
Subject: Re: Horns, transmission lines and reflex cabinets

Posted by [Retsel](#) on Thu, 18 Aug 2005 13:08:17 GMT

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I measured the size of the opening of the backhorn opening of my Hedlund Horns to be 27.25 inches x 9 inches. I entered the opening into my spreadsheet for calculating horn performance (assuming 1/4 space performance) and I found that it corresponds to a cut off frequency of 86 hz. This is consistent with the roll-off frequency of the Hedlund Horns which I have seen in plots sent to me (I never have measured the frequency myself). Thus, this suggests that the Hedlund Horn is a true horn and not a transmission line as you suspected. I believe that Jan Hedlund designed them with a Tactrix flair. If you reread my post you will see that I did not say that transmission line speakers suck. I did say that reflex boxes suck. I own a pair of transmission line speakers. They are the premier speakers made by Irving "Bud" Fried. They were originally sold with the name of C3Ls and then when he upgraded the speaker drivers and crossovers, he renamed the satellites as C5s (as part of his Vahalla system which sold for \$10,000 in the 80s). I upgraded to the C5s. They are very excellent speakers. It is just that the Hedlund Horns are better, as they start with better quality drivers. Bud did say that the woofers in those speakers are higher Q drivers. I am sure that the Lowther DX4s are excellent in transmission lines. I bet that you could duct tape a pair to the wall and if coupled with a suitable crossover, they would have respectable sound in that application too. But the point being made by this string of posts is that back horns are the best way to get the most efficiency and dynamics from full range speakers. My experience has confirmed this with Lowther DX4s and particularly so since they have such a low Q. Transmission line speakers probably have a higher WAF than back horns, and you could sell them on that basis, but I doubt that transmission lines will have the dynamics and efficiency of back horns. They may not be different by a lot, but side by side, they would be a notch lower. My question to you is when you put a pair of Lowther DX4s into transmission lines, do you need to pad down the upper frequencies, or is the frequency response relatively flat (I doubt that Lowthers are "flat" in backhorns, but they are so when averaging over the frequency response and they sure sound great without crossover components in the signal path)?Retsel