

MODELING A WOOD SHINGLE ROOF

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South Central Wisconsin Div.



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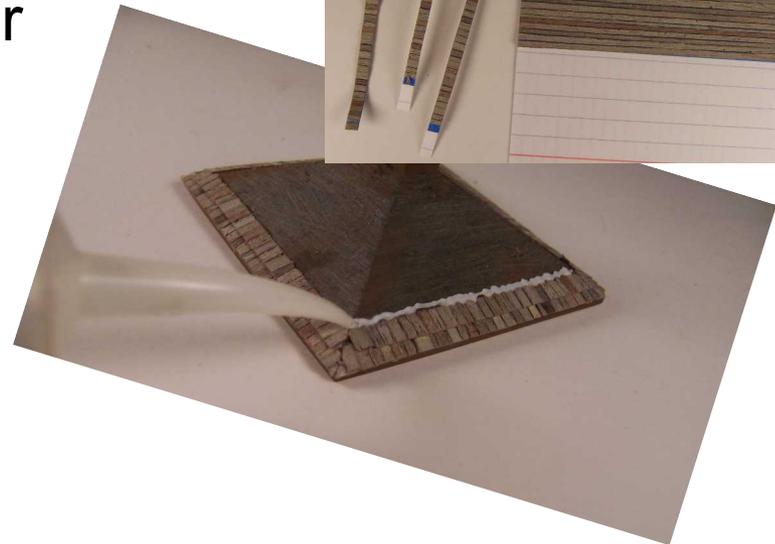
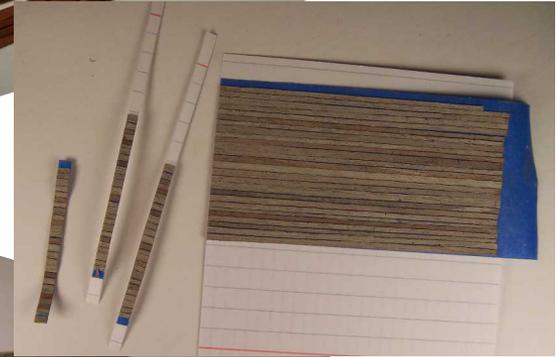
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- Roof detail is readily apparent.
- A detailed roof can sometimes make or break our impression of the model.
- Often it can make a quite ordinary structure stand out.



WHAT WE WILL DO

- Nothing looks better than a wood shingle roof made from individual random sized real cedar shingles.
- The roof we will make will essentially be made from hundreds of individual cedar shingles of near scale thickness.
- Before you freak out, it is easier than you think.



CHOOSING THE MODEL



- The model I chose is a simple plastic signal tower so that effort could be placed on modeling the roof and not the rest of the structure.

WHAT YOU NEED

- Hobby cutting mat and hobby knife with new sharp #11 blades, cutting mat
- White, black, brown acrylic craft paint, black India ink, isopropyl (rubbing) alcohol, lacquer thinner
- **Dap Kwik Seal Kitchen and Bath Adhesive Caulk and a glue syringe with a micro-tip**
- 2" wide Scotch blue painters tape, double stick tape, optional **glue runner**
- Sprue nippers, good tweezers, scissors
- 4" x 6" index file cards and computer to print them or draw lines
- Staining trough or pan, paper towels
- **Wood cedar veneer**
- 80 and 150 grit sandpaper
- Flat wood block, flat metal bar
- 0.40" to 0.60" sheet styrene if the roof is from scratch
- Draftsman's **rolling ruler**, scale rule
- Anything else you see in the pictures that I didn't list.



ABOUT THE ADHESIVE



- I use Dap Kwik Seal Kitchen and Bath Adhesive Caulk.
- It is water based, heavy bodied, clear and flexible.
- It fills gaps well.
- It sticks to lots of materials.
- Use a glue syringe with a micro tip as the applicator.

PREPARING THE ROOF

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- I do not recommend cardboard or paper based materials. They will warp.

