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Outdoor Dining Chair

This handsome chair is comfortable, rugged enough for outdoor use, and very inexpensive to build. You might want to build four or more to go with the dining table, plus a few extra to keep in your garden, on the patio, or beside the jacuzzi.



Materials

- 10 linear feet of 2 x 4 pine
- 30 linear feet of 1"-thick pine which has been ripped to 2" in width (Actual width after ripping will be $\frac{3}{4}$ " x 2")
- 6 linear feet of 2"-thick pine which has been ripped to 2" in width (Actual width after ripping will be 1-1/2" x 2")

Hardware

- 1-1/4" 3d finishing nails
- 1-1/4" wood screws
- 3" wood screws

Cutting List

Code	Description	Qty.	Materials	Dimensions
A	Back Leg	2	2 x 4 pine	37 inches long
B	Front Leg	2	2 x 4 pine	18 inches long
C	Front Rail	1	1-inch ripped*	15-1/2 inches long
D	Side Rail	2	1-inch ripped*	16 inches long
E	Back Rail	1	1-inch ripped*	15-1/2 inches long
F	Side Spacer	2	1-inch ripped*	13-1/2 inches long
G	Front Spacer	1	1-inch ripped*	14 inches long
H	Side Brace	2	2-inch ripped*	13-1/2 inches long
I	Middle Brace	1	2-inch ripped*	14 inches long
J	Short Slat	1	1-inch ripped*	14 inches long
K	Long Slat	12	1-inch ripped*	18 inches long

*Note: All the ripped pieces are presented in actual dimensions.

Cutting the Legs

The back legs of the chair are cut from 2 x 4 pine. The chair legs are angled at the top to make the chair comfortable to sit in. Although it looks complicated, it is simple to do. Just take your time and measure and cut correctly.

1. Cut two back legs (A) from 2 x 4 pine, each measuring 37 inches long.
2. Refer to *Figure 1* to mark and cut the first chair leg. Measure and mark points "a", "b", "c", and "d". Draw a line connecting "a" to "b", "c" to "d", and "d" to "e". Then cut along the lines to remove the shaded areas of the pattern. Use the resulting back leg (A) to cut a second back leg (A).

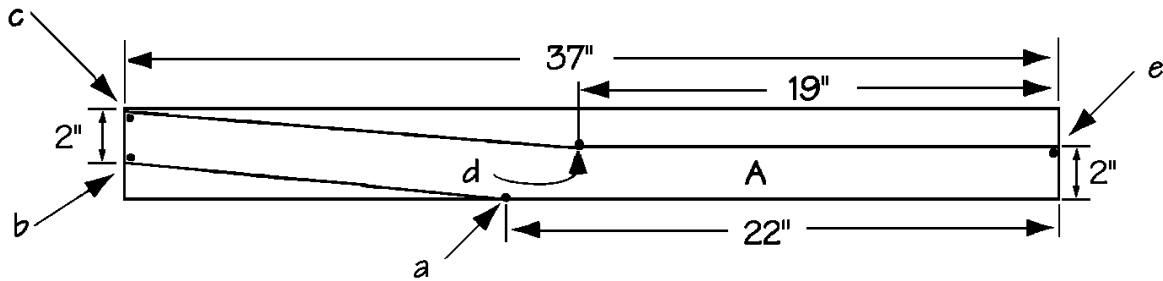


Figure 1

3. Measure 16 inches from what will be the bottom of the leg, and cut a 2-inch-wide dado, 3/4-inch deep in the leg (A), as shown in *Figure 2*.
4. Repeat Step 2 to dado the remaining back leg (A). Because the dados will be on the inside of the chair back, the second dado must be a mirror image of the dado in the first back leg (A).

