September 13, 2010

“Louder is Better – A Classical Marketing Fallacy”

Dear Jeanne,

Thank you for your reply.

The reasoning you offer for WXXI's "Rochester"-style audio processing is fallacious. You apparently believe that if only WXXI is loud enough, people with little or no interest in classical music will start listening. May I suggest you make your station more attractive to such folk by adding rhythm tracks to all that you broadcast? Attached is a sample of the engaging work of the Trans-Siberian Orchestra playing Beethoven, incorporating explicit rhythm. It is already 100% compressed for steady excitement (an oxymoron not comprehended by those who seek it). Hopefully Management and Operations will excitedly rush to confer with Programming, now that such efficacy stands revealed. [File also available at http://sirhute.com/how-to-attract-new-listeners-in-the-rochester-market.mp3 ]

It is misguided for WXXI-FM to believe it is "competing" in a "local radio market" and so must process its signal accordingly. Very MBA; very unlike the real classical radio world. Your station uniquely serves its own (classical) market-by-definition. It does not and cannot compete with the plethora of stations trafficking in loud simplistic sounds and explicit rhythms. WXXI's market is comprised of _classical_ listeners. It is not comprised of _all_ listeners. Your mission statement should in part be to acoustically emulate the huge number of presently better-sounding _classical_ stations all over the world and available streaming on the Internet.

The Syracuse and Canadian classical stations to which I've referred do not process their signals "according to [their] local market," to use your phrase. They process according to the >product< they offer, i. e. classical music, and for their de facto market, i. e. people who like classical music.

With respect, Jeanne, you seem to have missed three important points:

1) Syracuse and Canadian classical stations are purposely less pushy than are the non-classical stations in their proximate but irrelevant radio "market". How can they so dare? Answer: Because they know they are NOT competing. (The exception is the rather pushy CFMX at 103.1 which has a fair amount of interspersed commercial advertising and is no doubt acoustically beholden to its advertisers.)

If WXXI's audio processing is "actually quite minimal in comparison to other stations in the Rochester market", well great, but irrelevant. It is not elitist to note that WXXI fills a specialized niche that is unattractive to non-classical listeners. Or to note that loudly cranking up the volume of your "unattractive" sounds will not attract those previously not attracted. But doing so does make _lovers_ of classical music vaguely uneasy for inchoate reasons that most of us do not take time to assess. For classical Rochesterians you are the only game in town. How much more might we enjoy your broadcasts? Apparently we'll never know. But we lust less for your services than otherwise we might.

2) A scan of classical music stations across the Nation and on the Internet evidences broad consensus for relatively non-distorted presentation of classical music in this 24-bit 96 KHz (or greater) digital age. WXXI, believing that it is in competition with pop music, distorts its classical music in a pop-music fashion. Pop music is purposely distorted at the mixing console, and listeners to such music are acclimated to a product with exaggerated impact but largely without nuance, depth or dynamics. Subtlety is not the name of that game. Overkill reigns supreme. Such music is not meant to be _listened_ to; it is meant to be poured over passive _hearers_. At worst it provides a sort dystopian soma experience and at best it offers sexual-psycho-political commentary which arguably is creative,
fun and useful—but which is not at all subtle, and which utilizes only about 15% of the richness actually available within the art of music.

3) WXXI is missing a golden opportunity to locally represent music at its most evocative (at least over the air). Your insular head-in-the-sand remark, "WXXI is a ROCHESTER radio station and will continue to operate that way," is nothing if not sad. I guess Rochester just can't expect all that much from its very own classical station, as compared with the larger universe of 21st century classical broadcasting. A pity, because in so very many ways the entire WXXI operation is deeply praiseworthy.

All the above said, WXXI has recently made some audible changes for the better. I literally fear to say too much, almost expecting contrarian moves on your part. Your sound keeps shifting, even within a given day.

Here's what I've noticed:

--Overall the compression has been less severely obtrusive than it was a month or two ago, and than it has been historically. But there's a ways to go yet. Your basic audio (before overkill in modulation level, equalization, and compression) is at times quite lovely during the daytime, sounding like the 24 bit 96 KHz or greater audio chain it probably is since HD. Also very recently your engineers finally got the delay line dead on, so that if the HD signal drops out in this semi-fringe area the analog signal is synchronized give or take a few milliseconds. Historically there was always quite a bump during the switchover from a weak HD signal to analog--with about a full second of repetition.

