Subject: Back from Dallas and depressed ...
Posted by SteveBrown on Thu, 10 May 2007 17:33:22 GMT
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One thing I noticed in Dallas, listening to a number of the demo systems, was that some had more bass "slam" than my set up at home. So I'm wondering why. I can tell right away that some of the systems had exagerated bass due to the small room, and that is easy to spot, it sounds bloated and boomy. What I'm looking for is clean tight bass that can thump you. Know what I mean? So give me some advice. If I measure about any equipment setup I can put my hands on, it's reasonably flat in my room from 50 on up. And I'm using high efficency system (min 97 db and up) - I've tried amps ranging from 2w to 8w to 30w. I've tried SS and tube. My conclusion so far is: 1) It isn't the speakers; 2) it isn't the amps. So it must be the room? My listening room is a large basement space that has concrete on the floor, front, and both side walls, normal stud wall on the back, and open joists on the celing. But the hotel rooms, I'm guessing, are about the same - some concrete, some stud walls. No? For speakers I've tried direct radiators, open baffle, and compression drivers (1000 hz up). By the way, I can make the bass boomy in my room, but it isn't a lack of bass, it's a lack of punch. As for driver size, I've used JBL 2226 in a 2.5 box (15" driver) and I've used 15" IB sub on OB. So I also don't think it is related to the size of the radiator I'm using. Should I be looking for a room suck out at some higher frequency? Any ideas? Thanks!Steve

Subject: Re: Back from Dallas and depressed ...
Posted by Barry S on Thu, 10 May 2007 18:40:24 GMT
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I've got a small set of monitors and a sub in a small square room. Far from an ideal situation is being kind as the room is awful. The system had no slam or whump in it and had a somewhat congested quality overall.That changed by moving the listening position closer to the speakers. The chair went from a semi near field listening position to a very near field spot. It was probably a 4 or 6 foot change in the position of the chair.The system has slam in the new listening position and has lost the muddied congested quality.

Subject: Re: Back from Dallas and depressed ...
Posted by Wayne Parham on Thu, 10 May 2007 21:42:18 GMT
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It's the solid concrete. There's nothing to damp standing waves, so room modes are maximized. Framed drywall construction actually helps damp room modes because the drywall flexes and absorbs some of the bass. That's a good thing where room modes are concerned.

Subject: Re: Back from Dallas and depressed ...
Posted by SteveBrown on Fri, 11 May 2007 00:27:30 GMT
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So my options are?? Build out frame walls? Or, place acoustic damping pad? Any recomendations?

Subject: Re: Back from Dallas and depressed ...
Posted by colinhester on Fri, 11 May 2007 01:48:01 GMT
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Steve, Have you tried moving your speakers closer to the corners or back wall? How can you make "boomy bass" in your room?.....C

Subject: Re: Back from Dallas and depressed ...
Posted by SteveBrown on Fri, 11 May 2007 09:15:03 GMT
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Colin, thanks for the response. I have tried to move them into corners but it does get boomy that way. If they weren't so big, I'd cart them upstairs to see how they sound in a stud wall room.

Subject: Re: Back from Dallas and depressed ...
Posted by SteveBrown on Fri, 11 May 2007 09:18:52 GMT
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Barry, thanks for the suggestion. I tried it last night, I didn't notice a difference. Back to the drawing board. I think part of it might be that the room is so large that it soaks up a lot of energy, but that's just my WAG...

Subject: Re: Back from Dallas and depressed ...
Posted by colinhester on Fri, 11 May 2007 12:23:19 GMT
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You might hit Ron up for a sub. He just picked up a dual 15" Eminance with VERY low fs (20Hz) from me.

Subject: Re: Back from Dallas and depressed ...
Posted by Wayne Parham on Fri, 11 May 2007 21:09:27 GMT
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Grab a copy of CARA and do some modeling of various placements in your room. You may find a placement that works well. You might also find that the addition of one or two more subs helps. Probably the best thing though will be the addition of bass traps. They are large resonators that absorb sound and damp the room.

