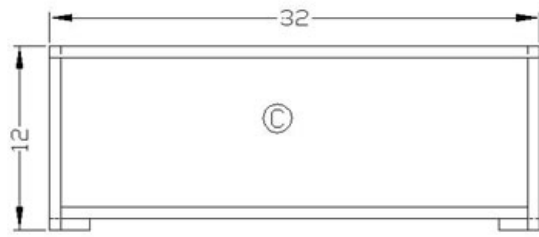


How to Build a Wood Bookcase

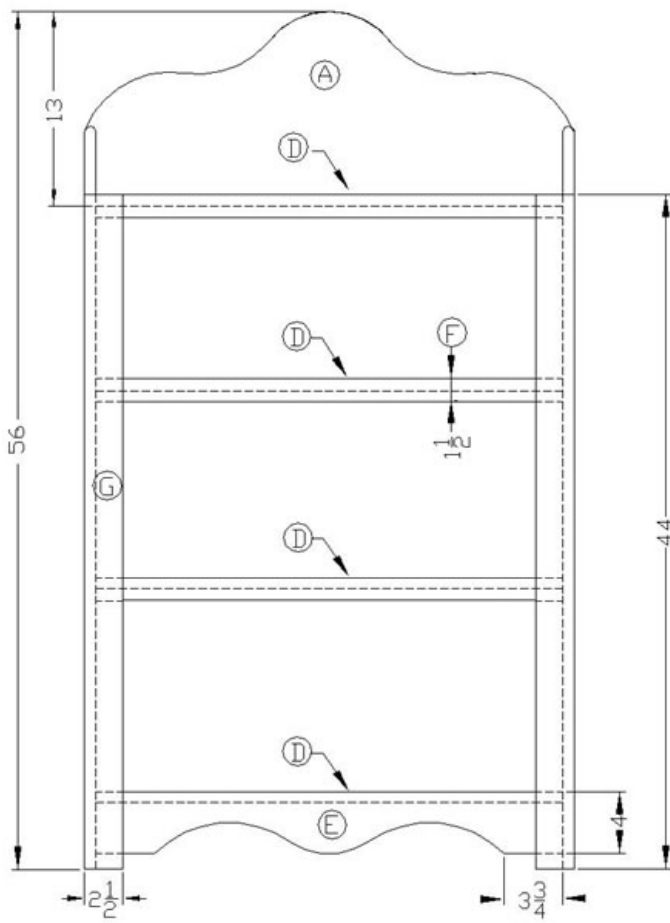
Every home should have a place for books, photo albums and other items of personal and professional interest. What better way to display these treasured items than with a beautiful custom made bookcase.

Whether it's located in a den, office, bedroom or family room, a bookcase will organize your life while adding a touch of class to your home. Lee's Wood Projects will show you how to build a wood bookcase in no time at all.

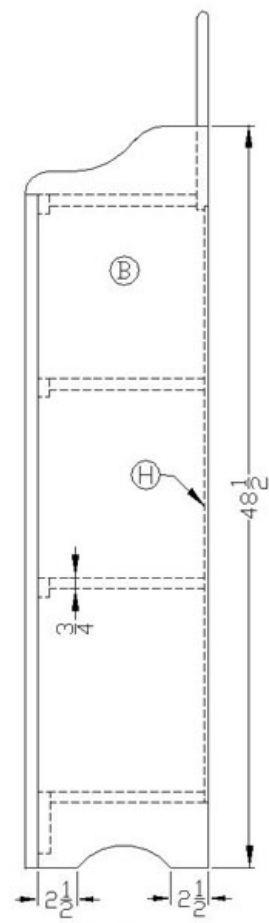




TOP



FRONT



SIDE

Technical Information for Building a Wood Bookcase

A. Materials List:

QUANTITY	LETTER	NAME	SIZE	MATERIAL
1	A	Top	$\frac{3}{4}$ " x 13" x 32"	Oak
2	B	Sides	$\frac{3}{4}$ " x 12" x 48 1/2"	Oak
1	C	Top Shelf	$\frac{3}{4}$ " x 9 3/4" x 30 1/2"	Oak
3	D	Shelves	$\frac{3}{4}$ " x 10 1/4" x 30 1/2"	Oak
1	E	Bottom	$\frac{3}{4}$ " x 4" x 30 1/2"	Oak
3	F	Shelve Fronts	$\frac{3}{4}$ " x 1 1/2" x 30 1/2"	Oak
2	G	Vertical Fronts	$\frac{3}{4}$ " x 2 1/2" x 44"	Oak
1	H	Backing	$\frac{1}{4}$ " x 31 1/4" x 38 3/4"	Oak Ply.
8		Shelf Supports		Metal

WOOD SPECIES



Red Oak

B. Patterns:

1. Scale Top A to the drawing dimension size. This can be accomplished by measuring the print out of the project and

dividing that size into the dimension size shown on the drawing, or listed in the Bill of Materials. This will give a "Multi-Factor" that can be used to figure the enlargement size for the pattern.

