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Subject: Re: Distance to furniture

Posted by [Wayne Parham](#) on Wed, 31 Dec 2008 22:04:13 GMT

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Any surface that is greater than about a wavelength across will act as a reflector. Coffee tables do tend to reflect upper midrange and the overtone region pretty strongly, and you can see their influence in measurements. Some can be distracting, sort of like ceiling slap. As for the edges of equipment like stereo racks, tables and chairs, I personally don't notice them. They may actually improve diffusion especially when placed far enough away, out in the room or against distant walls. I don't think I'd want them near the speakers in line of sight though. There was a time when I was making the edge of all my speakers rounded. I also suggested that all hard edged furniture be placed far from speakers. At the time, it seemed to me that limiting edge diffraction would be a good thing to do. Even though it was not one of the biggest acoustic offenders, in my opinion, it was still worth taking steps to reduce. I thought it made the cabinets look cool too, in a Roger Dean sort of way. The thing is, rounded corners are very hard to cover with veneer. Painted surfaces are no problem, but veneer can crack when you try to bend it around a corner. My cabinetmakers always threw fits. I was stubborn for a while, but agreed to build a pair of identical speakers, one with rounded corners and one without. We let people listen and nobody could tell the difference, even outdoors. So I reluctantly agreed to abandon the rounded edges from my speakers. I have noticed this has become an issue with some audiophiles. I don't believe edge diffraction can be detected in a blind test. I think sharp edges inside of horns are a problem because they cause improper terminations and the internal reflections that result from them. But cabinet edge diffraction is probably not audible. I would expect the same can be said of furniture outside the speaker cabinet. If it's directly in front of the speaker, that might be a problem. But if it's way off axis or far away, I don't think it's a problem. Might even be good to increase the illusion of ambience. Large hard surfaces should be considered reflectors, and should probably not be placed in the listening area where possible. Sharp edges are less a problem, but also should be kept reasonably far away. I would be more concerned about surface reflection from a large piece of furniture like a coffee table than I would about edge diffraction from it.

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