

Chess Board Building Instructions

Main Box

1. Obtain a piece of lumber from the instructor that measures at least 3" wide and 43" long.
2. Using the Surface Planer, surface both faces of the board until it measures 1/2" thick. (Remember to take off 1/16th of an inch or one wheel turn each pass.)
3. Joint one edge of the board. This may require of few passes.
4. Using the Table Saw, rip the board to exactly 2-1/2" wide making sure to use the jointed edge against the fence.
5. Using the router set up with an 1/8" dado bit, route a groove along the length of the board. (see back)
6. Using the Miter Saw, cut the lengths of each side with 45 degree angles. The 1/8" routed groove should face the inside of the mitered corners. (see back)
7. All 4 sides need to be exactly 9-1/2" total length with miters on the ends.
8. Obtain a piece of 1/8" thick hardboard from the instructor.
9. Using the Table Saw, cut the hardboard to 9" x 9".
10. Dry fit the sides and the bottom together and make sure the corners can come together tightly. If everything looks good move on to step 11. If the sides do not come together as they should, ask your instructor for help.
11. Disassemble the box and sand the inside surfaces of the sides. **DO NOT SAND THE MITERED CORNERS.** Sand only the inside edges. You will not be able to do a good job of this if you wait until after they have been glued together. You will sand the outsides after the box is complete.
12. Apply glue to the mitered corners of the sides and insert the bottom of the box. Obtain a couple of rubber bands from the instructor to use as clamps. Stretch the rubber bands around the box and make sure the corners are being held together.
13. Before the glue has dried, measure the box for squareness by measuring from corner to corner diagonally. Both measurements should be the same, but if they are not, you will need to make a few adjustments so that they will be.
14. Using the router table, route the groove for the chessboard to sit down in. This is done by turning the box upside down and routing the inside edges.
15. Sand all remaining edges. You may need to sand your groove slightly to get your chessboard to fit.
16. If everything fits together apply finish coat and you are finished.



Board

1. Obtain a piece of 1/4" acrylic from the instructor.
2. Remove **one side** of the protective film.
3. Using the laser engraver, open the chessboard file. Ask the instructor to approve the setup **before** starting the engraving.
4. Using a rag or damp cloth wipe the excess residue from the board. If you choose, you can remove the other side of the protective film. This will make your board a clear top. If you do not wish to have a clear top, **do not** remove the second piece of film.

SIDES (4)

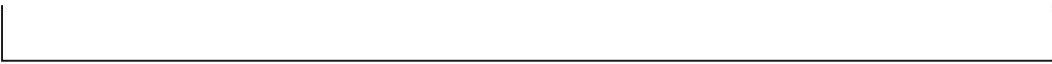
1/2"



2 1/2"



1/4"



9-1/2"



1/8"

1/4"

