

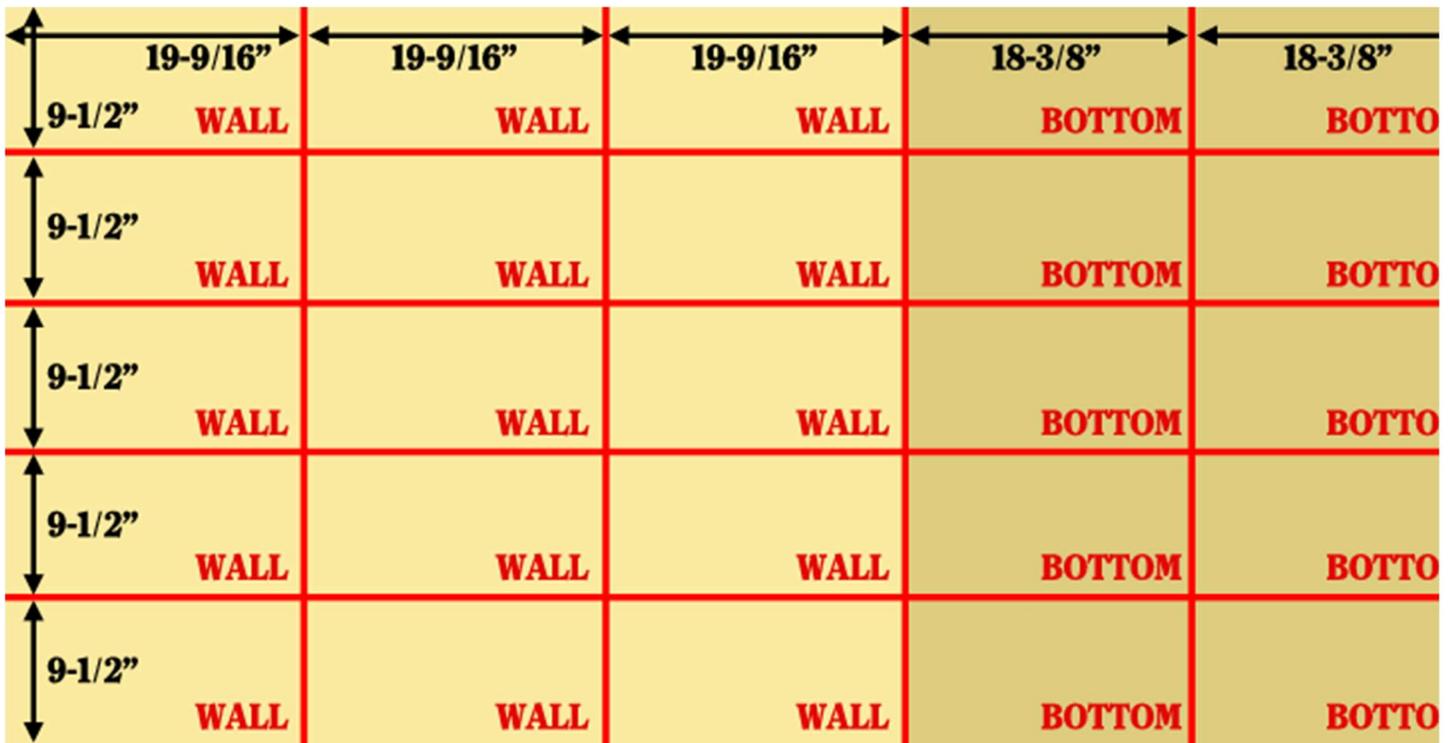
## James Kugler

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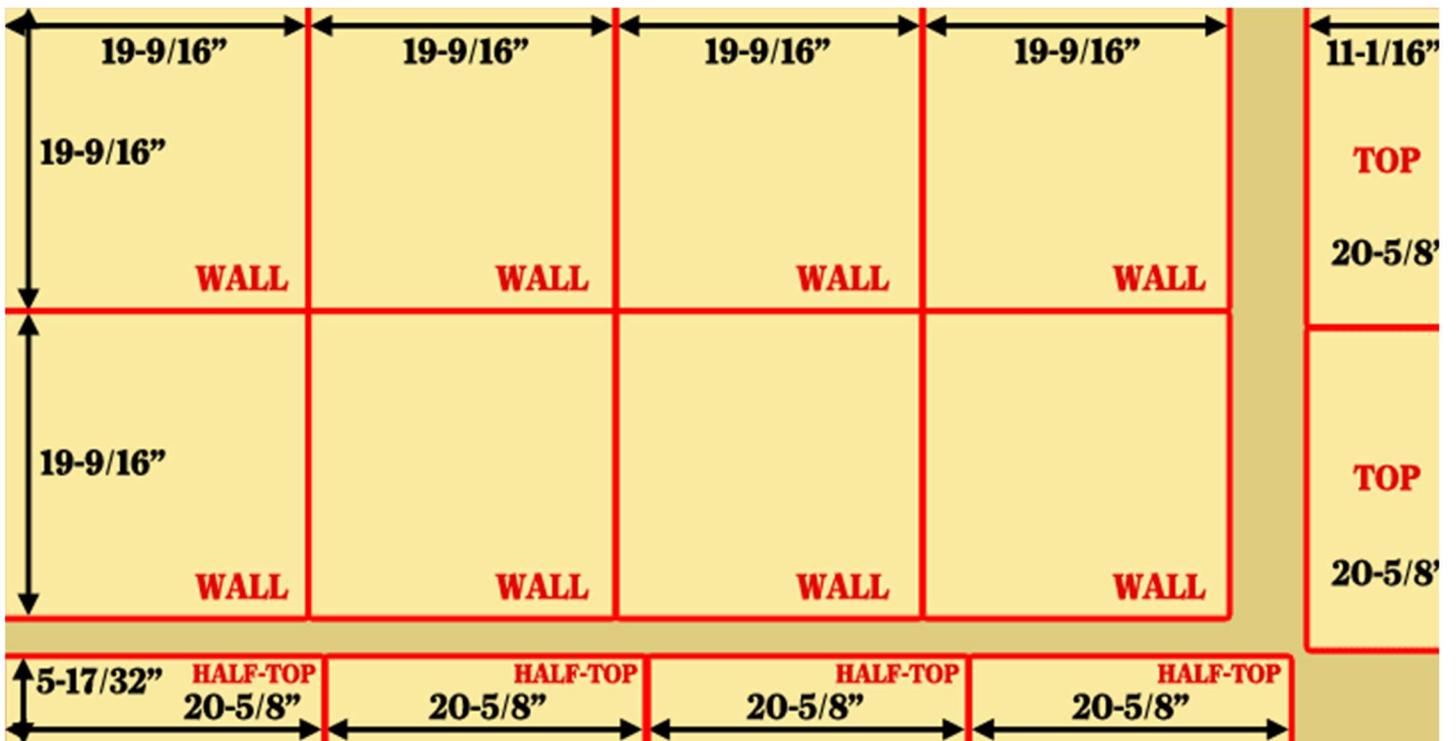
The model below has a volume of 53 liters or 14 gallons (“my favorite size!”). It is sturdy yet lightweight at 14 lb (“my favorite weight!”). It takes six extra-deep frames or standard Langstroth frames. The front wall, back wall, and the bottom are made of construction-grade 19/32” untreated pine sheathing plywood. The end walls and the top are 1/4” sanded pine plywood, the