

# Conowingo Models



## Caboose #2

HO Scale



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### Thank you for purchasing this kit!

The enclosed caboose is fictional but based on some real-world information. It is derived from the 36-Foot Wooden Boxcar kit.

The premise being that a boxcar was repurposed as a caboose and possibly a Railway Post Office (RPO) for short line use. The prototype was stained and then dry brushed with Apple Barrel Chocolate Bar to simulate being used and abused.

Many of the diagrams do not include the differences between the boxcar and caboose versions.

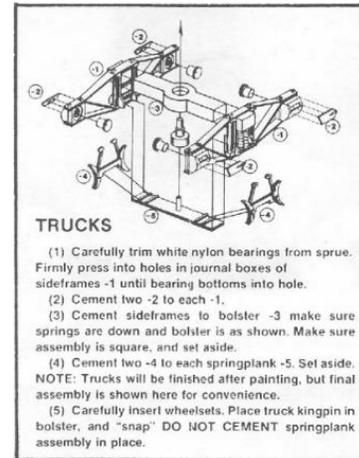
Supplied are the basic directions. For more tips and some additional instructions, please see [conowingomodels.com](http://conowingomodels.com)

### BUILDING THE FRAME

1. Start out by removing the frame from its carrier. Note there is a side with lines that denote where the bolsters and queenposts go. This is the underside.

You'll also note where the coupler boxes go. Plan out where you'll want to add weights. The NMRA, in RP-20 (essentially) states that the 36-footer should weigh 3.875 ounces. An unweighted example I used weighed less than .5 ounces. If you're not liking the options, I'd suggest adding a permanent load weight. Failure to add weight will result in a very uncooperative car that doesn't stay on the tracks.

2. Assemble the trucks and coupler boxes (some kits) as shown below.



(courtesy Tichy Train Group)

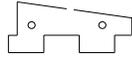
3. Paint the NBWs, stake pockets, ladders, brake parts and trucks as desired. See step 17 for illustration.

4. Take the included needle and run it through the holes in the end and side pieces as well as the truss rod holes to ensure that there is no glue or errant laser residue in them.

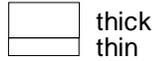
5. If you're adding a lighting kit, plan out where the wires will run and where the lights will go and where you will need to deviate to accommodate those items.

6. Cut the 1/32 x 3/32 wide stripwood for the decking to 9.5 scale feet wide or 1 5/16 inches. Scrape the pieces with a hobby knife, scuff them with a sanding block, cut the edges off of and add nail holes as you feel appropriate. we've found that painting/staining at this time is not a good idea because you'll trim the edges later.

7. Carefully cut the angled bolster pieces out and glue them together in pairs. You will end up with four pairs. Run the needle through the holes in the bolsters again to ensure they are properly aligned.



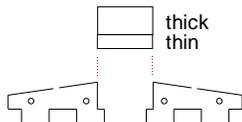
You can do the same with the smaller square bolster pieces, using one thick and one thin piece for each. You will end up with two pieces.



- Glue the side rails into place before the end pieces. Ensure the side rails either fit snugly against the decking or under it, depending on your decision for overhang or not. The end pieces should fit snugly against the side rails and the cut out on each end should match up to allow for the coupler box to fit.

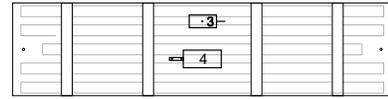


- With the top side is up, glue down the stripwood as shown. I covered both end pieces and side rails. Ensure you leave a small gap between the pieces to prevent buckling when you paint/stain it. IMHO it looks better with spaces as well. A few not-so-perfectly-aligned pieces add life to it.
- When finished adding the decking, Flip the bottom side up and flatten with a heavy object to prevent warping during the drying process. Be sure not to crush the side or end pieces. You may want to consider clamping the corners to something solid instead.
- Once dry, glue the bolsters and queenpost(s) into place and secure with clamps. The side pieces of the bolsters are notched to fit the under decking of the car. Ensure you use one of each thickness on the bolster center pieces.

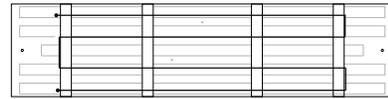


The 36-foot body has the option of two wooden posts or two flat basswood pieces with plastic posts.

- Included is the standard Westinghouse K-brake system. I'm not that familiar with the system. If you are, please enlighten us on the Facebook page. Glue the brake reservoir (4), brake cylinder (3) and any other desired details into place on the underside. There are notches where they need to go.



