

## PROJECT

# 3

# WOODWORKS FOR THE ADVANCED TV STAND

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

### TOOLS REQUIRED:

A fairly well-equipped shop is required for the completion of this project. The following are the minimum 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
- Phillips bit or screwdriver
- 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 REQUIRED:

	Item	Number	Dimensions	Wood Species
<b>CABINET</b>	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
<b>FACEPLATE</b>	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
<b>DOORS</b>	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.

### STAINING & FINISHING: (Choose one)

- MINWAX® Wood Finish and Fast-Drying Polyurethane
- WATCO® Danish Oil and Paste Finishing Wax

### OPTIONAL:

- MINWAX Wood conditioner

## 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 of the shelf.
6. Attach top: Refer to corner detail.  
**NOTE: There will be a square void left on each end when attached. See front view of "basic cabinet - no trim" drawing.**  
**NOTE: 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. Route one edge with a 1/2" roundover 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" kerf 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 either 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" roundover bit, route 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.
- 2a. Pre-treat wood with MINWAX® 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.
- 2b. Pre-treat wood with MINWAX Wood Conditioner if necessary. Apply WATCO® Danish Oil as per label instructions. Later, to add luster and protect the wood, apply MINWAX Paste Finishing Wax, again following label directions.

### VI. Final Assembly

1. Attach the hinges.
2. Hook up your TV, sit back in your favorite chair, and ENJOY!

### VII. Clean Up

- 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 is all that is needed for brushes used for water clean up products.

