

Conowingo Models



PANTHER COMPANY HOUSE

HO scale



www.conowingomodels.com
<https://www.facebook.com/ConowingoModels/>
conowingomodels@yahoo.com

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Thank you for purchasing this kit!

This building was designed to be a company house, similar to those owned by the Panther Red Ash Coal Corporation at the Douglas Mine in Panther, West Virginia. Like many of our other kits, this one would go well in a mining town or could be easily modified to go just about anywhere a small building would fit.

See conowingomodels.com for more info and tips on the instructions below.

OPTIONS

You have two choices with this house- you can build it as shown- sticking off of a hill (as with the pilot model) or you could build it to sit on flat ground. We will refer to these options as the Raised or Flat option.

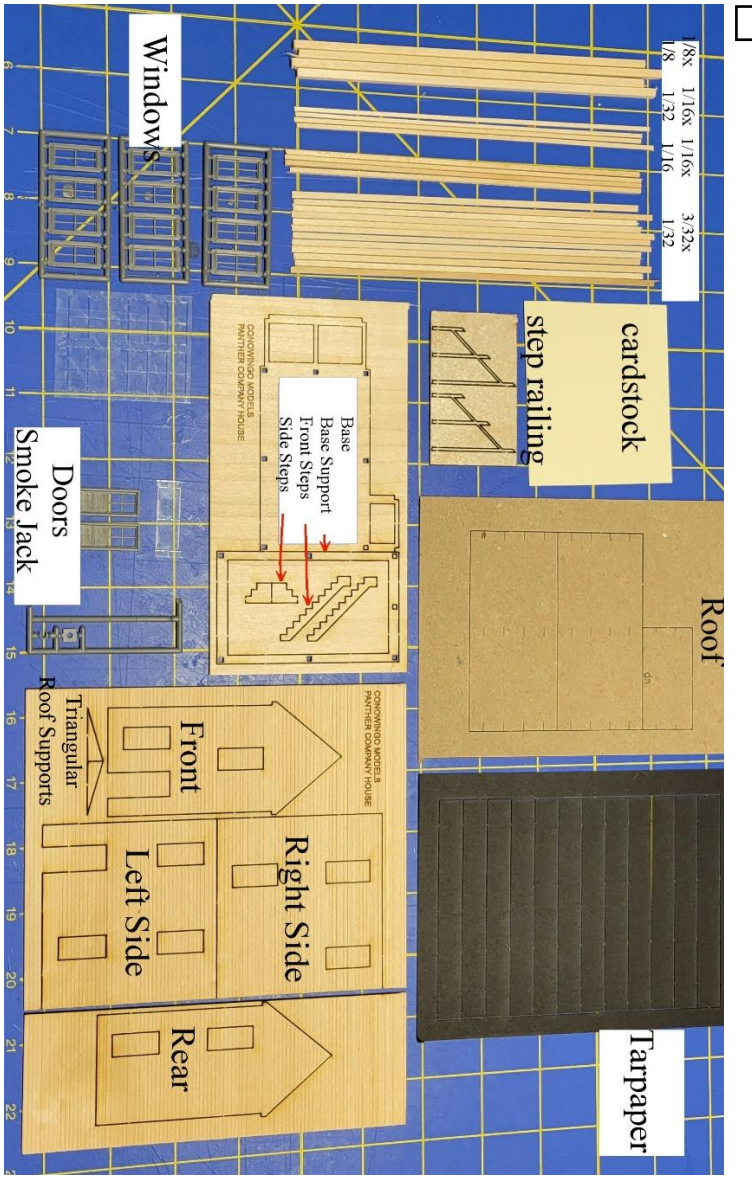
INDEX

The instructions for this kit skip around. This is intended to keep the builder moving forward while things are drying. In an attempt to keep things straight, we've included an index.

We've also included a stripwood guide on page 3 to help ensure you are using the correct stripwood for each application. Those include a circled number ① to indicate which pieces you are to use at a particular step.

