Subject: Port shapes
Posted by Wayne_Parham on Fri, 27 Apr 2001 23:29:31 GMT
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PiAlign calculates uses the port length corrected for area. The dimensions it gives are appropriate for inside dimensions of what should be used in the loudspeaker. You can see the corrected length formula used on the PiAlign document.About different port shapes, I typically use cylindrical when I can, and rectangular when I can't. The PiAlign program will calculate either one. Sometimes the optimal cylindrical port is not of a size that is readily available. So when that happens I sometimes use a rectangular port. If the port is short enough, sometimes I just glue wood panels onto the baffle to build up thickness to the required port length, then drill through at the needed diameter with a hole cutter.As for standing waves, they aren't a problem if dimensions are acoustically small. But if used to high enough frequency, then cabinet will start developing standing wave modes. The port can do this too. That's what the insulation inside is for. It's usually sufficient to cover three internal sides with R11 or R13 insulation, but larger cabinets are usually better with insulation spanning the cross-section too. Cross-braces are a convenient place to put spanning insulation like that.