PORTER AND MOORE
PUPPET STAGE
INSTRUCTIONS AND PLANS

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4-93

PORTER AND MOORE PUPPET STAGE

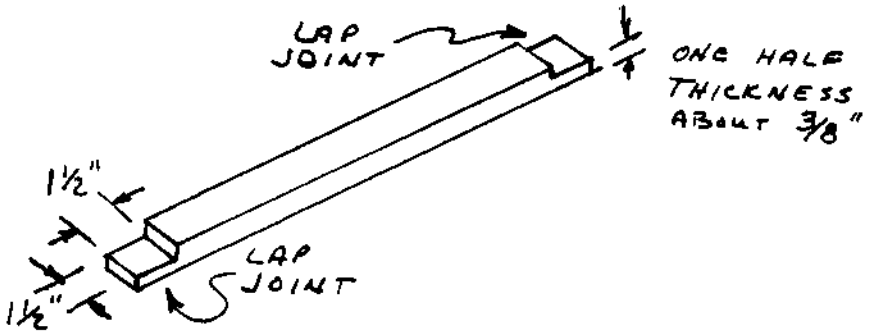
Step I - Building The Frame

Select lightweight 3/4" shelving board with as few knots as possible. Saw enough into 1 1/2" strips to cut:

12 39" pieces (for verticals)
4 64" pieces (for horizontals)
8 32" pieces (for horizontals)

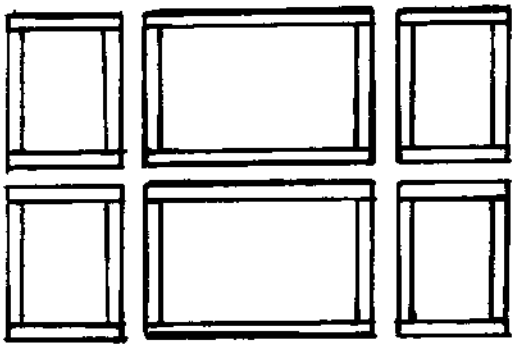
An alternate method that I recommend is to cut the boards to length and then cut into 1 1/2" width. The shorter pieces are easier to handle.

Cut a 1 1/2" lap joint at both ends of each piece. See drawing below:

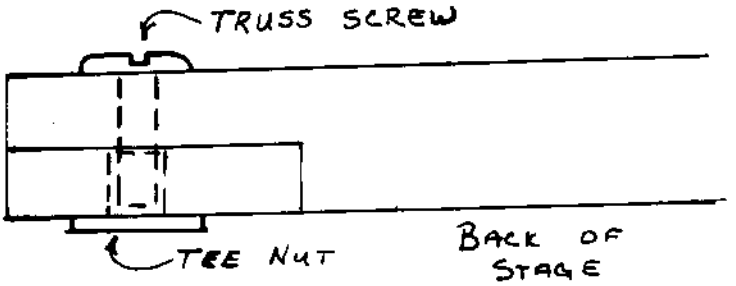


Sand all pieces to desired smoothness.

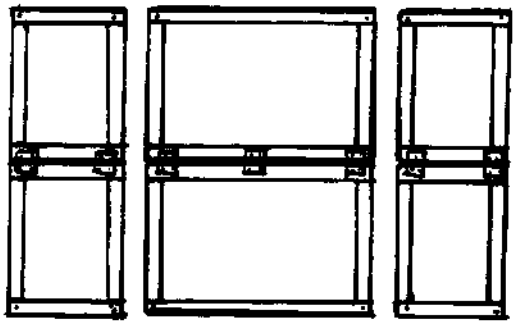
Take the 24 pieces and form 6 rectangles lapping the corners together as shown below: (This is the front of the frame.)



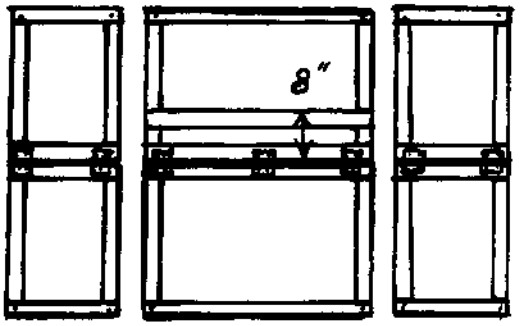
Using one 10-24 tee nut and one 10-24 X 3/4" truss head machine screw at each corner, drill and assemble. Do not use glue at this time.



