Opening Salvo

It’s hard to believe we’ve already reached the fifth issue of Copper. It’s been really interesting to view the wide range of responses from our readers: what one loves, another despises. We know that extreme reactions indicate passion, and we want to encourage that...without provoking bloodshed, of course!

Our columnists represent a diversity of topics and viewpoints, something for everyone.

This issue, Seth Godin writes about the joys of teetering on the edge of control. Richard Murison samples the subject of sample rates. Dan Schwartz looks back at his development as a professional bassist, and his part in a legendary recording. Lawrence Schenbeck revisits the concept of The Shock of the New, as it applies to music. Duncan Taylor wraps up his piece about being behind the glass with Greensky Bluegrass. WL Woodward considers another lynchpin year in music and society, 1968. My two columns look at the legendary audio manufacturer AR, and an evil little secret that many share but don’t talk about.

In our features, the irrepressible Dr. Schenbeck interviews recording engineer Daniel Shores, who provides interesting insights into what it takes to do his job. The legendary/infamous/widely-feared, former TAS reviewer AGB, Andrew Benjamin, makes his first appearance in Copper with a piece on the physics of record playback that’s bound to stir up comment, Anthony Bigler writes about an installer’s worst nightmare: gremlins. His gremlins were of a four-footed variety. This issue’s In My Room comes to us from reader Robert Hart, who loves him some speakers.

We always want to hear from you, whether it’s in response to one of our articles, or writing about your home music system. Until next issue: enjoy! Good reading!
Kessler again

In reading Ken Kessler's article, “What Too Many Have Missed,” I was surprised to read the following comment:

Listen to Coldplay? I'd rather have a colonoscopy without anesthesia.

Say what you may about some of the drivel that passes for Top 40 music these days, Cold Play is far from bad and, from where I sit, is actually a very, very good band. And elitist commentary like this really loses people and makes audiophiles look like disconnected snobs. Kessler lost me after that.

For what it's worth,

Juan C. Ayllon

...and again

Well, I just finished issue 3 and mostly enjoyed it. My version had the same system as #2, what's up with that?

It is such a good positive read, until we get to Kessler. I will never understand why people feel they have put down one artist to share the joys of another. His put downs of Gram Parsons was not necessary to make his point.

I always had a lot of respect for Kessler, in two articles he has shattered all of that. If it was up to me, he would be replaced with someone more positive.

PS Audio as a company has always been represented by an upbeat staff, that conveys a message and service that they like what they do, that they like themselves and others. Copper conveys that same message, with the exception of Kessler.

With all sincerity,

Jeff Starr
Dear Copper:

I’m late to the party with this reaction to Ken Kessler’s piece about high end audio and his denunciation of the ‘unreconstructed commie’. Honestly, as a democratic socialist, I have not got a clue where Ken acquires his views. As is said, Ken, you are welcome to your own opinion but not your own facts.

I am an unabashed leftist and have been since I was 20 years old. Now in my 60s, I can safely say that my love of high-end audio has increased with my age and income. Thirty five years ago, I heard my first Quad equipment, yes, Ken - Quad! From first hearing, I was smitten with an appetite for that audio manufacturer’s sweet mid-range. Over the course of 35 years, I upgraded my Quad system three times. I kept pace with advances in Quad’s equipment and, of great importance to your argument, I kept pace with Quad’s price increases.

Eighteen months ago, I had an introduction to Ayre Acoustics equipment. If there is one thing that you might know about Ayre it is that their stuff is neither low-fi nor low priced! I am also the owner of an Ayre, Audio Research and Aurender system that is fronted by a pair of Revel Ultima Salon 2 speakers.

I don’t like to boast about ‘my gear’, preferring instead to groove to the music in my leftist household. I should point out that I am far from the only leftist who enjoys high-end audio. Over the years, I have gathered a sizable number of close friends who enjoy the same hobby. Come on over and have a listen and a chat about politics, you never know, you might learn that trading in stereotypes can prove us wrong and that when it comes to enjoying well rendered music, a good ear will stand you in better stead than your politics.

University
Flat Response
This is because research has shown that the human ear is sensitive to deviations from a flat
the human ear is sensitive to changes from any shape frequency/intensity response curve which is
governed by the JND or JNND-
the “flat” curve is a matter of convince but not a true description or representation of the curve of human
hearing sensitivity across frequency. Indeed, the psychometric function that bests describes human
hearing sensitivity is far from linear. Also the curves that express loudness changes across the human
frequency domain is also curvilinear.

Like in Audiology, the audiogram , which portrays normal and abnormal human hearing sensitivity as a
function of frequency vs intensity , is for the normal hearer, a straight line across the frequency domain.
However this is a relative description (dB scale)not absolute hearing sensitivity. This is a curve of “ease
of observation” and allows easy visualization and description of hearing sensitivity and its abnormalities.

Thus, the statement in your article, regarding the ‘Flat response”
is not totally accurate. True, deviations from any flat frequency response will elicit a perceived change
if it satisfies the boundaries of the JND OR JNND.

Dr. Laurence Rosenblatt

Mine, Mine, Mine
In the 4th issue of Copper -- really enjoying it -- you wrote: “I've often posed the question: ‘How can
something that is based in something as beautiful as the love of music, become so incredibly hateful
and destructive?’ If you have an answer for that...let me know, will you”

I think the answer is simple...and sad.

The love of music, like any other form of love, can become perverted by possession. It's mine, she's
mine, he's mine.
And with music, the love of knowing “the best way” to do anything -- whether choosing the music to listen to, the recording to buy, or the components to play the music -- is another form of possession. “My way, because I love it, and therefore I know best,” and the rest of the online audio world is either stupid or ignorant, depending on where the “best way” person comes from.

Mine, mine, mine.

At least that’s what I’ve seen and read in certain online audio venues, but what do I know?

Dave Hallerman

It’s Just a Phase

Thanks for the opportunity to express my opinion to Copper Magazine for the Letter to the Editor section.

In response to “It’s just a phase” in Copper Issue 4, I would comment that, as the ear is basically just a frequency power spectrum detector, it is unlikely that it can detect the phase distortion you describe. I believe properly controlled tests have been carried out to demonstrate this, however I cannot turn up an immediate reference.

More importantly, although it is true that steep cut off analog filters will usually have significant deviations from a linear phase (constant delay) response close to cut off, this is not generally true of digital filters, however “brick wall” in response. Any digital signal processing manual will confirm that a FIR digital filter with a symmetrical impulse response will automatically have a perfect linear phase response within the passband. The anti aliasing and reconstruction filters used for digital audio are almost always designed with symmetric impulse responses.

If you are going to pick out supposed flaws in digital audio recording and reproduction systems then, to be fair, you should contrast them with their analog equivalents. Analog tape recorders are notoriously poor in their phase response and waveform fidelity when they try to compensate for the scanning loss of a finite gap replay head. Maybe at a tape speed of 30 ips this effect is not large. However they will
not match the perfection in this respect of digital recording and replay.

Of course loudspeakers are by far the most imperfect components in our music reproduction systems. It is relevant to this discussion, I think, to observe that a number of loudspeaker designs that have had excellent subjective reviews have been found to have their HF drivers connected in anti phase to their mid range and low frequency drivers. A gross example of an acceptable deviation from linear phase!

Richard Grubb
Boulder CO
Right on the Edge of Disaster

By Seth Godin

Here’s a simple question: which is more fun to drive down a winding country road at 30 miles an hour? A new Bentley or a 1969 Jaguar?

Most car fans would pick the Jaguar every time. After all, you can hear it, feel the road, and most of all, it might blow up at any time. Every downshift is an exercise in hope over good judgment.

It’s possible to buy an amp that’s powered with dilithium crystals, that has three hundred extra watts to spare, with a power cord that could power Tesla’s lab. And you can use that amp to power speakers that are made of corbomite and platinum and are capable of playing loud enough to melt your house.

[An aside: Did you know the loudest sound on Earth comes from the blue whale? I, for one, have never been in a stereo store where someone came in hoping to get a stereo loud enough to be able to hear the blue whale the way it was supposed to sound… but I digress.]

Why, then, am I drawn to my four watt per channel amplifier, powering high-efficiency speakers that appear, at any moment, like they might just drop dead from exhaustion?

I think that’s precisely why.

“It might not work” is of great attraction to humans.

At the jazz club, I’m well aware that Marcus Robert’s crack band (13 people crammed into Birdland!) can easily handle the charts they’re reading from. Sure, it sounds good, the music is what it’s supposed to be, check the box. Sort of boring, actually.

But, and it’s a thrilling but, when someone stands up and starts wailing (which is different from whaling, for those keeping score at home) on the trumpet, things change. Marcus doesn’t know what’s going to happen, they might not have rehearsed this. The player might not even know what’s going to happen
on the next bar or two. Will he get boxed in? How can he possibly top that last riff? What if it all falls apart?

This brings us to Just Roll Tape, a fifty (!) year old lost recording done by Stephen Stills (the full story is here). A young Stills was doing backup vocals for his girlfriend Judy Collins. At the end of her session, he slipped the engineer a few bucks and recorded for two hours after everyone had left. Just Stills and the engineer.

This album cost a million dollars less to produce than some of the singular albums of the 1970s. How come, then, it's so much better?

When we say, "just roll tape," we're inviting disaster. There are no overdubs, no chances to fix it in the mix, no retakes. It's naked, and thus alive. It might not work.

This is the thrill of live music, of the low-powered system teetering on the edge, of the stereo that surprises us instead of merely keeping its well-engineered promise.

So, we have the paradox of modern stereo equipment. The scientific method, combined with the persistence of professional engineering, has gotten us ever closer to the perfect stereo. The stereo that reliably and consistently does exactly what it's supposed to do. A stereo that measures well, that needs little or no care or tweaking, that's correct.

For some of us, that's same as a stereo that's boring.

Give me tubes that burst into flames, speaker wires that need a wiggle now and then, a turntable that can't possibly be as good as a CD player…

Even better, a stereo that has a sweet spot (which, by definition, means that there need to be sour spots as well).