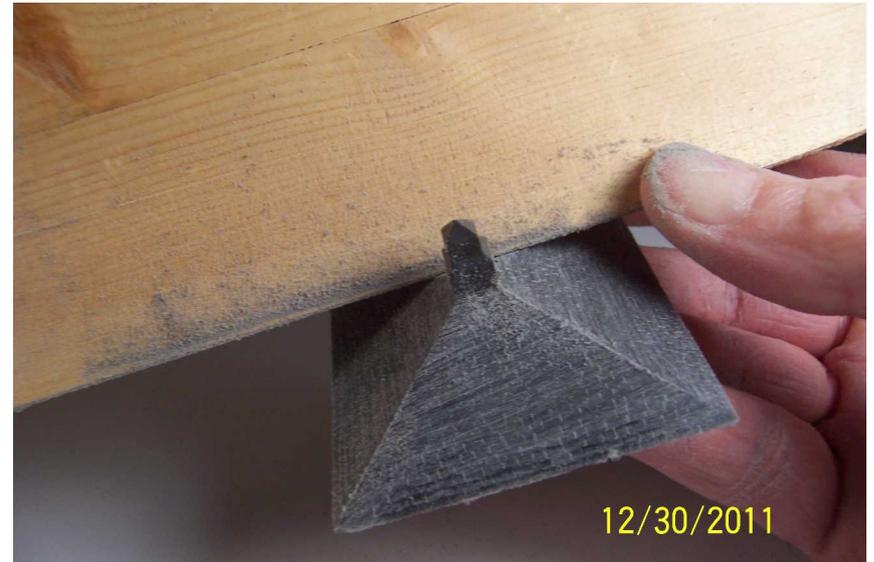
PREPARING THE ROOF



- To sand a flat roof section, use double stick tape to fix a small roof to a suitable block of wood.
- Sand the roof with coarse sandpaper (this is 80 grit) until the desired detail is removed. Finish up with medium 150 grit.
- The white styrene on the edge was added because I just wanted the roof slightly larger than in the kit.

PREPARING THE ROOF

- For a more rigid roof like this hip roof, you can just sand it with a sanding block.
- This roof has a cupola that I had to work around.



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- Others have used cedar from cigar stores.
- You could also use regular (much cheaper) furniture veneer, about 0.040" thick, for larger scales like G scale. I would use a course grained material like mahogany.

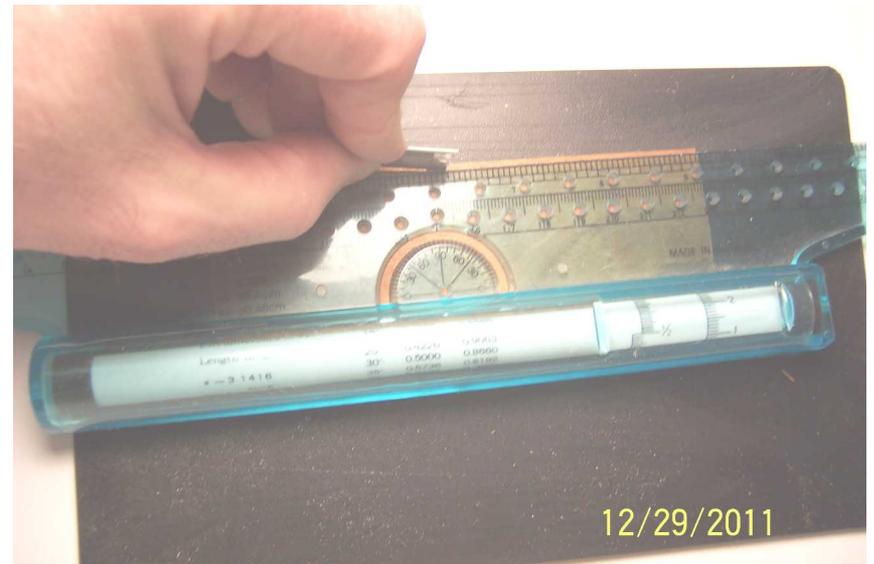


MAKING THE STARTER STRIP

- This is the first time I have used starter strip to double up the lower edge of the rood at the eve.
- I'm not sure if this is worth the trouble, but I will describe it anyway because I did it.
- The **technique of tapering the wood** may have some other modeling applications so it is worth while to describe it.

MAKING THE STARTER STRIP

- Cut some 11" (scale) wide strips of cedar. You can't see it here, but I tape the edge of the veneer to the cutting mat to keep it in place.
- This is called a rolling ruler.
- Use a new sharp hobby or razor blade.



MAKING THE STARTER STRIP



- Fix the strip to the very edge of a flat metal bar using double stick tape.
- This bar is about 1" x 1/16" x 5".
- Lift the edge of the bar and using 150 grit sandpaper, sand a taper on the strip its full length so that it is full thickness one edge and sharp on the other (scale bevel siding for that contest model anyone?).



