BEEHIVE SLATTED BOTTOM RACK

Material List

2 ¾" x 2 ¼"x 19 1/8" for Side boards
2 ¾" x 2 ¼" x 16 ¾" for front and back board
1 ¾" x 4 1/4"x 15 ¼" for shelf at front of rack
10 ¾" x ¾" x 14" slats

Cutting Dados on pieces

On the ends of both 2 ¼" boards cut a dado 3/8" x ¾". These front and back boards will be nailed to the end of the side boards making the side dimension a full 19 7/8".

On the two front and back pieces cut a dado ¼" from the top of the 2 1/4" board. The dado needs to be ¾" wide by 1/4" deep.

On one of the 15 ¼ " sides of the shelf board cut a 3/8" dado ½" deep the full length of the board, making sure that you have 3/16" on each side of the dado. One end of the slats will fit in this dado.

On the two side boards where the shelf will set in a dado , a ¼" x ¾" dado will need to be cut ¼" from the top of the board the width of the shelf board – 4.0 inches. There are two ways of accomplishing this, dado past the 4 inch so that you have a 4 inch x ¼" dado cut with the curved cut beyond the cut. The second way is to cut the dado 4 inch long and using a chisel, remove the part of the dado that needs to be cleaned out in order to have a full 4 inches.

On one end of the ¾" x ¾" 14" slats, set up a dado blade to cut a 3/16" wide x ½"deep area from opposite sides of the same end of the slat. This should leave a joint on the end of the slat that has a centered 3/8" x ½" area. This is the end that will fit in the 3/8" x ½ "deep dado on the shelf board. The other end of the slat stays ¾" x ¾" and fits in the ¾" dado in the back 2 ¼" board.

Spacing of the slats in the frame

The purpose of this slatted rack is to have the 10 slats line up with the bottom of each frame in the brood super. To achieve this, the two end slats,#1 and #10, those closest to the sides needs to be spaced so that there is a 5/16" space between the slats and the side board. The remaining 8 slats will have a 11/16" space between each of them.

Securing the slats to the shelf board and the back board

Using Titebond III Waterproof wood glue put glue on edges of boards that will come in contact with another board. In other words, any where there is a dado.

Using 5/8" brads or brad nailer with 5/8" brads or staples, place the brad 5/16" from the edge of the shelf board where the slats mate with the board.

On the outside of the back board draw a line 5/8" line all the way across the length of the back. Place a 1 1/2" brad on the line and centered on a slat that has been correctly spaced.

If your brads are countersunk, on the outside of the frame, fill with wood putty , sand and then put several coats of sanding sealer on the outside of the assembly that will be exposed to the weather and on the top and bottom edge of the outside frame.
Apply primer and several coats of good exterior paint. I use an exterior paint that the primer and paint are combined.