

# Tools and Tips:

As you build instructions will show in my many picture manual how to assemble. You can use your own methods as you desire, my results are very good. A smooth, flat work surface is very important and the more space the better.

The photo on left is basic tools needed:

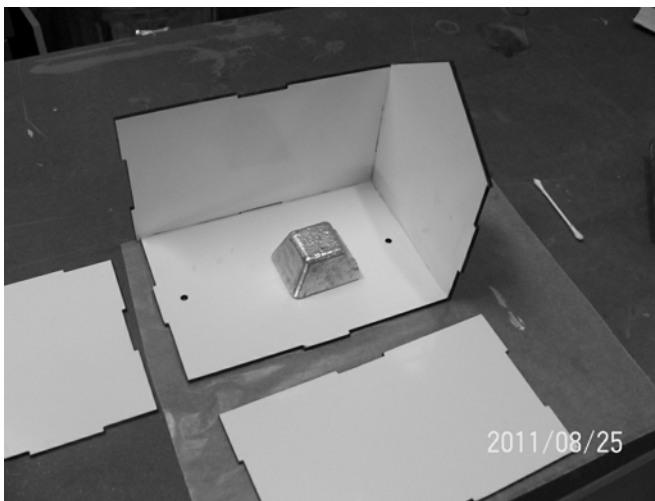
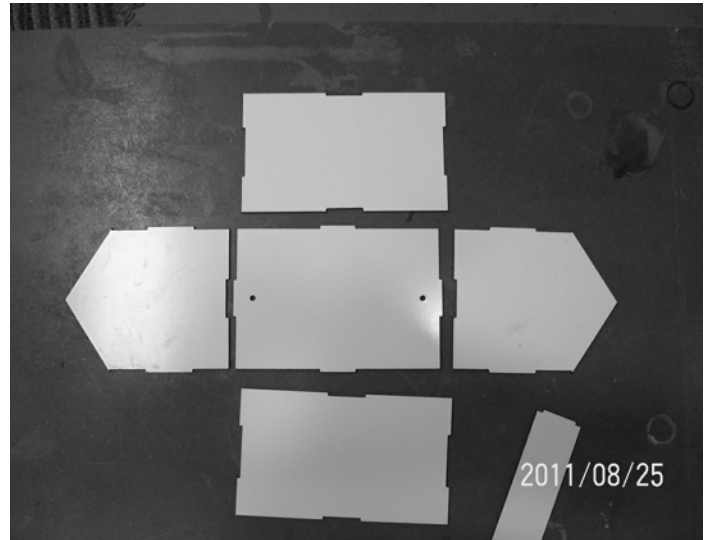
- A square and angle plates, also I use 123 blocks both to square and use as weights while glued parts dry.
- Hobby knives and plenty of # 11 blades
- While majority if not all parts are laser cut some of kits will need parts cut. A zona saw & miter is handy as also a Chopper.
- A assortment of sanding blocks a must to touch up parts and make perfect fits.
- For glues, CA (cyanoacrylate and quick set) white glue, I like Aleene's Tacky Glue. And most important how you apply the glue, not to much but enough to make strong bond. Using syringes for water base glues and needle point applicators on CA a must.
- For clean up q-tips or micro tip brushes work great to clean excess glue.

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

For painting will depend on materials but for wood best to not use water base paints. For best results use Floquil solvent-based enamel. Apply with air brush is best but brushing works also. I will make suggestions when to paint and colors I used for model built. The important thing is to take your time, test fit parts, look over photos before you make the final bond. If ever not sure feel free to contact me for help my advice.

# Nanton Grain Mill Assembly

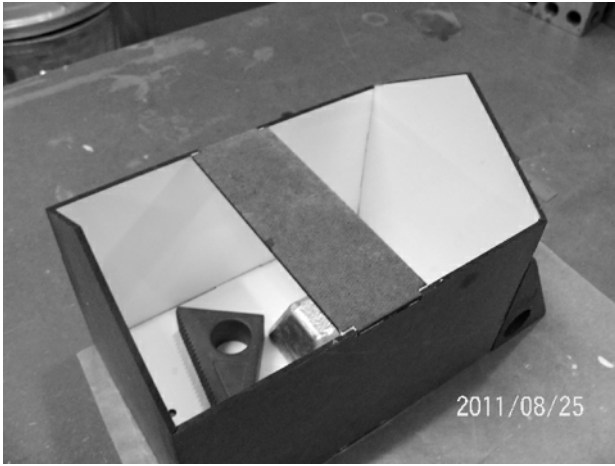
Locate package for assembling storage building. These are cut from 1/8" masonite. Inspect and lightly sand edges where it will be bonded.



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

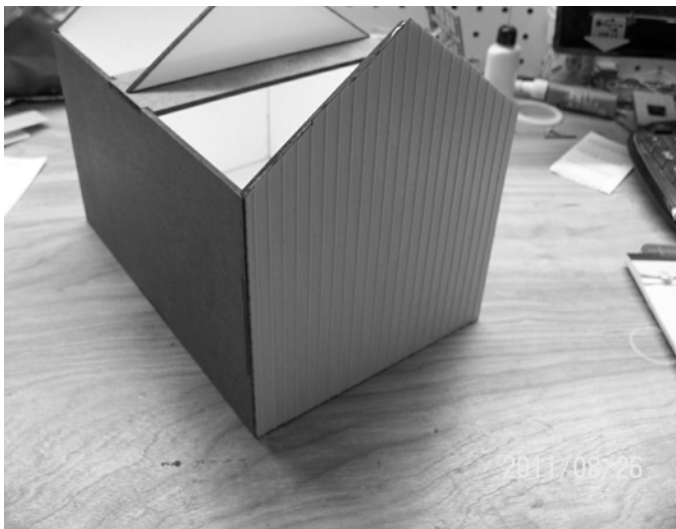
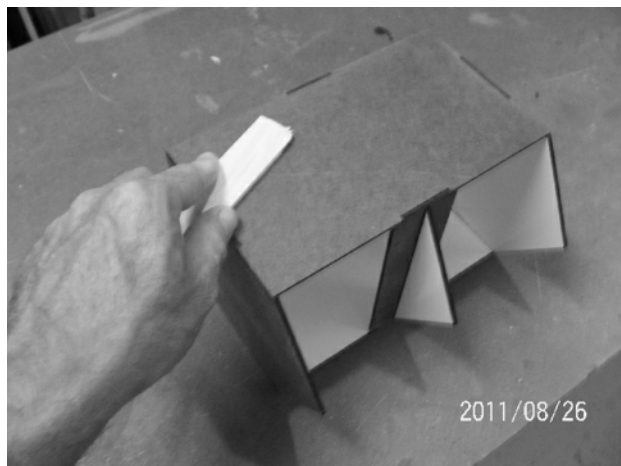
After first two walls set up lay out next wall as pictured to right. Test fit then glue in place.





