Subject: Ultimate diffraction control
Posted by jimdgoulding on Thu, 23 Jul 2009 15:49:45 GMT
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"The output should equal the input". "What goes in should be what comes out".

Legendary speaker designer John Dunlavy said the former, don't know who said the latter. But, what goes in originates at the microphone. What was once acoustical becomes electrical to become acoustical again once it departs our loudspeakers in the form of sound waveforms. Most everyone knows that how sound waveforms interact with our listening environment will have an effect on what we hear. What most people don't know, however, is that waveforms are interacting with the first thing they see at their point of departure. In the case of conventional box speakers, that would be the hard surface of our speaker baffles and edges:

http://www.silcom.com/~aludwig/images/diffdem.gif

Our baffles and enclosure right angles or near right angles are creating a second wave of the information just having arrived only it is later in time and out of phase with the original event. This causes a smearing to the output. It is the longer waveforms, those produced by larger drivers, that benefit from room treatments as they are spilling around our enclosures but the shorter ones are being diffracted- the proper name for this incident- as described. A 2000Hz waveform is 18cm or 7", for example. Unfortunate physics but fixable. I make a product for that:

http://www.diffractionbegone.com/newblankcontact.html

Short and spreading waveforms "see" the organic wool instead and are absorbed. What you get is more pristine or simply correct information at the listening position as nothing is being re-reradiated (i.e. diffracted) and mucking about. If I've articulated this well enough you can imagine the benefit to your senses and intelligibility where you sit and listen. It is something I would like for you to hear yourself.

I custom fit to an individual speaker or customer's specification and offer with a 30 day trial period. You'll find me a very responsive person to deal with and I think you will be amazed at how much better your system can make music sound real (and for what I charge, I might even become your new best friend). Pricing and some reviewer capsules can be seen at my site.

Thank you.

Jim Goulding