Portable Puppet Stage

Building Instructions

Materials List

	Qty.	
Wood:	(7)	8 foot, 1”x 2” pine boards
	(1)	8 foot, 1”x 4” pine board
Hardware:	(8)	two-inch hinges w/screws
	(60)	#0 wood joiners
	(11)	¼” x 1 ¾” carriage bolts
Fabric:	9 yd.	42” Fabric to cover frame A dark colored fabric would work best.
	1 yd.	Fabric for stage curtain A bright colored fabric would work best. *Option: add 1 yd of fabric to line the curtain instead of hemming*
	1 yd.	Fabric for stage scrim A scrim is a durable, loosely woven cotton or linen fabric. It is used as a drop in the puppet theater to hide the puppeteer from view, but permits the puppeteer to see the audience.
Paint:	1/2 pt.	For stage ledge

Tools & Supplies:
Table saw or Circular saw
Drill
Drill bits $^{5}/_{64}$” & ¼”
Staple gun with ¼”staples
Screwdriver
Measuring tape
Carpenter’s square
Wood glue
Safety glasses or goggles

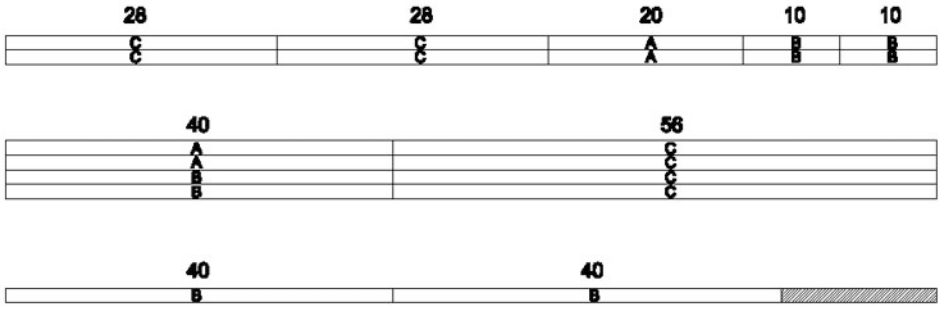
SAFETY NOTE: Always know, read and follow the safety directions that come with your power or hand tools, and **most importantly, always** wear safety glasses or safety goggles while working on this or any shop project.

Step 1: Build the Frame

Cut boards

Measure and mark the boards (both 1x2s and 1x4) according to Diagram A. Cut each board at regular 90º cut lines. Label each 1x2 board according to which panel it will be used A, B, or C. **See Diagram A**

Diagram A



Quick Look:

Finished dimensions of each panel are:

- Panel A: 20” x 40”, Qty-1
  - (2) side stile cut length: 40”
  - (2) top/bottom cut stile length: 20”
- Panel B: 10” x 40”, Qty-2
  - (4) side stile cut length: 40”
  - (4) top/bottom stile cut length: 10”
- Panel C: 28” x 56”, Qty-2
  - (4) side stile cut length: 56”
  - (4) top/bottom stile cut length: 28”

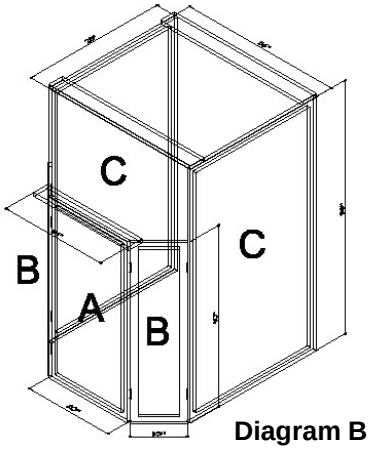


Diagram B

Make the panels

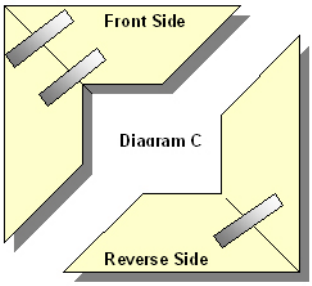
Cut opposing 45° angles on each end of the 1x2 pine boards, being careful to maintain the finish length.

