Tools and Tips:

As you build, this manual will show you how I assembled this model. You can use your own methods as you desire, but these worked best for me. A smooth, flat work surface is very important and the more space the better.

The photo on left is basic tools needed:

-A square and angle plates; I use 123 blocks both to square and use as weights while glued parts dry.

- Hobby knives and plenty of # 11 blades

- While the majority if not all parts are laser cut, some of the kits will need parts cut. A zona saw & miter is handy, as is a chopper.

- An assortment of sanding blocks are a must to touch up parts and make perfect fits.

-For glues, CA (cyanoacrylate and quick set)and white glue like Aleene's Tacky Glue are easy to find and do the job well. The most important thing is how you apply the glue - not too much but enough to make strong bond. Use syringes for water based glues and needle applicators for CA are a must.

- Q-tips or micro tip brushes work great to clean up excess glue.

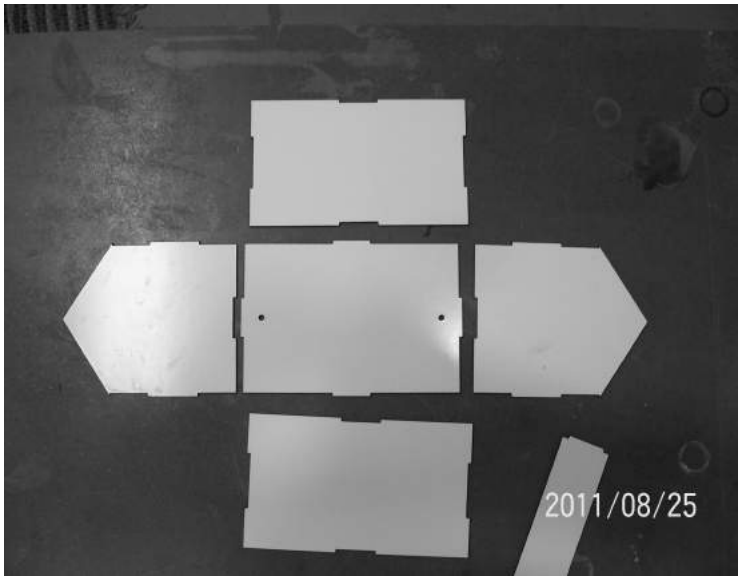
Most all of these can found at good hobby shop or from Micro-Mark online.

For painting, it will depend on materials but for wood it is best not to use water base paints. For best results use Floquil solvent-based enamel. Applying with an air brush is best but brushing works also.

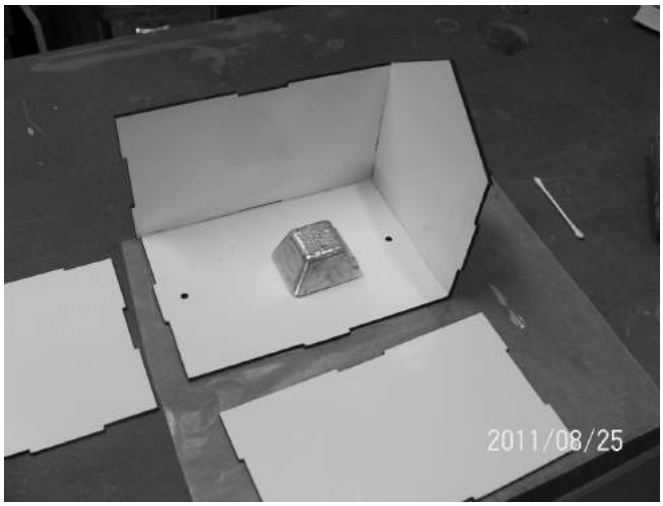
I will make suggestions when to paint and colors I used for the model. The important thing is to take your time, test fit parts, and to look over photos before you make the final bond. If you are ever not sure feel free to contact me. I am happy to help.

Nanton Grain Mill Assembly

Majority of pictures from
O scale assembly. HO
pictures used where needed.



Locate package for assembling storage building. These are cut from 1/8” masonite.
Inspect and lightly sand edges where it will be bonded.

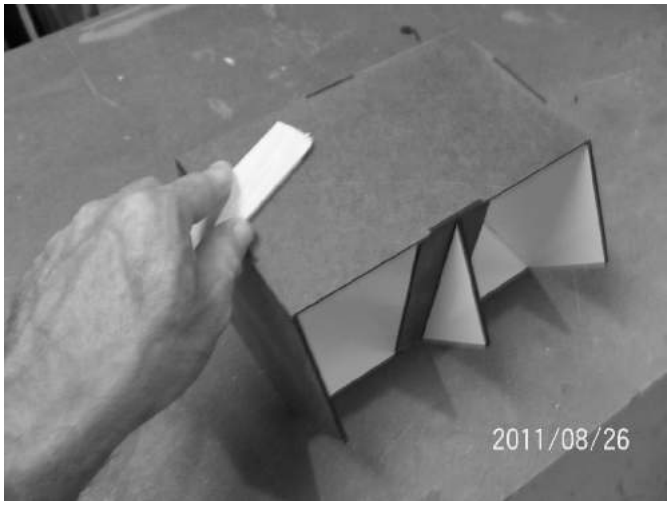


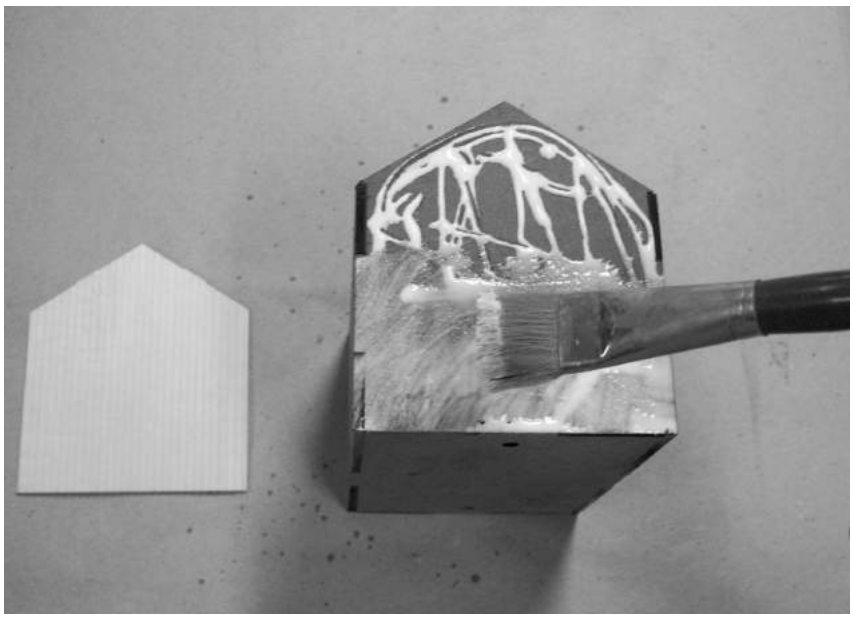
Use white glue or CA glue to bond. Set base down on flat surface with wax paper underneath so the base does not get bonded to your work surface. Test fit end wall and side wall as pictured to the left. I like to use steel angle plates to keep wall square and hold while glue dries. But these are not required, any type of weight will do.

After first two walls set up, lay out next wall as pictured to the right. Test fit and glue in place.

Bond upper support first, and then add roof center truss on top of support. Make sure that the upper support is bonded completely beforehand.

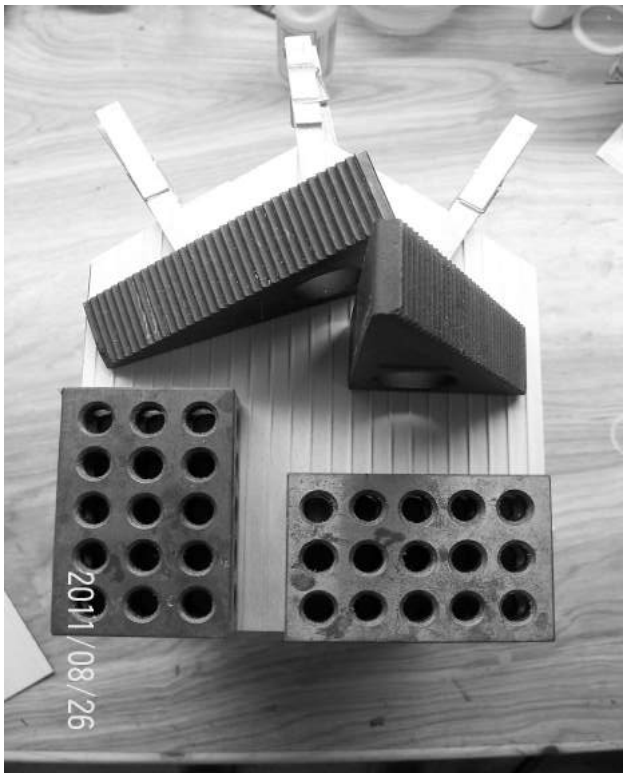
After main structure dries completely, sand it with a sanding block that has 80-150 grit sandpaper. Sand all flat surfaces smooth and flat.





