RESIN CAR WORKS
RCW
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Freight Cars of Every Description

Kit 8.02
Illinois Central
AAR Modified Design
40' Steel Boxcars

All Model and Construction Photos by Frank Hodina

Introduction

Thank you for your interest in Resin Car Works and this kit. Resin Car Works is not a business in the traditional sense. Its purpose is to share in the fun of prototype railroad freight car modeling and their operations with others to provide unique and different equipment that isn't readily available. Several friends assisted with various production phases so it's not quite a one-man operation. To list a few who helped with the production of this kit I would like to thank: Tom Madden for his casting work; Ken Soroos for the decal artwork (which is taken directly from the prototype cars themselves) and for help with formatting the instructions; and to Eric Hansmann, the keeper of the website and blog.

This is a "CRAFTMANS" level resin kit and its construction should not be attempted by anyone who has not built similar types of models or who doesn't have a knowledge of prototype freight car construction and components. The kit consists of a one-piece resin body, floor and detail parts; Plano Models etched ladders; Yarmouth etched roof walk and etched supports; A-Line stirrups; Tichy AB brake set; assorted wire sizes and grabs; Precision Design Company decals; and the closest Tahoe Models truck type that is available. The modeler is to supply any small styrene bits, chain, couplers, weight and small screws needed to complete the model.

Warranty

All sales are final. There will be no exchanges or returns. Resin Car Works will replace any part(s) found to be defective due to manufacturing or shipping to the original purchaser within the first 30 days after shipment. The damaged part(s) must be sent back with your request for replacement. As these are limited production kits, don't ask for replacement of parts that you damage or lose after the 30-day period.

Liability

Resin Car works will not be responsible or held liable for any and all personal injury and/or health problems, short and/or long term, that may result from the use and/or misuse of tools, adhesives, materials, castings, paints or any other product(s) used to construct and/or contained in this kit. This kit contains polyurethane castings. Although non-toxic in their cured state, dust is created during filing, sanding and drilling. Air circulation and/or ventilation should be provided. Always work in a well-ventilated room. Wear a dust mask or respirator and safety glasses for protection.

Always wash your hands when you're finished working.

History

The Illinois Central skipped the purchase of any steel cars until 1937, when 1000 40' and 800 50' autocars where acquired. These new cars were of a modified 1937 AAR design as they were constructed as 10'-5" interior height cars with 5/5 square corner-post Dreadnaught ends. The stated interior height was 10'-4" as the ceilings of the cars were lined. Otherwise they were standard 1937 AAR design boxcars of all-steel construction with Murphy panel roofs. Starting in 1939, the Illinois Central began purchasing steel 40' single-door boxcars, again with an interior height of 10'-4". Between 1939 and 1940, the IC purchased 5000 such boxcars before construction ended due to WW2 steel rationing. The first 3000 of these cars had square corner-post ends. They are the subject of our kit. The cars were equipped with a variety of trucks (AAR, Barber Stabilized and National Type B) and hand brakes (Universal XL 2000, Superior and Ajax). The freight car diagrams included with these instructions show which trucks and hand brakes went with which series of cars *(Pages 9 and 10)*.

Getting Started

- First give the resin parts a good cleaning with Dawn and a toothbrush to remove any mold releasing agents. A light sanding of joints also helps parts to bond.
- The cast parts are best attached with ACC. When the term "cement" is used in these instructions, it refers to ACC. ACC is a strong adhesive which dries quickly. It can easily attach a part where it is not supposed to be. It will glue skin. Be careful. Place a few drops on a plate of glass and use a wire or pin to transfer small amounts of ACC to the area to be joined. Always wear safety glasses. ACC debonder is a useful tool for removing smudges of ACC from surfaces where it shouldn't be. Place a drop on the offending spot and wipe up.
- GOO or other such products are not recommended for construction except in small quantities, as they will soften the casting material.
- When a measurement is given, it's in prototype feet and inches.
- When the word "scrap" is used, it refers to an item that the modeler is to supply.