2. Take the drawing printout and the multi-factor to a printing company. Most printing companies that do duplicating can make the enlargement required for the pattern.
3. The same multi-factor can be used to determine the enlargements for the other shapes B & E.
4. Trace the pattern enlargements onto poster board or Mylar and cut out the patterns with a pair of scissors.
5. Use these patterns to trace the shapes onto the wood stock.

C. Cutting Procedure:

1. Use planer to mill lumber to $\frac{3}{4}$ " thickness.
2. Use table & radial arm saws to cut lumber to proper widths & lengths.
3. Trace patterns (A) (B) & (D) onto lumber, cut shapes using a band saw, and finish using a drum sander.
4. Route top of parts (A) & (B) using a 1" Rounding-Over Bit.
5. Route top edge of parts (F) and (E) using a 1 $\frac{1}{16}$ " Roman-Ogee Bit.
6. Route inner edge of parts (G) using a 1 $\frac{1}{16}$ " Roman-Ogee Bit.
7. Use a $\frac{3}{8}$ " half-round router bit to make two flutes 1" apart on-center and 32" long in each vertical front (G), starting 6" from the top and ending 6" from the bottom.
8. Use a band saw to cut a $\frac{3}{4}$ " x 44" notch in the front edge of sides (B) to fit the vertical fronts (G) into place.
9. Drill $\frac{9}{16}$ " holes $\frac{3}{8}$ " deep into the insides of parts (B) for adjustable shelve supports. Space holes 2" apart.
10. Use a band saw to cut a $\frac{3}{4}$ " x 5 $\frac{1}{2}$ " notch in both ends of part (A) to fit sides (B) into place.

11. Use a table saw to cut ¼" x 3/8" rabbet joints into the back of the sides (B), bottom of top (A), top of bottom shelf (D) to position oak plywood backing (H).
12. Cut ¼" plywood backing (H) to proper size after (assembly) is complete.

D. Sanding Procedure:

1. Rough sand all parts of the wood bookcase using an orbital sander and 80 grit sand paper.
2. Intermediate sand using 120 grit sand paper.
3. Finish sand using 220 grit sand paper (**during finish procedure**).
4. Hand-sand all edges to desired finish.

E. Assembly Procedure:

1. Glue and nail vertical fronts (G) onto sides (B). Flush at the bottom.
2. Glue and nail shelf front (F) onto the top shelf (C).
3. Glue and nail shelf fronts (F) onto the two middle shelves (D).
4. Glue and nail the bottom (E) onto bottom shelf (D).
5. Glue and nail the sides (B) onto the top and bottom shelves (C) & (D).
6. Glue and nail sides (B) onto top (A).
7. Glue and nail back (H) onto sides (B) top (A) and bottom shelf (D).

Notes:

1. Use a professional-strength wood glue
2. Use 1 ¼" finish nails for all lumber.
3. Use ½" finish nails to attach the plywood backing.
4. Set all nails below the wood surface.
5. A nail gun could be used if available.

F. Finish Procedure:

1. Use plastic wood dough to fill all nail holes and cracks.
2. Finish sanding the wood bookcase using 220 grit sand paper.
3. Use a tack rag to remove all sawdust.
4. If stain is desired, apply with a brush and allow to penetrate 5-10 minutes and then remove with a clean rag.
5. Allow stain to dry approximately 6 hours and then repeat with a second coat.
6. Allow second coat to dry approximately 8 hours.
7. Use a tack rag to remove dust.
8. Apply clear finish coat such as Varathane, Polyurethane, ect. using a pure-bristle brush. Allow to dry 12 hours.
9. Lightly hand sand using 220 grit sandpaper.
10. Use a tack rag to remove all dust.
11. Apply second coat of clear finish.
12. Allow to dry 24 hours before using the bookcase.

***Congratulations, your wood bookcase is finished and ready to use!**