Detailing the Red Caboose X29 and 1923 A.R.A. Boxcar Kits to Model for. begins at 7:15 PM

> Bill Welch © Hindsight 20/20 June 13, 2020



WLE/NKP

B&O M-26D





LNE

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CNJ

MEC





CGW

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Level of Detailing. . . Your Choice

As you will see I like looking at the details large and small. How far you decide to go is of course your choice. I just ask you to keep an open mind. You may find you like going deep or at least you have a favorite prototype that you want to go deep with.

On the **20/20 Hindsight "IO" Group** site there will be a folder "Detailing the *Red Caboose* X29 and 1923 A.R.A. Boxcar Kits." There you will find this presentation and other resources including a PDF titled "X29, M-26 & 1924 ARA Plan Notes." It will have details related to each of the cars you see here that I could not fit into the presentation. Bear in mind that my modeling date is October 1955 and my modeling is geared for that date. You will probably want to detail for your date too.

As we start allow me please to suggest we think of styrene body in front of us as a blank canvas upon which using our educated eyes and mind we will apply specific details.

Let's go!

A Few Preliminaries . . .



Sections of 0.005" sheet styrene are used to create the end flanges of bolster cover plates. These are very obvious in photos of the various cars.

I like to use *Plastruct* styrene rod to fill the holes that will not be needed or that are in the wrong position. Usually .020" or .025" works perfectly.

This Cross Tie location is correct **only** for PRR X29 and perhaps the DT&I copies



For whatever reason the Stringers are too short so I use .040" x .040" to extend them to the bolsters.

For the models covered here the Cross Ties need to be relocated so they are under each door post or even with each side of the door opening. We will see several prototype photos where the car sides have repair panels either riveted or welded in place. To model these I suggest using *Archer's* "Surface Detail Decals." They make several varieties of rivets while for weld beads I use the most narrow "aircraft panel line" decals. Below is an example of the panel line decals.



Ladders

Given this event's time constraints I cannot spend much time on Ladders. The kit ladders are good for the WLE/NKP, CGW, LNE, CNJ and LNE (with small modification). Red Caboose tooled a 7-rung ladder for the B&O M-26 classes. The Speedwitch kits have correct 7-Rung Ladders for the MEC. The bottom rung on the B&O and MEC side ladders is a drop style attached to the ladder stiles. On the other cars, there is a separate Drop Grabs under the side ladders.







The MEC, LNE, and B&O ladders had mounting straps behind the stiles. I used .010" X .030" strip styrene for these.

Improving Ladders

For a few years now, I have been trying to improve the scale appearence of ladders by replacing their rungs with *Plastruct* 0.010 styrene rod. I realize this may not be everybody's "cup of tea" but I can tell you with practive you can find your rhythm, skill and comfort. When necessary I have also been using Evergreen and Plastruct styrene to scratch build ladders.



In the *Xxtreme Modeling* and *Modeling the A.R.A./A.A.R. Standard Steel Boxcars* presentations in the "IO" Group Folder "Detailing the *Red Caboose* X29 and 1923 A.R.A. Boxcar Kits" I explain how I use the 0.010 styrene to improve ladders and how I scratch build ladders.

Wheeling Lake Erie & Nickel Plate



The Wheeling & Lake Erie purchased one thousand cars. Their superstructure is identical to the PRR X29 while the underframe was the ARA Design.



When the WLE became part of the Nickel Plate, the NKP simply changed the reporting marks retaining the original car numbers.

Note: I cannot image modeling without photographs and collecting period photos has become a constituant of my hobby. Let's see what details can be found in a couple of photos.



This area seems crowded, what is going on? Something hanging down here not commonly seen Bolster Cover Flange I referred to earlier Placard Boards have two boards, probably 1" x 8".



Plate under the Door Lock hardware Closely spaced Door Stops

Where is the Reservoir?



This car has had a steel plate welded here—a repair of some kind.

Flaws in the design resulted in the lower portions of the side panels often corroding. Railroads repaired the rusted areas by either welding or riveting "Patch Panels" along the bottom of the sides where necessary.



Here I tried to duplicate the interesting plate the WLE applied to stiffen the Door Latch mechanism. *Evergreen* 0.005" is used to make this.