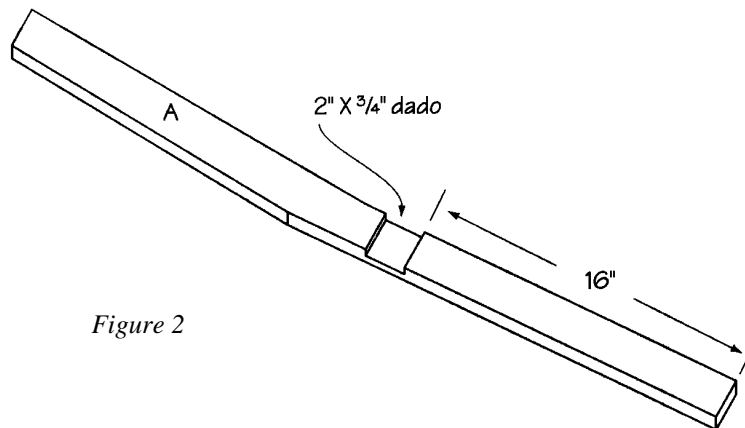


Figure 2

5. Cut two front legs (B) from 2 x 4 pine, each measuring 18 inches long. Rip each leg to a width of 2 inches.
6. The front legs (B) are dadoed to accept the seat rails. Follow *Figure 3* to dado the first front leg (B).
7. Repeat Step 5 to dado the second front leg (B). As with the back legs, the second front leg (B) must be the mirror image of the first front leg (B).

Adding the Chair Rails

1. Cut one front rail (C) from 3/4" x 2" ripped pine, measuring 15 1/2 inches long.

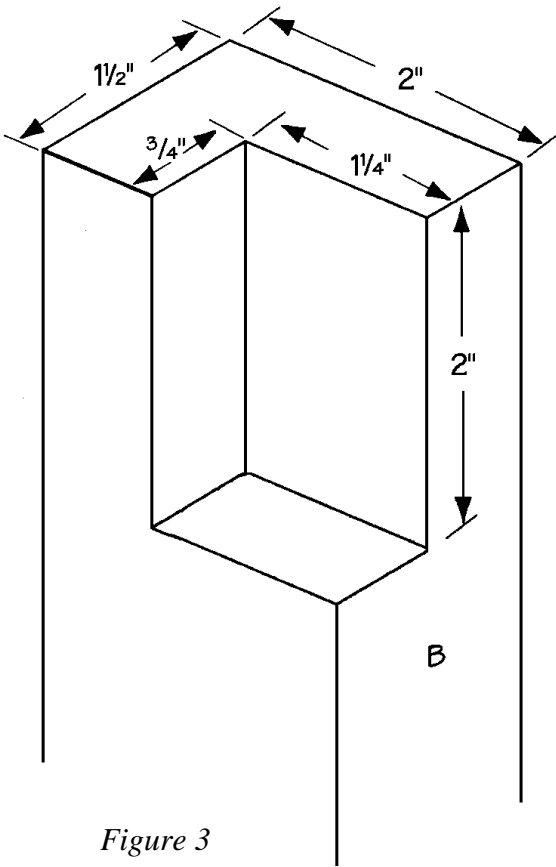


Figure 3

2. Miter both ends of the front rail (C) at opposing 45-degree angles, as shown in Figure 4.
3. Cut two side rails (D) from $\frac{3}{4}$ " x 2" ripped pine, each measuring 16 inches long. Miter one end of each of the side rails at opposing 45-degree angles, as shown in Figure 5.
4. Cut one back rail (E) from $\frac{3}{4}$ " x 2" ripped pine, measuring 15-1/2 inches long.
5. Refer to Figure 6 to connect the chair rails to the chair legs. First fit the un-mitered ends of the side rails (D) into the dado in the back legs (A), 3/4-inch from the back edge of the dado. Be sure that the miters in the side rails (D) face each other. Apply glue to the meeting surfaces, and screw through the side rails (D) into the dado in the back leg (A) using two 1-1/4-inch-long screws on each joint.

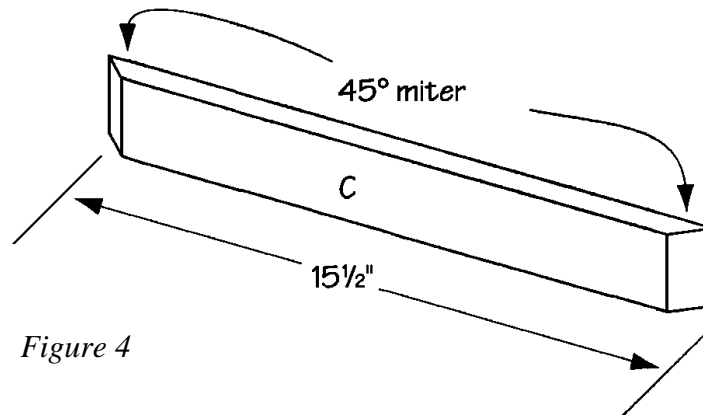


Figure 4

6. Fit the back rail (E) over the un-mitered ends of the side rails (D) inside the dadoes in each of the back legs (A). Apply glue to the meeting surfaces, and screw through the back rail (E) into the ends of the side rails (D). Use two 1-1/4-inch-long screws on each joint.
7. Fit the front rail (C) between the two mitered ends of the side rails (D) inside the dadoes in

