
Subject: PiAlign'ed at 2 cu ft tuned to 20Hz

Posted by [Wayne Parham](#) on Fri, 28 Sep 2001 11:27:26 GMT

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You have a motor with these specs: $V_{as}=5.33$ cu ft $F_{ts}=21$ Hz $Q_{ts}=0.39$ So PiAlign equivalents are: $V_{ad}=5.33$ $F_{rd}=21$ Hz $Q_d=2.56$ PiAlign recommends a 2 cubic foot cabinet tuned to 20Hz using either a cylindrical 5" long, 1 5/8" diameter port or a rectangular 1" x 2" x 5" long port. You can grab a copy of BoxPlot on the Pi Speakers website to show the response of this cabinet using Thiele/Small analysis. The box you've proposed is about 5 cubic feet, and I suspect that will work just fine. The driver will probably work very well in cabinets from 1.5 cubic feet to 6 cubic feet or so, tuned to 20Hz. You can use BoxPlot to find an alignment that will give acceptable response in this size cabinet.