

Harriet Chair with Modifications

This modification of the Harriet chair includes a slat back, padded seat, and is 2 inches wider than the original plan. The overall dimensions of the finished chair: 38" tall, seat is 16" deep, and 18" wide. Seat height is 19".



General Instructions

Please read through the entire plan and all comments before beginning this project. It is also advisable to review the Getting Started Section. Take all necessary precautions to build safely and smartly. Work on a clean level surface, free of imperfections or debris. Always use straight boards. Check for square after each step. Always predrill holes before attaching with screws. Use glue with finish nails for a stronger hold. Wipe excess glue off bare wood for stained projects, as dried glue will not take stain. Be safe, have fun, and ask for help if you need it. Good luck!

Shopping list (for 1 chair):

4 – 1x2x8 select pine boards

1 – 1x3x8 select pine board (will use part of this, use the rest of this piece for your next chair)

1 – 1x16x36 edge glued project panel (use half for this chair, and half for your next chair)

OR

¾" plywood panel, 2' x 2' (buy a 4 x 4 piece of plywood, if you are making 4 chairs)

1 8' pc ¾" x ½" S4S moulding (1 8 foot piece is enough for all 4 chairs)

½ yard 1" thick high density foam by-the-yard (24" wide) – cut this down to 16" x 18" for 1 chair

¾ yard of 45" wide batting (each chair will need 1 pc batting, 22" x 24" , so 3/4 yd of 45" wide batting by-the-yard is enough for 2 chairs)

¾ yard of 54" wide fabric (each chair will need 1 pc fabric, 22" X 24", so 3/4 yd of 54" wide fabric is enough for 2 chairs)

Staples for heavy duty stapler

2" finish nails and 1" finish nails (used nail gun)

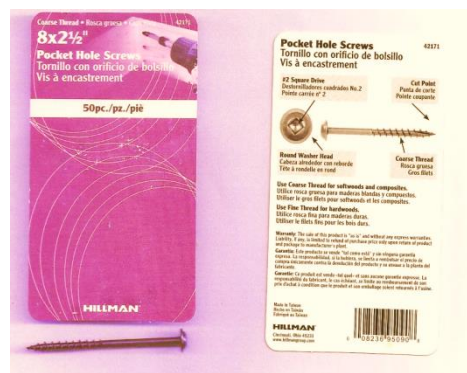
4 – 2 ½" flat head wood screws (for attaching back top to slats)

1 ½" round washer head screws (Attaching slats to seat, and attaching legs to back sides - you will only use a few of these – 1 box of 50 was more than enough for all 4 chairs)

2" round washer head pocket hole screws (for attaching seat to bottom)

2 ½" round washer head pocket hole screws (you'll need a lot of these – get 2 boxes of 50 if you're doing 4 chairs)

Note: This is a copy of the package for the screws mentioned (package color is dark red, not pink like my scanner shows) ;)



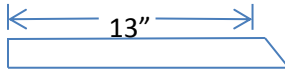
Spray Adhesive

Wood glue

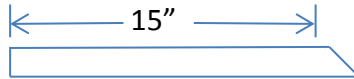
Wood filler

Cut List (for 1 chair)

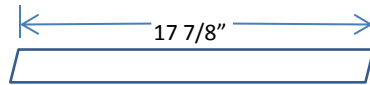
2 – 1x2 @ 13" (side apron) (short point, one end cut at 15 degrees off square, looks like this)



2 - 1x2 @ 15" (side supports) (short point, one end cut at 15 degrees off square, looks like this)



2 – 1x2 @ 17 7/8" (back legs, both ends cut at 15 degrees off square, parallel to each other, looks like this)



2 1x2 @ 17 1/4" (front legs)

6 – 1x2 @ 16 1/2"

(2 - front apron, 1 – bottom front support, 1 bottom back support, 1 – top back apron, 1 – back bottom)

1 – 3/4" thick project panel or plywood @ 16" x 18" (for seat)

2 – 1x2 @ 29" (back sides)

1 – 1x2 @ 13 1/2" (back top)

2 – 1x3 @ 27 1/2" (back slats)

Upholstery:

1 – 16" x 18" high density foam

1 – 22" x 24" batting

1 – 22" x 24" fabric

Step 1: Assemble chair frame sides



1a. Assemble sides as shown above, starting at the top, using 2" finish nails and glue, and followed up with 2 ½" self tapping screws, driven in from the outside, as shown in picture below.

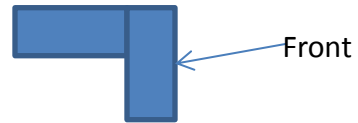


1b. Build 2 of these, making sure they line up to each other exactly. This is important so your chair will sit level and not wobble.

1c. Remember to lay these out so the prettier side of the wood is facing out when you assemble the frame.

