

Measure, identify, and label the parts

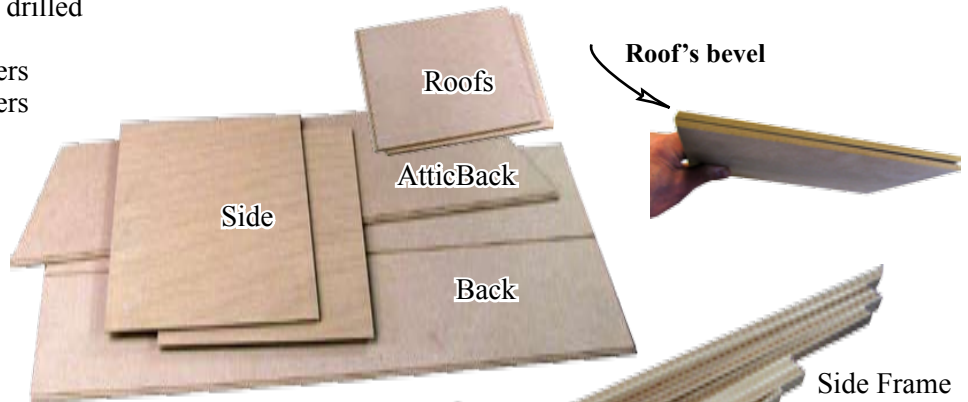
MS-800 and MS-811 are packed separately

MS800 Showcase Body: (Measurements are approximate and are for identification purposes only)

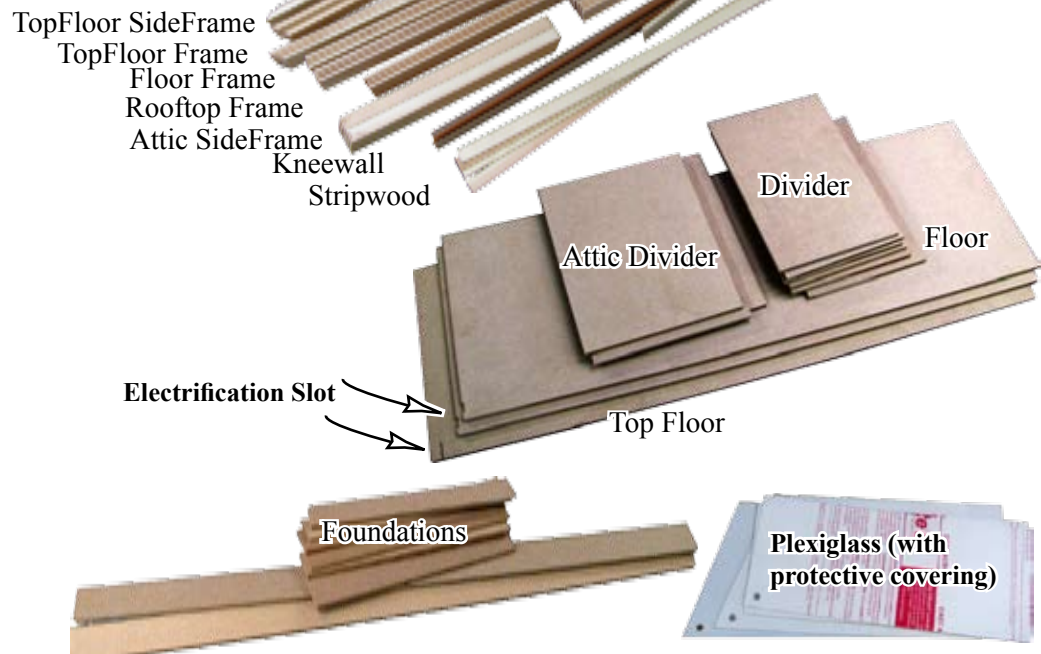
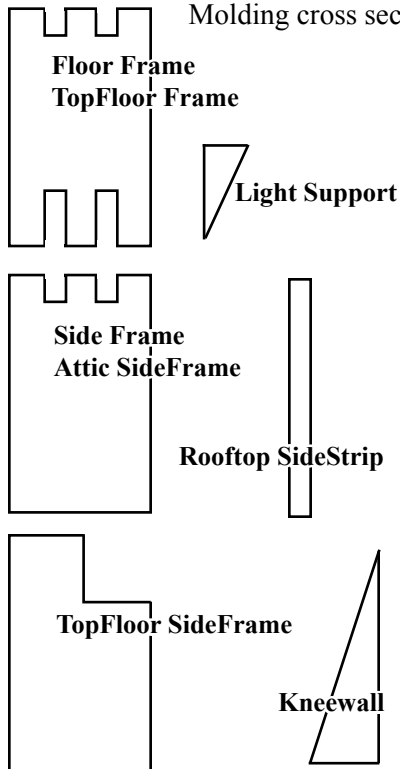
- 2 Side $\frac{3}{8}$ Milled 21 161/8 grooved
- 1 Back $\frac{3}{8}$ 21 451/2 grooved
- 2 Floor $\frac{3}{8}$ 451/2 157/8 slot
- 6 Divider $\frac{3}{8}$ 101/8 155/16
- 4 Front Plexiglass 91/2 221/4 drilled
- 2 Side Frame $\frac{3}{4}$ x 11/4 21 grooved
- 2 Floor Frame $\frac{3}{4}$ x 11/4 4313/16 grooved
- 4 Stripwood $\frac{3}{32}$ x $\frac{3}{4}$ 21
- 2 Light Support $\frac{5}{16}$ x $\frac{1}{2}$ triangle 45
- 12 Spline $\frac{1}{8}$ x $\frac{3}{4}$ 7/32

