
Subject: Re: directivity

Posted by [Earl Geddes](#) on Tue, 07 Jun 2005 12:41:32 GMT

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Could you give the reference to this paper. I recall the conclusion being different. At any rate, Floyd and JBL are moving towards a narrower directivity, which seems to contradict the conclusions that you state. And, the situation is more complex. The reverberant field depends on two factors, directivity or power response, which excites this field and the room's reverberation time - absorption (I hate the concept of RT for small rooms, and it's not too popular for big rooms either). I agree that people prefer a spacious sound, which can only come from a strong reverberant field, but that can be done with a directive speaker in a lively room just as well as a low directivity speaker in a dead room. The directive speaker however will have a far cleaner direct sound - early impulse response - and hence far better imaging, than the wider directivity speaker. You see, putting speakers in the same room and comparing them depends a lot on the room. In a dead room people probably will prefer a wider directivity, while in a lively room they will prefer the narrower directivity. But I would suspect that a comparison between the better dead room combination and the better live room combination would result in a strong preference for the more lively room with the narrower directivity. No tests of this nature have been done in a scientific manner, but my personal experience strongly supports this belief. And people (clients) always seem to like my rooms. Finally, as I show in my white paper (see www.gedlee.com) constant directivity cannot be achieved in a small cabinet. Big is required for this to happen and I think that the current trend towards smaller systems is why even though the drivers are much better than ever, the sound is not any better and in many cases worse than the old days when "bigger is better" ruled. Did you measure the polar response of your system to insure that it is CD?