Step 2: Attach front Apron and bottom front support

2a. For front apron, attach the 2 pieces of 1x2 with glue and 2" finish nails - like this:



2b. Attach front apron to sides, keeping it flush at top and front of the front legs. Use glue and 2" finish nails.

2c. Follow that up with 2 1/2" self tapping screw from the outside, as shown in picture

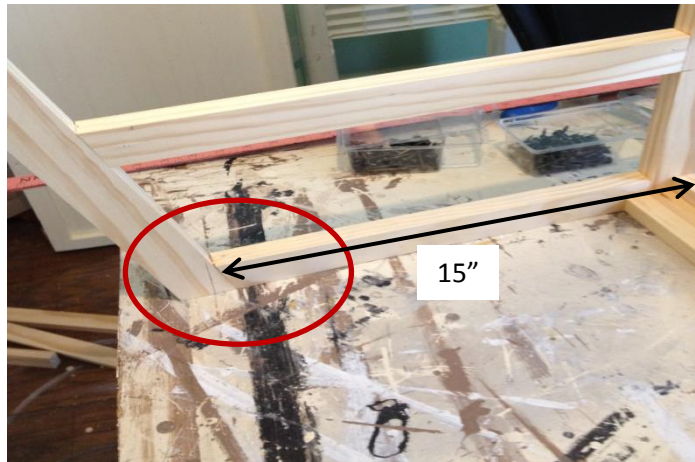


2d. Attach bottom front supports to legs, 7" up from bottom of the leg (keeping fronts flush) with glue and 2" finish nails. Follow up with a 2 1/2" self tapping screw, through the leg into the front apron from the outside, as shown in the picture

Step 3: Attaching Back Apron

3a. Turn frame upside down and set it on its top.

3b. On the inside of the frame, measure in 15" from the front and mark, on each side.



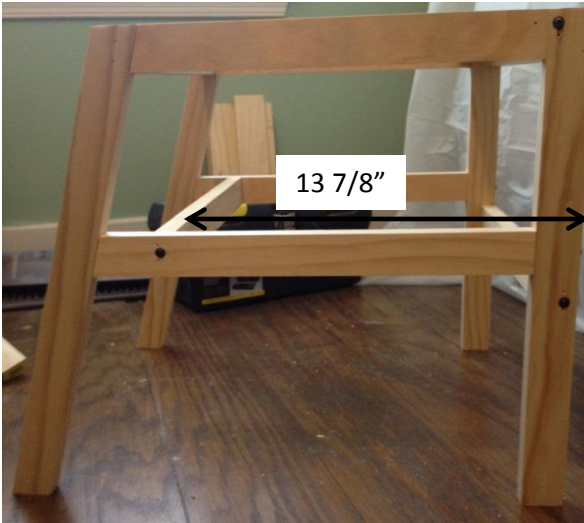
3c. Attach back apron to back legs, with front of the apron board lined up with the mark from above. Use 2" finish nails and glue. See picture.

3d. View from inside the frame, showing the aprons and supports attached.



Step 4: Attach back bottom support

4a. Stand frame upright.



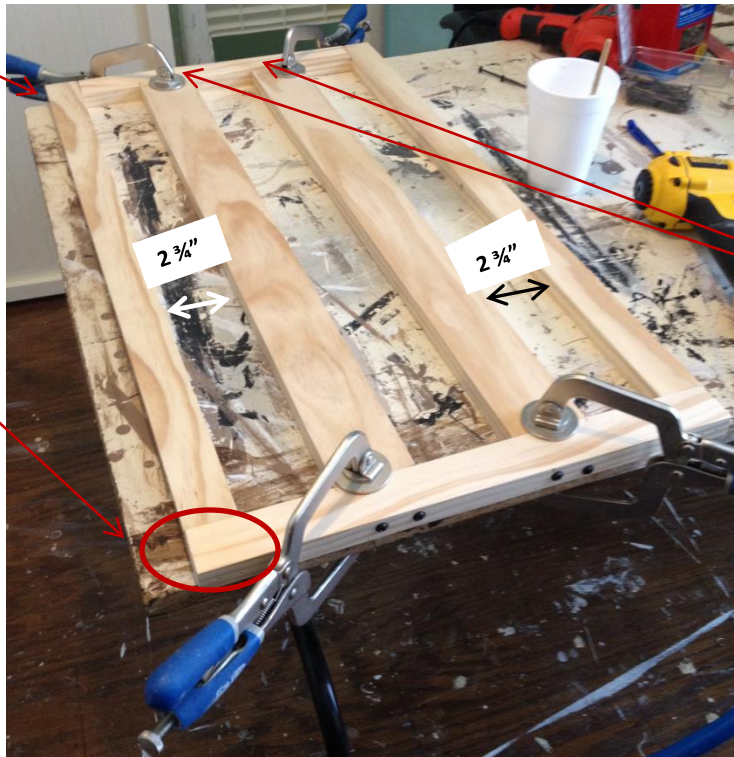
4b. Measure and mark the side supports, $13 \frac{7}{8}$ " back from front of legs.

