
Subject: Re: Horns Length, Frequency Wave Lengths, And, All That Good Stuff
Posted by [Wayne Parham](#) on Fri, 18 Oct 2002 18:39:21 GMT

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Hi Elliot! Risking oversimplification, a horn's performance is determined by its length, its flare shape, its mouth area, its throat area and its radiating diaphragm, motor and compression. The lowest frequency is determined by its length, which is $1/4$ wavelength. The highest frequency is determined by radiator mass and motor strength. Efficiency is determined by motor strength and compression and by its ability to limit directionality and focus the sound with flare size and shape. The shape and ratio of throat to mouth area set the horn's response curve, and small mouths usually result in response curves with ripples unless the horn radiates into fractional space, like steradians). Wayne