

M.L.W. Services CNR Colonist Car Kit

Introduction (PLEASE READ)

Thanks for buying this kit.

The prototypes for this kit are the Pullman/CC&F built CNR colonist cars that were built in 1919. There were a total of 130 built, 2750 - 2830. To get a complete history about these cars, see the Lepkey CNR Passenger Cars Companion Book.

You can build this kit so the doors operate or you can build it with the doors static in place. If you build the kit so that the doors operate, you can either use the supplied hinges or make your own from brass wire. Admittedly, the hinges are over scale and somewhat noticeable when the doors are open, but they do work well.

There are not a lot of underbody castings in this kit. This is intentional to keep the costs down.

There are areas where you will have to modify and adapt what is there. Sometimes things work on paper but change in a practical situation. Please keep an open mind when you are asked to change hole placement or remove some excess material.

If we were to correct some of these shortcomings and add more underbody castings, the price of the kit would increase by at least 50 percent. To keep the price point acceptable, we decided to go with this version.

REMEMBER, you are working with thin sheet metal for the most part. DO NOT OVERHEAT USING HIGH SETTINGS. DO NOT USE A BLOW TORCH! Failure to follow this advice will most likely WARP or BURN your parts. How? If one area is overheated and another remains cool, the overheated one expands while the cool one stays and voila, a warp. These parts cannot be replaced and warped sheet metal is almost impossible to fix easily. But it can be done.

ALWAYS work from the centre of any piece to the outer edges. ALWAYS check to see if things are aligned. If you notice that something is not lined up properly, do not continue. Backtrack to where things got into trouble or remove the piece entirely and try again.

Be very patient. This is a craftsman kit. Enjoy it. It should give you 24 hours of enjoyment.

Prototype Disclaimer

Groups of these cars went through modifications. Here is a chart outlining them.

Year	Cars	Type	Series	Balance
1919	130	Colonist	2750 - 2830	130
1923/24	12	Parlor	550 – 561	118
1937	50	A/C/ Coach	5130 – 5179	68
1927/55	9	Miscellaneous	-	59
1947	6	Parlor	892 – 897	53
1949/51	15	Combine	7173 - 7187	37
1954	17	Sub Coach	4959 - 74	21
1955/56	19	Combine	7188 – 7211	2
1962	2	Retired	2750 - 2830	0

Some of the AC cars did not have their appearance changed that much from the original configuration.

Different numbers of this class had their roof details located uniquely. Decide on which car you are doing and add the details to suit.

Check your prototype shots or freelance it.

Acknowledgements

Thanks to Chris Creighton of Schomberg Models for doing the excellent resin castings. Thanks to William Flatt for use of his photographs. Thanks to Bill Wade from BTS for making his castings available. Finally thanks to my wife, Terry for putting up with this time consuming endeavour.

All artwork and original patterns were done by M.L.W.Services. So you can blame them for any shortcomings.

Kit Contents

Etchings

Inner Sides/Outer Sides/Delicate Side Framing
Bulkheads/Bulkhead Doors
Vestibules, Vestibule Doors, Safety Gates and Trap Doors
Door Hinges

Resin Parts

Roof Ends
2 Smoke Stack Base

Brass Parts

4 x Steps
Brake Line/Signal Line
Steam Line
10 x Pullman Roof Vents
Brake Cylinder Assembly
Generator
2 x 0.020" – for hand grabs and rain gutter over baggage door
3 x 0.032" – for the Brake/Signal Line
2 x 3/64" – for the Steam Line
Spare 0.016" brass sheet
1 piece of 7/32" brass tube for 14" reservoir
1 piece of 1/4" brass tube for 16" reservoir
2 pieces of brass channel to mount the reservoirs
1 piece of 3/32" brass tubing to make the smoke stacks

Wood Pieces

Pre-cut Clerestory roof stock
1 piece of 5/8" x 5/8" wood for the battery box
1 piece of 5/8" x 7/16" wood for the storage box

Miscellaneous

American Models 6 Wheel Passenger Trucks
2 x 1/4" number 2-56 screws
2 x 3/16" number 2-56 screws
8 x 1/4" number 0 machine screws
Black Cat Decals
SHS Couplers

Preparation

Read through the instructions to familiarize yourself with all the parts. Then cut out the parts and file away the tabs. The fine rivet framing has been cut out for you and mounted on cardstock. Occasionally a frame piece may be incomplete. Additional material has been taped on to alleviate this.

The Frame

1. Fold the bottom of the fishbelly frame along the fold lines. Next fold the slopes of the fishbelly. There are narrow extensions at the ends. These really are unnecessary and are hard to fold. You can cut them off at the end of the slope. If you look at Figure 001, it is the extension on the lower left.
2. Place the fishbelly tabs in the slots in the floor and solder the tabs on the top of the floor. See Figure 001.