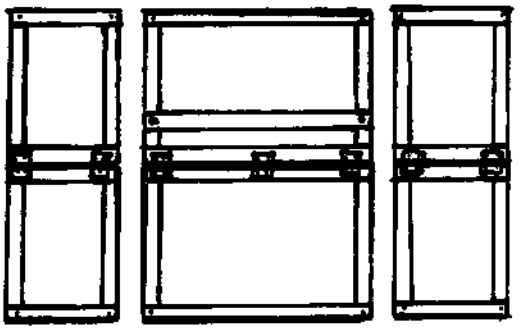
This is the front of the stage frame. Place hinges as shown on the drawing below:



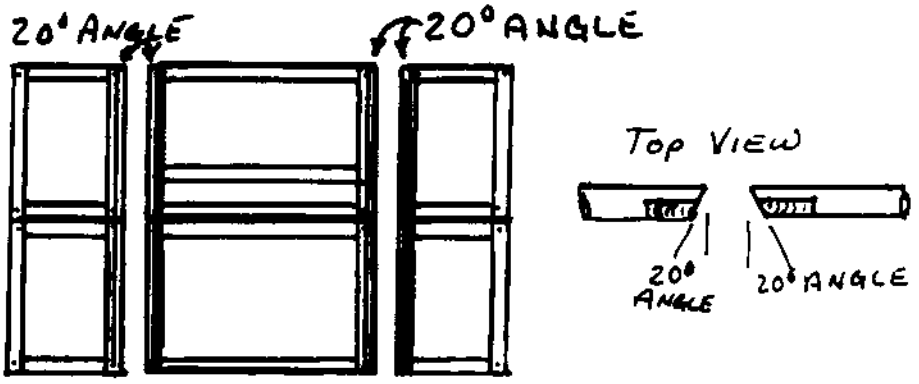
Cut another 1 1/2" piece 64" long. This piece will be the stage support. (It will be placed in the center, upper rectangle as shown below:)



Remove the two side pieces of the center, upper rectangle and cut a 1 1/2" lap joint to receive the stage support. Assemble with tee nuts and truss bolts and reassemble sides.



Turn the three sections of the stage frame over so the back of the frame is up. Cut a 20 degree angle along the edge of each of the adjoining vertical pieces as shown below:

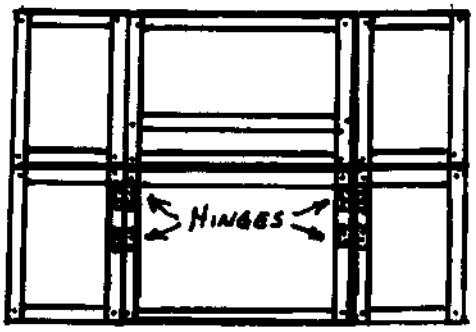


There are several ways this can be accomplished. One way is to remove each piece and saw the angle on a table saw, reassemble, and then handsaw off the small protrusions of the horizontal pieces to match the vertical pieces.

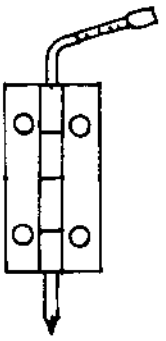
Note: The 20 degree angle could have been cut at the beginning, but it would make these instructions very difficult to write and to understand.

Glue all corners and be sure each rectangle is square at the corners.

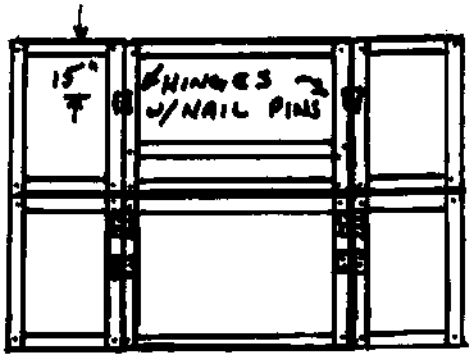
From the <u>back of the stage frame,</u> attach the 20 degree edge of the lower side assemblies to each side of the lower center section with hinges. There will be three hinges on each side. Install one hinge at the top and one in the middle. Save the third hinge to install later.



