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POSITIVE FEEDBACK

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Brutus, the All-Analog(ue) Dog

Out of Phase

Peter Manchester

Back to the 60s one last time.

It's 1962, and I was running AR-3s with Dynakit PAS-3 and Mark IIIs, the AR turntable, and godnose what cartridge—if the Shure V-15 was out yet, that would have been it. In addition to my friend Bob with the hotrod ElectroVoice Patrician (and a '53 Studebaker with a 45 under the seat; think smalltown rural and you've got the picture), my search for Fi in those days was also shared by Dan and Jerry, who over the previous several years had been adapting the appliance store they owned in the direction of a real hi-fi dealership. You couldn't get too far out ahead of your market in those days, away from the big city anyway. So their components demo room was relatively small, compared to the main showroom floor with its Magnavox and Fisher consoles alongside the refrigerators. But by 62, they were getting to be a big success, enough so that when Jerry married and decided to build a new house, plans for a dedicated listening room were built in from the start.

Now where Dan was the technical person, Jerry was basically into furniture. Not surprisingly, the top of the line speaker in the components room was the JBL Paragon. This was a huge piece of furniture, about ten feet wide, featuring a convex curved wood dispersion mirror in the center, toward which horn treble drivers aimed from bass horn openings at either end. The design idea at the time was to provide solid center fill in the stereo image, but it was also moderately successful at providing genuinely wide dispersion—certainly in comparison with horn tweeters straight on. I hesitate to think about what it did to phase information and overall linearity of response, but it did give music some 'size' when that was called for.

And that was clearly the one defect of the AR-3s that I couldn't wave aside, even at the height of my bedazzlement with them. They just couldn't seem to push the music out of box, even with stereo. Nevertheless, after my AR-3 "ate" Bob's Patrician on bass range and low distortion, Jerry got interested enough to stock them in the store, and Dan came up with an idea. For Jerry's new listening room, he designed a custom Paragon-like refractor, but several feet wider, with two AR-3s at either end, one facing out direct, the other facing into the refractor. Each speaker had a 70 watt Marantz amp to itself.

So what did I think? Let's just say the effect was gargantuan. Music had size like King Kong, striding through huge puddles of bass energy. Overall texture was...what shall I say? Thick. Very, very thick. This was not the direction forward.

I checked out of the hi-fi story at about this point, for nearly twenty years. But I certainly didn't move away from sound. Graduating from college in 1964, by 1966 I was living in San Francisco, where my old college roommate, a guitarist named Jorma Kaukonen, had joined a band named Jefferson Airplane. The rest, as they say, is history. For five years I was a charter member of High Psychedelphia, that strange city whose temple was the old Fillmore, and later Winterland (RIP Bill Graham). Weekend nights would find me hanging out backstage with the Airplane and the Dead, taking in nearly all the music that came to town. The first time the Who toured the U.S., I remember standing in front of the stage at the Fillmore—a small room by today's rock concert standards—contemplating the two tallest stacks of large speakers I had ever seen. "Summertime Blues" did things to me from which I have never recovered, like the rattle in my left ear that I still get with high pressure levels.

Through the 70s and into the 80s, the standards of amplification and speakers for live electric music rose dramatically, but we are clearly not talking about high fidelity here because fidelity of any kind is not in question: the goal is the pure production of sound, with distortion itself one of the colors of the palette. Nevertheless, some aspects of that phase of my musical experience continue to shape what I listen for in home reproduction. Pop music remains an enthusiasm with me, so a capability for truly unconstrained power is an obvious demand. But the biggest way in which the electric bands changed me was in my responsiveness to the spatial qualities of musical sound. It is hard today to recover the novelty of the experience of finding oneself among hundreds, later thousands of people, caught up together into the Big Now of an electric band that has found the groove. No way to talk, no attention left over to invest in any sensory field other than hearing (and dancing). I learned how to become interior to music, through the sheer physical fact of being enveloped in an ocean of sound and the shared exhilaration of thousands.