top is then attached to a frame made of strips ripped from “two-by-fours”, 15/32” thick. The top is covered with 14” aluminum flashing.



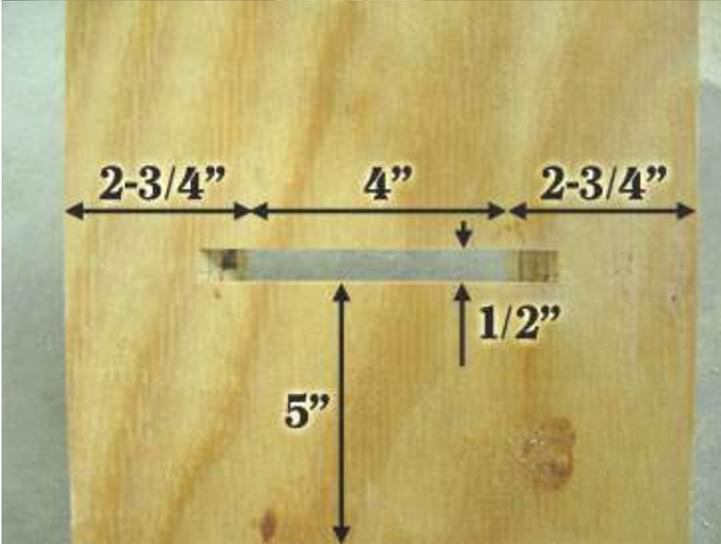
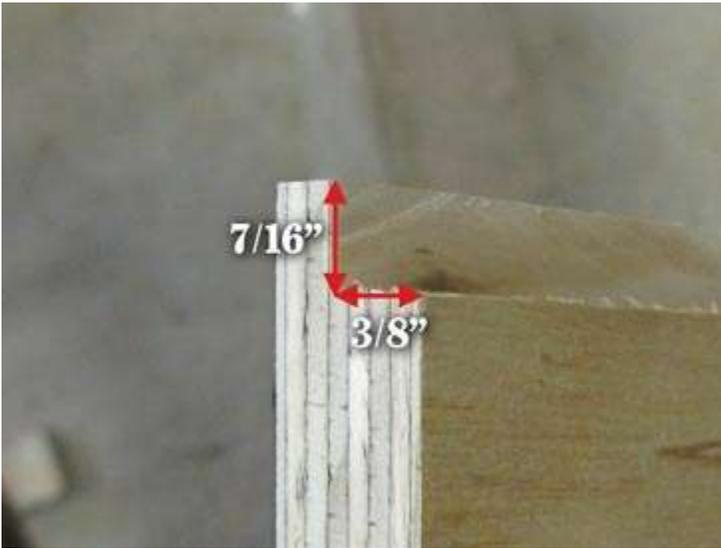
Cut a 4' x 8' sheet of 19/32” plywood as shown. You'll end up with 15 front/back walls measuring 19-9/16” x 9-1/2” (enough for 7-1/2 swarm traps) and 10 bottoms 18-3/8” x 9-1/2”. I rip the plywood into five 9-1/2” strips using a circular saw with a guide, and cut them to dimensions using a sliding miter saw.



