
Subject: Re: Pyle W820's in a one Pi alignment

Posted by [Wayne Parham](#) on Thu, 26 Jul 2001 06:58:03 GMT

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PiAlign recommends a cabinet having the following specifications:
Internal volume = 0.65 cubic feet
Port diameter = 1.4 inches
Port length = 1.5 inches
I've calculated some volume offsets using CSG:
Woofer - 47.5 cubic inches
Cone - 8" dia, 2" long - 33.5 cubic inches
Cylinder (magnet) - 3" dia, 2" long - 14 cubic inches
Tweeter - 5 cubic inches
Cone - 3" dia, 2" long
Port - 2.5 cubic inches
1" Fiberglass insulation (calculated at 1/4 thickness, to compensate for compression volume)
Side - 16" x 7" x 0.25" - 28 cubic inches
Bottom - 10" x 7" x 0.25" - 17.5 cubic inches
Back - 16" x 10" x 0.25" - 40 cubic inches
Total displacement: 188 cubic inches (Enter into one of the offset fields, either LFD or "other")
Internal cabinet dimensions:
Height - 16.4 inches
Width - 10.9 inches
Depth - 7.3 inches
I would recommend 5/8" wood stock, so add 5/8th inch twice, or 1.25 inches to each dimension. (Enter 1.25 into the "wood size" field)
Final analysis:
Height - 17 5/8"
Width - 12 3/16"
Depth - 8 1/2"
Port is 1.4" diameter and 1.5" long. You may substitute a 1 1/2" diameter port that's 2" long since 1.4" diameter (1 7/16ths) will be hard to find.
Let us know how your speaker sounds. It looks like it will probably work out very nicely!