the front legs (B). Apply glue to the meeting surfaces, and screw through the front rail (C) into the front legs (B). Use two 1-1/4-inch-long screws on each joint.

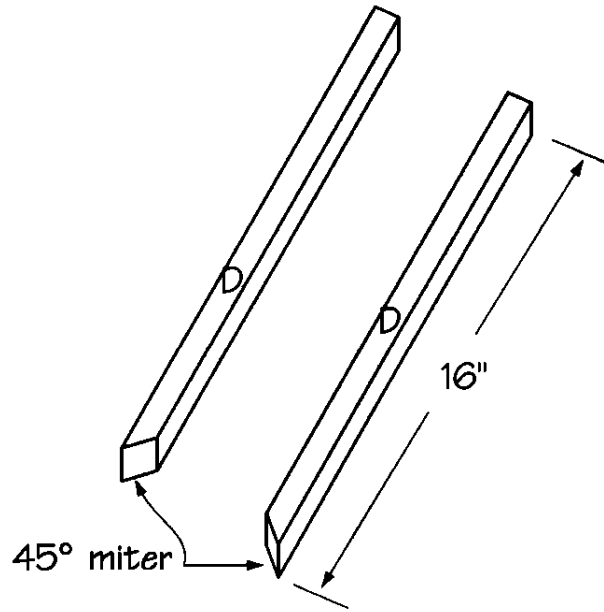
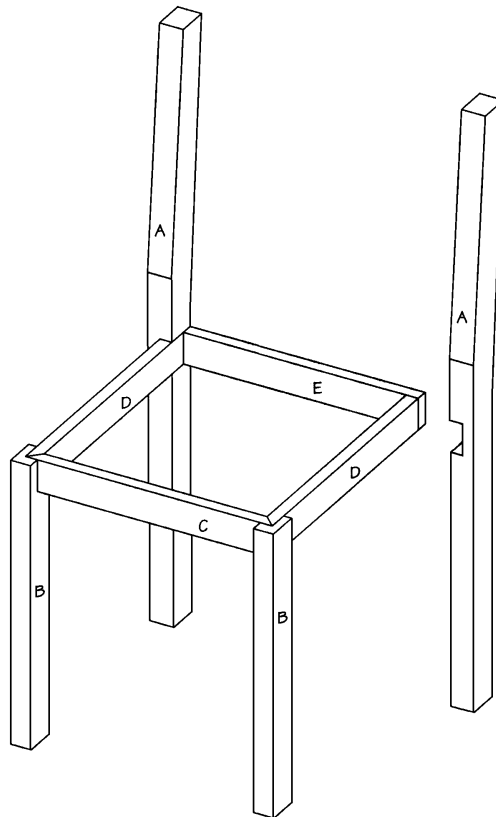


Figure 5

Adding the Spacers

1. Cut two side spacers (F) from $\frac{3}{4}$ " x 2" ripped pine, each measuring 13-1/2 inches long.
2. Fit one side spacer (F) face-to-face on the outside of the side rail (D), between the back leg (A) and the front leg (B) as shown in *Figure 7*. Apply glue to the meeting surfaces, and screw through the side rail (D) into the side spacer (F) using three 1-1/4-inch-long screws.
3. Repeat Step 2 to attach the remaining side spacer (F) to the opposite side rail (D).

Figure 6



4. Cut one front spacer (G) from $\frac{3}{4}$ " x 2" ripped pine, measuring 14 inches long.
5. Fit the front spacer (G) face-to-face on the outside of the front rail (C) as shown in *Figure 7*. Apply glue to the meeting surfaces and screw through the front rail (C) into the front spacer (G) using three 1-1/4-inch-long screws.

