Subject: Ping sam P.
Posted by M on Thu, 09 May 2002 03:22:54 GMT
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Sam,I understand that you are running 4648A-8's with Altec 511 horn. Would you be willing to share your corossover?Thank you,M

Subject: 600 Hz. with back to back BW's
Posted by Sam P. on Thu, 09 May 2002 09:41:20 GMT
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using textbok values of 3.0mH and 24uF. The woofer circuit has a zobel of 8 ohms/47uF. The HF is shelved ~12dB with a 10.2 ohm shunt resistance and between 24 and 28 ohms series resistance, bypassed with a 0.33 uF cap. Considering the 902-8b altec drivers' Z, the HP xover is "looking into" a load of 8 ohms that only varies +/-1ohm across the entire range. The drivers are phased at xover per Altec AN-9's procedure (using "sam's time alignment trolley"). Very happy with the whole system from bass to batsqueaks! These same xovers have been in use for over a year, the only real change was throwing out the variable Lpads. Imaging is solid, sound stage is wider than the speakers and deeper than the rear wall depending on the program material. "Sweet spot" is wider than the couch, very little change in "tonality" as you walk from the left side of the room to the right. Transients and percussive sounds are very crisp, distinct, and unsmeared. Listening distance averages about 12 feet, room is around 20x22 with cathedral ceiling. As an aside, the back to back BW's sum to +3dB at crossover, BUT PROVIDE a flat power response. At 600Hz, the dispersion of the 4648A-8 closely matches that of the 511's, I feel it contributes a lot to the seamless blending of the separate Lf and Hf sources. JBL goes into this topic in detail. Using the same 3.0mH inductors, higher xover freqs using Bessel or LR xovers can be built by just selecting new cap values. Stay below 800Hz. to avoid the dip where the two 2226J's separation distance results in some cancelation at 817Hz. THE ONLY thing I would do different is use 14Ga. coils, which were not available in 3.0mH when I built these. So expedience would dictate selecting a 2.5 or 2.2mH 14ga. coil, and calculate what cap values you need for a 700 or 800Hz. xover situation. Future plan is to install either higher power altec diaphrams, or drill the 511's to mount 2426's(then 800Hz. is mandatory). With the HF shelved 12dB, I "guesstimate" needing about 75watt HF driver power capability to "keep up with" the 1200 watt rating of the 4648a-8's:) Altec 902's handle maybe 15wrms:(But they sound so sweet as is... Sorry to be so wordy, but I really love these JBL/Altec's. Sam

Subject: Thank you Sam. (nt)
Posted by M on Thu, 09 May 2002 12:39:44 GMT
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nt

Subject: Re: 600 Hz. with back to back BW's
Posted by spkrman57 on Thu, 09 May 2002 13:11:38 GMT
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Sam, I also would like to thank you for the info. I plan to use JBL 4648 with Altec horn/driver combo. I recently acquired a pair of Altec 311-60 horns and a pair of Altec 288C drivers with 16G diaphrams. I plan on putting a 15 ohm resistor across the 288 to give me a 8 ohm load to the crossover(115db/watt minus 3db for the 15 ohm will still leave me 112db/watt). I bought from parts express: 800hz 2-way crossover with 12 db/oct low-pass and 18 db/oct high pass. I can use your zoebel info for my 4648's. I am wondering about the 817hz cancellation prob you mentioned and will try out first. If I must, I will probably use 500hz or 600hz crossover then. I plan to use Wayne's attenuation/compensation for horn(ie: 12 db/.47 ufd cap). I know .33 ufd is probably testbook but I like a little more sizzle on the top end(derived this from running 2226J with 2418 driver on 2373 horn with 1.6khz high pass 18db and 1.4 mh coil on 2226(Jbl 3677 cabinet - remove foam from ports and is close for low power applications)) Did you run your 4648's on their sides or upright????? I am anxious to try out the 288's (1.4" throat vice 1" altec's I have used before). I read somewhere that Altec decides to use 1.4" throat instead of 2" throat to keep the high frequencies from dropping off as much. If anyone on this forum has any advice concerning the Altec 288's please let me know. The 311-60 horn has 220 hz taper and the 288's are rated for 500hz to 16khz. Thanks for listening, Ron

Subject: haven't tried them sideways
Posted by Sam P. on Thu, 09 May 2002 14:01:06 GMT
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but at one time considered laying a 4648a-8 on it's side, putting a cinder block on each corner, and setting a second 4648a-8 on top. Plan was to stick the 511 in between the two 4648a-8's, decided it was too much trouble. Also envisioned a vertical array, 4648a-8, 511 horn, and another

4648a-8, about 8 feet tall, 300 pounds, a very "overbearing" presence in the room was feared, so I'm trying to think nice small speaker thoughts so my evil twin won't get his way. I eventually plan to build the dual 2226J's into nicer, Onken style enclosures. I am not sure how high the 288's go. The 902's go pretty high w/o compensation; with only the 0.33uF bypass, their upper octave may still be a little "hot" even. 800Hz. is OK for your xover, the notch/dip at 817Hz. is rather sharp, and probably only a factor when playing sine waves:) Sam