4c. Attach back bottom support to side supports, with front of this board even with the marked line, and keeping tops and bottoms flush. Use glue and 2" finish nails. Follow with $2 \frac{1}{2}$ " self tapping screw from outside, as shown above.

Step 5: Build Chair Back

2 ½" self tapping screw on each side at the top

No screws here at the bottom



Countersink two 2 ½" wood screws into top end of the slats

Boards used:
1x2's:
Top: 13 ½"
Bottom: 16 ½"
Sides: 29"
1x3's:
Slats: 27 ½"

Build the chair back as shown above.

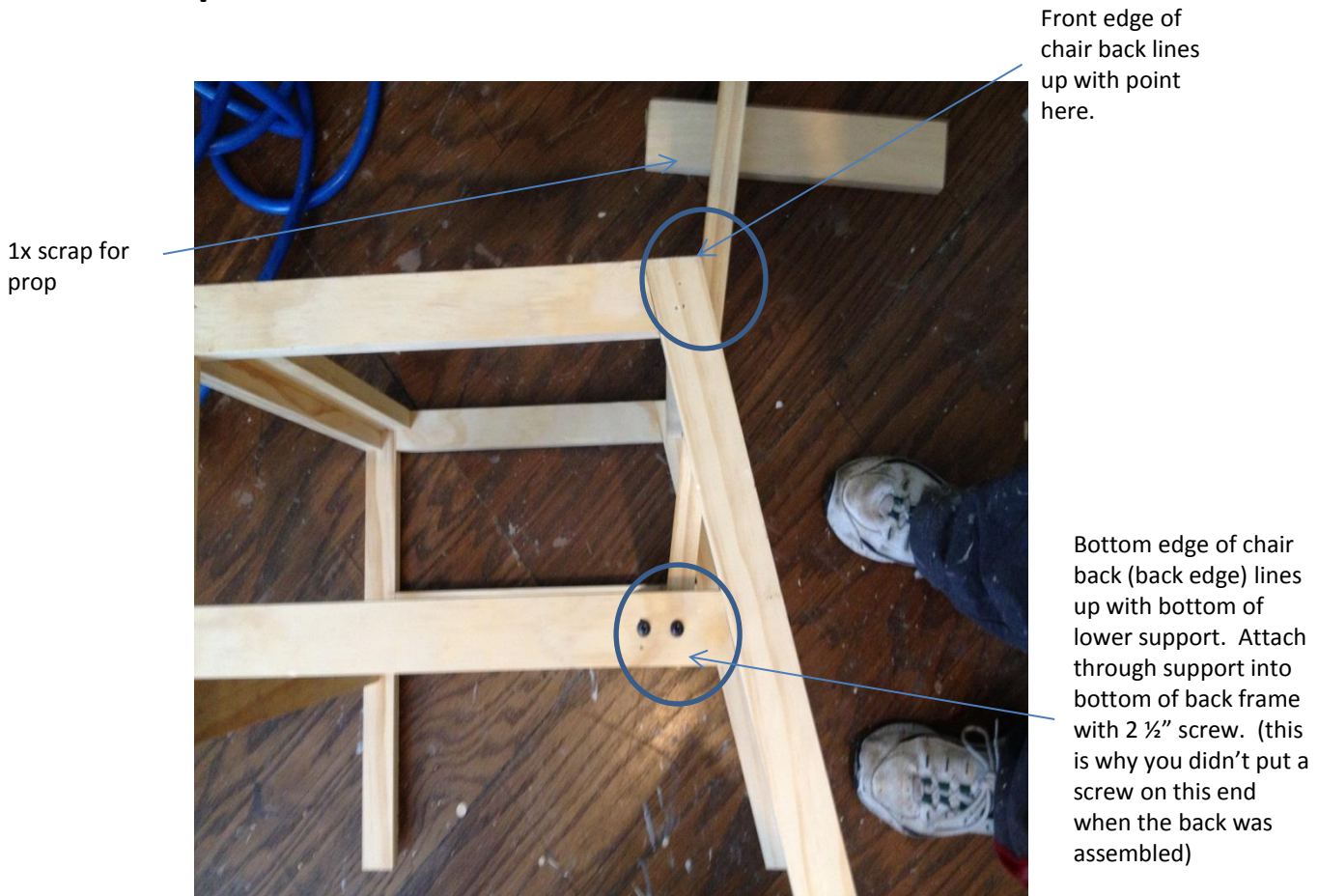
5a. Attach the bottom to the sides, then add the top, then add in the slats last. Slats are placed in 2 ¾" in from the sides. Use glue and 2" finish nails.

