Subject: Re: Woofer directivity
Posted by David McBean on Thu, 24 Jul 2008 08:01:11 GMT
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Hi Everyone,"You can expect a rigid flat piston radiator to generate a 90° pattern (-6dB) at the frequency where diameter equals wavelength."Just out of interest, the effect described by Wayne in his statement above can be readily demonstrated in Hornresp.A circular piston with an area of 929.41 cm^2 has a diameter of one wavelength at 1000 hertz. To simulate in Hornresp, set Ang = 2.0 x Pi (for infinite baffle), S1 = 929.41, S2 = 929.41 and L12 (Exp) = 0.01. Calculate the results, then run the Directivity Beam Width tool from the SPL Response chart, and Sample at 1000 hertz. The -6dB beam width is calculated to be 89.5006 degrees (which rounds to 90 degrees, as indicated by Wayne).Kind regards,David