-- On the Monday or Tuesday (I think it was) following my previous letter, the earliest music on Brenda's show was distinctly less compressed, and less loud and pushy than usual. It compared ballpark favorably with the sound levels and sound quality of WCNY. It was also distinctly better-sounding than had been the music on the overnight satellite feed immediately preceding Brenda.

--Subsequently however, there's been a slide again in the direction of more compressed pushiness, plus an increase in your broad 'loudness compensation' peak in the 100 Hz to 200 Hz region. Such a frequency hump would be expected of a station that considers itself a provider of background music, of 'wallpaper music'. For many decades stereos have incorporated "loudness switches" which compensate for the ear's loss of lower frequencies at the softest levels of sound by boosting them, making the music sound 'warmer' and 'closer'. This is how WXXI often sounds. Too warm and too close-up.

WCNY "Classic FM" manages to convey acoustical 'depth of field'. WXXI commonly conveys a warm close-up pancake. If you drop a heavy flat board on a filigreed sand castle at the beach, and then set aside the board and lean down with your nose a few inches from what's left, you find a pile of sand identical in composition and volume with the castle but now squashed into something less interesting. This is what WXXI-FM at its worst does to the music.

Are your engineers still tinkering? Occasionally there is a degree of daytime improvement--lower modulation levels and some actual depth of field. Seems like I've noticed this on Chris Van Hof's show. Do your announcers have input per segment? Tinkering notwithstanding, the music is often still _shoved_ at your listeners with a warm pancake proximity effect. At its worst there is no perspective, no depth of field, and no relief.

With excessive modulation levels and excessive compression, those musical elements which provide lushness of tone color and a sense of spaciousness are constrained. This is because most of the acoustic power in music resides in the lower frequencies, while delicacy, filigree and directionality/depth cues reside in the upper partials. Compression is triggered by the greater acoustic power of the lowest-pitched loud sounds, not by their upper partials. While vital to the full musical experience, the upper
partials are much less powerful than are the fundamental pitches that trigger compression. So those delicate upper partials are continually lost. As a result the sound of the music becomes, from a tone color standpoint, more bland and more boring. It also becomes more close-up warm pancake-like, without the depth of field always available on WCNY. Again, this problem has recently lessened, but you still sound louder and excessively warm/close compared with WCNY and other respected stations.

This morning Brenda's material sounds pretty badly squished, alas. Switching from WXXI to WCNY, it is in comparison (as ever) as if the curtain instantly goes up on a deep stage in a spacious European hall. A listener's WXXI-compensatory tension sloughs off with a sigh of relief. WCNY's music is plenty warm and plenty loud, but not pushy.

Ah! Here's a possible clue. Bill McLaughlin's "Exploring Music" spot just sounded as bad as everything else! Far worse than does his actual program. Go figure.

I respect that you have other things to do, Jeanne. But the reason this discussion has not been put to bed is that you continue to offer a fallacious rationale for WXXI's "Rochester"-style audio processing. So far you have "clarified" only that business-as-usual reigns supreme at WXXI-FM and that the excuse for business-as-usual is the uniquely insular "Rochester" outlook that audible excellence for excellence' sake is inadvisable next door to WBEE. This anti-excellence game plan differs egregiously from all the other truly excellent aspects of the WXXI operation. To be fair, for some reason you have not mentioned the tinkering that has yielded improvements in the daytime sound, making it discernibly better than in the recent past--but still not at full potential.

Being "in agreement" with a Corporate Status Quo is easier than is individually rethinking a situation with an open mind. Often in such corporate situations one outspoken person is 'followed' by others (even by others higher up in the corporate structure whose considerable management expertise has never required that they trust their own ears. Do "Management, Operations and Programming" (um, 3 people?) have any time for Listening?

Have "Management, Operations and Programming" made a direct A-B comparison with "Exploring Music" as broadcast by WCNY and as constricted by WXXI? Have you? You have never addressed _at all_ this simplest and most telling of suggestions, which I keep repeating in each email. Has anybody in "Management, Operations and Programming" actually _listened_ to WCNY and _then_ determined that WCNY would be a failure in Rochester? Or have you "all agreed" that you just don't feel like taking the trouble to engage in so simple an act which ultimately could so benefit your listeners?