Stuff that might not work.

Because when it works, it's a miracle.

Miracles are a good reason for a hobby.

**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.
We have established that the road to ‘Hi-Res’ audio is paved with greater Bit Depth. But what seems to capture much more of everybody’s attention are greater sample rates. Why is that? We’ve already seen that with an audible frequency range that tops out at 20kHz (provided we’re still teenagers), a sample rate of 44.1kHz is capable of perfectly capturing an audio signal with no content above 22.05kHz. And by perfectly, we mean mathematically perfectly.

So why do we clamor for astronomically larger sample rates?

And, of course, that is a very good question. What can we capture with a sample rate of, say, 96kHz that we cannot capture with 44.1kHz? From a mathematical standpoint, the answer is simple – we can capture all those frequencies from 22.05kHz up to 48kHz that were previously verboten to us. On the other hand, if we can’t hear anything at all at those frequencies, why would we need or even want to capture them in the first place? We are in effect doubling the file size and playback bandwidth in order to record something we can’t hear. Put in those terms, it seems rather pointless, doesn’t it?

And yet it is evident that Hi-Res audio files with high sample rates are widely lauded by audiophiles for their superior sound quality. They can, at their finest, sound notably better than their low-sample-rate equivalents. To gain insights into this quandary we can perhaps invoke the famous Holmesian line of logic – “when you have eliminated the impossible, whatever remains, however improbable, must be the truth”. If we substantially increase the sample rate, there are arguably only two things of relevance to consider. The first of these provides an “impossible” for us to eliminate – the accepted fact that nobody can actually hear any of the extra frequencies which can be captured. The second provides the “improbable” which is therefore our best candidate for the truth – the fact that the filter which removes all of the frequency content at the Nyquist Frequency and above can be a different filter. So let’s take a look at that.

This filter is quite critical.
We need it because any half decent microphone feed will contain a significant amount of ultrasonic energy – signals at frequencies extending well above the audible limit of 20kHz. The fact that we can’t hear them doesn’t mean they’re not there. And if they’re present, then we have to get rid of them. The job of stripping off those unwanted ultrasonic frequencies is carried out by a structure called an Anti-Aliasing Filter. Therefore, in essence, we need to change our rose-coloured view of digital audio to take this into account. Instead of saying that digital audio can completely capture all of the audible content of a waveform, we must modify this statement to say “digital audio can completely capture all of the audible content of a waveform which has been passed through an anti-aliasing filter”. If the filter has any audible consequences, these will be faithfully captured by the digital data stream.

Whole books have been written about filters, but I am constrained to this one paragraph. Filters are described largely by two characteristics, the structure and the order. The structure tells us what the filter does, and says some things about how it does it. The order describes the strength of the filter. When we say that we need an “Anti-Aliasing Filter” this reduces our choice of structure to a handful of useful types, and for the purposes of this column we’ll leave it at that. The anti-aliasing filter’s job is to pass all frequencies below 20kHz, and to block all frequencies above the Nyquist frequency. The closer together those two frequencies are, the higher the “order” of the filter must be to accomplish the job. With a 44.1kHz sample rate, those two frequencies sit almost on top of one another, requiring an anti-aliasing filter of a very high order indeed. But as we increase the sample rate, so we also increase the Nyquist frequency which, you will recall, is exactly half of the sample rate. Therefore we also push the Nyquist frequency further and further away from the 20kHz upper limit of the audio band, and in doing so we make it possible to specify a filter with a lower “order”.

I mentioned in last week’s column the fact that filters exhibit phase distortion as a fundamental consequence of their actions. If you increase the order of a filter, this brings with it a proportional increase in the amount of phase distortion introduced by the filter. The implication is that using a higher sample rate, which increases the separation between the top of the audio band and the Nyquist frequency, allows the use of a lower order anti-aliasing filter, which will suffer from a lower amount of phase distortion. Maybe sufficiently lower to make an audible difference….

It’s an interesting theory, and I take it seriously, but it remains speculative. My description here of the technical underpinnings is necessarily a gross over-simplification. The notion that phase distortion is audible and accounts for differences in sound quality between different sample rates remains to be clearly demonstrated. Also, from a practical perspective, the fact that a lower-order anti-aliasing filter can be used, does not guarantee that it will be used. Finally, bear in mind that some experts hold that there are in fact no audible benefits at all to be gained by using ‘Hi-Res’ sample rates in the first place!

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.
Schadenfreude

By Bill Leebens

There are very few beautiful-sounding compound nouns in German, a language full of long, unwieldy compounds, most of which sound like an air-compressor being run through a butcher’s bandsaw. “Schadenfreude” may sound like the name of an elegant Bavarian castle, but its actual meaning has more to do with the depths of human depravity than with the heights of human aspirations.

“Freude” translates as “joy”; thus, Beethoven’s “Ode to Joy” is, auf Deutsch, “An die Freude”. “Schaden” is the dark part of the compound, meaning “harm”. Thus we have “harm-joy”. To be precise, schadenfreude is “pleasure derived from the misfortune of others” (thanks, Wikipedia). This is a familiar sentiment in cut-throat business, where scorched-earth practitioners often express the sentiment, “it’s not enough for me to succeed---the other guy has to fail badly, as well”.

How does that relate to audio? Generally speaking, I want everyone in the biz to succeed: a rising tide floats all boats, yadda yadda. But there are companies in music and audio---generally large, ungainly, arrogant ones---that do cause me to smile a bit when they stumble. Sometimes, smile a lot. I admit this with more than a tiny bit of shame; I do try to be an enlightened soul, but….

Not surprisingly, schadenfreude seems to hover around highly-hyped celebrity-backed ventures like the acrid smoke above a tire-fire. One example is Pono, promoted by Neil Young.

Let’s be clear, here: I love some of Neil Young’s music, especially the thrasher stuff like “Hey Hey My My” and “Rockin’ In the Free World”, which, played at high volume on auto-repeat back in the day, probably saved my life. I respect Charlie Hansen and his crew at Ayre Acoustics, who designed the production version of the Pono player; they’re among my favorite folks in audio. I think the player itself is a remarkable, great-sounding product, and a freaking bargain.

So, Leebs—what’s the prob?
It’s not the fact that Pono was crowdfunded; I’ve developed a bunch of crowdfunding campaigns, and raised a few million. It’s the way it was crowdfunded. You might think that crowdfunding is the Wild West (and in some ways, it is), but there are rules campaigns have to follow. Lots of rules.

When the Pono campaign appeared on Kickstarter, it was immediately evident that the site had, in order to secure the high-profile campaign, discarded the rules applicable to ordinarily mortals. It was like watching a Patriots game played at Gillette Stadium: all things were possible for the chosen team.

So, famous dude was given the farm, legalities were overlooked, whatever. Get over it.

But THEN...there was the campaign video. At over twelve minutes in length, it was more Apocalypse Now than a standard less-than-three-minutes campaign promo, and it featured half the Rock ‘n’ Roll Hall of Fame. Cool. Again, so what?

I grew up in a college town in the late sixties, and can handle pseudo-benevolent hippie-speak. I’ve worked most of my life in sales and marketing, and can tolerate blatant capitalistic hucksterism. No problem.

But: do NOT, DO NOT try to mix the two. That’s what Neil did, and it was painful to watch. There was talk of wanting potential backers to BE A PART, and talk of HONORING ARTISTS’ INTENTIONS, all mixed in with multiple tiers and packages and perks. I can’t even convey how cringe-worthy it was, but those of us who’d done other campaigns stood back, bullshit detectors beep beep beeping, and waited for it to fail.

They raised six million bucks. The bastards.

No opportunity for schadenfreude there. But wait, but wait: after Kickstarter, they went and moved on to the newest new thing, equity crowdfunding. Another six million. And then?

And then people waited and there were delays and finger-pointing and dismay as backers realized the cost of the Pono-authenticated downloads. Many of the backers were boomers like Neil himself, from the era of $4.99 LPs, and the discovery that downloading an album could cost $25 or more did not set well. At all.

CEOs came and went, players were eventually delivered, and after that? Nada. They burned through all the money and more, Neil made himself CEO yet again and grumpily chastised the world at large for not supporting his “movement”. The Pono download store was essentially moribund, and word went out that more funding was needed for Pono to survive. They’ve been stuck at that spot for months now.

Sorry, but I can’t help but feel that it’s a fate that the banana Toblerone deserved. It’s a fine player, albeit with horrible ergonomic and industrial design. Fix that, and sell it as a quality player—not as a social movement by an aging, cranky, hypocritical hippie. As my daughter once said to me: don’t bullshit a bullshitter.

Celeb case #2: Monster (formerly Monster Cable) and Beats.
So, all credit to Noel Lee for helping to create the whole high-end cable industry (along with Ray Kimber, George Cardas, Bruce Brisson and a few others). Some of the other guys may have approached it from a deeper technical basis; Noel was and is a tough salesman. A VERY tough salesman.

As you might infer from that comment, Noel has been known to do things that occasionally provoke and infuriate. Employees, colleagues, customers… I’ve heard “this one time, Noel called me at 3 in the morning…” stories from all of them, told with a mix of amusement and anger. Some were more amused than angry; others verged on apoplexy in the telling of their tale.

So, this one time around 2007, Noel went to make a deal with the head of a record-company and a well-known producer. Viewed dispassionately from the outside, one would assume that dozens of attorneys were racking up hundreds of billable hours on both sides of the table. Well, not quite.

Turns out that the record-company head, Jimmy Iovine of Interscope records, did indeed put his floor-full of legal eagles to work on the contract in order to cover him and his partner Andre “Dr. Dre” Young. That’s what record-company heads do, right?

Noel, on the other hand, seemed confident to the point of foolhardiness, perhaps not realizing the potential represented by the deal. So…whether out of hubris or naivete, Lee sent his twenty-something son Kevin to handle the deal. And that was all.

