

Conowingo Models



GE 35-Ton Flatbed Doodlebug HO SCALE



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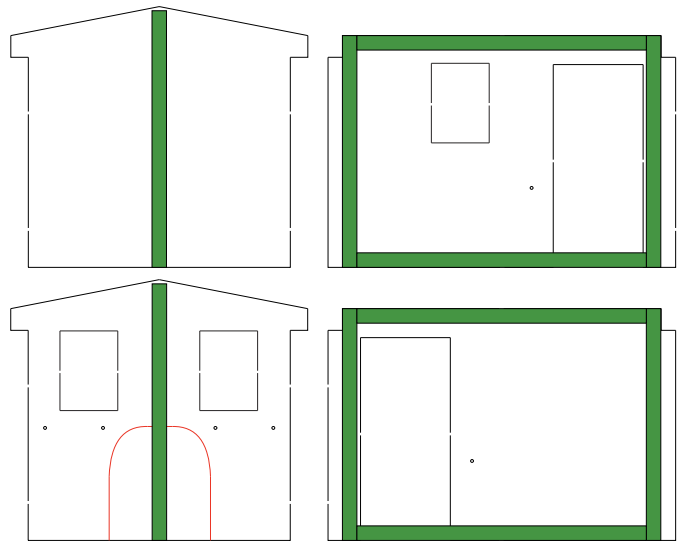
Thank you for purchasing this kit!

You will need to purchase an HO-scale AHM GE 35-Ton Switcher to complete this conversion. You may try to fit it on another body, but we didn't develop any instructions for that. There are several variations of this switcher. You are looking for one with two ladders on each side.

We also did not include DCC decoder installation instructions as they usually come with the decoder and can vary by model and manufacturer. However, builder Phillip Bechard informed us that he used a Loksound 5 Nano located next to the motor and put a Keep Alive in the tool chest. He included an ESU speaker and enclosure on the cabin wall without the window. Most of the wiring is managed on the floor in front of the motor.

We do update kit instructions from time to time. Please check the website for the latest instructions on this or any other Conowingo Models kit.

1. Bracing-
Cut and glue into place the 1/16 x 1/16 stripwood as shown on the diagram. Apply weight to flatten until dry.



2. Prepare the tarpaper roofing. We recommend using the tutorial by Jason Jensen Trains on Youtube. Look for episode 010. It explains the process better than we can. We recommend painting the undersides and edges of the chipboard roof with a grimy black, so that anything that isn't covered blends in. The width of the tarpaper should be cut to 3/8 inch.
3. We left the 3d printed parts on their carriers, figuring that they'd transport better that way. Carefully cut away from the part with your hobby knife. Be careful especially of the bell ringer arm.



4. Prepare the donor body/mechanism-



3a. Remove the shell by removing the screw on the top.



3b. Remove the weight. Use a rotary tool, such as a Dremel to remove the attachment plastic and flatten the bed. The photo below shows where we had added and removed a bed on an early version, which is why there is wood shown.

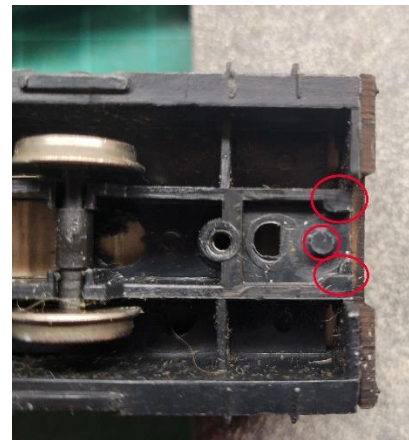


3c. Depending on whether or not you choose to convert the kit to DCC or not, you could do some wiring at this point. Ours is shown with the left wiring disconnected. You might choose to install a small DCC decoder in the slot shown. Keep in mind that the decking will be flush and there will be no access to it once the kit has been completed. If you're using straight DC, you probably want to install a bridge rectifier, some resistors and possibly even the LED at this time, leaving the wiring for the light somewhat long. We use DCC, so how to add LEDs to straight DC is only a guess on our part. If you are unsure, please do the research required and reference our diagram at the end.