Bond basswood siding ends first as pictured. Use white glue or Aleene's tacky glue. Place bead around outside edge and in the center, use a brush to smooth it out evenly. Set siding on and flush bottom and center over sides. Then weigh it down until it is dry, which takes about one hour.

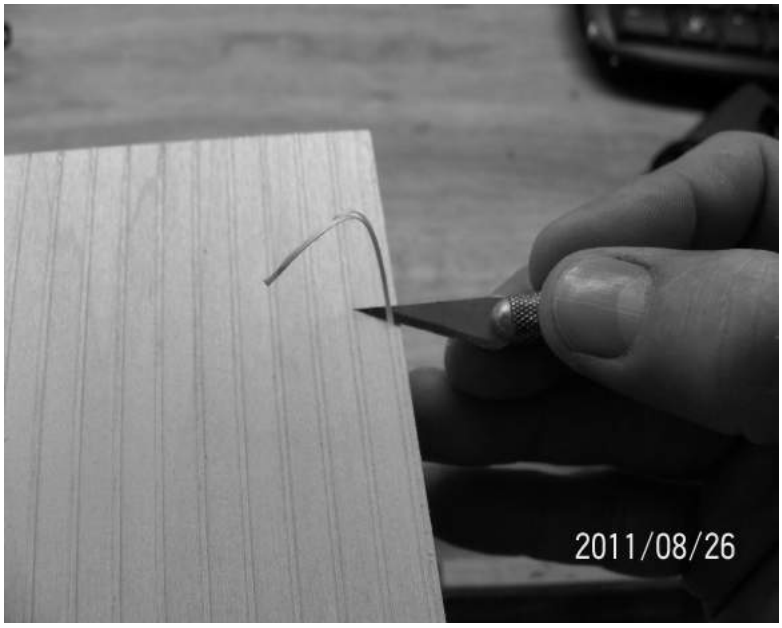
As you see here, use a weight to hold the siding down flat. At the top I used clothes pins to clamp top. Repeat for opposite side. The main thing is to bond siding flat and tight up to the edge. The edge may over hang a little but will be sanded flush before bonding the sides.

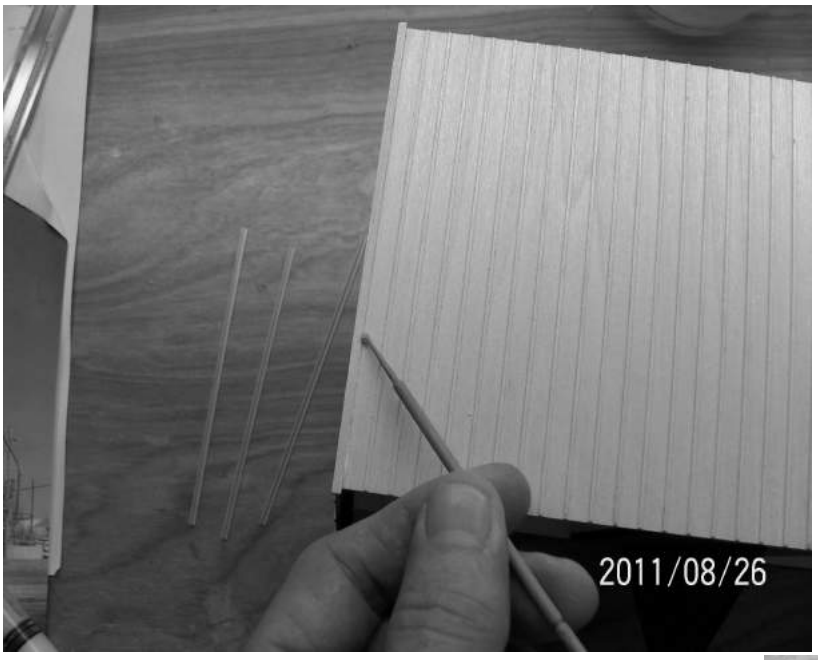


After ends dry, sand sides and bottom flush with tile board. Then clean and test fit sides.

Glue sides, remember to remove tape from back. It was used hold siding together while laser cutting. It is important to keep the same sides matched up. Again flush bottom and center length wise, any excess at the ends is sanded flush after dries. The HO version is one piece.

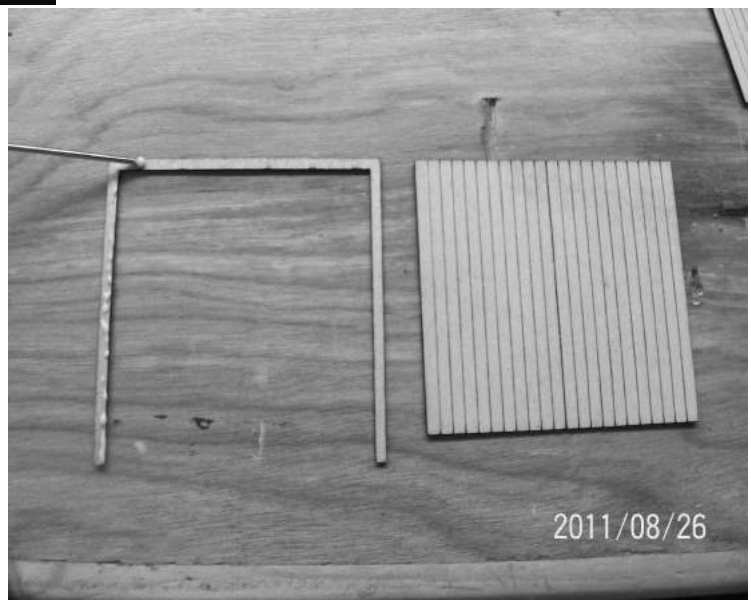
Next at corners of the building test a piece of 3/32” basswood angle. Look in the pack containing strip material. There are 2 sizes - 1/8” angle and the smaller 3/32”. As pictured to the right, you may need to shave batten off of side near corner for angle to fit. Do so with a sharp exacto knife. Cut 3/32” angle and test fit full length of corner. Then cap all four corners with angle.



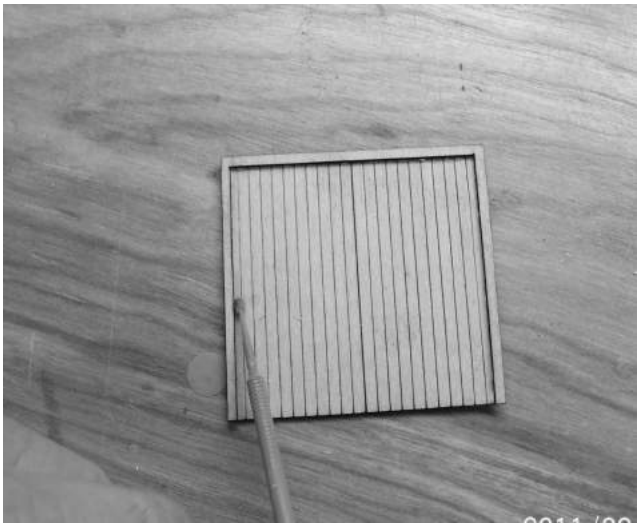


Here you see 3/32” angle being bonded. Use white glue in a syringe w/ needle applicator. Place bead in center of angle and press angle over corner. Clean up any excess glue with a Q-tip.

Build large door at the end. Look on sheet #S-2. below 2 is trim and below 3 is door. Cut tabs and remove, sand edges clean. Test fit trim over the edge of the door. Place small bead of glue on backside of trim and bond to door. Place a flat weight on trim to press tight.



