Subject: JBL 2205
Posted by Larry Acklin on Mon, 20 Mar 2006 17:49:34 GMT
View Forum Message <> Reply to Message

I have a couple- I ran the specs throuth Pialign, and I don't understand the results- a 2.1 cu ft bass reflex box with (I think) an enclosure tuning of 60 hz? Am I doing something wrong? To be paired (I hope) with JBL 2445Js on the big JBL butt cheek horns the model number I forget. Comments?Larry

Subject: Re: JBL 2205
Posted by Wayne Parham on Mon, 20 Mar 2006 18:50:18 GMT
View Forum Message <> Reply to Message

I tuned lower (40Hz) so that the resulting curve was slightly overdamped. But a 2.1ft3 - 2.5ft3 box tuned to 55-60Hz is just perfect for a JBL 2205, providing flat response down to 60Hz. This works

Subject: Re: Maybe this is a good time to discuss what is bass
Posted by Bill Epstein on Tue, 21 Mar 2006 00:45:24 GMT
View Forum Message <> Reply to Message

I think Larry is surprised, and I know I was to find that bass drivers run flat only to 60 to 100 Hz and then roll off. As you said about the Altec 414, lots of mid bass, little deep bass. The 414 was more than 10 dB down at 40 Hz. But the acoustic bass "E" string at 42 Hz just booms out of the speaker.Now Stereophile, as always, says full range means output dowjn to 20 Hz. But they never say how much?So when using WinISD and watching the output plot, how many dB can the driver drop below "flat" and still be a "bass" driver?

Subject: Re: Maybe this is a good time to discuss what is bass
Posted by steve f on Tue, 21 Mar 2006 03:26:45 GMT
View Forum Message <> Reply to Message

Hi All,Like Bill, I am amazed at how a good speaker with moderate (say 40 Hz) measured response can sound so powerful in its bass response playing music. Now I have heard a great full range system recently, the Linkwitz Labs Orion. Really impressive speakers. But with non classical music, and more typical instruments, what is really necessary? I don't feel like I'm

missing anything when I listen to jazz or rock music. I believe the Orions were down about 6 Db at 20 Hz. I'm willing to bet nobody feels that a speaker like a Pro 7 Pi is lacking anything in low frequency response. What is going on with our perception of bass? Are we responding to psychoaccoustic influences relative to SPL or what?Cheers,Steve

---

Subject: Re: Maybe this is a good time to discuss what is bass
Posted by Bill Wassilak on Tue, 21 Mar 2006 06:38:04 GMT
View Forum Message <> Reply to Message

Steve,60hz is considered the thump range, when you get down to around (50hz) or less than 45hz it sounds good and powerful. But when you get around or below that 38-35hz area and if got the power, and it's not rolling off down there (AKA the SPL flat down to 20hz) it takes on other dimensions, because the building AKA(Home construction stiffness) can come into play then.

Subject: Butt cheeks horn - 2344
Posted by spkrman57 on Tue, 21 Mar 2006 11:00:25 GMT
View Forum Message <> Reply to Message

And the 2205 would be great to reach up to 1khz(4430/4435 crossover).Add a powered sub for extra bottom end.The bonus for tuning at 60hz is great dynamics that a lower frequency driver will not have as good!Ron

---

Subject: Re: Maybe this is a good time to discuss what is bass
Posted by Larry Acklin on Tue, 21 Mar 2006 13:41:14 GMT
View Forum Message <> Reply to Message

I do the PA thing for bands in bars on weekends. My PA rig has a 24 db/octave rolloff at 40hz, and is largely flat from there up. My bass horns are dual folded horns in very large and heavy enclosures, with 2 Eminence Delta 15 in each. I cross over to the mids at about 130 hz. I drive both cabs with 1300 watts each. I'm carrying about 400 lbs of speaker to reproduce Kick drum, some electric bass notes, and keyboards. Yet, I really feel we need all of the above to make the system sound as powerful as it is. The thing I have found, is if the system has good extension into the bass, it can SEEM to be loud, but it is not. A good thumpin' kick has the fundamental at 80 Hz, 2nd harmonic at 160. Bump up the 160 and lo and behold, the kick seems much louder.With CD playback, it is very rare that I see (on the RTA) that we approach 40 hz, much less anything below.The subharmonic synths (aphex, et al) on the market are actually making the sub-fundamental. The psyco-acoustic processor boxes actually increase the second harmonic to make it appear the fundamental is more powerful.The key for my rig is to use folded horns on the

bass, rather than the dual 18's per side, which produce lots of harmonic distortion relative to the horns.Loud CLEAN bass is good...Larry

