Subject: Speaker Stand Article
Posted by audioaudio90 on Fri, 12 Oct 2012 15:45:53 GMT
View Forum Message <> Reply to Message

I was reading this article on speaker stands and he discusses that whether a stand couples or uncouples the speaker to the room depends on the room. Do you agree with that statement? I've always thought it was best to isolate the speaker.

Subject: Re: Speaker Stand Article
Posted by Wayne Parham on Fri, 12 Oct 2012 22:13:51 GMT
View Forum Message <> Reply to Message

I consider the loudspeaker position and its amount of panel vibration separately.

Loudspeaker position and direction determines the orientation of the forward lobe, and it also sets the position of the node that energizes room modes. This is true even if the loudspeaker were a perfect case where all energy transfer was through the air and no energy was transferred into the floor through the cabinet.

About "coupling", what we're talking about is how to deal with panel vibrations. The more well damped the cabinet is, the less it vibrates. So it seems to me cabinet damping might be more effective than isolation, although I suppose this isn't an option unless one is willing to build a new cabinet. But they can buy stands or spikes off the shelf.

When a loudspeaker is acoustically measured to obtain a response curve, this captures the total sound it makes, which includes the sound radiated by the cabinet. One can argue it isn't wanted, but if it is at such a low level it can't be heard, then it doesn't matter. In that case, the argument of isolation verses coupling is made moot.

At any rate, I think it is important to consider loudspeaker position/orientation separately from the matter of isolation versus coupling. They're two differnt things. I would probably suggest buying a stand purely for its ability to postion the loudspesker where you want it. Of course, I want a sturdy stand, but I don't think I would put a lot of emphasis on its mechanical coupling. If you want to focus on that, do it separately. You can always put the stand on spikes to couple the energy, or on an absorbent cushion, if you want. Or fill it with sand or lead, if you want to add mass for damping.

Subject: Re: Speaker Stand Article
Posted by 24KPython on Thu, 15 Nov 2012 02:59:50 GMT
View Forum Message <> Reply to Message

I believe "coupling" spikes and such were created as an alternative to essentially bolting the

speaker to the floor. A separate issue from panel resonance is that speakers rock themselves back and forth opposite the cone motion. Lighter speakers are especially susceptible to this type of distortion. Adding mass to the cabinet helps to keep motion properly isolated to the cone, but coupling speakers to something even heavier will help even more. Short of nuts and bolts, the spikes can lock the speaker to its stand (or the stand to the floor) by multiply the weight of the speaker into a pressure of hundreds of pounds per square inch.

With that in mind, consider that foam and rubber "feet" and "isolation pads" can make it easier for speakers to rock themselves around, adding and subtracting from the cone motion to create acoustic distortion.

Personally I use both - I use a sand-filled stand many times heavier than the speaker, the speaker is spiked to the stand, and the stand is isolated from the floor, so that floor vibrations don't get into the speaker.