The details are in an article on Gizmodo that is alternately painful and astonishing to read: http://gizmodo.com/5981823/beat-by-dre-the-inside-story-of-how-monster-lost-the-world

Long story short: Monster fronted the millions needed for design and development of the first Beats headphones, all the marketing costs, and a couple years downstream when Beats By Dre headphones had reached over half a billion dollars in sales and 64% of the US headphone market, Jimmy and Dre were able to walk away from Monster, owning everything and owing nothing. All because of that lame-ass contract.

Cruel though it may be, laughter rang throughout the kingdom. And yes, I was guilty of it, as well. “Couldn’t happen to a nicer guy,” was the chorus of the day.

Shortly after the breakup, Beats inked a deal with cellphone company HTC that was supposed to buy half of Beats. Unbelievably, HTC couldn’t come up with the dough, had to pay Beats millions in penalties, and Jimmy and Dre again owned it all. They later sold everything to Apple for billions, far in excess of what any sane individual thought the Beats empire was worth.

After all that, did Monster go quietly? Hardly: after the damage was done, THEN all +those attorneys entered the game. Suits and counter-suits are still flying: http://www.strata-gee.com/transfer-la-monster-vs-beats-picks/

Case #3: There are no big names directly involved here, aside from those who appear at a spescious “awards show” apparently watched by millions of tweenagers every year: iHeartMedia, formerly Clear Channel Radio. Just your average leveraged buy-out valued at $27B involving the purchase of 858 radio stations and a bunch of other media assets--- and a huge debt with no chance of being repaid.
So, the company responsible for the homogenization of American radio (really, you can now drive coast to coast and hear nothing but their plastic twaddle—I just did this) is pretty much on the verge of going bust: http://www.medialifemagazine.com/coming-the-collapse-of-radios-iheartmedia/

Let’s hope this break-up does more good than the AT&T breakup did, a few decades ago. It couldn’t happen to a nicer bunch of folks, and I couldn’t be happier. This time I don’t feel guilty...not even a little bit.

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.
The Road to the City

By Dan Schwartz

It’s February 21st and I got an email this morning from a very old friend that said, “Hey, Dan, Listening to the Hassell recording, and I’m in awe. It took a lot of balls to accept the challenge, and you nailed it. (pun?) (wrench?)”

But that’s not my memory of how it went. The record he (Tom Reiter, a terrific bassist in my hometown in NJ) is talking about, Jon Hassell’s City: Works of Fiction, came out almost 26 years ago. It’s recently been rereleased in a 3-CD set (All Saints Records, WAST008CD).

Everybody has their own narrative of how they got to the point of making any record. Mine goes like this:

I moved to California 40 years ago, to play in my brother Bob’s progressive band. Bob was a truly unique guitarist; his compositions were more like a hybrid of Weather Report and Oregon, and he was decades ahead of his time in forgoing speed for touch and melodicism --- but my playing in the band was fairly ornate. I wanted something else, though didn’t know what it was --- until I met Paul Dresher at UCSD, and he invited me to participate in his Saturday-morning Ghanaian drumming ensemble. Without knowing it, this was what I had been looking for. There were about 20 of us, and we’d make the rounds of the different instruments. As soon as I played a fairly large drum, playing a simple, interlocking pattern for 10, 15, 20 minutes --- well, that was IT. I instinctively knew that this was what I’d been hungering for. (I was 21, it was 1978, and I knew I was going to be gone from the university and San Diego come summer.)

But --- I still wanted to play bass, so how to translate the drumming to bass? It may be a more complex discovery than I remember it as being, but living on the border of LA county for the better part of that year and woodshedding Jaco Pastorius’ bass parts gave me a clue. I saw him once with Weather Report, and it was just showy pyrotechnics. But his playing with Joni Mitchell, that was something else. I realized what his part was on the title track from Don Juan’s Reckless Daughter.[1]

Hear it? There’s the key. I could play it as if I was drumming on it.
I was mostly playing a custom (fretted) Alembic in those days, and shortly after this period, I got another one. This one had a metal, fretless fingerboard – Sam Field of Alembic called it “continuously fretted”, and it was critical in my process of discovery. I applied what I had learned from Jaco on it --- and there it was. That Alembic had problems, and I replaced it with the first production unlined fretless that Steinberger made – this was late ‘81.

In ‘85 I picked up a heavy, gold cigarette lighter that Gonzalo Quintana[2] had and used it as a pick, kind of joking around. Kind of. He laughed and offered me a bigger pick --- an 8 & ½” Craftsman adjustable wrench. Now we’re talking! This thing worked! (It was hard on the bass that I was playing though, a new-to-me 1960 Fender P.) I could now bounce the metal wrench off the metal strings like a drumstick.

You see how it’s all coming together? That same year I sold my Chapman Stick, and I so missed the low notes that it was capable of that I dropped the strings on my Steinberger a 4th --- to BEAD --- and it’s been tuned down ever since. (In ’87, Rick Turner sent me a set if strings for to see how long they’d last. They’re still on the bass).

In ‘88 I met Jon Hassell --- I was a fan, but especially of his album Power Spot (ECM 1327) and the tune Miracle Steps, with a groove by J.A. Deane. It was suggested to me a couple years earlier that I play with him, but though I liked what he did, at first I couldn’t hear it. Miracle Steps showed the way. I helped him finish Flash of the Spirit (Intuition No. 9), a collaboration between he and Deane and an 8-man band from Burkina Faso called Farafina. When it was all done and out, we had lunch and a conversation about what was next. I recall saying something on the order of “You’ve done Indian, you’ve done Indonesian, you’ve done African, but you’re from Memphis. Why not do an overtly American album?” I brought along my guitar player throughout the 80s, Gregg Arreguin, Jon produced the other two people, and we started to woodshed various ideas together.

This was about two years after I had started writing for TAS, and I’d met George Cardas through Brooks Berdan. We had rewired my ancient Ampeg SVT speaker cabinet with his wire internally, and unlike the normal SVT set-up, we wired to all 4 pins of the XLR connector. The day before the set-up for recording City, I went into the studio, measured from where my amp would be to the tape machine, called Cardas and said “I need two 85-foot mic cables by tomorrow.” George delivered.

The tape was run at 15 ips, which always sounds more natural to me, and I discovered that an Ampeg SVT cabinet could really put out extraordinary amounts of low-end if the connection is really solid and it’s not turned up.

After that, it’s just: let fly. The sound of City is the sound of collaboration and discovery --- collective, organized improvisation around an extraordinary trumpet-player who had laid the groundwork for quite a few of us.

I made determinations about the mastering of the album on a prototyped pair of Snell Type Bs, affectionately referred to as “The Refrigerators” by designer Kevin Voecks. Those things are flat to 16 Hz (I still have them). You can sort of tell.

Of course, I still have all the elements: that first Alembic, the Steinberger, the Craftsman wrench, the
amp and cabinet, and all the Cardas cables. They're waiting for someone else worthwhile to call.

But (occasionally) I look back on my playing on that album as the bravura of youth. After City, I just shut up and played my bass.

[1] Aside: I once had dinner with the illustrious Ms. Mitchell. When I said to her that Don Juan's was my favorite of her records, she said, in a conspiratorial tone, “Mine too --- but nobody agrees with us!”


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.
The Shock of the New

By Lawrence Schenbeck

Hi folks! With this column we begin an occasional series reviewing new recordings. To make the cut, they need to sound good, of course. But they should also show some soul and lie at least slightly off the beaten path.

Here’s what I have learned lately: If you’re looking for that ecstatic, swept-away feeling, the buzz that opens up your pores, envelopes you in immediate sensation, and shuts down all your brainpan chatter, avoid youngsters. Seriously. What you want is an old hand, someone who knows the ropes, someone with a few rodeos under her belt. That’s the person most likely to surprise the hell out of you. Among records I’m recommending this month are an electric live set of Prokofiev piano concertos; a new violin concerto based on nearly thirty years of collaboration between composer and violinist; and septuagenarian Robert Wilson’s stunning theatrical realization of music by octogenarian Arvo Pärt.

The Prokofiev comes to us from pianist Vadym Kholodenko, conductor Miguel Harth-Bedoya, and the Fort Worth Symphony (Harmonia Mundi HMU 807631). This album is comprised of Concertos 2 and 5, an early work versus the composer’s last such effort. Both works have been captured in the heat of battle, to good effect. Although soloist and conductor are relatively young, that’s not the selling point. Coupling Nos. 2 and 5 allows us to compare music by a 22-year-old conservatory grad against the work of a far more experienced composer, one who by then had spent years working in Paris, Chicago, and elsewhere. That’s a very tough rodeo circuit.

With No. 2 you can easily hear Prokofiev’s youth, especially in the passionately overheated way he works through themes and structures. The only radical thing about it is the feeling. In terms of style, No. 2 owes big debts to Rachmaninov and Medtner, Liszt and Tchaikovsky. Listen to this excerpt and you’ll hear what one reviewer called its “astonishingly inflated bravura”:

TOO MUCH TCHAIKOVSKY
That’s from an extended cadenza (rhapsodic solo, no orchestra) that takes up nearly half the first movement, replacing a proper development section (thus freeing the composer from having to craft intricate conversations between soloist and orchestra, while fragmenting and transforming themes, while wandering creatively through various keys—i.e., doing something a whole lot more difficult).

In 1932 Prokofiev wrote his last piano concerto. He was 41 years old, had a wife and two kids. From the very first measure you can tell that his skills had grown along with his personal identity. No longer interested in “inflated bravura,” here he simply plays with the materials, deftly interweaving orchestral lines and a virtuoso piano part. His quicksilver changes of theme, texture, and instrumentation entertain us too:

*soundclip available only in the interactive version*

For collectors, the best part of this release is that it’s the worst part: nobody thinks Nos. 2 and 5 are Prokofiev’s greatest piano concertos. Yet these are terrific performances, beautifully recorded in hi-res sound. Kholodenko and Harth-Bedoya plan to complete the cycle with another album comprising Nos. 1, 3, and 4, i.e., the best part. That’s really bound to sweep us away.