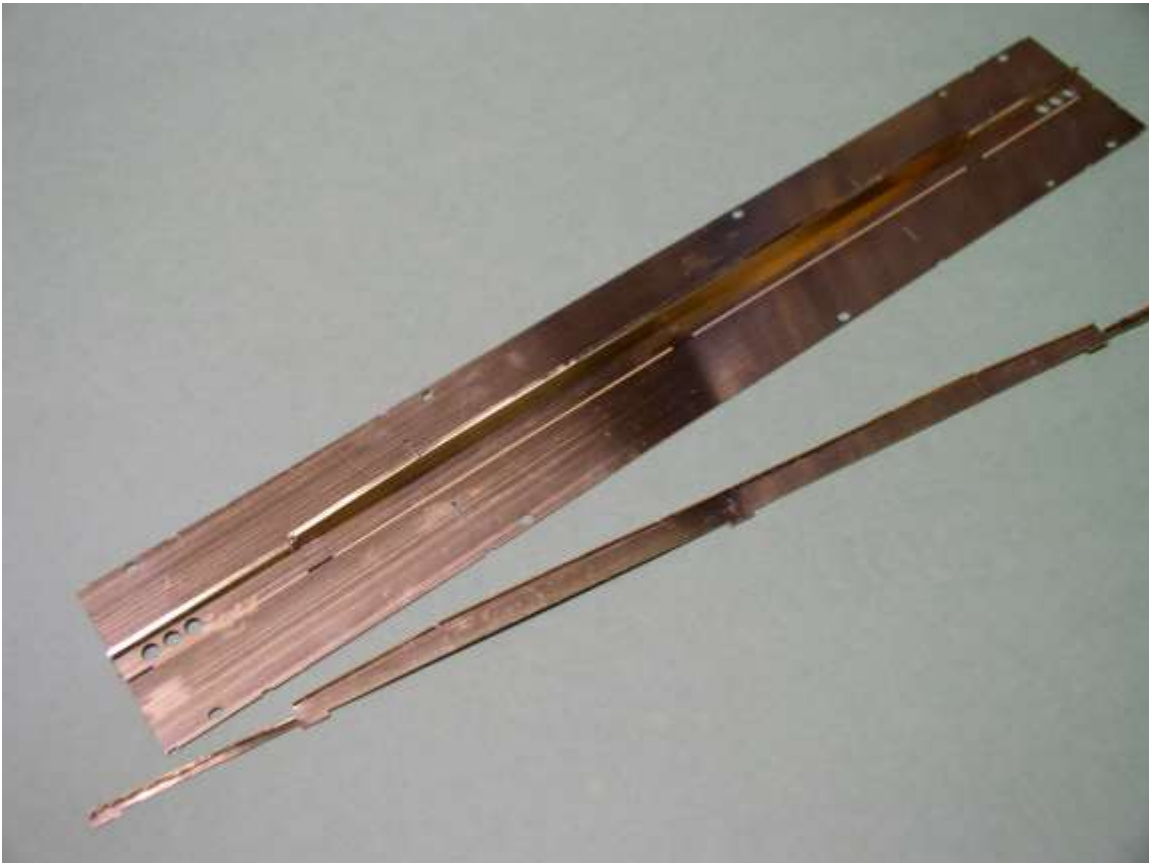


Figure 001.

3. Next add the side braces for the frame. You will have to clip a little off where the edge meets the fishbelly. See Figure 002.