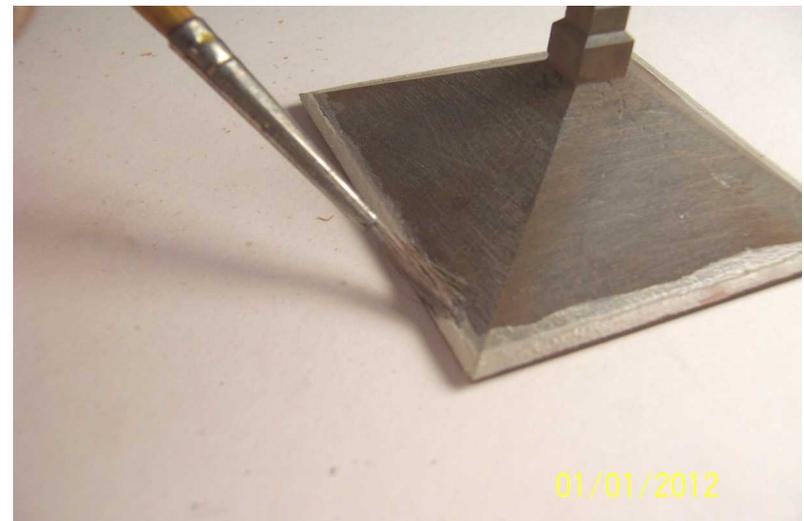
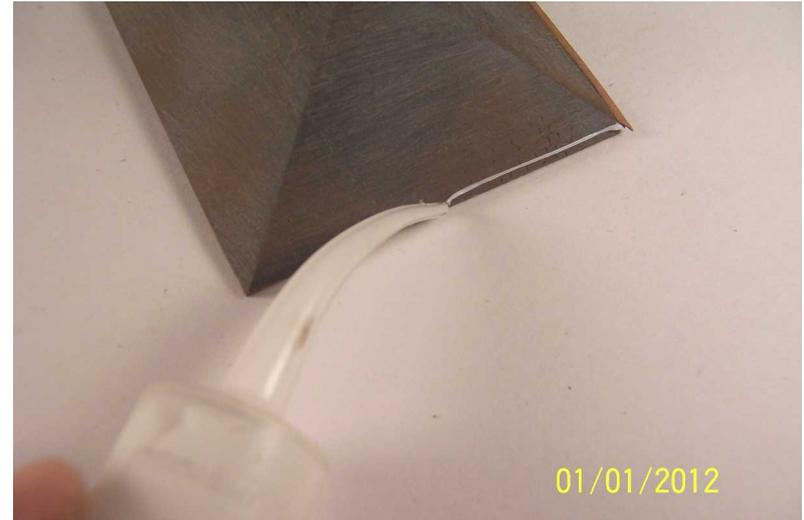
MAKING THE STARTER STRIP



- This beveled strip will be very fragile and you will not be able to pry it off the tape without breaking it.
- Here I am releasing the adhesive with a some lacquer thinner solvent on a brush.
- The solvent also helps to reactivate the adhesive so the tape can be used a couple of times before replacing it.

ATTACHING THE STARTER STRIP

- Glue the starter strip to the edge of the roof with the Dap.
- A glue syringe with a micro tip is used.
- Paint the starter strip with the weathering stain.



ABOUT WOOD SHINGLE ROOFS

- The type of roof I am replicating here is a **sawed shingle roof** with square butt shingles of clear cedar wood.
- They are about 11" long have widths of about 5"-10"
- They are sawed in a taper from sharp to about 5/8" thick.
- The 0.011" material from Sierra is about 1" in HO and would be best for HO. What I am using here is the 0.018" material, but it is what was available at the time I bought it.
- 11" shingles were laid with 5" exposure so one row completely overlaps the top half on the row below.
- Shakes or split shingles are much rougher in appearance and are not tapered.

MAKING THE SHINGLES

- We will be make strips of shingle to apply to the roof attached to a tape backing. I will call these taped rows.
- This is much easier than applying the individual shingles which some modelers do.



MAKING THE SHINGLE STRIPS



- Cut the shingle material into strips random 5" to 10" (scale) wide.
- Use a new sharp blade to cut the strips straight.
- I use the 1/16" marks on the parallel to judge the HO widths between 1/16" and 3/32" wide. Remember that these are random widths.