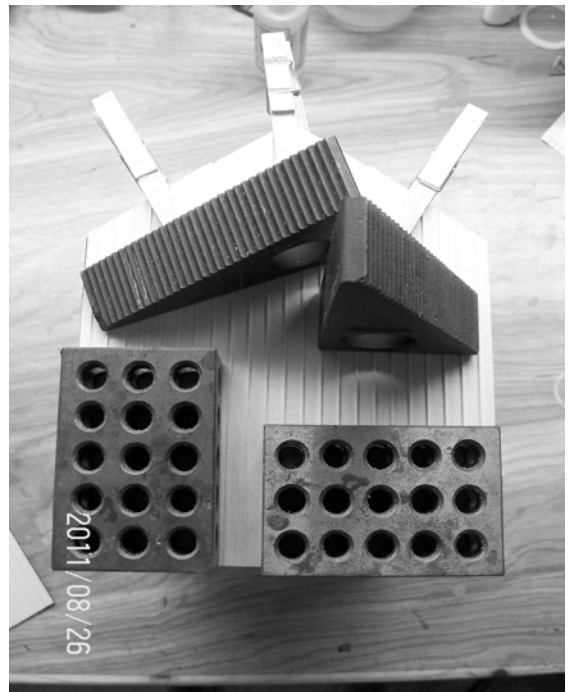
Then bond upper support and after tacks add roof center truss on top of support.

After main structure dries completely sand with sanding block 80-150 grit Sand all flat surfaces smooth and flat.



Then bond basswood siding ends first as pictured. Use white glue or I use Aleenes tacky glue. Place bead around outside edge and center, use a brush to smooth out evenly. Set siding on and flush bottom and center over sides. Then weight down till dry about one hour.

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



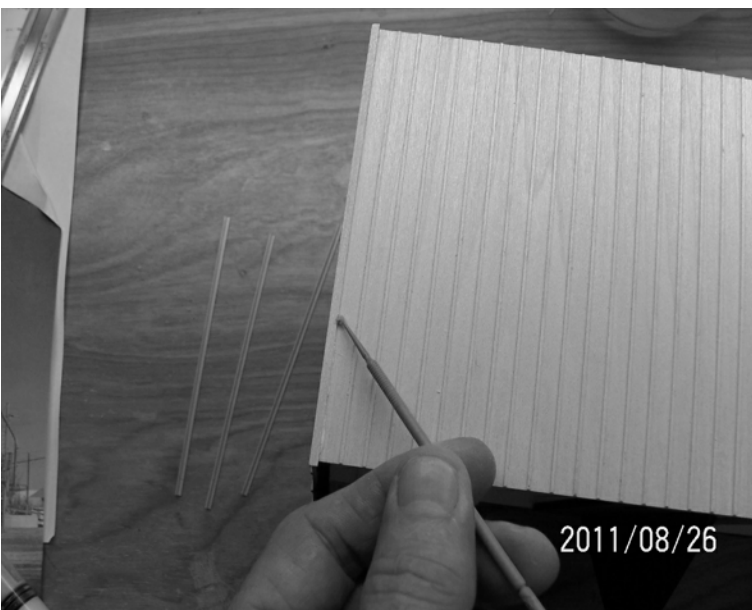
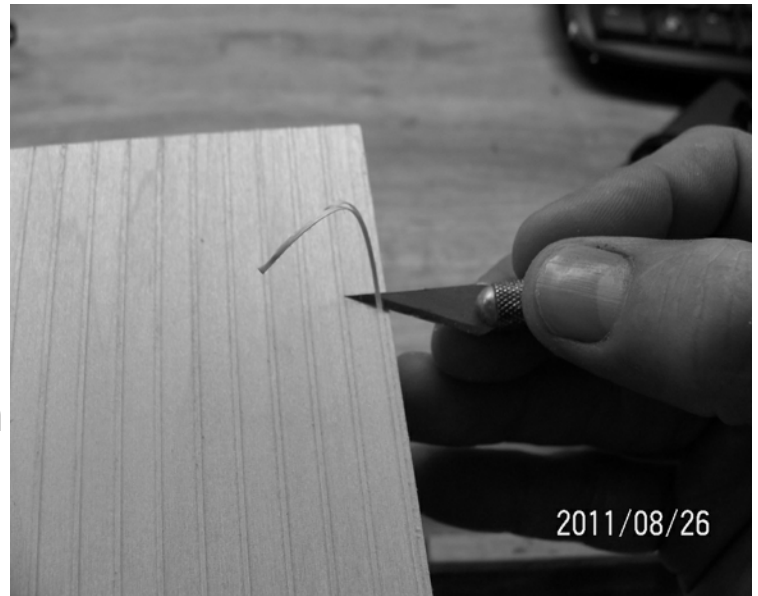
Next after ends dried sand sides and bottom flush with tile board. Then clean and test fit sides.