Adding the Leg Braces

1. Cut two side braces (H) from $\frac{1}{2}$ " x 2" ripped pine, each measuring 13-1/2 inches long.
2. Fit one side brace (H) between a front leg (B) and back leg (A), 7 inches from the bottom of each of the legs. Apply glue to the meeting surfaces, and screw through the front and back legs (A and B) into the ends of the side braces (H) using a 3-inch-long screw on each joint.
3. Repeat Step 2 to attach the second side brace (H) between the remaining front and back legs (A and B).
4. Cut one middle brace (I) from 1-1/2" x 2" ripped pine, measuring 14 inches long.
5. Apply glue to the meeting edges, and attach the middle brace (I) between the two side braces, centered on the side braces (H) as shown in *Figure 7*. Screw through the side braces (H) into the ends of the middle brace (I) using a 3-inch-long screw.

Adding the Slats

1. Cut one short slat (J) from $\frac{3}{4}$ " x 2" ripped material, measuring 14 inches long.
2. Fit the short slat (J), wide surface up, on top of the back rail (E), between the two back legs (A) as shown in *Figure 7*. Apply glue to the meeting surfaces, and nail through the short slat (J) into the back rail (E), using three 1-1/4-inch nails.
3. Cut 12 long slats (K) from $\frac{3}{4}$ " x 2" ripped pine, each measuring 18 inches long.
4. Attach the first long slat at the chair front, overhanging the front spacer (G) and each front leg (B) by $\frac{1}{2}$ inch, as shown in *Figure 7*. Apply glue to the meeting surfaces and nail through the long slat (K) into the front legs (B) and the front rail (C). Use two 1-1/4" nails on each front leg and four 1-1/4" nail on the front rail (C).
5. Attach the second long slat (K) at the back of the seat, 3/8" from the back legs (A) and overhanging the side spacers (F) by $\frac{1}{2}$ inch. Apply glue to the meeting surfaces and nail through the long slat (K) into the side rails (D). Use two 1-1/4" nails on each joint.
6. Repeat the procedure to attach 5 more long slats (K) to the chair seat, spacing them approximately 3/8-inch apart.

7. The remaining 5 long slats (K) are used for the chair back. Attach the first long slat (K) 1/2-inch higher than the top of the back legs (A) with equal overlap on both sides, as shown in *Figure 7*. Nail through the long slats (K) into the back legs (A). Use two 1-1/4-inch-long nails on each joint.
8. Attach the remaining 4 long slats (K) below the first one, spacing them approximately 3/8-inch apart as shown in *Figure 7*.

Finishing

1. Fill any cracks, crevices, or screw holes with wood filler, and thoroughly sand all surfaces of the completed chair.
2. Seal and paint or stain your chair the color of your choice.

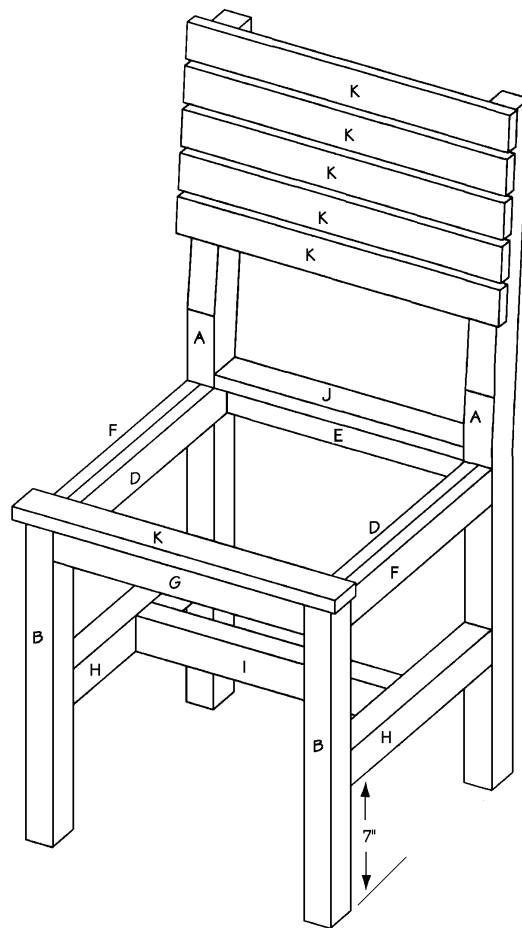


Figure 7