5b. Once everything is nailed together, at the bottom, add two 2 ½" screws through the bottom into the slats. Don't put any screws through the bottom into the side pieces, screws will get added from the outside later.

5c. At the top, add a 2 ½" self tapping screw into each side at the top, and countersink two 2 1/2" wood screws through the top into each of the slats.

5d. Attach a piece of S4S trim to the top of the back, with glue and 1" finish nails. This will cover up the screw holes.

Step 6: Attach chair back, bottom screws



6a. Set the chair frame on its side and slide the back into place as shown in the picture.

6b. Use a piece of 1x scrap to prop the back piece, to keep the chair steady while you add the screws

6c. The bottom edge of the back is flush with the bottom of the bottom side support.

6d. The front edge of the chair back lines up with the top back point as shown in picture

6e. Attach the chair back at the bottom, to the bottom side support with a 2 ½" screw, from the outside.

6f. Flip the piece over, and repeat for the other side.

Step 7: Attach Chair Back, side screws

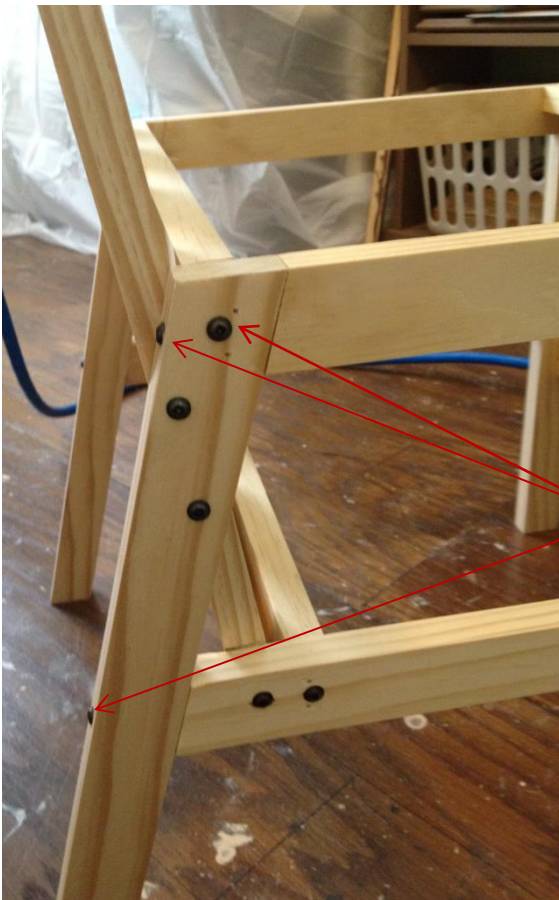
7a. Once bottoms screws are in place on both sides, push the seat back forward again, so the front lines up again with the corner point.



7b. Then attach side to back leg as shown in picture, using two 1 ½" screws on each side.

Step 8: Additional Screws

8a. Add a 1 ½" screw through the top back apron support and into each of the slats. You won't be able to see these screws once the seats are attached.



8b. Add a few more strategically placed 2 ½" screws, both for decoration and added strength

See picture for placement of the additional screws.

9. Finishing Instructions:

Fill all holes with wood filler and let dry. Apply additional coats of wood filler as needed. When wood filler is completely dry, sand the project in the direction of the wood grain with 120 grit sandpaper. Vacuum sanded project to remove sanding residue. Remove all sanding residue on work surfaces as well. Wipe project clean with damp cloth. It is always recommended to apply a test coat on a hidden area or scrap piece to ensure color evenness and adhesion. Use primer or wood conditioner as needed. Paint or Stain to desired finish.

Step 10a: Seat cushion batting:

- Apply 1" foam to top of seat board with spray adhesive.
- Cut batting 22" x 24"
- Lay seat in center of the batting, foam side down.
- Pull batting evenly around to the bottom of the seat and staple to the bottom with the heavy duty stapler. Start in the center of each side, pulling it taut, then work toward the corners. Make sure to fold in your corners neatly to avoid lumpy corners. Don't staple close to the outer edge – your chair bottom is being attached to the seat around the outer edge. Trim excess close to the staples.



Step 10b – Seat cushion fabric

- Cut fabric 22" x 24" and lay it out face down
- Place seat in center of the fabric, batting side down
- Pull fabric around to the bottom of the seat and staple to the bottom with the heavy duty stapler. Start in the center of each side, pulling the fabric taut, then work toward the corners. Make sure to fold your corners in neatly before stapling, to avoid lumpy corners. Don't staple close to the outer edge – your chair bottom is being attached to the seat around the outer edge.



Step 10c – Attach seat

To attach Seat: Use 2" screws to attach from the underside of the 1x2 aprons into the underside of the seat.