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



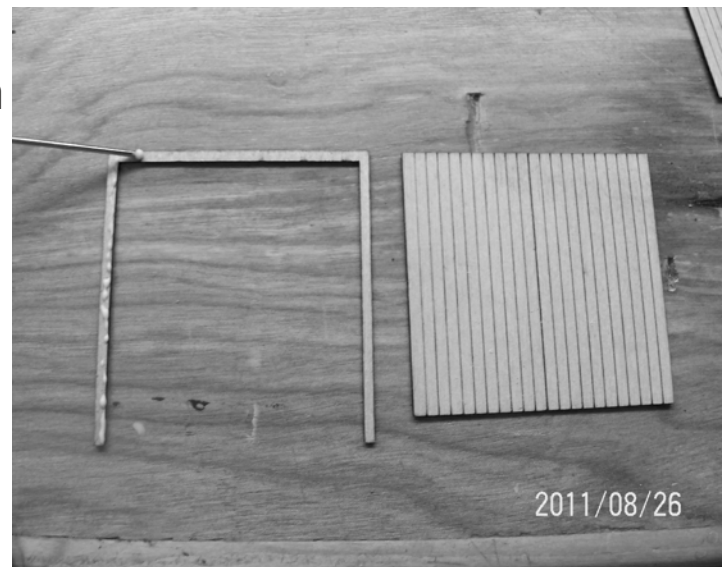


Next at corners of building test a piece 3/32" basswood angle. Look in pack containing strip material. There are 2 sizes 1/8" angle and the smaller 3/32". As picture to right you may need to shave batten off of side near corner for angle to fit. Do so with sharp x-axcto. Cut 3/32" angle test fit full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

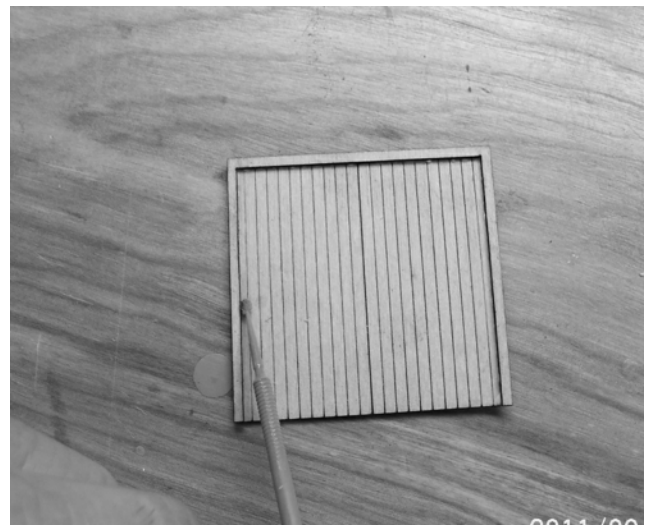


Here you see 3/32" angle being bonded, use white glue in syringe w/ needle applicator. Place bead in center of angle and press angle over corner, if any excess glue clean with wet Q-tip/.

Build large door at end. Look on sheet #S-2. below 2 is trim and below 3 is door. Cut taps and remove, sand edges clean. Test fit trim over edge of door. Place small bead of door 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 door, white glue or Aleenes tacky. Again any excess glue clean up with wet Q-tip. Next locate on sheet S-2, above # 6 Access door and locate as picture to right. Bond on to raised section of battens white glue.

Next locate sheet S-5, this can be found in package with roofing material. This is both sides of roof, cut tabs and sand edges smooth. As you test fit you will notch letter T bond with this side at top (peak). Scribe sides up I tape peak while glue is wet weight down roof till glue dries.



Here you see storage building with roof on and horizontal battens over vertical battens. But before you place these on it's a good idea to paint a light coat of red then install after paint cures. I recommend to seal basswood siding with floquil glaze thinned 20-30% reducer and sprayed with air brush. After cures lightly rub with very fine tooth brush to remove any fuze or defects. Also while spraying glaze put a coat on roof to seal. Then spray color you intend. In pictures I mixed 2 parts caboose red to 1 part reefer orange to obtain the color.(Floquil) It closely matches the real NANTON grain mill in Canada. Again just one light coat of red then install horizontal battens and vent the final spray building.



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



Here we see how to use template and using syringe to apply a drop aleenes tacky on each raised vertical batten. Then set horizontal batten on wet glue hold down till tacks. Then move up to next batten. Do this to top, the last batten is bond tight under eve. Do the other side same way.



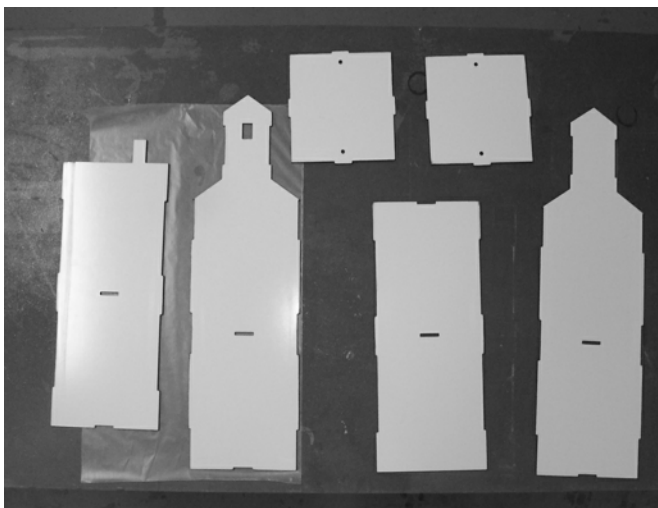
After glue dries 2 hrs sand any over hang flush at ends.

Then bond battens to ends, match to sides but still use template. This will insure battens stay straight.