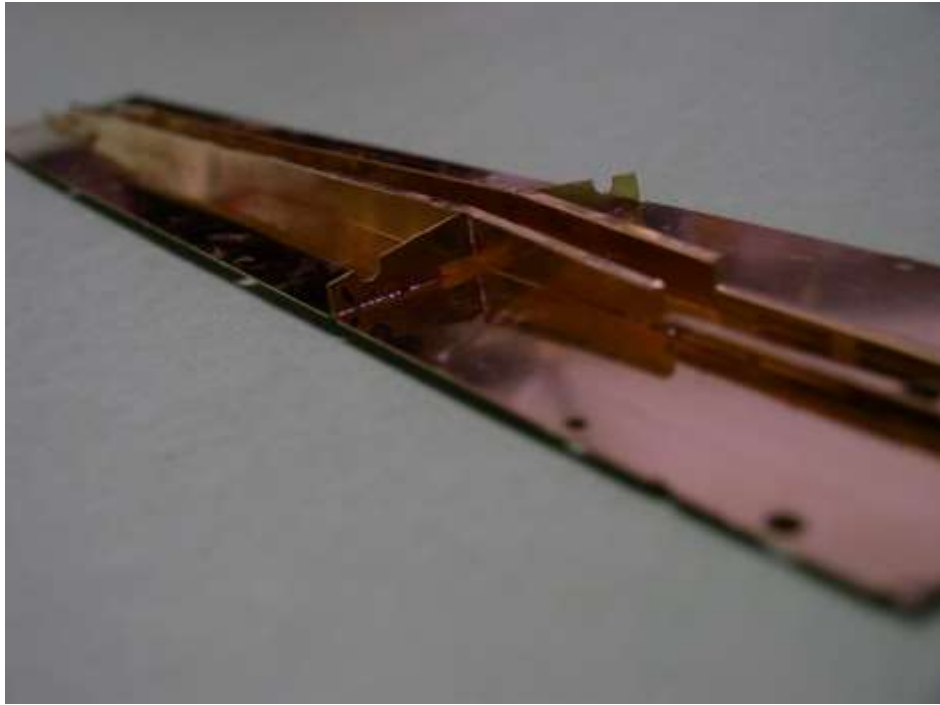


Figure 002

4. Add the top bracing to the side braces. See Figure 003.

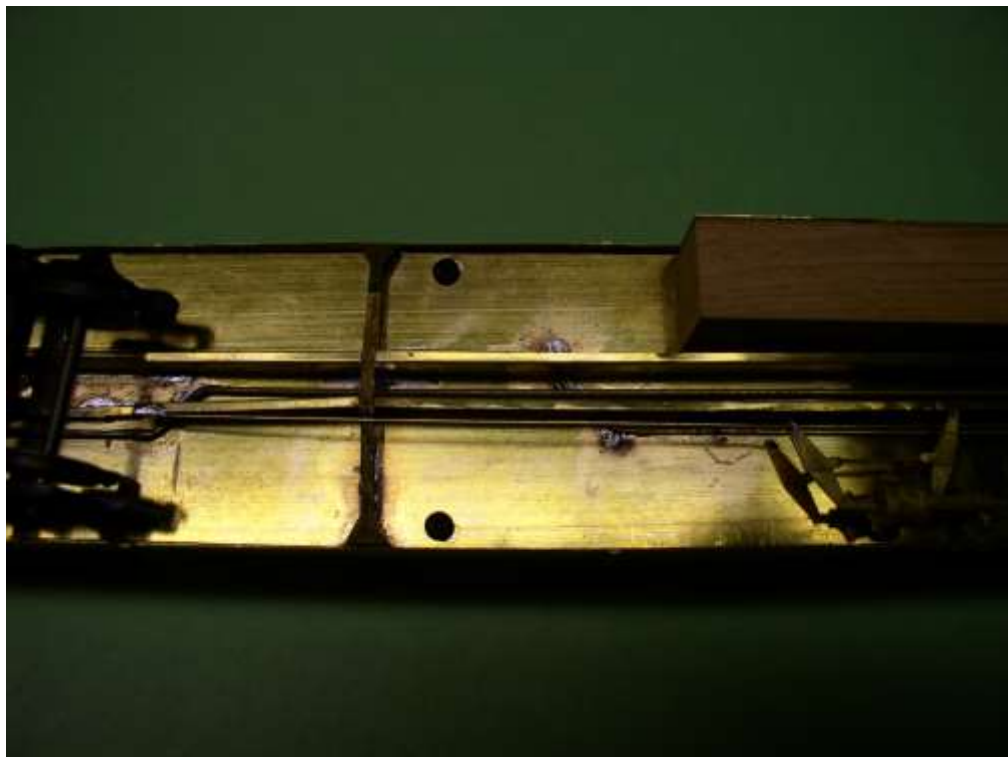


Figure 003.

5. Add the truck bolsters by soldering to the top of the floor. The truck bolster is shown on the left. We used the centre hole for the American Models trucks. If you use other trucks, you may have to experiment. See Figure 004.



Figure 004.

6. Try mounting the trucks. Use the 1/4" 2-56 screws from the bottom and 3/16" 2-56 screw from the top to secure the truck. You can play with the tension.
7. We will complete the rest of the frame later.

The Sides

1. Tin the inside of the outer side and the outside of the inner side. Figure 005 shows the outside of the inner side.

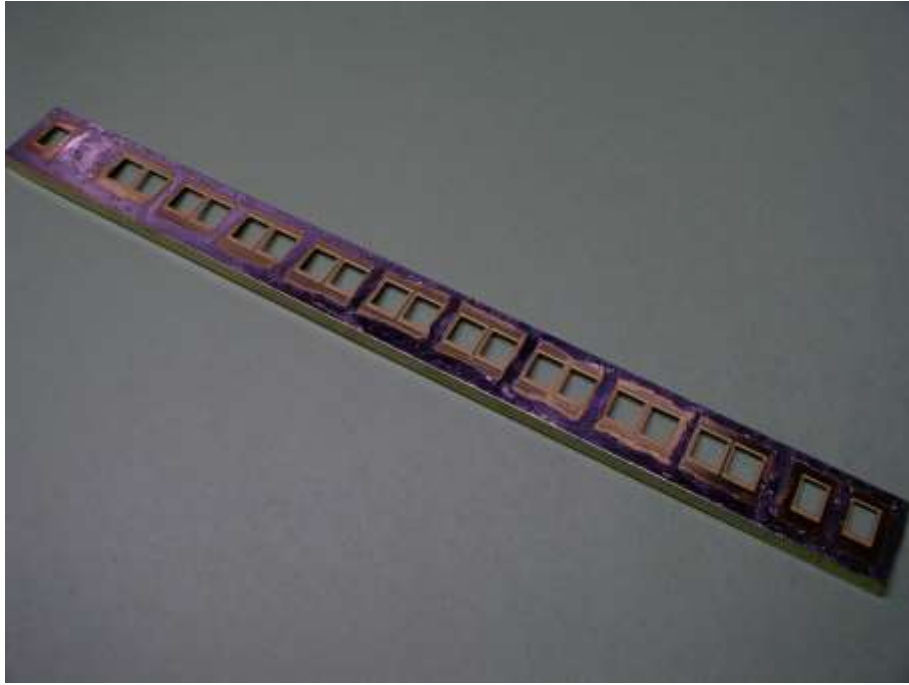


Figure 005

2. Line up the inner and outer sides so that the windows match. The outer top will have about a 3 scale inch overhang at the ends. This is the way it's supposed to be. See Figure 006.

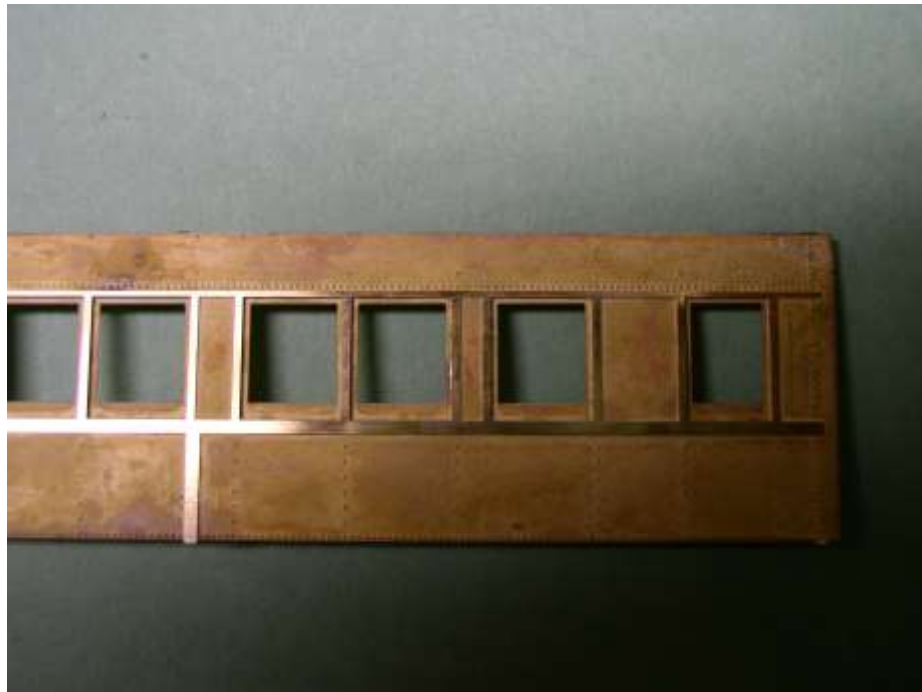


Figure 006

3. Tack solder the top edge above the middle of the side. Now slowly heat the inner wall and move from the centre of the sides outward. Use a coffee stick to help push the outer side against the inner side. Keep checking for alignment. If you are off, you can unsolder by using a razor blade to pry things apart. See Figure 006 and 007.