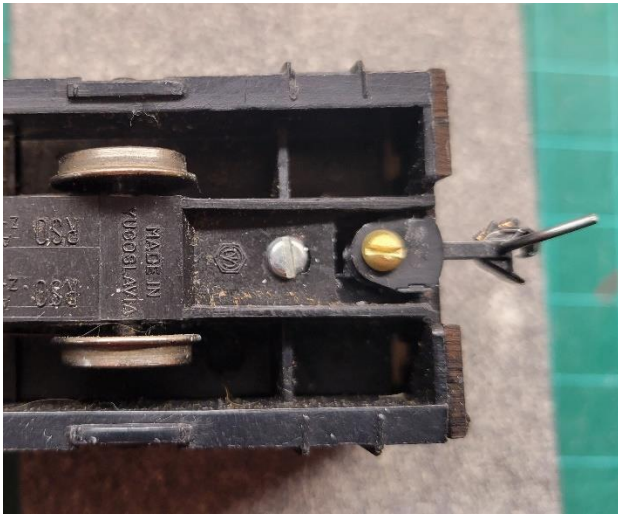
5. On the underside, there are three screws. Remove all three screws and the underframe piece, followed by both couplers. Now you need to make a decision. You have four choices with the new coupler.
- A. You can install none.
 - B. You can install the coupler at a lowered height, which will not be conducive to pulling cars.
 - C. You can install the coupler at the correct height for pulling cars. This approach will take the longest with a small degree of difficulty.
 - D. You can use the horn coupler that came with it.

If your choice is A, you can put the whole assembly back together, minus the couplers. Move on to step 5.

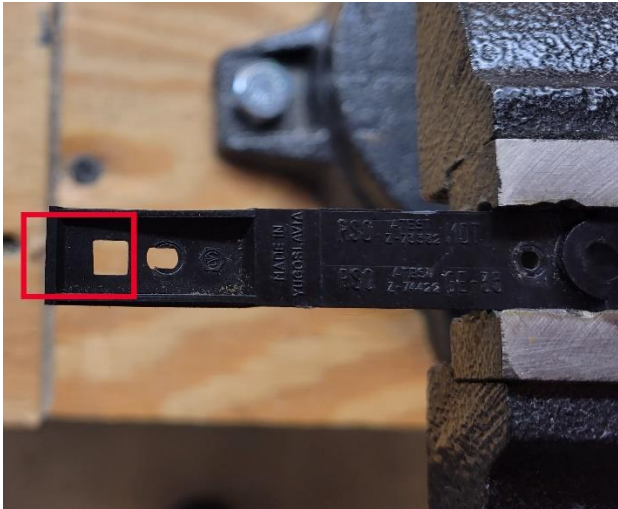
If your choice is B or C- Using a rotary tool, cut the plastic pieces as shown below. To clarify, cut the guides off of the aft end as well as the round piece where the coupler held to the body. For choice B, ensure the surface is level.



For B – Assemble the coupler box and coupler. Glue it into place using a fast-drying glue. Follow that up with a screw. You may want to pre-drill the hole first. (Shown after installation of the underframe.)



For B and C, cut the underframe with a rotary tool as shown below. Ensure that you cut the correct end.

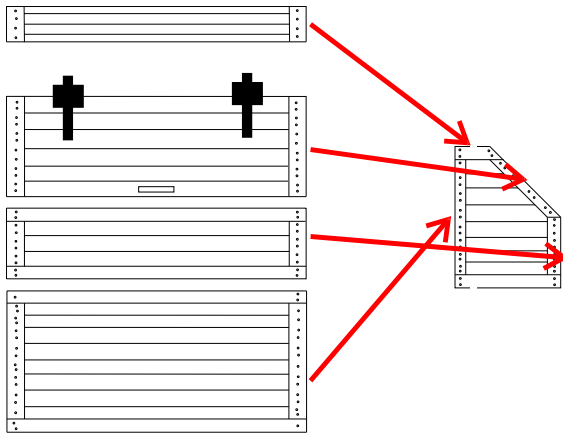


For B, reinstall the underframe piece using all three screws.

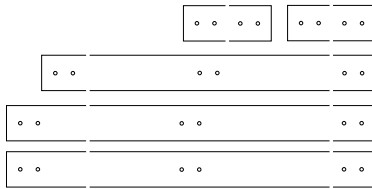
For C, we didn't attempt this approach. You will need to cut out the area shown to the left and build a new mount for the coupler box that is approximately 1/16 inch higher inside the body than the original. You will also need to cut the rear bumper when you get to that step to accommodate for the increased height.

