Subject: Re: Constant directivity tweeter horns and waveguides
Posted by Wayne Parham on Wed, 02 Apr 2008 22:43:27 GMT
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At frequencies where the radiator is acoustically small, the wavefront is basically an omnidirectional sphere. If on a baffle, it becomes a hemisphere in the range of frequencies where the radiator is acoustically small but the baffle is acoustically large. As frequencies goes up, so that the radiator becomes acoustically large, the beamwidth will narrow.A conical horn is like a baffle that narrows directivity smaller than 180°. Wavefront is basically spherical, bounded by the wall angle. Like the baffle mounted condition, this holds true through the range of frequencies where the throat is acoustically small and the mouth is acoustically large. Above and below this range, the pattern is no longer set by wall angle.