Subject: Damping of concrete backwall.
Posted by Kim Schultz on Sun, 19 Dec 2004 15:06:47 GMT
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Hi, I´m in the process of making a dedicated ht/hifi room.It´s in our basement and has the following measurements 2.35m x 4,38m x 5,48m(HxWxD).The front speakers and the screen will be on the short wall (4,38m) and the listening position will be in the middle of the room.3 of the walls are outer walls and made of bricks and concrete, when knocked on, they sound very dead. But the fourth wall is a concrete wall seperating this room and the washing room, when knocked on it has kind of a "booong" sound.I´ve thought of screwing some wood to the wall, then put some 50mm rockwool in between them, and finish it of with some plasterboard.Is this a good idea ?The floor and ceiling is concrete too, the floor will have a thick carpet.What would you recommend for room treatment ?RegardsKim

Subject: Re: Damping of concrete backwall.
Posted by Wayne Parham on Sun, 19 Dec 2004 16:09:22 GMT
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I'd try spacing out a ways from the wall and hanging or standing an insulating partition. See chapter 5 of the book below for more ideas.
Sound System Design Reference Manual

Subject: Re: Damping of concrete backwall.
Posted by Kim Schultz on Sun, 19 Dec 2004 18:32:46 GMT
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Hi Wayne.Yeah, I thought about that too, but I´m concerned that it will work as one big bass trap and suck up all the bass from the room.RegardsKim

Subject: Re: Damping of concrete backwall.
Posted by Adrian Mack on Fri, 14 Jan 2005 14:47:56 GMT
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Hi KimAre you looking for room treatment for frequencies handled by the subwoofer or treatment for fullrange speakers? I think the biggest problem concerning bass frequencies in the home is room modes. Standing wave modes are impossible to rid of in any room, and occur across the entire range. There's always nodes and anti-nodes. So it affects not just the subwoofer, but full

range speakers too, but the problem's are greatest in the vincinity of the subwoofers operation range. Omni-directional speakers, like subwoofers, tend to excite the most amount of room resonances too. One way to minimize the anti-effects is just place it away from a corner or wall, but that needn't be the case in all situations. You said in another post that you were concerned about absorbing all of the bass from the room. It will actually be pretty hard to do this, it takes over 12inch of concrete to block out a 30Hz soundwave. Remember though that if you're using huge bass traps or hanging other absorbtive material from the walls to fix a bad room in the subbass region, this very same treatment may tremendously absorb mid/high frequencies too. IE: It may give you a very acoustically dead room in this region, which may or may not be what you want. Personally, I like to have a reasonably reflective room as it tends to give a bit of "depth" to the music. Just for interest sakes, heres a comparison of a 100% reflective room and a more acoustically dead room from an article publised in SpeakerBuilder: I'm not sure if screwing wood to the wall would get rid of the 'booong' sound you hear when you knock it, I do think it would help to stiffen it up though so it could be worth a try. It seems like a lot of work to me though. I'd see wheather this wall actually is annoying while listening to music first. I noticed you said all your walls and floor and even the ceiling are concrete, you're going to get a tonne of bass Possibly extra room issues at the same time, however. Adrian

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Subject: Re: Damping of concrete backwall.
Posted by Kim Schultz on Tue, 18 Jan 2005 14:10:45 GMT
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Hi Adrian.I will build some corner basstraps first, and then place some fibreglass to absorb the first reflections from the speakers.And if needed I will pad the ceiling with fibreglass too at the first reflection.I have found out that the "boong" sound is the room ringing at the room modes, and that is in the bass freq, so the traps should help this.