Remove weight after couple of minutes and clean any excess glue with micro Q-tip. When dry, test fit in siding opening.



Once satisfied with fit, bond the door. Use white glue or Aleene's Tacky Glue. Again. clean up any excess glue with a wet Q-tip. Next locateAcess door on sheet S-2, above # 6. Lay out and bond on to raised section of battens as shown to the right. Use white glue to bond.

Next locate sheet S-1, both sides of roof on lower right side of sheet. Cut tabs and sand edges smooth. As you test fit you will notice the scribed top. Bond with this side up, tape peak while glue is wet. Weigh down the roof until glue dries.

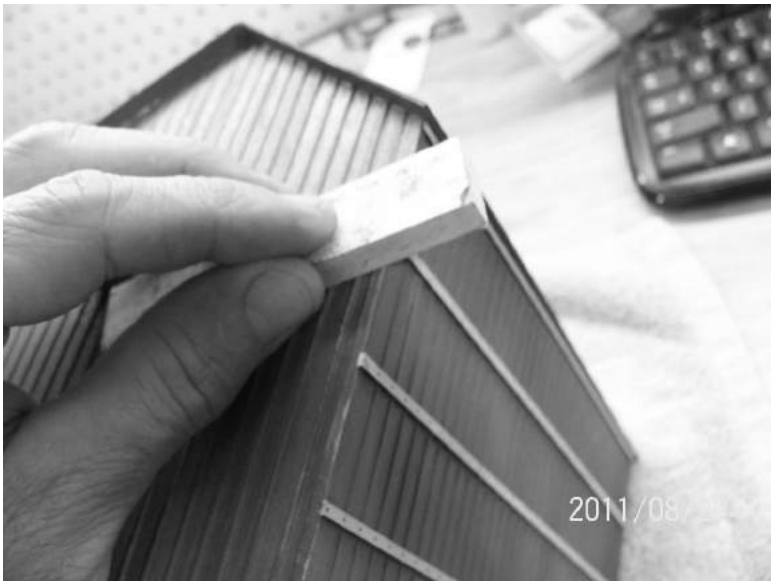
The scribes are used to place roofing material.

Here you see the storage building with roof on and horizontal battens over vertical battens. Before you place these on, it is a good idea to paint a light coat of red and install after paint cures. I recommend to seal basswood siding with floquil glaze thinned 20-30% reducer and sprayed with airbrush. After it has cured, lightly rub with very fine toothbrush to remove any fuzz or defects. While spraying glaze put a coat on the roof to seal it too. Then spray the color you intend. In the pictures I mixed 2 parts caboose red to 1 part reefer orange to obtain the color. It closely matches the real NANTON grain mill in Canada. Just use one light coat of red and then install horizontal battens and vent. Spray the final building.

To install horizontal battens, first remove them from sheet S-2. They are on upper right side of sheet. Install longs first, cut them from sheet and sand edges clean. Cut out the brace gauge just below, you will use this for the spacing of the battens. Start at the bottom and glue the first one flush. It may overhang a little at each end.

Here we see how to use the template. Use a syringe to apply a drop of Aleene's tacky glue on each raised vertical batten. Then set horizontal batten on wet glue and hold down until it tacks.

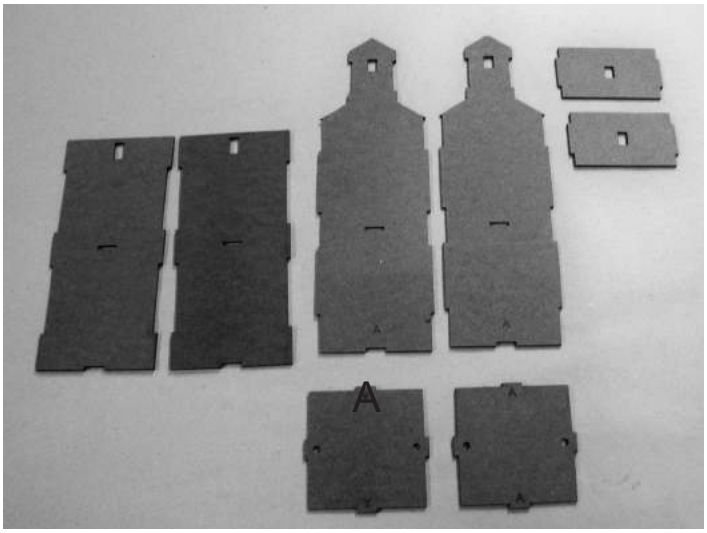
Do this to the top, the last batten is bonded just under the eve. Do the other side the same way.



After the glue dries (in about two hours), sand any overhang to be flush at the ends.

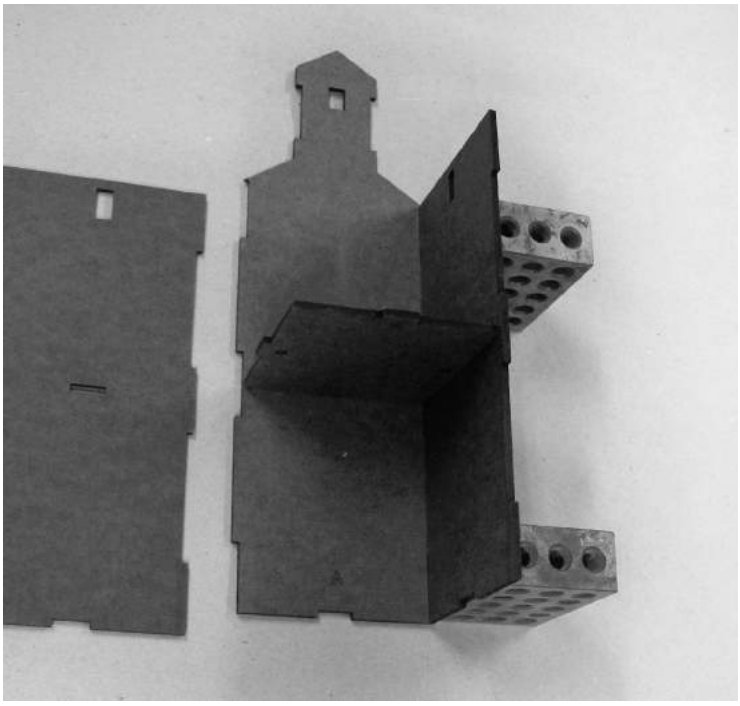
Then bond the battens to the ends. Match them to the sides but still use the template. This will ensure that the battens stay straight.

The front is a matter of cutting the battens to fit up to the door and then using the full length once above the door. The storage building is nearly done, but it still needs a vent in the front, a copula at the top and the roof material placed. These are done after painting.



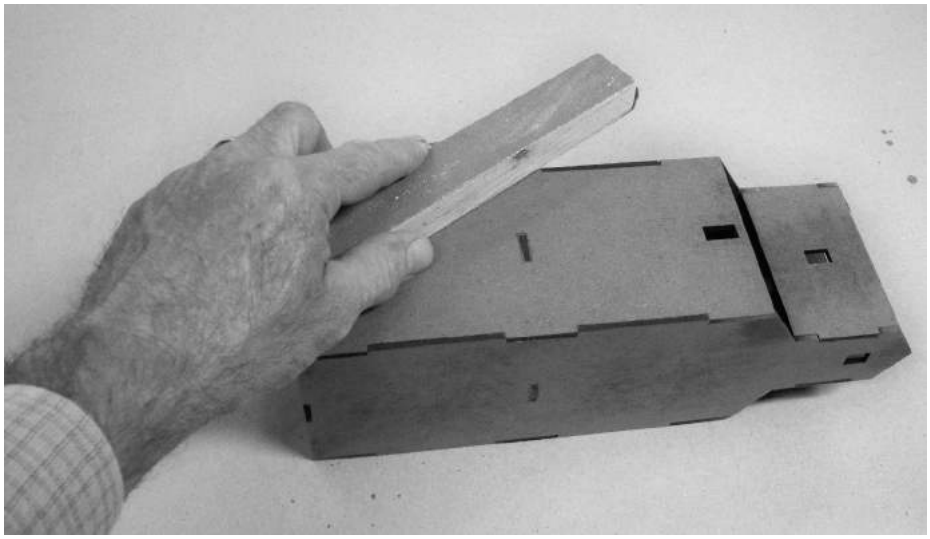
Next, open the two packages to build the tower. Then lay them out and inspect them. Notice that the letter should match to the tall side of the part.