Good grief, what if you guys discovered that you _liked_ WCNY? The Corporate sky might fall. But we'd end up with more headroom.

Sincerely,

Bob Laird

315-483-0523 Sodus Landline

585-738-2320 Verizon Cell

Skype and Google Talk: sirhute

Dear Bob,

Thanks for writing again. I thought my previous reply had clarified the reasoning for our approach to audio processing, but clearly that is not the case.

After your last email, we did an evaluation of our audio processing, which is actually quite minimal in comparison to other stations in the Rochester market. WXXI management, operations and programming are all in agreement that we must process our signal according to the local market, not in comparison with Syracuse or Toronto. I'm sorry that you do not like what you hear, but WXXI is a ROCHESTER radio station and will continue to operate that way.

I hope this closes the discussion.

Jeanne

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Jeanne Fisher  Vice President for Radio  WXXI Public Broadcasting  Rochester, NY  jfisher@wxxi.org

wxxi.org

August 30, 2010

To: Jeanne Fisher, Vice President for Radio, WXXI Public Broadcasting

Dear Jeanne,

Clearly I have not gotten through to anyone about WXXI's overzealous compression. We don't know each other, and I mean no disrespect, but in order to save time I'll be direct rather than flowery.

What you are apparently missing is that we humans are affected subliminally by negative stimuli even when we don't consciously recognize that it is going on. Stress is a perfect example, and you are
stressing your listeners. If your rationale for extreme compression is that of attracting and keeping listeners, then you are misguided.

WXXI is incessantly louder and pushier, phrase by phrase, than is any other of the several classical stations available over the air in Sodus, NY, or of the many streaming online. As we've discussed, compression is necessary. But WXXI takes compression to an unnecessarily stressful extreme. WXXI intersects the emotional peaks and valleys of the music in the manner of a "Flatland"-style plane. All vertical perspective is removed, and listeners are left with a planar event that is merely either/or: Either sound-at-one-loudness or no-sound-at-all. Only according to changes in timbre may the listener guess at what is really happening expressively/dynamically in the music. Indeed your current compressive overkill is such that fortes are actually being transmitted *slightly more softly* than are pianissimos through mezzo-fortes, with only the fortes' brighter timbre left as a clue that the composer, conductor and orchestra had intended and had executed a forte.

The result is stultifying. It is stressful to your listeners to have to subliminally compensate, phrase by phrase. It is not entirely unlike the twanging of a jew's harp ever at one volume level and variable only in harmonic content. One waits ever poised for a moment of relief from the wall of sound wherein a solo instrument is always ramped up to a level equally loud or even slightly louder than is the full orchestra when the latter enters and gets squashed and squeezed out to your antennas. More's the pity because the basic *sound* of WXXI is generally musical, if quite pushy and utterly without any depth perspective.

It is not elitist to ask WXXI to serve the music as well as do its brethren in Syracuse and Canada. It is not elitist to ask WXXI to recognize that its lifeblood and raison d'être is a genre of music in which part and parcel there is inherent dynamic range and there is inherent acoustical depth perspective before those elements are wrestled to the ground by your station--apparently in the name of grabbing a few listeners from WBEE. What folly! You are selling your classical birthright (or at least offering to--who from 92.5 is buying?) for a mess of pop porridge. Far beyond the necessary and acceptable compression one hears from Syracuse and Canada, you are killing the music you broadcast by pretending that it is other than it is, lesser than it is. You are dumbing it down in order to make a bigger splash. That is simply dishonest. Further it impedes the possibility that a person unfamiliar with classical music will understand (subliminally at first) why WXXI exists at all. 'More of the same' is about as uniquely attractive as is McDonalds at the Louvre.

People who are subliminally disaffected with any circumstance are neither attracted nor retained by that circumstance. You want to attract and retain listeners? Then puh-leeze touch base with WCNY's just-retired Vice President of Technology & Operations John Duffy. Learn how and why their three classical FM stations are successful even though they are *purposely* not quite as loud on the dial as are their myriad non-classical neighbors. Could it be that WCNY owes its success not to competition but to dedication?

