Model Railroad Hobbyist magazine™

MRH Gen2

February 2013

Price: *Forever Free*

- No duckunder layout entrance
- Anatomy of a DCC decoder
- Modeling a Conrail caboose
- A Master Model Railroader's workshop

MRH visits the Columbia Cascade and Western Layout

HAVING FUN WITH TRAINS

Standard edition - Landscape

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contents

index

Model Railroad Hobbyist magazine™

Front Cover: We especially like this photo of the Columbia Cascade & Western club because it's modeling a freelanced version of Woodburn Junction in Oregon, and the MRH headquarters is in Woodburn, OR. Learn more about this operationally-oriented club in this issue's feature story.

ISSN 2152-7423

Published for the glory of God. What's this?

Table of Contents - 1

Main Features

Click title to view

Tool Shed: Tweezers
A small tool that makes a huge difference
by Jack Burgess

Columbia Cascade and Western
MRH visits this progressive HO club layout
by the MRH Staff

Yes, it's a model
MRH's fabulous modeling photo feature
Compiled by the MRH staff

Modeling Conrail's N5 Caboose fleet
Kitbashing this caboose from a Bowser kit
by John Frantz

Teach your engineers to turn heads
Animate your engineers to watch where they're going
by Geoff Bunza

No duckunder layout entrance
Build this slick-working aisle gate
by Bob Bucklew

February Model Railroading News
MRH news and events
by Richard Bale and Jeff Shultz

Table of Contents - 2

Other Features

Click title to view

Columns

Do we lead you by the hand or just point the way?

Making sure MRH has the right focus

Reader Feedback (click here)

Publisher's Musings editorial
by Joe Fugate

MRH Gen2

What expectations do you have for how MRH should contribute to your enjoyment of model railroading? More specifically, do you think MRH should lead you by the hand, or should we primarily just point the way?

In the January 2013 *MRH Product Showcase* comment thread, a reader expressed disappointment because we didn't provide more prototype details to go with the ten cylindrical covered hopper click-n-spins.

If you expect MRH to lead you by the hand, then yes, it makes sense to include a lot of prototype info with such a click-n-spin feature. But should MRH just spoon feed you? Do we serve you best by trying to always be your one-stop-shop answer to all things model railroading?

However, if MRH primarily just points the way, then the MRH Product Showcase click-n-spins can become a great supplement.

By providing you with nice 3D visual presentations of these models, we alert you to the fact these models exist. Now you can go Google "Hawker Siddeley 4550 Cylindrical Hopper" and find a wealth of prototype information on the web.

Some comments on the Fort Wayne $500 layout contest article wondered why it was not more of a step-by-step how-to for beginners, especially since it was the grand prize winner.

If MRH is supposed to lead readers by the hand, then yes, we would agree. But if MRH focuses more on pointing the way, then such articles can be idea-sparkers, showing what's possible, but not providing all the answers to every little nuance of starter layout construction.

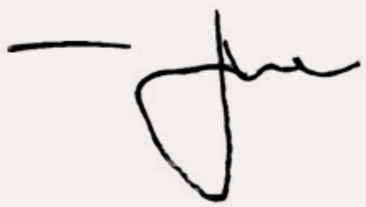
Here at MRH, we see our place as being more to point the way and not to lead you by the hand. When it comes to pointing the way, this includes coverage on specialized interest topics, and not just mainstream topics.

We're not into "formula publishing" where we focus only on what's popular. We also want to cover specialized interests like narrow gauge, traction, and pre-transition era modeling. This includes articles on scales other than HO.

Because we feel special-interest topic coverage is important, we gave the traction layout entry in our contest an honorable mention, which means we will be publishing it even though it didn't place, so traction modelers take heart!

Our desire to cover these more limited interest topics also means we need submissions on these topics. If you yourself aren't equipped to do such articles, then be on the lookout for good work in an area you're interested in, and send those modelers our way.

As always, click the comment button and let us know your thoughts! ☑



Reader Feedback
(click here)

MODEL RAILROAD HOBBYIST MAGAZINE
STATEMENT OF OWNERSHIP, MANAGEMENT, AND AUDIENCE[1]

Title of publication: Model Railroad Hobbyist Magazine
- ISSN: 2152-7423

Date of statement: 1 February 2013
Frequency of issue: monthly
- Number of issues published annually: 12
- Lifetime subscription: No charge (just supply email)

Location of office of publication:
Woodburn, Oregon 97071
County, Marion
Names of publisher, editor:
Publisher: Joe Fugate
Editor: Joe Fugate
Owner: Joe Fugate
Known bondholders, mortgagees, and other security holders owning or holding one percent or more: none

Extent and Nature of Audience[2] as of Feb 1, 2013
Total unique monthly audience: 98,643
Total monthly website visits: 206,139
Average duration of website visit: 6:36
Percentage of OS/devices used to visit:
Windows: 73.0%
Macintosh: 11.1%
iOS: 10.4%
Android: 3.5%
Linux: 1.5%
All others: 0.5%
Percentage of browsers used to visit:
Internet Explorer: 38.9%
Firefox: 20.5%
Safari: 18.5%
Chrome: 16.1%
All others: 6.0%
Total mailing list subscribers: 24,723

I certify that the statements made above are correct and complete.
Joe D Fugate Sr., CEO and Publisher
Model Railroad Hobbyist Magazine

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1 Per the Alliance for Audited Media and the Interactive Advertising Bureau (IAB), a totally digital publication such as Model Railroad Hobbyist must measure "circulation" by tracking *Audience* per publishing cycle (monthly in the case of MRH) since there is no direct physical publication to count. The Audience statistics reported here follow the strict guidelines set forth in this document published by the IAB and endorsed by the AAMi: http://www.iab.net/media/file/audience_reach_022009.pdf
2 Computed and provided by Google Analytics (and can be independently verified by Google as correct and complete).

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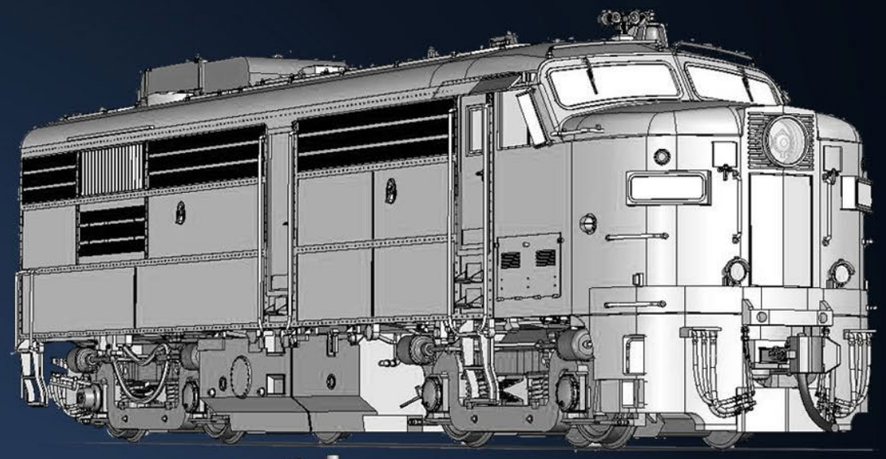
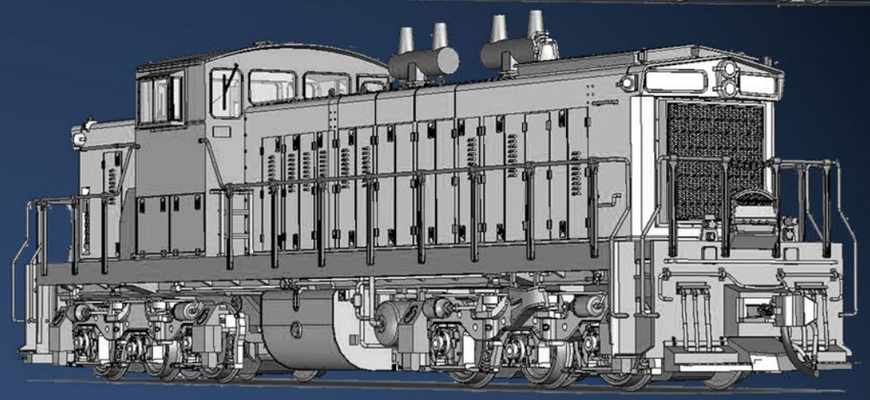
CN F9B
Coming in HO





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RAPIDO

Notes from the MRH Staff

MRH New Assistant Editor, Read MRH website like a magazine ...

Reader Feedback (click here)

MRH Gen2

MRH's new Assistant Editor: Don Hanley

Zinser Photography

We'd like to introduce MRH's new Assistant Editor, Don Hanley. Readers may recognize Don's name from the byline on his Nevada-California-Oregon Railway prototype modeling series in the March and April 2012 issues of MRH.

Don also happens to be a winner in our $500 starter model railroad contest, but Don submitted that piece before throwing his hat in the ring for our Assistant Editor opening.

Don's submissions come to us with a lot of publication-ready polish already applied, so it's clear Don knows the publishing ropes, and knows how to write a good article and prepare it for publication.

The Assistant Editor will be working closely with authors to develop articles for publication, as well as assemble magazines.

January 2012 MRH Ratings

The five top-rated articles in the **January 2012** issue of MRH are:

- **4.7** What's neat - Freight cars of Jeff Meyer
- **4.6** DCC Impulses - DCC Sound
- **4.6** Yes, it's a model
- **4.5** Best layout size using ops timing
- **4.5** Modeling a coal loader, part 2

- Issue overall: **4.4**

Please rate the articles!

Click the reader feedback button on each article and select the star rating you think each article deserves. ***Thank you!***

In our interview process through December and into January, Don climbed to the top of the candidates list, and we're thrilled he accepted when we offered the position to him.

As for his specific hobby interests, Don's an Erie fan, modeling the Huntington, Indiana area during the 1950s. He keeps an active hand in the hobby by expanding and detailing a fleet of rolling stock for his future layout.

Mainline Modeler' published numerous articles Don wrote describing some of his structure and rolling stock detailing projects.

So we welcome Don on board, and expect to start seeing a lot more of Don's byline in MRH, only now as MRH staff!

Read the MRH website like a magazine with Feedly

We've been playing with different RSS feed readers using the MRH website RSS feeds. If you don't know what an RSS feed is, you should. What if you could just mark the websites you like and have them contact you when they've been updated? What if you'd like to get less email spam? All this and more is possible with RSS feeds. To learn more about RSS feeds, see our video, **RSS Feeds for Model Railroaders**.

Anyhow, we've been playing with different RSS feed readers, and we must say, our favorite by far is the Feedly reader app. On a tablet especially, Feedly presents the MRH website *Recent Posts* list like this on an iPad:

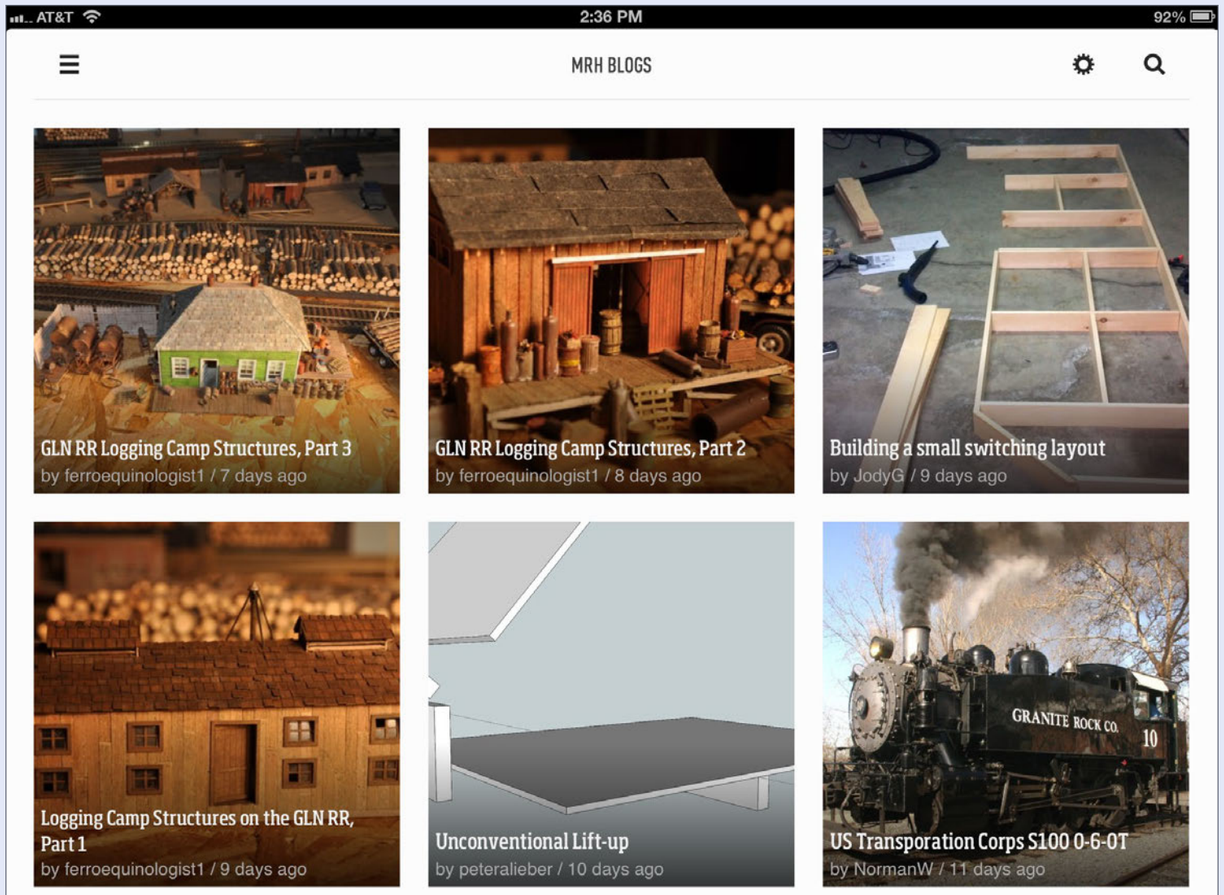
Now that's pretty snazzy! Certainly looks a lot more inviting than our website's version. To access the MRH Recent Posts list as an RSS feed, we've created this easy-to-remember link:

mrhmag.com/rss/recent-posts

We also have RSS feeds for our blogs listing. That RSS link is:

mrhmag.com/rss/blogs

Here's how a page from the MRH blog feed looks when displayed on an iPad:



You have to admit, that lools pretty cool. It also shows you in a very visual way there's a lot of interesting content you may be missing on the MRH website itself. By using an RSS feed, our site will automatically notify you of updates via your RSS feed reader.