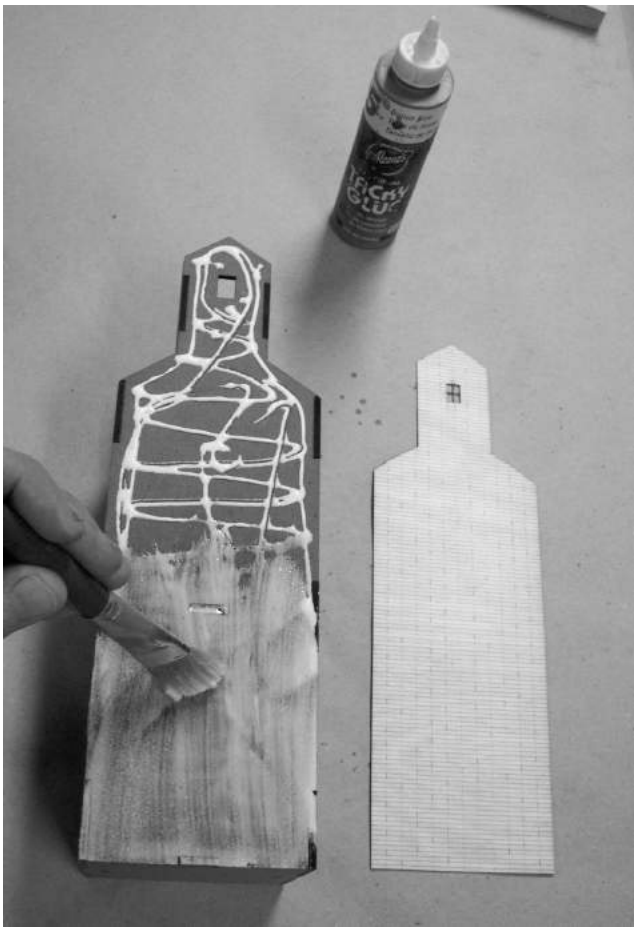
Lay the parts out as pictured. I like using angle plates or 123 blocks because they work well as weights and for squaring up walls. They are not required but very handy to have and they are used for nearly every model in our catalogue. Bond the walls with Aleene's Tacky Glue or CA.



Test fit the last two large walls and then bond. Here you see the use of the angle plates.

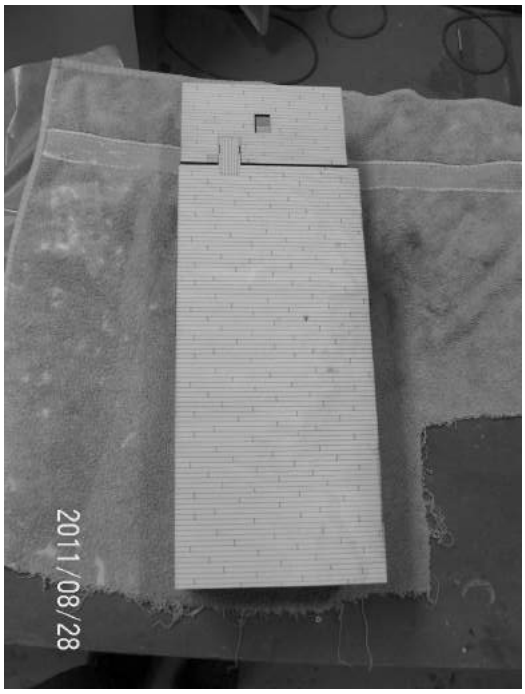
Now bond the last two upper walls. After assembly dries, block sand with 80-100 grit until all surfaces match up and are smooth as pictured below.





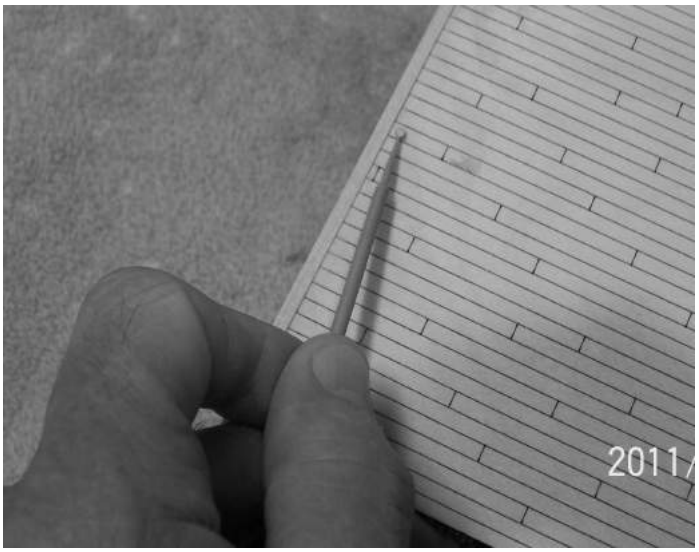
Next bond tall plywood siding as pictured above using Aleenes tacky glue. Use a brush to make it smooth. Align siding on then weigh down on flat surface. When glue dries after about an hour, repeat this process on the other end.

Once both sides are throughly dry, sand any overhang using a block.



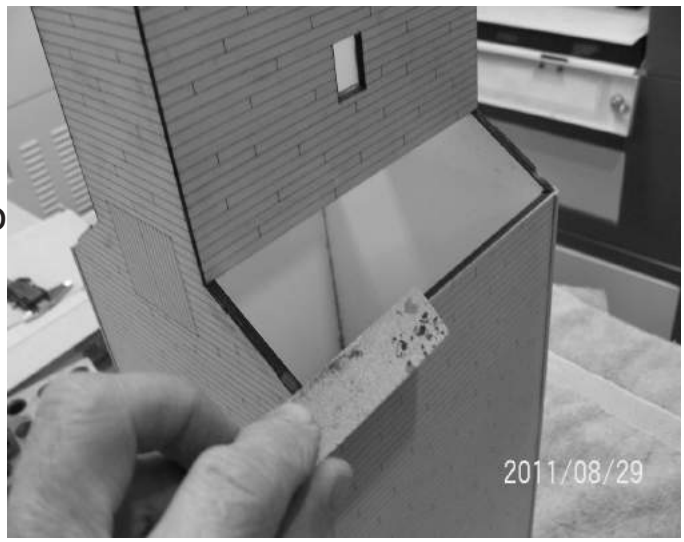
Before bonding side scribed plywood, you need to determine which side you want the storage building. The siding with small rectangular tab at top is the opposite side of storage building. Study pictures of complete building to be positive of this location. Then bond this side first and piece above it.

After all siding dries, block sand edges flush. Then locate 3/32” bass wood angle and cap all exposed corners. Cut the tops to match the angles of roof line. Use a syringe with needle applicator to apply white glue.



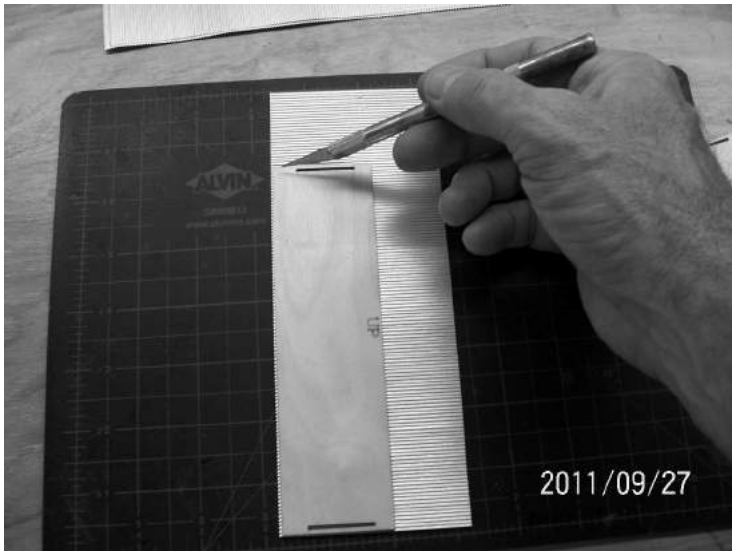
Be sure to clean any excess glue with a damp Q-tip.