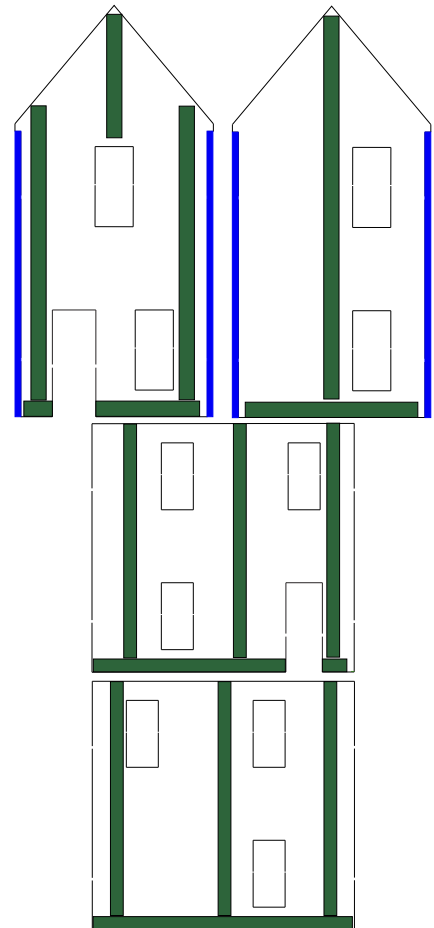
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KIT CONTENTS



BRACING

1. Start by bracing the walls as shown below. 1/8 stripwood ① is shown in green. 1/16 stripwood ② is shown in blue.
 - We recommend avoiding bracing the area around the door frames as there may be a fit issue. However, if you cut a small indentation in the bracing where the doors go, they will fit without issues.
 - Ensure you will have clearance at the corners for the walls to come together.
 - We use 1/8 stripwood at the bottom to ensure a good bond with the base.
 - The 1/16 stripwood are your corner pieces. Should you choose to make them a different color than the siding, we recommend you add these later, before assembling the walls.



2. Add weights to ensure the walls and bracing dry flat.

STRIPWOOD SIZING AND PAINTING GUIDE

These instructions assume that you are building the house as we did with the pilot model. Therefore, the colors listed below are only suggestions.

- **We recommend cutting the stripwood only as-needed.** Cutting all stripwood at once may have disastrous results. Should something not align properly or other malady there is a good chance that the wood will be either too short or too long and will end up being wasted. Use the dimensions listed below as a guide.
- Always cut stripwood pieces from the largest to smallest. Reserve any leftover pieces for the sheathing and trim.
- The pilot model suffered because we built the porch and then stained it. If you're planning on staining it, do yourself a favor and do the staining before cutting. If you stain all sides at once, it should not warp.
- We recommend altering the length of the vertical base supports (8) based on the height of the object you choose to support the base with in the Base Supports section.
- One thing we tried and it worked well with this kit was to very lightly spray paint the walls after bracing and before construction. As you spray it, there will be a grey that shows through. Let it dry and apply a grey stain to it to bring out the weathering.

Below is the broad strokes version of the paint guide. The chart that follows has more detail.

- 1. Paint the following items **WHITE**
 Doors
 Windows
 Undersides of roof and porch roof
 1 piece of 1/16 x 1/32 stripwood
 2 Triangular porch roof support pieces
 ** 4 Outside walls. Brace and let thoroughly dry before painting. **
- 2. Stain the following items **GREY**
 All stripwood, except the 1/8 x 1/8
 Sides of the front and side steps

- 3. Paint the smoke jack **SILVER**
- 4. Optional - Sand the laser markings from the 1/16 base piece and the support piece that goes with it and stain **GREY**

The chart below includes **approximate** lengths for both the raised and flat versions. If you are building the flat version, we recommend you cross out the column for the raised version and vice versa. That way, you don't cut a few of the parts too long or too short.

We recommend that you use a caliper to measure the lengths needed.