Feedly is also available for smartphones and for computer browsers like Firefox, Safari, and Chrome. We're sorry to say that as of this writing, there is not a Feedly reader plugin available for Internet Explorer.

Since web browsers are free, here's a reason to add another browser besides Internet Explorer to your web browsing arsenal.

Department of corrections

Last issue, we neglected to credit Darren Ferreter on the prototype photo he took that we ran along side Joe Atkinson's look-alike model photo. Sorry, Darren!

Darren Ferreter photo

MRH Gen2 feedback

Well MRH Gen2 is out, and we've received a lot of feedback about the change. Some were not too pleased while many others are delighted with the change. Here's a sampling of the comments we've received:

"I do not think the changes are an improvement in the least. It's too much of a dumbing down of the publication. Overall I've really enjoyed MRH since it came out, but I'm very dubious of this new direction."

"I'm not a huge fan of the change, but I'm not particularly bothered by it, either."

"Given the trend is toward smart phones and tablet computers for mobile computing and reading, I must commend your efforts to provide MRH on a broad assortment of platforms. I have tried out the new format on my Droid Razr. Laying on the sofa reading it definitely beats sitting in front of my computer screen!"

"What else can I add? I'm already used to a 90° rotated wide screen monitor attached to my PC, to properly read documents in electronic format, now MRH can fit that orientation: I love it."

"I don't care for your Gen 2 layout but I can live with it."

"The new format is rubbish, short lines, not enough on a page, and large fonts that make it look like a childs reader."

"I'm getting older every day. My vision is getting crappier every day. Therefore I like the new larger font size."

"Thanks for Gen2 – makes reading on my Android smartphone a lot easier!"

"This magazine is making me want a tablet sooner rather than later because it's annoying propping a laptop up on my lap when reading in bed."

Landscape and the future

We originally thought readers would be fine with setting the portrait Gen2 MRH to facing pages to duplicate most of the Gen1 landscape look, but we've received a number of strong pleas to bring back the landscape format.

So that's what we've done. After investigating, we found it's not that hard to go a bit more middle-of-the-road with Gen2 and provide a gutterless landscape version.

To allow readers to get the best of both worlds, when we publish a nice full spread landscape image, we will also publish a smaller half-spread image with the caption, somewhat like we do for the magazine cover today.

This way those of you who like the big screen-filling landscape images will get them, but now in all their glory with no caption or other magazine artifacts to clutter up the image.

Is foam too flammable for model railroading use?

A reader contacted us recently with his concerns about the use of foam on model railroads. He wrote: "I notice that there is an increase in the use of foam in the construction of layouts. You might be interested that there's a lot on the web about the dangers of foam. It seems to me that use of foam represents a significant fire danger. I have never this danger mentioned in articles about layout construction.

We replied, "Fire hazard danger on a model railroad is not limited to foam. John Allen's fabulous Gorre & Daphetid burned to the ground when they left the power on, and it predates the use of foam on layouts. The real problem isn't so much the foam as it is borderline wiring practices and leaving the power on. Houses use foam insulation in walls full of wiring and nobody gets up in arms about the use of foam there. But then house wiring contractors must follow strict building codes, unlike model railroaders." That about covers it, we think.

Speaking of photos ...

We have made another improvement in presenting photos in Gen2. We've improved the Image quality in the Standard Edition to allow zooming in to 200% on most images.

To illustrate, on the next page there is an image comparison between two images in MRH from Ken Patterson's popular "What's Neat this Week" column from the Standard Edition. We've zoomed the images to 200% so you can see the difference.

The image on the right is from Ken's column in the December issue and it has the old Gen1 image quality that starts to blur

... On to next page of text ➔

← back to previous page of text ...

and pixelate at 200%. The image on the left is from Ken's column in the January issue and remains sharp even when zoomed to 200%.

This means with MRH Gen2, you can zoom into the photos or diagrams and study them extra close if you like. Try doing that with a print magazine!

... On to next page of text ➔

What's in this issue ...

Coming your way in the February issue we have ...

Tweezers: Jack Burgess does it again. This time he delves into one of the smallest of tools, but also one of the most important to fine model making.

Columbia Cascade and Western: MRH visits this operations-oriented club to see how they've overcome some real challenges to build a layout that would be the envy of many.

Yes, it's a model: Our new regular photo feature is back with new photos, including pictures of S scale and N scale modeling.

Modeling Conrail's N5 caboose: Learn the tricks to easily modeling this caboose by starting with a Bowser kit.

Teach your engineers to turn heads: Animation and lighting expert modeler Geoff Bunza demonstrates how to get your loco engineer figures to turn their head in the direction of movement!

Around the room layout entrance with NO duckunder: Bob Bucklew shows how to build an aisle gate that opens to allow entry and closes easily for flawless train running.

Our regular columns: *Getting Real* guest columnist and Master Model Railroader Jack Burgess shows us how he's set up his workshop for maximum efficiency. Charlie Comstock starts running trains on his new peninsula, while Bruce Petrarca teaches us how those decoder boards do their magic. Finally Ken Patterson introduces us to Butch Eyler's modeling, truly a model railroading artist if there ever was one. Enjoy! ■

Reader Feedback (click here)

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QUESTIONS AND ANSWERS

Code 88 Wheels

Q. Some of my freight cars came with thinner wheels. I'm told these will only run right on Proto 87 track but they seem to operate fine on my regular track. Am I missing something?

A. No, you aren't missing anything. Chances are you're using switches made to a finer standard than much commercial track.

Most commercial sectional and flex track available in the US is made to NMRA standard S-3.2 but only some available switches and crossings conform. There is a list of useful links at the end of this answer.

A Code 88 wheel has a narrower width than the wheels on most mass-produced model trains. The overall width on one is .088" wide and the other usually .110" wide. Athearn Genesis and Atlas introduced narrower wheels on a few ready-to-run HO cars a couple of years ago to answer modelers' requests for more realism. They will run fine on correctly-gauged track. Other manufacturers have also sold "finer" wheels from time to time, and there have always been some modelers working to exact scale.


1

1: Kadee 33" wheelsets for Code 88 (right) and Code 110 left) show the difference in wheel widths. In a Code 88 world, truck side frames could be more correctly spaced to give a better appearance under rail cars.

In addition to their RP-25 lines, Kadee and Intermountain sell Code 88 wheel sets. NorthWest Shortline catalogs wheels in widths from .110" to .064". Reboxx sells Code 88 wheels in a variety of axle lengths.

As the width of the wheel decreases, so does the tire width (the part that runs on the head of the rail) and the flange width (the part that presses against the side of the rail). The recommended wheel flange profile and the taper of the wheel tread are more-or-less consistent. Some companies use different radius curves where the flange meets the tread, and some flanges taper more than others. All of these dimensions interacting determine which wheels work with specific standards.

The catch: NMRA S-3.2 calls for a minimum flangeway width of .050”, and allows a track gauge from .649” to .672” (16.5mm to 17.1mm). If the tolerances are toward the wide side, a Code 88 wheel can be a problem. Ideally, the Code 88 wheel would be used with a flangeway a little less than half the tread width. S-3.2 is written for best operation with .110” wide wheels.

A lot of manufactured track switches and crossovers don’t even match up well with the NMRA RP-25 .110” wheels. The switch dimensions and clearances don’t match the basic NMRA standard. So, even if track is gauged correctly, you can still encounter flangeways that are the wrong width and guard rails in the wrong places. People using Micro Engineering switches and switches built from Central Valley, P87 Stores, and Fast Tracks materials report few problems, if any.

People who widen their track gauge on tight curves to accommodate long-wheelbase locomotives may find that wheels with treads narrower than .110” drop between the rails and hang up because the wheel assembly is narrower overall. People modeling bumpy, twisting track also need to be a little more careful.

Code 88 wheels won’t run well on Proto:87 track. That has an even closer to prototype set of standards.

The NMRA categorizes Code 88 wheels as “Fine:HO”: nmra.com/standards/sandrp/S-4_1ProtoWheels.html.

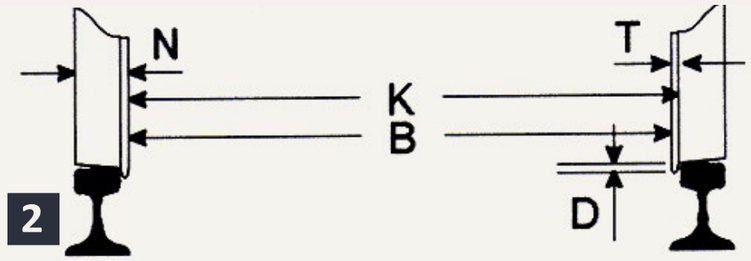
Fine: HO track tolerances are closer to Proto:87 than standard HO: nmra.com/standards/sandrp/S-3_1ProtoTrackwork.html.

Recommendations and standards

RP-25 wheel contour: nmra.org/standards/sandrp/S-3_2ScaleTrackwork.html.

S-3 track standards: nmra.org/standards/sandrp/S-3_2ScaleTrackwork.html.

Proto87:
proto87.org/d/
proto87.com/what-is-proto87.html
proto87.org/p87/standards/wheels.html



2

3		Back to Back (B) Min	Back to Back (B) Max	Tire Width (N) Min	Tire Width (N) Max	Flange Width (F) Min	Flange Width (F) Max	Flange Depth(D) Min	Flange Depth(D) Max	Wheel Check (K) Max
Prototype	inches	0.611	0.611	0.063	0.063	0.013	0.016	0.016	0.016	
	millimeters	15.52	15.52	1.610	1.610	0.340	0.400	0.400	0.400	
Proto:87.1	inches	0.610	0.613	0.064	0.069	0.012	0.014	0.012	0.014	0.623
	millimeters	15.48	15.55	1.620	1.750	0.310	0.350	0.310	0.350	15.84
Standard HO	inches	0.566		0.108			0.030	0.028	0.028	
	millimeters	14.40		2.740			0.710	0.700	0.700	

Proto:87 SIG

If you want to get into track that's close to exact scale, look at: nmra.org/standards/sandrp/pdf/technotes/TN_1_1_2%20for%20S-3.1%20and%20S-4.1.pdf.

Code 88 wheel suppliers:
kadee.com/htmbord/truck.htm
intermountain-railway.com/ho/hoacc.htm
reboxx.com/Documents/Wheelsets/Wheelsets%20Order%20Form.pdf
nwsl.com/uploads/cat_chap3_for_web_9-20.pdf

Fine-scale track and switch components:
proto87.com

– MRH

4

4: Powerex chargers for 9-volt batteries contain a "smart charge" circuit that switches to trickle charging after batteries are fully charged.

9V rechargeable batteries for Digitrax throttles

Q. Has anyone tried using rechargeable 9 volt batteries in Digitrax UT4D and DT402D throttles? It seems to me it might be a good use for rechargeables.

A. Yes, it's possible, but there are a couple of considerations. Depending on their construction, the true output may be as low as 7.2 volts, even at full charge. Digitrax throttles need at least 8 volts to operate reliably. Some brands are oversized and don't fit Digitrax battery compartments very well.

"Don" uses Tenergy 9 volt rechargeables in a DT400R. The battery produces about 9.2 volts fresh out of the charger. He says, "I've never timed how long a battery lasts. I just keep a couple in the charger and swap as needed."

Fritz Milhaupt reports using Maha Powerex NiMH (nickel-metal hydride) 9.6v batteries for over a year on the Operations Road Show layout.

"They've been fantastic," Fritz says. "On a single charge, they've consistently held up through our regular five-hour operating sessions at our home base, and I tested a couple successfully through nine hours of operation at conventions in the UT4Rs. I've never thought to try to get more than five hours out of one in a UT4D. We use both simplex and duplex on the layout."