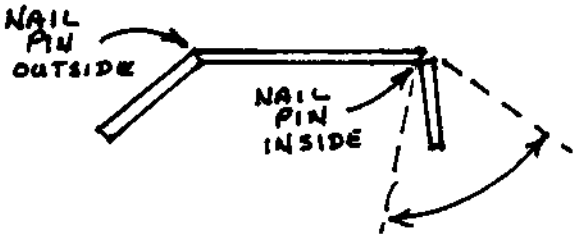
To hinge the top of the stage frame, remove the pins from four 1" X 1/2" square hinges. Replace the hinge pins with four 2 1/2" finishing nails with the top bent as shown.



At the junction of <u>each</u> upper side section and the upper center section, 15" down from the top, install the 1" X 1/2" hinge with the bent nail pin on the back side of the stage frame. Install one also on the front side of the stage frame.

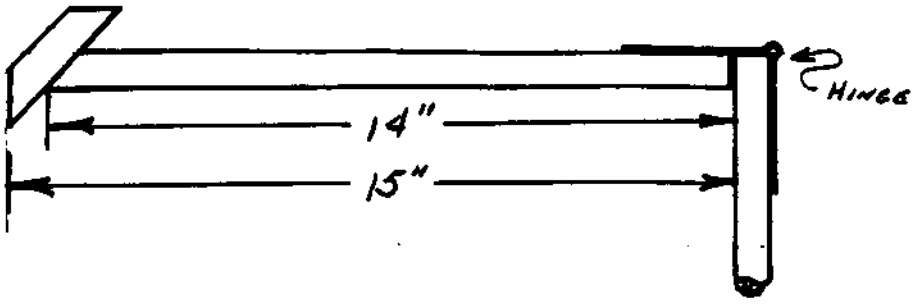


When using the stage, the finishing nail pins will be put in the front side of the frame or the back side of the frame, never both. When the nails are placed in the hinges on the front side, the sides are held sitting at a 40 degree angle to the front of the stage. When the nails are placed in the hinges at the back of the frame, the sides can be set at any angle 40 degrees and greater.

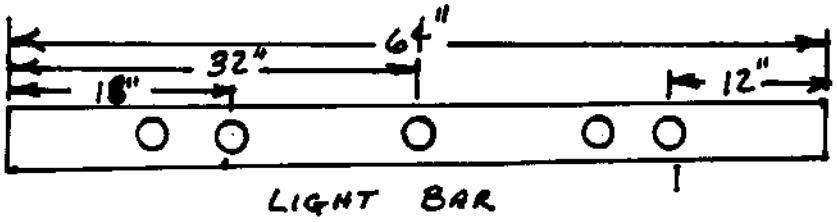


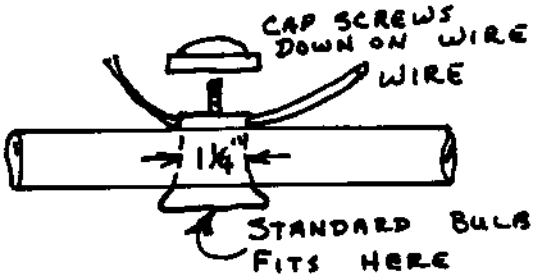
Step 2 - Building The Light Bar

Cut one piece of 3/4" lumber 64" X 2 3/4". Cut the edges off at 45 degree angles as shown. Cut two pieces of 3/4" lumber 14" X 1 1/2". Cut square on one end and at a 45 degree angle on the other end. Attach the 14" pieces (45 degree angle end) to ends of the 64" piece as shown. Using 5" lightweight strap hinges, attach the light bar assembly to the center upper section of the stage frame as shown.



Install five light sockets on the light bar as shown. (I use the round sockets that fit through a 1 1/4" hole and are made so the electrical wires attach on the back of the socket.)

