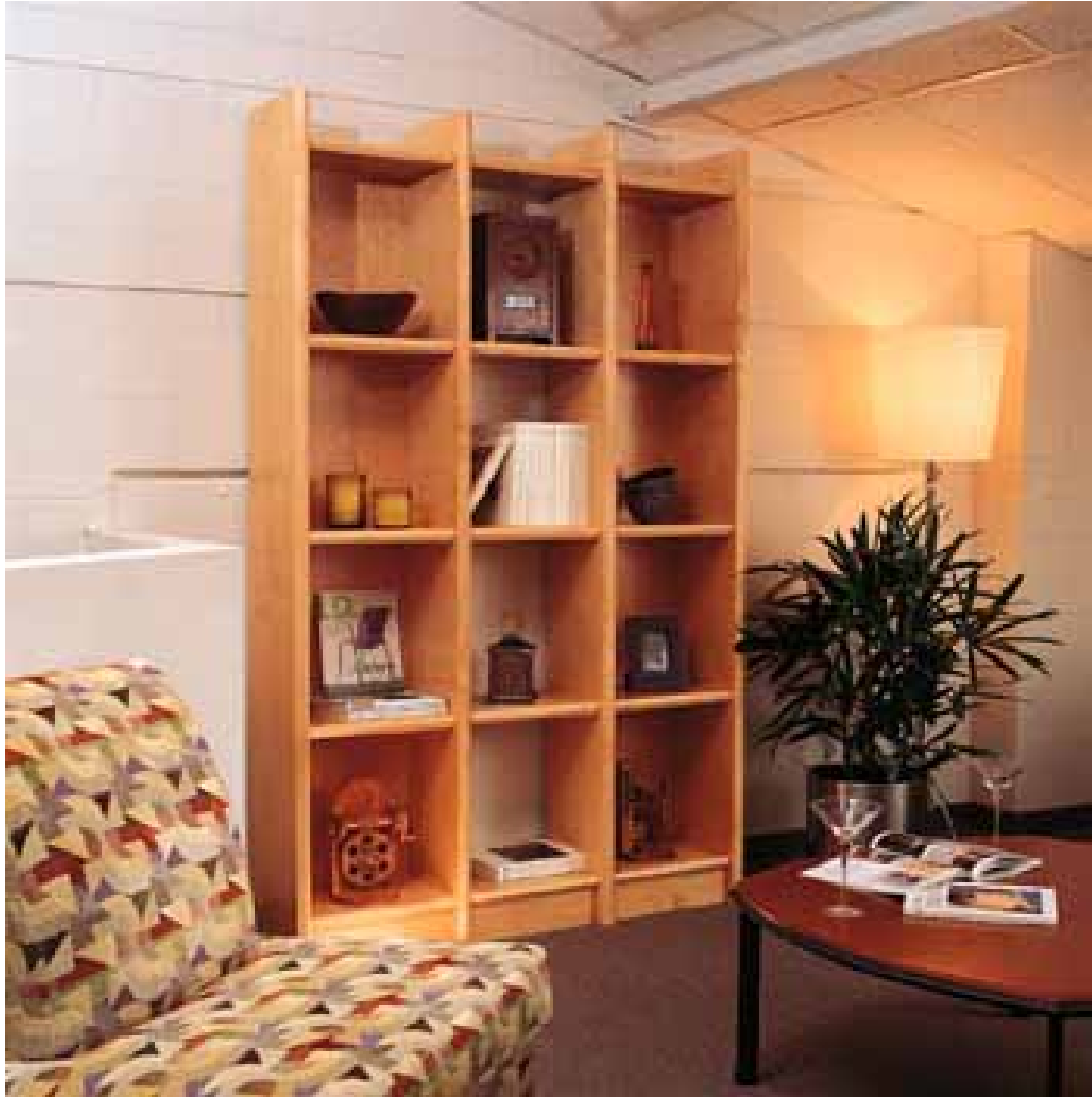
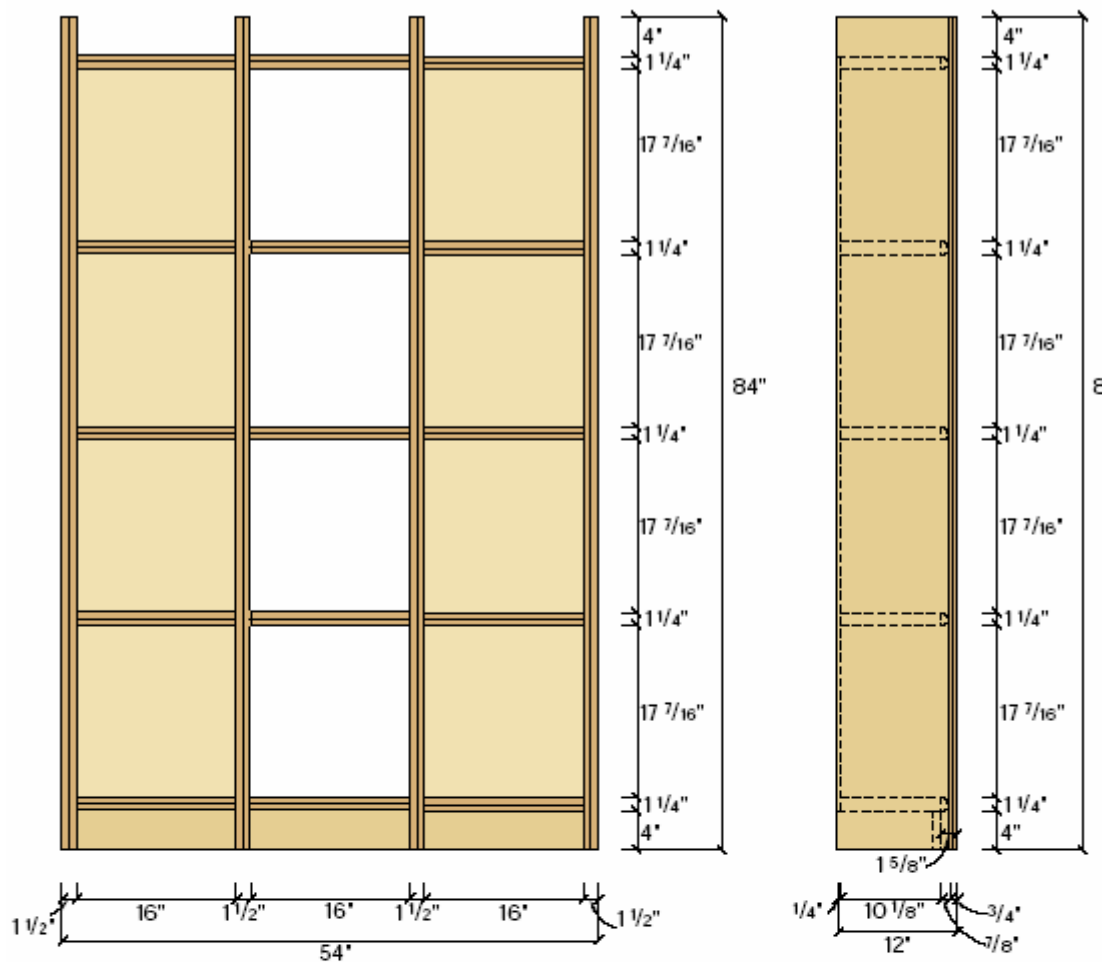


