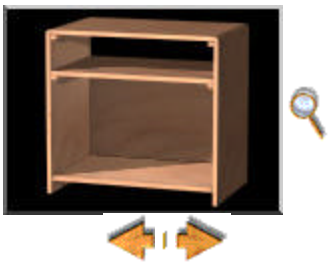
TV Stand

Use arrows to view the project from different angles & magnifying glass to enlarge image.



The Project

This TV stand will accommodate a television up to 27" and also hold a VCR on the shelf. The project is for the more experienced woodworker; it is assumed that you already have a solid background of woodworking skills. Through it, you'll practice basic cabinet and face-plate construction techniques using hardwood plywood and solid stock. You'll also practice working with tolerances; in this case, matching two doors to an opening. Oak or birch plywood is used to eliminate glue-ups. However, solid wood could be used.

Tools & Materials

A fairly well-equipped shop is required for the completion of this project. The following are the minimum tools required:

Tools Required

- Pencil
- Tape measure
- Table saw
- Planer
- Drill
- Router
- Countersink
- 9/64" drill bit
- 7/64" drill bit
- 1/2" roundover bit
- 3/8" roundover bit
- Philips bit or screwdriver
- Professional Strength Wood Glue
- #6 x 1-1/4" drywall screws
- High-quality brush
- Clean cloths

Alternate

- Air nail gun (15 or 18 gauge nails)

- Drill press
- Router table

Materials

CABINET			
Item	Number	Dimensions	Wood Species
Top	one	3/4" x 19-1/4" x 28-1/2"	oak plywood
Sides	two	3/4" x 19-1/4" x 27-1/4"	oak plywood
Shelf	one	3/4" x 19-1/4" x 28-1/2"	oak plywood
Bottom	one	3/4" x 19-1/4" x 28-1/2"	oak plywood
Shelf support cleats	four	3/4" x 3/4" x 19"	solid oak
Bottom support cleats	two	3/4" x 2-1/4" x 19"	solid oak
Back	one	1/4" x 18" x 29-1/4"*	oak plywood or masonite
FACEPLATE			
Top rail	one	3/4" x 2" x 30"	solid oak
Center rail	one	3/4" x 2" x 30"	solid oak
Bottom rail	one	3/4" x 2" x 30"	solid oak
Stiles	two	3/4" x 2" x 26"	solid oak
Top corner molding	two	7/8" x 7/8" x 20"	solid oak
DOORS			
Approximate dimensions. Match to opening and type of door.			
Inset doors	2 @ 3/4" x 12-7/8" x 15-7/8"*		solid oak
Hinges	2 pr. 35mm style inset hinges*		solid oak

* Bill of materials written using oak plywood and solid oak for trim and cleats. Substitute maple or birch if birch plywood is used.

Finishing Products

- Minwax® Wood Finish™ and Minwax® Fast-Drying Polyurethane

Procedure

I. Roughing Out Stock

1. Cut the top, shelf, bottom and two sides from a sheet of oak or birch plywood to the finished size as per bill of materials.

2. Cut the four shelf support cleats and the two bottom cleats to size.

II. Cabinet Construction

1. Drill pilot holes approximately every four inches on two adjacent sides of the cleats. (Stagger the holes.)

2. Countersink the pilot holes.

3. Glue and screw the cleats to the inside of the two sides as indicated in the front view "basic cabinet - no trim" drawing. Keep the countersunk holes pointing in and down.
   NOTE: These must be located exactly alike on both sides and be perpendicular to the front edge.

4. Using a partner to hold the sides for you, attach the bottom to the bottom support cleats using glue and thread into the bottom of the shelf.

5. Attach shelf by using 1 1/4"drywall screws and glue. Screws should fit freely through cleat and thread into the bottom shelf.

6. Attach top: Refer to corner detail.
   NOTE: There will be a square void left on each end when attached. No fasteners are visible on the top. The screws will thread into the underside of the top.

7. Check to make sure that the cabinet is square.

8. Fabricate the top corner molding from two pieces of wood measuring 3/4" x 3/4" x 24" each. The wood should match the cabinet. Rout one edge with a 1/2" round over bit. (A table mounted router makes this step much safer and easier than freehand.)

9. Adjust table saw and make the 1/8" x 1/8" kerfs on corner molding. Square cut one end of corner molding, cut to 20".

10. Attach to cabinet with glue and finish nails. (An air nailer is great for this step.) Drive nails at a 45-degree angle, driving into the cleat

11. Countersink and fill nail holes.

III. Faceplate Construction

1. Cut faceplate rails and stiles to length as per bill of materials.

2. Mark and cut half-lap joints. (Check depth on a piece of scrap wood before using your good piece.)

   NOTE: Notice half-laps are cut on the BACK side of the stiles and the FRONT side of the rails.

3. You may glue and assemble the faceplate as a separate unit, then attach it to the cabinet or assemble it on the cabinet as you go. (If you assemble it on the cabinet, attach the rails first, then the stiles.)

4. After the faceplate is attached, sand the top right and left corners to match the radius of the corner molding.

5. Using a 3/8" round over bit, rout all edges of the faceplate.

6. Sand to remove any ridges or machine marks.

IV. Doors

1. Inset doors are planned to keep with the smooth and uninterrupted lines of this project, but half or full overlay doors may also be used. Match the dimensions to the opening and type of door used.
   NOTE: Solid stock should be used for the doors.