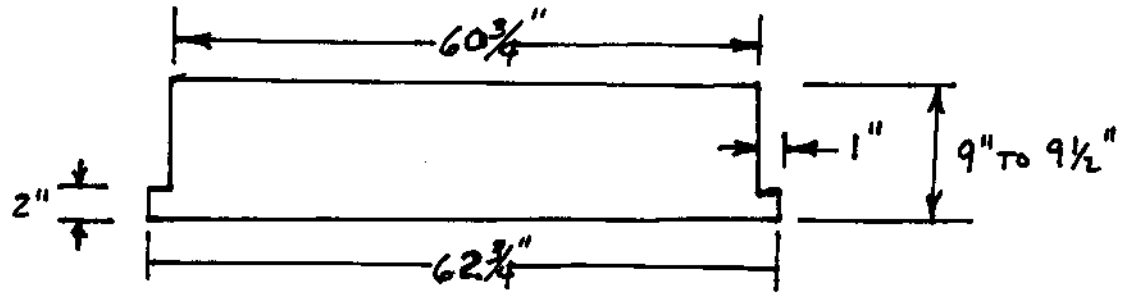




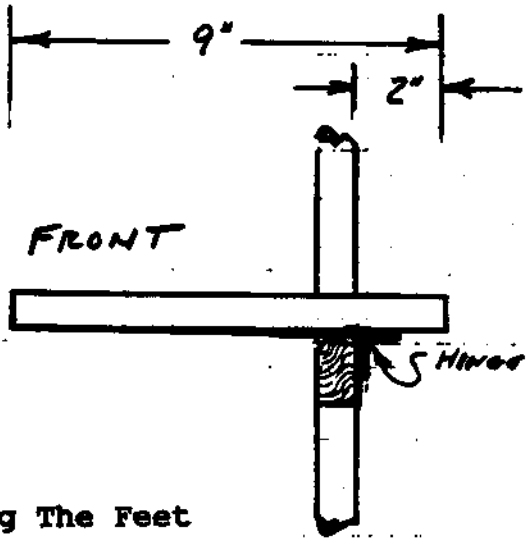
The outside sockets and the center socket are connected to one electrical cord and the other two are connected to another one.

Step 3 - Installing The Stage

To make the stage, cut a 3/4" X 10" X 6' board as shown below.

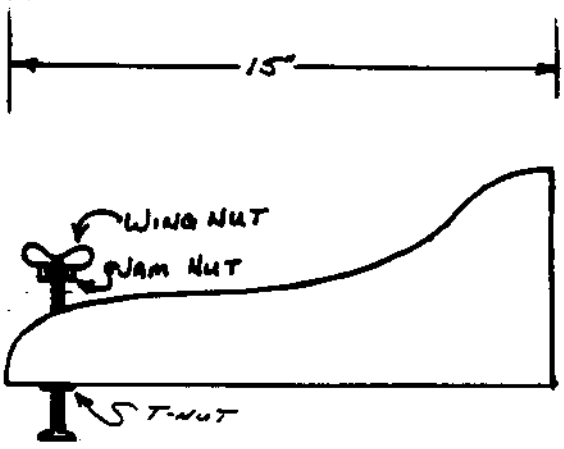


Place stage on top of stage support and attach with three hinges as shown.

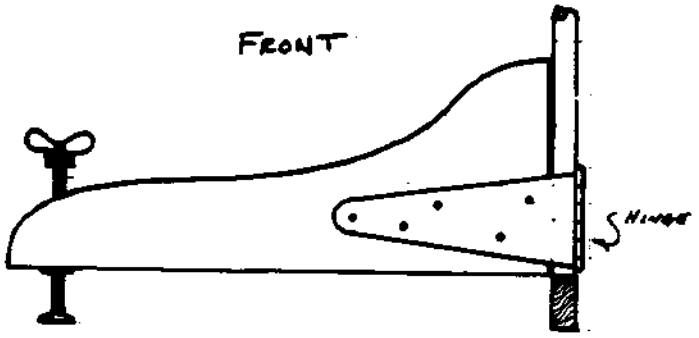


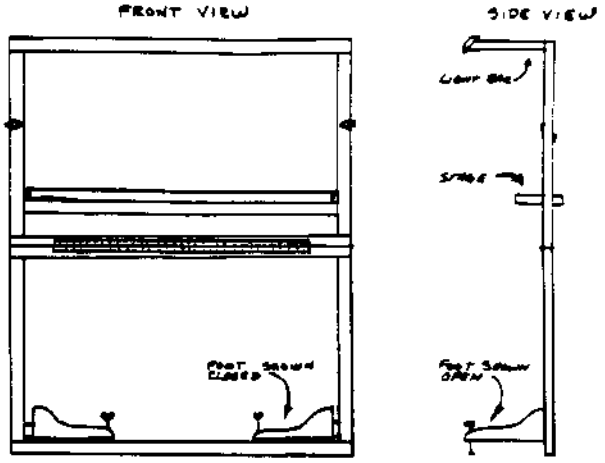
Step 4 - Installing The Feet

Cut two 15" X 4" X 3/4" stage feet as shown below. Install a 4 1/2" X 1/4" - 20 carriage bolt through the toe of each foot 1 1/2" in from the end with a tee nut on the bottom. Put a jam nut and a wing nut (both 1/4 - 20) at the top of the carriage bolt.