"Most of the batteries we bought were the 230 mAh (230 milliAmp-hours) version, though we have one 300 mAH model we've used. I tend to use that one in the DT402D I use for consisting. The 300 mAH model is just a little bit larger than the 240 mAH battery, so it's a tighter fit in the battery compartment."

"We haven't had any failures with the Powerex NiMHs yet. The Powerex do require their own smart charger, though," Milhaupt said.

You can buy Powerex batteries at almost any BatteriesPlus store, on Amazon, or at Thomas Distributing thomasdistributing.com

Tenergy batteries are sold online. Google for "Tenergy 9v 230 mAh rechargeable batteries."

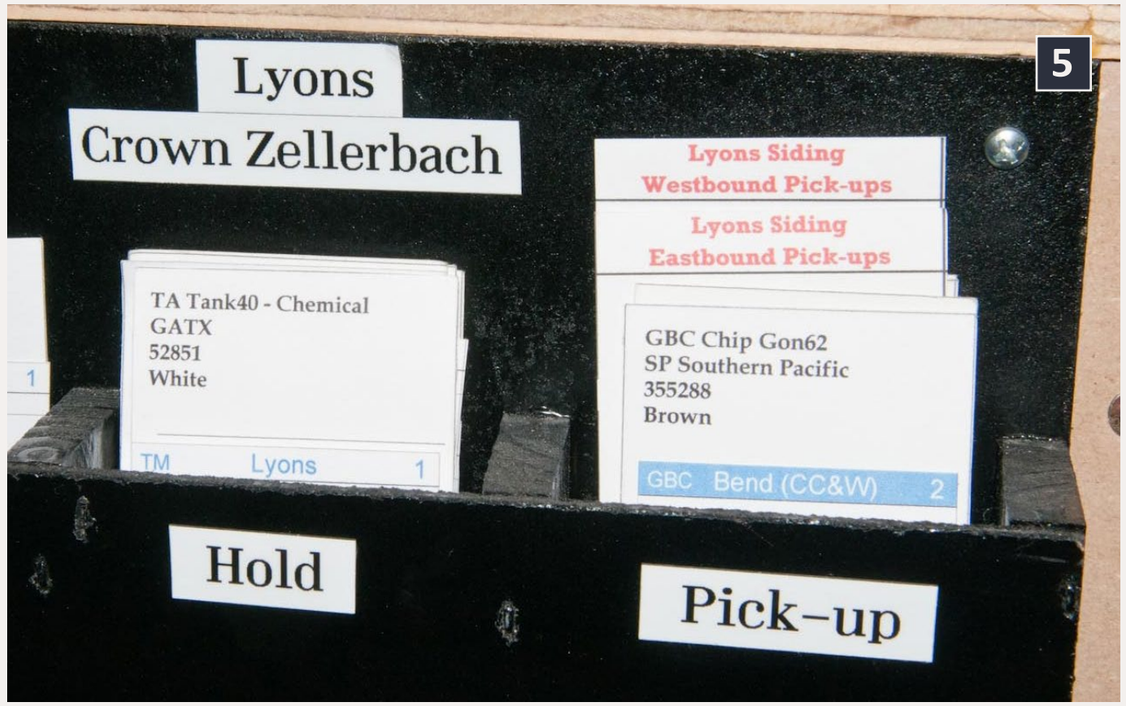
Several people report poor results with 9V batteries from Radio Shack, Menards and Walmart. The rechargeable batteries from Radio Shack would only put out 8.4 volts when fully charged - within a couple of hours they are in the danger zone.

The Powerex smart charger documentation says "When the lights turn green, the batteries are ready to be used. If left inside the charger, the batteries will be trickle-charged." Powerex specifies using its charger only with NiMH batteries that can stand a 90ma quick charge. People who use a different brand of charger need to check the instructions. You did save the instructions, didn't you?

– Jim Bernier, Don, Richard, Fritz Milhaupt

Card boxes for operations

Q. I'm going to be operating my layout with a car card and waybill system and I want waybill boxes to keep the clutter on my layout to a minimum. MicroMark has a nice "RTR" three-compartment waybill box that's relatively inexpensive but isn't workable in the four-step Set Out/Pickup/Off Spot/Hold system that I would like to use. Outside of making my own is anyone aware of four-compartment boxes out there? I was thinking of combining the set out/hold boxes, as theoretically during an op session, cards would be added only to this compartment.



5: Internal dividers in waybill boxes can keep car cards and waybills organized while reducing clutter on the fascia board.

A. If you don't want to build your own four-hole boxes, use the Micro-Mark boxes with the same four categories, but divide the last box (of the three) with two heavy card stock cards that just fit inside the box and are a little taller than a car card, with the back one even taller than the first. The back one is tacked to the back of the box and labeled HOLD. All cards for cars that need to held will go in front of it.

The other is loose and is labeled OFF SPOT . All cars that need an off spot movement during this session will be in front of that. Once those cars have been moved from the off-spot, the operator will move the card to the SET OUT box. The car cards will be switched from SET OUT to other boxes as needed between tricks as would any other car card.

For all cars that are left off-spot, the car card would then be placed in the off-spot section ready for the next crew to move as directed.

Office Max, Office Depot and Staples sell a number of small boxes made of cardboard, metal, or plastic and they may have what you need. Shopping in person will let you check the sizes of compartments and dividers. Craft stores like Michaels are also a good source of small boxes.

– Steve, MRH

Grain Service Box Cars

Q. I received a big box of old Athearn Blue Box kits. Among them were three "Grain-Loading-Door" box cars. They are 40' boxcars with double plug doors molded into the body. There are a couple of hatches near the top of one side door. When were these cars in use? I model 1955 in Southern Ontario. Would these find a home on my layout or are they fodder for eBay? Who had these cars on their roster?

A. Your Athearn model, except for some issues with the ends, is a good representation of the BF-50-2 "grainloading boxes" the Union Pacific rebuilt from old 40-foot box cars. UP had more than 2600 of them. They appeared in 1966-67, just when covered hoppers were coming into grain service in a big way.

In the mid-1950s, Canadian Pacific and Canadian National used unmodified 40-foot cars to haul grain. Grain doors were inserts, mounted inside the regular doors to keep the grain from spilling out when the main door was opened. These allowed any suitable car to be used in grain service.

CP had some 40-foot cars modified in a similar way to the Union Pacific cars, but in the late '60s or early '70s.

Microscale 87-7 or 87-466 would give you a start on lettering the UP cars. Here's the original discussion: model-railroad-hobbyist.com/node/7399.

– Graham Line, Jurgen Kleylein

TIPS

Google Power

Sometimes, when I'm trying to find a manufacturer's website, it's a challenge. Google keeps sending you to people who sell the product. I've found a back door to find some manufacturer's websites fairly quickly: Wikipedia (en.wikipedia.org/wiki/Main_Page).

Use the name of the manufacturer – Atlas, for example – then use the "disambiguation" page to find the article on the train manufacturer. There will be a link to the company website near the bottom.

You can usually get Google to give you the manufacturer name site at the top of the search results list by adding the word "home" at the end of your search phrase.

– Irish Rover and Andy Reichert

Guest Book

Keep a visitors register or visitors book in your train room. Have your visitors sign-in and date their visits to your layout.

The book can be as simple as a spiral notebook, or something a little more elaborate.

It's a good way to collect e-mail addresses for the future, makes people feel welcome, and can also help keep track of operating hours and positions for NMRA achievement programs.

– Daniel Kleine

6

6: Guest book.

Reader Feedback (click here)

GET $25 PER TIP

We pay $25 USD for each tip we publish. Send your modeling tips to Model Railroad Hobbyist and we'll get payment to you upon acceptance.

Just think, for only a few minutes effort, you could fund your next piece of rolling stock – or even pay for an entire train if you send in several tips and we publish them!

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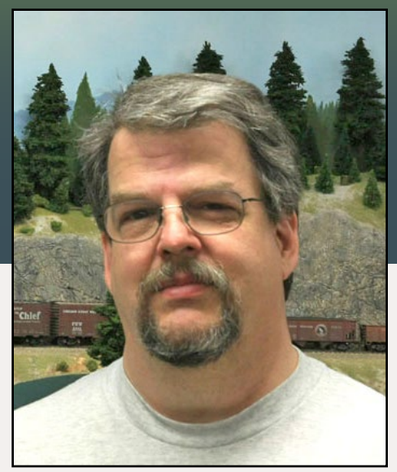


Peninsula Construction!

A regular report on the construction of a 1950s-something layout

Reader Feedback (click here)

Up the Creek column

by Charlie Comstock

First Trains on the new South Jackson mainline ...

It's been a long time since trains rolled on my HO scale Bear Creek and South Jackson. A year or so ago, I connected the peninsula and helix table to the walls and realized it was time for the old South Jackson (scrap box) yard to go. I'd built the old yard out of plywood, track, turnouts, and wiring recycled from my previous layout to permit op sessions while the remainder of the layout was under construction.

The scrap box yard served well from 2005 to 2012, but I always knew it was destined for replacement. When I connected the helix on the peninsula to the wall, the old South Jackson yard was about an inch too high. I bit the bullet and removed practically all of it in preparation for the rebuild. As of early January (when I'm writing this column) the new roadbed is in place, basic wiring is present and the track gang is hard at work.

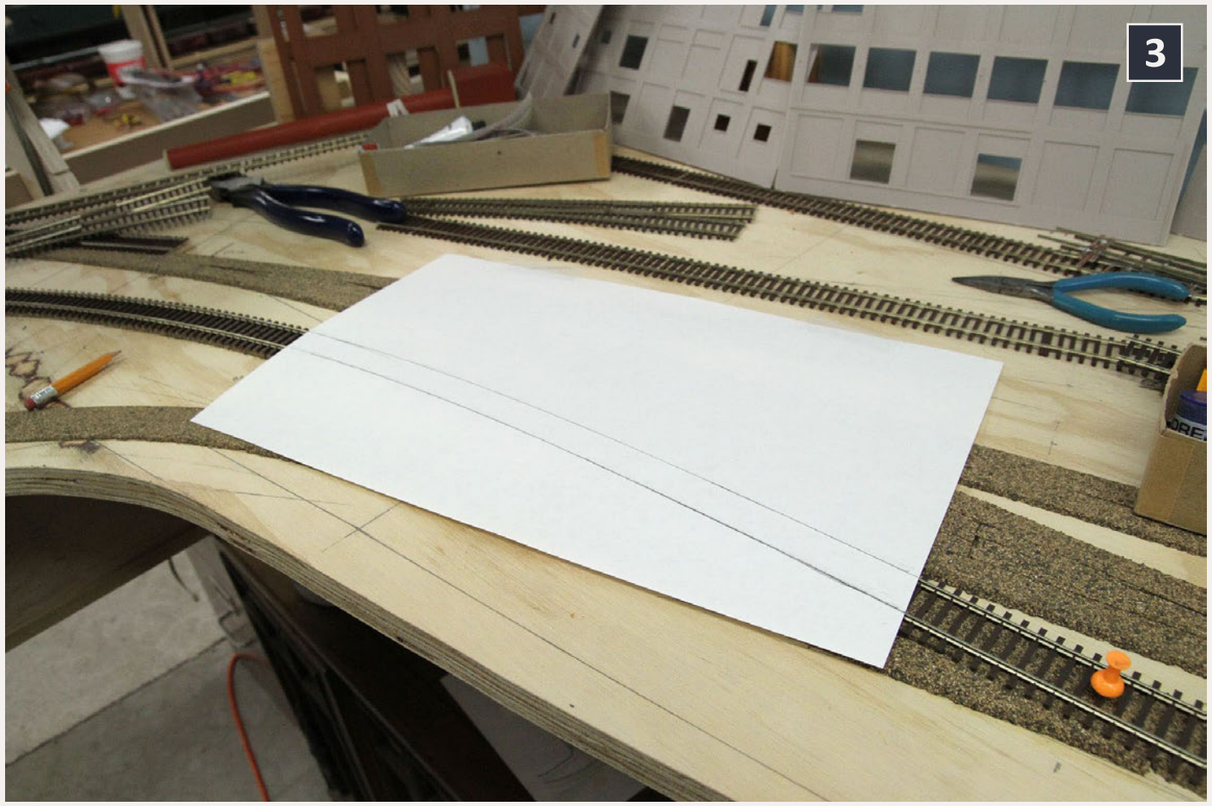
In the December Up the Creek column I explained the wiring needed to handle the double reverse sections at the top of the helix. With track power taken care of it was time for the track gang to get cracking on installing the mainline through the yard. The track gang was immediately presented with the challenge of scratch-building a curved turnout.

The following steps show how I build custom (as opposed to straight leg) turnouts. Basically, I prepare a full size paper template showing the rail head routing, then build the turnout, in place, on top of the template.

