave these guys plenty of extra headroom, because in soundcheck it was clear their dynamic range was large.
After setting volume and mic positions and balancing what I could, it was another case of sitting back and listening as a fan. Have a look at these two masters of music performing tunes from their album, "Rim of the Well." And be forewarned -- combat at the well’s rim isn’t without inherent danger. You just might fall to your death when listening to this duende-rich music.

**Duncan Taylor** is a product specialist at PS Audio, and recording engineer and producer of live-track video recording studio Second Story Garage. He also plays a few instruments, pens a weekly music column for college students, and likes to build speakers and amps in his spare time.
Of ‘Stats And Acoustats

By Bill Leebens

There are ideas in audio which simply refuse to die, despite difficulties in application, fragility, fallibility, or just plain wrongheaded misapplication of technology. Electrostatic speakers fall under this heading; now a century old, this seemingly-simple speaker design has survived in spite of numerous setbacks and liabilities. The idea of a conductive diaphragm that moves between a couple charged, acoustically-transparent grids is about as simple a design as a loudspeaker can get, and a lot of folks find that alluring.

In the past few decades, ESLs (ElectroStatic Loudspeakers) are primarily associated with the brands Quad and Martin-Logan, but back in the ’70’s and ’80’s, the rising star in ‘stats was Acoustat. Like many before and after them, the Acoustat star has set.

A brief aside on the history of ‘stats: the Quad ESL (often erroneously referred to as the ESL 57 due to its first show appearance in 1957), is often cited as the first commercial ‘stat. Add-on tweeters had previously appeared in Germany, England and the US (the best-known being the Janszens often added to AR 1-Ws), along with a few abortive “full range” stats that were so obscure even I have forgotten them. The Quad was more “full range” than most, but its limitations in dynamic range and
bass are well known. It managed to appear at a time when the hi-fi craze was booming in the US and the UK, and got to market before other full-rangers like the KLH 9.

In the US, availability of “full-range” ESLs ran something like this: Quad, 1958/59; KLH 9, 1960; Acoustech X, 1964. Just to show how much overlap there is in the world of audio: both the KLH 9 and Acoustech X (that’s a Roman numeral 10, by the way—a subtle dig at KLH’s 9) were largely the design-work of Arthur Janszen; Acoustech started in Cambridge, Mass with Marty Borish as the company head—you may recall that he would later head both AR and NAD; and Acoustech eventually moved to Milwaukee, where Koss, the parent company was. Yes, the headphone company.

Around 1966 an obscure ‘stat called the Harned appeared, was briefly reviewed by Stereophile, and then disappeared. Sort of. A guy named “Jeep” Harned taught the repair and maintenance of radar systems in the Army (haven’t we heard this before?). Upon his discharge in 1960, Harned started a company called Music Systems Inc. in Ft. Lauderdale, Florida, building and selling audio gear. Harned moved into the pro world with mixing consoles and tape recorders under the name of MCI Professional Recording Equipment. MCI, as it was commonly called, became a major player in outfitting recording studios.

One of Harned’s employees at MCI, Jim Strickland, was an engineer who designed logic and tape-tension systems for the MCI recorders. Strickland published several papers on tape-handling issues in the AES Journal, and somehow, he and Harned developed a slope-fronted two-way electrostat named after Harned. The Stereophile review by J. Gordon Holt may have been the only mention of the speaker in print; JGH mentioned an oddly phasey sound, and a rolled-off high end.

It’s hard to imagine a connection between the design of tape-transports and loudspeakers, but in the case of the Harned—and the Acoustat X that evolved from it—there was. The speaker diaphragm was a type of Mylar used by Ampex in producing recording tape, and the method used to apply conductive graphite to the panels was derived from oxide-coating techniques from the tape world.

For whatever reason—and I have no clue here—a decade passed between
the Harned review in Stereophile and the appearance of the Acoustat X speaker in 1976. The Acoustat was a complex design: panels were of a supposedly-indestructible plastic grid, with three full-range panels arranged in an arc to minimize beaming, all driven by hybrid “Servo-Charge” amps running at a staggering 5000 volts of bias. The X’s were a little home-brew looking, and despite some amazing performance capabilities—many listeners consider them the best ‘stat ever made, with dynamic capabilities unlike any other—at $1995 in 1976 bucks (around $8400 today), the X was not a huge success, and was apparently killed off in 1980. There were similar models carrying the “Monitor” designation; but they disappeared shortly after the X.