I am not so crass as to fail to realize that live music of every kind has awakened people to that ecstatic interiority. I've heard the Boston Symphony in Symphony Hall a number of times, and both the Main Stage and the Recital Hall here at Stony Brook have excellent acoustics and bring in fine ensembles of every scale. But I will admit that having come to music in the first place through home stereo and then live electric bands, I don't any longer have the devotion to absolute timbral accuracy as THE measure of musical reproduction that I once did. In that dimension, the gross coloration that speakers used to display is hard to find any more outside of department store 'component' stacks. Speakers continue to make very different impressions, but I find that their spatial differences are the most striking, and for me the most decisive for musical enjoyment.

Reflection on the spatial dimension of reproduced music has gotten hijacked, I would argue, by an essentially OPTICAL consideration of 'the stereo stage'. By that I mean such issues as the distinctness and stability with which voices or instruments are localized—between the speakers, or even more exciting, to their outside. Plainly this is not the only contribution of stereo to musical realism. Otherwise multitrack recording, with one mike and one channel to each instrument, and one speaker for each in playback, would be the ideal. Most of us have long since learned to dislike the technique in which this ideal is approximated by panpot synthesis of a stereo stage. But we still tend to be beguiled by systems and speakers whose principal achievement in regard to spatiality is this kind of optical accuracy.

A mathematician friend who lives next door plays Viola da Gamba, and I remember my astonishment early on in listening to him, discovering that in his largish living room, eyes closed, the apparent location of the sound source would wander all over the place. In certain registers the effect was nearly ventriloquistic. The same thing happens with orchestras, unless one is very near the stage. Horns are often very diffusely located; brass vaults up into the air over the orchestra; string choirs can slide around or seem to have no definite location at all. The power of vision to fool us in this regard is very great. In live performance of acoustic instruments, we integrate what we hear into what we see so completely it takes discipline to learn to listen only. Sitting in the sweet spot, on center between two speakers, holding our head real still so as not to jostle the illusion, it is all too easy to think we are experiencing musical accuracy, just because the array of apparent locations is so nicely and symmetrically distributed with respect to the seen location of the speakers.

What is musically called for is individuality and clarity of lines and voices, not necessarily their geometrical location. A

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Critical Reception

Scott Dorsey

All sorts of things are new here.

First on the list is the discovery of stampers for the special Westinghouse recording of Benny Goodman, performing at the 1958 World's Fair in Brussels. Unfortunately they are in terrible condition, and probably unrestorable. I have a sample pressing along with it, but that too is rather badly damaged. I'm still doing research on this stuff.

Another new thing is that I received a promotional copy of a new rag called *The Audio Critic*, which was distributed *en masse* to a huge number of audiophiles. If you got yours and threw it in the circular file, go grab it out and take a look at the article on cables. It's well reasoned, and while I think the plots shown are rather poor (since they change the vertical scale repeatedly), but the rest isn't bad. I don't know if I am going to give my subscription money to these guys, but I am definitely thinking about it.

I also had a fellow drop into my office and give me a Bell and Howell 16mm projector, model 302. It was brand new and in the box, with a sticker saying that it had been manufactured in 1962. Regretfully, however, it had a very noisy sound system, with no highs to speak of. I pulled it apart and found a phototube, and a 12AX7-based amp.

Figuring the problem was with the amp design, I routed the output of the phototube to a mike amp and gave it a listen. Not as noisy, but still lacking highs. Most of the sound heads I have used were built around selenium cells, which don't seem to be easily obtained any longer, so I am being forced to learn about photodiodes and silicon blue cells. I've been fiddling with a couple prototype cells which have been minor improvements, but rather nonlinear. I'll probably mention this in more detail in a future column, when I get the thing working and my girlfriend quits bugging me about all the projector parts in the middle of the living room. It's on the list, along with fixing the tapecaster, getting my film editing stuff up to snuff, and installing new disk drives on the home computer (a DEC VAX 11/750).

Letting the Rock Roll . . .

But, gentle readers of mine, I am indeed going to let you in on a secret that I share with very few. I have a personal obsession with '60's rock music. I know, it's wrong, and I'm good about hiding all the Beatles bootlegs far under the piles of junk in the bedroom where no one could find them without moving the 35mm film recorder, an exercise in patience all to itself. Seriously, I don't have many recordings, at least when compared with the amount of classical and jazz stuff, but I do have a few. One of the ones that I do have, and have always loved, is the original cast album from *Hair*. I've got the 1968 original issue, and it's not in the best of shape. It's a bit worn and a bit scratched, and the sound quality of the recording was never spectacular in the first place. So when I happened into a CD store and saw a CD reissue, I was pleasantly surprised. A couple of years ago, I had read the December '88 issue of *Audio* magazine, which had an interview with Rick Rowe, who did the digital restoration, and remembering that, I immediately purchased the CD.

