
Subject: Re: 4pi Commercial Dinner Theater Build
Posted by [Wayne Parham](#) on Mon, 22 Aug 2011 20:36:05 GMT
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dutchswan0311 wrote on Mon, 22 August 2011 14:48I am trying to figure out exactly what I want to do for our stage sound. I am thinking about stacking a 4pi built with an extra layer of ply on each side to make it the same width as the F20 (60"H,20"W,30"D), and then just stack it on the F20. Would it be okay to (1) flip the F20 over with the horn on top and then (2) stack a 4pi on top of the F20 flush to the front? The reasoning behind this would be to then build 1 cloth mesh grill to cover all of the drivers of the sub and 4pi (well, the drivers of the 4pi and the horn of the sub). I think they will work well that way, just be sure to delay the mains to match the path length of the subs. Orient the subs with the mouth near the floor. If the F20s sound good in the ~120Hz range, I'd low-pass them with a shallow filter slope, like ~90Hz second-order or ~120Hz third-order. This will make the F20s act as flanking subs, which smooth room modes in the upper modal region.

Run the mains full range or if you're really pushing the power, high-pass them at 60Hz. Having some overlap between mains and flanking subs will smooth the modes in the 70Hz to 140Hz range, usually vertical modes and self-interference off the back wall. More distant subs should be crossed over lower, with multiple sound sources to smooth the lower modes from 30Hz to 70Hz, usually horizontal modes between opposing walls.