Subject: Re: Widerange midwoofers, specs, and x-o pts...
Posted by Marlboro on Fri, 25 Sep 2009 03:14:13 GMT
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Re: "Not to mention, there are other factors in how things ultimately sound. Horizontal and vertical dispersion characteristics seem to favor ribbons in array circumstances i.e. ribbons have limited vertical dispersion and much greater horizontal dispersion giving a greater sense of space and size."

The only problem with this is that the human ears don't have the capability to recognize differences in vertical dispersion.....

Jim Griffin was describing circumstances regarding vertical dispersion in line arrays in June, 2008 on the PE forum:

".....talked about the differences in how a near field line array radiates vs. the spreading radiation which would be observed from point sources or for far field radiation. Another consideration with line arrays is from the psycho-acoustical viewpoint. Our ears and head combination provide an exceptional ability to localize sounds in the horizontal plane. Shadowing by the head helps in the horizontal plane.

"However, the ear has poor spatial resolution in our ability to localize sound in the vertical plane. This poor vertical resolution is attributable to the equal distances from each ear to sources in this plane. Furthermore, the ear will mask signals according to both their time of arrival and the strength of each signal. Thus we observe very little ability to discriminate between signals from different sources in the vertical plane.

"Bottom line is that you should not worry too much about the arrival time differences in the near field because of the ears lack of vertical discrimination."

Apparently in the jungle, early man did not need to hear predators coming from the trees, but only from around on the ground.

I'm not positive, but the reference suggests that the extreme differentiation of the human ear-brain to horizontal dispersion and minimal to vertical, would have some influence on your concern. I would need to see some measured comparison between domes and ribbons in horizontal dispersion. Just looking at the fact that the dome stick out, and the ribbon is flat, it would seem to me that dispersion should be easier for something that sticks up compared to something lies flat. But I've no research at the moment on the dispersion comparison. I'll research it.

What do you think?

Marlboro