Next up on my layout construction task list is completion of South Jackson. As I write this in early January I'm mindful of

... On to next page of text ➔

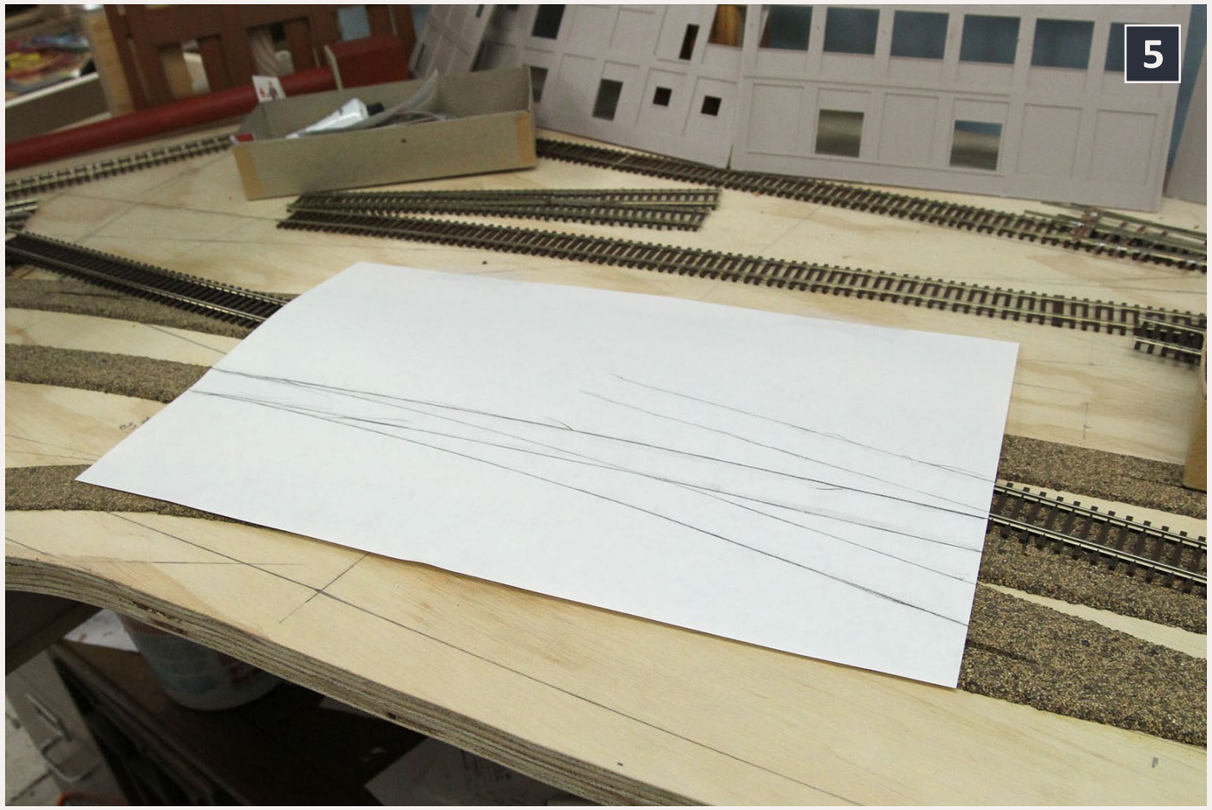
1: I'm watching the first train enter the new South Jackson trackage. Just ahead of the lead loco is the scratchbuilt curved turnout. It amazes me (well OK, I'm not all that surprised) how much stuff accumulates on all horizontal surfaces in my train room. Maybe I should rename the layout as the MF&SE (Messy Flats and Stuff Everywhere) railroad.

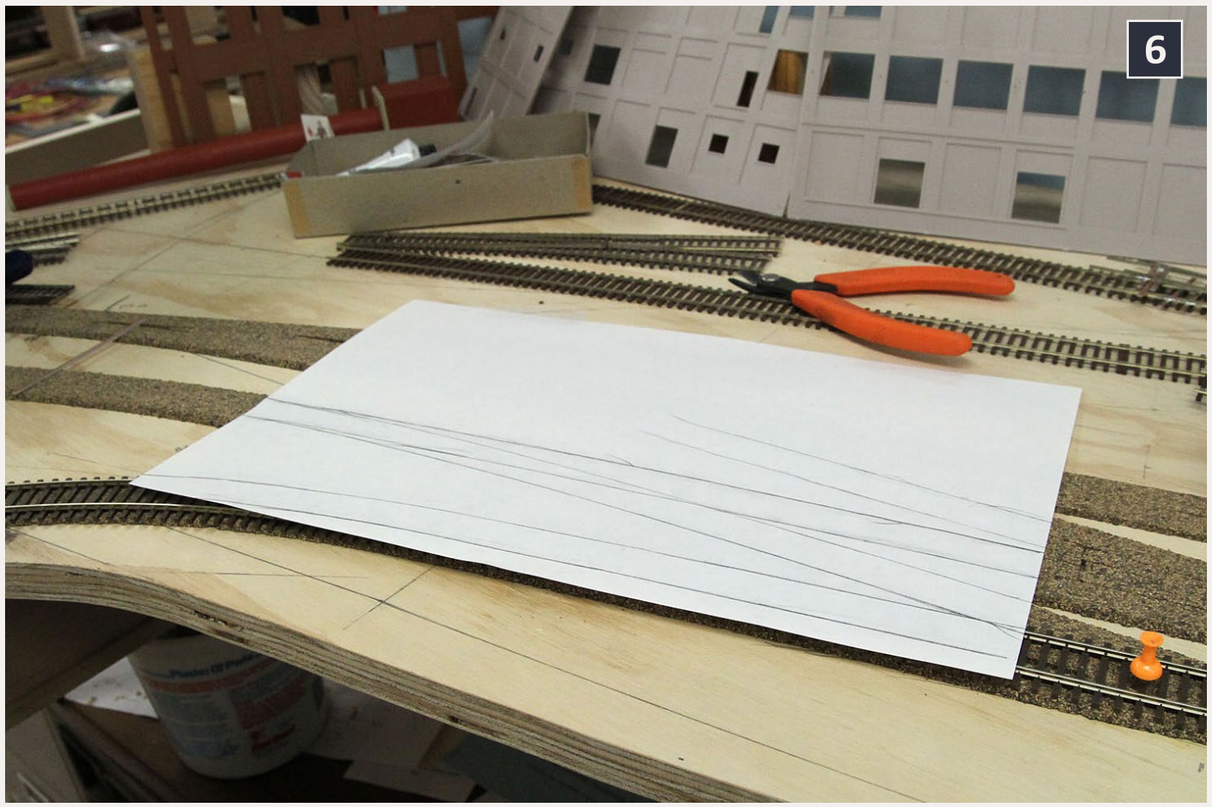


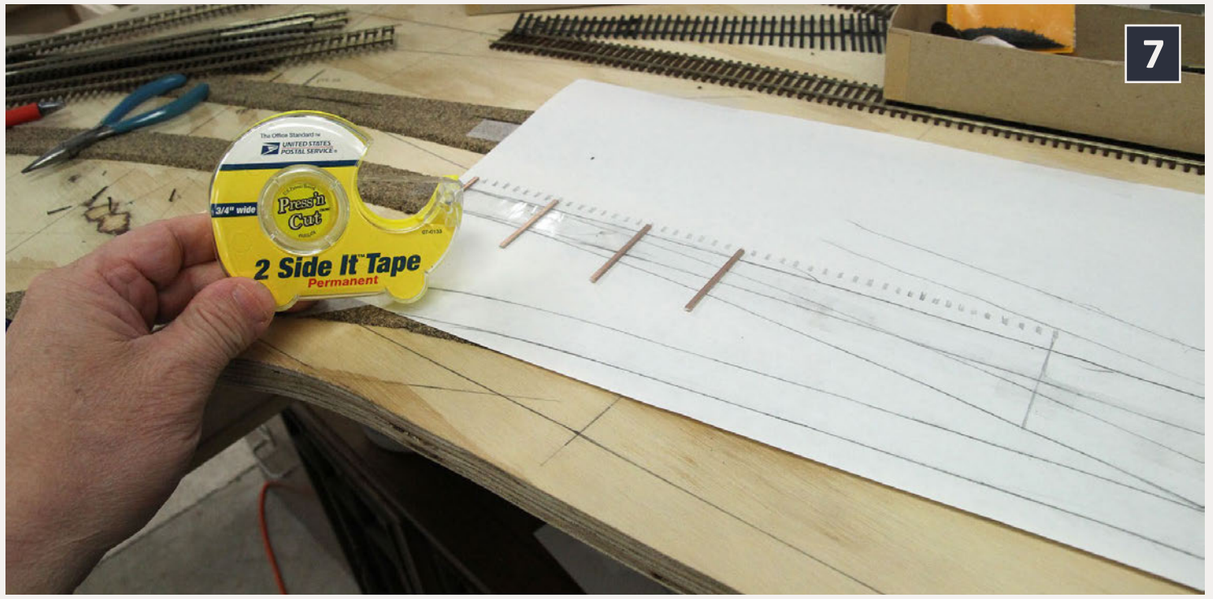
2: I tape one edge of a sheet of legal paper to the benchwork and tack down a piece of Atlas code 83 flex through the straight route. I use Atlas flex track because it curves nicely, and once it's detached it returns to its original state. Micro Engineering flex track looks really nice, but once curved, it's difficult to uncurve or recurve it.

3: With the paper flopped over the track I use the edge of a pencil to rub (trace) the rails. I take care to not move the paper around while I'm doing the tracing and avoid making marks anywhere except the rail heads.

4: With the paper template rolled back I reposition the flex track to the diverging turnout route being very careful to not move the track where the points and throwbar will go.



