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Subject: Re: How low can a Pi go?

Posted by [Wayne Parham](#) on Mon, 09 Apr 2001 05:09:27 GMT

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The seven Pi with JBL 2226 is -3dB at 50Hz and -10dB at 35Hz in freespace. The seven Pi with JBL 2241 is -3dB at 40Hz and -10dB at 27Hz, again in freespace. Rolloff is smooth and slow too, with fl below 20Hz, so there is useable bass well below those frequencies. Also understand that those figures are for reference only, as a Pi cornerhorn is never used in freespace. When used as intended, in corners, there is considerable bass lift from corner loading and room gain. The seven Pi cornerhorn design is purposely overdamped slightly to conjugate room gain and corner loading.

The alignment results in slow, steady rolloff in freespace response. If you didn't have this gradual rolloff, then in-room response would be boomy. The bass lift from room pressurization happens at the rate of 12dB/octave starting at a low frequency set by the dimensions of the room. When used in room corners as intended, the -3dB point is generally shifted down in frequency somewhere between the -10dB point and the -3dB point. In smaller rooms this occurs higher than larger rooms, so in the smallest rooms the -3dB point will be closer to the frequency where it's -10dB in freespace. In larger rooms, the in-room response will be closer to the freespace response.

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