

# Flag Case Construction Instructions

1. Select a wood that represents your local area, 72" x 3 3/4" x 3/4" finished surface on 4 sides.
2. Crosscut two pieces at 18 3/4" overall length.
3. Crosscut one piece at 26 7/16" overall length.
4. Make two feet, 1/2" x 3/4" x 3 1/8".
5. Rabbet 1/4" X 1/4" along inside back edge of each board for the inset for the back of the case.
6. Set table saw blade to a depth of 3/8" and dado 1/8" wide, 3/4" from the front edge of each board along the inside face to accept the glass front of the case.
7. Miter joints the ends of each board. The two short boards get a 45 degree angle on one end, and a 67.5 degree angle on the other. Cut the 67.5 degree angle by setting your blade at 22.5 degrees and running the board over the blade on end using a tenon or similar jig. Be sure not to change the overall length when mitering the ends.  
**Tips:** Use a tenoning jig as it is the easiest way to cut these angles on a table saw. Use scrap wood to establish an accurate cut. Be sure the saw blade is sharp. Be sure the blade is clean of pitch as the thickness of deposits on the blade will cause the cut angles to be different from cut to cut.  
The board to be cut must rest on the tablesaw as it rides in the tenoning jig. To prevent damage to the saw blade be sure and use a backing wood spacer (plywood or other) next to the metal surface of the tenoning jig.
8. Glue up the assembly, using masking tape on the corners to hold the glued joint together.  
**Tip:** Test the mitered joints before gluing. If you are not pleased with the joints, now is the time for correction. We found that minor adjustment of the two 45 degree mitered ends of the boards were the easiest place to make adjustments rather than the four 67.5 degree ends of the boards. During glue up be sure and keep the internal dado aligned so the glass installation will not require some very difficult adjustments. 1/8" thick scrap spacers cut, one at 90 degrees and two at 45 degrees can be placed in each corner to assure alignment and remove excess glue. Remove the spacers as soon as you are comfortable with the alignment so they will not be glued permanently in the dado groves.
9. Remove the masking tape when the joints are dry and kerf the ends of the miters for the through splines. You will need two V shaped sleds for this operation. One at 90 degrees and one at 45 degrees. Glue the splines in the kerfs to reinforce the miter joints. Number and placement are up to you, but use at least two splines per joint.
10. Trim the splines flush with the case side and sand flush when glue is dry.
11. Rout the ogee detail in the front of the case.  
**Tip:** With 3/4" thick sides to the case a 1/2" ogee leaves 1/4" of the case side not cut by the ogee bit. This gives a nice picture frame look to the finished case.
12. On the exterior of the Flag Case rout a 1/4" through dado 3/8" deep on the long board for insertion of the glass, 1/16" either side of interior dado, in-line with the existing dado, but stopping 5/8" from each end of the board.
13. Prepare a 1/4" x 3/8" matching trim spline into the through dado. Round the ends of the trim spline to fit the routed slot.
14. Drill a 3/8" diameter hole 1/4" deep in each corner of the flag case on the back edge. Be careful not to drill into the rabbet for the back. Glue a Screw Hole Button in each of the holes (Rockler Item Number 20537 or other of complementary color). These will allow the Flag Case to be laid on its back on a table without having the Turn Buttons in step 20 scratch the table.
15. Sand assembled case, trim spline and feet and apply finish. WATCO Natural Oil does a wonderful job when applied per the manufacturer's instruction on Walnut. Other finishes are also acceptable.
16. Cut the back from 1/4" prefinished hardwood plywood. The finished side should be on the outside of the case. The dimensions of the triangular back may vary and should be determined after the case is glued up.
17. Drill and countersink two holes for # 6-3/4" screws, on centerline of each foot. One at 3/4" from each end.
18. Two 1/8" glass panes for the front of the case can be cut diagonally from a square 17" x 17" piece of glass.
19. Final step is to assemble the flag case. Insert the glass in the dado groves. Insert the trim spline to hold the glass in the case. Screw the two feet to the case approximately 4" from the corners of the long case side. The feet will hold the trim spline in the case.
20. Clean the inside of the glass. Install the Flag Case back in the rabbet groves. Three Turn or Twist Buttons (Klockit Stock Number 39007, Rockler Item Number 27904, or equivalent) should be installed in the middle of each side to hold the back in place. Use #5-1/2" brass screws instead of brads for the Turn Buttons.
21. Sign the case in an appropriate place.

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