

How to Build Your Own Little Free Library

Join us by building a Little Free Library in your front yard!



Tools Required

- Basic carpentry tools
- Cordless drill
- Orbital sander
- Router
- Router table
- Table saw

Materials Required

- 1-1/4" pocket hole screws
- 1/4" x 12" x 18" acrylic sheets
- 3" coated outdoor screws
- 3/4" x 24" x 48" Baltic birch plywood
- 36" x 48" copper sheet (10 mil)
- 4x4 x 8' cedar post
- CA glue
- Contact adhesive
- Mahogany boards 3/4" bf
- Spar Varnish

Figure A: The Library

Overall dimensions: 32-in. wide x 18-3/4-in. deep x 35-in. high.

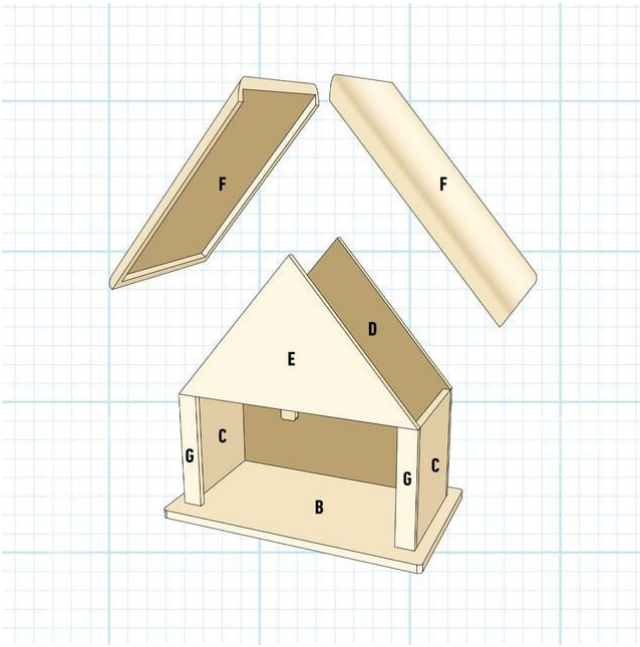
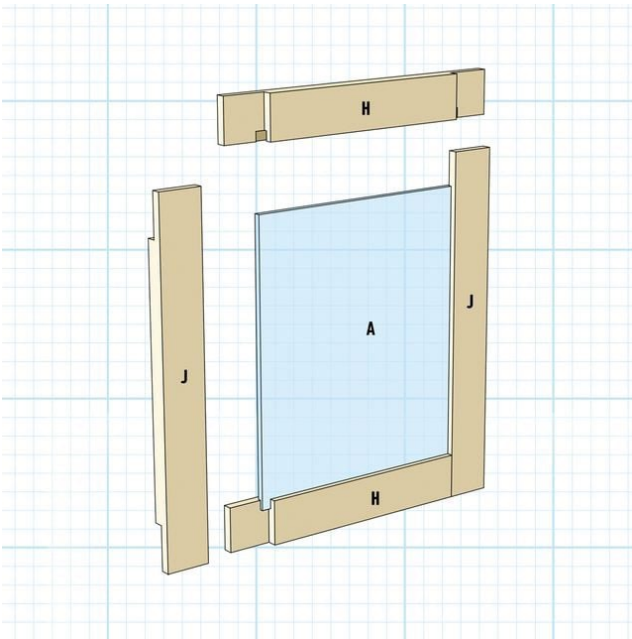


Figure B: The Doors

Overall dimensions: 12-1/4-in. wide x 3/4-in. deep x 14-in. high.



Cutting List

KEY	QTY.	PART	DIMENSIONS
A	1	Clear acrylic	9-1/2" x 11-1/4" x 1/4"
B	1	Base	32" x 18-3/4"
C	2	Sides	12-3/4" x 14"
D	1	Back	29" x 32"
E	1	Gable face	29" x 18"
F	2	Roof panels	19-3/4" x 29"
G	2	Doorjamb	2-3/4" x 14"
H	4	Door rails	1-3/4" x 12-1/4"
J	4	Door stiles	1-3/4" x 14"

Step 1

Finish the post

- I cut the 4x4 cedar post to 60 inches, which leaves enough to cut the angled braces after I finish the post.
- Sand the post to 180 grit to prevent splinters.
- Apply a coat of [epoxy finish](#) to the entire post and set it aside to dry. This will seal the wood against the weather above ground and against rot below ground.



Step 2

Fit the Base for the Post

- I attached the angled braces to the post using three-inch coated screws.
- Center the post on the base (B) and mark its position. Use that as a guide to pre-drill and [countersink holes](#) for the mounting screws.
 - **Pro tip:** Keep your countersinks shallow. This keeps the screws from digging too deep.



Step 3

Cut the Parts

- After gluing up the panels, cut them to size on a [table saw](#).
- I used a track saw to accurately cut the angles for the roof parts. You can achieve a similar result with a [circular saw with an edge guide](#).



Step 4

Make the Roof

- I chose to give the roof a round-over profile. To do this, glue 1/4-in. stock around the bottom edges of the roof panels (F).
- Once they're dry, profile the edges with a 3/4-in. round-over bit. You can do this with a hand-held router, but a router table would be better.



Step 5

Cut the Peak Joint

- After you rout the edge profiles, bevel the peak edges of both pieces at 40 degrees using a table saw.
 - **Pro tip:** I made a simple jig to help hold the part safely.



Step 6

Apply the Copper

- Roughen the copper and plywood with [80-grit sandpaper](#), and apply contact cement with a glue roller.
- I used [Dap Weldwood original formula](#) (\$15 per qt.). After both surfaces tack up, lay half of the roof down on the copper sheet.
- Lay the other half down starting at the peak.
- Finally, wrap the soffit and trim the excess copper. I found an old chisel worked well for this step.



