

SHOJI LAMPS DOCUMENTATION

MATERIALS USED:

- (4) 1x6 Common Board
- Titebond Original Wood Glue
- Rice Paper
- Rice Glue

MACHINERY USED:

- Table Saw
- Bandsaw

PREPARATION

1. Check boards.
 - a. Take note of bowing, knots, imperfect edges, etc... Try to plan around them.
2. Determine the most 90° side.
 - a. Square all sides off of that with table saw and crosscut sled.
 - b. If not square, the board will place uneven pressure on fence and break the blade....

RIP THE STRIPS, CUT TO LENGTH

3. Rip $\frac{3}{4}$ " strips of wood.
 - a. Use a featherboard. May need to rip in half first, for the featherboard to fit.
 - b. Alternatively, use the crosscut sled to cut the $\frac{3}{8}$ " deep channels first (dado blades), then rip strips. But that's kind of hard to be accurate with.
4. Crosscut lengths to size.
 - a. I used a tiny sled on the bandsaw because it's so small already.

CUT THE CHANNELS

5. Mark out channels with pencil for every piece.
 - a. There's probably faster ways (i.e. making a jig), but it makes better sense in my brain to mark it all out by hand.
 - b. Keep in mind bad sides facing in/down.
 - c. I also oriented the horizontal pieces so the grain also travels horizontal, but it probably doesn't matter.
6. Cut the channels.
 - a. Use the bandsaw with miter gauge to slowly hollow out every channel.
 - b. Probably possible to stop depth, but I didn't know how.
 - c. Test fit each horizontal set as you go, easier to make adjustments.

ASSEMBLE THE PARTS

7. Glue together vertical corners with horizontal squares.
 - a. I used copious amounts of stretched masking tape, because I don't have long enough clamps.
8. Cut paper to inside dimensions.
 - a. I used a sort of thin rice paper I bought while in China.
9. Apply rice flour glue to horizontal bars.
 - a. I mixed 1 tbsp rice flour with 1 cup hot water, reducing down to slightly gooey in the microwave. This recipe made way too much; not much is needed, just enough to hold the paper from gravity.
10. Feed the paper inside the lamp. Align to top bar, while pressing in the bottom bars. Put lamp on the side and tap down middle bars, applying more rice glue as needed.
 - a. Having another person to hold the other corners will make it much easier.

FUTURE CONSIDERATIONS

1. Make it collapsible/easy to disassemble (e.g. [link](#))
2. Try out kumiko inserts.
3. Use jigs/batched work to make cuts more even and precise.

REFERENCES:

Bike City Woodworks: Mini Shoji Lantern ([link](#))
A Japanese Touch for Your Home by Koji Yagi