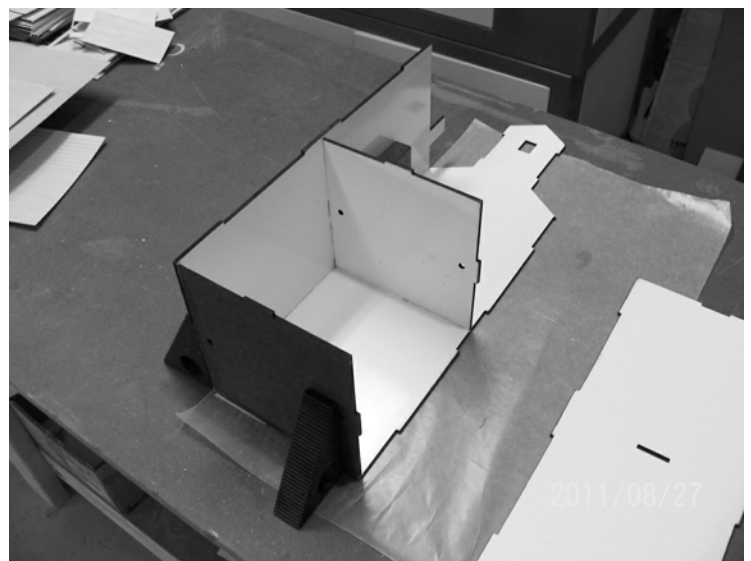


The front is matter of cutting battens to fit up to door then using full length once above door. Basically storage building near done, but still needs vent in front, copula at top and roof material placed. But these are done after painted from here.



Next open the two packages to build the tower. Then layout and inspect, the production ones are made symmetrical and slightly different than pictured. When you glue siding more attention will be needed to placement for it will decide which side storage building will set.

Layout parts as pictured, you may see a tang in picture of upper left wall. Your parts will not have this but will have window openings and slot for grain shoot. I have many angle plates and like to use them for weights and squaring up walls. Its not required but very handy to have and helps me work much faster. Bond assembly with white glue or Aleenes tacky glue.



Test fit last two large walls then bond. Here you see the use of angle plates. And I use mostly Aleenes tacky glue.



Now bond last two upper walls. After assembly dries block sand with 100-150grit till all surfaces match up and smooth.

Next bond tall plywood siding as pictured to right. Weight down till glue dries then bond opposite side.



Once both sides thoroughly dry block sand any over hang.



Next before bonding side scribed plywood you need to determine which side you want 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.



Here you see glue being applied for siding, then smooth out with small brush. Then apply siding and weight down, do same for above part. After dries bond opposite side same way.



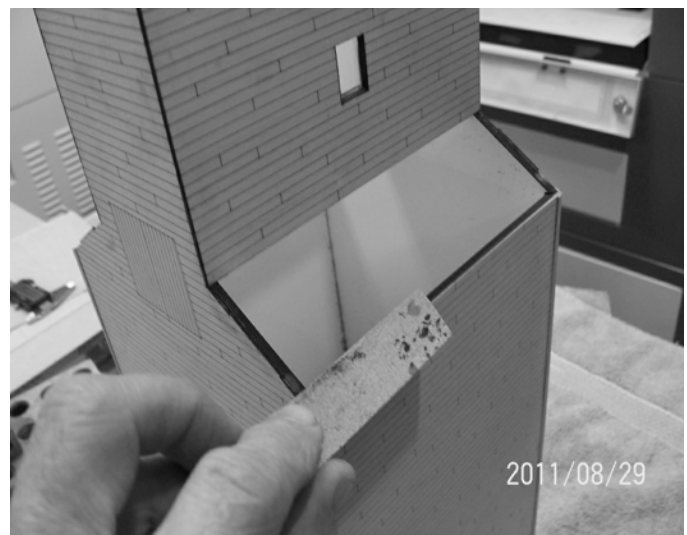


After all siding dries block sand edges flush. Then locate 1/8" bass wood angle and cap all exposed corners. Cut the tops to match the angles of roof line.



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

Here we see top edge being flushed up sanding block. Do this after angle thoroughly dries so not to lift it off.





Next locate roof parts from sheet #S-1 they are four large parts. Before bonding use them as templates to cut aluminum roof parts as pictured to left. Cut these slightly larger than plywood and set a side.

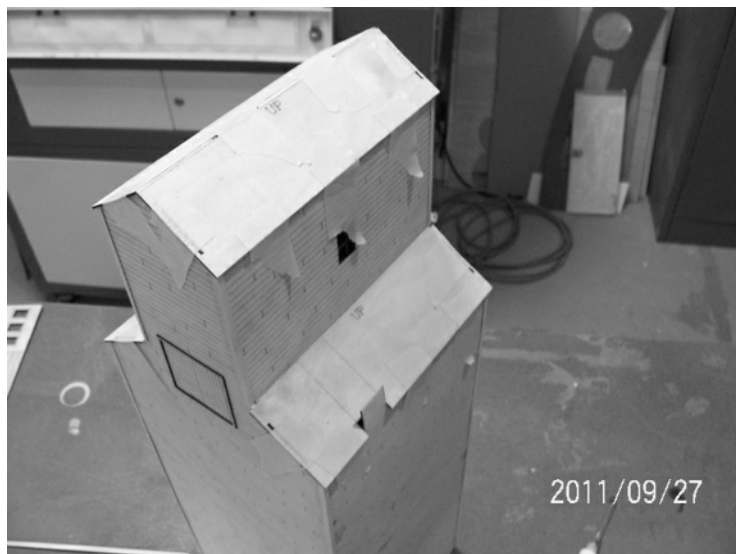


Here we see plywood roof parts being used as templates.

Test fit roof parts, the area as pointed out may need to be trimmed out to fit tight. Also notice words UP this is top of roof section. After good fit glue in place with tacky glue and hold down with tape.



Test fit balance of roof parts and glue in place.



Next after roof dries bond trim found on sheet S-4 part #4 four pieces. And on sheet S-2 part #7 two trim parts. These parts may require some fitting then glue in place both sides of tower .

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



Next build copula on one side of tower. Sides found on sheet S-2 part #8 L&R sides. Test fit then bond in place. Once dry trim edge with excess 3/32" basswood.