STAINING THE STRIPS

- Stain the strips to the desired degree of weathering.
- The color will be a weathered wood silver gray typical of bare wood that has been out of doors for several years.
- This procedure is also good for other bare wood structures on your model railroad.

STAINING THE STRIPS



- The gray stain basecoat is mixed from inexpensive acrylic craft store paints.
- You will need black, white, and brown.

THE SECRET FORMULA



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01/12/2012

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STAINING THE STRIPS

THE SECRET FORMULA

- 1 oz. white
- 30 drops black
- 15 or so drops brown
- Add water to make 2 oz.
- You should end up with a light gray color having a tinge of brown to muddy it a bit.

STAINING THE STRIPS

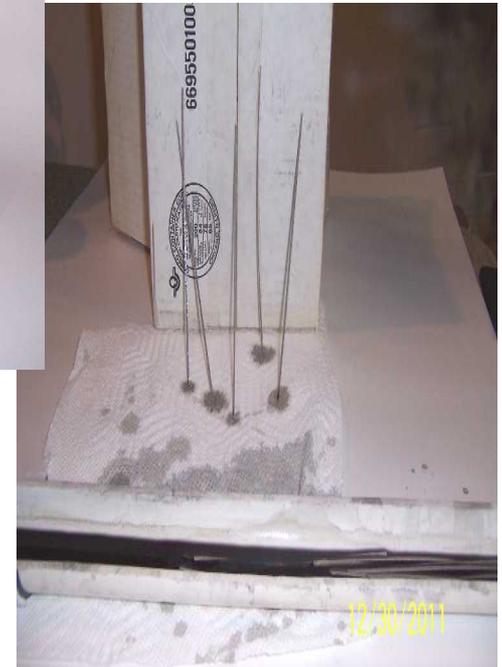
- Place the strips into a tray of stain, pull them out one by one, and lean them up vertically to dry on a paper towel. Let the stain run down the strips of its own accord and blot the towel.



- This tray is made from a 1-1/2" diameter x 12" long PVC pipe with the end caps glued on. The pipe is then sawed in half with a table saw yielding two trays. A shallow pan like a baking pan will also work.

STAINING THE STRIPS

- Dip the strips into an ink wash of 10 to 15 drops of black India ink per oz. of alcohol.
- Pull the strips out one by one and stand them up vertically on a paper towel to dry.



STAINING THE STRIPS

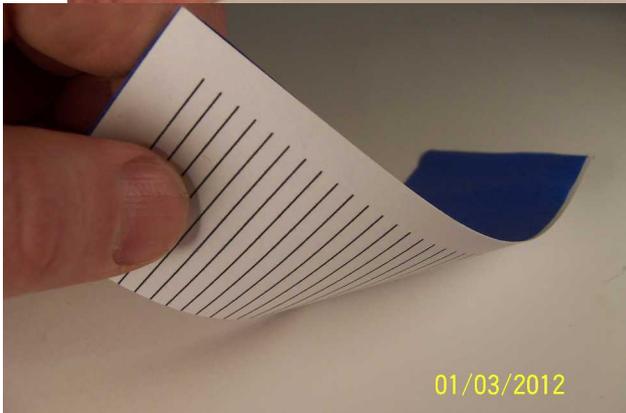
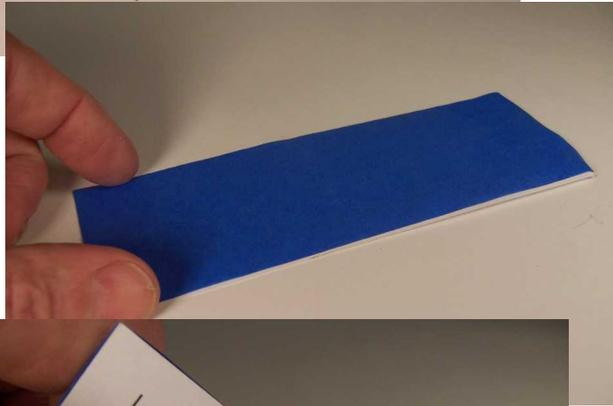
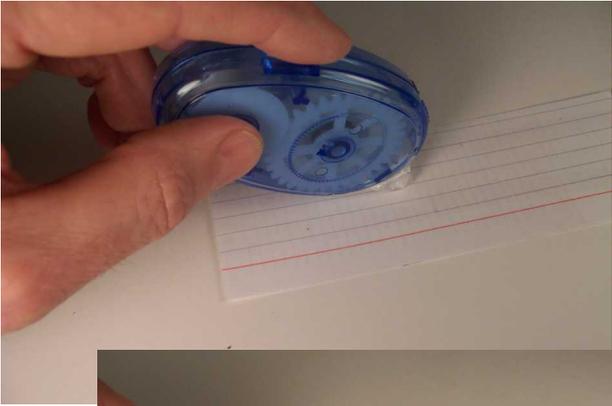
- The result of the staining will be a good looking varied weathered wood appearance on the strips.
- This technique can be used any time a weathered wood appearance is desired.