1. Body

As this is a one-piece body kit, most of the hard work has been done in creating the basic car shell. As I like to get the nasty tasks done first, clean the resin parts of any flash and drill the holes for the various parts. I generally use a #78 drill for all the grabs and #76 for the stirrups. Refer to the prototype photos for the location of the grabs and stirrups and install. The A-line stirrups will need to be re-bent to fit *(Photos 4, 7, 14)*.

I find that it's easier to paint the model if the underframe is left off the car body and installed after painting. It's also easier to glue parts which go through the body from the inside.

Keith of Plano Model Products created the etched ladders for this kit, as plastic ladders with 18" rung spacings are no longer available. We found the best way to form the ladder is with a photo etching bending tool such as is available from "The Small Shops." Honestly, I tried to bend the ladders with pliers and just messed them up. Once the ladders are formed, they can be mounted to the car by drilling #78 holes and inserting the ladders into them. I chose instead to remove the mounting pins and use small pieces of scale 2"x4" styrene attached to the back side of the angles as pads. The ladders were attached with ACC to the car sides and ends *(Photos 1, 2, 3, 4, 8)*.

Note that there is an "A" and "B" end to the body casting. Install the brake housing brackets, brake housing, plastic chain and bellcrank on the end along with the retainer valve. Run 0.010" wire from the retainer valve to the bottom of the end. Run 0.0125" wire from the bottom of the chain to the bellcrank. The brake step support is part of the etched fret for the running board. Bend and attach to the car end *(Photos 7, 8, 16)*.

Cement the cut lever brackets to the left corners of the ends. Attach etched eyebolts to the cut lever brackets. Leave the cut levers, brake wheel and running board off the car for now to make painting easier *(Photos 8, 15, 16)*.

This completes the body details.

2. Underframe

Add approximately 3 oz. of weight to the floor. I use whatever is handy

from the scrap box. In this case eight steel washers did the trick. And since I don't trust any glues to hold the weight, I make a bracket using scrap styrene, which is attached directly to the floor over the weight.

Attach coupler pockets to the underframe and drill and tap holes for 2-56 screws for the trucks and 1-72 screws for the couplers. The coupler boxes will accept only Kadee No. 158 semi-scale Whisker couplers *(Photos 10, 11, 12, 13 for all instructions in this* **Underframe** *section.* Refer to the photos and general arrangement diagram to determine the location of the crossties and brake components.

Fit and cement the four bolster covers and the crossbearer cover plates.

Fit and cement 8 crossties to the center sill. The crossties match the tabs on the car side between the bolsters and crossbearers. They are placed with the notch under the centersill flange with the channels facing outwards towards each end of the car.

(See also the prototype photos on pages 11-16 for the following:)

First drill out all the holes needed for piping on the brake components. The triple valve goes on the pad cast onto the underframe floor. Cement the brake cylinder bracket on the pads on the center sill and stringer. Cement the brake cylinder to the bracket. Cement one end of the reservoir to the center crossbearer and the other end to a short piece of scrap styrene as shown, making sure that the reservoir is level. Now install all the connecting piping using the 0.010" wire.

Install brake levers with 0.0125" wire using the Tichy turnbuckles with one end removed as clevises. Also install the connecting rod from the brake cylinder to the bolster with a small piece of scrap chain at the brake cylinder.

This completes the underframe.

3. Running Board

To place and attach the running board supports for the laterals, see *Photos 9 and 4.* Attach the running board and laterals with their corner grabs *(Photos 5 and 6).*

4. Painting and Lettering

When built, the cars were painted overall a red/brown color with black underframes and trucks. Repainted cars would have the trucks the same color as the body. Before painting, wash the car again with Dawn, rinse and let dry.

As for the color and types of paint, that's an individual choice. In this case I used Scalecoat I Boxcar Red #2 for the basic body, underframe and trucks. For this model I was looking for a car that had been repainted with the "Main Line of Mid-America" slogan since being built.

5. Final Detailing

Attach the underframe to the body, making sure that you're matching it to the "B" end. Install trucks, adjusting the coupler height with Kadee fiber washers.

Form cut levers from 0.0125" wire, using the prototype photos to determine the shape, and attach to car.

