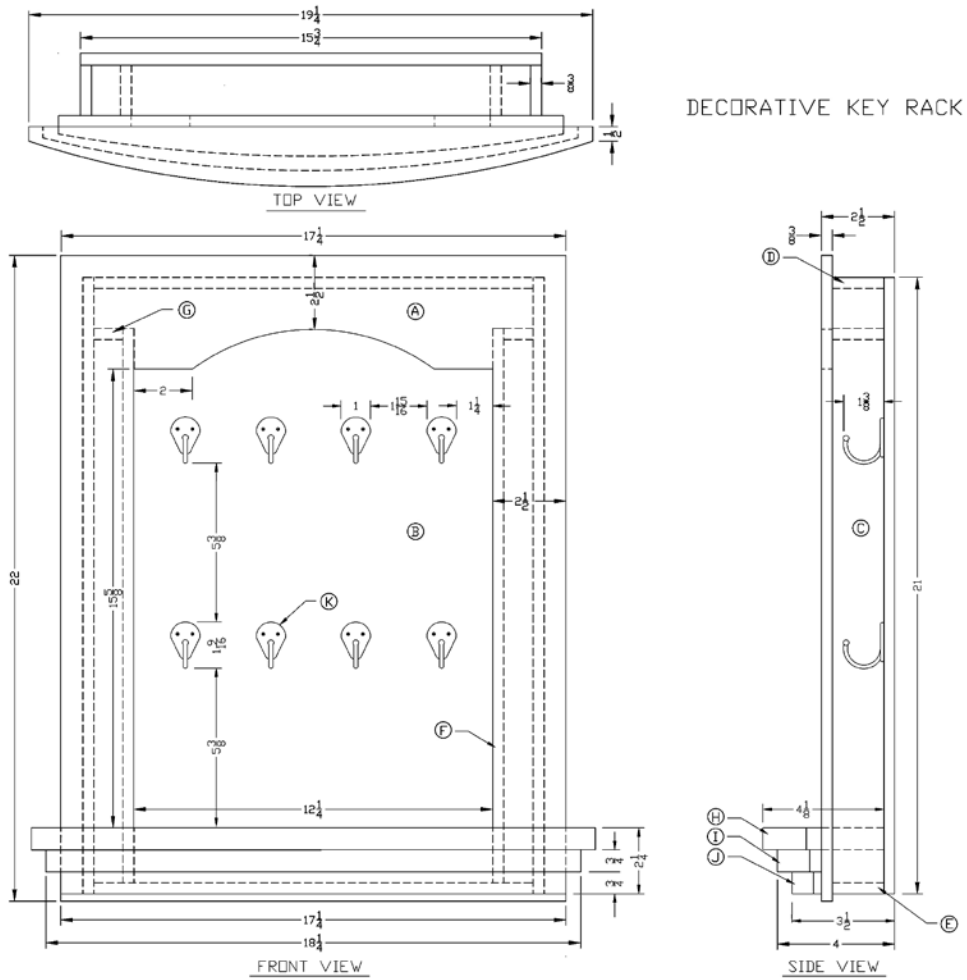


How to Build a Wood Key Cabinet

This beautiful key rack is a great way to organize and display the keys that you and your family use the most. The stylish design will compliment other wall fixtures as well as furniture.

The optional light fixture will help illuminate and more easily discern recognition of the various keys.





Technical Information for Building a Wood Key Cabinet

A. Materials List:

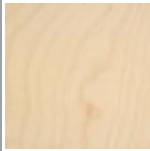
QUANTITY	LETTER	NAME	SIZE	MATERIAL
1	A	FRONT	3/8" X 17 1/4" X 22"	WALNUT
1	B	BACK	3/8" X 15 3/4" X 21"	WALNUT
2	C	EXTERIOR SIDES	3/8" X 1 3/4" X 21"	WALNUT
1	D	Top	3/8" X 1 3/4" X 15"	WALNUT
1	E	BOTTOM	3/8" X 1 3/4" X 15"	WALNUT

2	F	INTERIOR SIDES	3/8" X 1 3/4" X 18 7/8"	WALNUT
2	G	INTERIOR TOPS	3/8" X 1 3/4" X 1"	WALNUT
1	H	SHELF	3/4" X 4 1/8" X 19 1/4"	WALNUT
1	I	FRONT TRIM	3/4" X 1 1/2" X 18 1/4"	WALNUT
1	J	FRONT TRIM	3/4" X 1" X 17 1/4"	WALNUT
8	K	KEY HOOKS	1" X 1 9/16"	BRASS
4		DOWEL PINS	1/4" Dia. X 2"	BIRCH

WOOD SPECIES



Black Walnut



Birch

B. Cutting Procedures:

1. Three boards are required for this project. The first board should be 1/2" x 9" x 8', the second board 1/2" x 12" x 2", and the third board 3/4" x 8" x 2'. I used walnut but most any species could be used. If 1/2" thick boards are unavailable use 3/4" and plane to the required thickness.
2. Joint one edge and plane one side of the 8' board.
3. Use a radial arm saw to cut four 22 1/2" long boards from the 8' board.
4. Place two of the boards together in a bench clamp with the edges facing up. Use a combination square and a pencil, draw two lines across the edges, each 2" from the ends.
5. Place a dowel jig on one of the boards and align the 1/4" hole with the one of the lines. Use a hand power drill and a 1/4" drill bit to drill a 1 1/16" deep hole. Repeat the procedure at the line on the other end of the board.
6. Place wood glue in the drilled holes and use a wooden mallet to tap a dowel pin into each hole. Place wood glue on the edge of the board and

spread the glue evenly with your finger. Place wood glue on the edge of the other board and the exposed dowel pins. Clamp the boards together using two bar clamps. Clean up excess glue with a damp rag.

