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Subject: Re: PiAlign program

Posted by [Wayne Parham](#) on Thu, 22 Jan 2004 00:05:15 GMT

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PiAlign uses the terms  $F_{re}$  and  $Q_e$  to describe cabinet tuning.  $F_{re}$  is the Helmholtz frequency and  $Q_e$  expresses a ratio of cabinet volume to port area. But PiAlign also suggests a specific port and cabinet volume that reflect these values. You can substitute a different port if you wish, and just keep the cabinet tuning the same. But usually PiAlign does a pretty good job of fitting the biggest port it can into small cabinets, and choosing a reasonable size port for larger cabinets. Sometimes PiAlign "thinks" a smaller port is acceptable, sometimes it chooses a larger port. But, except in rare cases, I usually find its port suggestions are reasonable for the cabinet size suggested. The times you might choose a different port are times when port installation is difficult or sometimes when a high-excursion driver would make port turbulence a problem at high power levels. These situations sometimes require special port placement or size considerations. It often depends on your cabinet layout and intended use. PiAlign is a software tool that I've found extremely useful, but ultimately, the design choices are still yours to make.

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