MS-811 Attic and Foundation:

- 1 AtticBack $\frac{3}{8}$ 461/2 123/8 grooved angled
- 1 Top Floor $\frac{3}{8}$ 47 157/8 slot
- 1 Rooftop $\frac{3}{8}$ 393/4 161/8
- 3 Attic Divider $\frac{3}{8}$ 12 155/16
- 2 Roof $\frac{3}{8}$ 123/4 161/8 beveled
- 2 Foundation $\frac{3}{8}$ 457/16 21/2
- 6 Foundation $\frac{3}{8}$ 151/8 21/2
- 2 Attic Plexiglass 111/2 2211/16 angled drilled
- 2 Attic SideFrame 113/4 angled
- 1 TopFloor Frame 4713/16 grooved miters
- pr TopFloor SideFrame 167/8 grooved miters
- 1 Rooftop Frame 40 grooved lip
- 2 Rooftop SideStrip $\frac{1}{8}$ x 11/4 163/4
- 2 Attic Kneewall angled 153/4
- 1 Light Support $\frac{5}{16}$ x $\frac{1}{2}$ triangle 38
- 2 Stripwood $\frac{3}{32}$ x $\frac{3}{4}$ 125/8
- 8 Spline $\frac{1}{8}$ x $\frac{3}{4}$ 7/32
- 1 (600) Shingles style #SWO



Molding cross sections



Your Workspace: This product is too big to be assembled on the workbench.

You will need:

A smooth, flat, washable floor to work on.

A helper

White “tacky” glue

Tape Measure, pencil, sticky notes (for identifying and labeling the parts)

Solvent-based construction adhesive (see “shingling”)

Lots of 3/4” or 1” masking tape

Painting supplies (paint, sandpaper, brushes)

Plan ahead for the sequence of painting, wiring, and assembly.

I like to “first coat” and sand the parts before assembly for ease of sanding, but your plan may be different. If you “first-coat” before assembly, take care to not get paint in the grooves or on the edges, and to sand thoroughly enough to have plenty of wood exposed for gluing - glue doesn’t stick to paint

Prepare the parts and be ready for steps 1-9 so you can proceed quickly when the time comes to use glue... you must have the parts in position and weighted when the glue dries.

If you are building a five-story (or more) MS1200+ using more than one Showcase Body (MS-800), follow steps 1-9, 22, and 23 for each body unit separately, and glue the units together after step 27

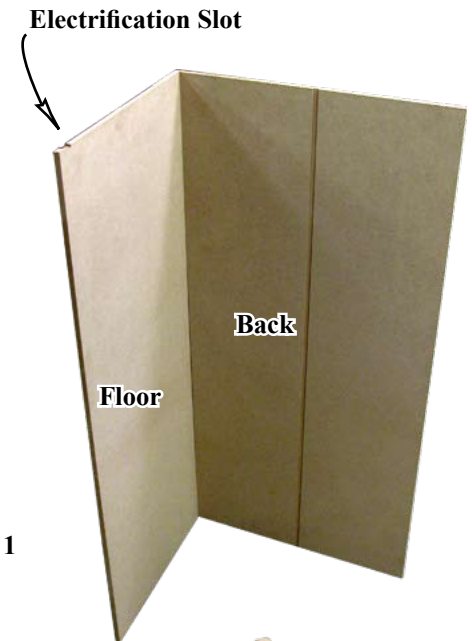
1. Spread glue in the middle and bottom groove of the Back. Set a Floor in the bottom groove, lined up on the end, with the electrification slot ‘out and up’. Tape the Back to the Floor tightly.

