



Letter to the editor

Bruno Putzeys writes:

Dear editor,

Richard Burwen's article on improving the subjective experience of audio using specially tailored reverbs immediately reminded me of three similar instances. Floyd Toole has reported that not only did many listeners prefer hearing early lateral reflections added in with the direct sound, those same reflections apparently improved listeners' ability to discern small changes in the signal. Sadly he did not delve deeper into the subject other than to recommend not making the side walls of a listening room too absorptive and speculating that "hearing the same signal twice" might be why it is better discerned. An example of this approach can be found in Darius van Helfteren's mastering room which is fairly evenly damped except for two vertical wooden half-cylinders halfway along the side walls. Overcome with curiosity we once hoisted the things out to hear what they did and indeed they helped clear the sound up instead of muddying it as one would naïvely expect.

Meanwhile another sound engineer, Leo de Klerk, has commercialised a replay system using four nearly omnidirectional transducers, two per side. A variety of disputable claims are made about the purported robustness of the stereo image but the system's undeniable outstanding feature is making the speakers unlocalizable and completely drawing attention away from their technical failings. Within seconds you're listening to the music.

I think the key lies in the observation that since stereo is an illusion, anything that can eliminate audible cues that would give the game away should be seriously investigated. Perfecting a room and speakers and seating the listener in the sweet spot is one way but making the sound field diffuse is an equally useful one. Inevitably tinkering with the signal necessarily has a sonic signature - one that puts me off in the long run (hence my penchant for controlled dispersion speakers) - but it's a valuable weapon to have in one's armoury, to be judiciously wielded when a particular style of music, recording or stage production benefits from it.

Finally, of course, our own Siegfried Linkwitz has been a major advocate of involving the listening room acoustics in order to make the speakers disappear.

Amidst this lineup Richard Burwen's contribution lies in the fact that he's explicitly changing the electrical signal instead of the speaker/room interface. To the astute reader this experiment eliminates many of the hypotheses proffered by builders of wide-dispersion speakers and narrows the range of possible explanations substantially.

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Richard Burwen replies:

Bruno, thank you for your thoughtful observations. I would add that for the best audio listening experience you need a combination of good speakers, room acoustics, and signals. Altering the electronic signal can reduce audible imperfections in the speakers, room, and the original recordings. Adjusting both frequency response and high frequency reverberation offers the possibility of closer accuracy or more entertainment value according to your desire. When I go out to listen to live music I often wish it were processed with my high frequency reverberation and had better tonal balance.