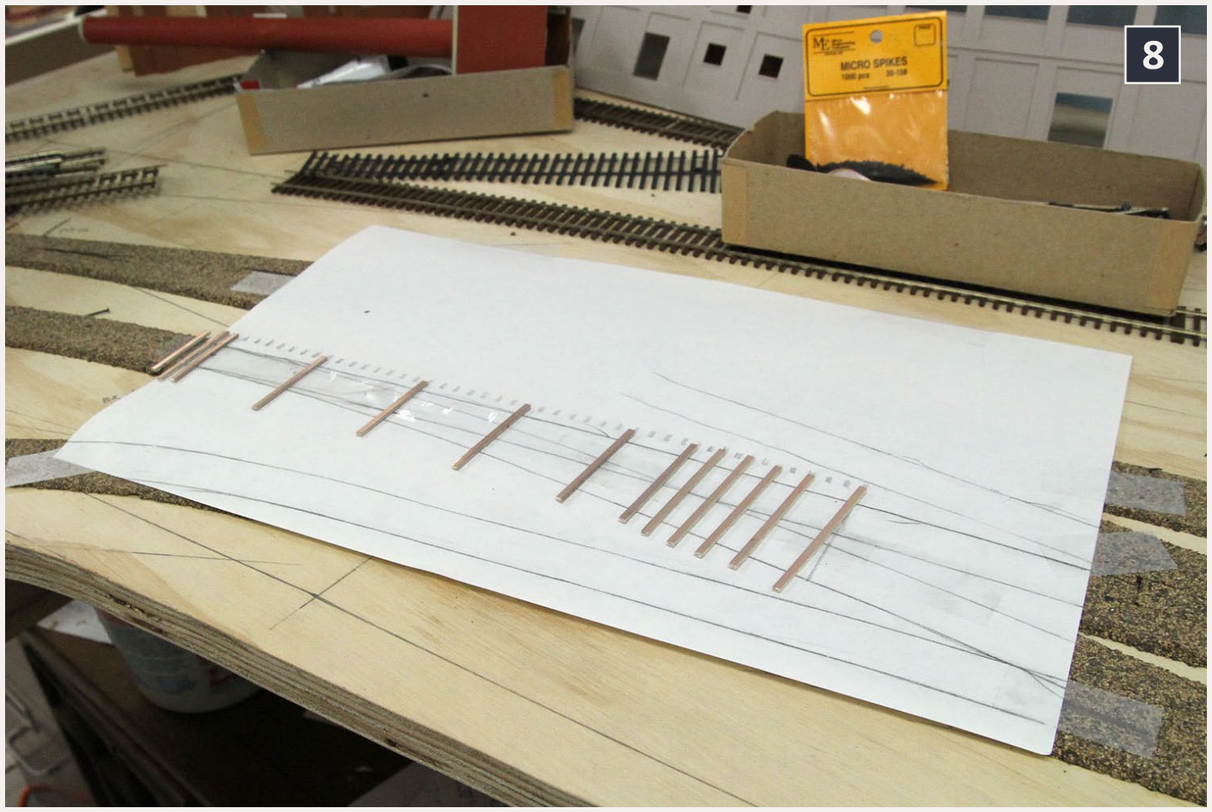


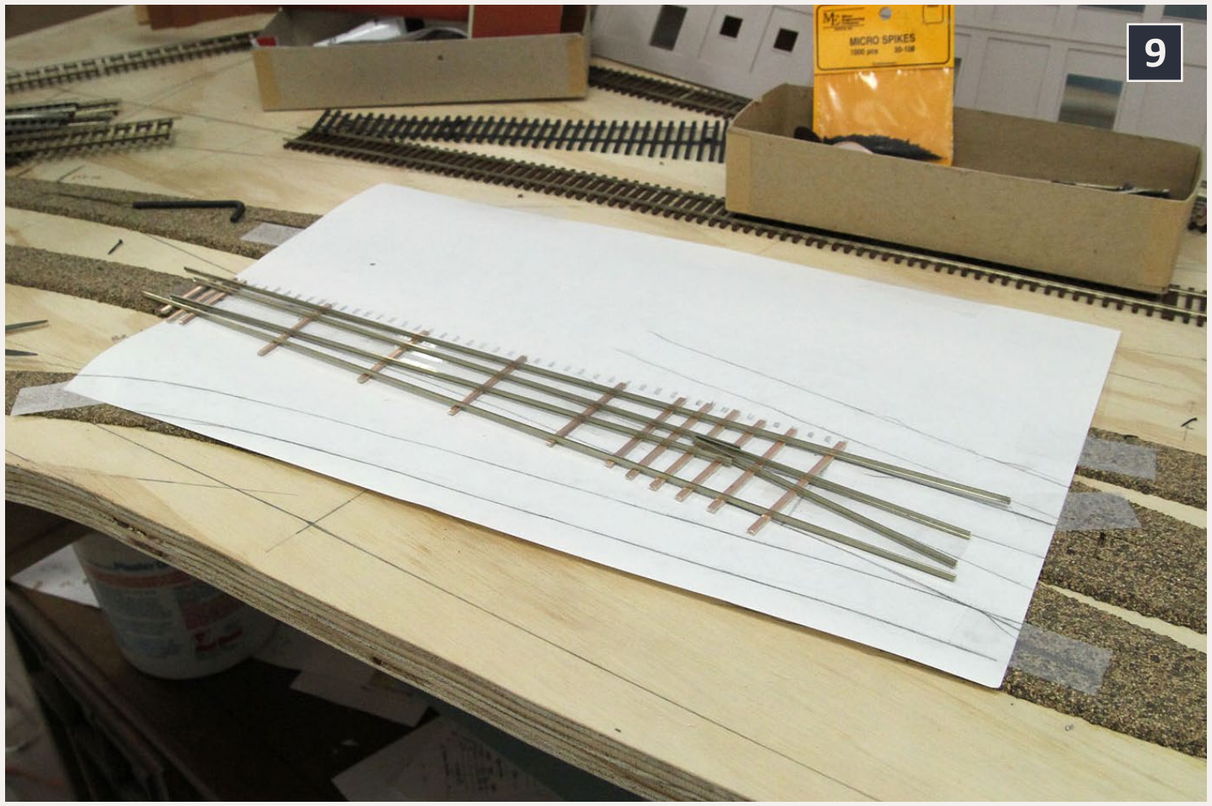


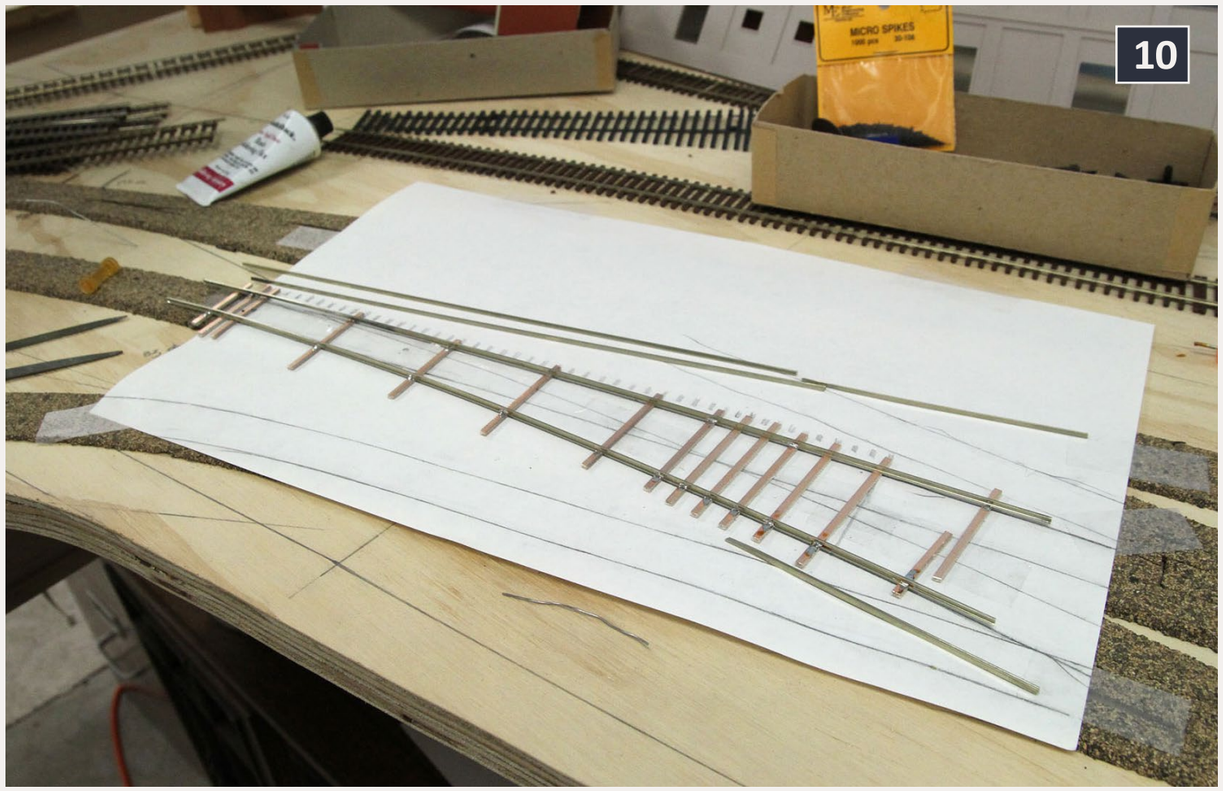
5: The railheads of the diverging route have been traced. Because this turnout is part of a crossover, I also trace the parallel track's route.

6: For good measure I also include the route of the adjoining spur track. These markings help me identify where to place ties when the rails are close to each other. It also helps to visualize the final result and locate the template when I tape it down in preparation for building the turnout on top of it.

7: I tape the paper turnout template to the roadbed to immobilize it. Then I use double-sticky (sticky on both sides) tape to hold PC ties in place. I like building custom turnouts on PC ties because they allow me to reheat a rail-to-tie joint and nudge the rail to adjust gauge and position. The little squares on the far side of the PC ties are tie alignment marks. Once the turnout is soldered together, I'll glue switch ties in place on the cork roadbed leaving spaces for the PC ties. A big drawback of this method of turnout construction is keeping even spacing between the glued-in-place wood ties and the soldered-to-the-rails PC ties.