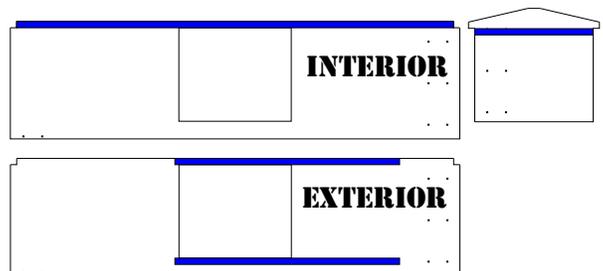
- Take the length of thread and put an overhand knot in one end (I used three and a dab of CA at the first bolster because the thread is thin) and gently thread it through the bolsters and queenposts as shown below. The wooden queensposts have notches for the truss rods to pass over. Initially, concentrate on just getting it threaded and then tighten it.



- Once taut, apply a drop of CA to the thread at the end of the threading to hold it in place. I hung the whole assembly from my workbench with a small clamp while it dries to keep tension on it. When it's dry, add the final knot (or several) as close to the bolster as you can get it and cut the excess. A drop of glue on each rod can be used to simulate turnbuckles.
- Trim the deck boards as desired. The under sides, side rails and end pieces can be painted/stained and lettered at this point, or you can choose to do so later if you so choose. I did most of step 16 at this point.

### **BUILDING THE BODY**

- Brace the walls as shown below using 1/8-inch stripwood. (X2) We recommend fitting the doors snugly for proper alignment. The prototype model did not have bracing in the cupola, but there is stripwood included for this purpose should you so desire to use it.



- Glue the somewhat-triangular-shaped, roof-support pieces to the front and aft pieces of the cupola, using the guidelines. (See step 27)
- Paint/stain the boxcar as desired. If you braced the cupola, you can do it as well.

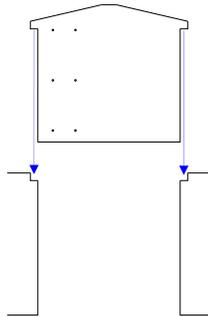
19. Paint the windows.

20. First, prepare the construction paper, which you will use as a tarpaper roof. If you are unfamiliar with how to do this, go to Jason Jensen Trains on Youtube and look for episode 010. The width of the tarpaper should be cut to 3/8 inch.

21. Cut and glue the 1/16 stripwood to the doors. I went with one piece across the middle, but you may want to make a "Z" or something else. Apply the hinges to the top and door latch about mid-way on the left side. There are several latches and hinges to choose from.

22. Remove the roof supports from their carrier and paint them. (Most likely brown) They are a group of small rectangles. Do the same for the walkway. Extras have been provided because many repurposed themselves to places unknown during the build of the original prototype. (That's my story and I'm sticking to it.)

23. Match (but do not glue yet) the end walls to the side walls. (Side walls shown sideways for clarity). The side wall tabs will fit in the notches. Use a rubber band to hold the four walls together.

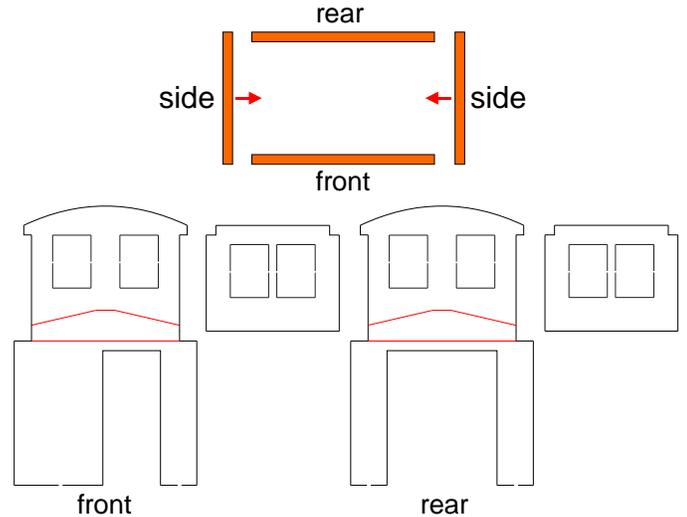


24. Place the walls over the flat car so that the sides hang over. Match up the top of the door slides with the floor of the flat car as shown below. (prototype photo)



25. Once in place, then glue along the inside corners only. This ensures a proper fit on the corners. You may also choose to glue the side walls to the floor. I used a quick-drying CA, but that isn't necessary.

