

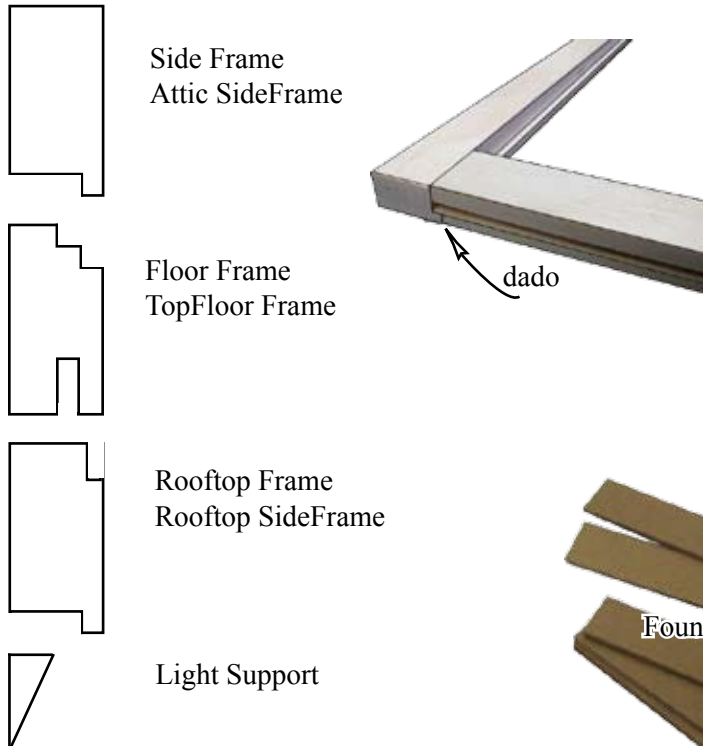
Measure, identify, and label the parts

Parts: (Measurements are approximate and are for identification purposes only)


2	Side	1/4 Milled	19 3/8	10	grooved	
2	Back	1/4	9 11/16	30 7/16	grooved	
1	AtticBack	1/4	3 11/8	10 1/2	grooved	angled
2	Floor	1/4	30 1/8	10 3/16	notched	
1	Top Floor	1/4	31 15/16	10 3/8	notched	
1	Rooftop	1/4	2 5/4	10 3/8		
4	Divider	1/4	9 7/16	9 7/16		
2	Attic Divider	1/4	9 7/16	10 1/2		
2	Roof	1/4	11 1/8	10	beveled	
2	Foundation	3/8	30 1/8	2 1/2		
3	Foundation	3/8	9 5/16	2 1/2	(1 drilled)	
1	Attic Plexiglass	9 15/16	29 5/8		drilled	angled
2	Front Plexiglass	8 15/16	28 7/8		drilled	
2	Side Frame	1/2 x 1	19 3/8			
pr	Attic SideFrame	1/2 x 1	10 7/16		angled	dado
2	Floor Frame	1/2 x 1	28 15/16		grooved	dados
1	TopFloor Frame	1/2 x 1	32 9/16		grooved	miters
pr	TopFloor SideFrame		10 3/4		grooved	miters
1	Rooftop Frame	1/2 x 1	25 15/16		grooved	miters
pr	Rooftop SideFrame		10 3/4		grooved	miters
4	Stripwood	3/32 x 9/16	19 3/8			
3	Light Support	5/16 x 1/2 triangle	29			
1	(400) Shingles	#SWO				
7	Bead	3/8				
2	1/8 Dowel	1 3/16				



Molding cross sections



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 test steps 1 - 10 without glue so you can proceed quickly when the time comes to use glue... you must finish this entire section quickly enough to adjust the fit of the parts while the glue is still soft. 

1. Glue and tape together the Backs; stretch the tape for a tight joint. Add flaps of tape to each end for taping the Backs to the Sides. Turn the Backs over.

2. Without glue, tape together two Dividers for an assembly “stand”. Spread glue in the middle and bottom groove of the Back.

