
Subject: A little bit more on the nearfield and the line array height.....

Posted by [Marlboro](#) on Wed, 21 Feb 2007 03:41:40 GMT

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Page 3: "Our goal is to develop a line array loudspeaker system for the home that assures that the listener is in the near field as much as possible."The array described in the report is one that is two way with a woofer system that goes down to a bit below 100hz, and a tweeter system above roughly 1600 to 3000hz, thus a two way system. Usually a low frequency driver is used to complement the array. Thus, Dr. Griffin goes on to describe the required height of both the woofer and the tweeter array portions on page 10.Woofer and Tweeter line height is described specifically. First woofer line height:PAGE 10: ".....Finally, best low frequency coupling to the boundaries occurs wherein the distances between either end of the line and the ceiling and floor are less than a wavelength, respectively. Typically, the woofer line length height needs to be greater than 70% of the room height for effective boundary coupling."Tweeter line height:"....Tweeter Line Height. As for the woofer line length, the ideal tweeter line length would also extend from near the floor to the ceiling. Such a length would assure near field sound radiation for the entire room. Possible implementations would be a very long ribbon/planar tweeter or a large number of small dome tweeters if a floor to ceiling line length is desired. However, either of these implementations would be expensive."Because of the expense, three options are considered.Part of the second is here: "....Listening Position Coverage. Consider also the listening position and whether you desire to cover the sitting position (slightly less than one meter (39.4") above the floor at ear level) only or both standing (typically up to 1.8 m (70.9") height) and sitting positions. Hence, for many situations a tweeter line height would need to be greater than one meter to adequately cover both sitting and standing positions."Both the line height considered here in Jim's paper and the discussion regarding the nearfield make it clear to most readers that there is a requirement for nearfield listening and line height itself to consider that the speaker system is a line array.Anything that does not meet these criteria is not part of the description that the Griffin report describes in its title:"Design Guidelines for Practical Near Field Line Arrays"It may be a mini line array, but its not a nearfield line array which provides all the benefits described in a line array.Sorry.....Marlboro