Subject: triamp Q for Wayne
Posted by Sam P. on Mon, 16 Jun 2003 11:41:31 GMT
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I have all the gear now to triamp "gracefully". I will use the 3rd order Tube Active xover unit at 800Hz. to split the LF(dual 2226j's) and MF/HF. The LF/MF will bve physically phase aligned at 800Hz:) The trusty 24dB/octave XM9L will need "reprogramed" to split the MF(511B/902's) and HF. The QUESTION is where to cut off the 511B/902 altec horns, and hand off the HF to either jbl 2404's or ev T-35A's? 5kHz. to 7kHz. would seem a logical place, but is there a "rule of thumb" regarding when the MF horn loading changes, and you might as well be using the HF tweeter?! The MF upper cutoff using 511B's, what's good? I'll be using 3 sand amps(only 200wpc for the jbl 4648a-8's! 100wpc MF, 60 wpc HF) with identical input sensitivity(135mV/1 watt out)and the PP 7581A's of the Mc-240 can also be set the same. The tube xover outputs are not quite unity gain(0.9?), but they are the same level. Adjusting how much shelving the MF and HF get using the XM9L level controls will be a snap:) -12dB for the mids, -6dB for the hf should get me pretty close to where they need to be... I will run just the sand amps at first, as the quasi-4 Pi Pro's sound really great with 40 watts of tubes driving them! TT to tube phono preamp to Mac gives me a totally "sand free" vinyl system:) Sam

Subject: 511's in a three-way
Posted by Wayne Parham on Mon, 16 Jun 2003 15:37:39 GMT
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I think I'd probably crossover the 511's around 600Hz and the 2404's around 6kHz. Seems that is the best range for the Altec's and I'm not sure I'd want to push the JBL tweeter much lower.

Subject: Re: 902 crossover point
Posted by wunhuanglo on Mon, 16 Jun 2003 21:51:26 GMT
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You may be interested in the referenced Altec page that advises crossing over the 902-A at 1200 Hz on the 511 or 811.

http://nleinternet.net/alteclansingunofficial/proloudspeakers/sectoralhorns/511B&811B-Data.pdf

Subject: Re: 902 crossover point
Posted by Wayne Parham on Mon, 16 Jun 2003 23:04:33 GMT
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As I recall, that was an early attempt at matching directivity. While I applaud this in general, I don't think the Altec sectional horns are good canidates for this approach because they're not CD. Add another crossover point to device with another very different coverage pattern and I think matching the directivity at 1.2kHz becomes mute.That said, as you know, I do believe that uniform directivity is important and propose systems that achieve it as much as possible. I just don't think this one can.

Subject: Re: 902 crossover point
Posted by AstroSonic on Tue, 17 Jun 2003 00:09:14 GMT
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I suspect that the recommendation of 1200 Hz as a crossover frequency for the 902/511 and the 902/811 combinations had more to do with power handling (and abuse/misapplication in the field) than with amplitude-frequency linearity. The literature for the Altec small format drivers pretty clearly suggests that they are meant to be used from 500 Hz up (with the 511 horn) and 800 Hz up (with the 811 horn) in smaller settings where they could provide the same bandwidth as the large format drivers and their lower power handling capacity was adequate. Perhaps one of the Altec pros could weigh in on this.AstroSonic

Subject: Re: 902 crossover point
Posted by Tom Brennan on Tue, 17 Jun 2003 01:58:15 GMT
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Astro---Altec crossed over the 802-902 at 1200 late in the game for a couple of reasons. There were A7 models meant for musicians that crossed at 1200 in the interest of better power handling. But with the Model 19, the last Altec 15" home 2-way, the crossover was at 1200 to match directivity at the crossover point between the woofer and the 811 horn used. This was forward thinking at the time.IME Altec 1" drivers work very well when used down to 500hz if on proper horns. They even work well when crossed at 500 1st order. When I used 1" JBL drivers at 500 1st order they clacked but Altecs worked very well. This was for hi-fi use, wouldn't try using them that way for pro-sound. I used 802s, 806s and 908s with Radian diaphragms like this, all sounded good.

Subject: Re: Proper horn for 902/500Hz Xover
Posted by AstroSonic on Tue, 17 Jun 2003 09:35:59 GMT
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Tom,Thanks for the info. I have 511B's and am wondering what the lowest acceptable crossover frequency would be for 'civilized' home use (no earthquakes, etc.). If the 511B's are not good to 500 Hz, which horns would you recommend? I would like to stick with 1st or 2nd order because I suspect that the more complex networks will be more difficult to optimize, and simpler is often times better. Regards,AstroSonic

Subject: Matching directivity
Posted by ToFo on Tue, 17 Jun 2003 13:31:23 GMT
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Hi Sam,I can't find polar response plots for 511-B but that would really help because you have the 2404 above it. Your 2404's are rock solid off axis and you can guarantee that the 511-B's have narrowing dispersion as they near the top octave. It would be a shame to have all those killer horns with a big hole off axis. I think your right on with your 5-7KHz guess. Look at it this way. The 2404 has constant directivity above 7KHz, and has a real nice transition in directivity from 4 to 7Khz. Crossing the 511-B at 5 or so should put you where the Altec is starting to narrow and you 2404 is starting to go constant. This gives a nice transition in off axis directivity as well as on and off axis frequency response. You are still getting nearly a decade of output from your 511-B(which is remarkable really). I will bet you have a meter and some way to make test tones from 4 KHz up. The measurements wouldn't be something I'd publish, but I think you could find where the the 511-B starts to narrow. Really though, you can't lose at 5 or 6Khz.Thomas

Subject: Re: Proper horn for 902/500Hz Xover
Posted by Tom Brennan on Tue, 17 Jun 2003 19:36:01 GMT
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Astro---The 511B works and sounds fine used down to 500. In fact IMO it's the 2nd best horn I've ever used and I've used lots of them: Edgars, EVs, JBLs, Martinellis, McCauleys, PAudios. The best sounding horns I've used were tarfilled Altec multicells, 1005s.So yeah, damp the 511s and use them and forget about it, you'll be done, only one thing sounds better than a 902 on a 511 - a 288 on a 1005. :-)