I got it home. I put it on the modified Phillips deck. I played the first track. And I could feel my guts tightening up inside me. It was awful; the vocals were nothing short of clipped, and the instruments were strident. I was utterly horrified, and I got out the original recording to compare it, suspecting that perhaps the record wear and loss of high frequencies had caused me to not notice this effect. It just wasn't there on the original record, but a lot of other low-level details were. Sounded like a noise gate had been used to remove tape hiss from the remastering, and it had removed a bit more.

Thanks to our esteemed editors at *PF*, I was able to get a copy of the *Audio* article (and damnably near press time too, I might add). The attitude of Mr. Rowe is rather interesting, and worth discussing here. I wish the entire article could be reprinted alongside this, but barring that I'll just make a few points.

The reissue really is a complete remastering and remixing, beginning with the eight-track master tapes. Mr. Rowe rightfully deplores the right/left/center/nothing in-between mixing techniques that many records of that era were plagued with, and attempts to correct this by potting to what he considers more appropriate positions, and trying to obtain a more live effect than the studio ambience of the original issue.

So far, so good. At least, if you look at the recording as an attempt to recreate an experience (which Mr. Rowe does, and perhaps rightfully so; since he has seen the stage production several times, he should be as qualified as anyone as to how to do so).

However, if you look at the recording as a historical document on an acetate base, his alterations may not be particularly beneficial. This is a minor difference in the way of looking at things, and I could understand either viewpoint without difficulty. The way he attempts to remix the recording, however, are not--umm--historically accurate. We are talking about use of the Aphex Aural exciter here. We are talking about the heavy-handed use of noise gates. We are talking, my friends, about fake reverb generated by Lexicon equipment. Also mentioned is a noise reduction system "similar to NoNoise."

Whatever was used, it probably was used a wee bit too much. Now, we should point out that the condition of the original tape was pretty bad. From the description in the article, the distortion was quite high, and some serious fiddling was needed in order to play sections of tape. Flaking oxide, curling acetate bases, and folding tape are not conducive to good sound quality. Mr. Rowe describes spraying flaking oxide over the head in an attempt to reduce the distortion (and no, I don't really believe this either, but you'll have to read the original article for details).

As he says "This is my idea of what the show should have sounded like, had I been the producer 20 years ago. The one rule was that there were no rules. Whatever I had to do, I did—even if I had to bring someone back from the dead. I'm not really interested in the historical value of this piece of acetate. I can't be concerned about that and with rendering a new product." And my only reply is that I didn't want a new product, and that it's a shame that the

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Manchester - Continued from p. 20

presentation, not a representation. I have heard the old Robert Johnson recordings playing on a portable in the next room and found them completely compelling. And I have heard systems that were altogether equal in power and timbre to Brahms or Mahler or Richard Straus, but that confronted me with the music rather than letting me into it.

My encounter with music was electric from the start. The groping of the 50s and 60s toward reproductive accuracy with acoustic instruments was blown away in my experience by the explosive outbreak of electric performance in the late 60s and 70s. As I listen and choose among design approaches to home sound at the end of the century, I find that I want it all. I want contemporary synthesizer Europop to come across with the same conviction as some Bach flute sonatas or a Beethoven quartet. Reggae with the same authority as Shostakovich.

It's got to be possible. Music is music.

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VTL: The Magic of Tubes

Out of Phase

Peter Manchester

David,
I had planned tonight to write you a note explaining that I had nothing for you. Between the time you called and this weekend I picked up an assignment that used up all my time; a colleague needed access to a discussion that was only available in German, which she didn't read: ***Das Kultbild im Ritus des Esoterischen Buddhismus Japans***. I don't do art history, but the material was very proximate to what I do do (manifestation and occultation), and I got engaged.

Finally I was left with an hour and nothing to say, but I ventured some musings anyway. All I could think of was that paragraph from last time when I talked about knowing Jorma and hanging out with the Airplane,[1] from that letter that I told you to use. So I let myself be drawn back to those times and made the paragraphs that are attached here.