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Subject: Re: haven't tried them sideways
Posted by spkrman57 on Thu, 09 May 2002 14:06:37 GMT
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Sam, My evil twin has been getting his way for years, could explain why my house only has thin walkways in each room. I have collected way too much audio/spkr cabs/electronic equip. My 2--car garage is filled, my basement is full, only room without anything audio is the bathroom. (My reading material is partly there). I will let you know when my project reaches reality. Thanks, Ron

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Subject: too much "stuff" syndrome
Posted by Sam P. on Thu, 09 May 2002 15:50:11 GMT
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I can relate to. I could live pretty happily with just my 8 inch pioneer FR TQWT's and fisher tube receiver fed by vinyl and cd. But my wife enjoys music a lot, and she appreciates how great the jbl/altec systems sound. And she was sympathetic when I explained about the long wall and short wal...zzzzzzz, said, OK, buy four of the bloody things. The 4648a-8's play ruler flat from 100 to 800, with very low distortion. Maybe only 97dB/watt per jbl. Their low end makes me happy, I think you will enjoy them even without a subwoofer. Insure that your HF levels are not so "hot" as to overpower the 4648a-8's. Crossing at 800Hz. will let you get all that greatness out of those 4648a-8, before transitioning to the 288's. What kind of diaphrams are in your 288's? Mismatching is common, for example 902's come with two different part number diaphrams, their response varies a lot. I guess in Pro audio or at a theater, if a driver blew, when it was repaired any new diaphram was as good as any other if it fit...so what if it did not match the others! Only way to know what you have is to open the drivers and see if the numbers are the same, non oem replacements are also common. Which is why I am waiting till I can afford a new pair of 2426's

rather than rebuild a used pair. Altec 902's can be rebuilt nicely for about $150/pair IIRC, I don't know what parts for 288's cost, but new diaphrams should be considered when implementing used drivers for hifi use if you want the left and right response to be the same, if you have old, weak alnico...good luck. That brings us back to the topic, too much clutter. Best idea is sell some of my junk, and buy new drivers for more speaker projects. Anybody need a Leslie 247 tone cabinet,it would make a nice tube driven(pp6550's) subwoofer:) Or should I be looking for a Hammond organ to add to the LR collection? Hhhmmmmm. Sam

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Subject: Re: too much "stuff" syndrome
Posted by spkrman57 on Thu, 09 May 2002 16:04:48 GMT
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Sam, the 4648's are 100db/watt and the diaphrams I have are the 16G type (my 288 is the "C" model. I will attenuate 12 db on the 288's and have a 15 ohm resistor in parallel with the 288's also. This has been a fun thread. Regards, Ron

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Subject: jbl posted new data recently
Posted by Sam P. on Thu, 09 May 2002 21:52:26 GMT
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at www.jblproservice.com where many more of their systems detailed tech data is available, lots of xover schematics for instance. Some even have errors, where the same xover is used with 8 ohm HF in one system, and a 16 ohm driver in another, need to be careful about "cloning" from bad drawings. The 4648A-8 system is specified at 97dB/watt using the dual 2226J's. My rat meter calls them 100. JBL say the 4648 using a pair of 2226H's is 100dB/watt, but that is a 4 ohm system impedance. The main point is knowing how many dB's to shelve the HF. In room measurements once all xover losses have acted will let you know how close you have gotten with level matching, in some cases manufacture published data is misleading...my 902's can't be found rated higher than 106dB on a 511 horn in any Altec data. They measure 112dB. Good luck. You HAVE been to the altec heritage online library, right? Sam

Subject: Re: jbl posted new data recently
Posted by spkrman57 on Fri, 10 May 2002 09:57:19 GMT
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Sam, I have been to the Lansing Heritage (JBL) site and both of the ALtec sites. I am a little confused on the efficiency of the 4648's, I think the pair of 2226J's in parallel for 8 ohm result is 100db/watt. By the way, the 2226J's used single in a cabinet even though 16 ohms works very nice with my 3677 cabinets with the 2418driver on the 2373. I used the 1.6 khz high pass from Parts Express and using 1.2 mh coil (I actually bought it for another project"14 guage") the proper value for that should be 1.4 mh. I used 15 ohm resistor shunt with 30 ohm series for attenuation with .47 ufd cap on the 30 ohm. (special note here: with my good friends come over with their 2A3 Paramour's, I just double another 30 ohm over the 30 ohm resistor already in place. The 2A3's have great midrange"magical comes to mind" but need that extra 3-4 db less attenuation. My normal amp is Marantz 2215B (15 watts per channel @ 8 ohms, so at 16 ohms maybe 8 watts) In my 12' X 16' living room I still get 105-108 db cleanly at the seated position approx 7' from each speaker. Room placement makes big difference with 2226's I have to mave away from back wall at least 8" to 1'. Sorry to bore everyone to sleep now, I'll quit for now. Regards, Ron