Subject: Re: The Movement of Waves and Particles
Posted by Cuppa Joe on Thu, 01 Mar 2007 05:21:06 GMT
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Thanks for the links, Wayne. I hadn't thought to look there! I already had the impression that you'd say sound was both particle and wave, but I wasn't sure whether one property overshadowed the other in application or theoretical discussion. Both properties get equal billing, right?I'm still concerned about my bends vs. reflectors indecision. A wavelength in a horn doesn't just have length, it also has...diameter, I guess. If I want to pass a signal through a W-bin up to (at least) 1kHz via 45 degree reflectors, wouldn't the wave impacting the reflecting surface interfere with itself when it exits toward the mouth?I had a similar concern for a rounded bend in a W-bin. What is there to prevent a frequency leaving a driver's cone from simply shooting across the passage to the outer wall, as opposed to following the horn's inner curve? Wouldn't that cause cancellations as well? I'm not completely understanding how a wavelength's "width" affects its behavior inside a folded horn, especially as the frequency rises.When Bill F. was proposing that a wider radius passes a higher frequency, I think it's because a curve comes closer to approximating a straight wall as its radius increases. Is that about right? So, with a reflector, what does reflector size vs. wavelength mean? That relationship is yet unclear.I also noticed with some of John Sheerin's models showing a soundwave moving through a long 90 degree bend, that higher frequencies tended to adhere to the outer curve as they left the mouth. Could I expect that in a folded horn with rounded bends, where the higher frequencies might cling to the outermost edges of the horn's mouth? Would a reflector fix that problem?