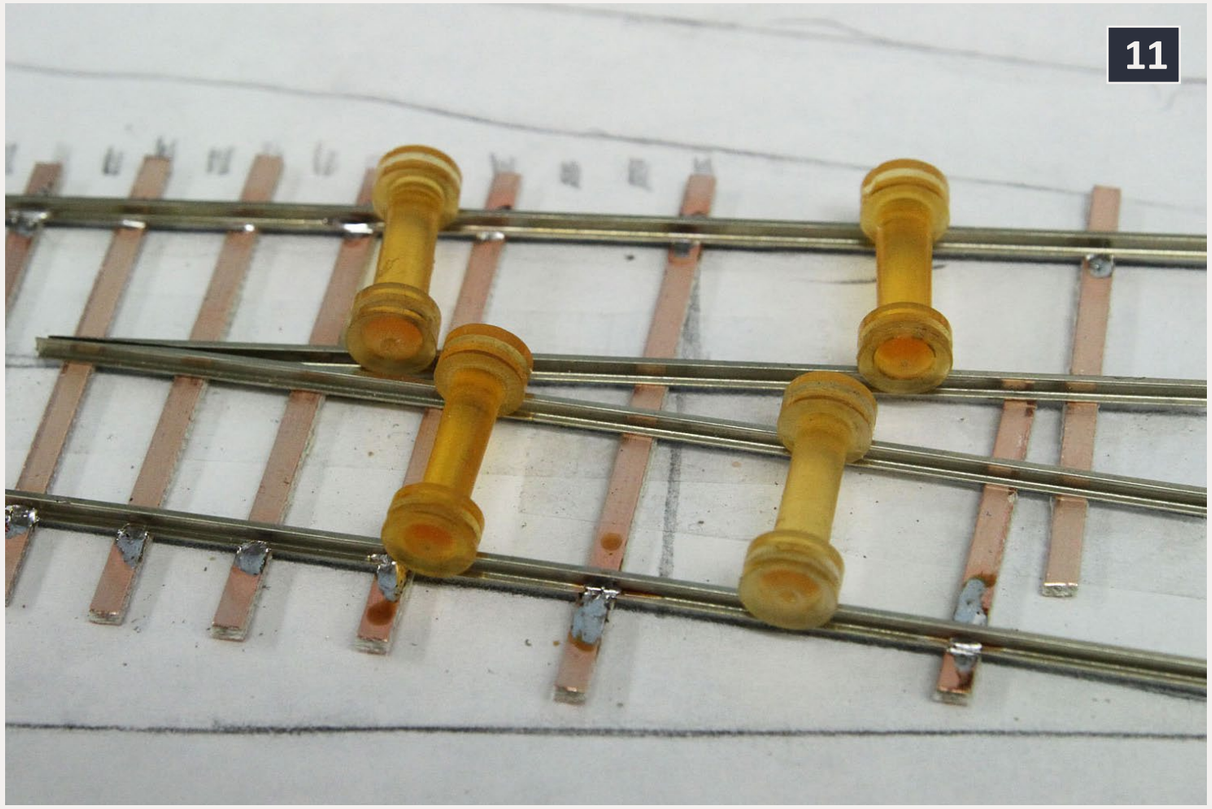


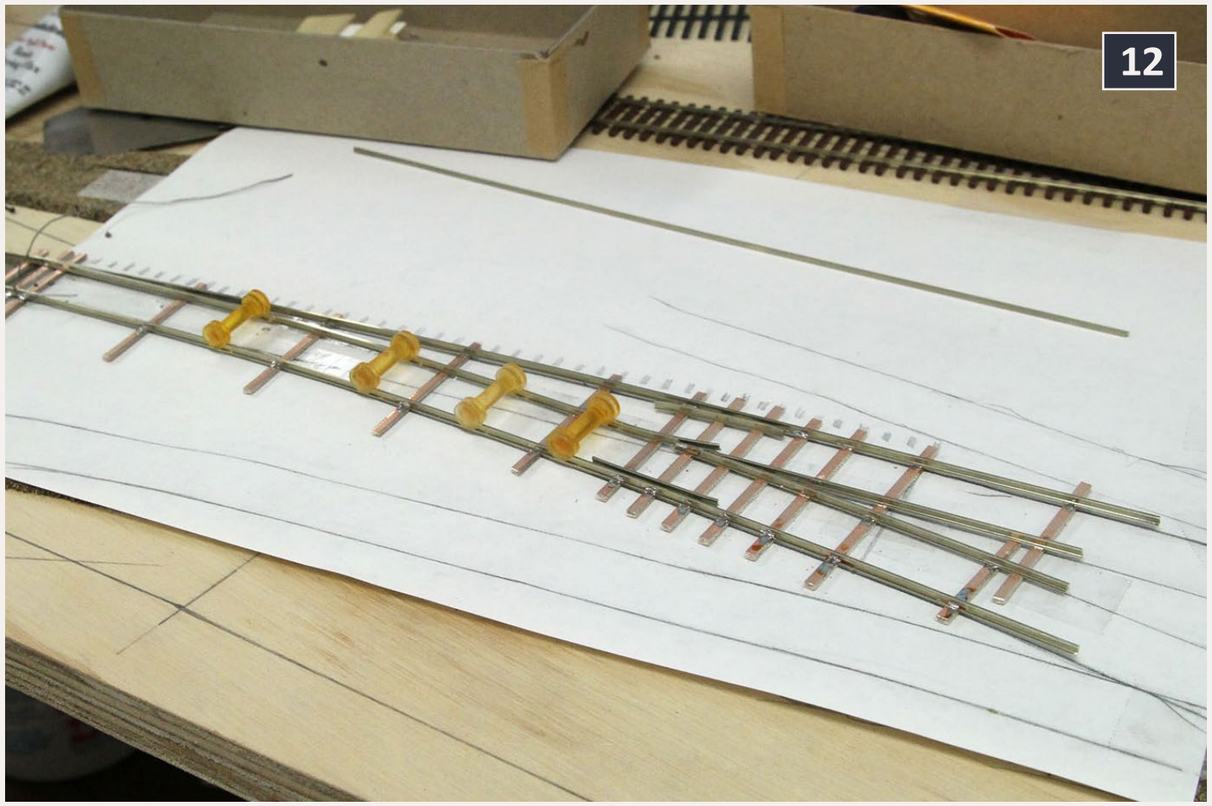


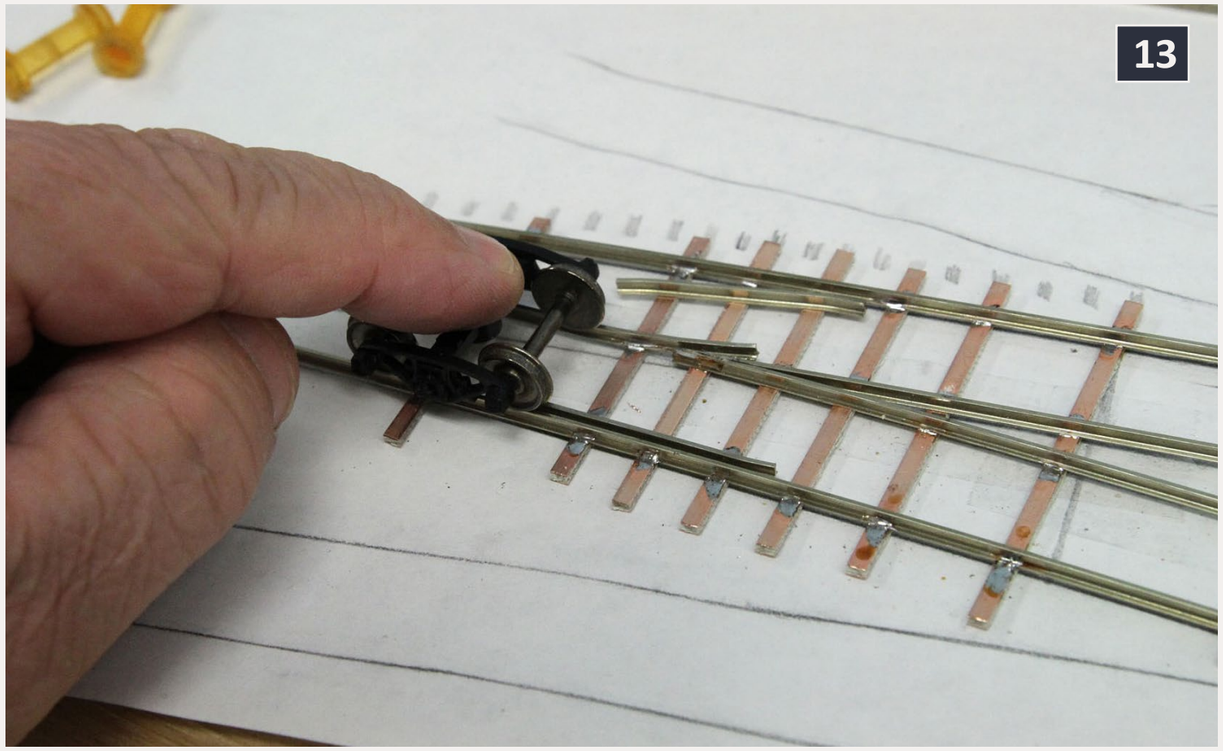
8: All the PC ties for the curved turnout are stuck in place. Note how there are more ties where the frog will be located. This helps stabilize this location and also provide extra support when insulating gaps are cut in the rails on either side of the frog.

9: Pieces of rail, cut out and ready for soldering to the PC ties. I use a 5” disk / 1” belt benchtop sander to “machine” the frog points, points, and stock rails. I cover grinding the rails and assembling them in detail in the companion video to the June 2012 Up the Creek column (youtube.com/watch?v=F_POUtKO5qQ) where I show how I build standard (straight leg) turnouts.

10: The first step in attaching the rails is soldering the two stock rails in place. Be sure the notches cut in them face the inside of the turnout where they’ll accommodate the points and are lined up appropriately for the location of the throwbar.



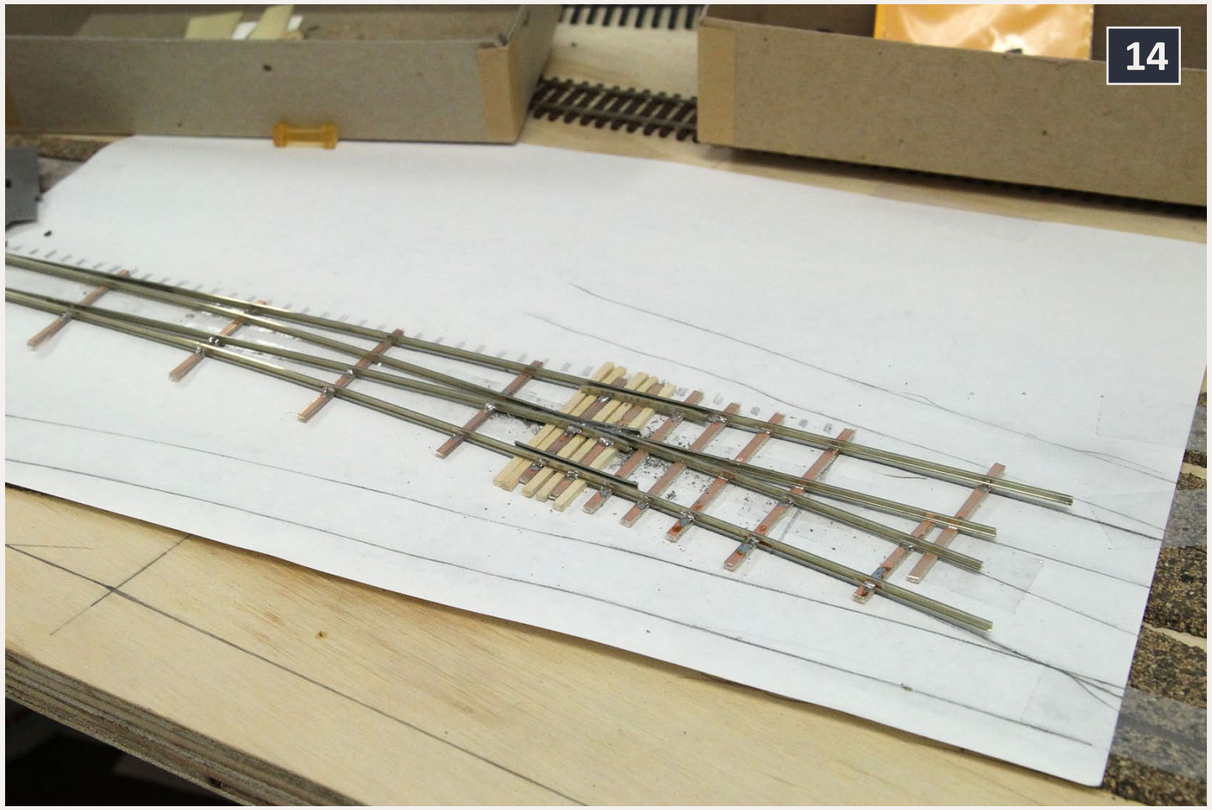




11: I use Railway Engineering (railwayeng.com/gauges.htm) Rollee Holder track gauges to locate the frog point. I slide the two frog-point rails forward and backward (left and right in this photo) until the frog points line up well. A quick soldering job leaves them solidly in place.

12: With the frog rails installed I use the Rollee Holder gauges to put the closure rails in place. When building custom turnouts, I find it easier to bend the wing rail end of the closure rail, temporarily install and adjust it until the flangeway between the frog and wing rail are correct and the frog and closure rail are a smooth line of track. THEN cut the point end of the closure rail to length and grind the taper for the point. This is the opposite of how I build turnouts using a Fast Tracks jig.

13: I've installed the wing rail and am using a truck with Intermountain code 88 (semi-scale) wheels to check for smooth operation.



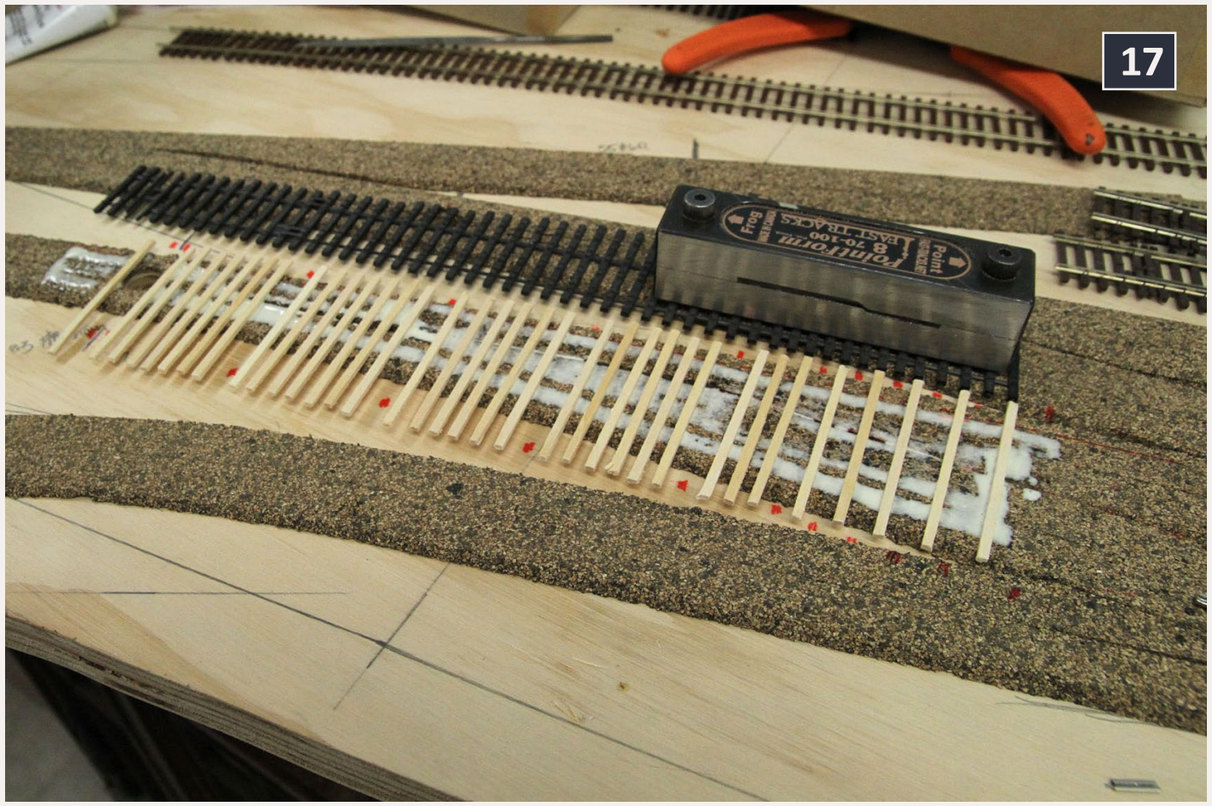
14: All rails are soldered in place. I like to fill the flangeways in my frogs with solder. It looks better and it also prevents the semi-scale wheels under many of my cars from dropping into the frog point flangeway. On a standard turnout, I make the frog assembly in a jig and fill the frog flangeways with solder before removing it. With custom turnouts I push wood ties under the frog to prevent solder from "leaking" out the bottom, heat up the frog with my soldering iron, and add solder until it looks about full.

Once cool, I use a 2" piece of a hacksaw blade to "mill" the excess solder out of the flangeway, then touch it up with a couple of jeweler's files. Testing with a wheel set and the flangeway end of a NMRA track gauge is very important after this step – it's pretty easy to leave excess solder in the flangeway which can lead to wheels riding up and derailments.

Another problem is not removing enough solder from the floor of the flangeway resulting in RP-25 flanges bumping against it as they roll through. Done correctly, when the wheel encounters the gap between the closure rails and frog point, the rim of the flange is supported by the floor of the flangeway and there are no bumps as the wheel passes through.

WARNING: If you are using the older IHC or Rivarossi "pizza-cutter" flanges, don't fill the flangeways of your frogs or they won't work with your oversize flanges.

15: Once the turnout is ready, I remove the paper template and bore a hole under the throwbar for the switch machine's actuator wire. I use a ½" Forstner bit to make the hole. Clamping or holding a piece of scrap wood under the hole helps prevent ragged edges and splinters down there. Splinters are no fun, but you probably already knew that.



16: The custom curved turnout sitting where it will be installed. The red marks are guides to help with installation of the remaining switch ties.

17: I use Micro Engineering ties with my scratchbuilt turnouts. I coat the roadbed with yellow glue then bed the ties in place. Instead of precutting the ties to different lengths (and needing to store them!), I just use full length ME switch ties. Once the glue dries and the turnout is spiked in place, I make a pass with a Dremel tool and cutoff disk to trim the ties to proper length. This saves time and hassle. The Central Valley tie strip next to the ties helps me set tie spacing between the red marks.

18: I lay Micro Engineering flex track on a bed of gray, paintable, latex caulk. A “train” of canned goods helps bed the track into the caulk on the roadbed. More evidence of construction zone mess is clearly evident in this shot of the east end of South Jackson.

19: Joe Brugger and Paul Mack at work getting the final piece of South Jackson mainline installed in preparation for a historic first run. By the end of the work session the four mainline turnouts and mainline through South Jackson were installed and wired. Nothing burst into flame when track power was turned on so we brought a train up the helix out of staging to test the newly installed track.

20: The first thing we discovered was some of the helix junction Tortoise controller wiring had been uprooted. Arghh. A few minutes with the soldering iron, and it was good as new again.

21: With the helix junction turnouts behaving again, we were able to select the correct route for a train traveling from staging into (and hopefully, through) South Jackson.

22: Here's the turnout spiked in place, ties trimmed, and gaps cut in the rails to electrically isolate the frog. The surface of each PC tie must also be gapped to prevent shorts. I use a jeweler's file to make a gap in the PC tie surface. Be careful, sometimes what looks like a gap in the PC tie foil isn't "clean" gaps. All it takes is a stray whisker of copper too small to be easily visible to make a short. The first attempt to run a train through this turnout failed. When the lead loco reached the frog, a short circuit materialized resulting in several minutes of scrutinizing the gaps in the foil. If you can't find the problem visually, try going over all the gaps again. A few minutes of filing on the PC ties and the train sailed through with no more shorts.