Figure 006



Figure 007

4. Figure 008 shows an alternate method of attaching the sides using large carbon tipped tweezers.



Figure 008

5. Tin the trim and using a very low heat setting solder on to the raised portions of the outer sides. If you get out of alignment, use a razor blade to help unsolder. See Figure 009.

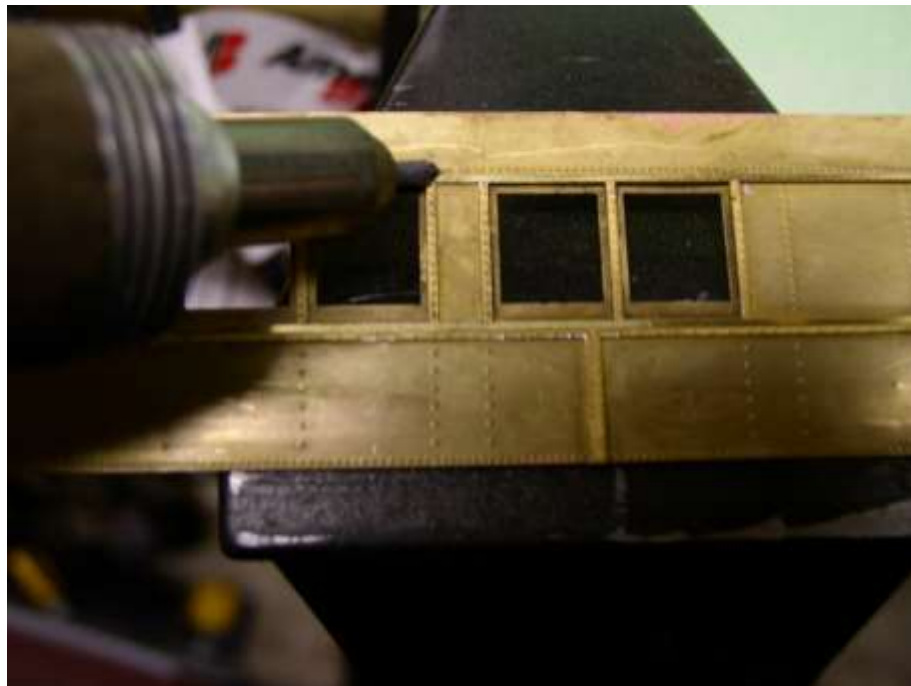


Figure 009

6. There are two short vertical rivet strips that can be attached to your car side in the place shown in Figure 010. These are optional as some cars did not seem to have them. Check figure 010a for a better picture. Your finished sides should look something like Figure 010.



Figure 010



Figure 010a

7. Solder the doors into the bulkheads. Solder the bulkheads to the ends of one of the sides. See Figure 011.

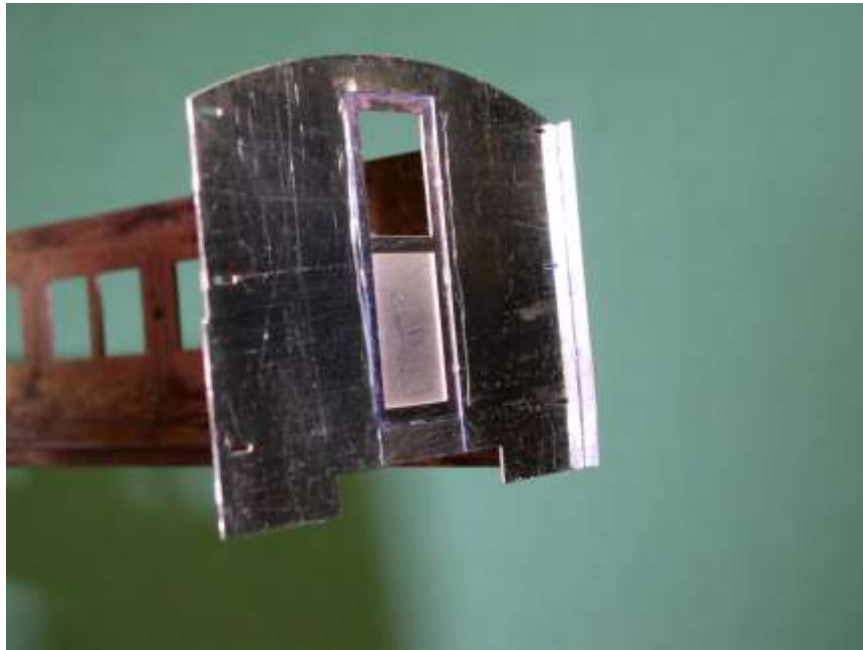


Figure 011

8. Figures 012 and 013 show our CNR Combine kit having the bulkheads installed on one side and then the second side attached. Note the Colonist car does not have an inner bulkhead nor baggage door.