6. Remove the radiator and the radiator caps from the carrier. We included three because they are delicate. They are the circles in the cutout by the rear bumper. You could also try using the excess where the NBW (Nut, Bolt, Washer) holes are cut on the aft bumper piece. You may choose to cut it down some and glue it into place on the top center of the radiator. Add one of the basswood engine cowl formers to the backside, ensuring it is level on the bottom with equal space on the top and sides.

7. Prepainting the parts are advisable with this kit. Read ahead for ideas on what you want to paint and what colors you would choose to use. With the door and windows, we opted to remove/not include the muntins and rails. We opted for a Testors blue acrylic wash and white doors/windows. We didn't have any brass paint for the bell and whistle, so we used copper. The inside of the headlight is silver. The radiator is a Testors Grimy Gunmetal, but it didn't soak in the way we'd like it to. The remainder of the detail parts are flat black.
8. When dry, size, cut and glue into place the 1/8 x 1/8 stripwood to the front end of the mechanism, so the top will be level with the top of the mechanism and the sides are even. The front end is the end closest to the motor. Glue the pilot into place below it.
9. Glue the rear bumper into place, so the top will be level with the top of the mechanism. The opening should staddle where a coupler is. See photo on step 23.
10. Locate the two pieces of the 1/32 scribe decking. If you are so inclined and have extra stripwood, you may consider replacing the decking with stripwood. Either way, we do not recommend only covering part of the deck. It could cause the engine cowl, cab, etc. to be uneven. Dry fit the two pieces to ensure they will be properly placed and then glue them down. When properly placed, the motor should be unobstructed, along with the solder points on the body and the decking should fit squarely on all four sides.
11. Assemble the cab so the corners resemble a tab and slot configuration with the door openings on the forward side of the cab. Add one of the basswood engine cowl formers to the forward side of the cab where there are is a laser cut outline.
12. Assemble the tool chest as shown below. You might want to consider putting something else here. We added it so that it could be a cover for the soldered points. Depending on the size DCC decoder, it might also be a good spot to hide the decoder. Note the position of the two strap hinges. The short part goes on the top piece and the long part goes on the lid.



13. Add the stake pockets to the support pieces shown below. Each double dot should match up with a corresponding nipple on a stake pocket. See photos on steps 22 and 24.



14. Fit and trim the edges of the chipboard roof to your liking. Do not glue it down yet.

15. Using a quick drying glue, add the headlight to the chipboard roof.

Glue on the tarpaper roofing, from the outside to the ridge as shown below. Do not cover the ridge and area around the headlight. Weight the roof until dry to ensure it's flat, unless you want a rippled roof. (Most people don't, but hey, it's your creation!) You may want to install patches on the roof to add character. We've found that adding glue to the edges of the chipboard and curling the ends of the tarpaper looks better than cutting it to length. Once dry, cut off any excessive overlap.

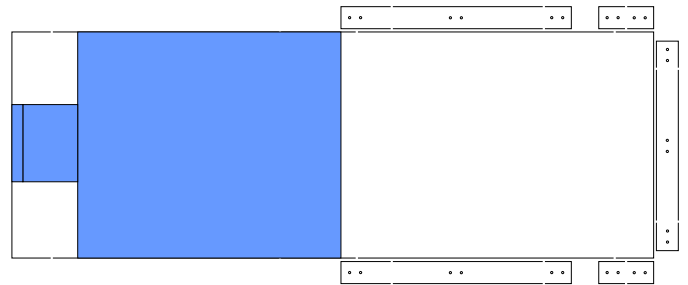


16. Wet the engine cowling with water (or Hunterline stain) and let sit for a few minutes.

17. Bend the cowling around the former on both the cab and the radiator. Trim as necessary and glue into place with a fast-drying glue. Place it on a flat surface to ensure everything settles in the right places.

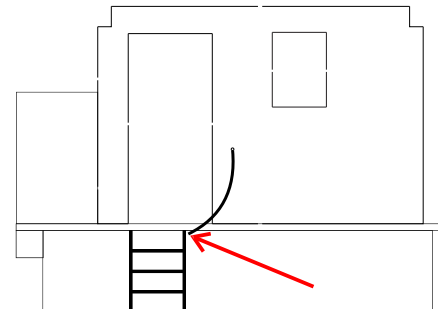
18. Feed the LED through the hole in the roof and glue into place inside the headlight with a fast-drying glue.