MAKING THE SHINGLE CARD

- Using my computer and printer, I printed a series of lines about 11" scale apart on 4" x 6" file cards.
- The lines were typed in a word document as the underscore character with a font size of 8.6 spacing them very close to 11" HO scale apart.
- You can draw the lines any way you wish, but the computer and typing is a very quick way of getting equally spaced lines. Then adjust the font size to suit the desired spacing.



MAKING THE SHINGLE CARD



- Now make a card with tape on one side and lines on the other.
- Cut the printed card in half lengthwise to 2" x 6" size.
- Using a glue runner, run two adhesive strips on the back of the card along its length.
- Apply a strip of 2" wide blue painter's tape sticky side up to the other side of the card.
- If you don't have a glue runner, you can use double stick tape, but glue runners are another neat toy to have.

MAKING THE SHINGLE CARD



- As I was making one of the shingle cards, it occurred to me that maybe you could skip printing the card and just print directly on the back of the tape.
- Here is the result of laying three strips of tape on a sheet of 0.005" styrene and printing the tape.
- I had a bit of trouble feeding this through my printer as you can see by the bent corner. By curling the leading edge down, I got it to feed OK.

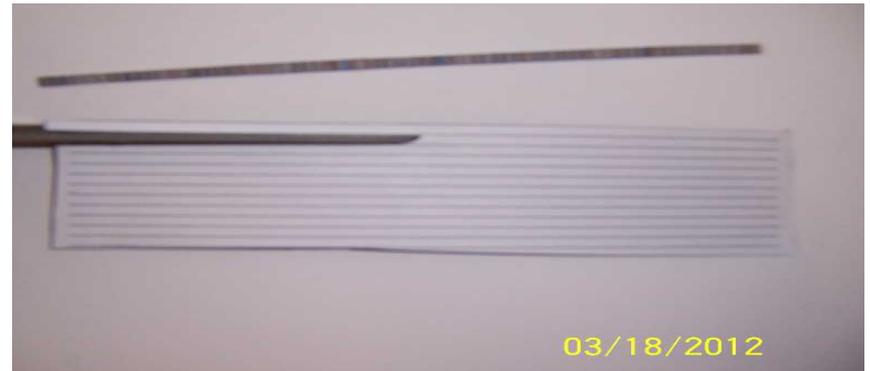
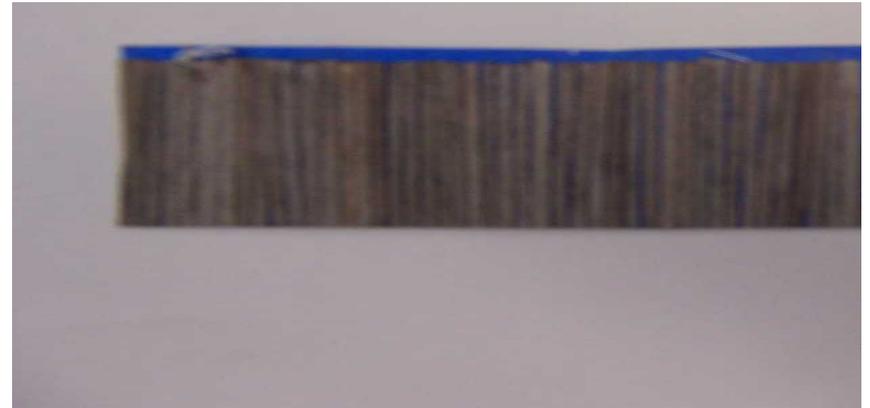
MAKING THE SHINGLE CARD

- Now, add the stained shingle strips.
- Select the stained shingle strips at random for width and color and press them into the tape side.
- Does this look like a flat car deck or weathered building siding to anyone?