Prokofiev and I go way back; my interest in Paul Moravec (b. 1957) is more recent. His Tempest Fantasy for clarinet, violin, cello, and piano won him the 2004 Pulitzer Prize in Music. It’s an engaging, extremely enjoyable piece, recorded on Naxos 8.559323 with klezmer king David Krakauer and Trio Solisti. They’re led by violinist Maria Bachmann, Mr. Moravec’s muse. He’s written more than a dozen other works for her, latest and finest of which is a Violin Concerto (2010, rev. 2013). It forms the centerpiece of a new Moravec/Bachmann recording (Naxos 8.559797) that includes a Shakuhachi Quintet and two shorter works for violin and piano. Here’s an “afterglow” moment from the Concerto:

*soundclip available only in the interactive version*

The Shakuhachi Quintet is less deeply felt—or imagined. Moravec relies more on Western flute idioms than on the unique capabilities of the shakuhachi, long revered in traditional Japanese music. It’s clear that his relationship to that instrument and its player does not go back a quarter-century.

His work with Ms. Bachmann, on the other hand, does. By now she is an old hand, having burst onto the scene by winning a Concert Artists Guild Competition in 1986. In the ‘90s she made several new-music CDs for Tim Page’s Catalyst label including Kiss on Wood, the premiere recording of that James MacMillan work. Philip Glass, among others, has also written music for her. I wish we had more space to discuss how a Young Hotshot goes on to sustain a life in music (catch her in Telluride this summer), becoming an authentic force for good in the artistic universe.

But we must press onward to a pair of Truly Old Hands. Arvo Pärt (b. 1935) and his music have been welcome chez Schenbeck for a long time. My wife Lyn was one of the first people to write about his use of tintinnabuli. Still, we were not prepared for the refreshing shock we experienced when we viewed Adam’s Passion, a new Blu-ray video (Accentus ACC 10333) of four works by Pärt in a performance staged by Robert Wilson, best known for his work with Glass (Einstein on the Beach), choreographer Lucinda Childs, and many others.
It’s hard to talk about Pärt. If you’re not familiar with his work, start with time-tested masterpieces like “Silentium” from Tabula Rasa. Move on to Miserere or Passio. The music seems simple, but it can evoke complex responses. The truest thing you can say is that Pärt encourages us to adopt humbler, more meditative states of mind. Any moment in life, no matter how banal, may suddenly become numinous. The same is true of the images in Wilson’s light-suffused stagecraft.

soundclip available only in the interactive version

We’ve been discussing collaborations; here’s another. Danish composer Hans Abrahamsen (b. 1952) might have lived and worked in obscurity forever. But at a crucial period, he stopped composing and re-thought his journey. Afterwards his music was more personal, less predictable. Increasingly it reached listeners on a visceral level.

Before 2013 Abrahamsen had written almost nothing for the human voice. Then he decided to adapt a novella, let me tell you, by Paul Griffiths. Working closely with soprano Barbara Hannigan, who coached him on what singers can do (and she can do a lot), he came up with some truly breathtaking music. It drew upon his love of woods, snow, nightfall. It won him the Grawemeyer Award. Read more about it here. Or just listen, here:

soundclip available only in the interactive version

**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.
Recording Greensky Bluegrass/ Part 2

By Duncan Taylor

(In Part 1, Duncan detailed the drama caused by an over-eager tour manager. Now, to the music. ---Editor.)

I don’t have a big ego, and don’t really understand people who do. All I wanted to do was do a good job recording a promising act, Greensky Bluegrass, and their stage manager was getting in the way, acting as though only he knew how to record them.

Unfortunately, only I knew how hard it was to record in our converted office room, and only I knew how to craft the sound to play on all of the playback devices we knew our viewers used. Our previous results were good enough to attract the attention of the band’s management, after all.

I couldn’t let him take over the recording, and kept rebuffing him while I worked. I watched him retreat and corral the band for a group talk. Probably not a great sign.

Continuing to set up, I waited for a moment to chat with one of the band members.

“Is this guy for real, man? He’s been up in my face since I got here,” I said to Anders, the world-class dobro and lap steel player.

“I’ll talk to him,” he said.

I could see the tour manager working to create job security by being a go-between and explaining how the microphone setup worked. But I’ll never forget thinking that the band deserved better information and leadership.

Undaunted, we all got on with the recording. I set up my own design of a stereo microphone tree -- two cardioids in ORTF formation, with a large diaphragm figure-8 microphone between them, with the dia-
phragms at the same height. I ran the figure-8 through a vintage DBX 118 compressor (in mono), and brought it up just enough in the mix to solidify a good central image for our monaural tablet and phone viewers.

I knew I’d want a spot mic on the guitar player. In a bluegrass group, it’s a rare guitarist with bright enough strings or thick enough pick to carry the frequencies involved to the top of the mix, when needed. In a quasi-honest stereo recording setup, you can spot-mic and pan the guitar pretty closely to where it lives in the soundstage, to great effect. Even if it’s the only spot mic I use, I choose the guitar every time because it really pays dividends.

For the arrangement of the guys, I usually have the band set up the way they play onstage. I’ve found that to help with musical cohesiveness.

The only change I made to their setup was to move the banjo player to the back, next to the bass player. Instrument for instrument, pound for pound, a tuned banjo can be the loudest sound in a bluegrass group. I always have to pay close attention to where that thing is aimed!

I added another spot mic way to the left side of the room (stage right) and out of view of the camera. This is to pick up that 1KHz-heavy, directional tone of the dobro coming straight off the end of the instrument near the bridge. Following good practices, I found the right spot by moving the mic around and listening through headphones. Once panned well to the left, the spot mic added width to the soundstage, and gave me the classic tone I was after. Frequency-wise, it only really competed with the banjo. So having them on opposite sides of the ensemble worked well and delivered a good overall balance.

The final spot mic was a dynamic kick drum mic located about a foot off the ground for the bass player. I also took a direct line from his bass, and mixed those signals to taste.

One last observation of our tour manager friend. Not satisfied to sit on the sidelines, he had the nerve to walk up to my spot mics and adjust them right before I started to record. He did it more than once, and I kept asking him not to! After seeing this happen over two takes, the studio’s executive producer gently asked him to wait outside for the remainder of the session, to which he agreed.

No recording done in our specific way is ever perfect, but the results can be magical. I asked lead singer/mandolinist Dave to try to stay further away from the mic during solos and verses, but old “self-mixing” habits die hard. You can hear a bit of clipping on the mic when he’s really belting out a verse, and the mando licks came out hotter than I’d have liked. But I left it alone and didn’t press for more takes because as a whole the music and timing was just unreal. Most often, the first takes have the best energy and I wanted to take advantage of that.

Even with the difficulties imposed by the rogue manager I found the hardest task to be deciding which take to use. This is an enormously talented band, and each take was nearly identical until the solos. In the solos the takes couldn’t have been more different. That’s a hallmark of great players, right there.

For two of the tracks that had two takes (the third song was nailed in one), I chose the takes featuring the best dobro solos. I have so many good things to say about Anders Beck as a dobro player -- he’s inventive, lively, supportive, fast and has great timing. And he plays loose and with a grin. You can’t
beat that.

Take a look at the video below if you have the time. In the years since their visit, at least one of our videos has become Greensky Bluegrass’ highest-viewed on YouTube. In the words of their publicist (who later reached out with thanks), the recording session became “easily the best Greensky videos on the web as far as audio and video quality is concerned.”

(soundclip available only in the interactive version)

Praise we can live with. No good session has ever really been easy, but this one I won’t soon forget.

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.
Are You a Collector or a Hoarder?

By Bill Leebens

In the new millennium we have an almost infinite array of choices, in almost anything imaginable. For some, the options are inviting; for others, overwhelming. Makers of real, hard products often have difficulty gaining market share, much less market dominance, as a zillion competitors are all available at the click of a cursor.

It wasn’t always that way. Acoustic Research, our subject, was a pioneering leader in loudspeaker technology, an incubator from which sprang dozens of audio companies, and, at their peak in 1966, manufacturer of ONE-THIRD of all loudspeakers sold on Earth. ---But that’s getting ahead of the story.

Here’s a capsule history of the birth of the American Hi-Fi industry: armed forces training during World War II produced more highly-trained electrical and radio techs than had the preceding sixty years of academic and industrial training. The post-war era saw trained folks eager to put their skills to use in civilian life, and a public more open to new technology than ever before. Add in a population eager for entertainment and with more free time and disposable income than ever before, coupled to surplus manufacturing capacity left from a dismantled war machine and huge quantities of war-surplus electrical and electronic components…and you’ve got the industrial and marketing equivalent of a perfect storm.

Many of the men who would come to be considered fathers of American Hi-Fi (and thus of the industry worldwide) went from wartime technical positions to found audio companies: Frank McIntosh, of McIntosh Laboratory; Saul Marantz, Sidney Smith and Richard Sequerra of Marantz; Sidney Harman of Harman-Kardon; and Edgar Villchur, founder of Acoustic Research, known for decades as AR.

Before the war, Villchur had earned a BA in Art History and an MS in Education from City College in NYC, and had intended to become a designer of theatrical scenery. Drafted and trained to repair radios of Army Air Corps aircraft, Villchur completed Officers’ Candidate School, became an officer, and
was eventually stationed in New Guinea as Group Communications Officer of the 348th Fighter Group.

After his discharge and return home, Villchur found greater opportunities in using his electronics training than in scenery-design. He opened a radio-repair shop in Greenwich Village, and prospered. He studied physics and sound reproduction theory at the main library at Fifth and 42nd, and in 1947, Villchur, his wife and two other couples purchased a brownstone in Chelsea for $6,000. That translates into $64,000 in 2016 bucks, but Manhattan being Manhattan, that same building sold recently for $6.5 million!

During that period Villchur wrote articles on audio topics for Audio Engineering (later Audio), as well as for mainstream magazines such as Saturday Review. He also taught a night course entitled “Reproduction of Sound” at New York University’s Washington Square campus, which he continued to teach after moving his family first to Queens, then to Woodstock (yes, that Woodstock).

