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Subject: Re: Seven Pi-18 or Ten Pi-18

Posted by [Wayne Parham](#) on Sat, 09 Feb 2002 19:29:13 GMT

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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.