2. The door dimensions should be approximately 1/16" to 1/8" smaller than the door opening.

3. Drill holes for the inset hinges; 35mm style inset recommended.
   NOTE: Spacer blocks will have to be added to the inside of the sides to accommodate the 35mm hinges.

V. Sanding, Staining and Finishing

1. Finish sand cabinet, faceplate, and doors.

2. Pre-treat wood with Minwax® Pre-Stain Wood Conditioner if necessary. Stain all parts using Minwax® Wood Finish™ as per label instructions. Later finish using Minwax® Fast-Drying Polyurethane as per label instructions.

VI. Final Assembly

1. Attach the hinges.

2. Hook up your TV, sit back in your favorite chair, and ENJOY!

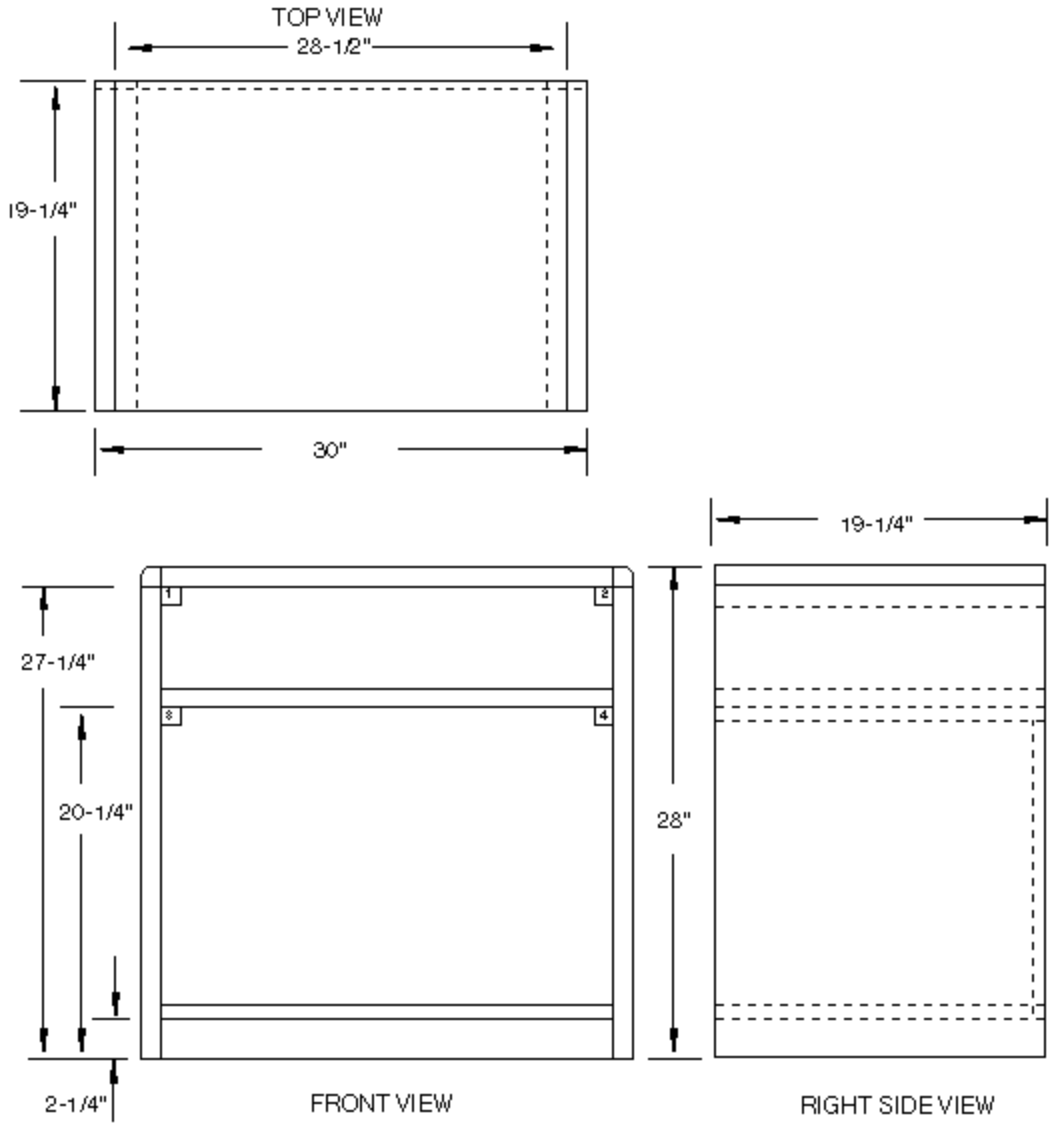
VII. Cleanup

- If you have product left over, wipe the can rim so that product in the rim doesn't dry out and cause lid not to form a tight seal. After sealing, store cans away from heat.

- Clean brushes used for oil-based finishes with mineral spirits; soap and water are all that is needed for brushes used for water cleanup products.

VIII. Safe Disposal of Rags & Waste

Please be mindful of the safe way to dispose of used rags and other waste. Rags, steel wool and other waste soaked with oil finishes may spontaneously catch fire if improperly discarded. Place rags, steel wool and waste immediately after use in a water-filled metal container. Tightly seal and then dispose of in accordance with local regulations. Be sure to keep the container out of reach of children.


TOP VIEW
28-1/2"
19-1/4"
30"
19-1/4"
27-1/4"
20-1/4"
2-1/4"
28"
1
2
3
4
FRONT VIEW
RIGHT SIDE VIEW