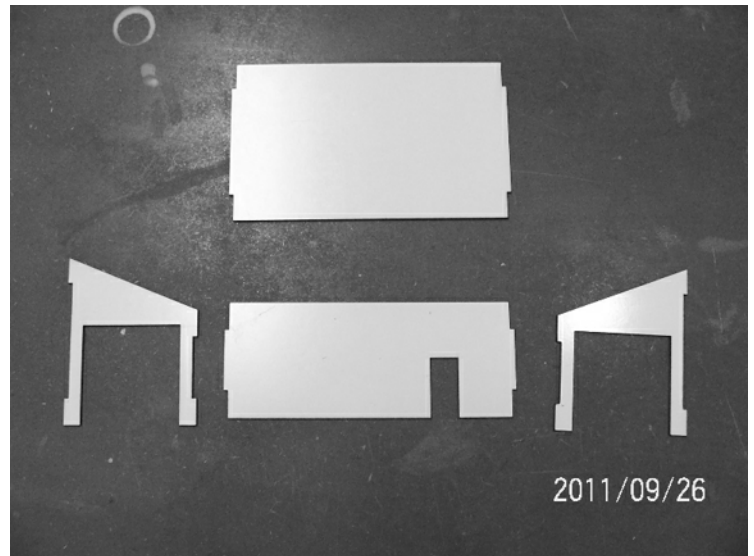
Then cap sides with roof piece found on S-1 upper left hand corner. Then bond door to face found on S-2 part #5.

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 picture to right. Notice there is no floor part as early two structures.



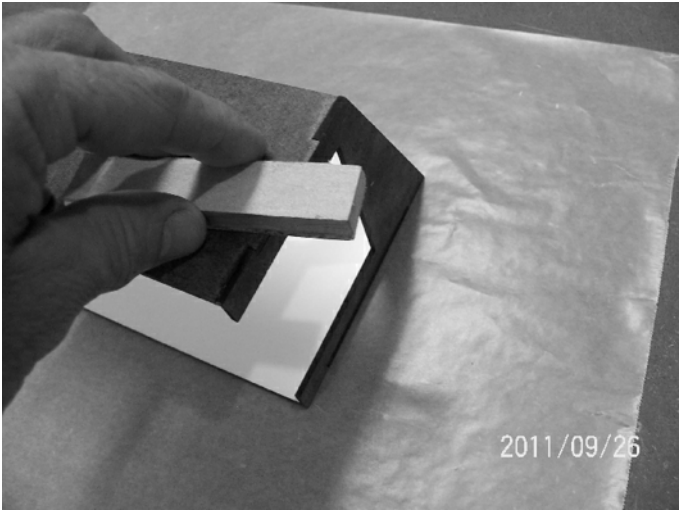
On wax paper I like to glue a end wall one to each side as pictured. Square up parts with small square till dry.

Then glue all walls together to complete assembly as pictured to right.





Once completely dry sand all edges flush.

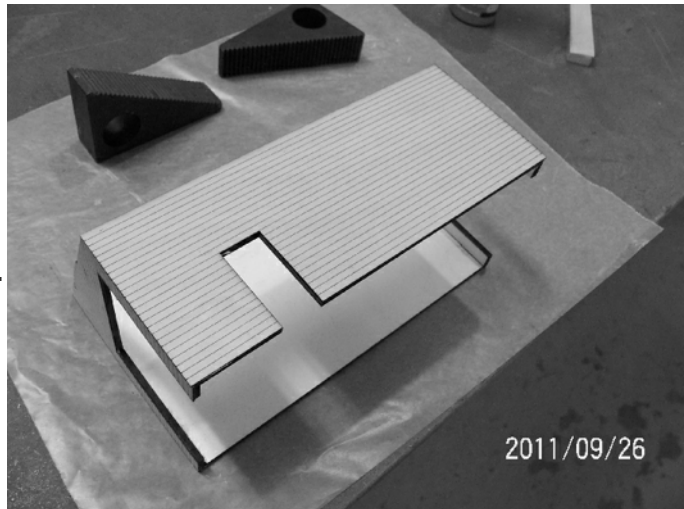


Then bond scribed plywood ends centering up on face both ends.

Once faces dry sand edges flush.

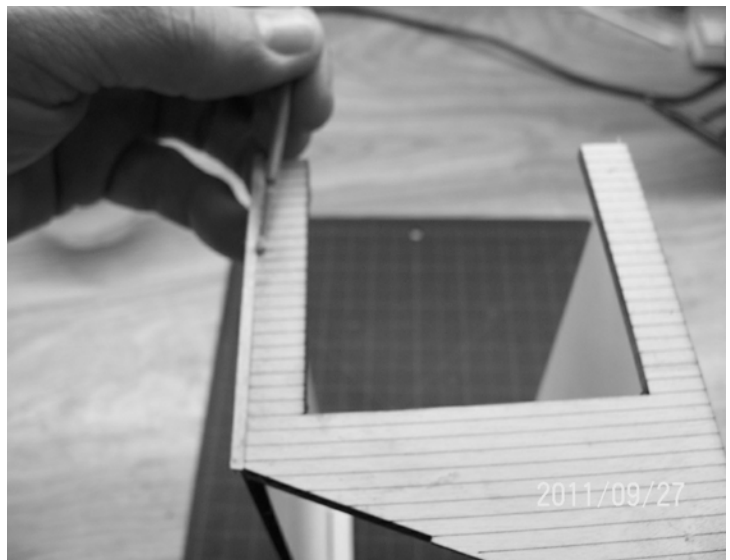


Then bond plywood siding on short height side. The tall side goes against storage building and requires no siding.



After siding dries sand any over hang flush the bond  $\frac{3}{32}$ " basswood angle on all four outside corners. Let over hand at top and bottom then sand flush once dries.

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



While outside corners dry trim out front edges of main doors also with 3/32" trim. Notice top of outside corner slightly long trim and sand these flush once dry.