Clearly you and everyone at WXXI-FM are dedicated to classical music and to your listeners, and I am grateful for that. But within dedication it is possible to be misguided.

"If it ain't broke, don't fix it"? How can you be sure that just because extreme compression has for decades been the local, insular status quo it ain't in fact broke? Listeners don't ask you to fix it, because they know neither that you easily could nor how marginal is their present experience of the music as trammeled by WXXI. For many a two-minute comparison with WCNY would be enlightening and refreshing. Although the difference is clearly audible 24/7, the nightly 7 pm simulcast of "Exploring Music" makes for an ideal comparison, and is worth a drive east within range of both WXXI and WCNY (although you can hear the compression difference equally well online).
Have you yourself made the comparison, Jeanne? I'd be grateful for your answer.

Sincerely,

Bob Laird


Reply to Jeanne Fisher:

August 12, 2010

Dear Jeanne,

I'm sorry. Thank you for yesterday's email, and for your previous reply via Brenda's blog.

You are right, I did fail to see your reply on the blog nine days after I wrote. Did not even realize my initial comments had actually been approved and posted. I'm not a huge blogosphere guy; I'd somehow missed the "comments" link under "Glimmerglass".

Just yesterday morning I unleashed another email to poor Brenda, with a bunch of Cc's in frustration. I did not have your name at the time. It looks like our emails of earlier today crossed in cyberspace, and/or I failed to check my inbox at the last minute before sending.

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Now that I've heard your rationale for WXXI's severe compression, please allow me to clarify:

The question is not "to compress or not compress". All stations compress to some degree and always have, for valid reasons--some of which you cite. The question really is, "How much harm may we inflict upon the music via compression in order to make our station sound exceptionally loud and powerful?"

WXXI's modulation level and degree of compression is truly excessive. WXXI (and WRUR) jump aggressively off the dial as one tunes past. And they aren't just louder—they also sound bad. They shove the music out AT the listener. Thus little or no opportunity is allowed for a listener to catch his breath with interest and become actively drawn in to the music, rather than passively inundated by it.
In Sodus we receive four and occasionally five or six classical stations over the air. WXXI's audio always sounds the loudest of these, by a good 3 or 4 dB. Its audio also sounds mushier and more nearly opaque (for want of better descriptors). The exception is CFMX at 103.1, which sounds about as bad as WXXI, although it is not quite as loud-sounding.

On the other hand, CBC Radio 2 at 103.9 is a model of glowing clarity, subtlety and power. It sounds every bit as vibrant and lovely as does WCNY "Classic FM" 91.3 in Syracuse. These stations consistently sound like real music, rather than like the excessively-processed amalgam of tune and technology that WXXI constantly pushes out.

Of course there are also tons of classical stations available online, as is WXXI. An interesting exercise is to open WXXI's stream in one browser and then in another browser listen to WCNY, or to some other classical stations via the revolving links or the search bar at http://radiotime.com/station/s_27969/WCNY-FM_913.aspx One quickly notes WXXI's comparative overkill.

If you play WXXI and another station simultaneously through your computer's sound card, WXXI generally 'wins' in terms of loudness. During "Exploring Music" [such a great program!], both over the air and online WXXI always 'wins' over WCNY. But it is a hollow loud victory at terrible cost to musical clarity.

What do these other less pushy classical broadcasters fail to see, that WXXI has somehow proven to its own satisfaction? Conversely do the more refined stations, but not WXXI, understand that with classical music less is more--which then allows 'more' to be truly MORE in contrast, when called for?

Seems to me the attraction/attrition problem is really the opposite of what you propose, Jeanne. People seeking a consistent loud wall of sound to accompany their driving or their child-rearing or their blending of martinis (not necessarily in that order!) will even on a very loud WXXI still find the program material itself lacking in that regard. So you won't gain such listeners by emulating just the loudness but not the content of commercial radio.

Another big factor, with which by definition you cannot compete, is that many people seek the listening ease of monody and explicit rhythm rather than the initially more challenging polyphony and implicit rhythms of classical music (broadly speaking). But you certainly will not lose existing listeners by offering a bit more respite from the hubbub.