2. Inspect inside the Showcase to be sure the floor is tight to the top of the groove. If an ‘extra push’ is needed to hold the floor to the top of the groove, temporarily tape a foundation underneath the floor; stretch tape from the foundation up the back

3. Set a Floor in the middle groove, with the electrification slot ‘out and up’.

4 Glue and tape the Left Side to the Floors/Back, with all parts tight into the grooves.

Electrification Slot

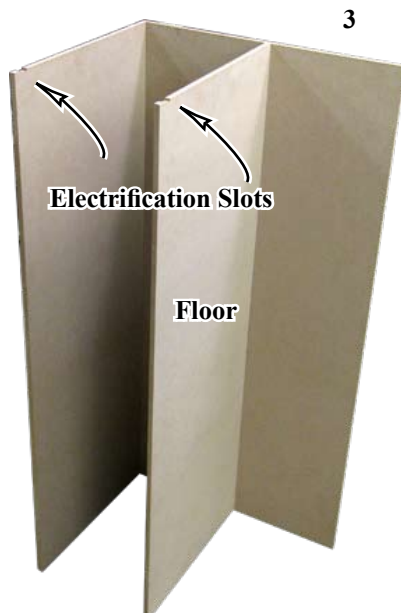


1



2

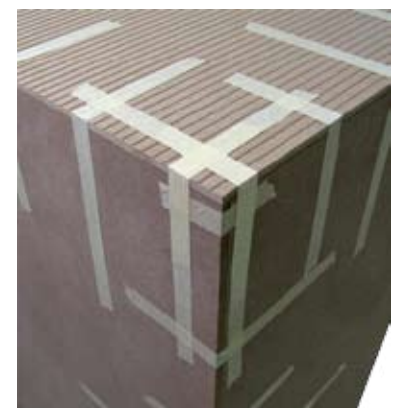
Tape around the foundation for an ‘extra push’



3



4 A well taped corner



5. Prepare flaps of tape on a Divider. Tape the Divider between the floors to hold them stable.



Divider



Divider (temporary)

Use plenty of tape and rub it down - this Divider will support your Floor while you turn the Showcase over!

6



6. Tip the Showcase backward, carefully supporting the parts (remember, the Middle Floor is hardly taped at all!). Continue the backward rotation until the other end of the Floors is up.

7. Glue and tape the other Side to the Showcase.

8. Lay the Showcase on its back. Stretch tape across the Showcase to hold the Sides tight to the Floors.

9. Set the Attic Dividers across the face of the floors and weight the floors to keep them tight into the grooves as the glue dries. Inspect the edge of the floors compared to the edge of the Sides - if they line up, all is well. If they do not find out why and correct it now (the Middle Floor may not be all the way into the groove or the work surface may not be flat). They must line up as the glue dries.

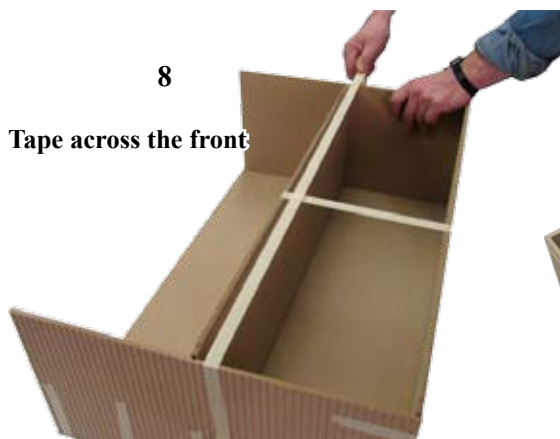


7



Side

8. Tape across the front



8

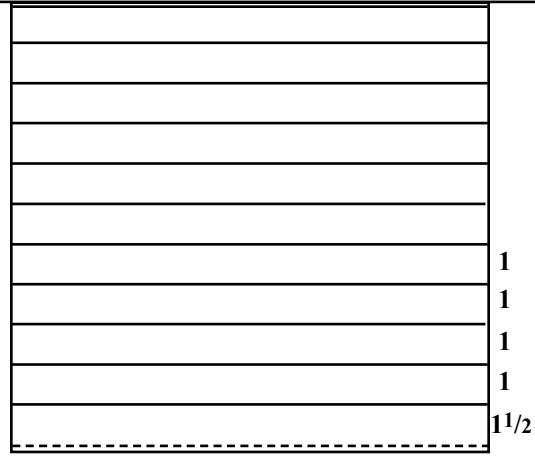
9



Let the glue dry



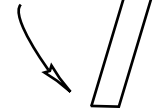
10. Prepare shingle guidelines on the roofs. The first guideline is 1 1/2" above the bottom edge, and the rest are spaced 1" apart. Measure up both sides of the Roofs and mark for the guidelines using a ruler or the guideline measure on the edge of this page.



