Caboose #1

HO Scale

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Thank you for purchasing this kit!

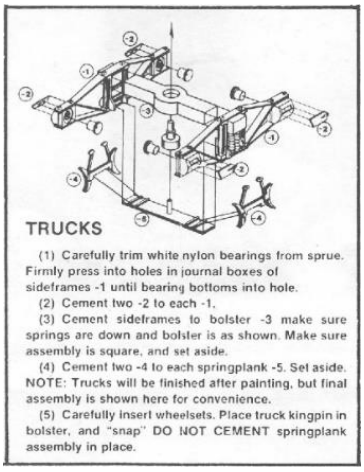
The enclosed caboose is fictional but based on some real-world information.

Supplied are the basic directions. For more tips and some additional instructions, please see conowingomodels.com

BUILDING

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 24-footer should weigh 2.75 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.



TRUCKS

(1) Carefully trim white nylon bearings from sprue. Firmly press into holes in journal boxes of sideframes -1 until bearing bottoms into hole.
(2) Cement two -2 to each -1.
(3) Cement sideframes to bolster -3 make sure springs are down and bolster is as shown. Make sure assembly is square, and set aside.
(4) Cement two -4 to each springplank -5. Set aside. NOTE: Trucks will be finished after painting, but final assembly is shown here for convenience.
(5) Carefully insert wheelsets. Place truck kingpin in bolster, and "snap" DO NOT CEMENT springplank assembly in place.

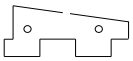
(courtesy Tichy Train Group)

3. Paint the doors, windows and smoke jack, NBWs, ladders, brake parts and trucks as desired. Glue in acetate pieces when dry. Same with the smaller windows, which can be propped open.

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. Now is a good time to cut the 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. I've found that painting/staining at this time is not a good idea because you'll trim the edges later.

6. 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.



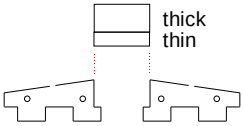
You can do the same with the smaller square bolster pieces, using one thick and one thin piece for each. You will end up with two pieces.

7. 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.

8. 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.

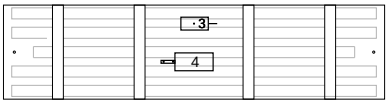
9. When finished adding the decking, Flip the bottom side up and flatten with a heavy object to prevent warping during the drying process. Be sure not to crush the side or end pieces. You may want to consider clamping the corners to something solid instead.

10. 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.



This caboose gets the single, wooden queenpost in the middle.

11. 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. If you know-how and desire to wire up the brake system and have the material to do it, now is your opportunity to do so.



(36-foot car shown)

12. Run the included needle through the holes in the bolsters to ensure a clear pathway. The laser and glue can clog those when you least want it to.

13. 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.

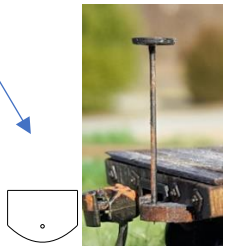
(36-foot car shown)

14. 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.

15. 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.

16. Find some scrap wood or other items to support the car body in a level position. This will greatly assist in construction.

17. For the brake wheel, cut the head off the needle with wire cutters to a height of 4 scale feet (35/64 inch) or as desired. Glue the wheel and rod to the wood piece, sharpened end down and in the notch. I glued mine to the end of the car. Different variations are highly encouraged!



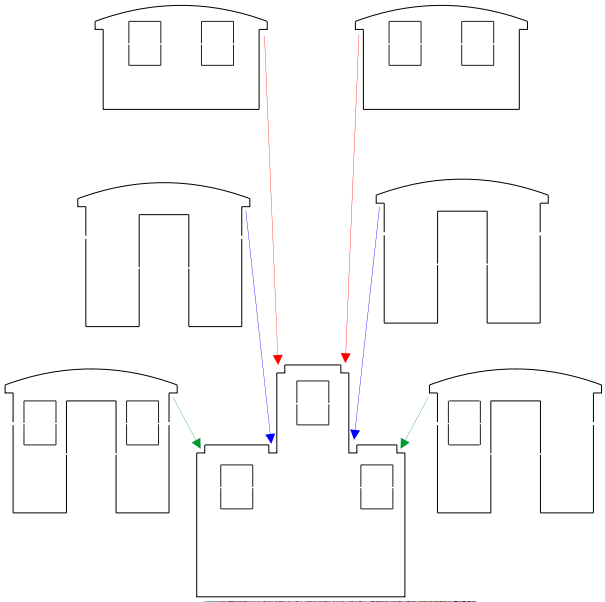
18. I have found that assembling the walls on the flat car and then painting later will negate the need for bracing. I did one version using bracing and had to rip it all out because of how the car went together.