Using 5" or 6" heavy T hinges, attach each foot to the bottom center section as shown. Be sure the bottom of the hinge is at least 1 1/2" from the floor.

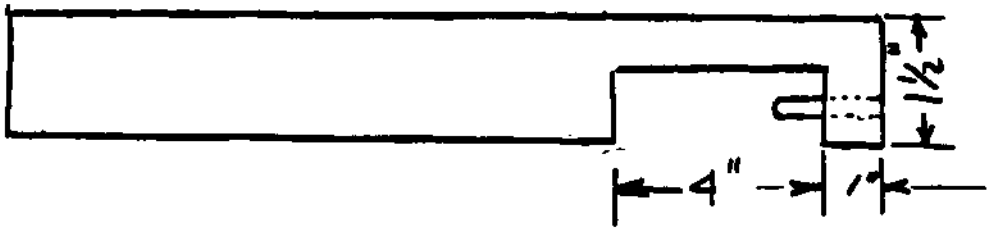




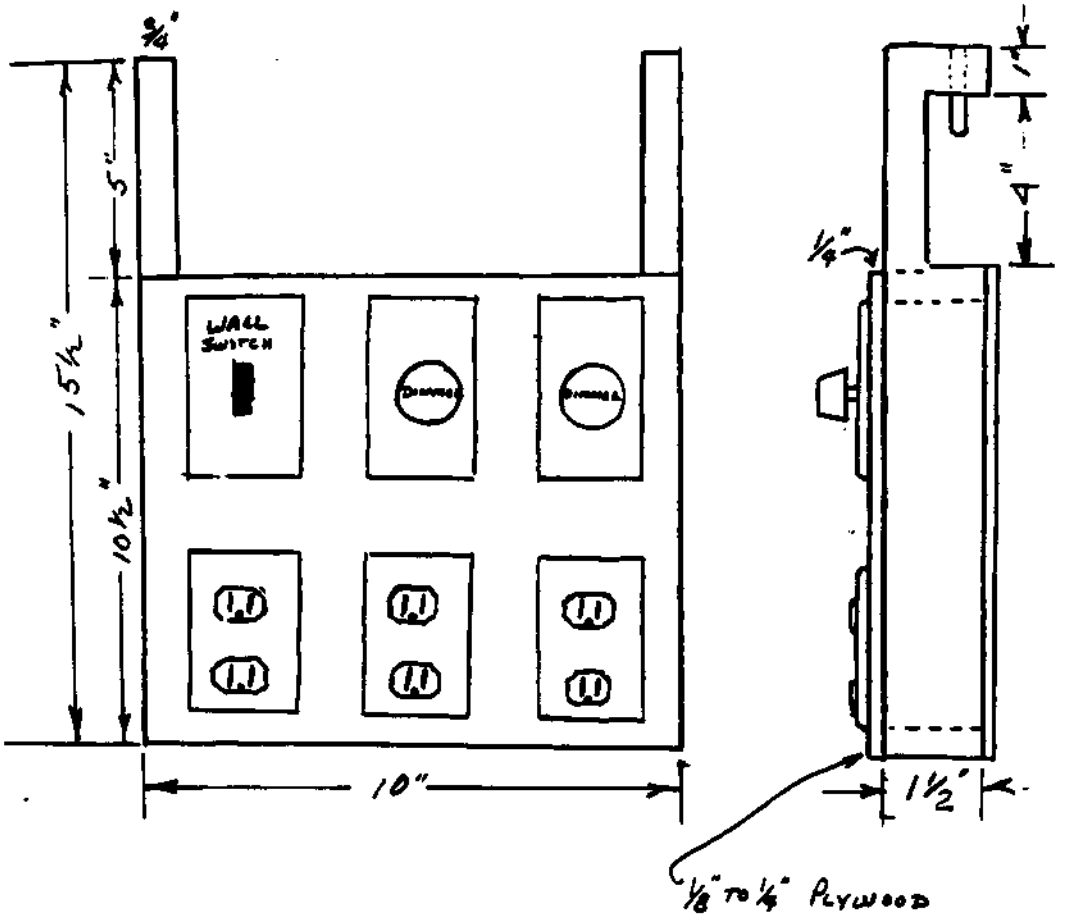
Now install the third hinge on each stage frame side where the 20 degree angles meet. Put the hinge at the top of the foot hinge. If we had not waited to install this third hinge, it most likely would have been in the way of the foot hinge.