Figure 012



Figure 013

9. Fold the overlap over the bulkhead ends using a piece of wood. See Figure 014.

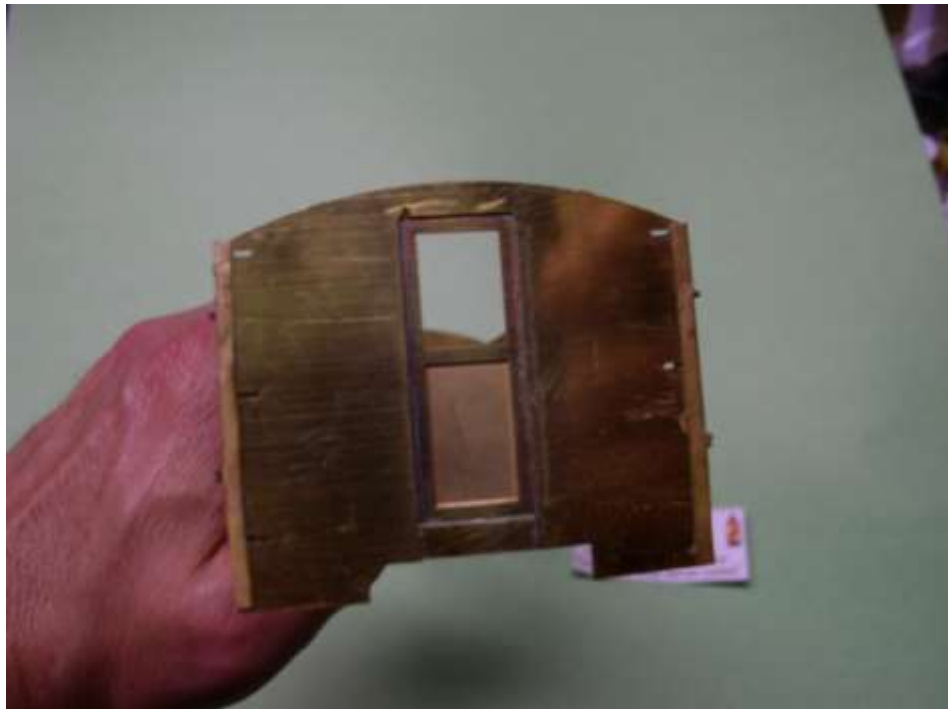


Figure 014

Decide whether you want hinged doors or not. If so, proceed to next step. If not, proceed to step 14.

10. Fold the hinges on the doors 90 degrees using the fold lines as guides. Try to have them as flush as possible. See figure 015.



Figure 015

11. Solder the hinges into the slots on the ends. The hinges can be found tabbed to the doors and the stair opening in the floor. They look like bird's heads. There are two types. One has the hole 1 inch closer to the tail. The other has the hole farther away from the tail. Use the ones that you feel will help to keep the door side closer to the bulkhead. The slots are longer than necessary so help you horizontally position the door. See Figure 016

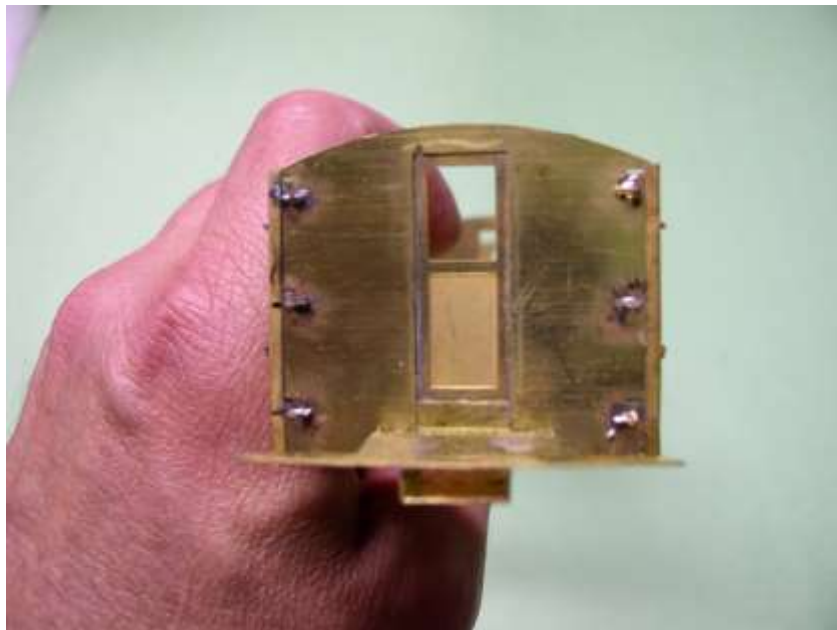


Figure 016

12. Bend the vestibule end slightly on each side of the door frame to match the vestibule floor end. See Figure 017. Vestibule floor end is visible as well.



Figure 017

13. Using a piece of 3/64" brass wire clamped vertically in a vice, start to roll the edges of the vestibule end. See Figure 018.



Figure 018

14. Now place the end on a flat surface and continue the roll around the 3/64" rod. See Figure 019.

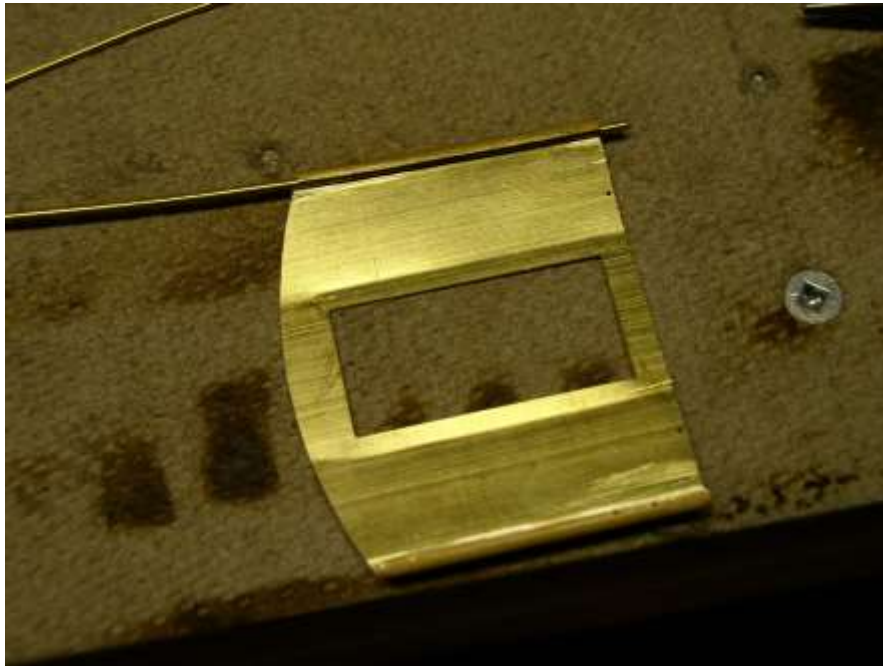


Figure 019

15. Place the vestibule platform ***inside*** the combine with the step opening flush with the rear of the bulkhead. Everything should square up nicely. Solder it in place. See Figure 020.