Pro tip: Dye or stain shingles several days ahead of time so they will be dry when the time comes to shingle the roofs. Follow the instructions on Real Good Toys' dye, or see "Dye or stain shingles" at www.dhbuilder.com

Prepare the parts and be ready for steps 10-18 so you can proceed quickly when the time comes to use glue... you must have the parts in position and weighted as the glue dries.

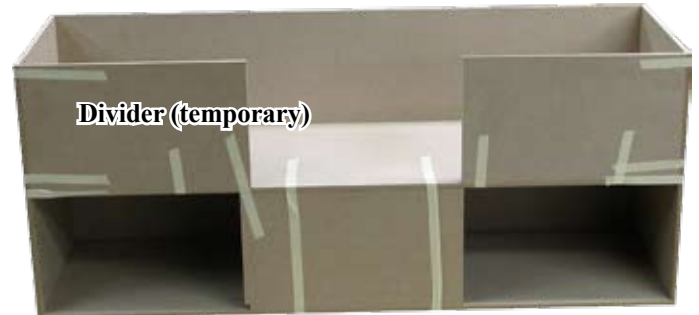
The pointed edge of the Roof at the bottom is the outside



11. Stand the Showcase upright. Tape (no glue) Dividers to the Sides. Spread glue on the top of the Sides and Back.



11



12. Set the Top Floor onto the Sides; center the Top Floor side-to-side in front. Line up the front edge of the Top Floor with the front edge of the Sides

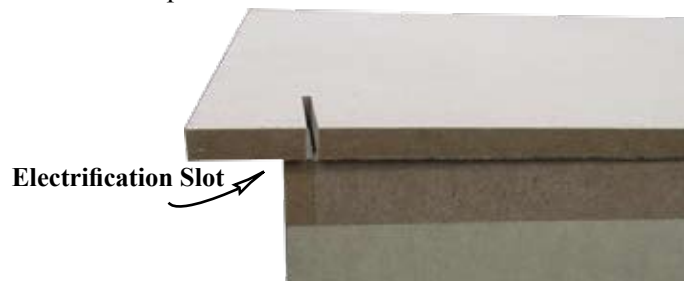
Measure the centering



12

Top Floor

13. Peek into the Electrification Slot. You must see a slight space into the interior of your Showcase... enough to slip a thickness of tapewire thru.



13

Tape the Top Floor to keep the position stable



1"

1"

1"

1"

1"

1"

1"

1"

1 1/2"

14. Measure across the front at the mid floor, then measure across the top of the Sides. Adjust the top of the Sides so the measurements are the same. Tape the front edge of the Top Floor to the Sides and the Dividers

15. Measure to center the Top Floor at the back edge.

16. Glue and tape the Attic Back to the Back and Top Floor. Hold it upright with an Attic Divider, taped across the top. Measure to confirm the side-to-side centering.



17. Glue and tape the Left and Right Roofs to the Showcase, spaced evenly from the edge of the Top Floor



18. Lay the Showcase on its back. Set Dividers and weight across the face of the Top Floor to keep it tight into the groove as the glue dries. Inspect the edge of the floor compared to the edge of the Sides - if they line up, all is well. If they do not find out why and correct it now (the Floor may not be all the way into the groove or the work surface may not be flat). They must line up as the glue dries.



Keep the Roof parallel to the Top Floor's edge as the glue dries

Stand the Showcase up

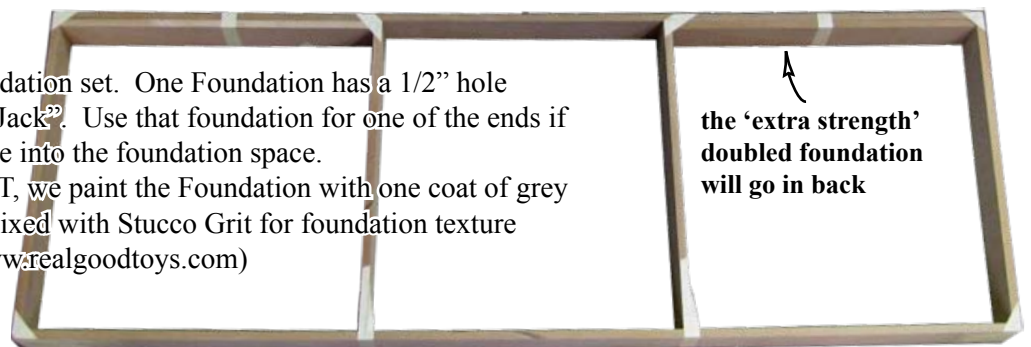
19. Glue and tape the Rooftop to the Roofs and Attic Back, lined up in back and centered side-to-side.