23: Paul Mack watches our first train heading through the soon to be yard on the brand new mainline.

← back to previous page of text ...

the promise I made to my operators that we'd be running op sessions before the end of January.

A lot of turnouts remain to be built and installed in South Jackson for the yard's body tracks, plus I need to get the South Jackson turntable installed.

All I can say is "I'm working on it" and things are looking promising.

Time will tell. ☑

Reader Feedback (click here)

24: One more problem. The first train made it all the way through South Jackson and was entering Mill Bend when "beep beep beep", we had another short.

The South Jackson and Mill Bend blocks are powered by two different boosters. When the loco bridged the boundary a short occurred. A quick check with a digital multi-meter revealed the two blocks had opposite polarity rail power.

It appears that when a Digitrax DCS-100 and DB-150 are run off a common LocoNet, the Rail A and B outpus of the DB150 are reversed from the Rail A and B outputs of the DCS100. When the loco connected them, a short circuit occurred.

I swapped the Rail A and B wires on the DB150 and all was well again.

A clipping from the

South Jackson Gazette

Citizens Celebrate First Train in new South Jackson!

Locals gathered in new South Jackson to celebrate the progress being made by the BC&SJ railroad's track gang. Said prominent citizen Horace Fithers, "Well, we're sure glad to see some mainline in South Jackson connecting them corkscrew tracks with Mill Bend. It were getting' right boring jest sitting around without no trains to be watchin'. Even though them engineering types done a good job getting the ground fabricated, it's still jest that monotonous plywood color and a body can only take so much of that before they get kinda bilious."

Double-headed cab forwards pull a long test train through the newly installed mainline in the new, improved South Jackson yard.

When reached at the railroad's office, Charlie Comstock, Superintendent of Nearly Everything stated, "We're well aware of the hardships borne by the local citizenry since trains stopped running. I can assure you that we're working hard to get back to regular operations and hope to achieve that goal expeditiously."

Other trackside citizens seemed confident that the railroad will make good on its promise and even the train crews are hoping to get back to work. Said Behl Ringher, BC&SJ engineer, "Heck, even with the railroad paying us our regular wages while the trains aren't running, I'm sure gonna be happy to get back to work. Sitting around the crew lounge watching Lost in Space re-runs and waiting for Gaston to make a move while he's playing checkers is just plain frustratin'!"

Local scuttlebutt says the railroad will be running again in early February. This reporter hopes that will prove to be the case.

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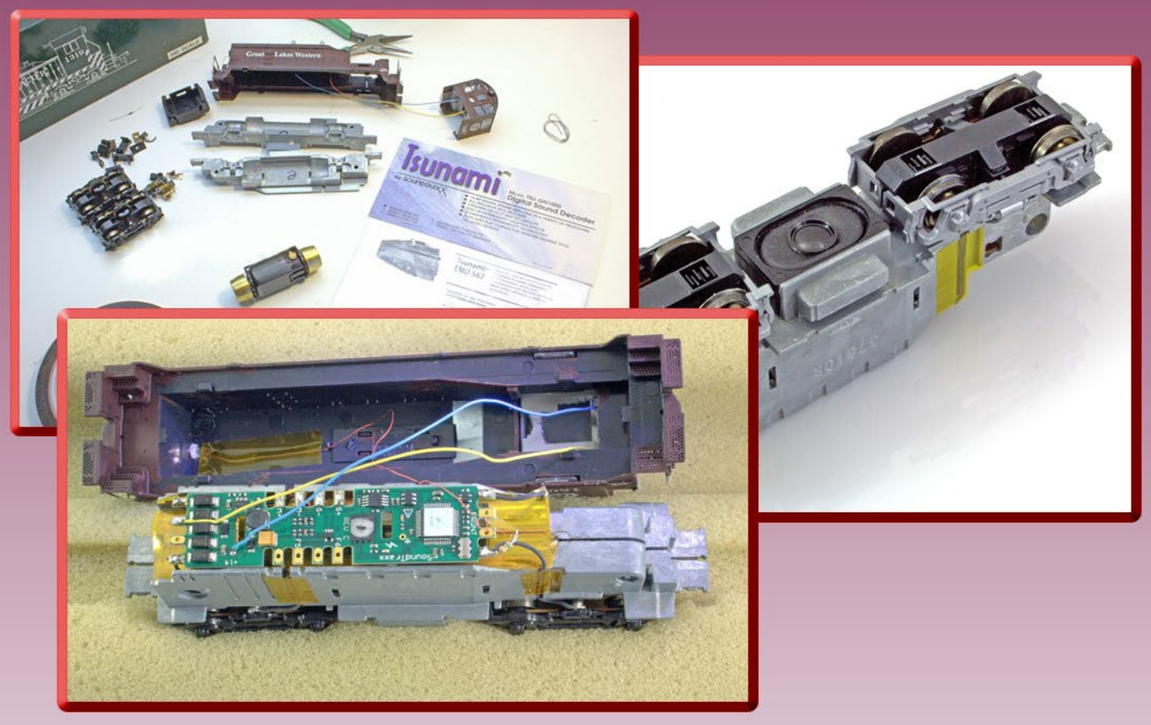
Sound decoder installation video

By MRH DCC Columnist, Bruce Petrarca

90 minutes, step-by-step



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Anatomy of a DCC Decoder

Looking at what's on that little board

Reader Feedback (click here)

DCC Impulses column

by Bruce Petrarca

Understanding what is inside will help your installations ...

Last month's column about sound installation in a HO-scale Kato NW2 was long and detailed. That column, and the companion video (mrhmag.com/magazine/mrh-2013-01-jan/dcc-full-feature-video), was the culmination of many months of work. Hopefully you found some hint or idea in there that you can apply to your pike.

This month's column will be a bit less ambitious. I'm going to delve into a topic for every DCC user: what is going on inside the decoders we use and how to make the best use of what you are provided, internally and externally.

If you need a refresher course in DCC Basics, you may wish to review my inaugural column from October 2011 (mrhmag.com/magazine/mrh-2011-10-oct/dcc_impulses).

What is happening

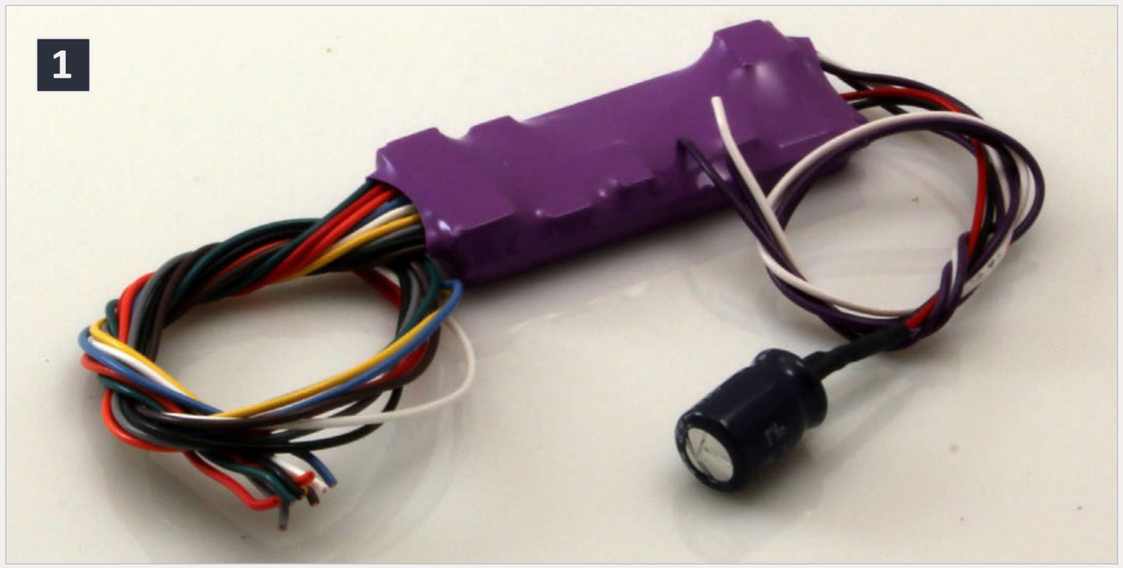
Functionally, the decoder takes (packets of) data off the track and uses them to decide what to do: drive a motor, turn on lights, generate sounds, etc. Let's look inside and see the basic functions necessary to make all of this happen.

When I reference colors of wire, I'll use NMRA recommended practices wherever they are defined. For the less well defined, I'll use industry practices to explain the situation.

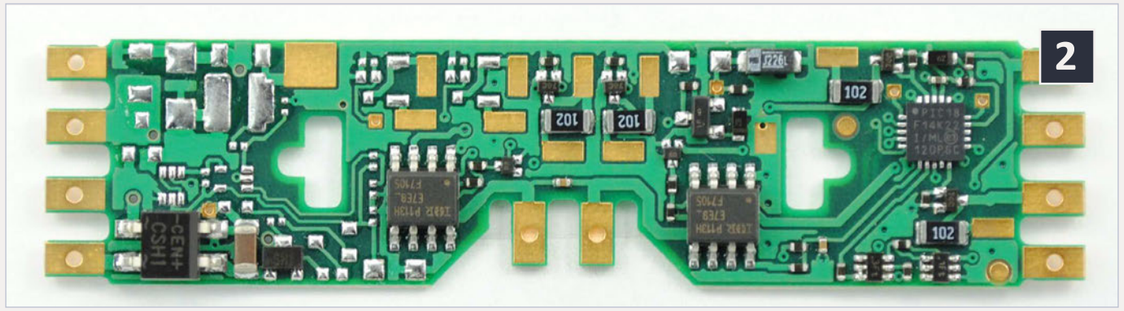
There are two basic styles of decoders: wrapped and open boards.

The wrapped units (1) have shrink tubing surrounding the decoder board with wires coming out of one or both ends. When I talk about wiring colors in this column, I'll be referring to this style of decoder.

Open board decoders (2) don't have the shrink tubing and frequently have contact points for wiring connections. The connection points are labeled or referenced in the instructions with this style of decoder.