Here we see the top edge being flushed up using a sanding block. Do this after angle throughly dries so as not to lift it off.



Next locate roof parts from sheet #S-1. They are four rectangular parts on lower left side. Next to #S-1 is the small roof that goes over door.

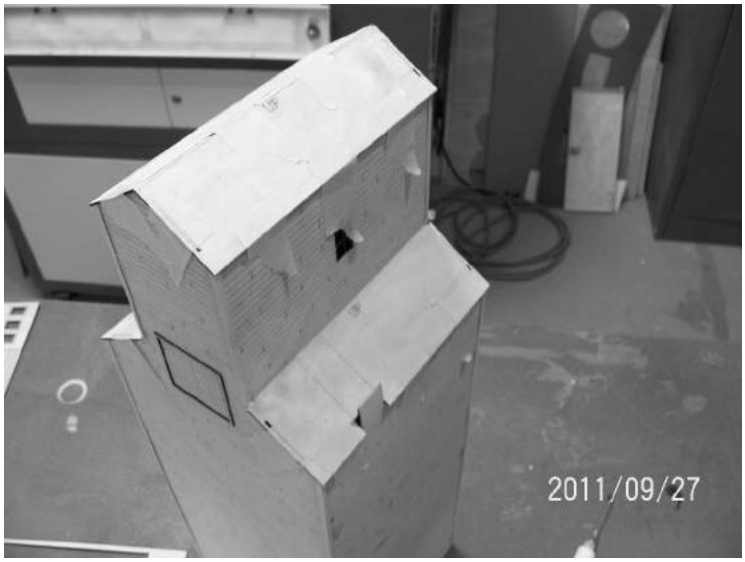
Before bonding, use them as templates to cut aluminum roof parts as pictured to the right. Cut these slightly larger than plywood and set a side.



Here we see plywood roof parts being used as templates. Use the 3 sections of long narrow aluminum from roof pack.

Test fit roof parts, the area as pointed out may need to be trimmed out to fit tight. Also notice word “UP” - this goes toward peak. After prefitting, glue in place with tacky glue and hold down with tape or weights. Always clean up any excess glue to give the piece a finished, professional look.

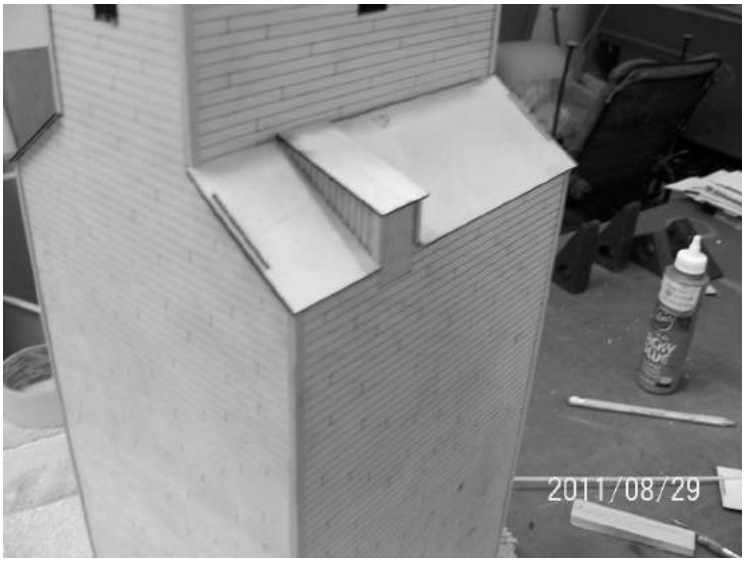
Test fit balance of roof parts and glue in place.



Next after roof dries, bond trim found on sheet S-4. #4 four pieces and #3 two trim parts under peak. These parts may require some fitting. Once satisfied with the fit, glue both sides of the tower in place.

Next trim out window opening found on sheet S-2 part #1 three frames. Apply white glue w/needle applicator, center up and clean any excess glue with a micro q-tip.

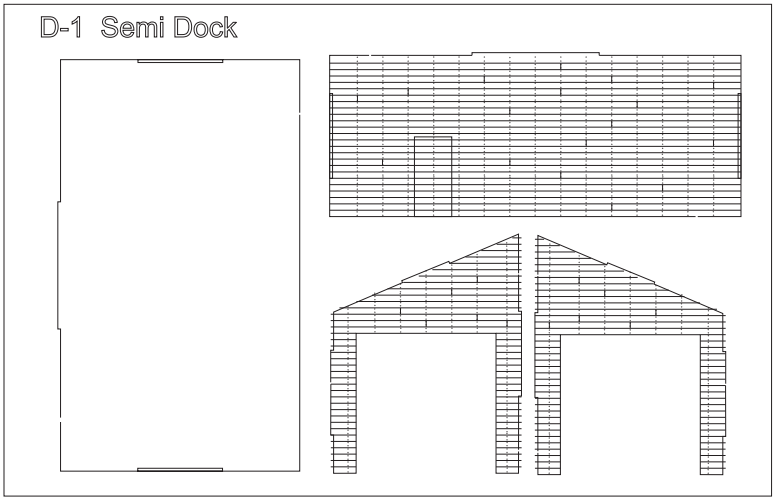
Next build copula on one side of tower. Sides found on sheet S-2 part #8 L&R sides. Test fit and then bond in place. Once dry, trim edge with excess 1/16” basswood.

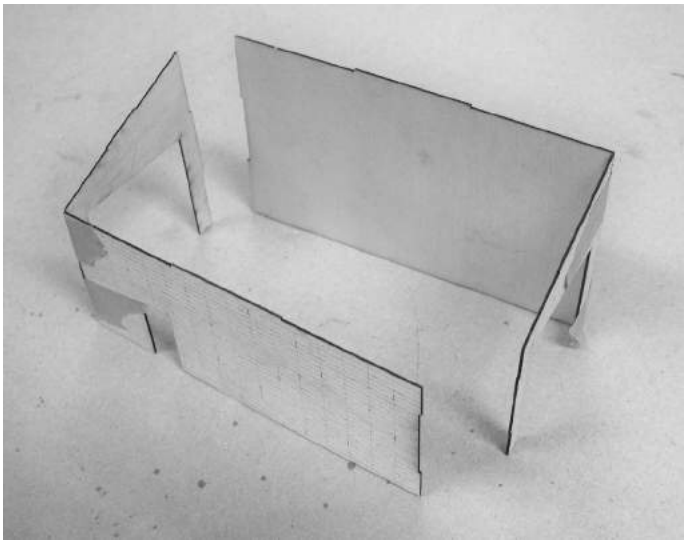


Then cap sides with roof piece found on the S-1 upper left hand corner. Bond door to face found on S-2 part #5.

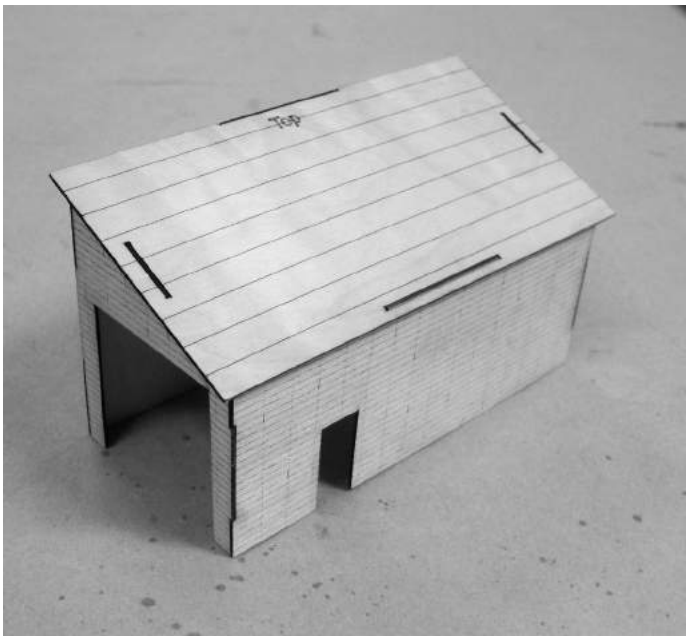
Bond trim ring found on S-2 above #2. Tower is now ready for clean up and sealer.

Next locate parts for semi dock as to pictured to the right. Notice there is no floor part as the earlier two structures. Roof is on S-1 sheet upper right side. The top is scribed for roof sheaving placement later.