As a trained artist and teacher, Villchur was skilled at analysis, design, and in explaining complex subjects to laymen. Discussing the various elements of a sound system with his students, he expressed his idea that the weakest link in the sound reproduction chain was the final one: the loudspeaker. He expounded upon that idea in a Saturday Review article entitled, “A New Speaker Principle”. While the title could’ve presaged developments that would soon come, it actually described Siegfried Klein’s new ionic loudspeaker.

In the article, Villchur wrote: “Taken all together, the weakest link in the chain of audio reproduction remains the one which seems, to the lay eye, to have the greatest exterior efficiency—the speaker itself.” (“A New Speaker Principle”, Saturday Review, September 27, 1952, pp.60-61) Villchur was particularly disturbed by the distorted and restricted bass that was characteristic of most home loudspeakers. While mulling over ways to improve those characteristics, he had an epiphany: “I thought, Well, what we need is a linear restoring force, one that doesn’t bind, one that allows the cone to move a large distance and brings it back elastically. That’s when the light went on. This linear spring had been there all the time. The cushion of air in the cabinet was exactly the kind of spring I wanted.” (1995 interview with David Lander for Stereophile)

Villchur built closed-box prototypes of what he called “acoustic suspension” loudspeakers, in which the woofer featured a very floppy suspension (compared to those used in horn-loaded or ported woofer
enclosures), and the restoring force was provided by the inherent springiness of a carefully-calculated volume of air. As he had no desire to go into manufacturing, Villchur sought to sell the idea to several manufacturers including Altec and Bozak; none were interested, and some called it “impossible”.

Villchur sought to patent his concept, and not having the money to hire an attorney, prepared the application himself. Years later, the deficiencies of his application caused him to lose a number of suits related to primacy of concept. In spite of that, the application was beautifully written and illustrated, utilizing Villchur’s talents as both writer and artist.

One of the students in Villchur’s night class was an MIT dropout named Henry Kloss (pronounced “close”, as in “close to the edge”). In early 1954, Villchur drove Kloss to the Woodstock house and demonstrated his prototype. Kloss was sold on the idea, and persuaded Villchur to go into business with him to manufacture loudspeakers using acoustic suspension principles.

From that point, things moved rapidly: Kloss (shown below, decades later) owned a loft in Cambridge, near Harvard, where he was already building speaker enclosures for a now-forgotten company called Baruch-Lang. That would be the manufacturing facility for the new company, Acoustic Research. “AR”, as it was quickly dubbed, was capitalized by Villchur, members of his family, Kloss, and two of Kloss’ friends, Anton “Tony” Hoffman and Malcolm Low.

Villchur’s patent was filed in March of 1954, and Kloss did much of the production design for the company’s first product, the AR-1, a two-way speaker utilizing the first woofer custom-built for an acoustic suspension application. Mids and highs—what there were of them—were provided by a Western electric (later Altec) 755 driver. The oldest-remaining AR-1, serial number 0006 (show in this photo) was one of several prototype speakers shown at the New York Audio Fair in October, 1954. The directory of exhibitors in Audio magazine listed the product as “The
Villchur Loudspeaker System", but the nomenclature “AR-1” stuck on production models.

That same issue of Audio (at that point still published under the aegis of the Audio Engineering Society) also included Villchur’s paper, “Revolutionary Loudspeaker and Enclosure”. It described the basic principles of acoustic suspension enclosures, the novel design features of the AR-1, and the overall design of the speaker. The paper’s sub-heading intoned, “The author describes a fundamentally new loudspeaker system whose 12-inch woofw utilizes an enclosure volume of only 1.7 cubic feet, but whose bass performance is claimed to be superior to that of a true infinite baffle installation.” Accidental emphasis to that claim was provided by a Jensen feature a few pages later which showed that company’s mammoth infinite baffle “Laboratory Reference Standard”. The AR-1 was barely the size of the Jensen speaker’s tweeter array.

The new company was in motion, and would go on to cause several major upheavals of the hi-fi industry. We’ll get into more details of that in Part 2.

Sidebar:
About the AR-1

In forty-something years of seeking, buying, and selling vintage gear, I’ve seen just about every rare or important piece of audio equipment anyone can name, and owned many of them. In all that time, I have seen exactly ONE AR-1. Why is that?

For anyone who grew up around audio in the ’60’s and ’70’s, as I did, AR speakers were ubiquitous. As said in the intro, in 1966 AR was the largest speaker manufacturer in the world, producing 1 out of every 3 speakers sold. That was the peak---and the AR-1, introduced in 1954, was the beginning.

Many of those ARs sold in 1966 were lower-cost models like the AR-4x. The AR-1 was not inexpensive:
it was $185 at its introduction in '54, accounting for inflation, that translates into $1630 in 2016 dollars. That's for one speaker, of course, as the AR-1 predated the widespread availability of stereo recordings or equipment.

The AR-1 was not conceived of as an entry-level product; Villchur wanted to produce the best speaker he knew how to build, as a convincing demonstration of the merits of acoustic suspension designs. While often called a "bookshelf" speaker, at a little over 2 cubic feet, the '1 wasn't tiny, but set the standard in non-floorstanding speakers for generations to come.

From the company's outset, Villchur presented the company in a tasteful and artistic manner. His artistic training showed in the logo which he designed, based upon ancient Roman fonts, and the ads he wrote had the conversational tone of one of his magazine articles.

In the Stereophile interview mentioned above, Villchur stated that in their first year of business, AR sold 455 individual speakers (again, think mono). Half were the two-way AR-1 system, half the AR-1W model, which had only the acoustic suspension woofer, to be used with other tweeters (often Janszen electro-stats). The company earned $70,000 in its first year, about $619,000 in 2016 bucks. Not a bad start.

The "tweeter" used in the AR-1 is one of the reasons so few intact systems are found today: it was the Western Electric/Altec 755, a
driver sold as “full-range” for public-address installations. Those wooden speaker-boxes seen on the walls of schoolrooms built after WWII often contained 755s. Starting in the ‘80’s, the 755 gained a reputation amongst DIY audiophiles and fans of vintage gear as being astonishingly lifelike. Back in the day, 755s could be picked up for almost nothing; today, they are alarmingly expensive and collectible, as bemoaned by former Sound Practices publisher Joe Roberts:

I said “tweeter” in quotes above because by the 755 had limited HF extension, especially by 2016 standards. Nevertheless, units sell on eBay for as much as $3,500 apiece, crazy money. The result is that if you ever do find an AR-1, the 755 will probably be missing.

Another reason for the AR-1’s scarcity is simply the passage of time: how many 60-year-old hi-fi components have survived, in general? Not too damned many. So if you happen upon an AR-1--- or even more unlikely, a pair of them--- don’t do anything stupid, like gutting them.

And call me, will you?

**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.
1968

MUSIC TO MY EARS

By WL Woodward

In the new winter of ’68 I broke a front tooth playing hockey. Not the hockey the kids’ sport has morphed into, the organized, life savings-sucking, parents hovering around praying for Timmy to make a goal type hockey. This was disorganized, each kid has a stick that’s been duct-taped 12 times, skates you’d been wearing since you were 11, we got one puck and if it disappears in a sewer we’re going to use your nuts type hockey. Our parents didn’t know where we were, and didn’t care. As long as the phone wasn’t ringing about some escapade and we were home in time for dinner, they were good.

There was this anemic water source called Kettle Brook in the woods behind a neighborhood of rascals. The main draw of Kettle Brook was it was out of sight of any houses. And.. you know who. During the summer we’d dig the ground around the stream into a poor man’s rectangle. In the winter we’d dam the thing up and let nature do the rest. If you helped dig during the summer months you got to play hockey in the winter. That was it, man. No negotiation. This was hockey like all kids’ sandlot sports, then as now. A game to the death.

In the winter of ’68 we lost 147 kids. We all lied to our parents when the phone calls came. Kids get their stories straight before they go home.

I’d love to say that I lost the tooth trying to ram a puck into the devil’s maw, or at least into a buddy’s tool box. Truth was I tripped and fell, leading with my front teeth, playing goal at the other end. What a pultroon.

Our family had a dentist and family friend (always a bad combo) whom I believe never passed his anesthesia boards. I say this about a truly wonderful man, and with only one piece of evidence.

He did me a root canal without any anesthetic. This when I’m already pissed off about Wounded Knee.

Before he started the procedure, crouching over me with a chain saw and a drill I swear I’d seen in his garage, the doc wide-eyed the phrase that would define 1968. “This is going to hurt”.
On January 4 Jimi Hendrix was arrested in Sweden for beating up his bass player. In America, we would have understood. I did some time as a bass player and I needed a periodic beating. A month later the Bee-Gees made their television debut on the Smothers Brothers Show. Now that’s funny.

At the same time the Beatles were recording the white album, a band called Jeff Beck Group released Truth introducing Rod Stewart and Ronnie Wood, and oh yeah, Jeff Beck to all of us.

In February David Gilmore joined the Floyd. So sorry Sid. We hardly knew ya.

On March 8 Bill Graham opened Fillmore East in an abandoned theater.

Ok. So far so good. A little weird, but OK.

In 1968 during the Vietnam conflict, not actually a war thank heavens, some 16,000 American kids and 28,000 South Vietnamese kids died, killing 200,000 North Vietnamese kids.

April 4. Man, April 4. Martin Luther King, the prince of peaceful protest, was gunned down on the balcony of a cheap motel that had never seen a damn ice machine. Later that night James Brown did a nationally televised concert trying to calm the nation. Love you, sex machine. Also that night, Bobby Kennedy, running for President and with some experience in this kind of thing, announced in a cracking voice to a crowd of supporters the news of King’s killing.

“What we need in the United States is not division,” Kennedy told the crowd, “what we need in the United States is not hatred; what we need in the United States is not violence and lawlessness, but love and wisdom and compassion toward one another and a feeling of justice toward those who still suffer within our country, whether they be white or whether they be black.”

On June 6 Bobby was dead.

The ’68 Democratic Convention in Chicago, conspicuously missing RFK and with Richard Daley at the helm, showed everyone around the world how free countries treat their people. Folks, it was so bad they nominated Hubert Humphrey so they could all just go home.