Lay out boards to make the outline of each panel according to **Diagram B**. You will have:

- (1) Panel **A**
- (2) Panel **B**
- (2) Panel **C**

Fasten the corners using a carpenter's square and wood joiners as follows.

- Apply glue to the mitered cut.
- Square the corners using the carpenter's square.
- Hammer 2 wood joiners on one side, positioning one of these wood joiners on the inside of the joint and the other on the outside of the joint. **See Diagram C**
- Carefully turn the assembled panel over and install one additional wood joiner in the middle of the joint, being careful not to split the wood. **See Diagram C**



Each joint will have three wood joiners securing it. When all corners have been fastened, the panel is complete.

There are many wood joinery methods available, miter, lap, biscuit etc; Use the method you feel the most competent, keeping in mind the overall sizes of the finished panels as described above.

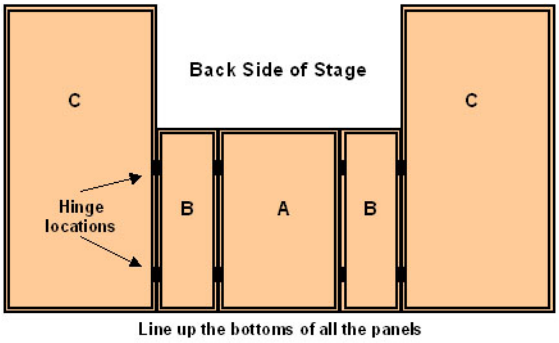
Step 2: Attach Fabric

Cover the panels with fabric

Lay out the fabric, finish side down, and place a panel frame face down on it. Cut the fabric about 3 inches wider than the perimeter of the frame, so that there is enough fabric to wrap around the frame, allowing for a ½ inch folded hem. Fold the fabric over frame and pull tight. Begin stapling, starting in the middle and working both directions toward the ends. At the corners of the frame, fold the fabric like wrapping a present (45 degree angle) and staple.

Attach the hinges

This step will bring the panels together to form the frame. Lay out the panels on a flat surface, finished side down, being careful to line up the bottoms. Measure and place marks 5" from the top and 7" from bottom on each of the long sides of both **B** panels. (21" from the top of **C** panels.) Place the top of the hinge, with the barrel or round side facing up, on the mark. While holding the hinge in place, drill guide holes for the hinge screws using a small bit ($^{5}/_{64}$"). This will prevent the board from splitting when the hinges are screwed in. Hinge together both **B** panels to panel **A** and then hinge each **C** panel to the opposite side of both **B** panels.



There will be slight openings between the panels. Cover these with strips of fabric so no one from the audience can see inside. Staple five inch wide strips of the same fabric as the frame on the inside of these gaps (allowing for a ½ inch folded hem on each side). Staple it loose enough so that panels can fully extend if necessary.

Step 3: Assemble

Support boards
Stand the frame upright and place the two 36” 1x4 boards across the top connecting both of the **C** panels, one at the front and the other at the back. These will be mounted temporarily with carriage bolts fitted into drilled holes in the **C** panels. These boards bring stability to the stage and hold the front curtain and fabric roof. They can be removed when the stage is folded and put away.

Attach support boards to the frame by drilling two holes in each board wide enough for the carriage bolt to easily fit through. Continue the drilling into the **C** panels. **Note: Position these holes 2” back from the outside edge, so as not to drill into the mitered corners of your panel.**

Stage ledge
Attach the moveable 24” 1x4 board onto panel **A** and both panel **B’**s. This will be used as a stage ledge to place objects next to the puppets. To attach the front board, mark on the top of the center of panel **A** and drill a hole large enough for a carriage to slide through (¼” drill bit). Drill a hole in center of the ledge board. Slide the carriage bolt through this hole to hold the board into the top of panel **A**. When the board is centered and lined up parallel to panel, drill through the far outsides of the board into the **B** panels and push the carriage bolts through these two holes.

With a hammer, gently tap all the carriage bolts into the boards, setting the heads. Once you have seen that the stage ledge fits appropriately onto panel **A** and panels **B**, remove the carriage bolts and paint the stage ledge.