---

Subject: Re: Maybe this is a good time to discuss what is bass
Posted by Manualblock on Wed, 22 Mar 2006 01:53:28 GMT
View Forum Message <> Reply to Message

We discussed this at length earlier on this forum; exactly what constitutes bass and how low in frequency a speaker must go to reproduce the entire orchestra. We never really came to any conclusion and I find that peculiar. If the lowest note on the string bass is 31HZ why do we need a subwoofer? I think you have it right. Not for accuracy of reproduction but to accomplish another end. That of pushing the thump.There's bass then there's thump. It amazes me that guys who swear they are after absolute accuracy in frequency response and show graphs and charts to prove that will add something onto the speaker that is absolutely innacurate. The Thump machine.Lot of money in those subs; especially if you add one onto an already existing system. If your speakers are already flat through the normal bass region; what exactly are you accomplishing? EQ; thats what.

Subject: Re: Maybe this is a good time to discuss what is bass
Posted by Bill Epstein on Wed, 22 Mar 2006 02:07:08 GMT
View Forum Message <> Reply to Message

"The thing I have found, is if the system has good extension into the bass, it can SEEM to be loud, but it is not. A good thumpin' kick has the fundamental at 80 Hz, 2nd harmonic at 160. Bump up the 160 and lo and behold, the kick seems much louder."What Larry says is a revelation to me in terms of our own listening rooms. We often hear about the humps at or near 150 Hz that need bass traps or EQ. And as I recently discovered, the fundamental is way rolled off. As MB says, it's the "thump" we hear and not the fundamental. So I guess that explains why the system I built down 10 dB or more at 40Hz still has strong but boomy bass.BTW, I went back to sandbox bases for my speakers just tonight. Bigger bases with more sand (50 lbs each) this time and I removed the fancy brass casters. Cleaner, clearer more detail better imaging; the whole 11 yards. If you have a suspended floor you have to try this. Would be interesting to hear the results on a concrete floor, as well.

Subject: Live Bass
Posted by Shane on Wed, 22 Mar 2006 05:15:15 GMT
View Forum Message <> Reply to Message

"Loud CLEAN bass is good... "This was something we always strived for when playing live. We did our own PA work and gradually figured it out over the years. We had some sort of horn cabinets our bass player made from some plans he got where we were running two 18" Peavey Black Widows in each cabinet with about 1500 watts going to each cab. Whatever he did they were nice and clean.The comparison of listening to music in the home and listening live in a bar is something I have yet to understand. Does the home system reproduce music accurately? Unless I'm running at very, very loud levels I can't make a fair comparison. I've never played a gig or been to a show where the levels were at where most people listen at on their home setup. Even at the symphony, the levels are fairly loud if your in the right spot. I used to take my gradfather to pipe organ concerts at Century II in Wichita for years and let me tell you that damn thing was loud. When they hit a low not the whole building shook--COOL! Many people talk about this speaker or that speaker having great bass or not enough low bass. Well, unless I turn my amp up to clipping levels with my Pi Towers I'm not even approaching the perceived effect of playing live. The kick drum was more a viceral than anything else. When my brother stood up and came down with both pedals on a double bass we had the people's attention, by making them feel like they were getting "thumped" in the belly. Same with smacking that low bass guitar string.Don't get me wrong, as the Towers produce nice, low bass at moderate listening levels that I can begin to "feel". At low listening levels, say as background music, the bass is there but you have to really listen for it, it doesn't poke it's head out and announce itself. But I know no one that listens at the levels to produce "live music", except maybe at parties (which my wife says I'm too old for now--she's right as always)I guess my problem is that I'm accustomed to feeling that low end and well as hearing it, and that's what I associate with low bass.

Subject: Re: Maybe this is a good time to discuss what is bass
Posted by Manualblock on Wed, 22 Mar 2006 14:05:55 GMT
View Forum Message <> Reply to Message

I have always heard you isolate with concrete and couple with wood floors. Might be an urban myth. Especially since you notice the exact opposite effect.Wayne should reproduce the original post about mass loading suspended floors; it's on here somewhere. I just remmember seeing pics of Gizmo with his Tannoy Westminsters bungee-corded to twenty cinder blocks as stands. He called it mass-loading.I don't know but my Valencias roll off pretty high up there; yet I sure hear the sound of a string bass low E note well.

Subject: Re: Maybe this is a good time to discuss what is bass
Posted by Spinjack on Thu, 23 Mar 2006 18:16:48 GMT
View Forum Message <> Reply to Message

Shouldn't the low A on a piano be the target, rather than the low E on a bass guitar? The A on a piano is 27.5Hz, I believe. Or, maybe its ok because the second harmonic is at 55Hz which most speakers can handle.