Seeking to compete by emulating widely-available loudness decreases the probability that a casual dial twister will even discern the valuable programming difference at WXXI. Also, dial twisters are becoming increasingly rare. Nowadays people punch a preset or click online to a known favorite. Who has time to dial-twist?

I don't doubt the listener demographics you cite, Jeanne, and I take your
point about domestic noise vs. concert hall quiet. No doubt the past relatively extreme abatement of compression to which you refer did make casual listeners (of whom there are many, and rightfully so) believe something was broken.

Compression is necessary and advisable, as I noted in one of my letters. Compression is audible at WCNY but it is accomplished far more discreetly than is WXXI's in-your-face approach. Yet WCNY does not attempt to offer a concert hall experience, nor should any broadcaster (at least via the simplest present state of the art). But somehow, without losing listeners en masse, WCNY does manage to provide at least a few dB greater dynamic range. So does WCNY know something that WXXI does not? Or is WCNY doomed eventually to oblivion after all these years of not being loud enough?

The difference at WCNY is that there is a slower time constant applied to automatically ramping up softer passages, and such passages are never fully ramped up to the max as they always are at WXXI. Thus during a compressed forte or fortissimo heard via WCNY there is still at least a pretty good _sense_ of dynamic contrast with reference to a preceding mezzo-forte. On WXXI the parameters and time constants simply provide no headroom. It's like being on the Titanic as the last bit of breathable air at the ceiling of a compartment is usurped by surging water. There's just no place to go.

Nothing is ever as simple as an amateur crusader makes it out to be. Matters are complicated by a certain variability in WXXI's audio-squishing, at least of late. For whatever reason a brief relaxation of your compression did occur in mid July, leading me to my initial star-crossed blog attempt. Since then there have been other very short periods of lessened compression. At times I have heard the audio level, and the amount of compression, briefly vary within a single phrase, as if a local engineer or technician were making manual adjustments in real time. One wonders if the compression controls are vulnerable to passers-by! Very lately though, the Visigoths have returned in full unrelenting force.

I hope this clarifies some matters, Jeanne. You seem to be arguing from an extreme past experimental circumstance of significantly lessened compression, which may have brought complaints "some years ago" but which did not exist during the recent July respite (were there complaints?). At that time no pianissimos became inaudible beneath the barking of my neighbor's dog (who truly has this barking thing down cold), nor did fortissimos cause anyone to flee. Such extremes and their consequences similarly do not ever exist on the more moderately compressed WCNY.

The only extreme in this picture is WXXI's choice to drown its listeners in fear of losing them.

Best,

Bob Laird

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From: "Jeanne Fisher" <jfisher@wxxi.org>
Dear Bob,

Thanks for contacting us via wxxi.org. On August 3, I posted a response to your comments on Brenda Tremblay's blog. My response is below. I should also let you know that the "Supervising Audio Technologist" is an audio producer and has nothing to do with the compression and processing that takes place at the transmitter. That's why Mr. Croucher has not been in touch with you.

I hope my response, posted over a week ago, helps you understand why we broadcast this way. Thanks for listening.

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Jeanne Fisher
Vice President for Radio
WXXI Public Broadcasting
Rochester, NY
jfisher@wxxi.org
wxxi.org

Audio Quality

Submitted by jeannefisher on Tue, 08/03/2010 - 3:22pm.

Dear Bob,

Thanks for your inquiry about audio quality on WXXI Radio.

"To compress or not to compress" has been the question for classical music broadcasters for a long time. During prime time radio listening hours (6am – 6pm), 49% of listening takes place in cars, at work or at other locations, with 51% of listening being done at home. While many cars are quieter in 2010 than in 1970, vehicles are not concert listening environments. Neither are homes, which are filled with the sounds of electric appliances, children, pets or sounds that come in from the out of doors.

We take all of this into consideration when deciding on the compression levels we use in our signal processing. We also must consider the audio gain of the other stations in our market, so that they do not sound discernibly louder than WXXI when a listener is scanning the dial.

A number of years ago, we tried using less compression in the broadcast signal. We were inundated with complaints from listeners who were frustrated with audio that was much too soft
or overwhelmingly loud. Once we restored the processing, many, many of these listeners called to thank us for "fixing" the sound.