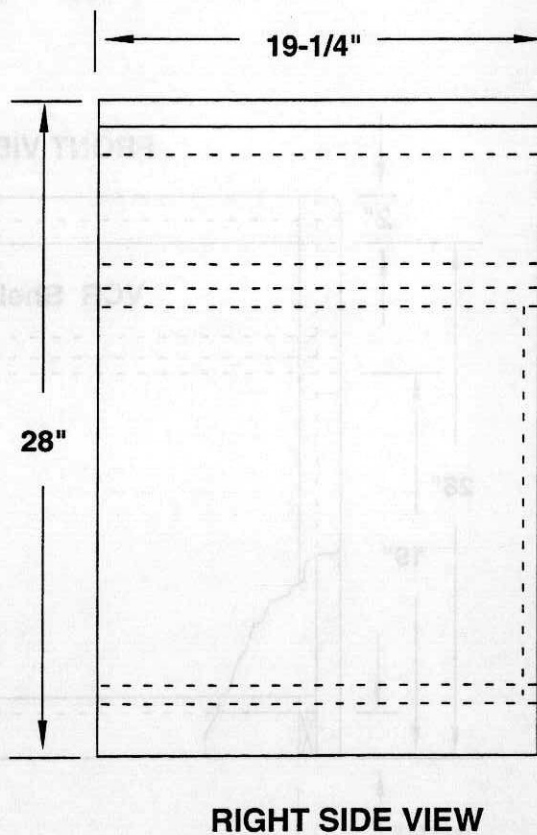
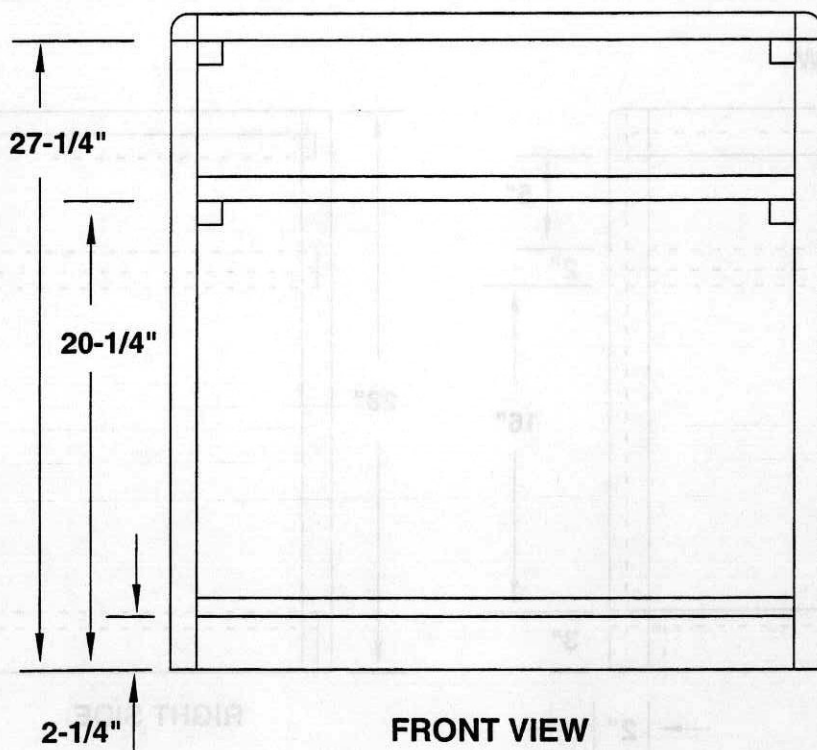
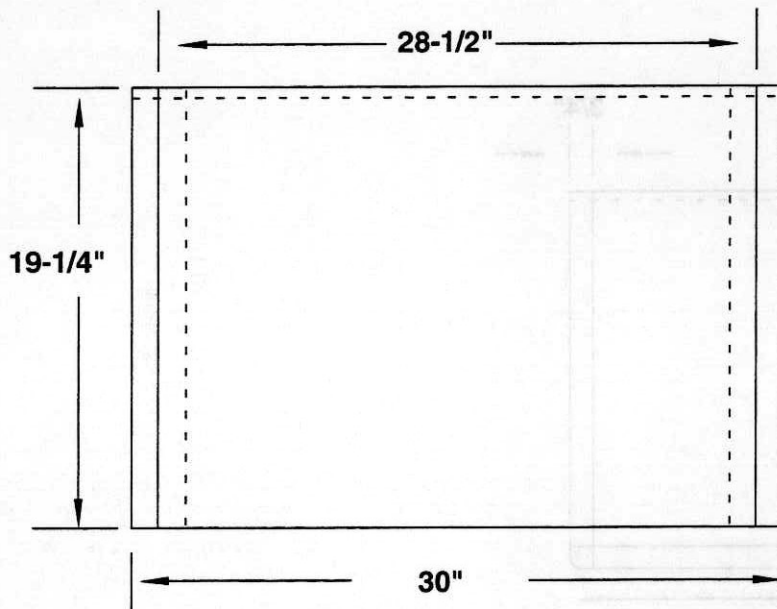
### VIII. Safe Disposal of Rags & Waste

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 fire regulations. Be sure to keep the container out of reach of children.

#### TIPS SUMMARY

- Stain and finish all surfaces, especially inside drawers and openings, to help prevent warping.
- If mixing wood tones, first consider the wood itself. A soft, porous wood such as pine can vary greatly in its base color, how it takes the stain, and how much stain it will absorb. To help achieve even stain penetration in soft, porous wood, pre-treat the wood with MINWAX Wood Conditioner.
- MINWAX Wood Finish Natural color wood stain is the recommended choice for lightening any wood tone.
- Look at the predominant color of the wood you are matching. Is it reddish, grayish, blondish or yellowish? Use a stain of that hue as your base and add lesser amounts of a secondary stain until you reach the desired tint or tone.
- Try not to mix more than three wood tones at a time. Be sure to mix enough to complete the entire project.