If any electrostatic speaker can be said to be normal, the Acoustat models that followed the X were pretty normal: flat panels that required the user to provide an external amp. The Spectra 1+1, 2+2 and 3+3 featured stacked full-range panels (1, 2 or 3, depending upon the model) and featured a step-up transformer (the so-called “Magnetic-Kinetic interface”) that took the output of the external amp and ramped it up. There was a rather bewildering range of models and configurations, from modest-sized models to ceiling-scrappers.

None of the speakers were easy to drive, being both inefficient (82-84 dB/I watt) and dropping to very low impedance (as low as 1 ohm, in some cases). Strickland designed the Trans Nova Twin 200 amplifier to provide the match his speakers’ needs, providing high current into horrific loads.

Later in the ’80’s, Acoustat was absorbed into the Rockford-Fosgate corporation, which had previously purchased Dynaco and Hafler. Following David Hafler’s retirement, Strickland became chief designer for Hafler.

Production of Acoustat speakers continued through the early ‘90’s, and eventually just faded away. In the decades since, the name has reappeared on speakers made in Italy and in China, but neither were “true” Acoustats.

As is true of many storied audio brands, the history of Acoustat deserves to be told at length. This is but a brief outline of the history of ‘stats—and Acoustats.

Bill Leebens has bought and sold vintage gear since the days when it was new. He regrets that a goodly number of classic American components now reside in Japan, because of him. Mea culpa.
MUSIC TO MY EARS

By WL Woodward

When you turn 16 the known world stops spinning one way and starts back on itself.

I knew an old Indian, actually a biker who had an old Indian. He taught me how to roll my own cigarettes, a talent that paid dividends when pot came to town and no one knew what to do with it. He also had 4 years back issues of Playboy. At the time he was the most interesting adult I’d met. I think he was 18. I was just old enough to have a thousand questions. He had one answer to all of Life’s Queries. You need a girl, and you need a car.

“So which comes first?” I asked with no regard for ridicule. Brian was busy looking for a pipe he might have left in the bathroom, which if his mom found it would be gone. He stopped, and with a look I didn’t get then but would remember and use many times..

“It’s in the Bible.”

“What?”

“First Therollians. Give me a hand here, will ya?”

Maybe the best lesson I ever got. Shut up, and search.

Of course, the music still lit us up.

In February Black Sabbath released their first album. Now think about that. Brian can’t find a pipe, I can’t find a girl, and these schmucks trip over an entire genre. Really. Not fair.

Um, by the way, that first album. Yah.

In March, Mountain released ‘Climbing’ Three piece power rock that was attempted by Cream and smashed by Leslie West, Felix Pappalardi, and Cork Lang.
Felix Pappalardi went on to become the next pope.

In April within 5 days both Paul McCartney and Mike Nesmith announced they were leaving the Beatles. There are 12 people out there that got that joke.

It was a year for things starting, ending, and re-starting. Frank Z released two great albums, Burnt Weenie Sandwich and Weazels Ripped My Flesh in the same year Grateful Dead released two of their best, Workingmen’s Dead and American Beauty.

New directions were starting. Van Morrison’s Moondance, James T with Sweet Baby James, Poco, Stage Fright, Tea for the Tillerman, T Rex and Ry Cooder. Led Zeppelin even managed to release an album without robbing everyone before them with my personal favorite of theirs, Led Zeppelin III. Benefit by Tull. Leon Russell and Joe Cocker recorded one of the best live albums ever with Mad Dogs and Englishmen. Eric Clapton pulled a young slide player out of the South, Duane Allman, and recorded Clapton’s best studio effort with Layla and other Assorted Love Songs.

Johnny Winter And.

Again, you couldn’t keep up.

President Nixon finally admitted we had invaded Cambodia because the North Vietnamese were smuggling tampons and tools on a path no wider than an oxen trail. OK, he didn’t admit that last part, but Martha Mitchell told us all about it. God Bless nutty drunks married to crooked politicians.

Despite the fact I was turning 16, my dad was not motivated in helping me get my driver’s license. His reluctance probably came from an unfortunate combination of events that started with his leaving his keys in his car and my discovery of that fact, and ended with a tree. Fortunately, my high school had a driver’s education program.

