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Subject: challenge for wayne (altec style bass horn)  
Posted by [replay](#) on Mon, 17 Dec 2001 22:41:21 GMT  
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hi wayne, for my next project i'd love to build a Pi speaker with a vintage look. a simple 2 way high efficiency speaker based around a 15" kilomax driver housed in a classic altec style bass bin. is there a compromise in sound with this enclosure versus your current designs? what trade-offs or benefits do you see? could you find the time to plot dimensions for this box (a low frequency of 40hz would be fine, lower would be great)? just thought i'd throw it by you, with all that free time you will have over the holidays (yeah right!) best wishes to you and your family merry christmas, george

<http://www.voiceofthetheatre.com/816A.th.htm>

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Subject: Altec Voice of the Theater  
Posted by [Wayne Parham](#) on Tue, 18 Dec 2001 05:51:53 GMT  
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Sounds like a neat project. I always love the looks of those VOTTs. One thing I'd do differently is to boost the bass to match the mids. The Altec midwoofer is front loaded and reflex tuned. The front horn is tuned for midrange, which has the effect of introducing a midrange shelf that's louder than the bass. I'd pad the midrange down with a bypass coil to boost the bass. On one hand, that lowers system sensitivity but on the other hand, the midhorn load will still reduce midrange excursion. That means the benefit is still there, in the form of reduced midrange distortion. Don't push a system like this hard though, because bass excursion will tend to modulate the midrange, creating intermodulation distortion. Since you're talking retro style and tube amps, I don't think this will be an issue. It will probably be pretty cool. Keep us posted if you decide to do it!

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Subject: Re: Altec Voice of the Theater  
Posted by [Tom Brennan](#) on Sat, 22 Dec 2001 01:02:59 GMT  
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Wayne-The 825-828 VOT most certainly is bass-shy due to its stepped response. Mind that it was designed for theater use and Hilliard wanted directional control over the upper bass and lower

mid, also Hilliard was keen on acoustic lineup of the woofers and treble drivers, something impossible with the Shearer horns that preceded the VOTs. The midrange and upper bass is glorious though, especially if using the 515B woofer. No woofers other than Altec should be used in these cabinets as I doubt other woofers will have that Altec magic. My 825s do lack lower bass for sure though, the 2 JBL 4846s I ordered should take care of that though. That the Altec VOTs still have a following 55 years after introduction shows that Hilliard and Lansing were really onto something; these speakers, warts and all, still sound fantastic.

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