Floors:
The Molding Notch faces out, and the Electrification Slots must line up with each other from floor-to-floor (in this instruction it will be on the left side)

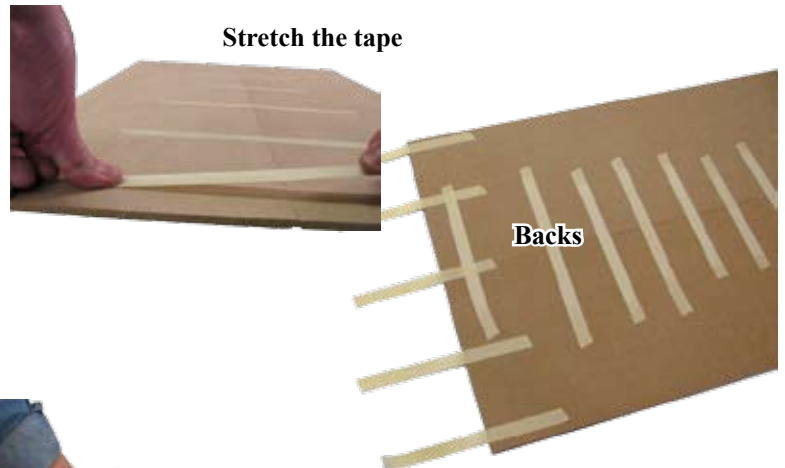
 Electrification slot

 Molding notch

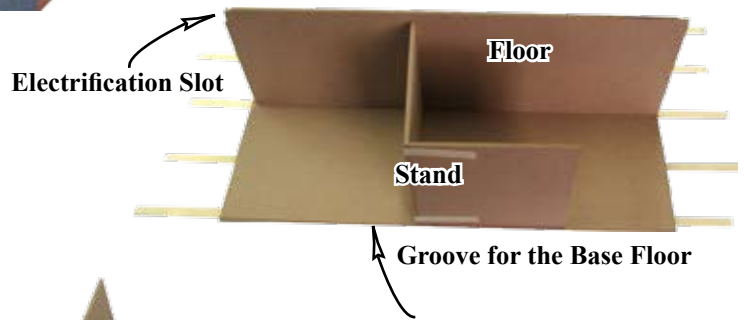
3. Set a Floor in the middle groove, centered side-to-side. Tape the floor to the “stand” to hold it upright.

4. Set a Floor in the bottom groove, centered side-to-side. Tape the floor to the “stand” to hold it upright.

5. Spread glue in the grooves of the Sides. Glue and tape the Sides to the Floors and Back. **Carefully adjust** the Sides and Floors to line up with the Back evenly from the bottom corners to the tops.



Two Dividers make a “Stand”



Tape the Sides to the Floor



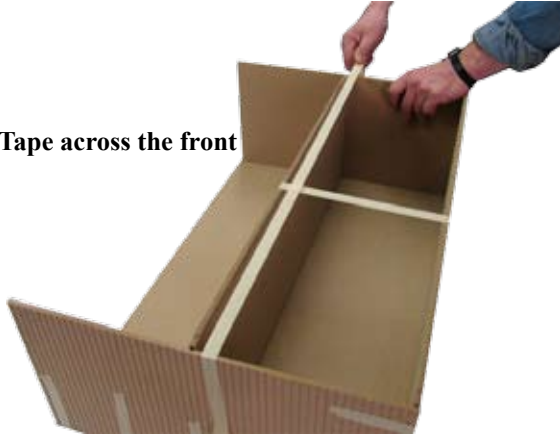
6. Stand the Showcase on its top and tightly tape the Base Floor to the Back

Tape the Base Floor to the Back

Don't worry about how they line up on the *outside*... make sure they are tight on the *inside*

7. Lay the Showcase on its back. Tape across the front to hold the Sides tight to the Mid Floor

Tape across the front



8. Make sure the Base Floor is tight to the top of its groove



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.

