Subject: Acoustic impedance of arrays
Posted by Ralph on Thu, 26 Aug 2004 22:39:56 GMT
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Arrays increase efficiency by adding drivers within 1/4 wavelength of each other. Does this increase acoustic impedance the way a horn does? Does the acoustic impedance become more resistive and make acoustic phase closer to zero?

Subject: No.
Posted by Bill Fitzmaurice on Fri, 27 Aug 2004 12:41:42 GMT
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Horns increase acoustic impedance by placing a column of air in front (or back or both) of the cone; it is the combination of the mass and geometry of that air column that offers an impedance load to the driver. Arrays don't in and of themselves alter the load that the cone drives into. They achieve higher sensitivity via the increased radiation efficiency that results from increasing the size of the radiating plane.