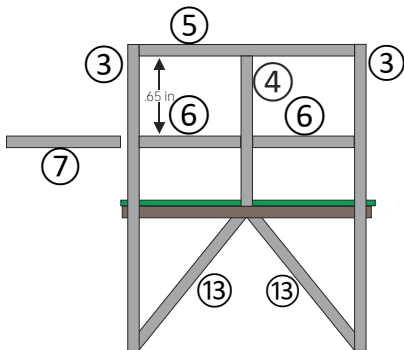
Stripwood Sizing and Paint Guide						
Part	Stripwood	Raised Version Length (Inches)	Ground Level Version Length (Inches)	Qty	Purpose	Paint / Stain
1	1/8 x 1/8	various	various	4	Interior bracing	None
2	1/16 x 1/16	2.57	2.57	4	Corner supports	Stain grey, then paint white
3	1/16 x 1/16	2.20	1.25	2	Front porch roof supports (left and right ends)	Stain grey
4	1/16 x 1/16	1.08	1.08	1	Center vertical support for porch roof	Stain grey
5	1/16 x 1/16	1.55	1.55	1	Horizontal support for porch roof	Stain grey
6	1/16 x 1/16	0.73	0.73	2	Porch railing (front)	Stain grey
7	1/32 x 3/32	0.80	0.80	1	Porch railing (side)	Stain grey
8	1/16 x 1/16	1.30	N/A	9	Vertical base supports	Stain grey/ dark brown
9	1/32 x 3/32	0.87	0.87	16	Front porch decking	Stain grey
10	1/32 x 3/32	0.58	0.58	12	Side porch decking and steps	Stain grey
11	1/32 x 3/32	0.78	N/A	8	Front porch steps	Stain grey
12	1/32 x 3/32	1.2	N/A	2	Front Step Railings	Stain grey
13	1/16 x 1/32	1.20	N/A	4	Porch supports	Stain grey
14	1/16 x 1/32	1.45	1.45	4	Roof Trim	Stain grey, then paint white
15	1/32 x 3/32	various	various	A/R	Vertical sheathing for raised foundation	Stain grey
	Doors			2		White
	Front stairway			2		Stain grey
	Plywood front stairway railings			2		Stain grey
	Stovepipe			1		Silver/Grey
	Triangular Porch Roof Supports			2		White
	Walls			4		White
	Windows			10		White

FRONT PORCH FRAMING

1. If you are building the raised version, use the template below to assemble the front porch.

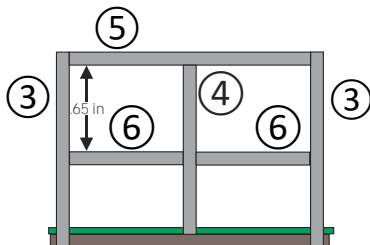


- This hi-res photo of the house shows a cringingly, primitively-constructed front porch and support system. The supports were tree trunks with bends in them and the angled supports appear to be 2 x 4s, angled 90° from what you'd expect. They used what they had on hand and could afford.
- Only use parts ③, ④, ⑤ and ⑥ for now.
- For illustrative purposes only, the area in brown will be the deck part of the base.
- Again, for illustrative purposes only, area in green will be the 1/32 x 3/32 decking.



2. For the flat version, build your porch as shown below. Use parts ④, ⑥, ⑮ and ⑭.

- Item ⑭, the porch railing is optional.



3. Measuring up 1.16 inches from the bottom of the front wall, add a small pencil mark just in from the 1/16 piece of corner bracing. Repeat for the opposite side.

ASSEMBLING THE WINDOWS/DOORS/SMOKE JACK

1. Using a clear-drying glue, install the acetate in the windows and doors.
2. Smoke jack placement and size are personal choice. If you want to build it like we did, cut the smoke jack and glue together as shown below. You may need to add some putty and clean up the 90° elbow.
- We figured the smoke jack would be coming from the kitchen stove. You may choose to do something else.