MAKING THE SHINGLE CARD

- For a longer roof, print the lines and lay the strips the other way on the card.
- These will become six inch taped rows, about the longest I handle for HO.



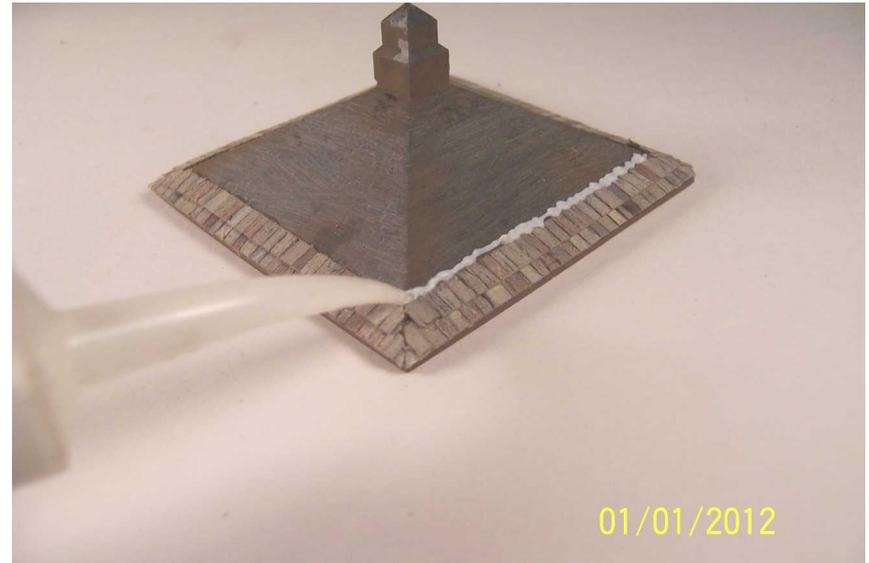
MAKING THE TAPED ROWS

- Now for the fun part.
- Using the lines on the back of the card as a guide, cut off strips of the shingles with scissors to make the taped rows.
- Peel off the file card backing to end up with a strip of individual shingles only attached to the tape.



APPLYING THE TAPED ROWS

- Spread a good bead of the Dap Quik Seal along the top edge of the starter strip or previous row of shingles using your glue syringe.
- By the way, if the syringe tip dries out since the last use (it will), store it in a bottle of water between uses like this.



APPLYING THE TAPED ROWS

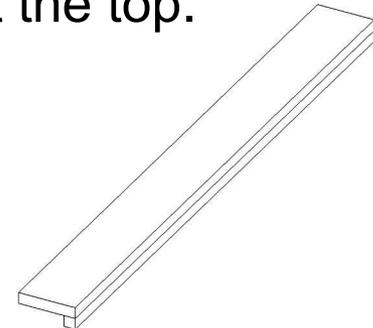


- Press the taped rows into the glue.
- If you used a correct amount of glue, it should ooze slightly above the top of the row, but not on the row below.

APPLYING THE TAPED ROWS



- You will need an exposure gauge to space the rows as you go up the roof.
- This one is made from styrene by gluing an 0.020" square strip to a wider strip.
- I always place the shingle strip low and push it up with the gauge.
- The exposure of the shingles may need to be adjusted slightly in the last few rows to avoid a very small or large row at the top.



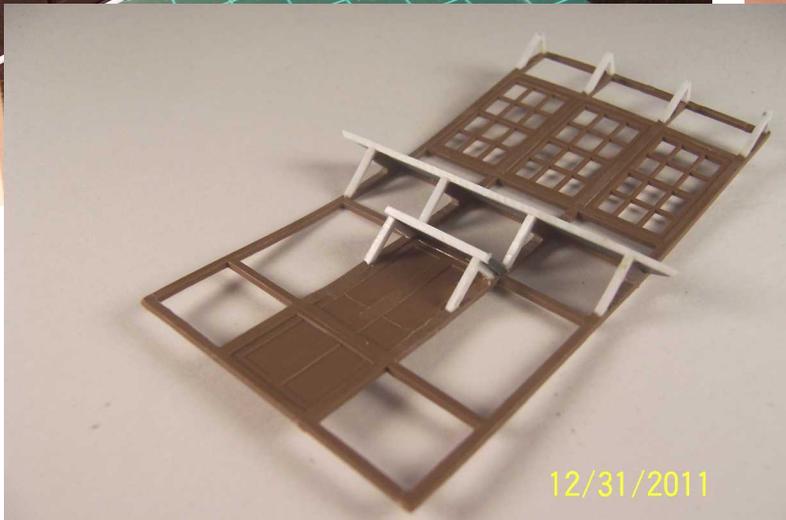
APPLYING THE SHINGLES

- For a hip roof, trim the angles at the end as you go. Trim the other end with a sharp hobby knife running the blade down the ridge.
- Edges are easier to trim with sprue nippers.
- The glue will need to dry 15 minutes per row. Then, peel the tape