At the start of the first class, we had a school room full of anticipation, geeks, and girls. I had a buddy, Paul Light, who had a similar automotive history with his mom. We both knew this was probably our only chance at redemption or at least a license.

Mr. Beaudry, our instructor, taught math and was the coach of the golf team. Rumor had it his life was miraculously enhanced as the driving instructor by drawing the short straw in a rigged teacher’s meeting. Nice guy, but was so insufferably boring in his math classes he had to resort to periodically kicking the trash can next to his desk to wake us up. Seriously, he did that. Ask anybody.

My bud Paul was one of my class favorites. He was a tall, gangly, skinny drink of water, incredibly funny and sweet but always on the verge of a minor calamity. He had an older sister in college who gave him some mushrooms, and Paul, who always thought stuff through, took them in the morning on a school day and ended up taking his clothes off in Mr. Antonucci’s biology class.
During an English exam he went to the front to sharpen his pencil, and as he passed my desk I stuck my foot out. Paul went down like an old oak, ending with a spectacular face plant. And HE got in trouble.

As Paul and I settled in our seats, expecting the Beaudry nap routine, the old guy started with every high schooler’s favorite line.

“Class, we’re going to watch a film today”. Sweeter words have never been spoken in the halls of learning.

The film was one of those classic driver’s ed horror films showing accidents, mayhem, and bloody limbs. To this day I can’t remember which of us started giggling first. Didn’t matter. Once we got started there was no stopping. Now, you can’t laugh out loud about such things. But we all remember times in our lives when trying not to laugh in inappropriate situations was like lighting an M80 and trying to hide the bang.

Beaudry finally stopped he film because by now the entire class was snorting, and with every fresh wreck a new breakout snorkled its way across the room. Unfortunately Mr. Beaudry had Paul and I in his classes and pretty well knew how this had started. He had in fact paused the film twice to chastise the class and stress how important the examples of the hapless victims were to our future. That, did not help.

We were sent packing. Branded. Another chance at freedom blown by teenage hormones.

Within 3 weeks in late September early October, Jimi Hendrix and Janis Joplin were dead. That sure shut us up. Ok, keep yer arguments to yerself. They were crazy, but they were ours’.

The seventies were about to descend into Eagles/Fleetwood Mac/Jimmy Buffet Land. We dug that stuff too, but with the exception of the Allman Bros nothing seemed to be mind-blowing anymore. We graduated from high school, went to college with varied success, and settled into beemer lives.

I suppose every generation has a similar story about freaking out over Talking Heads or the Police or Elvis Costello before they got jobs on Wall Street. But few had years like 1967 to 1970 during soul formulation.

Dad eventually bribed a shady driving school in the North End of Hartford and I got my license. After a series of accidents I finally wised up and got a motorcycle.

W L Woodward is the Director of Operations at PS Audio. He has been married since 1974 to his high school sweetheart and should practice his guitar more.
The Other British Invasion
Part 2

When we left Part 1 of this tale, I had closed the first installment with the intimation that what went on in the 1970s still resonates to this day. That’s true, but not in the way you might imagine: I was not suggesting for a moment that the “Buy A Linn LP-12 Or F*** Off and Die” attitude still prevails.

Of the survivors among the primary culprits on the manufacturing side, the handful that is still with us has seen its influence reduced to, well, nothing. They are now merely brands-among-many, neither taste- nor king-makers. But you could, in their defense, argue that there are NO kingmakers anymore. Gone are the days when a coterie of brands dominated the high end. If anything, the playing field is more level than it has ever been.

Of the Flat Earth brands that survived, the primary players in the dramas of the 1970s, Linn still makes LP12s but hardly qualifies as a name heard on a daily basis; the company produces around 1000 LP-12s per annum, but has matured and moved on to streaming, clever control system and other pursuits that would have been anathema when Linn was at the forefront of decrying digital. I recently visited the brand, it’s in robust health, but it is now just a brand, not a religion.

Naim is now French-owned and its fortunes have shifted from high-end amplification to admittedly cool all-in-one Musos. I’m told these are the company’s best-ever selling products. I have to laugh when I think of my idiot colleagues, who used to tell me how anything from NAIM, including a NAIT could “blow away” anything from Krell, Mark Levinson, Threshold or other brands. Not the common thread: American brands, which were the bête noir to the Flat Earthers.