20. Space the Roof evenly back-to-front under the Rooftop. Tape an Attic Plexiglass to the Roof to hold the angle.



Finish painting the outside of the Showcase (do not paint the edges).

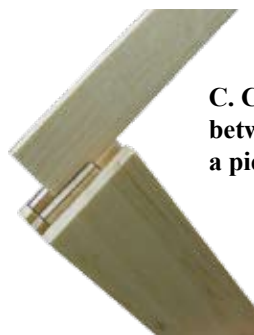
21. Glue and tape together the Foundation set. One Foundation has a 1/2" hole drilled to fit a #247 "2.1mm DC Power Jack". Use that foundation for one of the ends if that jack is how you want power to come into the foundation space. For the Showcases we make here at RGT, we paint the Foundation with one coat of grey paint, then one coat of the same color mixed with Stucco Grit for foundation texture (see your Real Good Toys Dealer or www.realgoodtoys.com)



22. Glue two Splines into *one* end of each Side Frame (the spline slots in the other end will only be used if you stack multiple units for a 5 story or 7 story Showcase)



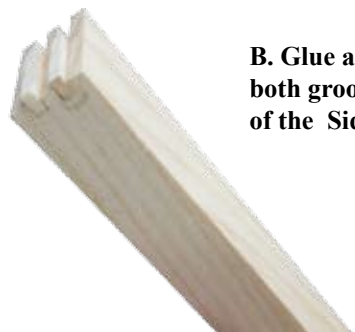
A. Apply glue to one end of a Spline



C. Clean out excess glue between the Splines with a piece of Stripwood



The Splines are straight, they don't interfere with the Plexi's groove, and the excess glue is gone



B. Glue a Spline into both grooves on one end of the Side Frames



D. Clean the plexiglass groove and make sure the Spline isn't in the Plexi's space

☐ 23. Glue Splines into both ends of the Floor Frames and both ends of the Attic Side Frames

- The Splines are straight
- They don't interfere with the Plexi's groove
- The excess Glue is cleaned up

☐ 24. A. Prepare flaps of tape from under the back at both ends of the Top Floor and Rooftop.

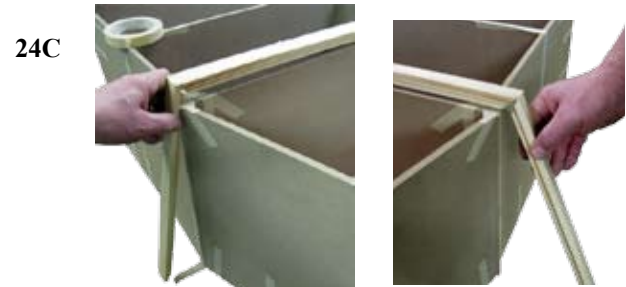
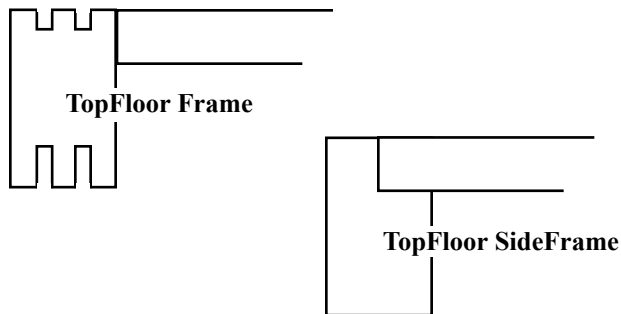
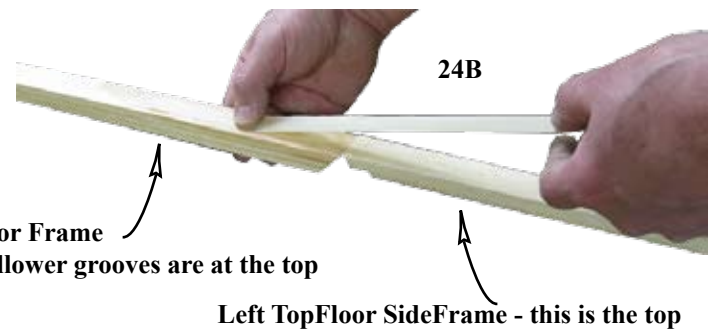
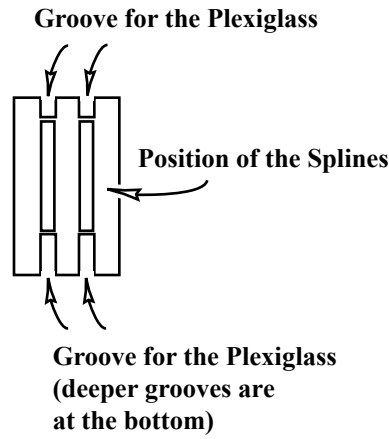
B. Tape together the TopFloor Frame set

- The TopFloor Frame has shallow grooves on top and deep grooves on the bottom
- The TopFloor SideFrames are Left or Right, and are grooved on top

C. Test, then glue the TopFloor Frame set to the Top Floor. Tape the back ends of the sideframes with the flaps prepared in "A".

