Subject: Re: High frequency dispersion and driver size
Posted by Duke on Sat, 10 Mar 2007 00:42:32 GMT
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As a general rule of thumb, a driver's radiation pattern will narrow to about 90 degrees at the frequency where the cone diameter (or diaphragm dimension if non-circular) is equal to one wavelength. Cone break-up preserves a wider radiation pattern to a high frequency than if the cone were behaving as a rigid piston. A dome driver acts as an annular radiaton in breakup mode, which from what I understand also gives a wider pattern than rigid piston theory would predict but not as much so as a cone in breakup.If you want to get into mathematics that will describe real-world loudspeaker behavior rather that idealized rigid pistons, I recommend "Audio Transducers" by Geddes. Duke