- Some people install the doors, windows, etc. before assembling the building. For some, it solves dexterity issues. If you are having this issue, go ahead and try it. If not, we recommend waiting until after the building is fully assembled and dry before adding those items. This is so you don't damage anything should you need to use clamps to straighten your structure.

BASE SUPPORTS

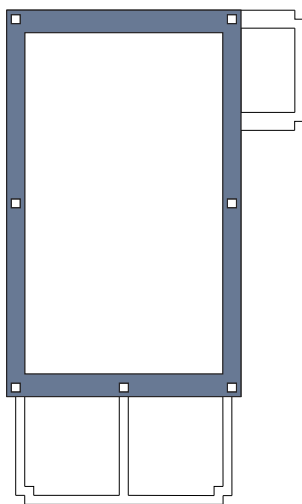
This section is only for use if you are constructing the house in the raised position.

- For this particular step, we suggest using a tacky glue that sets up without fully drying, allowing you to manipulate it as needed.

1. Find an object where you can rest the base while it dries. Make sure it's tall enough for the supports to rest gently on the working surface. We recommend a 3-2-1 block for this and will refer to it as the 3-2-1 block. Keep in mind that the 1/16 pieces (8) used for supports may need to be altered from what is listed in the Stripwood Lengths section due to the height of the object you choose.

- The vertical base supports (8) are all the same length to help with construction. Once the house is complete and ready for final placement, you can either cut a hole in the base material or shorten the supports. The pilot model was not built this way and it posed some significant challenges when building the underside.

- In this section, you are adding the vertical supports for the base. This support is being installed upside down for ease of construction.

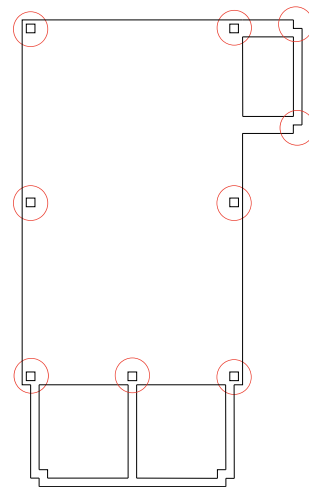


2. Flip the base piece over as shown above.

3. Add the base support piece to the underside as shown above in grey.

- 4. Make sure that the holes line up. Note that on one short side, the third hole goes in the front, against the decking.

- This support makes the base look more robust and it will help hold the supports in place. It will also help with the sheathing.



4. Cut and glue the nine 1/16 base support (8) pieces into their respective holes (shown above) so that they sit flush. Use clamps, weights, 3-2-1 blocks or whatever you have to keep them vertical. If you're feeling lucky, perhaps a little CA would help secure the supports in place faster.

- There are two notches for the side porch that are included in this instruction. You may choose to add them later.

- You will notice that there are two notches on the front porch that do not get the supports. The porch supports will be installed there at a later time.

5. When tacky, flip the base over onto the object mentioned in the header section and adjust the supports so they are vertical.

- At this stage, you are (hopefully) letting gravity be your friend by helping those supports find a straight vertical position to rest in.

- You may need to manipulate the supports into the vertical position.

TARPAPER ROOFING

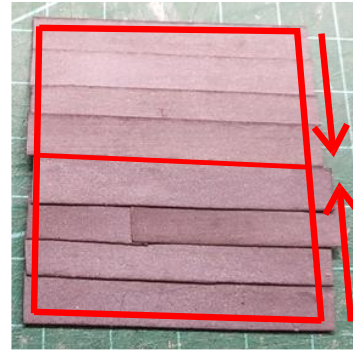
After the kit was designed, we found a high-resolution version of our example photo which showed the house actually had interlocking shingles. If you want your building to look like the real one, we suggest <https://www.rail-scale-models.com/HO-Dragon-Scale-Shingles> If this is one of your first kits, we'd recommend sticking with the tarpaper. It's much easier and quicker to do.

