Subject: Seven Pi-18 or Ten Pi-18(long)
Posted by GJP on Fri, 08 Feb 2002 17:11:48 GMT
View Forum Message <> Reply to Message

Hi,I've been sitting on the fence for weeks now, mainly because I'm still in the market for used 18in JBL drivers (2241 or 2242). I have a 23x17x8 family room. I have the plans for the Seven Pi's, and when finished (no rush, I still have LaScalas which I love) the speakers will sit on the short wall corners. My concern is that I have two 4+ ft. high Salamander rack systems flanking my tv. Adding their width, they come out about 3-3 1/2 feet from the back wall. My question, is it practical to use cornerhorns in this type of set-up? It seemed like a good idea at first to use cornerhorns because they don't eat up alot of space. But lately I've been thinking that with the above mentioned set-up there will be some degradation of imaging and soundstaging using cornerhorns that will be behind these rack systems. So now I'm leaning toward Ten-Pi's (same drivers) and I can position them so they're sitting a few inches ahead of the rack system (like my LaScalas). Is there anybody out there, that's using Seven-Pi's, that has a similar situation that they can comment on? I use the system 85% music (Paramours & Foreplay), 15% HT (Adcom HT pre-amp). Also, for Wayne, there is a 6-8in. space between the rack system and the back wall. The space between the rack system and the side wall is about 42in. on both sides. The walls are drywall construction and they're solid (no breaks, cut-outs, etc) from floor to ceiling all around. You mention that for cornerhorns to operate properly there should be no obstructions for 4-6ft? on either side due to it's hornloading characteristics. Does the rack system, as I described above, constitute an obstruction by your definition? My feeling is that it is not. I'm only asking this because no one else has and I just want to be sure. When you take into account the width of the Seven-Pi 18 cornerhorn, in your opinion, is the 42in. space enough separation between the speaker and rack system? Wayne, I would really appreciate your take on my system set-up and whether you would recommend the Seven-Pi's or Ten-Pi's and what the pluses and minuses (none I hope) are with each. And thanks for this forum Wayne. And thanks to all who contribute to it.Gerry Provenzale

Subject: Re: Seven Pi-18 or Ten Pi-18
Posted by Wayne Parham on Sat, 09 Feb 2002 02:39:53 GMT
View Forum Message <> Reply to Message

I can give you a few general recommendations:1. Cornerhorns are appropriate in rooms from 500 sq. feet to 2500 sq. feet where room length and width have not more than a 3-to-1 ratio. This isn't a hard and fast rule, but a generalization.2. Cornerhorns are appropriate where a room has corners that have at least 3 feet of unobstructed wall space and at least 6 feet of wall space before termination. Termination includes another wall or an entry way. Obstruction includes large absorbent or reflective objects, such as a bed or large couch.3. Cornerhorns are not appropriate in rooms having rasied hardwood floors. Then again, nothing having reasonable bass output sounds good in a house with raised hardwood floors.4. Cornerhorns are also not appropriate in

rooms having truncated corners, i.e. places where an entryway or other large opening in the wall occurs nearer than three feet from the corner.5. Cornerhorns may or may not be appropriate in rooms having highly reflective walls, such as basements, concrete or brick walled rooms, and solid hardwood walls like log cabins. Such rooms should be treated with sound absorbent material spaced several inches away from the wall surface.When the rules listed above are followed, cornerhorns usually perform very well.

Subject: Re: Seven Pi-18 or Ten Pi-18
Posted by RichardC on Sat, 09 Feb 2002 14:41:40 GMT
View Forum Message <> Reply to Message

Wayne,I haven't found that 18" yet. Anyway, I was reading a review a while back about the effect of increased bass output in small listening areas. The article was primarily about automotive sound systems. He displayed a response curve in open air and superimposed a curve obtained inside of various cars. A small car interior had about a 30db max boost starting below 100Hz that he called the "pressure pot effect". Do you know at what point a room will exhibit this effect? Say, below "so many" square feet we have a noticable increase and above this area is negligible. I have a little over 250 square feet. You said that generally a 500 square foot room would be the minumum for a cornerhorn; so what happens in a room 1/2 that size? Do I lose the bass extension because the sound wave doubles back and cancels? I sure don't want to waste my time if another enclosure design would give me better low bass extension. Until I can get the proper 18" JBL driver to experiment with, I will probably turn my 4508 (4648-8A) into the corner. Its a LOT better than nothing.Richard

---

Subject: Re: Seven Pi-18 or Ten Pi-18
Posted by Wayne Parham on Sat, 09 Feb 2002 19:29:13 GMT
View Forum Message <> Reply to Message

When a room is very small, bass frequencies tend to pressurize the sound chamber. The woofer has more influence proportional to displacement on chamber pressure in a small room, which tends to emphasize lower bass sound pressure levels. This is what causes room gain.The room

of the walls. A long wall provides directional control at low frequency, but a shorter wall will not. If

you have a short wall that opens into another room, the bass will literally go around the corner into the other room. If you have a long wall that opens into another room only after a great distance, the bass will not go into that room because the wall has already set the directivity. That's the main reason why wall length matters, and why a truncated wall is not recommended.There is another issue, and that is room modes caused by standing waves. If the cornerhorn were set into a trihedral corner, open into free space with no ceiling and no walls on the opposite side, then the corner walls would set the directivity without being spoiled by interfering reflections. But opposing walls reflect back the sound, and standing waves develop. At some frequencies and some positions, the reflections add to the direct sound, making certain bass frequencies louder. At other frequencies and positions, the reflections cancel the direct sound, causing bass dropouts.Each of these phenomenon occur in all sound rooms, depending on their dimensions and characteristics.