Subject: Parts shopping Q
Posted by Rich B on Tue, 04 Sep 2001 12:51:46 GMT
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Being new to building a speaker I have some questions on parts supply.Going to be building 4 Pi speakers very soon. Starting to put my shopping list together.Need to buy 1.0 mH 10A and 0.6 mH 5A inductors Looking at Parts express I can get Air Core in either 18 ga (300W) or 14ga (800 W).Q1)Would the 18 gauge be okay or is there problems using 14 gauge in terms of the wire gauge causing highs to be rolled off etc? Trying to correlate 300W with 5A.Q2) Do I put any sound deadening material inside the "box" ie fibreglass on the back side only or on all sides except the front baffle?Q3) If Q2) how thick, 4" fibreglass okay or is the special poly fills better.?I am sure I will have many more questions as I really get into this. Time to get a sheet of MDF (good plywood hard to find and $$$) and get going.Thanks for the help.!!!Rich

Subject: Construction details: crossover parts and fiberglass insulation
Posted by Wayne Parham on Wed, 05 Sep 2001 06:12:56 GMT
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About coil wire guage, 18 guage wire is acceptable but 14 guage is better. The difference isn't really in the highs, it's the lows. Coils with larger conductors have lower resistance and this improves damping. The speaker is slightly overdamped though, so smaller coils that shift the alignment towards less damping aren't terribly troublesome. Still, I'd prefer a larger conductor with less resistance.As for insulation, line the back, bottom and side nearest the port with R11 or R13 insulation. In larger speakers with braces, lay a sheet on the braces spanning the cross-section of the cabinet. Braces should be installed approximately every 18" of linear panel, and cross-section standing wave insulation barriers should be placed there as well. These steps serve to reduce midrange standing waves inside the cabinet, and prevent them from entering the port. Failure to do so will cause the speaker to sound hollow and resonant.