WATCHING THE GLUE DRY

- This is not a fast process. If you start the roof first, you can complete other parts of the project while watching the glue dry.

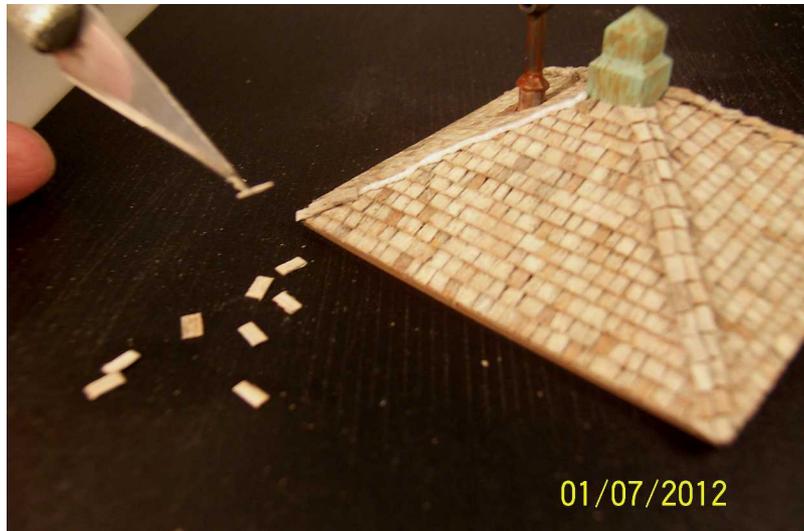


CUTTING INDIVIDUAL SHINGLES

- For hips and ridges, you will need to glue down the shingles individually.
- Peel back the card and tape on a shingle card.
- Fold the tape back so rows of shingles are not taped.
- Using the lines on the card, cut rows of individual shingles without tape attached.

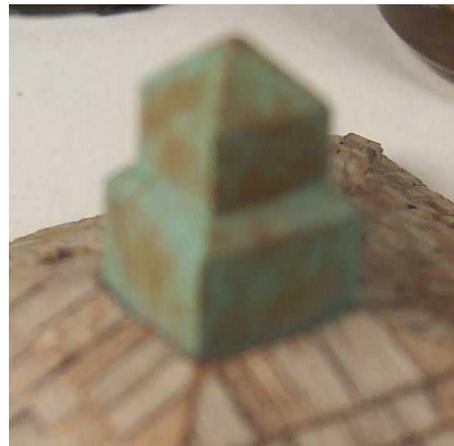


APPLYING HIP OR RIDGE SHINGLES



- To apply ridge and hip shingles, apply a bead of glue with the syringe on the ridge line.
- Choose shingles all about the same width.
- Stab each shingle lightly with the tip of a hobby knife each shingle and place them in a bed of glue. I alternate side to side.

APPLYING HIP OR RIDGE SHINGLES



- Trim corners and edges with a sprue nipper or sharp hobby knife.
- Shingle against stacks, cupolas, finials, and other features are trimmed as needed.
- Flashing can be cut from styrene or file card stock and added as you like.

DETAILS

- Here I am drilling the hole to add a smokejack after the shingles are in place.
- Chimneys would be easier to attach first and the shingles could be fitted around it.



FINISHING UP

- This process results in a mild grey weathered roof.
- You may wish to dust some weathering chinks to dirty the roof up a bit. The steam era would have soot all over.
- Dry brushed tinges of dark green along the lower edges will simulate the moss which often grows there.
- Another thin wash of the ink overall would weather the roof a little more and blend it.



THE END

Thank you for participating.

Special thanks to Jim McQueeney for his compliments to my first shingle depot roof which railroaded me into this clinic.

Now, get to your hobby bench and try this.

THE REAL END