D. Carefully line up the Frame with the top of the Top Floor. Tape the frames firmly to the Top Floor

E. Put spacers on the other floors and weight the Top-Floor Frame to hold it flat as the glue dries



24D. Line up the top
Tape firmly



24E Taping across the top tends to roll the frame... the spacers and weight will help to hold it flat as the glue dries



☐ 25. Cut two pieces of Stripwood to fit from under the Rooftop to the Top Floor. These will be used to help locate the Attic Side-Frames, and will trim the back edge of the Roofs later (step 33)

25

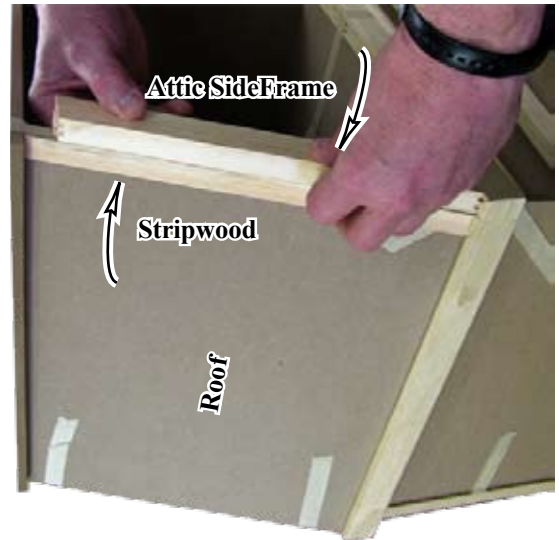


☐ 26. A. Glue and tape the Attic SideFrames to the Roofs and the TopFloor Frame. Hold the Stripwood cut in #25 against the Roof, and locate the Attic Side-Frame to line up with the Stripwood on the outside.

B. Glue and tape the Rooftop Frame to the Attic SideFrames and the Rooftop. Clean excess glue out of the grooves, then put the Attic Plexiglass in the frames to confirm the angle of the SideFrames.

C. Set Dividers across the Frames and add weight to hold them flat as the glue dries.

25A



26B Rooftop Frame
the lip is outward

27 Attic SideStrip

Do not remove the plexiglass protective covering until the Showcase is complete

26B



27. Glue and tape the Attic SideStrip to the Rooftop and Rooftop Frame

If you are adding extra MS-800 Showcase Bodies to the Showcase, stand them upright, and glue them together lining up all the surfaces and edges. Put Dividers in the Showcase to hold the Back straight. Glue, weight, tape, and let the glue dry. Lay the Showcase down for the next step

28. Without glue, set up the Side Frames and the Floor Frames centered side to side.

- The Side Frames extend about the thickness of the Strip-wood outside the Sides on both sides.
- The Floor Frames line up with the Floors on top.

Glue and tape the Side Frames and Floor Frames to each other, to the TopFloor Frame, and to the Floors and Sides.

Clean excess glue out of the grooves for the Plexiglass

Set Dividers across the Frames and add weight as the glue dries.

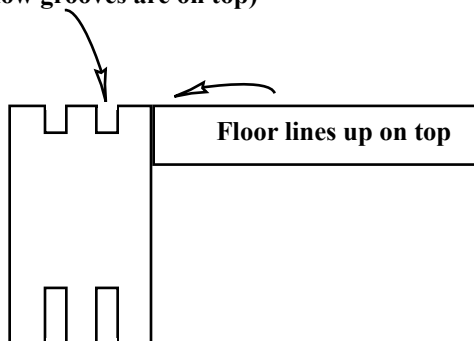
27



28

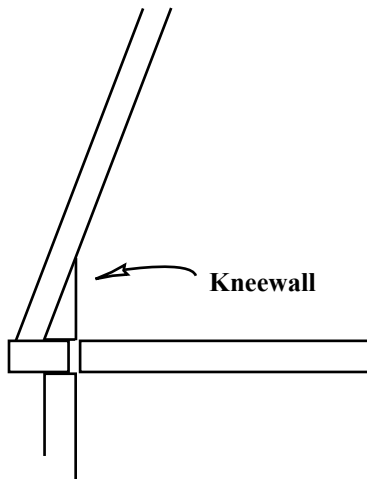


Groove for the Plexiglass
(the shallow grooves are on top)

