Subject: Wayne, can I get the plans for the pi 7 18"?
Posted by xcortes on Wed, 18 Feb 2009 20:07:36 GMT
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thanks,xavier

Subject: Re: Wayne, can I get the plans for the pi 7 18"?
Posted by Wayne Parham on Wed, 18 Feb 2009 21:15:24 GMT
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Sorry, that one isn't available anymore. I may be able to dig up the plans on an older hard drive,

scale the bass bin cabinet up to being two feet wide and tune it to 30Hz. Scale all the dimensions that way, so it will be four feet tall, etc. The midhorn, tweeter and crossover are all the same. A more complete description can be found in the post called "seven Pi-18 cabinet dimensions."

Subject: Thanks. Another question
Posted by xcortes on Wed, 18 Feb 2009 21:54:08 GMT
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When I simulate your midrange horn with hornresp I get response to somewhere between 400 and 600 hz depending on the driver. Yet you cross it over at 1.6khz. What am I overlooking?Thanks again!

Subject: Re: Thanks. Another question
Posted by Wayne Parham on Wed, 18 Feb 2009 23:23:54 GMT
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I saw falling response in the simulations too but I kind of expect that in midhorns and tweeters. David McBean has done a wonderful job with Hornresp, and I've grown to trust it implicitly for modeling basshorns. It's less reliable on midhorns and tweeters, only because it uses a pistonic model. You have to measure a speaker to see what its behavior is like above the pistonic range.Implementation, measurements with and without the crossoverAbove a few hundred Hertz, the cone is no longer pistonic and areas of the cone are decoupled from the rest. This creates what is effectively a lower-mass section that operates semi-independently from the main body of the cone. At high frequency, this behavior is what makes a big part of the total response. They key is to use drivers with good damping, so these higher frequency modes are smooth. Voice coil cover shape and composition plays a major role in the response up high. Below you'll see the

response curve of the midhorn with a Delta 10 driver; Other drivers will measure differently.