Rega still makes high-value turntables but, as with Linn and Naim, no longer dominates every magazine, every conversation. Arcam and Meridian – the approved electronics – if you didn’t buy NAIM – are now “establishment”, but then, they were never as close to Linn as NAIM once was. The term that best applies is “fellow travellers”, the nationalism working in their favor.
Those who abetted the manufacturers, their acolytes in retail, are in much reduced circumstances. Hell, all retailers seem to be suffering much-reduced circumstances, but the decline in the number of retailers in the UK is frightening. A few of the flattest of the Flat Earth retailers still trade, pretending it’s 1985, and bless ‘em if they can carry on like that.

What happened – and what will explain the demise of the “useful idiots” – is that UK audio consumers finally realized that the rest of the planet made fantastic equipment. And, in every instance, with the possible exception of SME tonearms, it was decidedly better equipment. EAR-Yoshino, Chord, and a handful other British companies that aspired to more than the Flat Earth credo demanded survived those dark years, by making true high-end gear that can easily hold its own against the best of Japan, the USA, and Germany.

In essence, due in no small part to the internet, and the efforts of one tenacious British distributor, the nationalism that once fed the British scene ceased to control the market. The vicious xenophobia and jingoism that fuelled the Flat Earthers, their “Buy British!” argument no longer matters – especially not at a time when the nation is about to go to the polls to commit mass country-cide by voting to stay in Europe.

Because the Linn/Naim/Rega/Nytech/Arcam/et al juggernaut needed the hi-fi press to communicate its message in the days before Twitter, Facebook and other forms of social media, and because far too many of the British journalists were walking clichés straight out of the Whole Earth Catalogue, the latter bought into the former as if it were a new religion. I will not waste your time recounting the cant, the actual conversations, the utter, inane drivel that issued forth from these cretins – most of whom would never find work in “real” magazines – because you simply would not believe it. Let’s just leave it at “CD causes cancer.”

Their entire belief system was based around the notion that no hi-fi could sound any good if it did not have as its source a Linn LP-12. If you could not afford an LP-12, then you were “allowed” to buy a Rega. To be fair to Rega’s Roy Gandy, as arch a cynic as I have ever met, and to be lauded for that, he never actually encouraged the press in its stupidity. He still keeps us at arm’s length.

Neither, though, did I ever hear him vociferously contest the more ludicrous claims of the Flat Earthers, and he had a few of his own oddball notions involving VTA and stereo sound-staging. And why should he? The collective schmucks of the UK press wrote so glowingly of his wares that he hardly ever had to spend a penny on advertising. And let’s face it: there’s never been a better-value tonearm than a Rega…

To be continued…
I make a habit of running each morning. It’s not far, a mile or two up hill and down dale. But running makes me feel good, energizing me as few other things can. My running companion is a set of earbuds and an iPod playing opera. The music, the open air, the exercise, the melodic riffs, keep me addicted to a personal pleasure.

Just this morning I took a different route through the neighborhood and had to stop in front of a house I had never seen before. To suggest the house was big would be an understatement. Ostentatious might define it better: tall white columns supporting a second story balcony the owner could use to survey the lands below. But it was the twin marble lions guarding the front door that really got my attention. Like the Greek statues in front of actor Michael Constantine’s home in My Big Fat Greek Wedding, these twin lion statues seemed perfectly at home in front of a dwelling that yelled out, I’m expensive. Look at me!

Displays of wealth and luxury are a trait that’s been with humankind since the beginnings: the castles, guarded gates, villas, perhaps even the highest cave overlooking the valley below. But interestingly enough it took the work of one man to turn luxury into an industry. Jean-Baptiste Colbert, who lived in the mid 1600’s, created what’s become known as the luxury industry and life’s never been the same since.

Luxury goods, stereo equipment included, depend on a couple of ideas to qualify as luxurious. The first is rather obvious. Expensive hi-fi equipment, I mean really expensive hi-fi equipment—a $100,000 speaker or amp—is rare. And rare is the point. Rare means not many have such things and the own-
er’s are singled out—sometimes for good taste and powers of discrimination, but perhaps just as often, the response is a scratch of the head.

