
Subject: Re: line array [Re: Vifa two way]
Posted by [Bill Fitzmaurice](#) on Sun, 13 Jun 2004 12:01:16 GMT
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Your pipe needs to be a quarter wavelength long at the lowest produced frequency, but there's no point in a ten foot 28 Hz pipe with a driver that has an Fs of 100 Hz. A good rule of thumb is to have the pipe frequency perhaps 20% below Fs, but Qts and a lot of other factors come into play, too many for a simple explanation. Pipes should be fully stuffed or they become resonant devices with all sorts of midrange aberrations. The idea of stuffing is that it suppresses mids for a non-resonant device but the lows essentially blow right through the stuffing. Unstuffed pipes are only recommended for pipe organs where you want single note propagation. Most music is in the midrange as far as definitive content is concerned, but it's the nuances of the low fundamentals and high harmonics that make it interesting. I'd say the new Eminence line array 6 (available at Parts Express) leans more towards high power pro use than home; for the home I like the idea of very wide range drivers in the four to five inch range. You can get very flat response over a wide bandwidth with small drivers, and by using six or more you get the sensitivity up to where the SPL is quite adequate.
