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Subject: Studio 2 Pis are complete

Posted by [drumwagon](#) on Fri, 27 Jan 2006 13:28:49 GMT

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Well the Studio 2 Pis are complete, built with my 13/now 14 yr old. We are blown away with how well the speakers look and sound. Thanks for answering all our newbie questions, and especially thanks to Wayne for a great product. I figure I owe the forum/future builders a rundown of my build. Take this with a grain of salt, this was our first attempt at building speakers, it is by no means the "RIGHT" way, it's just the way that worked for us. I put some pictures here (not sure if pictures posted

directly): [http://pg.photos.yahoo.com/ph/imealflanow/album?.dir=2c80&.src=ph&store=&prodid=&.done=http%3a//photos.yahoo.com/ph//my\\_photos](http://pg.photos.yahoo.com/ph/imealflanow/album?.dir=2c80&.src=ph&store=&prodid=&.done=http%3a//photos.yahoo.com/ph//my_photos)

THE MATERIALS:-Two Studio 2 Pis kits-1 sheet of  $\frac{3}{4}$  MDF -1/2 roll of R13 insulation -Silicone chalk (I sealed the cabinet, with chalk, but don't think it was required as the glue joints were very solid) -Spray contact cement (for gluing the R13) -Wood glue-Tie wraps (to tie the crossover components to the brace)-Two speaker ports from parts express (these were 2" id, we changed the length to exactly 2")-1 sheet paperbacked veneer (80" by 40"  $\frac{1}{4}$  sawn mahogany, bought on E-bay for \$30 delivered. This was enough to do the front, top, & sides. Back was painted the flat black)-Box of 1" black drywell screws

THE TOOLS:-Circular Saw/Table Saw -Jig-saw-Clamps (I had 4 bar clamps, and some corner picture frame clamps, this was just enough)-Mat/ X-acto Knife with lots of extra blades (for trimming veneer)-Electric Sander (I guess you could sand the MDF by hand, but I would be tough)

THE BUILD A lot of posts talk about MDF dust... they are not kidding. We did all cutting and sanding outdoors, and dusted off before bring components into the house. Even with that there was still a fine layer of dust in my garage that drifted through open garage door. We cut the panels with a table and circular saw, and used a jigsaw to cut the openings. I would not suggest cutting the port with a jig saw if it was required to look finished (we used a commercial port). One note: the plan drawing opening size for the tweeter is too small. We found this out when we did a test fit of the tweeter. It was a pain to trim the opening and the two radiuses at the top, so measure the actual tweeter before you cut. We glued and clamped the boxes using 4 bar clamps, and some picture frame clamps to hold the top edges square. It worked okay, but I wish I had more clamps. We didn't use any screws or biscuits (sp), and really don't feel they were needed. We added a brace about  $\frac{3}{4}$  up inside the cabinet, and tie-wrapped the crossover components to it. One note about the brace, when first fired up the speakers didn't have any insulation on it, the tweeters seemed a little harsh sounding, we put a piece of R13 on the brace, and they sound great. We put the R13 (with the paper peeled off) in the cabinets using spray on contact cement. Add the insulation before gluing the front panel on, as it would be impossible to get the insulation through the opening and positioned correctly. We used the yellow glue iron-on method for veneering; it worked great with paper-backed veneer (I won't go into detail as there are lots of lots of posts regarding this). We trimmed the veneer with a X-acto knife, which worked fine, as long as we took our time, and changed blades frequently. To finish the speakers we HAND sanded the veneer with 240 grit, and applied 5 coats of tung oil, sanding between a couple of coats with 400 grit. We then finished with a coat of butchers wax on top. My listen space is a model for "where not to put your speakers" It's a concrete floor finished basement with a drop ceiling. That being said the speakers sound great. Brubeck, Radiohead, Krauss, Steely Dan, they sound great with all of it.

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