A second reason might be handcrafting. When you buy certain high priced automobiles, or Swiss watches, handbags, clothing, they cost an arm and a leg because someone spent the better part of their life handcrafting them. This is rare in its finest form, and often these one-of-a-kind artisan-built products are handed down from generation to generation. As soon as the handcrafted qualities are replaced by modern building techniques, and the price stays the same, the intrinsic value begins to plummet. Not many heads are turned when a person checks the time on his gold Rolex, anymore.

A third reason has to do with why I wrote this article in the first place. Performance. It is assumed that astronomically-priced goods, such as the $70,000 polished metal amplifier, the $250,000 horn loudspeaker taller than its owner, the $120,000 user adjustable speaker cable are, by default, better performers than their lesser-priced counterparts. In fact, that assumption has rarely been challenged by the magazine reviewers. How many reviews have you read of ultra-expensive stereo kit where the reviewer points out the emperor hasn’t any clothes on?

Could it be that we don’t want to challenge those assumptions? After all, a magazine reviewer that’s lucky enough to have a quarter million dollars of equipment set up in his home for review has only to suggest its performance is on par with any number of similar products costing 1/10th as much, and he is unlikely to ever get a chance to review that product (or any expensive product) again. Worse, their readers want to hear what it’s like to enjoy music through a product of such high performance standards that only the rich and famous can own them. The last thing people want to read is the $500,000 Rolls-Royce Phantom has a ride almost as good as a $50,000 Cadillac—but lacks the get up and go of the cheaper car. Instead, we want to close our eyes and imagine how cool it would be to ride in half a million dollars of metal and rubber, or luxuriate in the music fed to us by metal sculptures we cannot ever hope to afford.

More expensive isn’t always better performing, but we’d like it to be that way and we’re kind of let down when we discover it’s not—like learning the truth about Santa Claus. We want to believe. We want to place lions outside our homes to scare away the evil spirits that come to get us at night.

And all that’s fine. Let’s just not assume the lions are actually going to provide anything for us in the way of protection.

**Paul McGowan** is the CEO of PS Audio, a Boulder Colorado company that builds some pretty cool hifi equipment.
This system is the culmination of a 43 year adventure in sound reproduction at home.

It all started in 1973 when I spent 3 of the 6 days of my honeymoon in Hi-Fi stores auditioning gear. Almost getting divorced on my honeymoon has not prevented me from pushing those same boundaries many times over the years, but I am still married to the same long suffering woman that I married all those years ago.

Amps have changed from the Sony TA88 (11 solid state watts per channel) – which by the way I still have, and it still works.
The Pioneer PL12D turntable and Sonny SS610 speakers are long gone, but I still have all of the vinyl that I had back then, augmented by a lot more!

The current system is a 26 year old Sota Cosmos turntable with an ET2 air bearing (supplied via a medical compressor and custom surge tank, running at 12.5psi ) linear tracking tonearm, running a custom made Garrott moving coil cartridge via Transparent XL interconnects into a VTL TL 6.5 phono stage fitted with the silver MC transformers.

This analog rig is my preferred source for when I want to listen to my collection of rock.
For more recent music, which is on CD or the network, I use a T+A (from Germany) MP3000HV which combines a CD player, streamer, FM radio and media player into one box. It feeds via Transparent XL balanced interconnects into a VTL TL 7.5 III two box preamp which in turn connects via Transparent XL balanced interconnects to a pair of VTL Siegfried power amps. Transparent XL speaker cables connect to the Magneplanar MG 3.7i speakers which are augmented by a pair of REL S2 subs in the front corners of the room.

The room itself is a little unusual. It is a steel portal framed building where the walls are made from bales of barley straw, and are thus almost half a metre thick. These bales are plastered with a natural lime plaster (not painted) with natural undulations a feature.

The room is of good volume, being 10.44 metres (34.25 ft) long by 5.45m wide (17.8ft) with a cathedral ceiling that runs from 4m (13ft) up to a peak at 19ft. There are 6 tonnes of plaster covering the walls, so there is a lot of mass!!

The ceiling is finished in oiled poplar wood (because it is a softwood) with a double layer of wool batts behind that and flooring grade ply above that. This gives a good balance between hard and soft surfaces with minimal need for room damping. We have a few bass traps to deal with some dominant modes, but overall the room sounds great with excellent RT60 performance.
Sunrise by
Paul McGowan
Badlands