1. Find the black construction paper carrier sheet with the cut strips on it. *****Do not remove the strips from the carrier sheet yet.**
2. You could use it the way it is to represent a brand-new roof by using as single, even coat of dark grey and skipping ahead to step 9. However, we recommend very quickly spray painting it with three different shades of grey. You don't want a uniform cover. Half-sprayed splotches are great.
3. It dries pretty quickly. Once the roofing is dry, cut a strip from the carrier sheet.
4. Take that strip and line it up along the corner of a scrap piece of 2x4 or an edge of a hard material you don't mind getting messed up.



5. Take either a 400-grit sanding sponge or sandpaper and gently run it across the construction paper strip. The goal is to blend the paint colors together.
6. If you so desire, you can dig into one of the long edges and sides of the construction paper enough that the black comes through to show roofing damage. It's your model, your call. (Photo shows fully assembled)
7. Repeat steps 3 - 6 until all roofing strips are complete.

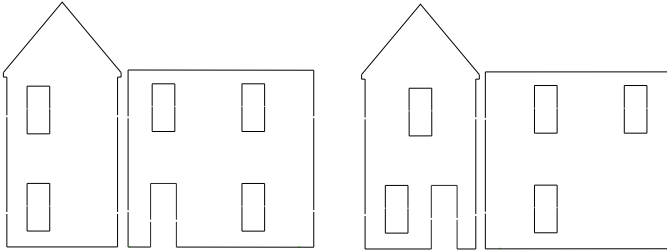
8. On one piece of roofing material, scratch up both long edges if you're aging the roof. This will be your roof cap. Hold this piece separate from the rest.
9. Locate one of the chipboard roof pieces you prepared a while ago.



10. With the middle cut edge up, glue the roofing strips down in the following manner;
11. Start by adding a row of tarpaper at the bottom. There are guides on the sides and middle. Use them at your discretion to help keep the tarpaper straight. Ensure the scraped black edge is on the down side. You want a slight overlap on the bottom edge and on both sides.
12. If you desire, you can cut a row short and add an overlapping piece. Left to right or right to left doesn't matter. This shows where the tarpaper roll ended and a new one began. You may also want to use a scraped edge on the "new roll" where it overlaps the "old roll". This shows character. The pilot model had four rows on each side of the roof.
13. We recommend flipping the roof around and doing the bottom row.
14. Allowing for slight overlap, add rows until both halves are covered. Do not cross over the cut line in the middle.
15. Repeat for the porch roof, using three rows.
16. Allow the roof to dry and cut the excess from the sides. You may choose to add some weight so that the roof dries flat. Not adding weight may add character, but you might not be happy with the results.

ASSEMBLING THE WALLS

- For this set of instructions, we used a magnetic gluing jig to keep the corners at 90° angles.
- **The instructions on this page should be done fairly close together, while the glue is tacky. This helps ensure the building goes together squarely.**



1. Take one end and one side piece and glue them together at one corner as shown above. We recommend the front and right side, the rear and left side. Either way will work.
 - Ensure that the bottoms line up and that the edges are even.
 - Brace the walls at a 90° angle
 - The two walls should meet at the 1/16 stripwood ②
2. Repeat step 1, ensuring the two halves are glued together at the same corner. We recommend that this be the rear and right side.
 3. Let dry enough that it is tacky.

ASSEMBLING THE HOUSE

1. Glue together the two halves of the walls, ensuring the building is square and that it will sit level.
2. Glue the walls to the base while the walls are still tacky.
- The house should sit so that it slightly overlaps on all sides, except in the front.

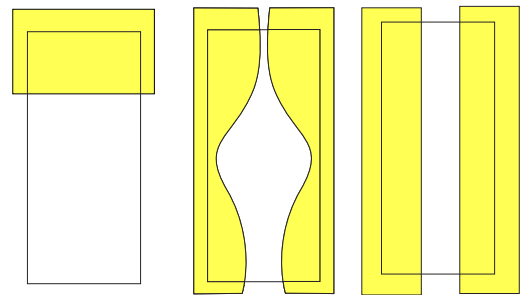
- If the walls don't sit level on the base you can gently place 3-2-1 weights across the side walls to help level the walls.
- 3. Let glue dry.