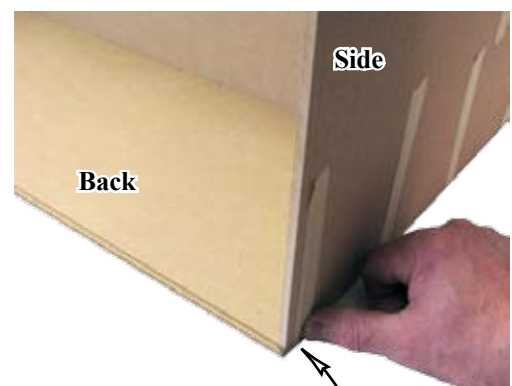
10. Check the faces of the Molding Notches - they must be flat with the front edge of the Sides (this indicates that the Floor is all the way into the groove). Check that each Side lines up with the edge of the Back at the top



The Notch lines up with the Side



Let the glue dry



The Side lines up with the Back

11. Tape (no glue) Dividers to the Sides. spread glue on the top of the Sides and Back



12. Set the Top Floor onto the Sides and Back. Clean up excess glue; center the Top Floor side-to-side and tape it tightly to the Back. Line up the Top Floor and Back all the way along the edge.



Carefully center the Top Floor side-to-side ($\frac{3}{4}$ "



13. Check the measure under the Top Floor ($\frac{3}{4}$ "). Fine-tune the position of the Side so a narrow slit is showing inside the Electrification Slot.

Electrification Slot



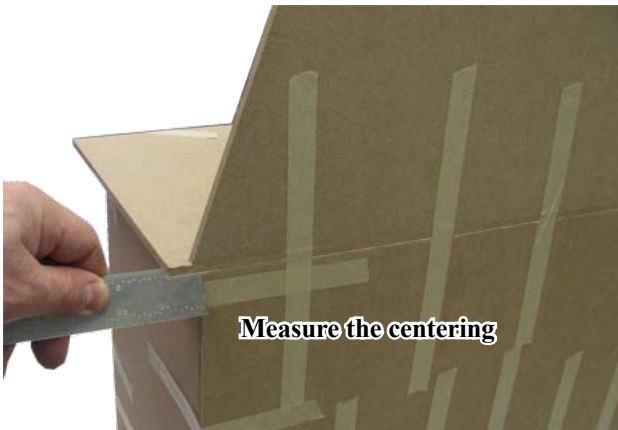
14. Measure across the front at the mid floor, then measure across the top of the sides. Adjust the top of the Sides so the measurements are the same.

Tape and weight the Top Floor to keep the position stable



Weight the Top Floor over the Sides, let the glue dry

15. Test, then glue and tape the Attic Back to the Top Floor.
Measure to confirm the side-to-side centering.



1"
1"
1"

16. Tape an Attic Divider to the Attic Back to hold it upright. Inspect the Attic Back at the bottom. If it bows out (toward the back) there will be a gap at the bottom of the Attic Divider. If so, tape a long stick across the back of the Attic Back (such as the TopFloor Frame) to apply pressure... or you may have to push it out with an Attic Divider. Do what you need to *now* to make it straight in back.



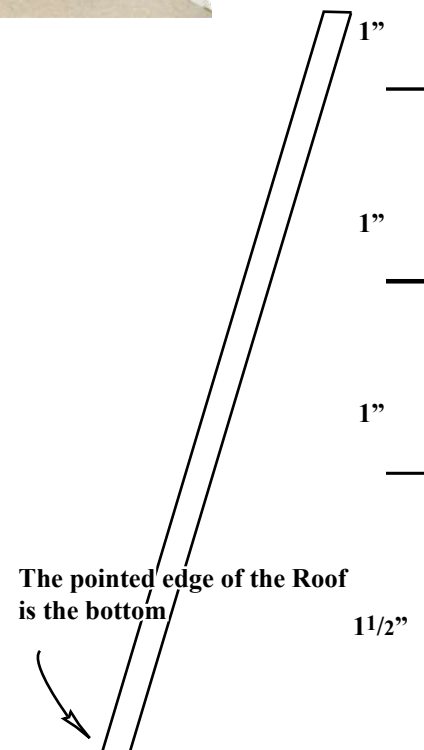
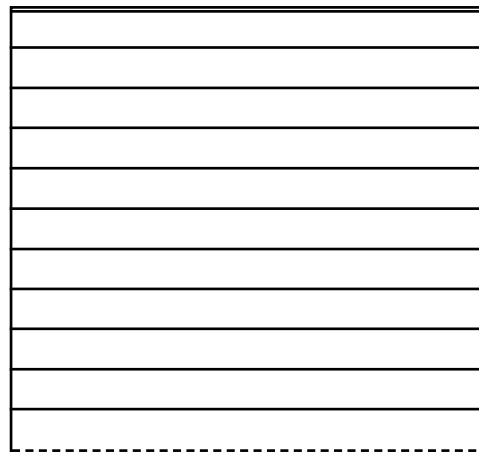
1"
1"
1"