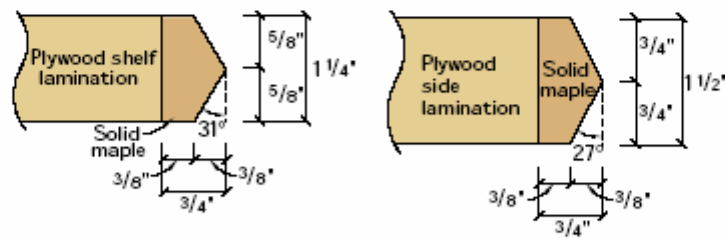
# 76 **SHELVES**





Elevation

Profile



Detail of bevel profiles

Schedule of Materials: Contemporary Shelves			
No.	Item	Dimensions T W L	Material
4	Sides	3/4" x 11 1/4" x 84"	Plywood
4	Sides	3/4" x 11" x 84"	Plywood
10	Outr. shelf tops	3/4" x 10 1/8" x 16"	Plywood
10	Outr. shelf bottoms	1/2" x 10 1/8" x 16"	Plywood
5	Cntr. shelf tops	3/4" x 10 3/8" x 16"	Plywood
5	Cntr. shelf bottoms	1/2" x 10 3/8" x 16"	Plywood
2	Backs	1/4" x 17 1/2" x 76"	Plywood
3	Aprons	3/4" x 4" x 16"	Plywood
4	Side edging	3/4" x 1 1/2" x 84"	Maple
15	Shelf edging	3/4" x 1 1/4" x 16"	Maple

Supplies: Woodworkers' Supply (800-645-9292), 12 6" taper connectors, # 928273 \$4.95/pkg. of four. 18 wire shelf supports, # 826028, \$1.45 apiece for 10+.

It's rare that bookshelves look as interesting as the objects you display on them. After all, how much can you decorate the edges of your shelves and sides? This unit is unusual because the shelves and sides are beefier than you would normally see, and the two bevel cuts on the front edges give these shelves nice visual interest. Best of all, perhaps, is that this piece is simple and quick to build.