26. Assemble the cupola essentially the same way as you assembled the walls. Be sure to match the notches in the corners. The roofline guides should face outward (front and rear)



27. Glue the weights (not included) mentioned in step 1 into place.

28. If you did not brace the cupola, now would be a good time to paint it.

29. Turn your attention to the roof. Bend along the two scribed lines that parallel the walkway. This will add rigidity while you're painting the roof.

30. Paint the roof either a metal color or you could use construction paper (not included) to add a tarpaper roof. Or use stripwood (not included) to build your own.

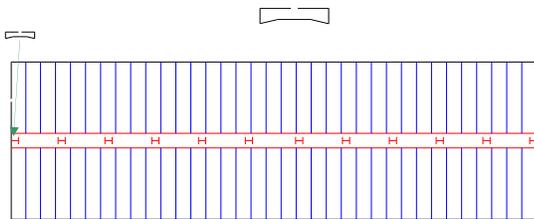
31. Install the cupola - This and the next step should be done in quick order. Test fit the cupola and roof to determine where it needs to go. The front should be positioned so that the door goes between the two side doors, but offset so the wall doesn't block the doors. Once that is accomplished, using a slow drying glue, install the cupola.

32. Install the roof. Ensure all sides are glued down and the cupola fits in the proper location.

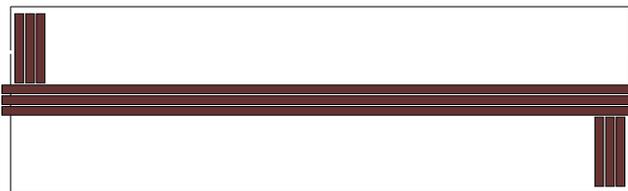
- 33. Glue the cupola roof into place.
- 34. Apply the strips of tarpaper to the cupola roof from outboard to inboard. The follow-on strips should slightly overlap the more outboard strips, moving towards the middle.



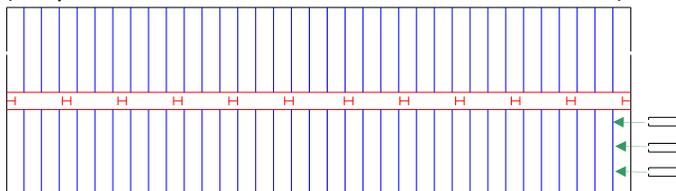
- 35. Glue the roof supports onto the Hs as shown below. The rounded side should straddle the center. (Only one shown for clarity.)



- 36. Size and glue down the 1/32 x 3/32 stripwood on the roof supports lengthwise. They should slightly overlap the ends of the boxcar. Don't apply stripwood to the ladder accesses just yet.



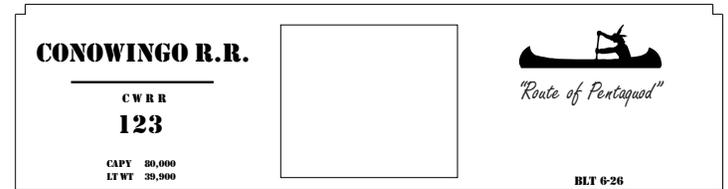
- 37. Glue down the roof supports for the ladder accesses on the right forward and left aft sides of the roof. (Only left aft shown)



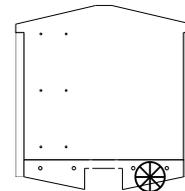
- 38. Size and glue down the 1/32 x 3/32 stripwood on the ladder accesses as shown in step 37.

- 39. Cut and install the ladder pieces as required. The holes should match up with the ladders. The short ladders on the left outside have an engraved top hole to serve as a mark for where to cut the top of the ladder.

- 40. Apply decals as below if you choose to do so.



- 41. Install the windows.
- 42. Install the bolts (NBWs), brake wheel(s) and ladders. Either CA or white/wood glue seems to work equally well. The bolts and ladders have cut holes where their respective parts fit. We installed the brake wheel as shown below. However, variations are encouraged!



- 43. Install the coupler boxes. I recommend applying some CA to the frame where the coupler boxes will go, followed by appropriate screws (unfortunately, the screws included with some kits are for the trucks and are too long for this application).
- 44. Install the trucks using the screws and insulating fiber washers (some kits). For those unfamiliar, the washers go between the truck and bolster to smoothen truck movement. Tichy Arch Bar trucks (some kits) can now have the spring planks installed. Despite the instructions, We've found that a dab of CA helps keep the spring planks in place.

- 45. Apply any finishing touches and enjoy!

Many thanks to Mark Schreier, Jeff Grove, Steve Milley and Greg Cassidy for their help with this endeavor.

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Thank you for your purchase!