Step 4: Attach Curtain and Fabric Roof

Fabric Roof
Cut a 42”x90” piece of fabric (same as the frame). Staple the 42” side of fabric onto the 1” side of the 36” front support board allowing about 3” to hang over the length of the board. Turn board over so the stapled side of the front support board is facing the back. Insert the carriage bolts through the front support board and into the **C** panels. Wrap the fabric over the top of the front support board and then drape over the back support board.

Stage Curtain
Side panels: To make the side panel curtains, cut two 12”x17” pieces of bright fabric. Fold over and make a ½ in hem around the edges of each panel. The finish size of each panel will be 10” wide by 15” in length.

Option: To line the panels, cut four pieces of 11”x16” and sew two pieces right sides together ½” from edge. Leave an opening to turn fabric inside out. Trim the edges along stitching. Turn right side out and press. Slip-stitch the opening.

While the stage is assembled, staple the side panel curtains to the 1” side of the front support board. Begin at the corner of the board and staple a ½” fold about

every 2” to make pleats or gathers. Staple another side panel to the opposite corner of the front support board in the same manner.

Valance: Finished fabric will be approximately 7” in height and 60” wide. From the same fabric as the side panel curtains, cut a 9”x62” piece. Fold over and make ½” hem around the edges (or sew in lining by cutting out two 8”x61” pieces and stitch right sides together. Continue as above in Stage Curtain Option.)

Staple the valance onto the 1” edge of the front support board (on top of the side panels) starting in the middle and working to each corner. Again staple a ½” fold about every 3” to make pleats or gathers.

Optional: To hide the staples in the curtain, glue a ribbon over the top of the stapled valance.

Scrim

A scrim cloth allows the puppeteer to see the audience, but since it is dark inside the stage, the audience can't see the puppeteer.

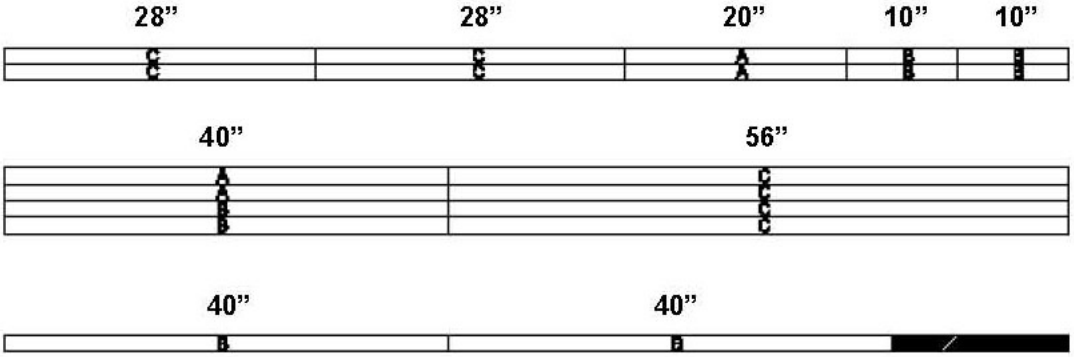
Pull back the fabric roof and staple the fabric for the scrim to the other 1” edge of the front support board. (opposite the edge where curtain is stapled)

To Assemble Finished Puppet Stage

1. Stand the paneled frame upright
2. Attach the back support board onto side **C** panels by inserting the carriage bolts into the drilled holes.
3. Set the front support board with the curtain and scrim into place at the front of **C** panels.
4. Insert the carriage bolts through the front support board into the front of **C** panels.
5. Drape the fabric roof over the back support board.
6. Tuck the extra hangover side edges of fabric roof inside the side panels.
7. Attach the stage ledge to **A** and **B** panels with carriage bolts.

Diagram A

MEASUREMENTS TO CUT 8 FOOT 1x2's



MEASUREMENTS TO CUT 8 FOOT 1x4

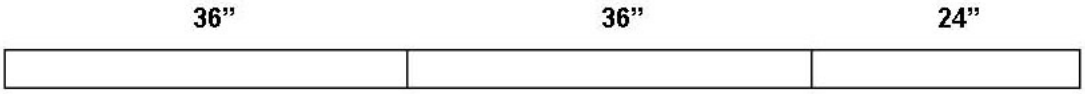


Diagram B