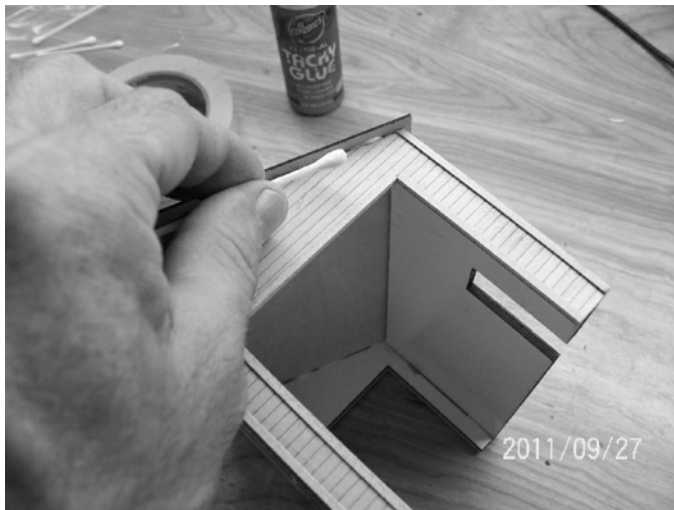


From sheet S-3 part #5 cut door parts out and assemble. I use a flat weight after gluing edge of trim and weight down flat. Install in side opening once dry.

Here we see trim being sanded flush once dry. Copy same roof angles.

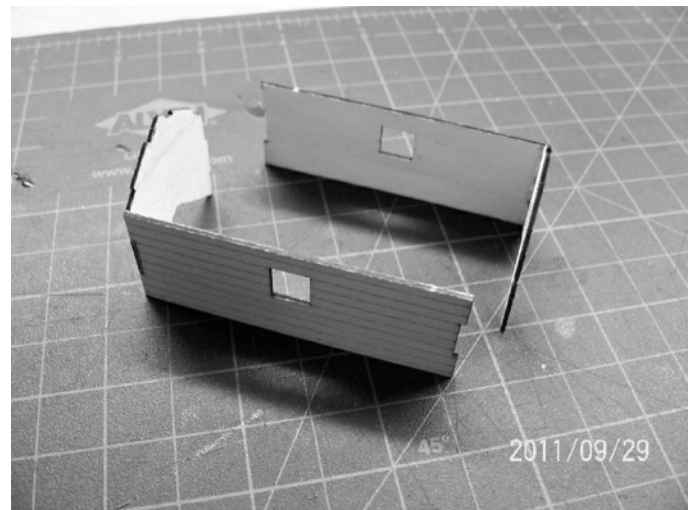


Next locate roof and test fit then bond with aleenes tacky or white glue. Tape down till dry.



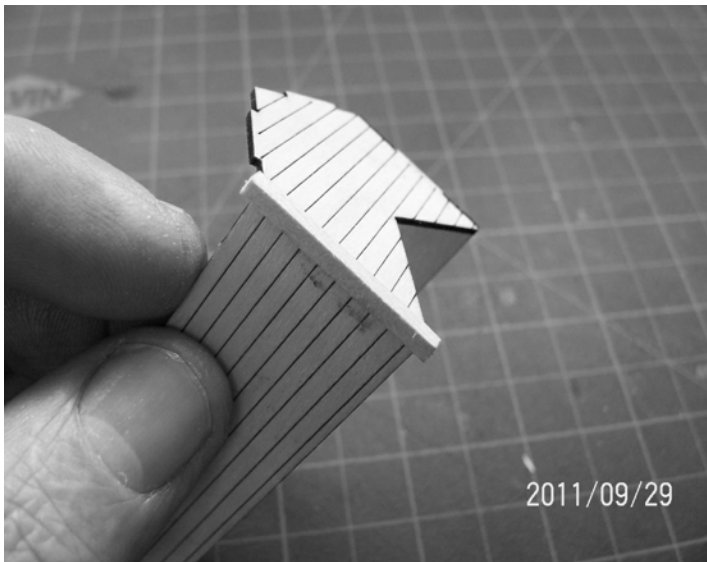
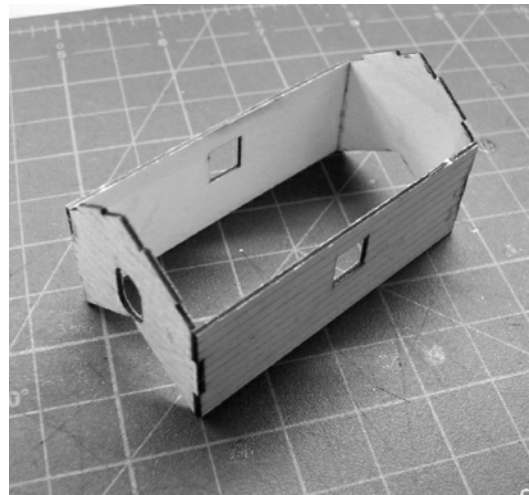
Clean up any excess glue with q-tip. After roof dries locate from sheet S-4 part # 1 trim. These bond under roof edge front and back. They may need to be fitted before bonding. Semi dock now ready for sealer.

Next lets build copula for storage building. Locate wall and roof parts from sheet S-1 they are just above letters and last parts on this sheet. Layout and bond as pictured to right.





Then bond sections together as picture to right.



Then trim corners with 3/32 basswood angle. After dries trim excess to match top and bottom angles.

Next bond roof to walls.



Next trim out eve and window opening. These are located on sheet S-4 #2 for windows and #3 trims end wall eve as picture to right. Below trim for window.



Always clean up any excess glue before dries with micro Q-tip.

Now that main building built it is time to paint. But first inspect all walls and trim for any defects and repair. Then clean with very fine tooth brush in direction of wood grain to remove any fuzz or burs. Before painting I like to seal wood with floquil glaze thinned 30% and air brush on. After dries over night wire brush or fine sand paper any defects smooth.