19. If you are using the supplied tarpaper roof, prepare the construction paper. 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.

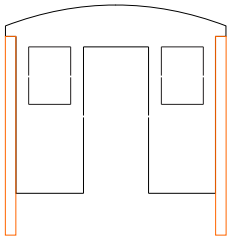
20. One product I highly recommend Adlake Marker Lights by Tomar Industries. If you have a set, now is the time to figure out how you will install them. The same goes for any internal lighting. A nano warm white LED (not included) would look great in the cupola area.

21. Once everything is dry, assemble the walls as follows;

    a. Place the outer walls parallel to each other. I've found that holding them in your hand can be cumbersome, but seems to work the best. The diagram below shows which pieces go where in relation to the left side wall notches. The four inside walls can be interchanged for variation. The photo at the bottom shows how they should look upside down with the roof installed.(not yet)



    b. Using a fast-drying adhesive, glue the inner walls and cupola pieces into place. Cupola not shown for clarity. Ensure the walls fit together tightly. Use the flat car for additional support and to ensure the pieces fit properly.



22. Once dry, paint/stain the caboose walls as desired. Ensure you finish the ends of the outer walls as they will be exposed. If you want to add a stove and/or furniture, add it either now or before step 15.

23. Paint/stain the undersides (scribe side) of the roofing, ensuring you get the edges as well.

24. Install the doors and windows.

25. Test fit the roofing pieces. The scribe side goes down. The largest piece goes on the front. The medium piece goes in the rear and the smallest piece goes over the cupola.

26. Decide where you want the smoke jack and drill the hole accordingly. Make any adjustments you desire to the roof.

27. Glue down the roofing pieces. You may need rubber bands to secure the roof to the walls while the glue dries

28. Once the roofing is dry, you can apply the tarpaper roof using a glue of your choice. It may make sense to thin down some of the width so the pieces look uniform. Whether or not to wrap the edges is completely up to you.
    a. For the forward and aft-most pieces, start at the outside and work your way towards the cupola.
    b. For the cupola itself, add a strip on the front and back, then overlap the two with a center piece.
    c. For the smoke jack, cut out a rounded piece with a hole in the middle for the smoke jack. You'll probably want to elongate the hole so the jack fits through if you're installing it on an

angle. If you want supports on your smoke jack, use the leftover string from the truss rods.

d. Install the smoke jack and tarpaper piece.
e. You may want to install patches on the roof to add character.

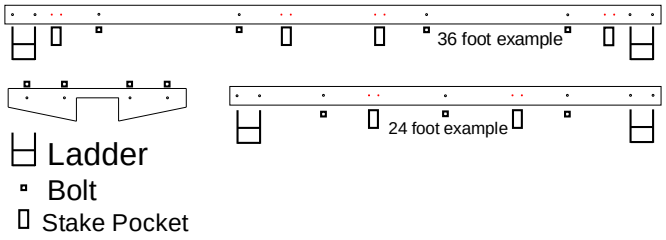
29. Figure out where you are going to install the caboose portion on the flat car and glue the weights (not included) into place. Reference the flat car instructions for proper weights.

30. Glue the caboose in place on the flat car.

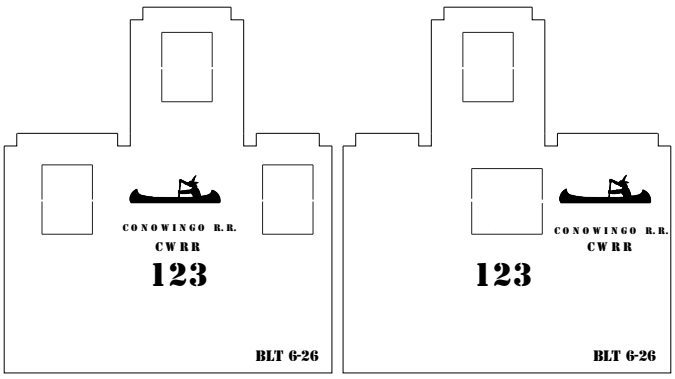
31. Install the coupler boxes. I recommend applying some CA to the frame where the coupler boxes will go, followed by appropriate screws (unfortunately, the screws included with some kits are for the trucks and are too long for this application).

32. Install the trucks at this time 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, I've found that a dab of CA helps keep the spring planks in place.

33. Install the bolts, ladders and stake pockets (optional) using glue. Either CA or white/wood glue seems to work equally well. The bolts and ladders have cut holes where their respective parts fit. There are provisions for 8 stake pockets on each side of the 36 foot car.



34. Apply decals as below if you choose to do so.



35. 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!