In September after the Yardbirds broke up, Jimmy Page built and performed with a new band, The New Yardbirds. Turned out they were actually Led Zeppelin.

October. Jimi Hendrix released Electric Ladyland. Anyone who doesn’t know who Eddie Kramer is needs to go search him right now. Go ahead. We’ll wait.

The music continued, and continued to grow. R&B was still a gas. Marvin Gaye went yard with Heard It Through The Grapevine. The Four Tops, The Temptations, Smokey, The Supremes, Stevie Wonder, they were all killing it. We’d lost Otis Redding in December ’67 but he was still kicking serious ass with a live recording of the Monterey Pop Festival from the year before.
Deep Purple released a cover of Joe South’s Hush that featured not only a line-up that would define the band for 5 years, but a rare, for pop, susplendic organ solo by Jon Lord. RIP Jon. You made it all happen.

In November Richard M. Nixon was elected President of the United States. I read once about a guy who had his gag reflex surgically removed. That would’ve been nice.

I didn’t know it at the time but 1968 would be the last year that I was right about everything. Nixon was a douchebag and the BeeGees were his back up group. Working sucks. Your parents were working for the FBI. Stuff like that.

But still there were major questions. Were my parents right? Was all this my fault? Can the world recover from Nixon and McDonald’s? What about that front tooth? Am I ever going to get laid?

On December 20 Peter Tork announced he was leaving the Monkees. The world would never be the same.

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.
Interview Daniel Shores

By Lawrence Schenbeck

Three-time Grammy nominee Daniel Shores, senior engineer at Virginia’s Sono Luminus Studios, has worn label-chief and graphic designer hats there too. As a musician, Daniel started life as a classical and jazz pianist and percussionist, then moved to jazz and rock bass, guitar, mandolin and more. He spoke with Lawrence Schenbeck on March 18, 2016.

**LS:** How did you become interested in doing this?
**DS:** Well, my father had been an engineer—he’s a Methodist pastor now, but in a previous life (laughs) he was an engineer, so when I grew up there was this reel-to-reel machine in the house. I remember specifically, I guess I was around 8 or 9, there was a radio commercial my dad was making for a church function and I remember learning about recording it and cutting tape and thinking “oh, this is pretty cool.” A few years later I had a piano teacher whose husband wrote commercials and he had a studio in the house. They were having work done in the front of the house, so we had to come in through the studio; I walked in and saw the studio, and I was just, this is what I want to do. I started listening to music in a different way, trying to figure out how they did it. I remember getting my first 4-track cassette recorder, and hooking up microphones to it, and having one of the early Brother MIDI sequencers that used the floppy drive.

**LS:** Wow, yeah (laughs).
**DS:** Finding all these ways to capture and create music. It always felt like home.
**LS:** You attended Shenandoah University.
**DS:** I graduated with a degree in Commercial Music, which became their Music Production and Recording Technology program. I’m an adjunct professor there now.

**LS:** That’s what they need, people in the field.
**DS:** It’s a lot of fun. I enjoy working with students and bringing a perspective that’s a little different from the academic. I teach the recording practicum, so I supervise students who record all the concerts on campus. There are some great people that teach them to slide faders, but they also have to learn how to work with artists, how to lead pre-planning sessions.

**LS:** It can be a difficult apprenticeship.
**DS:** We’ve got a long track record of helping people move up. Our producer, Dan Merceruio—who was nominated again for a Grammy this year—I actually hired him as an intern ten years ago.

**LS:** Good move! (laughs) You guys are doing groundbreaking work. For inspiration I listened again this morning to In the Light of Air, the highly praised Anna Thorvaldsdottir album you did with her and ICE [Sono Luminus DSL-92192]. It came out in 9.1 Auro 3D.
**DS:** This is a great new technology. We were the first American label to release an Auro 3D album. It literally adds another dimension to the soundscape, being able to immerse a listener in a specific au-
ral environment. Even for projects we never released in surround, we’ve recorded everything in 5.1 or 7.1 since 1996, before I was even part of the company. When Auro 3D came along, it allowed us to provide a new listening experience that, quite frankly, stuns people. Up in Boston this past week, we did a listening event for a new album we have coming out with Skylark, using the full 9.1 system. The [20-voice] ensemble was there along with some other people, about 60 in all. The ensemble had recorded twice in that space—Church of the Redeemer, in Chestnut Hill—and they were like, this is just how it felt to sing there. They knew that room.

**LS:** Many of our readers are diehard two-channel fans. If they listened to this album in Auro 3D, how would their experience differ?

**DS:** All of a sudden they’d start to feel more of the room, and the space in the room. As with all our Auro 3D projects, we set up for that recording with 10 microphones, one mic for each channel as a discrete source. When you listen to the 5.1, you are hearing from those channels exactly what you would hear from them if you were listening to 9.1 Auro 3D.

**LS:** Nothing mixed down from the height channels. And likewise, nothing in the height channels mixed “upward” or derived in some way from the other mics.

**DS:** Correct.

**LS:** Seems like an obvious point, but let’s be clear about it: the height channels are not artificial enhancements, they are authentic additions to the total aural information available to listeners. Being “in the room” like that could be an integral experience for so much music.

**DS:** It’s part of an immersive recording philosophy. We aim for what it would feel like if you were an audience member sitting in the middle of the ensemble and in that room. You’re having a total experience, both audible and emotional. We especially want to convey that additional emotion.

**LS:** Can you talk a little about your work for Steinway & Sons?

**DS:** At this point we’ve done about 20 records for Steinway. It’s been a great relationship, getting to work with extremely talented pianists, varied repertoire, exploring the piano as an instrument in so many different ways. We usually have a rough starting place, the piano in our room with our microphones. Then we go in and tweak the mic positions to match that performer on our instrument, and the repertoire, in our room. We vary between two sets of mics. DPA 4006s are our go-to microphones. We have also used AEA A840s—large, active ribbon microphones—on at least five or six of the Steinway records. And they give a very different feel to the instrument. There’s some repertoire that they match so nicely! While keeping the piano sound open and full-bodied, they lend an intimacy that has really translated spectacularly.

**LS:** Does the artist collaborate in this?

**DS:** Yes, artists will come in, and they’ll listen, and they’ll have different characterizations in the music that they want to bring out, “okay, I really want a strong low end in this piece,” or “I’d like the top end to sound very airy.” Dan Merceuio and I try to translate that. I’ll go out and move things, and he’ll listen, and I’ll listen, and the artist will come back in and listen. We’ve done a lot of piano records, so it’s become a fairly
quick process. But we still take care with every session. It's great to have all the best gear, but our job is to serve the music.

LS: Tell me more about the Anna Thorvaldsdottir project. How many hours in the studio did that take?

DS: (laughs) That was 12 hours, tops. It was one day plus maybe a half of another day. ICE came in and they just—with their concert experience, they just embodied the music. We did a lot of pre-planning for that session, talking about positioning, where they would be sitting, how we would be recording. I mean, the electronic drones and things that are in there? We had speakers in the room, with them, so that was part of the performance we were recording. It wasn't like we added that in on the backside, or digitally somehow.

LS: The ICE artists interact so sensitively with the electronics. One never thinks, oh, that sound is electronic, and that sound is the viola player or the percussionist.

DS: Anna was actually in the room with the performers. She was controlling the electronics. Over the years, we've worked with a number of living composers and it always helps. It becomes, how am I going to make sure we capture every particle of their vision? With the Skylark album we were discussing, Anna has a piece on that as well. She came over from Iceland for that. They also did Jón Leifs' Requiem, so she came over to help especially with the Icelandic language. But by the time she walked in, they had the language thing down. After tweaking a couple of words here and there, we had the luxury of working mostly on the music.

LS: Wait, Naxos just sent me a Skylark album, Crossing Over. And it's got Anna's piece, and other music by living composers as well.

DS: Yes, that's it. [Composer] Robert Vuichard was present at the sessions too. With every piece on that record, the ensemble is in a different formation. For most of the album, they're in a circle around the microphone array. It might be an SATB circle [singers grouped by “part” or vocal range], or a mixed-chorus circle [singers of different ranges standing together], or maybe men in the back, women in the front. Sometimes we would re-balance the ensemble based on the music itself. Still a mixed thing, but kind of a weighted mixed ensemble.

LS: Sure.

DS: And through that we were able to achieve something that elevates the music to a unique sonic
place. This ensemble moves as one; they sing as one. And again, just like with the ICE record, the pre-planning helped. When we walked through the sessions, our producer had already worked with Matthew [Guard], the conductor, and had come up with two different setups for every piece, sometimes a Plan C as well. That album is about the last moments of someone’s life: moments of silent prayer; moments of railing against it, “I’m not ready to go”; a moment of acceptance, and then with William Schuman’s Carols of Death, the actual moment of death in the program. For that, we had the ensemble move to the front in a standard choral configuration, this very singular, forward kind of sound.

Then, with Anna’s piece, which symbolizes ascension, we spread them back out in a circle again. The album ends with the Tavener Funeral Ikos, and we move them again back to the front, because that very eloquent text speaks for those left behind. By moving the ensemble, we tried to give the listener another level to follow along with the story-telling in the music. As an engineer, I grappled with some great problem-solving tasks, like how do we get this person to be able to hear that person, line-of-sight issues, and more.

But the group couldn’t have been more helpful. You know, sometimes it is unnerving, for musicians who have spent their entire career sitting [left-to-right] First Violin, Second Violin, Viola, Cello when we say, “okay, now I want you to be in this corner, you to be in that corner, and you to be over here,” and they go, “what?”

With Skylark, I could ask them to take a two-inch step to the right and a one-inch step to the back. No problem! We could mix, not at the board, but in the room, with the musicians.

LS: Exactly.

DS: And because we’re using this large array of omni microphones, we do have some control, but it’s not as if everything is spot-miked and you can go in and tweak every little element. So we’re positioning the performers and sometimes putting them on a riser, sometimes pushing back, pushing forward, left or right, just to get all the fine adjustments we want in the mix.