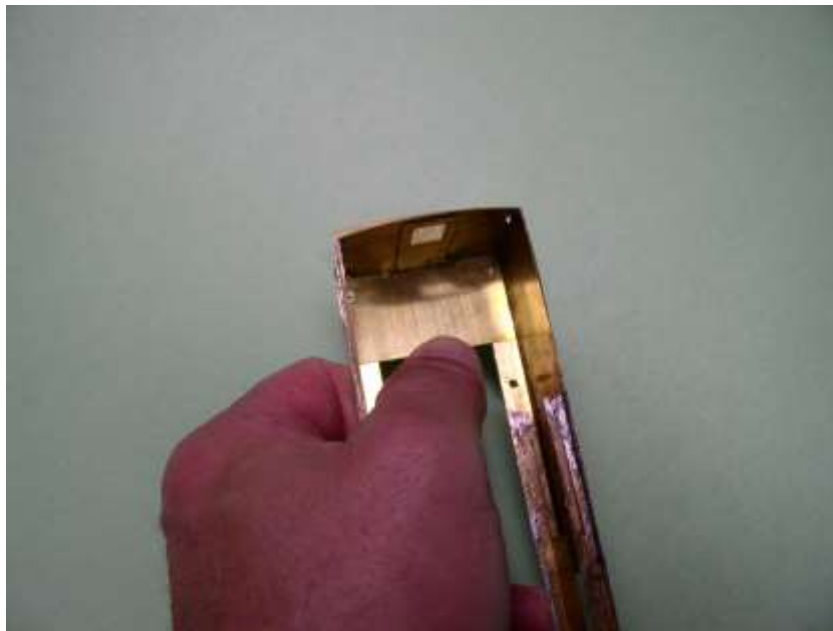


Figure 020.

16. Fold the sides on the coupler mounts and attach one to the bottom of each vestibule end. See figures 021 and 022.

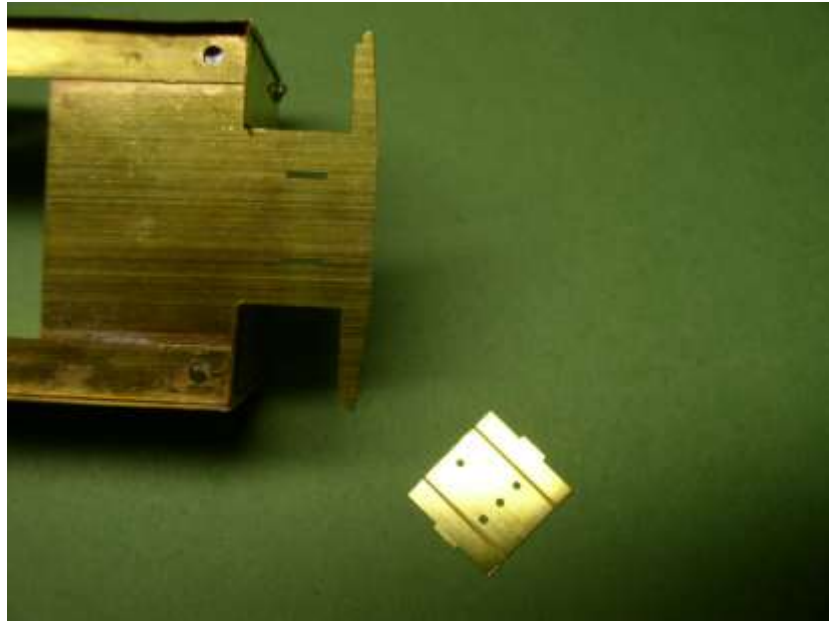


Figure 021

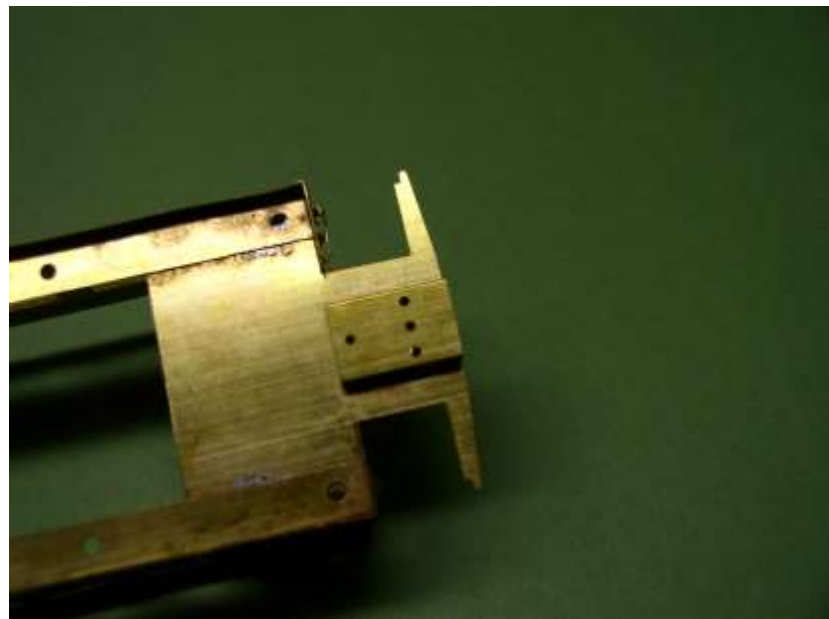


Figure 022

17. Test fit the end to the vestibule floor. The edge of the vestibule end will go around too far for the door to attach squarely. You have to unroll the edge a bit and remove 1/32" from the edge. A sharp pair of scissors will do this or you could file away. Reshape and test until you get a good fit. You can use a plastic hammer to gently shape it true with brass rod held where the radius is. See Figure 023.