While building dries locate adhesive roof material and paint. I found 99 cent a can paint from HomeDepot works great. It's flat black enamel, spray 3-4 light coats till even cover. Then I air brush some roof brown, grey, and some light spots in silver all floquil colors. When roof is installed makes for nice weather affect. Also spray small trim sheets same time.



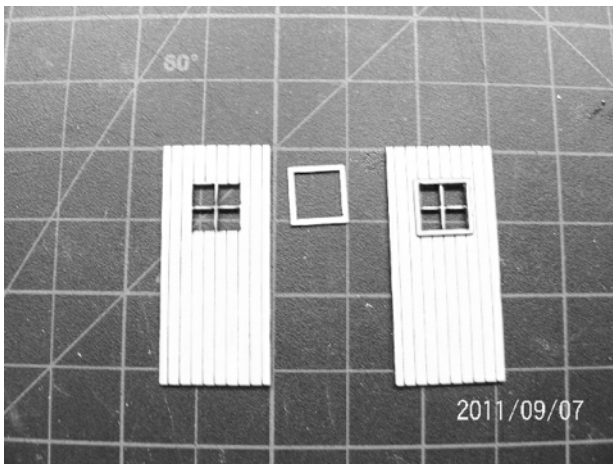
Next while spraying roof parts test fit aluminum parts cut out earlier to roof, make corrections then mark back for location. Roof color Wisc. Central Gold is pictured in manual. Let dry over night before bonding. Also the square parts will used as a roll up door, spray these white and set a side.

Then when ready to spray building, for red used in manual I mixed 2 parts caboose red to 1 part reefer orange then thin about  $\frac{1}{2}$  part. For the O scale model this parts where 1 oz bottles. Make sure 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 I spray red. It will take 3-4 coats take your time and inspect between each for dirt and fuzz and remove as you proceed. After dries over night used NANTON stencil for lettering before adding final details.

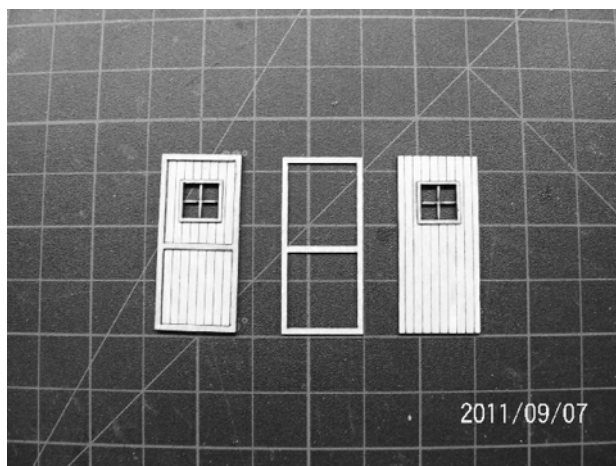


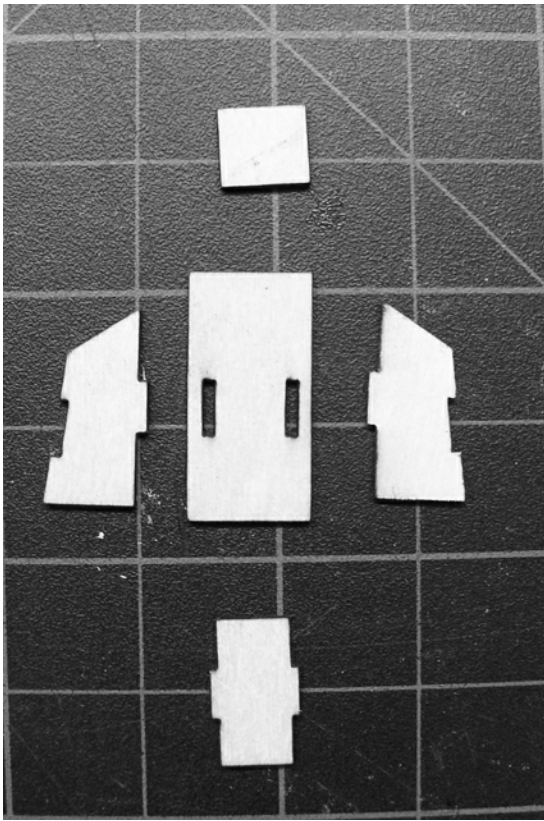


Here stencil is located and then and then outside area cover with plastic keep over spray off finished model. Air brush white and push down stencil tight if needed while spraying.

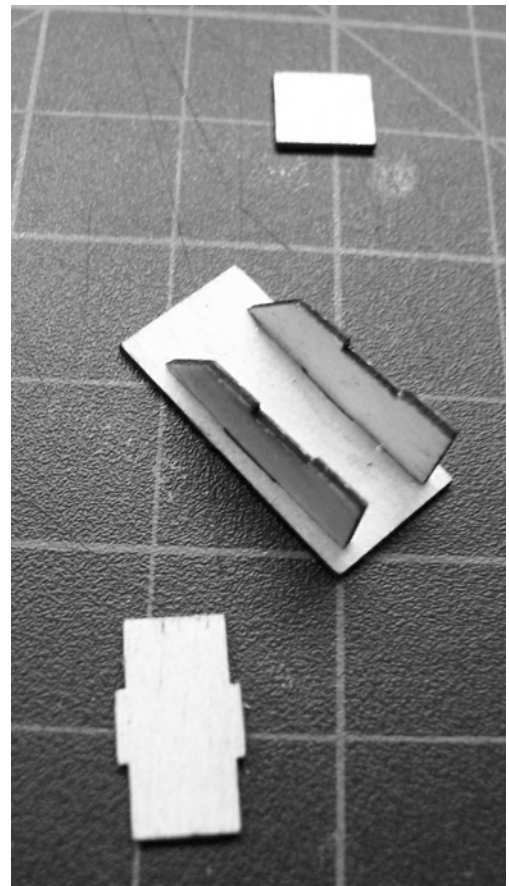


Then locate slide doors and parts to build slide doors. Sheet S-3 part# 2 are doors, and hanger #6. Trim is on sheet S-4 #,s 2 and 5. Bond the small square around window. The frame to outside of door set a side to spray later. Attach 1/8 plastic strip to top of # 6 wood, set a side to spray.