You're the editor, buddy.[2] I am not hungering for publication about any of this, and I don't think I am any kind of expert on anything relevant to most of your readership. Leave me blank for a quarter if you like and I'll be happy. But I don't want to send you nothing, even if it goes no further than you.

OK, fi fans, our local leader and cauldron of enthusiasm David Robinson is putting together another issue of this journal, whereas I am flying off to the Caribbean tomorrow. He made the fatal editorial error the other week of letting on that he had more stuff for last issue than he had space for. With someone like me, that's an open invitation to duck out. I have pretty much told all the war stories from the Early Days that seem likely to be of general interest. As to these days, I am quite uncertain how far I am really here. I continue to be a devotée of my Shahinian Obelisks, especially after having upgraded this summer to the current woofer and network, but after that I am running medium-grade standard issue at best: NAD CD and amps, a Denon 3-head cassette deck, a B&O turntable and cartridge. Heavy hardware store wire to the speakers, and factory interconnects throughout. I'm a perpetual 386 person in a 486 world (though this Seiko Multisynch sure is pretty with a SpeedSTAR plus).

David is trying to incite me to talk psychoacoustics, and to mention recorded music that I like. Psycho-acoustics. Hmmm. In my professional work I have perpetrated a certain amount of philosophical phenomenology, mostly in the area of the physics and logic of time. But somehow I find myself resisting any pretentions to wisdom about a discipline that, if taken seriously, requires not only experience with equipment utterly beyond my own personal experience, but a decent basic familiarity with a professional literature and discipline of experimental design that I simply do not have.

But the term itself: Psychoacoustics. Puts me in mind of "psychedelic"--and that is a whole 'nother story.

I see from last issue that other contributors to this archive know who Stanley Owlsley was, and know that he is not legendary merely for his application of Voice of the Theatre speakers to early Grateful Dead outings. There was a remarkable symbiosis of technologies in San Francisco from 1965 through 1967 that was simply AUDIBLE in the music, and I will admit to still being fascinated by how all that worked and why. For me, the breakthrough listen was one sunny afternoon with special powder in the pipe when my circle first heard "Between the Buttons" from the Stones. This was the British release, which included "Back Street Girl." Another big hit in those days was the Regal Zonophone first release of Move, "The Move," which included an absolutely titanic execution of wretched excess in the final cut, "Cherry Blossom Clinic." And of course that was when "The Doors" appeared from Elektra—and then, to keep us all honest, Dylan's "Blond on Blond."

This is going to be a short one—after all, poor David IS strapped for space. But maybe my problem finding something to say for a general interest high-end audio group has some relevance. I am increasingly less able to invest myself in generic matters of audio system design, as distinguished from quite specific musical experiences, live and recorded. I remember hearing Gary Davis toward the end of his life on a garbage soundstage in Marin, singing to a guitar accompaniment he could still hear and his hands follow, but that he could no longer execute. We had to listen everything up for him, and we were damn willing. I remember—to change the frame quite drastically—the first time I heard Patti Smith ("Easter") and my first encounter with Kate Bush ("Live at Hammersmith Odeon").

By temperament I'm a fan, and that means that I have basically no capacity for critical judgment at all with respect to disinterested technical questions. I spent a decade dealing with the question, "Is this cartridge sweeter than that one?" Ortofon, Grado, ESL, Pickering, Shure. There was a strain-gauge design whose name I simply can't come up with, an application of NASA technology. It was basically a ceramic cartridge, except that instead of generating current piezoelectrically, the resistance of the ceramic varied linearly with deformation. VERY linearly; the original application was to instrumentation. In cartridge application, an external voltage was modulated by the varying resistance and the AC sent to the preamp. Line level. Lord, that thing was sweet—for three months. In mechanical application, the concept worked. But at audio frequencies, the crystal structure changed before long, and the thing became hideous. I still have the power supply.

Meantime, my brother had played me "Highway 61 Revisited," and my friends had made "Surrealistic Pillow." That's the stuff that stays with me.

For now I'm out of here--got to catch some sand in the Virgin Islands . . . .

[1] *See the* **Reverberations** *section for this letter, belatedly printed.*
[2] *My eyes, head, work load and lawyer all agree with you . . .*