LS: Naxos also sent me two string quartet recordings. Were your setups for them simpler?

DS: The Ying Quartet’s Schumann recording was standard configuration, so the rear channels become ambient rears. The Spektral Quartet’s Serious Business, however, is fully immersive. First violin and second violin in front, viola and cello behind you. That album also has an additional element, in that the piece by Dave Reminick is a singing string quartet!

LS: Ah.

DS: So, you have a very cool modern work with the quartet actually doing theatre while playing. It lent itself well to the immersive format. The pieces are all by modern composers with the exception of the Haydn “Joke” Quartet [op. 33 no. 2], which is sequenced right after the Reminick piece. For the Haydn piece we moved the ensemble all to the front, a traditional setup. When you’re listening to the album in surround, you get a fun transition, back to this traditional sound.

LS: Like putting the Haydn work into hipster quotation marks.

DS: I suppose so, yeah.

LS: Earlier, you touched on the skills an engineer needs. Want to add anything?

DS: Two things would be listening, not just being able to hear “music,” but all of the components going on in a session, the artist’s personality, their agenda perhaps, the producer as well, the client if there’s an outside client. You want to make all those elements serve the music. The other is being patient. I know I have the greatest job in the world. But here’s something: my 14-year-old daughter came to a session with us—she actually ended up getting an album credit, because she ran the session as a
recording technician for most of the day (laughs)—and I think she learned what a lot of young professionals have to learn: there’s a lot of sitting and being quiet.

LS: Yeah.

DS: You take lots of notes. After the session is done, a whole new stage of work begins, with editing, tweaking the mix, mastering. It’s like directing a film: success comes down to pre-planning and then acting on that plan, documenting everything. I’m blessed. I get to work with a phenomenal producer. Together we’ve worked 120 records by now, probably more. And, you know, he’s taking his notes, I’m taking my notes, we have a system so we know where the other is going and thinking. We use that teamwork to support the musicians and help them achieve their vision.

LS: You and Dan Merceruio are always handling cutting-edge technology. What do you see lying ahead in terms of that?

DS: Always a hard thing to predict. I do think MQA is an amazing new set of tools. It could revolutionize the delivery of the music. We are hoping to become a part of it, because it has the potential to give people high resolution in a [file] size that is manageable.

LS: Any new projects nearing completion?

DS: I just finished the stereo mix, now starting the multichannel mixes for an album from Ronn McFarlane. He’s an amazing musician, active in several spheres. In the early-music world, he was lutenist for the Baltimore Consort. He’s formed a group called Ayreheart, doing original compositions and interesting takes on traditional things. The new album features the current incarnation of the band: Ronn on lute, Willard Morris, their bass player, on colascione—kind of a large bass lute—Matthias Rucht, their percussionist, doing different frame drums, long drums, hand percussion. Their singer, Brian Kay, is also a blazing lute player. They’re doing great versions of things like “John Barleycorn” but also early-music cornerstones like Dowland’s “Come Again, Sweet Love.” It’ll be coming out in June, all flavors: stereo, 5.1, 9.1.

LS: Sounds like another great recording. In closing, anything else you’d like to say?

DS: I think it’s wonderful that people continue to seek out high-quality recorded music. Whether it’s from us or others doing great recordings, like my friend Morten [Lindberg] from 2L or the folks at Five/Four Productions, Reference Recordings, those who really put their heart and soul into capturing this music and pushing sound to the next level. It’s sad that we have become a society where everyone wants to compress everything down to a tiny MP3. So it makes me feel good to know there are still people who want to rise above the “earbud life,” who really want to experience something. When you get into high resolution, emotion starts to come out. Anything we can do to help is great.

LS: Thanks for sharing your time and thoughts with us.

Photo of Daniel Shores by Jordan Strider
A Trip Down Grand Canyon Lane

By Andrew Benjamin

You began life as an infinitely large boulder. Your life consists of rolling down canyons. Bouncing between the tight walls over the stream that was once a river, you travel inside the Grand Canyon.

Eighteen miles wide and 6000 feet deep. More or less five times the height of the Empire State Building. 1900 miles long! There you are, happily smashing your way through this monstrous primordial crevice in the earth, slamming into the canyon’s walls with sheer abandon grinding your way unrestrained to create as much sturm und drang as possible. You are a hardened soul, granite, sturdier than the sandstone and limestone making up much of the canyon. Your superiority assures your lasting longer than the walls of the canyon.

Your master puppeteer sitting in the crane tries to rein you in with a bungee, hoping you will center yourself and do less damage. “Good luck!”

Being the loose screw (or boulder) you are, you mercilessly continue smashing into one and then the other wall, fragmenting, grinding, peeling and chopping off pieces of yourself and the walls into smaller boulders, rocks, and debris. You run freely and blindly as your master tries to hang on to the other end of the leash to which you find yourself tethered.

The boulder represents the head, the very beginning of the analog replay scheme. It is the stylus attached to the rod “cantilever,” the other end of which is restrained by a rubber doughnut “fixing” the coil and magnet (aka the motor of the cartridge that converts the mechanical motion of coil or magnet to electrical signals.) The Grand Canyon has now morphed into the grooves and walls of your LP.
We should see a clear picture of what is happening in the relationship between the stylus and the walls of an LP’s grooves, now in miniature.

The boulder (the stylus of the phono cartridge) is a loose cannon ball. Being a physical, rather than an electrical object, it has mass, inertia, velocity, and lateral and longitudinal rotation - "flex." The mechanical-to-electrical conversion recreates a poor facsimile of what was embossed (magnetically) on the tape from which the recording was made. Not being massless whereby it can accelerate and stop immediately... on a dime... it cannot operate linearly in concert with the input.

The physical forces of a moving stylus cannot respond quickly enough to the relatively “flexible” walls of the vinyl groove that deflect it and command the conversion of mechanical to electrical energy. Among others, we get time distortion and delays because the stylus’ mass responds to counter-force (the groove’s walls) delayed in time.

Rubber, essentially a spring, is nonlinear – at rest it has more stretch than fully extended. Fully extended, it stores more energy than at rest. In between is the nonlinearity. The nonlinear suspension causes the mass (stylus) attached to it to overshoot and undershoot. The output will now consist not only of a musical signal, but too, self-generated noise.

We reduced the canyon to the macro and micro level of a groove barely visible to the naked eye. Your stylus/vinyl interface is a microscopic equivalent of the gargantuan boulder bouncing down the Colorado River. Its noise and distortion, along with the musical data, will be amplified millions of times by your preamp and amp. Containing many frequencies of music and noise (structural and airborne feedback too), and combinations of all of these manufactured right at the stylus, we should get significant intermodulation distortion of musical data and noise blended together. These distortions exist on top of the music signal and they cannot be removed. And no, one cannot listen “through it.” The noise creates false “air” and space and ambience.

The modern LP playback system has incorporated within its various precision parts massive and he-
roic countermeasures, all of them designed to minimize, counter, shift in frequency, eliminate, dissipate and ground the tiniest of vibrations external to and not generated by the cartridge. It is a wondrous feat indeed, that we extract so much musical information engraved into mere plastic.

Also note, as much as the LP deviates from the master tape, we all have experienced direct-to-disc LPs that sound far better than the master tape and/or the LP cut from tape. Analog tape evidently captures far less of the information than a D2D! Accordingly, the commercial LP is a low resolution medium.

Analog tape and the LP is not the answer to progress for the hi fidelity industry. It is not even the question. Vinyl technology is the same today as it was a hundred years ago. It is arguably primitive and needs brute force treatment to work well; an unreasonably expensive approach to ameliorate its fundamental shortcomings. Improvements for playback have been evolutionary, finite, albeit regular refinements requiring heroic treatment of vibration and expensive precision mechanics to overcome. These solutions were meant to address noise and vibration at the vinyl-stylus interface, and later downstream across the playback platform, speed instability and irregularity, and dimensional changes to materials.

While today we understand the effects of these on playback during dynamic, real time conditions, and too, that we are dealing with a miraculous 100 year old technology best suited to nostalgia, the LP industry exist mainly for increasing advertising revenue for the commercial audio press and the vendors who advertise.

We return to the beginning of the chain – your stylus bouncing here, there and everywhere. With limited physical control over velocity, mass and inertia, wear and tear that cannot be avoided, analog playback is a loose cannonball, a distortion and noise generator with limited dynamic range that cannot, even with heroic contortions, avoid the laws of physics.

To think otherwise is wishful thinking.

The LP’s role is Mission Impossible. As we had just begun our trip down Distortion Lane, a side road to Grand Canyon Lane, one might observe from this trip that it is downhill all the way.

©Andrew G. Benjamin Opinion expressed herein is of the author’s only. COPPER is not responsible for anyone’s thinking out of the box or for bad behavior. AGB has lived a whole life behaving badly and makes no apologies for the world winding up in the condition it has.
ERRATA: In the April issue a senior (unnamed here) reviewer for one of the (unnamed here) high end press whom I respect highly, made a comparison of a (here unnamed) singer’s voice recorded via a (here unnamed) vintage and obsolete A/D converter through a (here unnamed) system at a major audio show, compared it with an analog recording made on another system at another time in another place by another engineer using an unknown monitoring system quite different from the system at the show or the monitoring system for the first recording, and, using his memory of a performance of even another kind of music wholly unrelated to the above played by other artists in another venue far larger than the first above more than two decades ago, declared vinyl closer to the “real thing.”

He ended his impressions with: “Sorry, you digital-philes, but that’s the way it was.”
I bet. I have news for this gent hawking hundred thousand dollar turntables: Analog is nice, very nice, but the game is over. Digital is making technological leaps and bounds while analog is taking baby steps. That’s the way it really is. Moreover it has the potential of sounding far better, more real, and most importantly, more accurate.

