Subject: Re: PiAlign port
Posted by Adrian Mack on Sun, 14 Sep 2003 09:33:25 GMT
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Hey Wayne,Thanks for the response, it was definitly helpful. Besides peaks/dips in the response curve from port resonances if they are in the passband, is there any other unwanted things that they cause. Such as what the name suggests, "Organ-Pipe Resonances" ?I think that instead of placing so much emphasis on where the port resonances occur, using techniques which minimize them should be emphasised. That link you suggested has a formula which calculates when the resonance frequencies for an unflanged duct will occur. It seems that the port resonances occur at the acoustical impedance peaks, according to that paper. That formula would be good to get a starting point so that a suitable port length could be choosen which wont have resonance frequencies in the passband, and then use port placement and insulation, and crossover to minimize any affects which may be in the passband. Some people report that bandpass subwoofers usually have more problems with "organ pipe noise". I believe that they should be just the same as a bass reflex cab, because they both use a duct and the dimensions of the duct will set where the waveguide behaviour occurs, and its not like the duct is extremely long such as in a TL. Furthermore, its a subwoofer and the problem should be attenuated by a filter like in a bass reflex cab, so I cant see why its more of a problem. Does the acoustical lowpass filter of the bandpass subwoofer attenuate midrange energy from the port the same as an electrical crossover filter would? If so, that would mean they'd have less problems than a bass reflex cab, unless the bass reflex had a crossover to make it fair, then it would be just the same. Thanks!Adrian