Remembering the photo of NKP #25986 here is the steel plate on the edge of the first steel panel. *Evergreen* 0.005" sheet styrene is used to model this patch.

Both models are being built using the "Patch Panel" X29 #7005 body.



Close examination of photos shows interesting details about the WLE/NKP cars—they featured an AAR three-lever arrangement. Further when the WLE upgraded their car with an "AB" brake arrangement, Sometimes they added the "AB" valve and an Emergency Reservoir instead of the more conventional reservoir with two chambers, probably because the cost was lower.

I made two of the Emergency Reservoirs using spares cut in half, sheet styrene, spare Tichy parts from their "AB" brake sprue for the grey dome shapes and rivets harvested from an *Athearn* boxcar.





Long Third-Lever Support

Primary Reservoir

Brake Cylinder: Note the brakes are not applied.

The A.R.A. Three-Lever design would make it easier for the Brakeman to apply the brakes using an unpowered brake wheel by providing more mechanical advantage or "leverage."



Orders should give PIECE NUMBER and NAME of part wanted

Here is the drawing for the Emergency Reservoir

Photos show a *dished* Brake Wheel: these are from *Tangent*, look for their Tank Car detail parts. For variety I oriented them differently as photos show them both ways.

Tichy NBW

A-Line Sill Step used for Brake Shaft Bracket

4

Ends are drilled for *Kadee* "Bracket Grabs" using template for *Yarmouth Models*.

The "B" ends are identical of course for the WLE and NKP.

A couple of years ago I started making finer brake shaft supports by cutting Shim Brass into strips and with the best one wrap it around a #76 drill shaft and squezzing with pliers to form the shape I want. Then I drill two #79 holes where it will go and use a #11 to connect the two holes. The mounting flanges are 0.005 styrene with harvested Athearn Rivets for mounting bolts.



Baltimore & Ohio



The B&O built thousands of M-26 boxcars installed in six different sub-classes. Here I am modeling one of their M-26D cars equipped with a Duryea Underframe designed to cushion the load.



B&O 274971 represents a typical M-26D. It was photographed before cars usually had a second bracket grab added to the left end of the side but otherwise represents the model I am building.





"Tatum Patent"* Route Card Holder Widely spaced Door Stops—kit parts

Add .010 x. 030 strip Mounting Straps to the back of the Kit ladders

*Mr. Tatum was the Railroad's Chief Mechanical Engineers and held several patents for parts used on the B&O's freight cars.





Detailing the "B" End



Precision Scale Retainer valve

Kadee "Ajax" Brake Wheel

Scratch built "Tatum Patent" Brake Step

Pipe Bracket made by flattening 0.010 brass wire

Type "1" Bracket Grab*

Type "2" Bracket Grab*

*Please see my Modeling Notes on the 20/20 "IO" Group for explanation.

"Tatum Patent" Route Card Holder scratch built and copied in Resin Door Handles made with flattened 0.010 brass wire

Tichy Door Supports

Kit's Door Stops I am quite obsessive about Sill Steps and find the *A-Line* "Type A" very useful. Once heated in a flame it can be rebent into many of the common shapes. All of the models in the presentation have Sill Steps using the modified A-Line part.





Speedwitch Media offers Duryea Underframe resin cast kits specifically for the B&O M-26 cars so equipped.





This makes for a very interesting variation.

Lehigh New England



Note that *Speedwitch Media* has offered modification kits with parts to do correct roofs, doors, ladders and other small parts and decals to model these cars.

Okay, let's pause for a moment. . .



and read this photograph . . .what details do you see that can be modeled?

Here are a few. . .



Side mounted Sill Steps with mounting flange

Two different styles of Grab Irons

Steel Panel Repairs and they are at varying heights

Reinforcement added under the door





Reinforcement under the door adds visual difference for me.

I still need to add the Route Card Holder approximately here Styrene strip is used to make correct lower door guide and door stop



The first two groups of LNE cars featured the A.R.A. three-lever arrangement. Photos of the cars after installation of "AB" brakes helped me locate the Reservoir and AB Valve properly.



My "B" end is in process, mainly waiting for the Kadee Bracket Grabs and Ladders to be installed.

Why only three holes here? Because there is also a Bracket Grab to be installed at the same height on the side, also using three holes so the two parts mounting points will not interfere with each other.