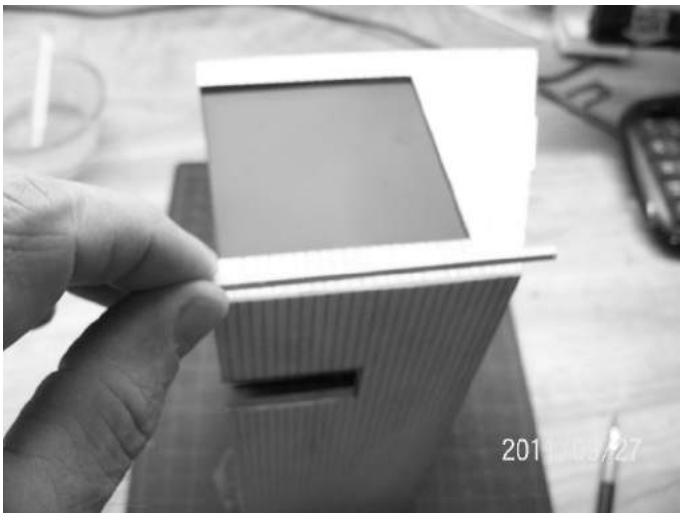




On wax paper, glue ends to sides as pictured. Square up parts with small square until they are dry.

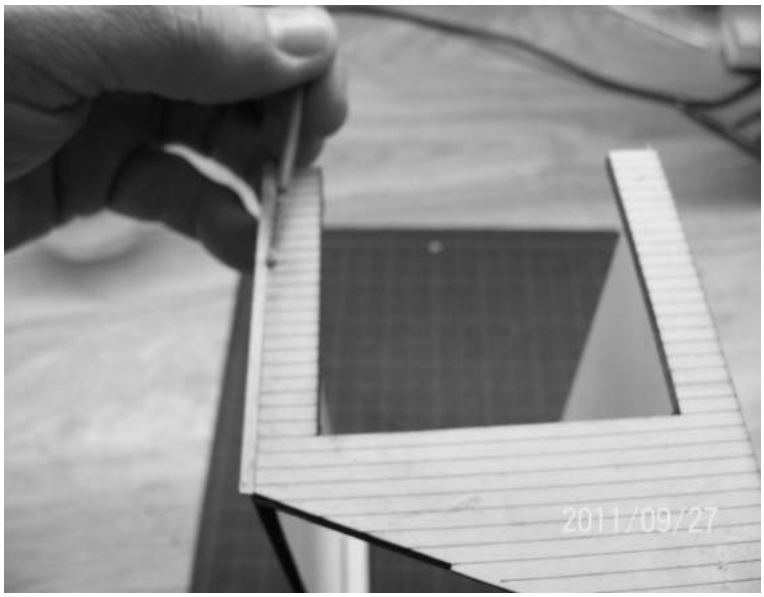


Glue all walls and roof together. Complete assembly as pictured to the.left

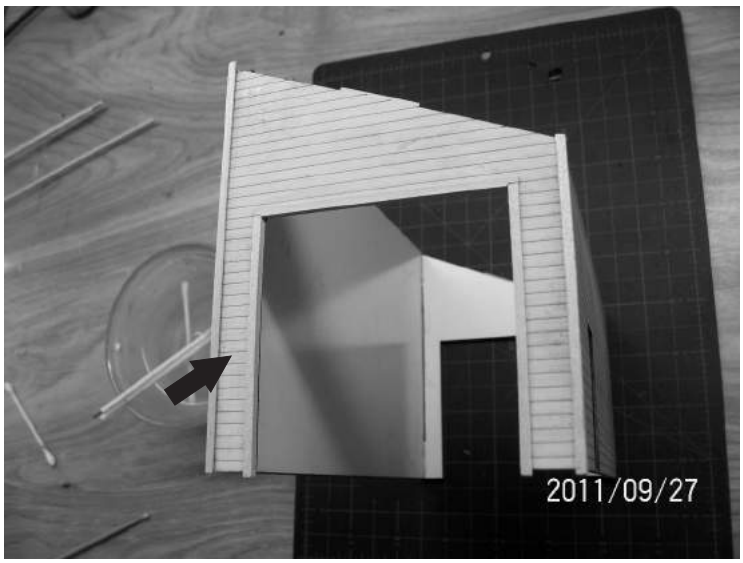


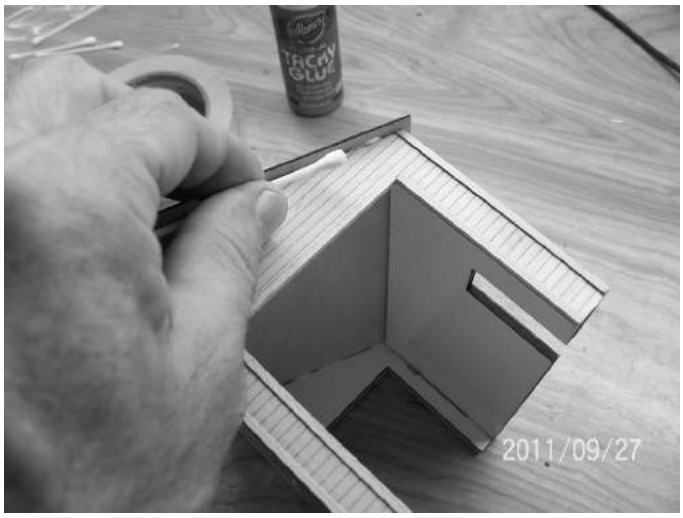
Trim out the 4 vertical corners with 1/16” basswood.

Remember to clean any excess glue with micro q-tip.



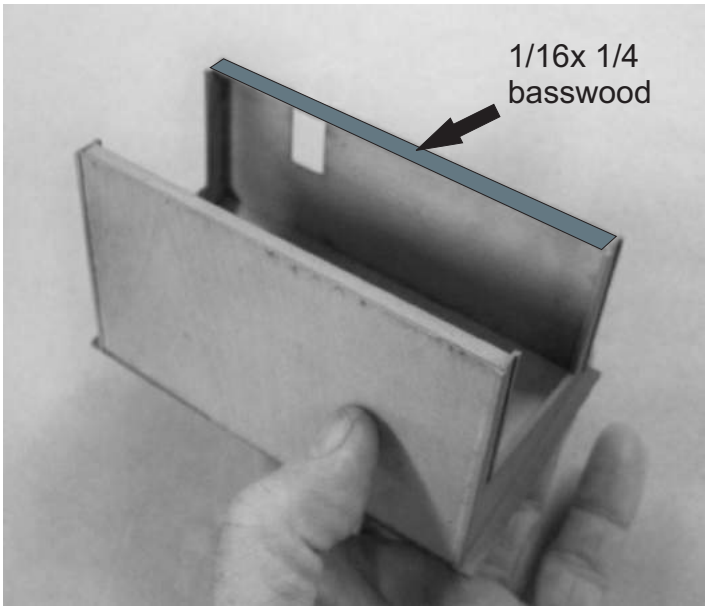
While the outside corners dry, trim out front edges of main doors with 1/16” trim. Notice the roof is not installed in this picture but should be.



