Subject: D'appolito configuration
Posted by BrianG on Sat, 22 Jun 2002 15:02:31 GMT
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Wayne,Any thoughts about adapting the 4 pi to the D'appolito configuration? Some of the benefits are:-increased effieciency to better match the HF horn's effieciency (and SE tube amp's power)-ability to use 16 ohm drivers in parallel with existing crossovers (there were many threads here about the use of 16 ohm tent sale drivers)The JBL driver version of the 4 pi has such a small cabinet size that even doubling it will still make it smaller than some of the alternative driver 4 pis.On a JBL history website, they showed a few JBL models (the Everest?) that had a woofer above and below the horn midrange. So the approach was validated in a flagship JBL commercial product.Do you think this is a worthwhile project? Are there any downsides to this approach (other than cost and increased cabinet size)?Thanks,Brian

Subject: Re: D'appolito configuration
Posted by BrianG on Sat, 22 Jun 2002 15:15:36 GMT
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For Clarification:The JBL model that uses a woofer above and below the midrange horn is the K2, not the Everest. Information about it is available at:http://www.audioheritage.org/html/profiles/jbl/k2.htmIt was built prior to D'appolito naming this configuration and describing its benefits.The D'appolito configuration uses a woofer above and below the midrange/tweeter. It uses geometry to partly solve crossover, efficiency, and maximum output issues. Mr. D'appolito has published his designs in the Audio Amateur (now AudioXpress) and theory papers in the Journal of the Audio Engineering Society.Brian

Subject: Re: D'appolito configuration
Posted by spkrman57 on Sat, 22 Jun 2002 15:47:45 GMT
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Wayne, I also would be interested in such a endeavor. I have eight (8) 2226J's in my collection and would be interested in using pair of 2226J's with my Altec 288C driver on 311-60 horn with 600 hz pi x-over in the M-T=M configuration. Just think about it, JBL bottom end w/100 db and Altec horn/driver combo @ 115 db for 15 db attenuation/compensation would be killer. The JBL 4648 cabinets (I have 4 decent and 1 cracked cabinet) doesn't leave any room for the horn between the two 15" drivers. (BUMMER!). I know from Sam on this forum that @817 hz there is cancellation between the two 2226's, but a system such as this would best be with 1.4" or 2" throat drivers for high end, so 500hz/600hz or 800 hz would be good x-over prospects. I think for anyone going this route, 1" drivers would be a problem since the crossover should be crossed

over lower than 1.6 khz. Regards, Ron

Subject: Speaker arrays
Posted by Wayne Parham on Sat, 22 Jun 2002 16:39:48 GMT
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The dual woofer setup makes a two-element speaker array that increases LF output slightly. I make two-way speakers so that collapsing DI of the LF driver matches the HF horn in the crossover region. See AES Volume 31, Number 6 for more information on this approach.

Subject: the 817Hz notch is caused by the distance
Posted by Sam P. on Sat, 22 Jun 2002 18:34:38 GMT
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between the drivers centers being about 16.7 inches. If you move them farther apart, you will still have a notch, BUT AT A LOWER FREQ., where it will be even more audible(?). Some other jbl dual woofer format speakers roll off the lower woofer about an octave sooner than the top one for a smoother response in the xover region, FWIW. I'm not sure what would be gained by using dual woofers above and below the horn as far as efficiency is concerned, compared to the 4648a-8 configuration, which I find to work rather well. I can see building new bass enclosures SOMEDAY, that are a bit shorter, match the 511 Altec's in width, and maybe slightly less depth, to arrive at a net of 5 cu.ft. Vb. But the work would be for cosmetic benefit only in my eyes, aside from getting the woofs into a Pi align tuning configuration.