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Subject: Thoughts on ceiling treatments w/ line arrays?

Posted by [Aaron D](#) on Fri, 16 Mar 2007 02:37:59 GMT

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I have an idea for a ceiling treatment panel that was originally inspired by one of those home decorating shows and my lack of satisfaction w/ the current lighting in my room. Room is 11 X 17 and I want to hang a 4'ish X 6'ish panel from the ceiling centered in the room. My arrays will be 1' to 3' out from one of the 11" walls. That puts the top of the arrays 4.5' to 2.5' from the closest edge of the panel. With any other type of speaker I would not even worry about the effects, but knowing that the arrays we discuss on this board actually benefit from floor and ceiling reflections makes me wonder if I might be working against myself. I can accomplish the design part of this project more easily if I do not try to make it an acoustic panel also so this project does not hinge entirely on this aspect. It was just an idea I had and I saw a way to kill two birds w/ one stone potentially. Any thoughts? Aaron D

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Subject: Re: Thoughts on ceiling treatments w/ line arrays?

Posted by [Wayne Parham](#) on Fri, 16 Mar 2007 15:31:24 GMT

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As long as the ceiling doesn't buzz, it's good. A little bit of "give" helps damp room modes. In this regard, line arrays are particularly immune to floor and ceiling reflections because of the differences in path lengths between individual drivers and the floor and the ceiling.

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Subject: Re: Thoughts on ceiling treatments w/ line arrays?

Posted by [Bill Wassilak](#) on Fri, 16 Mar 2007 15:47:30 GMT

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That and the vertical dispersions only going to be 5-10 deg at most.

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Subject: Re: Thoughts on ceiling treatments w/ line arrays?

Posted by [Wayne Parham](#) on Sat, 17 Mar 2007 15:34:41 GMT

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Even at very low frequencies where the line becomes a point source, there is still response

the response at that frequency. The same kind of thing happens to reflected modes coming from

the floor and ceiling, although the distances will be greater since the floor and ceiling are spaced away from the line. This makes the frequencies lower where the averaging modes occur. A 5 foot line acts like a point source below 56Hz since every driver is 5 feet apart or less. But reflections may be greater than this distance. Still, the number of drivers tends to average the field, in the same way the 112Hz mode from the two most distant drivers are averaged by the drivers in between.

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Subject: Theory is great... What do I do with it?  
Posted by [Aaron D](#) on Sat, 17 Mar 2007 19:10:58 GMT  
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I understand what you are saying but how can I apply it? From what I can gather it does not seem as if my panel will have much of an effect one way or another. It could possibly be of benefit at lower frequencies but I am pretty sure that a panel the size of what I had planned will start losing effectiveness well before getting down 100 Hz. I might keep it in mind but I will concentrate on other places for room treatment. Like I mentioned before the whole panel idea was more of a decorating/lighting improvement idea originally. Thanks, Aaron D

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Subject: Re: Theory is great... What do I do with it?  
Posted by [Wayne Parham](#) on Mon, 19 Mar 2007 15:16:25 GMT  
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I don't expect much influence from a panel on the ceiling.

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