19. Fit and glue the cab into place on the mechanism, ensuring it fits and that the radiator is on top of the 1/8 piece of stripwood, even with the front.

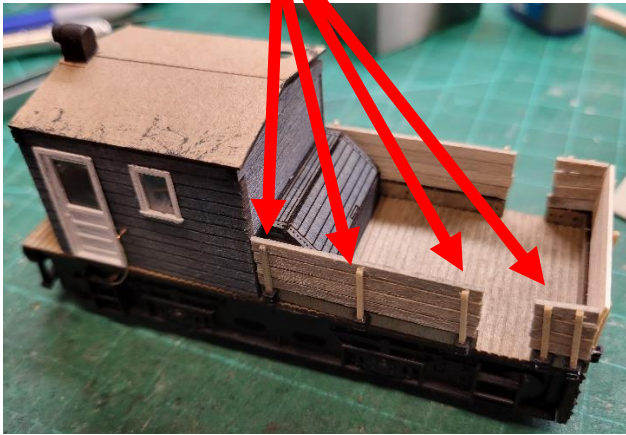


20. Glue the support braces onto the flatbed with the stake pockets vertical on the outside. They are shown sideways in the diagram above for clarity. The opening should allow ladder access. See photos on steps 22 and 24.

21. Insert one end of the caboose hand guides into the hole on the aft sides of each door. Take a small drill and bore out a hole as indicated by the arrow where the other end of the hand rail will go. Glue the hand guides into place. We temporarily used a piece of scrap 1/16 stripwood between the cab and the hand rail to ensure an equal spacing for the rails.



22. Cut the 1/32 x 1/32 stripwood into 13 pieces of equal length, approximately 4 scale feet. These are the stake supports.



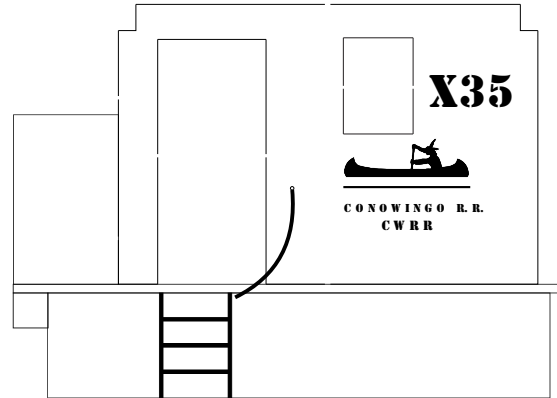
23. Glue the tool chest into place. You may need to cut the back to fit snugly against the cab, depending on the DC/DCC installation you did.

24. Add the NBWs onto each side of the rear bumper as shown below. Randomly pattern the direction of the NBWs.



25. Glue the grab irons into the holes on each side of the cab front. We used a piece of scrap 1/16 stripwood to ensure an equal spacing for the grab irons just like on step 20.
26. Drill a hole for the bell on top of the engine cowling or elsewhere as you desire. Glue the bell into place.
27. Figure out where you want the whistle and glue it into place.

28. Figure out where you want the smoke jack, drill a hole and glue it into place.
29. Apply the decals as you desire. Here is what we did for the left side. The right side has the lower lettering raised up and centered with the number underneath.



30. Assemble the doors and windows and glue them into place.
31. Cut the 1/32 x 3/32 stripwood to length as shown on steps 21/22.
32. Glue the stripwood to the 1/32 stake supports. If you are planning on staining these pieces, do so before you glue it all together. This process can leave some glue marks as the stripwood is not a fan of cooperating.
33. Close up the cab by ensuring that wires will not interfere with the motor and gluing the roof in place.
34. Glue the roof into place.
35. Add the tarpaper for the roof ridge. We added a separate piece that was cut to fit around the headlight to cover up any sins.
36. Glue the doors and windows into place.
37. Perform any paint touch up and weathering as needed!
38. 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 me what you need to complete the kit and I'll send it your way. I'm a one-man shop and I do occasionally miss things. Also suggestions for improvement are welcome.

Please send photos!

See the Conowingo Models website

www.conowingomodels.com

Or our Facebook page

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

for more exciting, funky buildings and rolling stock for your model railroad!

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