Cut a 4' x 8' sheet of 1/4" plywood as shown below. You'll have 8 end walls measuring 19-9/16" x 19-9/16" (enough for 4 swarm traps) and 4 tops 20-5/8" x 11-1/16". Two of the tops will consist of two halves, which is totally fine because the top will be covered with waterproof aluminum flashing.



Cut frame rests (3/8" by 7/16" rabbets) along the top inner edge of front and back walls, and a horizontal entrance slit (1/2" high by 4" long) on the front wall. I use a table saw with a dado blade for both operations:



The box is ready to assemble. Attach the front wall and the back wall to the bottom, making sure the frame rests look inside. Pre-drill through the face of the wall into the bottom, apply wood glue, and assemble on  $1-5/8''$  deck screws:





Put it on the side, apply wood glue, and nail the side wall using small thin nails (I use 3/4" nails or 1/2" staples). Flip over and attach the other end wall. The box is ready:





Now let's make the top. Cut a piece of "two-by-four"  $19\text{-}11/16$ " long; rip it into  $15/32$ " bars. You'll have six bars  $19\text{-}11/16$ " x  $1\text{-}1/2$ " x  $15/32$ ". Cut another piece of "two-by-four"  $11\text{-}1/16$ " long; rip it, and you'll have six bars  $11\text{-}1/16$ " x  $1\text{-}1/2$ " x  $15/32$ ". Connect two long bars and two short bars to form a frame (use glue and small nails). Nail through the short bars into the long bars. Apply glue on the frame and nail the plywood:





The only thing left is to install aluminum flashing. Cut a 22-5/8" piece of 14"-wide flashing. Clamp the top in the center, score the perimeter with a knife, then fold and staple to hold it in place. The top is ready.





The swarm trap is ready to be painted and put to use.



### Materials list

- 19/32" pine plywood, construction (sheathing) grade, untreated. One 4' x 8' sheet makes front & back walls for 7-1/2 traps, and enough bottoms for 10 traps.
- 1/4" sanded pine plywood. One 4' x 8' sheet makes end walls & tops for 4 traps.
- "Two-by-four", untreated. One 8' piece for 9 traps.
- 14" aluminum flashing. One 25' roll covers 13 swarm trap tops.
- Wood glue (e.g., Titebond III), one 8-oz bottle is plenty.
- 1-5/8" deck screws, four per trap.
- Small thin nails, preferably 3/4" long; 40 per trap.
- Manual staple gun with 1/4" staples.
- Exterior acrylic primer (1 qt per dozen traps) and light-colored exterior acrylic paint (1 qt per two dozen traps); a wide brush.

### Equipment used

You can complete this project using a variety of tools. This is what I use:

- Circular saw with a guide — to bust plywood.
- Sliding miter saw — to cut the ripped strips of 19/32" plywood and "two-by-fours" to size.

- Table saw with a dado blade — to cut frame rests (rabbets) and entrances.
- Hammer.
- Phillips screwdriver.
- Metal shears — to cut flashing (you can also cut with utility knife).
- Utility knife — to score flashing.
- Staple gun — to install flashing.

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<https://www.youtube.com/watch?v=7ulRw7CLQgw>

"Remember, If you don't have time to do it right, you don't have time to do it twice"