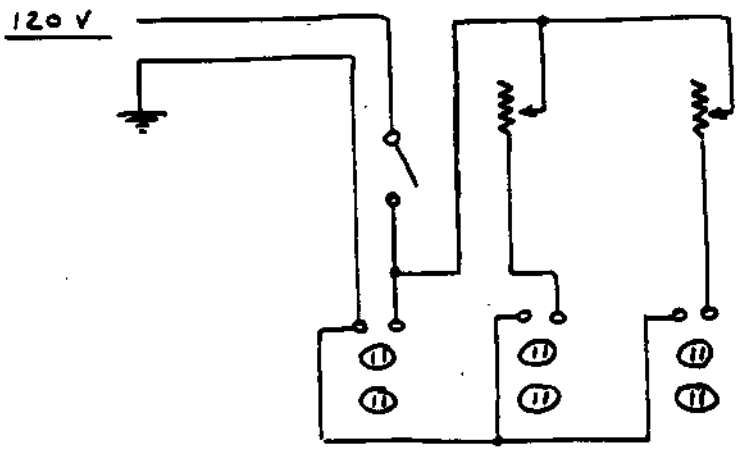
Step 5 - Building The Light Control Box

Cut two pieces from 3/4" lumber 15 1/2" X 1 1/2" and two pieces 8 1/2" X 1 1/2". Cut two pieces of 1/4" plywood 10" X 10 1/2". Cut a 4" X 3/4" slot out of each 15 1/2" piece 1" from one end as shown below. Drill a 1/4" hole in the end of the 15 1/2" piece and glue a 1 3/4"long 1/4" dowel as shown.

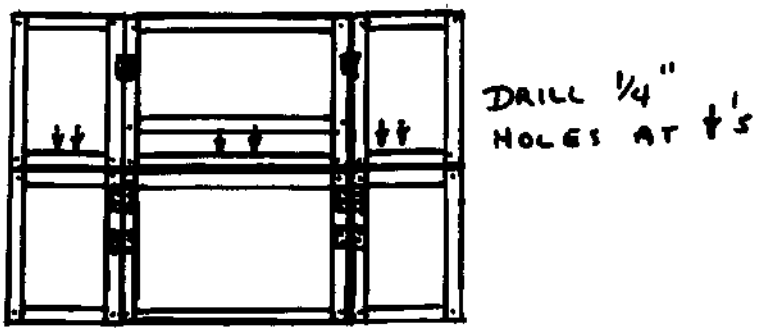


Install 1 wall switch, 2 dimmer switches, and 3 plugs on one of the 1/4" plywood pieces as shown and then wire per diagram. Assemble box as shown using #6 3/4" wood screws.





Drill two 1/4" holes (to match dowels in light box) in the bottom horizontals of each of the upper sections of the stage frame. This will allow the light box to be placed on either side or the center of the frame as needed.



Step 6 - Dressing The Stage

An adjustable round drapery rod is recommended for the backdrop. The rod rests on top of the sides of the frame and can be attached with rubber bands.

Five curtain panels are desireable (an upper and lower for each side frame and one for the lower center). A valance is needed for the light bar. These can be attached to the frame using velcro.

PUPPET STAGE
LIST OF MATERIALS

LUMBER

3	1" x 8" x 12'	$28.74
1	1" x 10" x 6'	6.36
		35.10

HINGES

4	1" x 1/2 square	3.68
16	2" x 3" square	12.40
2	5" x 5" strap	2.04
2	6" Tees (Heavy)	4.92
		23.04

FASTENERS

30	10-24 Tee Nuts	3.00
30	10-24 Truss Screws	1.60
100	#6 Wood Screws 3/4"	3.20
4	2 1/2 Finishing Nails	.01
2	1/4"-20 x 4 1/2" Bolts	.60
2	1/4"-20 Wing Nuts	.20
2	1/4"-20 Nuts	.10
1	Elmer's Glue	2.00
		10.71

LIGHT CONTROL BOX

5	Light Sockets	8.45
1	Wall switch and cover	1.10
3	Receptacles and covers	2.75
2	Dimmers and covers	7.10
25'	Drop Cord	5.10
2	Light Cords	5.25
		29.75

TOTAL $98.60 + Tax