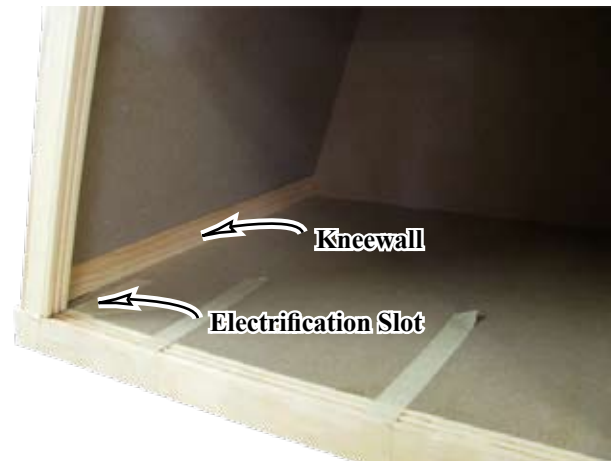


Groove for the Plexiglass
(the deeper grooves are on the bottom)

29. Glue and tape Kneewalls to the inside of the Attic. Make sure enough of the electrification slot is still accessible to slip Tapewire through (if you are wiring the Showcase)



29



Wiring: The Electrification Slots make running “tape style” wiring easy. We strongly recommend interior area lighting to be primarily LEDs to keep heat down. ExtraBrite® LEDs are high output LED striplights, available in daylight white or warm white.

The three story Showcase will use close to 11’ of ExtraBrite striplight which, by itself, will draw less than 22 watts (1.8 amps at 12v). These instructions will cover the use of ExtraBrite LEDs and tapewire. A 12 volt direct current (12VDC) power supply is recommended, although 12 volts alternating current (12VAC) will work. Choose a power supply that has enough capacity (watts) for all your lighting plans plus future expansion (40 watts or more)

These wiring supplies are not part of this Showcase Kit.

30. Run Tapewire from the top of the Roof to 4” below the Base Floor, leaving the 4” un-attached. Turn the 4” of tapewire at an angle where it will come into the Foundation space so it won’t be trapped by the Foundation (see Illustration #32).

31. Glue, tape, and weight the Showcase to the Foundation (the best place for the doubled foundation is the back). The Foundation touches the Floor Frame in front, is spaced evenly down both sides and across the back, and does not trap the Tapewire. Check all around - let the glue dry

32. Tip the showcase back. Stick the Tapewire to the inside of the Foundation - cut off the excess leaving at least 2 1/2” of tapewire for making connections.