Make sure the Attic Back is lined up with the Top Floor



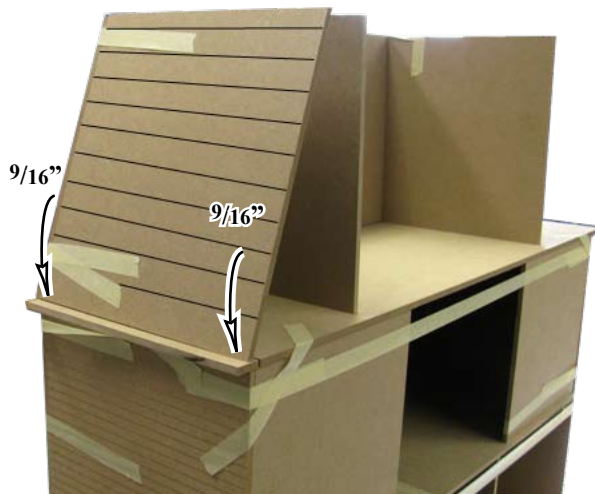
17. Prepare shingle guidelines on the roofs. The first guideline is 1 1/2" above the bottom edge, and the rest are spaced 1" apart. Measure up both sides of the Roofs and mark for the guidelines using a ruler or the guideline measure on the right of this page.

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



1"
1"
1"
1 1/2"

18. Glue and tape Roofs to the Top Floor and Attic Back. Confirm even spacing back-to-front by laying a piece of Stripwood (9/16") on the outer Top Floor.



19. Glue, tape, and weight 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. Confirm the spacing with two Dividers laid against the Roof. Tape the Roofs to keep them from sliding inward at the top, or outward at the bottom when weight is added. Add weight, let the glue dry.



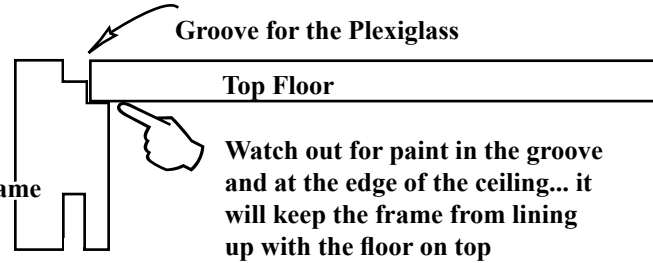
Check the spacing again before the glue is dry

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

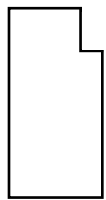
21. Glue and tape together the Foundation set. One Foundation has a 1/2" hole drilled to fit a #247 "2.1mm DC Power Jack". Use that foundation for one of the ends if that style jack is how you want power to come into the foundation space. For the Showcases we make here at RGT, we paint the Foundation 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. Tape and test the TopFloor Frame and the TopFloor SideFrames on the Showcase - make sure they can line up with each other on top. Note the places where you will glue. Remove the Frames, spread glue in the grooves, and tape the Frames to the Top Floor. Clean up any excess glue in the groove for the plexiglass