The bottom line is that WXXI is a radio station, not a concert hall or even a CD player. We must bring the music to listeners where they are, not where we think they ought to be. And if listeners can’t hear the pianissimos, or are deafened by the fortissimos, they will tune away.

I hope this helps you to better understand why we broadcast in this way. And thank you for taking time to write to us.

Jeanne Fisher
Vice President for Radio

Second letter to Brenda—with frustrated multiple intra-WXXI Cc’s. I was wrong about having received no response from WXXI. Jeanne Fisher had replied via Brenda’s blog (reproduced above).

August 11, 2010

Hi again Brenda,

You are the only person at WXXI who has responded to my audio compression concerns, or who has even acknowledged that I've called (twice) and written (three times http://sirhute.com/wxxi-fm-classical-amusical-audio-compression.pdf --but please save the time; pretty much everything is covered in this email!)

I respect your singular focus on the music and on the people of music, rather than upon technology. I won't waste your time with flowery gratitude for all that you do in your gently effervescent manner, but thank you indeed.

My recently expressed concern about WXXI's broadcast sound relate to the least technical of any technical issues. Any lay person who knows intuitively when to turn the volume down on a loud home stereo is two-thirds of the way there.

A neighbor of mine is conversationally always hale and hearty. He has a robust voice, and he leans in close and talks loudly. You might say that he 'stands out' acoustically above others more genteel. A very nice guy, but he effectively intrudes upon the auditory and personal space of those to whom he conveys information. There is not available to his listeners any natural perspective upon him or upon his ideas as he holds forth.

Ditto WXXI FM. It would seem that as my neighbor is oblivious to his own excess, so is everyone on the other side of the broadcast antenna at WXXI.
It is a fair question: How many times during any given year do your 'technical people' attend a live acoustic (unamplified) concert or recital? Their meters and LED's are accurate enough, but they are measuring only discrete part(s) of the story, and very possibly missing the forest for the trees. A nuts and bolts approach, necessary as it is, ultimately cannot compete with the complex, flowing Fourier analysis gestalt of a musically aware human ear/brain. This is an unpopular position among many engineers. But naming a function or functions and measuring such functioning is not the same as grokking the thing itself holistically. Some of the very best piano technicians at Eastman and elsewhere are so called "ear tuners". They have access to laptops and to tuning programs of great accuracy, but they get better results by ear. They know it, and their grateful clients know it.

At WXXI FM, the extreme compression of the louder parts of the music is made necessary by the undue loudness of the softest parts of the music. Thus when a louder passage occurs there is nowhere to go without overmodulating and harshly distorting. So instead, WXXI clamps down on all crescendos, creating literally infinite 'soft' distortion pervading all the music--as louder continuously modulates softer (over even the most minute of dynamic increments), and as softer soon grows unnaturally loud again. This equation yields a monochromatic mushy turbidity that lacks natural acoustic perspective and which serves to best advantage neither the music nor your listeners. Most of us have long settled for just 'hearing the tune' on WXXI, not realizing that much more is possible and could be readily made available. No investment required--simple adjustment of existing equipment only.

Syracuse's WCNY Classic FM at 91.3 epitomizes desirable results along these lines, and has done so for many years. Their chief engineer, John Duffy, is approachable and friendly. What different rationale allows their relative faithfulness to the sound of music?

Tuesday evening I caught the last bit of the Haydn symphony from last season's RPO concert. Performance considerations aside, the music sounded dull, loud, turbid and mushy, and too in-your-face. After the Haydn you presented a commercial recording of the Tchaik 1 piano concerto. Same sad sound, now from two different sources (though admittedly same RPO orchestra, conductor and possibly venue). But then after 10:00 came a short guitar piece followed by another Haydn symphony. Exact same sound. In-your-face, loud and turbid. The single common denominator across these four pieces from four varied sources was WXXI's hyper-controlled audio processing.

By 10:15 or so I gave up and switched to WCNY for a little respite. Prokofiev's Romeo and Juliet--full, rich, soft, loud, and lovely. Lucid; never turbid and mushy, even during resounding double forte passages. Distinctly greater dynamic range--both softer and louder, more like real music. How can they do this? Why can't, or won't, WXXI?

