
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 textbook 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