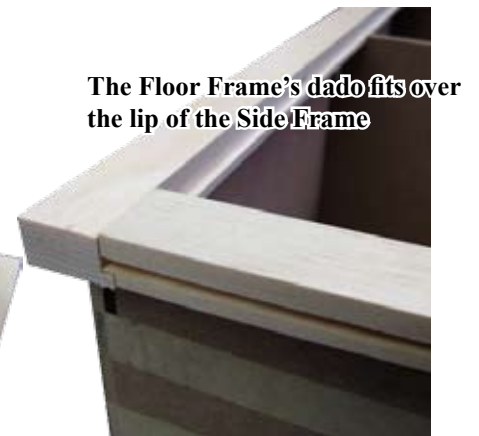
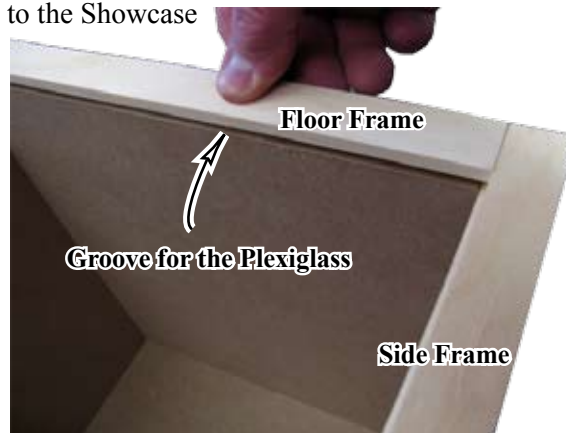
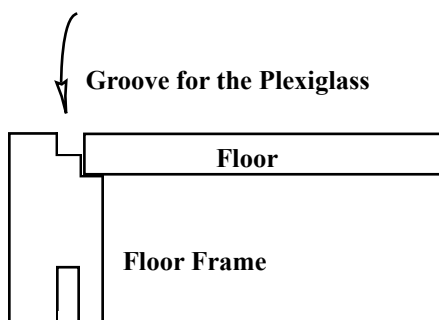
TopFloor SideFrame



23. Test then glue the Side Frames to the Showcase



24. Test then glue the Floor Frames to the Showcase



25. Clean excess glue out of the Plexiglass groove. Lay a piece of Plexiglass in the middle floor frames to make sure the top of the Side Frames are parallel as the glue dries. Tape the frames tight together and weight the Frame. Let the glue dry.



26. Test then glue and tape the Rooftop Frames to the Showcase

Rooftop Frame



Rooftop SideFrame

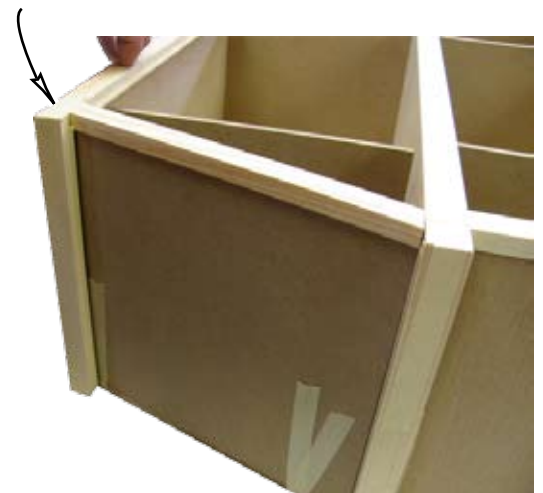
Attic SideFrame



The Attic SideFrame's dado fits over the lip of the Rooftop Frame

27. Test then glue the Attic SideFrames to the Showcase.

Lay the Attic Plexiglass in the frame set to confirm the spacing as the glue dries. Slide the Attic Plexiglass "UP" so it touches the Rooftop Frame. Tape the frames tight and add weights. Let the glue dry.



Attic Plexiglass

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.

This Showcase will use close to 7’ of ExtraBrite striplight which, by itself, will draw less than 14 watts of power (1.1 amps at 12 volts.) 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. These wiring supplies are not part of this Showcase Kit.

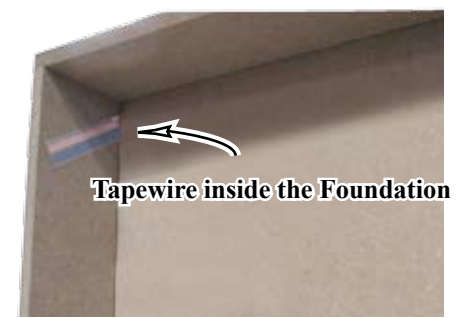
28. Run Tapewire from the top of the Roof to 4” below the Base Floor, leaving the 4” un-attached.



