Subject: Array Length/diminishing return
Posted by DSM on Tue, 18 Jan 2005 14:15:02 GMT
View Forum Message <> Reply to Message

Is there a maximum length a line can be? At what number of WL do we reach diminishing returns on any added length?

Subject: Re: Array Length/diminishing return
Posted by Bill Wassilak on Tue, 18 Jan 2005 21:42:49 GMT
View Forum Message <> Reply to Message

>>Is there a maximum length a line can be?Yes, depends on the lowest freq. your shooting for and the c-t-c spacing of the drivers.>>At what number of WL do we reach diminishing returns on any added length? Again it depends the freq.Attached is a link to Jim Griffin's white paper on the subject, a vary good paper with lots of info, it's what I used when I designed up my arrays. Plug in some numbers and it'll give you some idea.HTHBill W.
Near field line arrays

Subject: Re: Array Length/diminishing return
Posted by DSM on Wed, 19 Jan 2005 03:37:03 GMT
View Forum Message <> Reply to Message

So, its non-linear? I understand it must be longer at lower freqs. (longer wavelenght) My question was at what number of WL(s) do we see diminishing returns. I was thinking about trying to suspend 48 4" NSBs I have lying around here doing nothing. Outside of course. Not that I would expect it to be hifi. Just an experiment.

Subject: Re: Array Length/diminishing return
Posted by Jim Griffin on Wed, 19 Jan 2005 14:55:38 GMT
View Forum Message <> Reply to Message

DSM,You don't state what your basic concern might be in extending the length of a line. The pat answer is that you should have a line length that places your listening position well within a near field. A floor to ceiling line length would place the entire room in the near field. At low frequencies you should assume coupling to the floor and ceiling surfaces as the line will image from this planes at their lower frequency limit (see my white paper for discussion and a diagram). In theory you would have a lower freqeuncy limit but a floor to celing line array would work as a line source

down to the bass limitations of the individual driver. That means don't expect 20-30 Hz bass coverage from a driver that cuts off around 100 Hz even though you have an array that has 100's of these drivers. Bottom line: You should read my white paper as it covers the line length issue in detail. Jim

Near Field Line Array White Paper