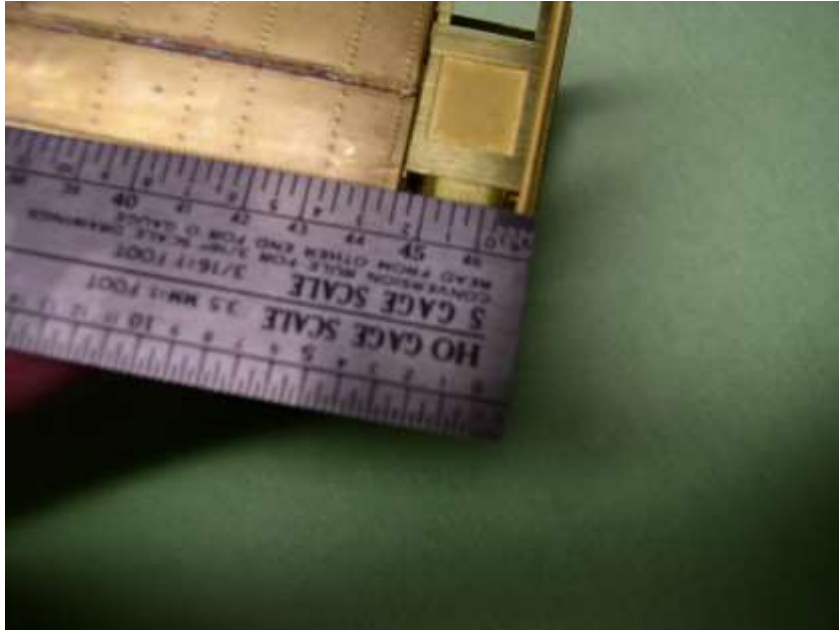


Figure 023

18. Take the end off and solder the top form in place. If you are soldering your doors in place, solder them in place to the vestibule end. See Figure 023 and 024.

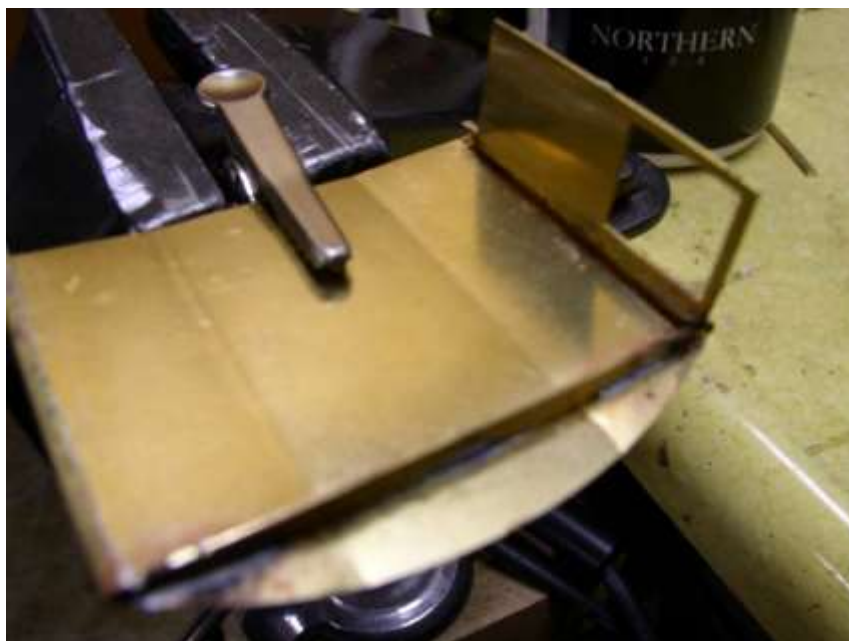


Figure 23



Figure 024 showing the doors soldered in place on solid end.

19. Trim and attach the safety gate to the inside of the vestibule end. See Figure 025.



Figure 025

20. After checking and positioning, solder the vestibule ends to the vestibule floor.
See Figure 026.



Figure 026

21. Cut a piece of strip brass, straighten it then bend it so that it fits between the top of the door of the end bulkhead and the top of the form of the vestibule end. Solder it in place to create a secure vestibule end. See Figure 027.

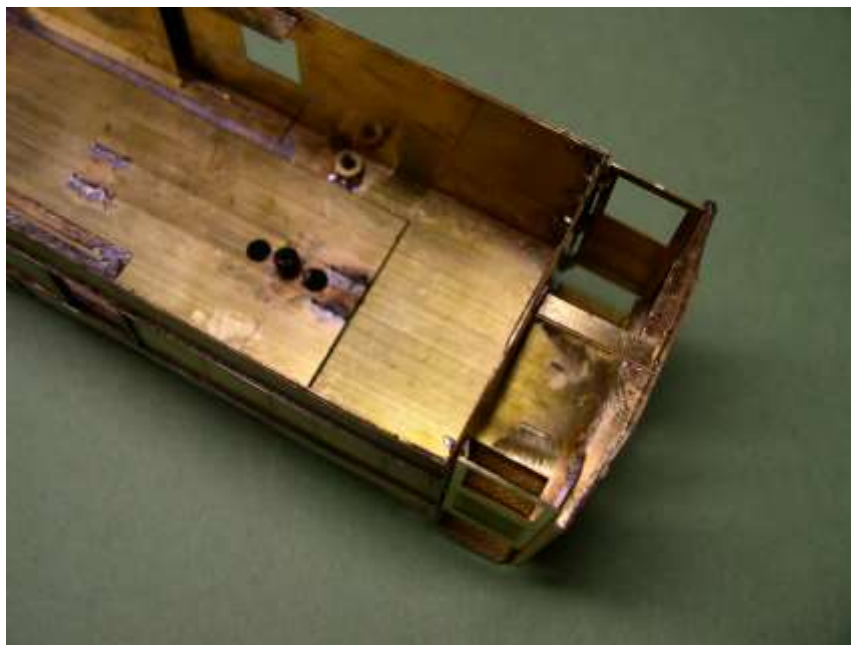


Figure 027

The Floor Part 2

1. There are small holes in the floor that will line up with the body lip. One hole is where the brake reservoir should go. You will have to either put the brake reservoirs in another place or drill a 1/16" hole in the floor and a corresponding 3/64" hole in the lip back from where the brake reservoirs are supposed to go. See Figure 028.