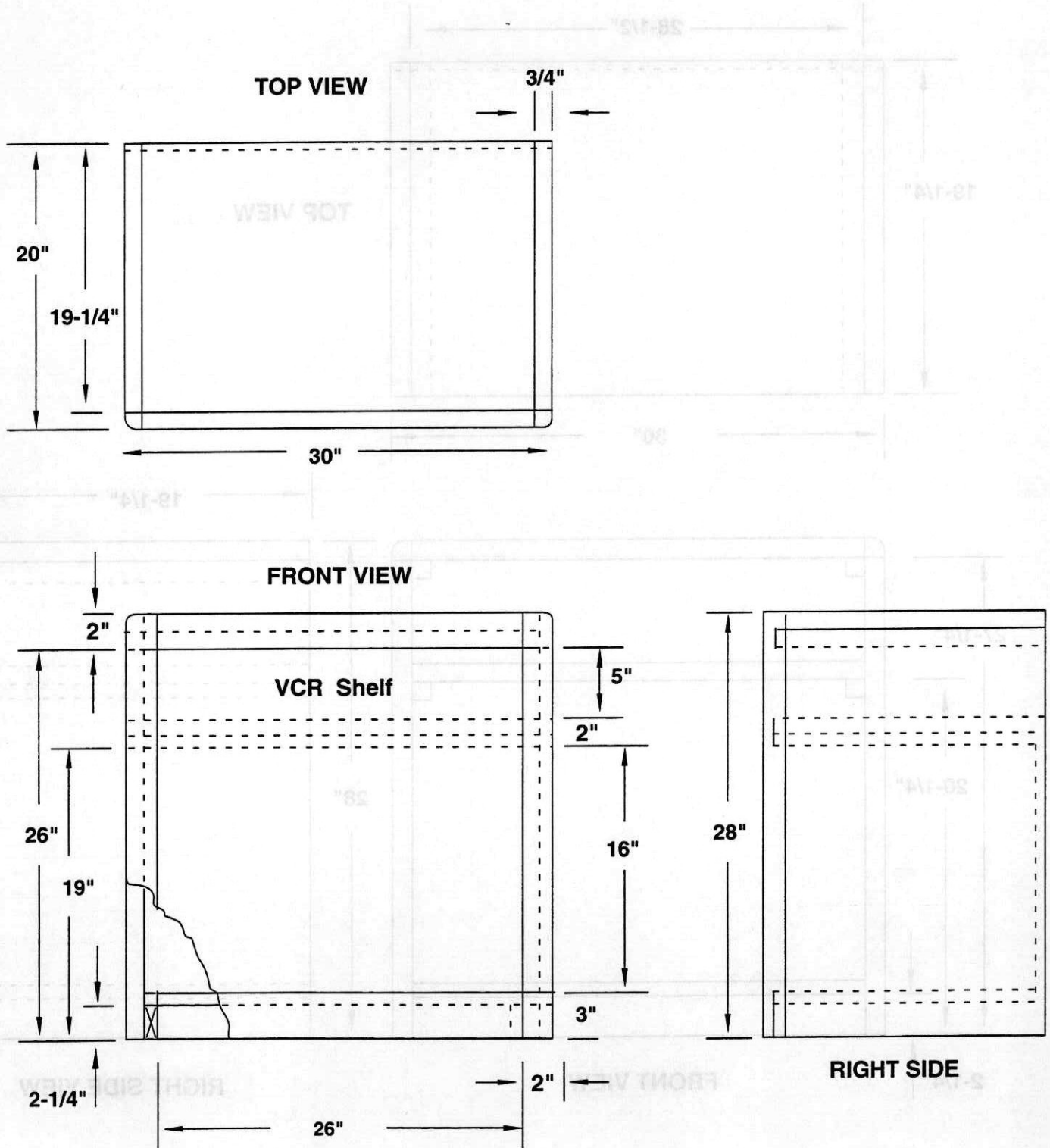
# BASIC CABINET WITHOUT FACEPLATE OR TRIM ATTACHED (TV STAND)



**BASIC CABINET  
WITH FACEPLATE  
AND TRIM ATTACHED**

(TV STAND) continued

Overall Dimensions: 20" x 28" x 30"



# CORNER DETAIL (TV STAND) continued