WXXI FM has genuinely attractive programming and a superb group of on-air personnel. The staff at all levels must surely be operating synergistically out of love for music and dedication to listeners. Now, might someone please invite an engineer out to a concert?

Best,

Bob Laird

Website contact letter redux:

August 5, 2010
A Plea:

This is first and foremost a musical issue, but it is technical in that WXXI FM's audio processing has long interfered with the music. I am submitting this to http://interactive.wxxi.org/contact under the Category of "General Question" because it deserves broad readership and concern within the WXXI-FM organization and among all classical music lovers. Out of little more than archaic habit, WXXI-FM is banging listeners’ heads against the wall, and by and large we have gotten acclimated—tacitly believing that there is no other choice.

It is time to rethink last century's philosophy of “Slam the audio out at constant full throttle to the farthest reaches of our analog signal.” And, "Make WXXI sound always really loud on the dial, just like those constant walls of noise pushed out by pop/rock stations all over the place."

Brenda Tremblay assures me that she has passed on to the "chief engineer" my two recent plaintive letters. I’ve heard nothing back from any technical or engineering person, even after having left two voicemails for someone called a "Supervising Audio Technologist" about three weeks ago. The letters I’ve sent to date including this one are viewable/downloadable at http://sirhute.com/wxxi-fm-classical-amusical-audio-compression.pdf

I live in Sodus, NY. WCNY's analog and HD signals are available out here at 91.3, as are WXXI's at 91.5. It is revelatory to A-B the sound of the two stations during "Exploring Music", a very well-recorded program. WXXI's audio is always significantly louder than WCNY’s, and the music delivered via WXXI is continually amplified or compressed on a hair trigger to keep it ever at the same loudness, whether a solo flute or the March to the Scaffold. You can easily hear this on a car radio; it doesn't take some megabuck home stereo to discern it. And it occurs 24/7, not just between seven and eight o'clock in the evening! Even NPR news breaks are louder and more strident-sounding on WXXI.

As a result of this constantly maxxed-out level of modulation and constant gain-riding, the musical dynamic range that the composers intended is simply not heard, and not even implied. Well, except that we listeners have become acclimated to interpreting audibly 'softer—but-brighter’ as a crescendo electronically clamped down upon, or an audible crescendo while a sustained piano chord is dying out (!) as in fact a decrescendo.

Other strange sonic artifacts continually recur in the warp and woof of the music. Perhaps the most obvious artifact is the tympani’s entrance smashing a previously soaring string line into constricted submission. In addition there are more subtle deleterious effects pervading all of the music. These I have delineated in my two previous letters, reproduced below this one in the linked PDF file.

There are technical and even listening-venue considerations that would make it unwise to remove compression completely, although that condition exists naturally at any live acoustic (unamplified) classical concert. Even WCNY is lightly compressed, but in a far more subtle manner than is WXXI. John Duffy, Chief Engineer at WCNY-FM remarked to me a year or so ago that he simply cannot relate to any necessity for the overzealous compression he hears "from other classical stations as I drive along the Thruway."

At the very least, please throttle the online stream less. There’s essentially no signal to noise consideration there – no possibility of that old analog hiss, even halfway around the planet. You won’t lose listeners during a more nearly-accurately rendered pianissimo passage, any more than people presently walk out of Kilbourn Hall during the softest
passages in the Arietta of Opus 111. Rather there will be a collective sigh of relief and smiles all around. (And the forte passages will be all the more effective in CONTRAST, precisely as Beethoven intended.)


Bob Laird
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315-483-0523

Edited August 5, 2010 to remove certain peripheral material:

July 30, 2010

Brenda,

May I ask you to consider that WXXI’s broadcast FM analog and HD sound remains as ever a poor second to that of WCNY Syracuse? A 45 minute drive to Sodus or points East to compare "Exploring Music" on one’s car radio at 91.3 and 91.5 will instantly reveal what I’m talking about. It is not subtle. It does not take a high end stereo to hear it.