Figure 028

2. Fold the bracket for the reservoirs as shown in Figure 029.

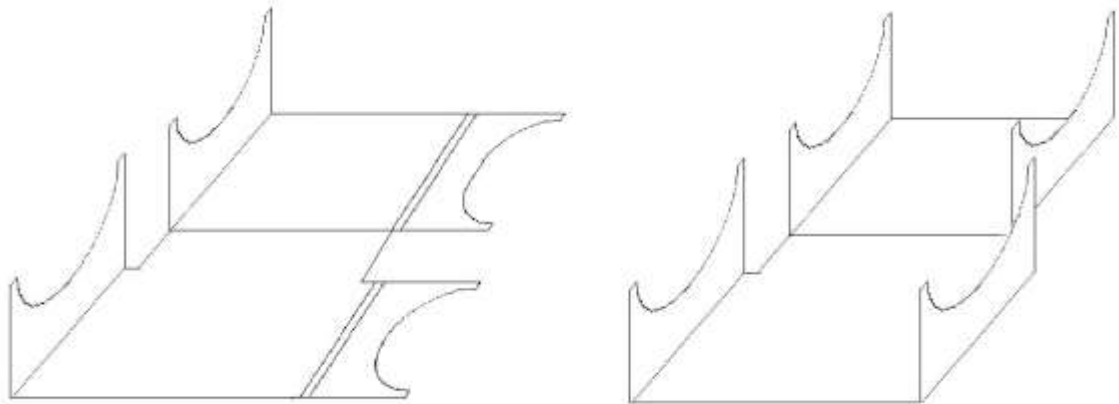


Figure 029

3. Look at Figure 028 again. This shows the typical placement of the underbody details. . The air reservoir bracket is located about 3 ½ scale feet from centre of the side brace that is located closest to the left end of the side with only one single window on the right side of the end. The centre of the generator is located about 4 ½ scale feet from the left of the same side brace. The brake cylinder should be 6 scale feet from the right edge of the small air reservoir.

4. Solder a large circle to each end of the 14" brass tubing. See Figure 31.



Figure 031

5. Repeat steps 6 & 7 for the 16" brass tubing.
6. Solder the 16" reservoir in the bracket closest to the fishbelly and the 14" reservoir in the bracket closest to the car edge as shown in Figure 028.
7. ACC the battery box covers etchings to the 5/8" x square piece of wood. Attach to the floor of the underframe of the side with two end windows. The box is situated between paired windows 5 and 6 counting from left to right. See Figure 032.



Figure 032

8. The storage boxes were not part of the Colonist Cars but have been included so that you can add them where you want. Do the same with the storage box using the storage box etching and the 5/8" x 7/16" piece of wood.
9. You can add the air and signal lines using the 0.032" brass rod. They cross to the engineer's side just behind the battery box. See Figure 033.



Figure 033

10. Add the steam line using the 3/64" brass rod. It crosses over to the fireman's side just as you see it crossing the engineer's side in Figure 032.
11. To secure the floor to the body, use the 8 1/4" number 0 self tapping screw in the holes provided. Some of these can be seen in Figure 033.

The Roof

1. Situate the wood roof section on the top of the body with the groove over the middle bulkhead. Add the resin ends. Check the resin ends for squareness. File the ends lightly to get a better fit. See Figure 034.



Figure 034

2. When you get a good enough fit, ACC the ends to the centre section. Scrape the seam with a razor blade. Fill the gap or any differences with water based wood filler. Allow to dry then sand. See Figure 035.



Figure 35

3. Drill a 3/16" hole 9 scale feet from the left end of the roof. Drill a second 3/16" hole 10 and 3/4 scale feet from the right end of the roof. We start with a 1/32" drill and work up. Stay clear of the clerestory. These holes will be for the smoke stack bases for the stove and heater. ACC these stacks in the holes. You may have to enlarge the holes a bit and fill the edges. See Figure 036 and 036b. These smokestacks are located on the brake gear side of the car.



Figure 036



Figure 036b

4. Cut the 3/32" tubing to form the smoke stack. Make a small tee by grinding a curved notch in one end and soldering a cross piece in the notch. Check for the height that you need. Different cars had different heights. ACC in place. Please note that this is a shot of the combine. See Figure 037.



Figure 037.

5. On the side with the battery box, Use 1 inch finishing nails to represent the toilet vents just behind the end windows in the passenger area. See Figure 038, Figure 038a and Figure 038b.



Figure 038



Figure 038a



Figure 038b

6. Add the Garland vents to the roof where shown in Figure 039 and Figure 039a.



Figure 039



Figure 039a

7. Drill 0.020" holes for the hand grabs in the ends where indicated in Figure 040. Form the hand grabs from 0.20" brass wire. If you wish to add the steam pipe connectors, the brake line connectors and signal line connectors attach to the ends as shown in Figure 041.



Figure 040

8. That's it. Now use the Black Cat Painting Instructions to paint your CNR Colonist Car. Add couplers and window material (not supplied) and you're done.
9. You can attach the roof by gluing it using water based contact cement or which ever way you choose.

Gallery



CNR 2789 Courtesy of the William Flatt Collection