## Dividers and Shelves

Start by cutting out the sides and shelves. The 1-1/2"-thick sides are made by gluing two pieces of 3/4"-thick plywood together. The 1-1/4"-thick shelves are made by gluing 3/4"-thick plywood to a 1/2"-thick piece. Note that the finished sides have a 3/4" x 1/4" rabbet for the back that's formed by gluing a narrower piece to a wider one. The adjustable and fixed shelves in the side openings are all the same width. The center shelves are 1/4" wider to account for the lack of a back.

To cut the sides, crosscut a whole sheet of plywood to the length of the sides first, then rip them to width (11" and 11-1/4"). Cut the sides a little wide (1/16"), initially, to give yourself a little room to saw off a square straight edge. This will give you a clean edge for attaching a piece of maple later. Now nail and glue the dividers together, remembering to offset the back edge for the rabbet. Place your nails so the shelves will hide them.

Here's an easy way to cut the shelves. Rip them to width from a full piece of plywood, then nail and glue up a length of shelving. Then crosscut the shelves to length from the long pieces. You can get five 16" shelves out of a 96" rip. For even less work, cut the shelves to length after attaching the edging.

## Edges and Angles

The edges for the bookshelves are solid maple. Because the thickness of 3/4" and 1/2" plywood is considered "nominal," you will end up with finished thicknesses about 1/16" less. Rip your edging stock a little wide and attach it with biscuits and glue. With a flush-cut bearing bit in a router, trim the edging flush to the sides and shelves, then clean up your work with a plane or scraper.

The last step is to bevel the edging. The photo shows how I did this on the table saw. Remember that the setup must change for the different width pieces.

## Making it a Stand-Up Unit

The next step is to mill stopped grooves in the topmost and bottommost shelves to accept the tapered sliding connectors that attach the sides together. The grooves in the ends of the shelves are 3/4" wide by approximately 3/8" deep, and milled with a dado set on the table saw. It helps to make a practice joint because the depth of the groove is critical to a snug fit using this style of connector.

## Installing the Shelves

After cutting the slots in the shelves, lay out and mount the small part of the tapered connector to the side. The large connector will mount to the shelf groove with the wide end towards the shelf front. Do a test fit on the shelves. The shelves in the side units should be flush to the rabbet in the back edge of the sides. The center shelves should be flush with the back.

The next step is to cut the stopped grooves in the rest of the shelves for the hidden wire shelf supports. If your blade is too narrow, take two cuts to get the 1/8" groove necessary to slide the shelf onto the wire supports. Some drill and chisel work will be necessary to lengthen the kerf to accept the entire 9-3/4" length of the shelf wire. This requires drilling and chiselling into the end of the front edge. Lay out and drill the locations for the wire supports in the side and center sections so the shelf heights will match across the bookcase.

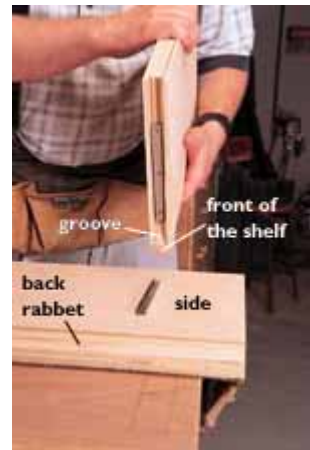
Now it's time for all the parts come together. Begin by assembling the two outside units



**Face-Glue the Parts:** Once you've got your parts cut to size, glue and nail them together leaving the rabbet at the back. Set and putty the nails, then rip the dividers to their final width.



**Profile:** The bevels on the edges are basically a "V" shape on the entire edge. See the diagram at right for the details and cutting angles. Clean up your saw marks with a plane.



**Mount Knockdown Hardware:** Use a dado stack to cut a 3/4" x 3/8" groove from the joint where the edge attaches to the shelf to the back of the shelf. The knockdown hardware is mounted in about the middle of the shelf. It pulls together pretty tightly, so you might want to sand any bumps or ridges off the ends of the shelves to keep from scratching the sides.

of the bookcase. Tip them onto their backs and attach the aprons to the bottom shelf using cleats and screws. Next attach the side units together forming the center section. The best way to do this is to assemble with the front facing up. Use a handscrew clamp to hold up the sides while you're assembling. The apron on the center bottom can be screwed onto the shelf and braced with corner blocks prior to assembly. Push the lower shelf into place and mark the location of the apron, also called a "kick" or a base. Then remove the shelf and add two stop blocks to the sides to support the center apron from behind.

When you're happy with the fit of the parts, disassemble the bookcase and finish. I applied a coat of light stain to give the maple an aged appearance. (I used about two ounces of linseed oil and colored it with Olympic stains, one-half Early American #41552, and one-half Red Oak #41567. 1/4 teaspoon of each.) Wipe on an even coat of oil. Wipe off the excess and let it dry for 24 hours. The next day, lightly sand the surfaces and clean them with a tack rag. Finish with two or three coats of a clear finish.



**Magic Wire:** After cutting the 1/8" grooves in the shelf sides, assemble the case. Tap the wire shelf supports in and slide the loose shelves in place.