BASE MOUNTING

1. Take the base piece and flip it so that the side porch is located on the left side, at the rear.
2. Take the house and situate it so that the front door faces front on the base with the other three sides slightly and evenly overlapping the edges. If the walls do not line up satisfactorily, you can use clamps, rubber bands or other methods to straighten it.
3. When you are happy with how they are situated, glue the house into place on the base.
4. Let dry.

WINDOW AND CURTAIN INSTALLATION

1. Install all windows. Do not forget to install the acetate with a clear-drying adhesive.
- Do not install the doors yet as the decking needs to be installed first.



2. Cut various sizes of the yellow cardstock to form window shades and/or curtains, gluing them to the interior top and/or sides of the windows as you go. They don't need to be perfect, they just need to cover the top and both sides of the window. See the examples above for curtain ideas.
- You can mix the first and second or first and third styles shown above. We'd recommend using different colors for the shade and curtains.
- Various lengths show "signs of life"

- Alternatively, you could use different colors, but a dirty white or tan would have been the predominant color. We chose this shade of yellow because we felt it would show some age and sun fading.
- If you don't have other colors of cardstock, you can use either colored construction paper, sticky notes, regular paper or paint the cardstock. Painting will cause the paper to warp a little, but curtains and blinds are not perfectly flat.
- The cardstock can also be cut and painted to form drapes. Again, feel free to use different colors. Also, feel free to try different shapes. A vertical accordion-style could be used to form open drapes.

DECKING



- 1. Using the stripwood intended for the front porch, glue down the decking material. ⑨
- The decking should be applied as shown above with a little bit of spacing to allow for expansion and contraction. (Yours will not have the porch roof installed, as shown in this photo.)
- Work from the middle, outward.
- You will need to cut out the notches for both end porch support posts. There does not need to be any cut out in the middle.
- The boards can butt against the front wall of the house and under the door.
- Leave a little bit of overhang on the sides and front.



- 2. Using the stripwood intended for the side porch ⑩, glue down the decking material in a similar manner as above.
- 3. There wasn't much to side porch on the real house and it certainly isn't much here!



- 4. We included two steps that were intended to be installed on the house rear side of the porch. You may choose to install them, or do as they did on the real house and use two pebbles for rocks.
- If you decide to add the half railing as shown above, we recommend waiting until all the stripwood from the kit has been used first, or use some from your scratch box.

If you decided to sit the house directly on the ground, the following steps are unnecessary.



- 5. Glue the two step supports inside the respective supports on the backside of the side porch. (Rear of the house.)
- 6. Depending on the terrain, you may need to alter the height of the steps.
- 7. Cut and glue into place the steps ⑩ to fit the side porch.

PORCH INSTALLATION

- 1. Install the front porch framing on the front of the house.

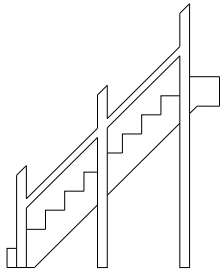


- 2. On the front wall, glue into place the triangular porch roof supports on top of the porch framing, as shown above.
- 3. Use the pencil marks you made earlier as a guide for where to place the bottom edge of the triangle.
- 4. Ensure the clapboard side is facing out.
- 5. Repeat for the opposite side, ensuring that the triangles are even with each other.
- 6. Install the porch roof centered on the porch frame with the top layer of tarpaper at the top.

FRONT STEP INSTALLATION

If you decided to sit the house directly on the ground, this step is unnecessary.

- 1. If you altered the height of the house, you will need to alter the stairs to match.
- 2. The following set of instructions would benefit from the use of CA, as it will allow you to move through these steps quicker.



