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Subject: Pi versus T-S

Posted by [Pilkar](#) on Wed, 20 Nov 2002 07:44:24 GMT

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hello guys! i have some doubts, and i think you can help me. i have just finished the design of my new speakers (by the T-S theory). i visit this site nearly every day, and is difficult not to get interested in the Pi alignment theory. so, i would like to know, which are the advantages of Pi over T-S, and vice versa. i will be using the selenium wpu1205 (12") woofer, paired with the d405ti driver on a h11450 horn, all selenium. the box is designed to have a smooth response up to 55hz (f3 point), at 40L. i would like to know how big would be the box using Pi theory. all i want is a powerful bass, not too much extension. this is the woofer data: sensitivity= 95dB/Fs= 46Hz Vas= 57L Qts= 0.33 Qes= 0.34 Qms= 11.92 Re= 6.7ohm Le @1KHz= 1.324mH thank you very much! Pilkar

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Subject: Re: Pi versus T-S

Posted by [Wayne Parham](#) on Wed, 20 Nov 2002 09:01:50 GMT

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Using the data you provided, Vas=57L, Qts=0.33 and Fts=46Hz, you can enter these values into PiAlign as Vad=2ft<sup>3</sup>, Qd=3 and Frd=46Hz. PiAlign recommends a rather small box of 0.667ft<sup>3</sup> (20L), tuned to 52Hz with a port that's 4.4" long and with area of 4.3in<sup>2</sup>. It further recommends that this be accomplished with a cylindrical port of 2.35" diameter or a rectangular port of 1.56" x 2.77". The system would then have -3dB around 70Hz, I expect, and would work well as a midwoofer system, perhaps as surround speakers or as mains designed to be used with subs.

Discussions about various cabinet alignments

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