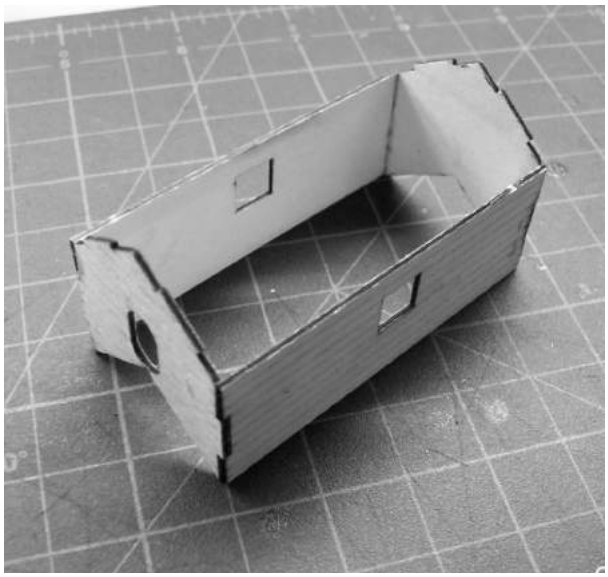


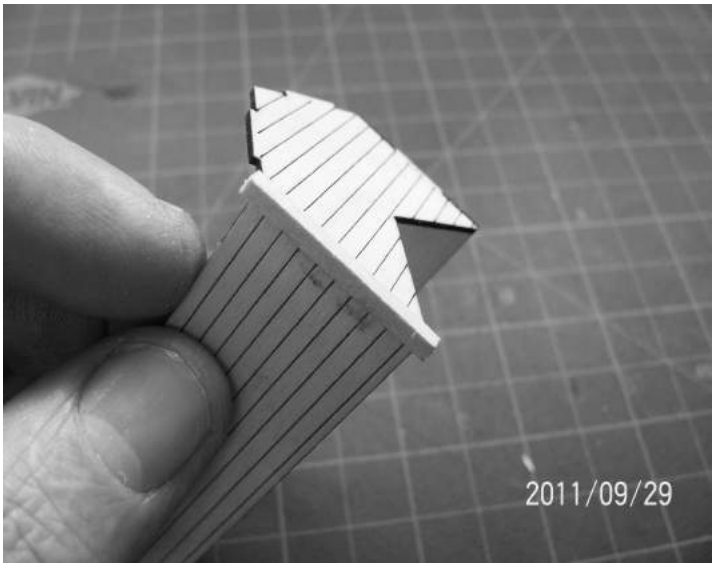
From sheet S-4 part # 1 trim bond under roof edge front and back. This may need to be trimmed before bonding. The semi dock now ready for sealer.

Bond on each long side 1/16” x 1/4 basswood stiffener.



Build Grain Storage Bin Copula. These parts can be found on the upper left corner of the S-1 sheet.





Then trim corners with 1/16 basswood angle. After it dries, trim excess to match top and bottom angles.

Next bond the roof to walls.

The 3 main building structures are built . The next step is to paint before adding details. First, inspect all walls and trim for any defects and complete repairs.

Then clean the structure with very fine toothbrush in the direction of the wood grain to remove any fuzz or burs. Before painting, I like to seal wood with floquil glaze thinned 30% and air brush it on. After it dries overnight rub it with again with a toothbrush.

As a alternative to floquil glaze I found a product at Home Depot called Zinsser Bulls Eye Seal Coat (Universal Sanding Sealer). This product can be thinned with isopropyl rubbing alcohol. Reduce 30-35% with alcohol and apply lightly to wood surfaces with a fine brush in the direction of the wood grain. Be careful not apply too much as you want to keep the wood grain detail. As above after 24 hours, rub it with a toothbrush in the direction of grain and clean before painting.

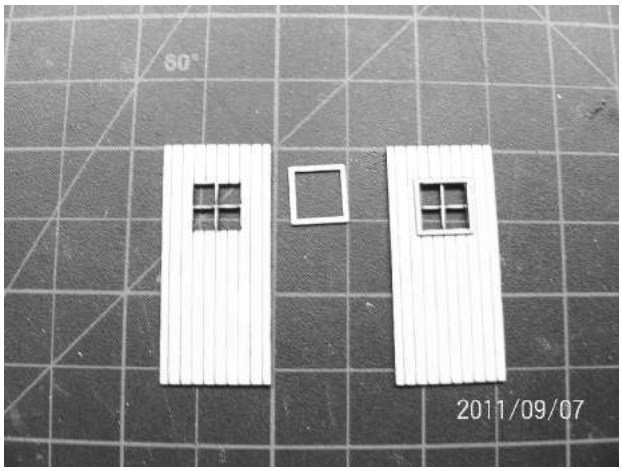
While the building dries, locate adhesive roof material and paint. I found 99 cent a can paint from Home Depot works great. I used flat black enamel, spray 3-4 light coats for even cover. Then I air brush some roof brown, grey, and some light spots in silver (all floquil colors). When roof is installed it makes for a nice weathered effect. Spray the small trim sheets at the same time.

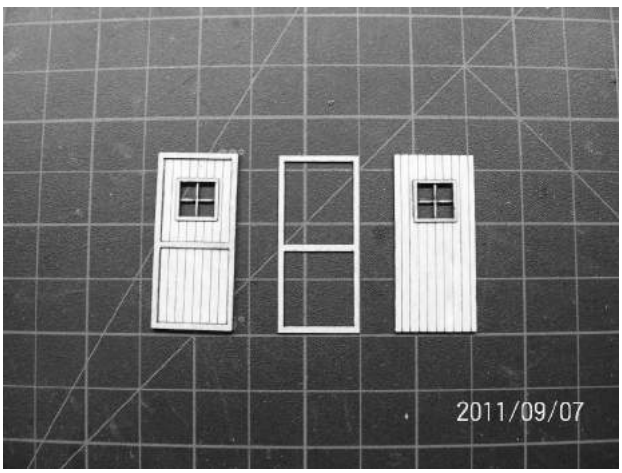
While spraying roof parts
test fit aluminum parts for the roof. Make any corrections needed and mark the back of the part so that you remember which one goes where.
If you are building the Nanton version of kit, I used Roof color Wisc. Central Gold. The Purina Chow is flat black and then weathered with roof brown and gray.

When ready to spray building:
For the red used in the manual I mixed 2 parts caboose red to 1 part reefer orange thinned about ½ part. For the O scale model this part were 1 oz bottles. Make sure that your model is clean and free of dust before spraying. I sprayed right on the sealed wood but would recommend a light coat of grey or red primer next time. This will take 3-4 coats. Take your time and inspect between each coat for dirt and fuzz and make repairs as you proceed. After the model dries overnight, used the NANTON stencil for lettering before adding final details.

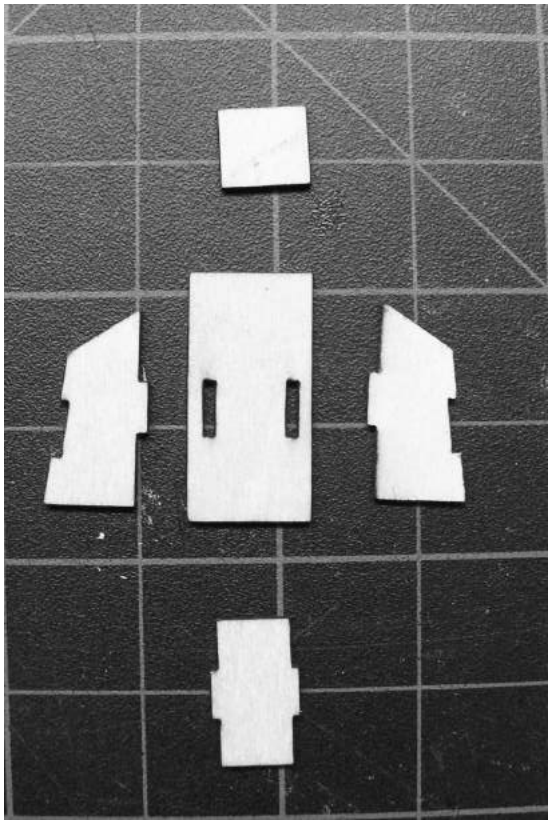
If you are painting the Purina Chow, use spray masks supplied.

Here stencil is located correctly. Cover the outside of your model with plastic to keep over spray off finished model. Air brush white and push down stencil tight while spraying.





Next locate slide doors and parts to build slide doors. Sheet S-3 part# 2 are doors, and hanger #6. Trim is on sheet S-4 # 2 and 5. Bond the small square around the window. Bond the frame to outside of door and set a side to spray later.