- 3. If you choose to install the step railings, the railings should go on the outside of the steps as shown above.
- 4. Glue the front side of the top railing into place, even with the front side of the top step.



- 5. Install the front steps as shown above. They attach to the underside of the frame.
- 6. Cut and glue the bottom step into place first. This helps align the rest of the steps.
- 7. When happy with the alignment of the steps, install the remaining steps.

SIDE STEP INSTALLATION

If you decided to sit the house directly on the ground, this step is unnecessary.

- 1. When the high-resolution photo was found, we realized that the real house did not have back steps. Instead, there are two rocks that served as the steps.



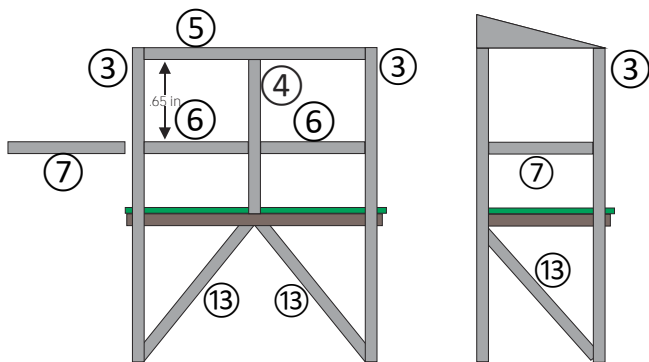
- 2. Glue the two step supports inside the respective supports on the backside of the side porch. (Rear of the house.)
- 3. Depending on the terrain, you may need to alter the height of the steps.
- 4. Cut and glue into place the steps to fit the side porch.

ROOF ATTACHMENT

- 1. Glue the roof into place, so that the roof is centered front to rear.
- 2. Once the roof is firmly in place, fold and glue into place the reserved piece of tarpaper that covers the roof ridge.
- 3. If you choose, cut one or more pieces of tarpaper to serve as patches for the roof and install them.

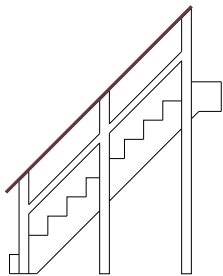
FINISHING TOUCHES

1. Install the doors. The door sill will overlap the decking.

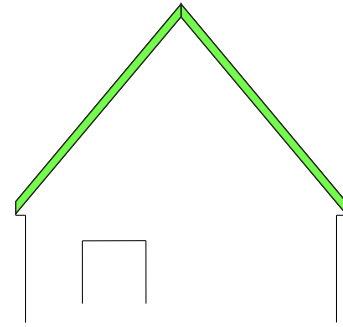


2. On the raised version, install the porch supports (13) as shown above and in the photo. The illustration has the supports thicker than they should be.

- You will notice that there are more of the same supports under the house. We wouldn't worry too much about installing those as they most likely will not be seen.
- Given the precarious nature of these supports, we recommend using CA for quick bonding.



3. Install the front porch railing (12) as shown above in brown. They should be centered on the top of the plywood piece.



4. Cut and install the roof trim (14) for both ends, ensuring that the trim is butted up against the roofing.



5. Using (15) and any remaining stripwood, cut and install any desired vertical sheathing to the underside of the house as shown above.
6. Attach the smoke jack.
7. Do paint touch-ups and weather as appropriate. We recommend a thin wash of Hunterline Concrete to grime up the structure after all weathering has been completed.

CONCLUSION

Please share your photos on our Facebook page!

<https://www.facebook.com/ConowingoModels>

Once again, thank you for your purchase!

If there are any parts missing, please e-mail us what you need to complete the kit and we'll send it your way. Also suggestions for improvement are welcome. Please send photos!

See the Conowingo Models website
www.conowingomodels.com

Many thanks to my family, Jeff Grove, Steve Milley and Mark Schreier for their support!

Prototype with decorative trim and base, minus the step.
Shingles from railscalemodels.com



Photo credit – National Archives. College Park, MD.
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