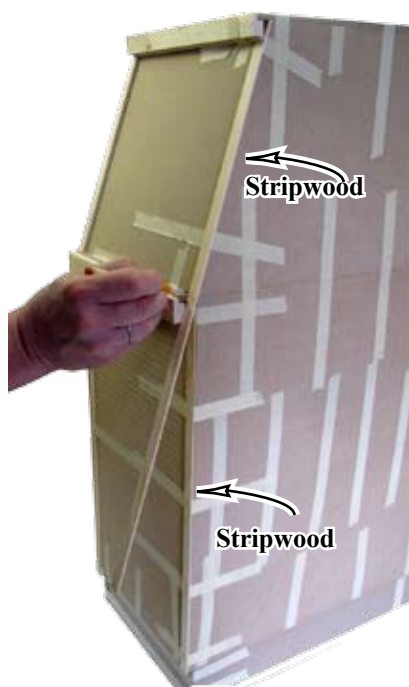
29. Glue, tape, and weight the Showcase to the Foundation. Turn the 4” of tapewire at an angle where it comes into the Foundation space so it will still be a loose flap after the Foundation is attached. The Foundation touches the Floor Frame in front, and is spaced evenly down both sides and across the back. Check all around - let the glue dry



30. Tip the showcase or lay it on its 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.



31. Stand the Showcase upright. Glue and tape painted Stripwood to the Sides at the back. Cut, glue, and tape painted Stripwood to the Roofs at the back.



32. Glue Dowels into two Beads. Drop the dowels thru the Rooftop Frame’s holes to “keep” the Attic Plexiglass. Glue one bead centered between them, and four beads in the corners

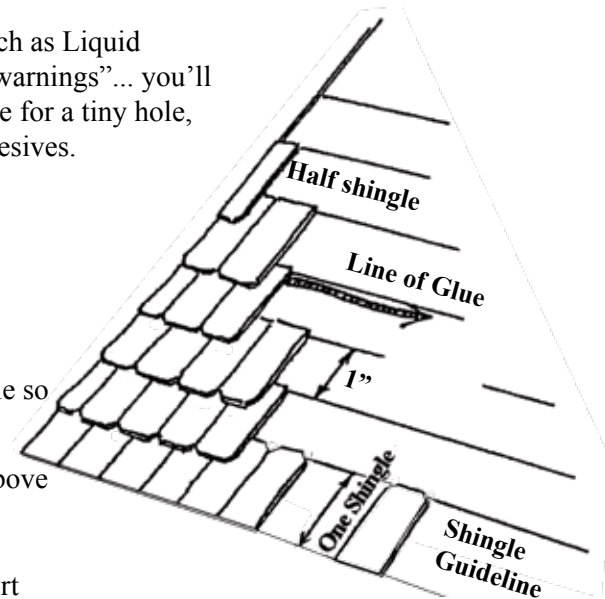


33. Shingle the Roofs: Glue: Use a thick *solvent-based* panel adhesive such as Liquid Nails[®]Macco available in a caulking gun tube at building supply stores (read the “warnings”... you’ll know it’s *solvent based* if it’s flammable). Trim just a little of the end of the tube for a tiny hole, to give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

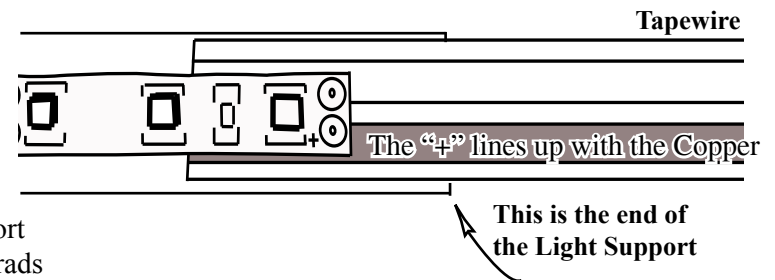
Apply a thin line of adhesive 1/8” below the lowest guideline. Press the top edge of a Shingle into the line of glue, squeezing out the excess. Hold the first Shingle steady and press another shingle into the adhesive, tight to the first. Hold the next Shingle and press in another... etc. all the way 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.

When you get to the top course the guideline is hidden; space the shingles 1” above the next-lower course.



34. 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.



35. 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.

36. Stick the flap of Tapewire to the Side, overlapping the vertical Tapewire run (step #22). Make eyelet connections, copper to copper and blue to blue.

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

38. 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.

39. Remove the protective covering from the plexiglass when construction is over. 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.