Subject: Re: Back from Dallas and depressed ...
Posted by Delgadas on Sat, 12 May 2007 03:34:40 GMT
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I suppose most small rooms, especially rooms with low ceilings, simply don't have the volume needed to develop low frequencies. Driver size is not so critical providing they are capable of delivering the proper waves. A pipe organ can lay down some very low frequencies but the wavelength is so long, at 50Hz it may need more than 30 feet to develop. Otherwise, in a small room the sound will get all blended around and you won't be able to pick up the new transients. Bass traps in a small room can help by allowing the long waves to stretch out.In a small room there will be a node or nodes somewhere, not necessarily near the listening chair or even in the same room, where the bass will sound nice and tight. It's almost never where you want it to be.I've had a little success in my own low ceiling, far from ideal room. It's a little like tuning an instrument. After much fiddling around and with help from a friend with good ears, I ended up with dual subs, port down on the carpet with the driver facing a wall. Adjusting the distance from the walls makes huge changes in the location of the good nodes. I can get that nice rich satisfying thumping at my chair from 2 watts but it's still no Yes concert.

Subject: Re: Back from Dallas and depressed ...
Posted by SteveBrown on Sat, 12 May 2007 09:57:04 GMT
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Thanks for your thouhts. My room is actually rather large - 16 x 25 x 8. I was thinking maybe it is the opposite problme - too big. I will say that of the speakers I've used, open baffle seem to have the most promise. Maybe that's due to the radiation pattern of that type of speaker. I should probably try a sub again, but I've never had much luck integrating them so they don't sound

boomy.

Subject: Re: Back from Dallas and depressed ...
Posted by Skip on Sat, 12 May 2007 18:26:42 GMT
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Steve, I'm speaking here from an imprecise understanding, (FWIW), but mysense of 'bass slam' is as dependent on the harmonics as on the fundamental -- they both have to be present, appropriate in amplitude,and undistorted. You may have issues with the harmonics which could behigh enough in frequency to be muddled by first reflections. Have you tried putting centering your speakers on the long wall well away from the end walls. Your room is big enough to not feel cramped with thisarrangement. By the way, many moons ago you recommended Obligato caps, and led meto try them in the parafeed positon in my S.E.X. Amp. I like theresult very much. I meant to mention this to you in Dallas, butthe opportunity didn't arise. Thanks,Skip

Subject: Bass in small spaces.
Posted by Bob Brines on Sat, 12 May 2007 23:13:58 GMT
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"I suppose most small rooms, especially rooms with low ceilings, simply don't have the volume needed to develop low frequencies."This is one of the long standing myths about audio. If this statement were true, headphones wouldn't work, and there would be no bass in a car. When the wave length becomes large with respect to the space, the entire space pressurizes and the air vibrates as a single mass. Your ears can't tell the difference from a passing wave train and a pulsating pressurized room. The rest of the discussion of room problems was correct. In these small rooms most of the nodes are along the walls and in particular in the corners. The loops are in the middle of the room. I was fortunate to find the bass performing reasonably at the seat I planted my visitors in.Bob

Subject: Re: Back from Dallas and depressed ...
Posted by SteveBrown on Sun, 13 May 2007 00:03:24 GMT
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Skip, thanks, I'll try the other orientation. Maybe that will be better. Glad you like the Obligaotos, I've enjoyed them. Nice to find a good sounding cap that cost less than my mortgage payment.

Subject: "Slam" is not real bass
Posted by Bob Brines on Sun, 13 May 2007 10:52:15 GMT
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"Slam" is centered around 80Hz. You say that your system is flat above 50 Hz. Good. You are hearing what is on the recording. This is why changing amps, etc makes no difference. If you want more slam, you need to put a peak in the response at 80 Hz. Bob

Subject: Re: "Slam" is not real bass
Posted by SteveBrown on Sun, 13 May 2007 11:04:45 GMT
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Thanks, Bob. That's an interesting idea, but I guess I'll learn to be happy with flat.

Subject: Re: "Slam" is not real bass
Posted by SteveBrown on Mon, 14 May 2007 13:54:36 GMT
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Well, on closer measurement this weekend, using my Rives disc that is recorded to take into account the problems with the RS SPL Meter, I find that my open baffles get down to 32.5hz with strong results (using a 15" Parts Express IB on the bottom w/seperate amp). But what I did find that was interesting is a big hole (-10 db or so) around 80 to 100hz. This may be related to crossover and/or phase, I'll have to look into that. I suppose it may also have to do with the spacing of the two drivers (the FR and the sub) on the baffle.

Subject: Re: "Slam" is not real bass
Posted by colinhester on Mon, 14 May 2007 16:39:08 GMT
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Could it be related to the "floor bounce" that you and Bob discussed? I wonder how high the sub would need to raised off the floor to get above the XO frequency.....C

Subject: Standing wave notch
Posted by Wayne Parham on Mon, 14 May 2007 16:55:17 GMT

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I see floor bounce most often about an octave above that. This is because mini-monitors and two-way speakers on stands are typically spaced a few feet up off the ground, which results in a dip around 150Hz to 200Hz.I suspect this one is actually from the walls. They're as rigid as the floor in a concrete basement, so the destructive interference from a standing wave will be just as strong.