I was the one who coined “Digital Sucks” over three decades ago and for that remark, among others, was invited to join the self–same publication. It doesn’t. Digital equipment of decades ago, for example the recording made on a poor quality obsolete A/D converter, would suck even today. Modern state-of-the-art digital not only doesn’t suck, it can, in the words of another senior reviewer from the same journal, wipe the floor with analog. The last used a system for both that cannot be faulted, analog or digital – the same system used by the analog guru of the competing journal. And his impressions were determined at home after listening to valid comparisons for months, changing only one variable – the front end.

The ONLY way I know of to compare accuracy – or a deviation from it - is a direct line, or mic feed from the live musician to two recorders in the monitoring room: one analog and one digital. Compare both recordings to the line feed direct from the musician and you decide.

Andrew G. Benjamin is an equities trader; assessment, tax, and real estate specialist; former transition member of the NYC Mayor’s Economic Development Commission; member of the Subcommittee on Taxation, Finance and the Budget for the Rudy Giuliani transition team; musician in his wayward youth; and author on matters of politics, middle east, intelligence matters, history, culture, humor, and technology. Andrew wrote for The Absolute Sound for a decade and a half, the bible of high-end audio and others like-kind during temporary bouts of a lack of seriousness; and later for Western Free Press, Canada Free Press, American Thinker and others on even less serious matters observing the Passing Scene.
“Come and get this piece of junk out of here!”

It had taken a lot to get Mr. P to abandon his Olive, and throw himself all-in to a new full-blown, hi-res network audio setup. I had gone all-out knowing his love of music, and convinced him that a Linn system was right for him, providing his quality needs, multi-room functionality, and playback ease from his iPad.

Yeah, after all that careful system planning, convincing, and installing it ends with a screaming phone call on a Saturday morning at 9AM: the time when I’m supposed to be enjoying my home theater on my comfortable sofa with a nice, strong cup of black coffee. Alas, it’s not to be on this day.

Drawing on our ten-year relationship of mutual dealer/client trust, I get him to agree to let me come over and take one final look before the ICBMs launch toward my design studio. “What could have gone wrong?” I ask myself as I’m loading my car with any and every conceivable cable, part, and connector I might need, “it was working perfectly on Thursday afternoon.”

When I arrive I’m treated to a particularly glum expression that indicates Mr. P has been dealing with spousal verbal battering (“I told you not to...”) that adds to my feeling of fretfulness. Guess I won’t be getting offered lunch and a beer today. Running through my mental flowchart on the drive over has calmed my nerves and given me a place to start.

I begin at the beginning: let’s see if he just has an internet connection. OK, all good there. Now why wouldn’t the Linn music players be responding? Next, try a full reset of all components. Dodge the dog, hmm another worker here...wonder what he’s doing? Wiggle behind rack #1, squeeze myself silly, finally reach the main power switch, then unplug the unit. Repeat on rack #2 in the bedroom and rack #3 in the dining room.

Still nothing.

Better check out the CAT5 cables connecting up the various components. Hooking the cables up to the tester I recall how this all started: Mr. P’s initial enthralment with the Olive music server system, followed by eventual dissatisfaction. Clunky to use, frustrating to file music by the appropriate genre, impossible to re-tag, slow upload, falls off the server...oh, how badly I wanted to tell him “I told ya so!”

By Anthony Bigler
for not buying the system I sell. Now this...ugh.

Time to plug everything back in and turn it on. And? Nothing. OK, time to check all the network connections. Modem, router, switch – all powered on and all flashing correctly in the right order and color.

Well, back to the basics. I remember from my days of satellite installation to always have a known good cable with oneself. This is a maxim to be strictly adhered to. I hook up my 50ft network cable from the switch directly to his 2-day old DAC/pre, wait for handshake to complete, and...Houston we have music!

This is how it goes: I go and recommend the big, fabulous, state-of-the-art upgrade to my client he’s been dodging all these years. “you deserve it, you’ve earned it” I tell him now that he’s retired. “Imagine superior quality music all over your home, your whole music catalog intelligently curated, perfection shall be achieved!” Part and parcel to the deal I convince him to upgrade all his network components to enterprise-level grade. Something must have happened to the cables routed through the garage, ceiling, and walls to the rooms where the components reside, but what disaster could have befallen them in just two short days? It was working when I left, working yesterday, suddenly the original cable just dies? Doesn’t make sense.

At this point I’m out of ideas and I don’t think anything I could do would salvage this situation anyway. Time to get in the attic and run a new wire on my dime. Why did I get into this field anyway? Oh, yeah, right I love this stuff! I should have just listened to my dad and become a doctor because they...

My thoughts are interrupted by his wife: “Hey, honey,” she calls to Mr. P, “the exterminator wants to talk to you before he leaves.” Exterminator? My mind flashed back to a job years before listening to a client talk to his wife about how rats had chewed through some phone cables. I cautiously offered, “You know, rats have been known to chew through cables.”

He whispers to his wife, wife scurries away, muted conversation drifts through the window from the driveway below. Mmmhmmm...oh, really? “Honey can you come here for a minute?”

His look of consternation slowly gives way to a sheepish grin as he says, “So, uh, would you like a check now?”

Anthony Bigler discovered the sweet spot all by himself, prefers knobs to buttons, and takes his coffee black (just like his audio components). He worked for the elite a/v dealers in the SF Bay Area, including his own custom installation company, before relocating to the middle of the Pacific Ocean.
I have lived in this house for 20+ years. While I love the living space, it is 19' x 37' with a 11ft peak in the open beam ceiling, then tapers back where previous owner installed air con running a ~ 3 x 3 ft enclosure to hide the duct work some 6ft behind the listening position. Making matters even more difficult- both front and back walls are mostly glass, and, on the left side up/down stairs. Did I mention the pickled Mexican tile floors? These handmade tiles are anything but flat, which makes balancing/stabilizing components/speakers difficult. I recently bought 6 sets of Machina Dynamica springs which work fantastic at isolating and balancing components. Just now put a set under my PS Audio Premier Power Plant (behind the main rack)- now that's an eye/ear opener!

My room is suited to high power amps and big speakers, AKA “Budget Busters”.

I have tried many speakers over the years, including HP’s personal Genesis Vs with outboard power amp driving the woofers. Oh, how I miss the remote control of the amp's volume and polarity, which facilitated the enjoyment of polarity-correct music. The best sound I managed was when I had a Kinergetic KBA 75 (class A amp/room heater), which blew up when changing power cords; seems it stored a lot of energy.

My next speakers were Reference 3A deCapos which were terrific, but by themselves could not create
sufficient SPLs in the bass; without that, the music sounds threadbare. I added 2 Sunfire Sig subs, which I never got to reveal their magic. These were followed by enjoying a pair of prototype entry-level Nearfield Pipedreams. After a relationship with that company went south, I soon located a pair of Magnepan 3.5Rs (my first pair) hoping the sheer size of the bass panels would work comparably. No such luck. I added a SVS Ultra sub, but the room really needed 2, at least, which was not in the budget. And me wanting more realistic SPLs to properly couple the music to the room, I cranked up the volume, blowing many fuses and ribbons. Was this an incompatibility between Wyred 4 Sound’s MC 250/500 class D amp, and the Maggies, or...? I had the 250s on the ribbons and the 500s on the bass panels. I did find issues with the Parasound P5 bass circuit, which caused me problems on other speakers as well. They replaced it, no issues in a couple months now, but no Maggies either.

Frustrated, I decided to search the classifieds for different speakers. I got lucky and found a pair of Swan Diva IIs locally, so I could hear before buying. Another terrific loudspeaker overmatched by the room. Frustrated, I got the idea to try using the top end of the Divas with the 3.5R bass panels. The plan to then try the opposite, literally went up in smoke when smoke began rising from the top of left bass panel. I estimated the cost to repair including shipping both ways @ $400+ with no guarantee once back that I could make magic mixing the two.

I decided to put the Divas into my TV system and try my Wharfedale Diamond 10.1s which were on the TV system with an older SVS sub and the Ultra. This meant I could finally hear what two SVS subs would bring to the party. Sigh, I couldn’t get a good blend between the 10.1s and subs, so, I began yet another classified search. I came across an ad for brand new Anthony Gallo Classico IIs. Turns out he bought up the remaining inventory and was selling the Cherry cabinets, MSRP ~ $1300, for $399!

After breaking them in on my tv system I moved them to the main rig. Thanks to the Parasound P5 preamp’s built-in bass control circuit I am able to blend these quite well. However, the mylar ribbon combined with no crossover is extremely revealing, and I think I am hearing cold hard edge in my pure silver interconnects, which were great when I had a tube front end. I have one pair of PS Audio ICs (copper) that helped. Fortunately David Salz (WireWorld) is an old friend and let me borrow 2 pair of XLR cables.
I just replaced the silver 1.5m pair with WW 2.0m, which listening to JVC XRCD Gold Tina Turner’s Private Dancer, which has always sounded hot and dry on a wide variety of CD players, as it WAS last night with the silver XLR from pre to amp. This prevented me from cranking the volume.

I went upstairs after cut 9 and listened to that cut again. This is a huge step forward in fleshing out the sound stage as well as the musicians and instruments on them. After 3 cuts I replaced the PS Audio interconnect with a WW one meter pair. Listening to the opening of Private Dancer, Tina let’s out a sigh, which describes what I feel. This pair of WW interconnects is as magical as a pair of interconnects can be.

Perhaps before replacing speakers and components, interconnects/speaker cables is the place to start.

As good as my system sounds now, I think the amp is its Achilles Heel, keeping me from attaining a higher level of musical bliss.

Hey Paul, how about a BHK Junior?

Robert Hart has been interested in audio since 1967. His first credit-establishing purchase was a stereo system.

After the Air Force he worked in audio retail, and in the early 2000s was a partner in Audio Tweakers, selling high-end audio components. He then started a company called Vitality Science in 2008, making his own all-natural, human grade, supplements and remedies for Cats and Dogs sold through vets, retailers, and direct on line.

To this day he remains an avid audio listener, now choosing to minimize his audio investment. His current system plays much bigger than it has a right to.
Upcoming

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Duncan Taylor
WL Woodward
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Haden Boardman
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MQA
Mr. Dithers
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Prince: In the beginning
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