7. Repeat procedures 4 through 6 for the other two boards. These boards will be used for the front (A) and the back (B).
8. Allow the glue to dry for 24 hours.
9. Use a radial arm saw to cut board (A) 22" long and board (B) 21".
10. Rip the board (A) 17 ¼" wide and board (B) 15 ¾".
11. Plane the boards (A) and (B) 3/8" thick. Be sure to only plane 1/16" from each side so the dowel pins are not exposed.
12. Use a band saw to cut the front (A) to the shape shown on the drawing.
13. Plane the remaining ½" thick board to 3/8". Joint one edge of the board.
14. Set the rip fence on the table saw to 1 ¾". Rip the board six times.
15. Use a power miter saw to cut two of the boards 21" long for the exterior sides (C). Cut the top (D) and the bottom (E) each 15" long. Cut the two interior sides (F) to 18 7/8". Use the remaining wood to cut the two interior tops (G) 1" long.
16. Use the ¾" board for the shelf (H) and the two front trim pieces (I) and (J).
17. Joint one edge and one side of the board.
18. Lay out the shape and size of the shelf (H) and the two front trim pieces (I) and (J) on the board.
19. Use a band saw to cut the trim pieces (H) and (I). For the shelf (H) only cut the rounded shape at this time. The remainder of the cutting procedure for the shelf (H) must be very precise and cut to fit after the other pieces of the key rack are assembled.

C. Sanding Procedures:

1. Use a spindle sander to sand the rounded shapes of the front (A) and the front pieces (I) and (J).
2. Rough sand the all the pieces (A) through (J) with 80 grit sandpaper.
3. Intermediate sand all the pieces with 120 grit sandpaper.
4. Finish sand all pieces with 220 grit sandpaper.
5. Remove all sanding dust with a tack rag.

D. Assembly and Gluing Procedures

1. Assemble the sides (C) to the top (D) and the bottom (E) with wood glue.

2. Glue the assembly (C), (D), and (E) onto the back (B).
3. Use a nail gun with 1" brads to secure the assembly.
4. Glue the interior tops (G) onto the interior sides (F) and secure with brads.
5. Glue and nail the interior assemblies onto the back (B), sides (C) and the bottom (E).
6. Place glue on the edges of the assembly pieces and attach the front (A). The front should be positioned $\frac{1}{4}$ " below the bottom of the assembly and extend $\frac{3}{4}$ " beyond the assembly on each side. Secure all pieces with brads.
7. Glue the front trim (J) onto the bottom of the front trim (I). Be sure the flat edge surfaces of each trim piece are flush and the ends of the trim (I) extend $\frac{1}{2}$ " beyond the trim (J) on each end. Clean up any excess glue and allow it to dry 4 hours.
8. Glue the front trim assembly (I) and (J) $\frac{1}{4}$ " above the bottom of the front (A). The ends of the front trim (J) should be flush with the sides of the front (A). Use spring clamps to hold it in position and allow the glue to dry for four hours.
9. Carefully measure the placement for the shelf (H). Use a band saw to cut out the shape.
10. Place glue on the edges of the shelf (H) and on top of the front trim (I). Position the shelf into the key rack assembly and on top of the front trim assembly.
11. Use spring clamps to secure the shelf and trim assembly. Also, secure the back edge of the shelf (H) to the back (B) with brads.
12. Allow the glue to dry for 24 hours.

E: Finish Procedures:

1. Fill any cracks, nail holes or imperfections with walnut wood dough.
2. After the wood dough has dried, use 220 grit sandpaper to sand the wood dough flush.
3. Use a tack rag to remove all sanding dust.
4. Use a pure-bristle brush to apply a clear coat of Varathane, Polyurethane, lacquer, etc. Allow it to dry for 12 hours.
5. **Lightly hand-sand the clear finish with 220 grit sandpaper. Remove all sanding dust with a tack rag.**
6. **Apply another coat of the clear finish and allow it to dry.**
7. **If additional finish coats are desired, repeat steps 4-6.**

F: Installation Procedures:

1. Determine the approximate location for the key rack to be installed into the wall.
2. Use a stud finder to locate the inside surfaces of two adjacent studs.
3. Determine the bottom location on the wall for the key rack.
4. Use a level to draw a horizontal line on the wall.
5. Measure up 21 1/8" from the horizontal line, and draw another horizontal line.
6. Drill a 1/4" hole in the drywall below the top horizontal line.
7. Use a jig saw, with a fine tooth blade, to cut out the drywall for the opening. Carefully cut on the inside of the bottom horizontal line.
8. Drill a 1/8" hole through the sides (C) above the interior tops (G).
9. Position the key rack into the opening of the wall. Place a finish nail in the 1/8" hole and use a hammer to make an indentation in the stud. Repeat this operation for the other side.
10. Remove the key rack and drill a 1/16" pilot-hole 1" deep in the studs at each indentation.
11. Replace the key rack into the wall and secure it using #8 x 1 1/4" particle board screws.

NOTE: A convenience light could be installed in the top (D) for better visibility.

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