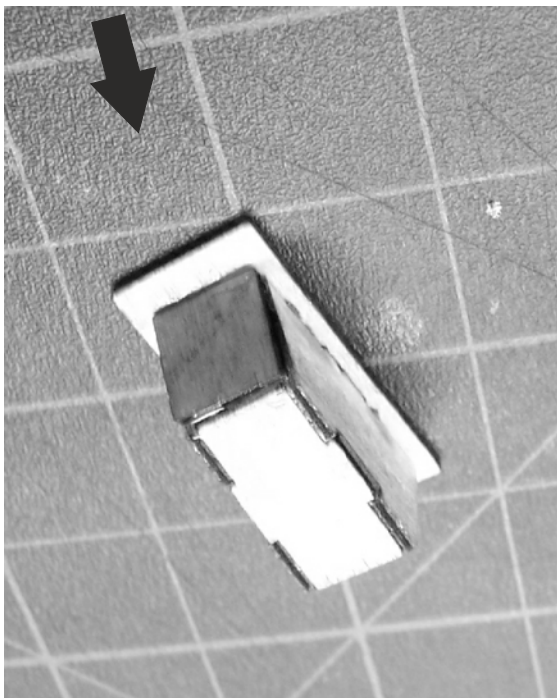




1



2



3

Next build the shoot box that is located at top of tower. Locate parts on sheet S-3 parts #4. Layout as pic 1. Check surfaces and edges, lightly sand smooth. Then bond two side parts as in pic 2, notice on back of part notches closest two one is bottom and is where shoot tube is inserted. Then as pic 3 bond face and small square piece to top last. I used CA to build here, then round corners and fill any defects with model putty and sand smooth. When complete set a side to be painted.

Next locate styrene tube and cut 2 lengths 7 1/8" long. Next locate part # 3 from sheet S-2, locate 6 small post for railing post. Locate basswood profile of vent, cut 7 parts 3/8" long and one 1/2 long. Sand edge smooth and remove fuzz. The wood parts, doors, and shoot box should be sealed before painting. The paint all these parts and let set over night before final assembly or building. As picture below left shows platform the scribed decking is glued to top of 1/8" basswood, brush the edges first before bonding decking.



Assemble platforms as pictured to left



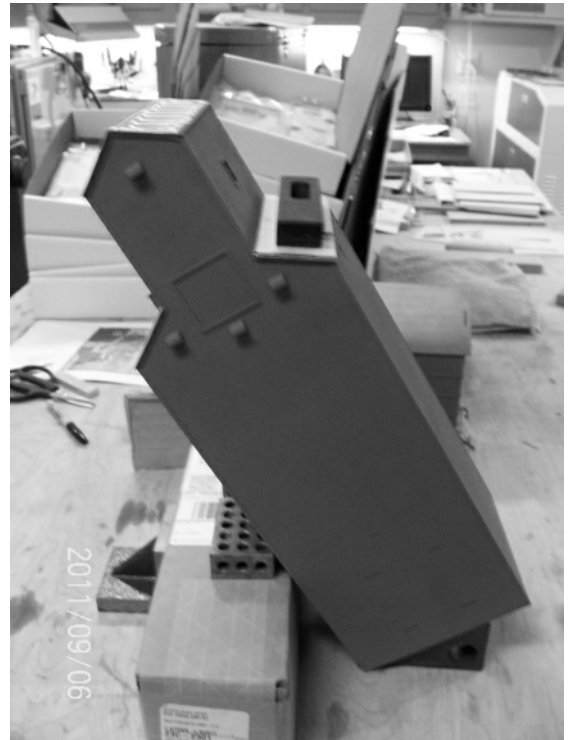
Assemble hand rails from sheet S-3 #s as pictured to right. Attach shoot support part#3 from sheet S-2.



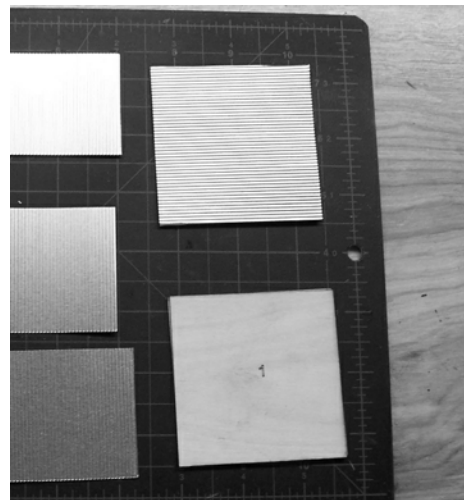
Paint styrene ladder black and attach as picture to left.



Next bond aluminum to tower roof. Set tower at angle so roof is flat, you will weight down corrugated material until glue dries. I used aleenes tacky or epoxy would be best. As picture below shows glue being applied then center up sheeting and weight down till dry. Glue all tower roof sections this way.



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



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



The roof on copula and semi dock 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. Copula is bonded to top center of roof of Storage building. Also not covered in detail is vents but they should be painted and ready to in stall. Study pictures and place in approx area. The grain shoot box built from page 25 also should be painted and ready to installed on front side of tower above sliding doors. The top of box is approx 1" down from bottom of large door at top. The shoot tube slide inside of box and rest in support bracket just above upper platform. The small piece of black tubing is attach to end of shoot tube. To finish up the bases milled from MDF board need the 3/16 wood doles inserted in holes, chamfer tops so building slides on easier. I sealed base, and ramps parts with wood sealer. Sand and finish smooth, may require a few coats of sealer and sanding. Then paint parts, I found at Home Depot, Rust-oleum color Camouflage #1917 KHAKI. Looks great to simulate concrete base after a little weathering. Assemble parts on base and you are done.