Finish up the model with the lettering scheme of your choice followed by sealing the car with flat glaze. After weathering, the model is ready for the layout. And don't forget to make the car card for your new piece of freight equipment.

6. A Note on Trucks

We asked Brian Leppart of Tahoe Models which truck fits closest to the ones used on these cars. Here are his comments:

"The short answer, I think, is my 007 double truss, spring plankless, double truss trucks.

I haven't found any early photos of these cars. The 40-ton trucks were changed out to 50-ton trucks sometime after 1953. The best I could find were a couple builder's photos of 50' square corner-end 40-ton box cars in Freight Cars Journal #36 from Dec. 1990 (It covered IC freight cars). Both were built by ACF in 1940 and 41. Both had trucks like mine but with a closer spring spacing. These trucks were also being built in the 1938-39 time frame when these 40' cars were built.

As for your first question, American Steel Foundries and Scullin would have cast anything the customer wanted. I think the "AAR" refers to any truck that meets AAR specs and looks like what the hobby often calls a "Bettendorf. "


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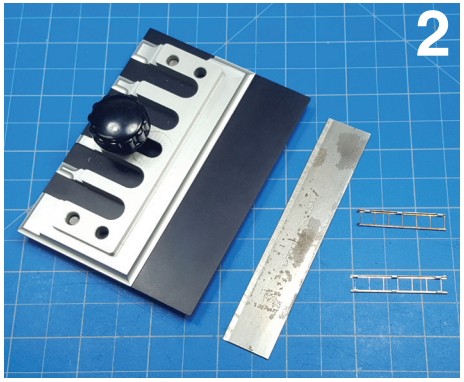
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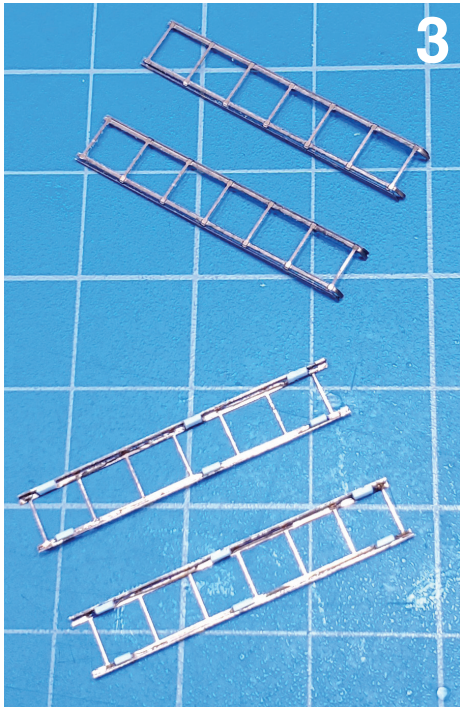
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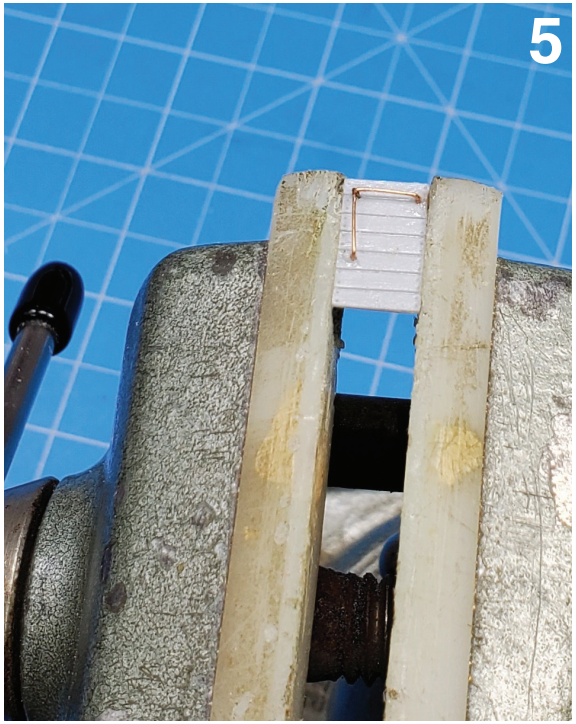
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