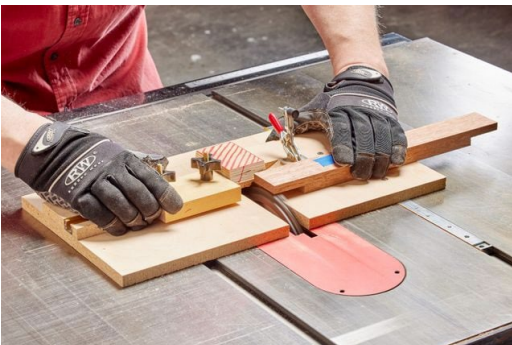
- **Pro tip:** I sealed the underside of the roof with black oil-based paint, but you can use the same spar varnish as the rest of the project.
- Alternatively, you can save money by skipping the copper. Get creative with your roof! Cedar shingles, tile or even just painted wood can lower the cost.



Step 7

Make the Doors

- Cut the rails (H) and stiles (J) to size.
- I used a 1/4-in. bit on the router table to cut the slot for the acrylic pane (A). Place stop blocks on the fence to avoid cutting through the ends.
- A half-lap joint is strong and easy to make on the table saw. I used a basic table saw sled to make these cuts, but a miter slider will work, too.
- Cut the acrylic panes to size on the table saw in multiple shallow passes. This will give you a cleaner cut and won't melt the acrylic.



Step 8

Rout the Hinge Mortise

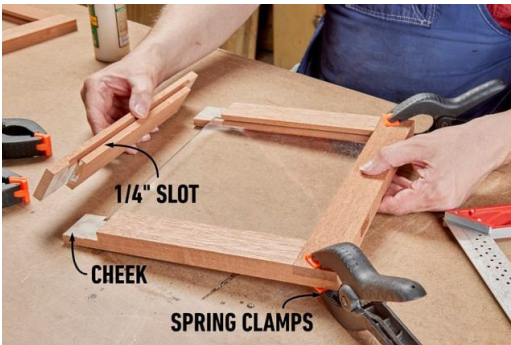
- On the edges of the stiles and door jambs (G), mark the center lines for the hinges three inches from each end.
- Center the Soss hinge router jig on these lines and mortise the pockets for the hidden hinges with a 3/8-in. router bit.
 - **Pro tip:** If you're not comfortable with Soss hinges, try piano hinges instead. They're simpler and don't require routing.



Step 9

Glue the Door Parts

- Spread glue on the cheeks of the half lap joints. Clamp the bottom rail and the two stiles together.
- Slide the acrylic pane into the slot and clamp on the top rail. Check that the frame is square before the glue sets.



Step 10

Assemble the library

Put up the walls

- I assembled the library with [pocket hole joinery](#) and stainless steel screws.
- Start with the back (D), then attach the sides (C).
- After attaching the door jambs on the front of each side, I attached the triangular gable face (E). I used CA glue to hold it in place, then secured it with screws from the inside.



Step 11

Attach the Roof

- With a helper, carefully lay one side of the roof down on the library. Gently lower the other side, taking care to not damage the copper on the roof peak. Attach the roof with pocket hole screws from the inside while making sure the soffit reveal remains even all the way around.



Step 12

Install the Doors

- I made the doors a little wider than they needed to be, knowing once everything was assembled I could trim them for a perfect fit.
- With the doors attached to the jambs, find the center on the gable and mark it on a bit of tape. Transfer this mark to the doors and trim them on the table saw.
- Reattach them and check the fit. I used a small magnetic catch to help keep the doors shut.



Step 13

Apply Spar Varnish

- The finish can be applied at any step along the way. You don't have to wait until the end.
- Once I fit the doors, I applied three coats of spar varnish ([TotalBoat Glean](#)) to all the surfaces.
 - **Pro tip:** You'll need to reapply a coat of varnish every three years or so.



Step 14

Hammer the Copper Roof

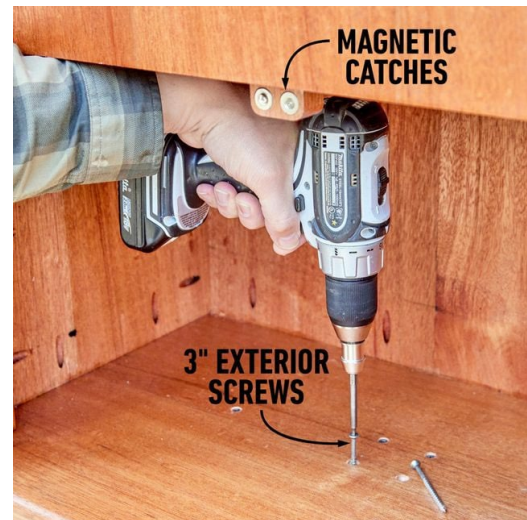
- I chose to give this copper roof a hammered look. This is optional but well worth the hours and the sore hands — it looks amazing!
- You could buy hammered sheets, but they're even more expensive. Save money and DIY!



Step 15

Planting the Post

- You have a few options for [setting the post](#) for your [Little Free Library](#). You can get a posthole digger and plant the post with cement or foam.
- Alternatively, you could avoid digging a hole altogether! Post anchors go into the ground with no digging. I like the screw type. If I need to move this library, I can just unscrew it!
 - **Pro tip:** Always call 811 before digging, even if you're just using a post anchor.



Step 16

Attach to the Post

- Once the post is secure in the ground, place the Little Free Library on top. I used three-inch coated screws in the holes I predrilled earlier.
- Now it's time for the big reveal: Register your library, fill it with books and call your neighbors!