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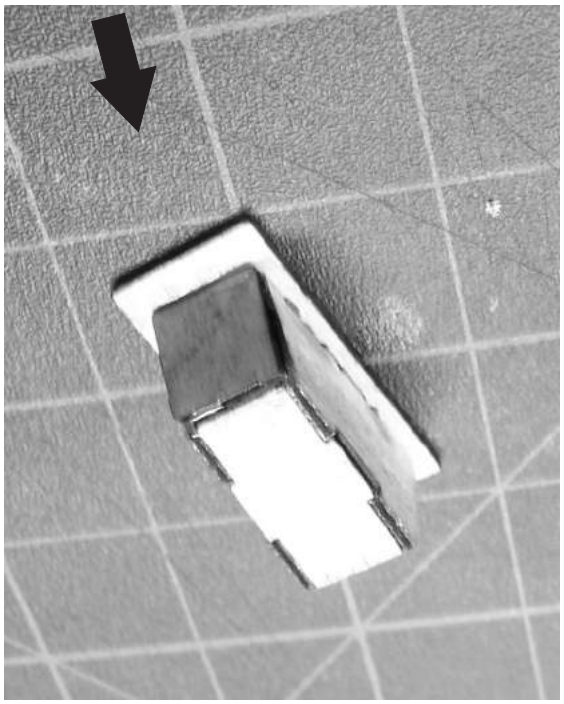


3

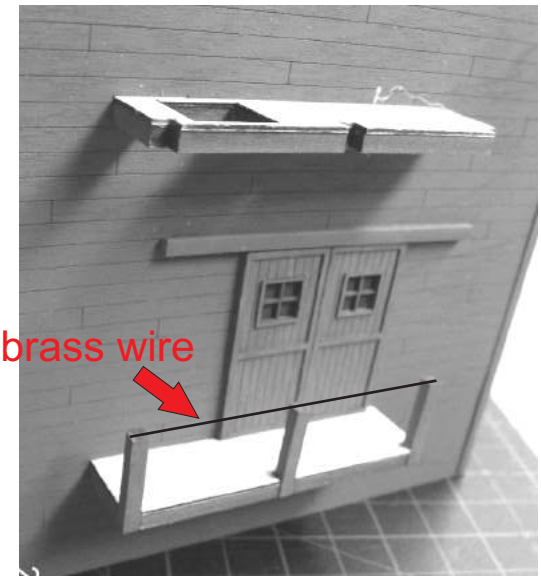
Next build the shoot box that is located at the top of the tower. Locate parts on sheet S-3 parts #4. Lay out as picture 1 demonstrates. Check surfaces and edges, lightly sand to smooth.

Then bond two side parts as shown in picture 2, notice on the back of the part there are notches to show where the shoot tube is inserted.

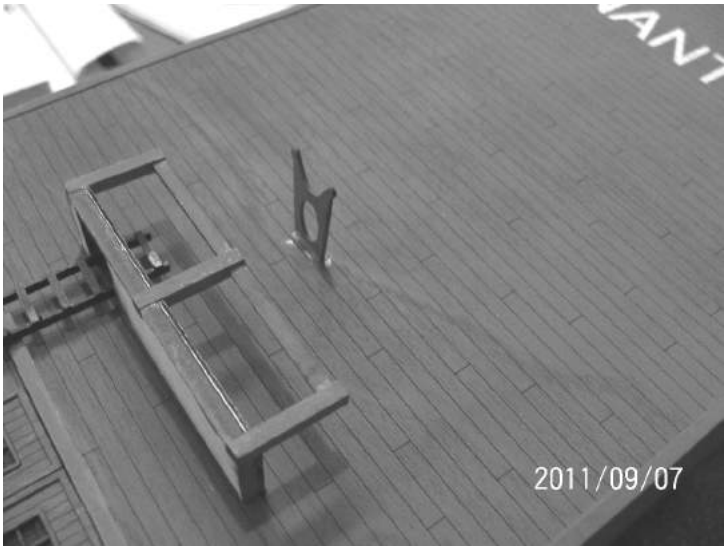
Then as picture 3 demonstrates, bond face and small square piece to the top. I used CA to bond here, then round corners and fill any defects with model putty and sand smooth. When complete, set a side to be painted.

Next locate the styrene tube and cut 2 lengths 4 1/4” long. Locate part # 3 from sheet S-2, locate 6 small post for railing post. Locate basswood profile of vent, cut 6 parts 5/16” long .

Sand edge smooth and remove fuzz. The wood parts, doors, and shoot box should be sealed before painting. Then paint all these parts and let them set over night before final assembly or building. As the picture below to the left shows, the scribed decking is glued to top of 1/16” basswood. Brush the edges first before bonding the decking. On the HO model I included 2- pieces of .020 brass wire for the upper railing of platform post.



Assemble platforms as pictured to left

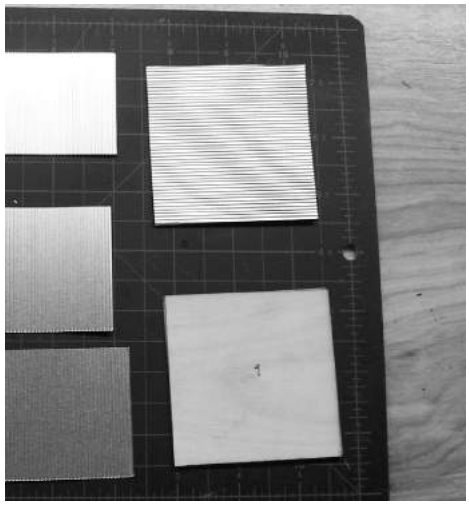


Assemble hand rails from sheet S-3 #s as pictured to right. Attach shoot support part#3 from sheet S-2.

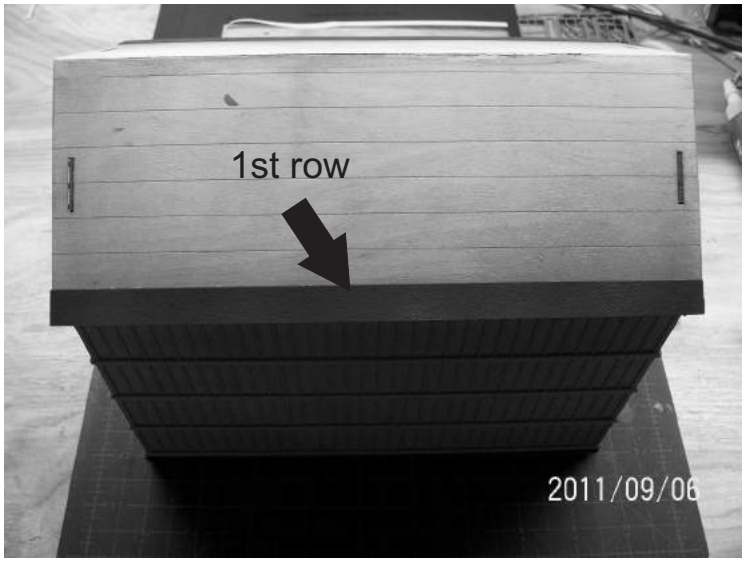
Paint styrene ladder black and attach as picture to left.

Next, bond aluminum to the tower roof. Set the tower at an angle so the roof is flat, you will weigh down the corrugated material until the glue dries. I used Aleene's tacky glue or epoxy. The picture below shows the glue being applied. Center up the sheeting and weight it down until dry. Glue all tower roof sections this way.

I did not get a good picture of the large door assembly for semi dock. But part # 1 from sheet S-1 is inserted behind openings to make the door. Bond the square corrugated aluminum to make up the door. After dry, sand flush then test in open to make sure that it fits. Both ends are done this way. Glue into opening.



Next peel and stick roofing to storage building. First clean roof of any dust or dirt. The are 2 sheets that have been painted. Roofing storage building does complete roof here. But to start you need the shim tab on the other sheet to start, it is the two narrow strips below the cap piece at the bottom of the sheet. Peel and apply to bottom front edge.



Then start with first row mark 1st from storage building sheet. Use scribes as guides and work your way up to the peak. Once both sides are complete, use cap at the peak.

The roof on copula and semi dock are completed same way. Study pictures and roof sheet and complete. If sheeting does not pull clean, some light scribing with #11 blade may need to be done. The copula is bonded to the top center of roof of Storage building. Also not covered in detail is vents but they should be painted and ready to install. Study pictures and place in approx area. The grain shoot box built from page 25 also should be painted and ready to be installed on front side of tower above sliding doors. The top of box is approx 1” down from bottom of the large door at the top. The shoot tube slides inside of the box and rests in the support bracket just above the upper platform. The small piece of black tubing is attached to end of shoot tube. To finish up, the bases milled from MDF board need the 3/16 wood doles inserted in holes, chamber tops so building slides on easier. I sealed the base and ramp parts with wood sealer. Sand and finish smooth, this may require a few coats of sealer and sanding. Then paint parts. I found Rust-oleum color Camouflage #1917 KHAKI at Home Depot. This looks great to simulate concrete base after a little weathering. Assemble parts on base and you are done.