Subject: Re: Standing wave notch
Posted by SteveBrown on Mon, 14 May 2007 18:16:33 GMT
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Thanks for the note, Wayne. In this case we're talking about open baffles, which I understand have a fairly directional radiation pattern, so I'm wondering if the walls would exert that much influence? What do you think? I've got a couple of sound absorbing panels and I can try placing them 4' from the front of the speakers against walls.

Subject: Re: Standing wave notch
Posted by Wayne Parham on Mon, 14 May 2007 18:31:44 GMT
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Dipoles have a directional pattern that favors front and back, to be sure. But it is frequency sensitive and not 50/50 straight front to back. There is radiation at angles other than straight on-axis. I suspect that your notch is probably from a wall reflection. To find out, you can move the speakers and see if the notch frequency moves. Take 'em outside and see if the notch goes away. If it doesn't, then it's something in the speaker. If it does, then it's something in the room.

Subject: Re: Standing wave notch
Posted by DMoore on Mon, 14 May 2007 19:56:44 GMT
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I think that LF drivers have a power-frequency bandwidth, that is, they are most efficient in certain topologies and that each combination of driver and loading topology is further bandwidth-limited or at least frequency-specific. Throw a crossover into the mix, and stir vigorously. Place in a room of unknown acoustic parameters...I too have been on the search for the so-far-still-elusive low-frequency response combined with the appropriate ability to "punch".Seems that if a particular driver is good at one end of the spectrum, it gives up the other. Getting a balance is a combination

of the loading, the specifics of the driver and the crossover. The crossover is an important consideration in the mix, too.Room suck-out could be a culprit, but if you had punch in the first place, it is unlikely that it would be removed completely. My opinion is that it is the particular driver/loading/crossover combination.No clean answers to this one.DM

Subject: slam is a subjective term
Posted by Me on Tue, 15 May 2007 00:38:33 GMT
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When someone says slam it could mean a lot of things.Stick with the terms that are standard.There are standards to the industy not every one knows them.sSo to say slam is not bass WELL LET'S ALL MAKE IT UP

Subject: Re: slam is a subjective term
Posted by SteveBrown on Tue, 15 May 2007 01:15:38 GMT
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Some physical sensation of impact is what I mean by "slam", sorry my term was not precise. I meant the same thing when I used the term "punch". Is there a standard term for this? If so, can you enlighten me?

Subject: Re: Back from Dallas and depressed ...
Posted by hurdy_gurdyman on Fri, 18 May 2007 19:00:24 GMT
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Steve,I assume you've already tried this, but, just in case, have you tried reversing the phase of your subwoofer? If the overlap region is near 80 Hz, and if the two are out of phase, there may be a cancelation in this region.Dave

Subject: Re: slam is a subjective term
Posted by GM on Tue, 22 May 2007 00:50:08 GMT
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Greets!These normally describe an emphasis in the upper-bass (~80-160 Hz) like you get with a

Karlson K15 or pro-sound 'sub' or bass-horn.GM

Subject: Re: Standing wave notch
Posted by GM on Tue, 22 May 2007 01:33:33 GMT
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Greets!Hmm, 'floor bounce' historically has been used to describe the interference of this standing wave's reflection to the speaker's direct radiation at the listening position, so you normally have two notches from it, though when measuring on-axis at 1 m the two typically sum to a single deeper, broader one.Standing waves are 1/2 WL issues, so ~1130/2/4 = ~141 Hz.GM

Subject: Re: Standing wave notch
Posted by Wayne Parham on Tue, 22 May 2007 02:12:09 GMT
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It's very apparent. I make measurements using an LMS system and when making ground plane measurements, there is no floor bounce. But when I place the same speakers on stands a few feet up, the floor bounce notch is most apparent.

Subject: Re: Standing wave notch
Posted by GM on Tue, 22 May 2007 02:38:56 GMT
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OK, your measurements proves my point that floor bounce isn't just about the driver/floor standing wave.

Subject: Re: Standing wave notch
Posted by Wayne Parham on Tue, 22 May 2007 02:43:45 GMT
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I'm not sure I get your meaning. Floor bounce is caused by a reflection off the floor. It is an interaction between the direct wave and the reflected one. It's easy to calculate and measurements show it to be exactly at the frequency expected. What exactly is it you are trying to say?