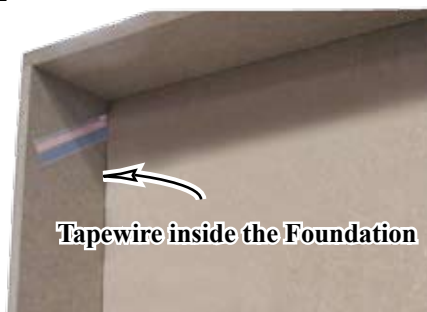
30 Tapewire



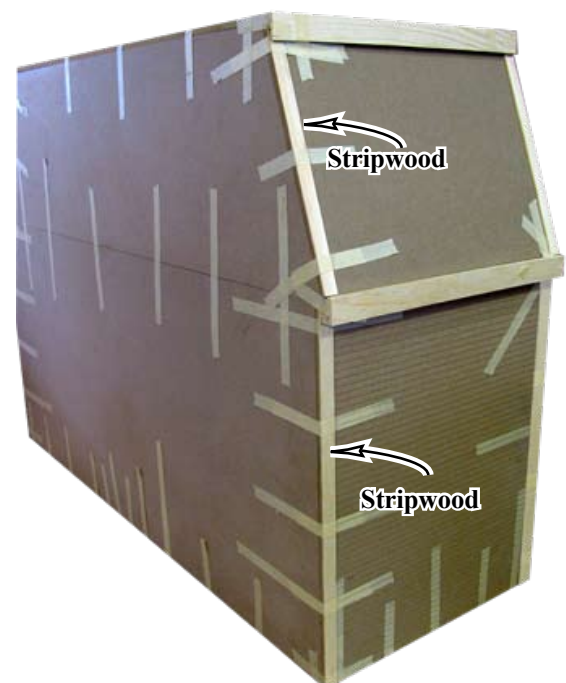
31



32



33



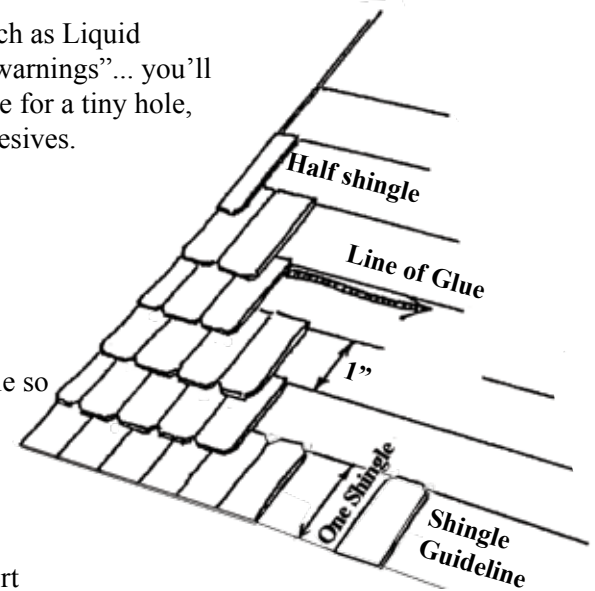
33. Stand the Showcase upright. Glue and tape painted Stripwood to the Sides at the back. Glue and tape painted Stripwood (cut in #25) to the Roofs at the back.

34. Shingle the Roofs: Glue: Use a thick *solvent-based* panel adhesive such as Liquid Nails[®]Macco available in a caulking gun tube at building supply stores (read the “warnings”... you’ll know it’s *solvent based* if it’s flammable). Trim just a little of the end of the tube for a tiny hole, to give a thin bead of glue. Always use good ventilation with solvent based adhesives.

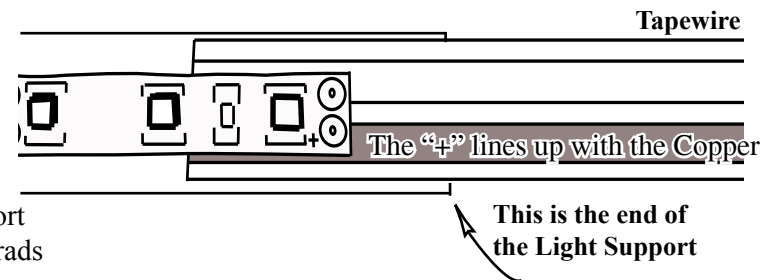
Apply a thin line of adhesive $\frac{1}{8}$ ” below the lowest guideline. Press the top edge of a Shingle into the line of glue, squeezing out the excess. Hold the first Shingle steady and press another shingle into the adhesive, tight to the first. Hold the next Shingle and press in another... etc. all the way across the roof, cutting the last shingle to fit with scissors or a fine toothed saw.

Continue up the roof one row at a time. Start every other row with a half Shingle so that the seam between Shingles weaves back and forth as you go up the roof.

Cut shingles $\frac{5}{8}$ ” for the top course.



35. Stick a piece of Tapewire to a Light Support with 3” or so on the Support and a 3” or so flap sticking out the right end. Cut a Lightstrip at a “cut mark” just shorter than the Light Support. Stick the Lightstrip to the Tapewire with the “+” contact on the lightstrip over the copper colored wire, and the “-” contact on the lightstrip over the blue colored wire. Punch a hole thru each contact with an EL-66 Electrification tool (www.realgoodtoys.com), and insert an eyelet thru the contact into the foil.



36. Start 3 brads in the light Support. Turn the Light Support around, hold it against the back of the Floor Frame, drive the brads into the Floor Frame - but **don’t hammer the Lightstrip!** The ExtraBrite striplights last a long time but not forever... leave the heads of the brads exposed so they can be pulled out for service.

37. Stick the flap of Tapewire to the Side, overlapping the vertical Tapewire run (step #30). Make eyelet connections, copper to copper and blue to blue.

38. Repeat these steps for each floor. Cut the Light Support to fit the Attic ceiling.

39. Drill a hole in the foundation to bring in the power. Connect a 12 volt lead-wire from the Power Supply to the tapewire. If the power supply is DC, it matters which lead-wire goes to the “+” (copper-colored) so, if the lights don’t light up, switch the lead-wires.

Test the lights before spackling the tapewire or doing the interior finishing in your Showcase following normal miniature wiring procedures. Refer to your wiring manual, Real Good Toys’ “Quickstart Guide”, or www.dhbuilder.com for wiring techniques information.

40. Remove the protective covering from the plexiglass when construction is over. Plexiglass lifts into the top groove, then sets down into the lower groove. Clean the plexiglass with soap and water, and a soft “lens grade” cleaning pad only... do not use amonia or glass cleaner, paper towels, or squeegees. Install Dividers as part of your interior finishing plan; it is recommended to use *at least* one Divider between each floor for structural support.

