Subject: Horn shapes
Posted by Wayne Parham on Sun, 20 Apr 2003 16:37:59 GMT
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CD flares are those that have straight sides, often with sections separated by sharp edges. Their main strength is that they exhibit constant directionality regardless of frequency, hence the name.Personally, I prefer radial horn shapes, with straight side walls matched by catenary radius from the throat angle and exponential curvature of the top and bottom walls. This provides a narrow vertical pattern, usually with some collapsing directivity in the vertical plane at high frequencies. Horizontal directivity is uniform, although not generally as much as a sectioned CD horn at low frequency. The sections in CD horns widen the patten down low, maintaining constant directivity down low, just before the horn loses pattern control. This offers a slight improvement in coverage but there's a penalty in smoothness of response as a result.You can find some good useful general information and brief history of various horn developments in Quadratic horn whitepaper. This document is commercial in nature, intended to introduce you to specific Peavey's horn products. But the description of various horn shapes is good.