As I said "I am quite obsessive" about the Sill Steps and I like capturing the profile. You can see that I use 0.005" styrene to replicate the mounting flanges and harvested *Athearn* boxcar rivets for the bolt heads used to secure the step in place.



By my 1955 modeling date the LNE cars had been rebuilt with SRE's Diagonal Panel roof. This roof is included in the *Speedwitch* kit as are small parts and Decals.

Central New Jersey



Note that *Speedwitch Media* has promised modification kits with parts to do correct roofs, doors, ladders and other small parts and Decals to model these cars.

A few details attracted me to model this car. . .

Two different types of Grab Irons

CNJ

The long reinforcement tab running under the door opening and the fact that each end has a slightly d fferent profile

> I also liked the *Superior* door although I knew I would have to make it.

I am not sure yet if this size Herald is good for my 1955 date

XM

Add .010 x. 030 strip Mounting Straps to the back of the Kit ladders

Route Card Holder

Along with the door and long sill reinforcement are these gusset plates.

Rounded on the left end, angular on the right end

Traditional bolted-on Grab Iron

Bracket Grab will go here Door stops are from the Red Caboose kit



Please do not be afraid to make things. Make friends with *Evergreen* and *Plastruct*. If you have not already, lay in a good supply of both dimensional strip and 0.005", 0.010", 0.020", 0.030", etc. Plastruct has several sizes of styrene rod—I suggest getting all of them from 0.010" up to 0.035" at a minimum. It is a rare day that I do not reach for one of their products. The door is sheet and strip styrene, gusset plates are 0.005" sheet.



I used sheet styrene to model the Sheet Metal Brake Step but could have used a section of brass sheet too.



The Safety Grab on the lower right side of the end had a unique pair of mounting flanges for which I used 0.010" styrene in an attempt to model these.



Reminder, all the models you see here have there 0.005" styrene to model the ends of the bolster cover plates

On the CNJ cars the Sill Steps were mounted under the Sill.



The CNJ cars were built with Hutchins roofs. The roof you see was harvested from an *Accurail* body and narrowed to fit into the Red Caboose body cavity. A Hutchins roof will be included in the forthcoming *Speedwitch* kit.

Maine Central



Note that *Speedwitch Media* has offered modification kits with parts to do correct roofs, doors, ladders and other small part and decals to model these cars.



Sill Steps are rectangular and attached to the sill with flanges.

Patch Panels are varying heights.

Add .010 x .030 strip Mounting Straps to the back of the Kit ladders





This is the brake arrangement for the Maine Central model

Details added to the "B" end. It is prety common for there to be variation for the routing of the Retainer Line so photos are handy here.

Like the B&O cars, the MEC has the Type 2 Braket Grabs on the bottom of the ends. See my Modeling Notes





There I go again, obsessing on Sill Steps. What can I say I like the corner tight and square with minimal curve.



The only work here after fitting the door is fabricating a door handle from .010" wire and making the lower door guide and door stop.



By my 1955 modeling date the MEC cars had been rebuilt with SRE's Murphy Panel roof. This roof is included in the *Speedwitch* kit as is the door, small parts and Decals.

Chicago Great Western



Okay, confession time, I have not yet started my CGW as I just just secured a pair of doors that Red Caboose did thanks to a very good friend. But there are still details to look at. There is not perfect way to model these cars as the Rivet Pattern used on the CGW cars is different than both the X29 and ARA types. I am going to use the ARA body for my model.



Even by circa 1951 the CGW has not applied a second grab here. Note too the Grab in place is not a Bracket Grab but rather the more traditional bolted-on type. Patch Panels are present but not on every side panel, i.e. four on the left side, two on the right on this example.

This circa 1939 photo shows a car probably as it was delivered.



Side mounted Sill Steps

Route Card Holder, note bottom edge of the actual wood board often just below the edge of the lower sill.

Dalman Two-Level trucks

Note: With a car this early it is likely too early for Patch Panels

Traditional bolted-on Grab Irons were used on the ends.

c G W 7332

> The third group of CGW cars came with the second grab here.

CGW

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On this example Patch Panels extend across all ten of the side panels but two are a little taller. Thank you for your attention today. Please do not fail to check out the folder on the **20/20 Hindsight "IO" Group** for more resources related to modeling these cars and freight cars generally. Model on Ya'll