And then, the various questions are:

- Why?
- Does anyone besides me care?
- What is it at WXXI that abhors the very silence upon which all music rests? That abhors that pristine silence which is the necessary antipode of all sound? Rock and pop stations all over the dial have long since lost sight of silence, seemingly fearing it. A lot of people fear it. The original impetus for the recent acoustic modification of the Eastman Theatre was the desire of an influential person to make the music louder! But whenever one finally recognizes and allows silence, much is gained. Why does WXXI fail to offer to Rochesterians the silence underneath and in-between the notes? Must one move within range of WCNY to bask in such happy contrast, to be more fully refreshed by the warmth and clarity of the music thus allowed to be more simple, more true to itself?
- Where do we go from here?

There certainly are more serious issues abounding in life. But I can’t think of any issue more easily resolvable with the twist of a couple of knobs or the punching of a few buttons. People will breathe out and smile.

John Duffy, Chief Engineer at WCNY-FM remarked to me a year or so ago that he simply cannot relate to the degree of compression he hears "from other classical stations as I drive along the Thruway." I did not ask him to name names, and we both knew that that was unnecessary! He specifically cited the common example of a forte string line being smashed down beneath the tympani when the latter enters. This is just one of the more obvious artifacts, but the negative effect of excessive compression pervades the music at all times. And it suffuses the receptive psyches of your long-suffering listeners without their even recognizing it, most of the time.
With respect,

Bob Laird

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*Sent to Brenda Tremblay’s blog on or about July 25, 2010:*

For just a few days during the third week of July 2010, the sound of classical music on WXXI FM (both analog and HD), became pellucid. Gone was the perennial heavy handed audio compression that causes:

- Virtually zero dynamic range
- Tympani entrances knocking soaring string lines into muffled submission
- Solo flute just as loud as full orchestra
- Sustained solo piano notes gradually crescendoing (!) over several seconds while in reality they are decaying--as is the nature of the instrument
- A strange phenomenon whereby the only way a listener may tell that a crescendo is being executed by any instrument or ensemble is that the sounds become *softer* but brighter!

So I called and left a voice mail of gratitude for Andrew Croucher, Supervising Audio Technologist. “Thank you, Mr. Croucher, for curtailing WXXI’s constant mega-throttling of the music, for finally allowing the sound of the music on WXXI to be as richly rewarding to hear as is Syracuse’s classical WCNY 91.3 analog and HD, out here in Sodus, NY.”

Just a few weeks earlier I had flipped back and forth between the two stations during “The Moldau” on “Exploring Music.” No contest! WCNY’s audio, while lightly compressed, was relaxed and easy to listen to, and to listen ‘into’ in the best musical sense. But WXXI’s processing made the audio bombastic, bloated, monochromatic and more nearly opaque than what its neighbor at 91.3 was lusciously providing.

Of course WXXI also sounded discernibly *louder* than WCNY on this identical program material. This greater loudness is always the case with WXXI, and it has been so for decades. WXXI jumps out and grabs you, just like any properly raucous pop/rock station on the dial.

From across my dimly receding past I recall my conversations with a couple of different Station Managers over the decades. “Elitist!” they accused. “We need to constantly slam the music out to the farthest reaches of our signal so people out there won’t notice the analog hiss as much. Also, for listeners in noisy vehicles, we need to hold their attention against wind and motor noise.”

Can we all rethink this now in 2010, please? With HD, you hear a noise-free signal. Cars are by and large quieter than in 1970. The Internet provides a high signal to noise ratio to anyone anywhere anytime. But just as back in the dark ages of the previous century, WXXI FM continues to go slam-thunking along, breathing deleterious artificiality all over the music, masking it, getting in its way.
How many listeners simply put up with this, knowing nothing better? How many uninitiated gentle souls who might be open to a little delicacy in their lives tune past a WXXI that is sonically just one more example of pushy FM broadcasting?

Old habits die hard. By that very evening of the day I had left my message of gratitude for Mr. Croucher, the brief respite of a few days had ended. Did my grateful voice mail only provide a reminder to Mr. Croucher to check his settings and restore the full pizzazz? Darn, I should better have first cast the yarrow sticks and read a “Shut up and do nothing you idiot” result . . .

Called Mr. Croucher two days later. Left a second message asking to talk with him. Nothing heard. He’s probably pretty busy.

Bob Laird