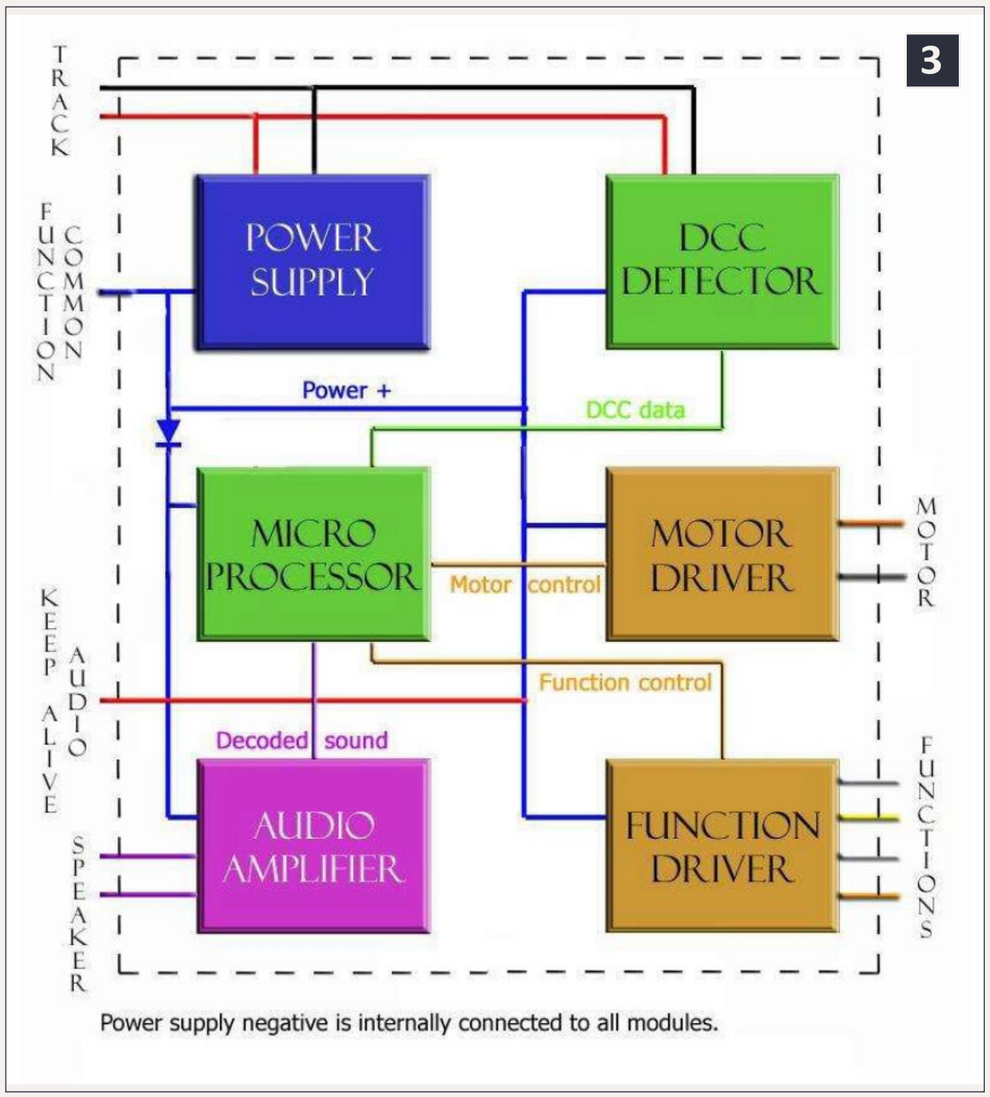


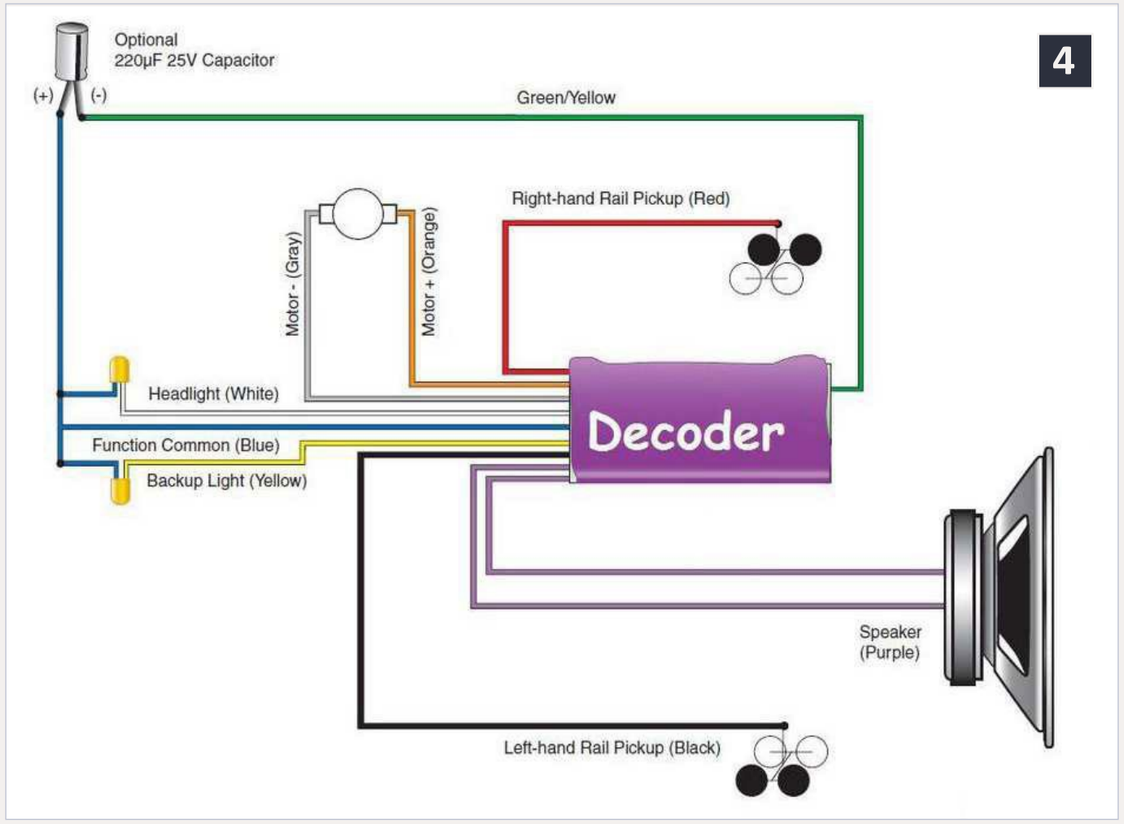
1: Wrapped decoder example – SoundTraxx Tsunami TSU-1000.



2: Open board decoder example – TCS A4X – photo courtesy TCS.

3: Decoder Block Diagram.





4: Decoder wiring diagram – from SoundTraxx' Micro Tsunami (TSU-750) instructions.

When I'm wiring open board decoders, I select wires with colors that match the NMRA recommended practices (nmra.org/standards/DCC/standards_rps/RP-9.1.1%20200801.pdf), as they help me remember "what is what" as I'm doing the installation and later, if I'm troubleshooting or reworking a locomotive.

Figure 3 shows a block diagram of a SoundTraxx Tsunami TSU-1000, which covers the features of most decoders. Don't be intimidated. Let's walk through it in detail. The dashed line represents the decoder itself. The lines that cross that dashed line represent the leads coming out of the wrapped decoder.

Figure 4 is a wiring diagram, modified from the SoundTraxx Micro Tsunami instructions. The Micro Tsunami (TSU-750) is

similar to the TSU-1000. The Micro is smaller and only has two functions, while providing less output power. You may wish to refer to figure 4 as you read this column, to keep in mind where things are connected outside the decoder.

The Power Supply

The most basic of needs in the decoder is to change the DCC signal from the track into DC power to run the decoder and to drive the motor and lights connected to it. The blue box in (3) depicts this. Figure 3 shows the internal connection of the positive voltage to other circuitry within the decoder. The negative voltage connections are not shown, but still exist.

The red and black track leads bring the DCC track voltage in.

The positive voltage from the power supply comes out of the decoder on the blue lead. Some decoders bring the power supply negative out on a wire for keep-alive circuitry or other uses.

SoundTraxx brings the negative out of their Tsunami-1000 series decoders on a black wire that is wired to the external capacitor – different than the black wire connected to the track.

In the Micro Tsunami (TSU-750) series decoders, the negative wire is green-with-yellow stripe – a much less confusing color than having two black wires that have different uses on the same decoder.

TCS brings out the negative wire on most of their decoders with a black-with-white- stripe wire, per NMRA Recommended Practices, RP-9.1.1.

I'll discuss the diode shown in the positive lead in figure 3 later in this column. To my knowledge, it only exists on the Tsunami TSU-1000 series decoders.

Some open board decoders provide a power supply negative contact point on the board.

DCC Detector

The green boxes in figure 3 represent the circuitry that handles the DCC data inside the decoder.

The DCC Detector looks at the DCC pulses on the track and translates their timing into a stream of data pulses for the "brains" of the decoder to use. The next few paragraphs and figures will explain how different detector schemes work. If you don't care, jump ahead a couple of pages to the next section, about the microprocessor.

The NMRA standards are that pulses that are nominally 55 microseconds (µS) apart represent a data one. Zeros are indicated by pulses more than 110 µS apart. So, to identify the pulses, the detector needs to decide when a transition has occurred.

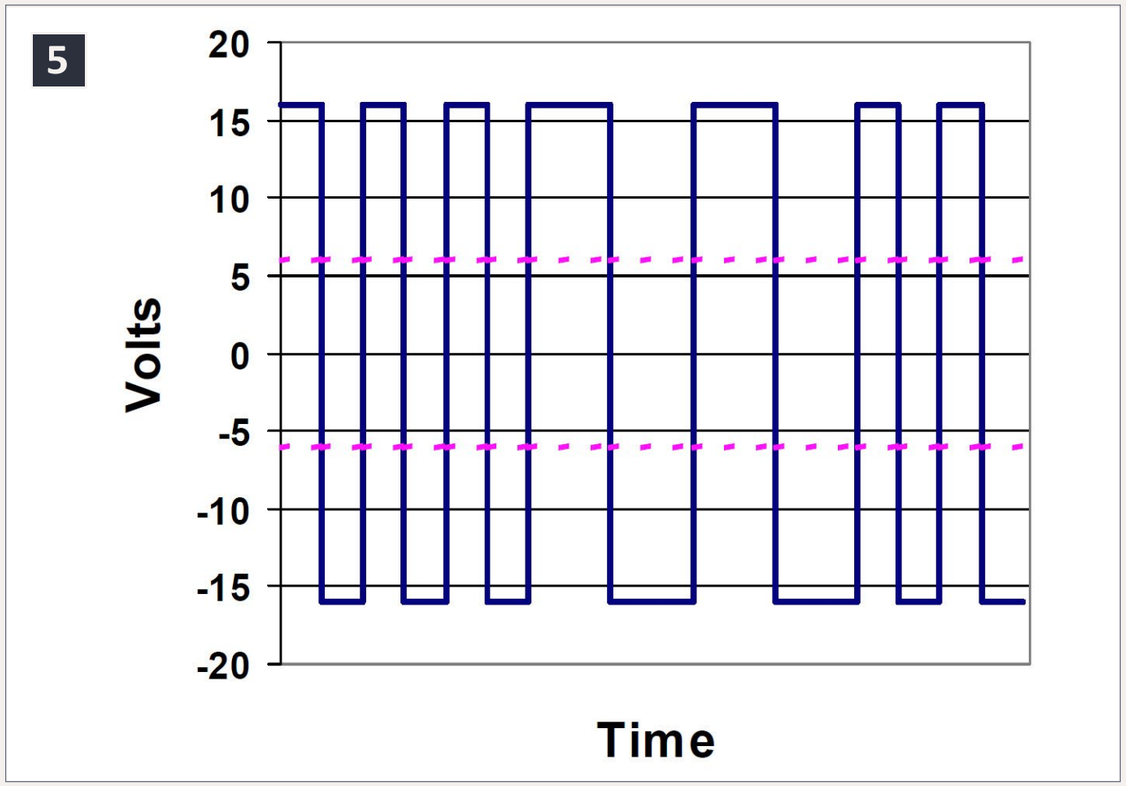
The most common method is to set a threshold (say 6 volts) and presume that when the voltage goes above or below that level, a transition has occurred. The disadvantage of this method is that dirt on the track and other discontinuities may drop the DCC signal level enough that transitions are missed. If that happens, instead of a group of ones and zeros, the detector decides that there was a long zero. Remember, zeroes are deemed to be anything longer than 110 µS without a transition (5).

About 10 years ago, Lenz released their Gold series decoders that used a differentiator to determine when a transition occurred. In English, this means that, instead of looking at the level of the DCC signal, the detector looks at the fact that there is a change (difference) of voltage. Running the DCC signal (5) through a capacitor creates the signal in figure 6. So why bother?

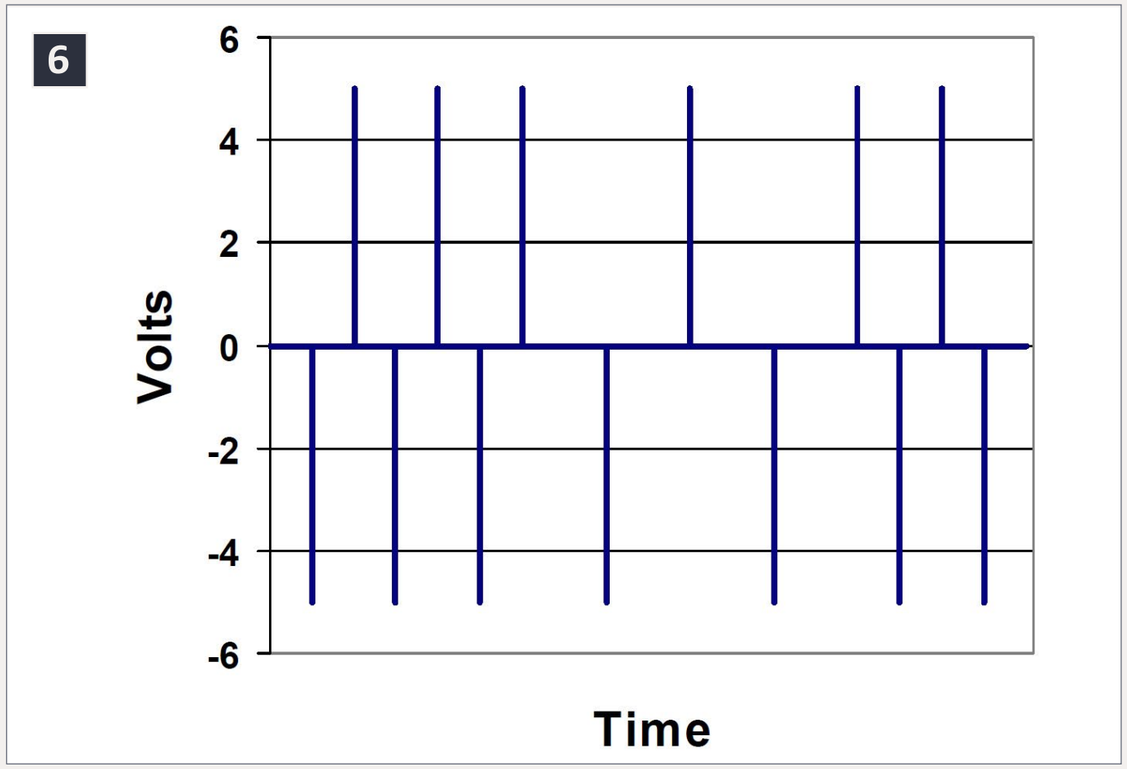
If you remember my December 2012 column on Basic Electronics (model-railroad-hobbyist.com/magazine/mrh-2012-12-dec/di_basic-electronics-for-dcc), two parallel conductors separated by an insulator make a capacitor. Well, your locomotive's wheel and the track, separated by insulating dirt, make a capacitor.

So, if your detector is designed to decode the signal in figure 6 and your loco runs over a dirty spot on the track, the amplitude of the (6) signal will diminish, but the shape of the waveform won't change. Thus, the decoder can read the DCC signal even through a sheet of paper. If you are detecting signal level (5) the sheet of paper will reduce the level to zero and the decoder won't see any transitions.

Either detector will create a data stream for the microprocessor to analyze and act upon.



5: Threshold Detection – looking for when the DCC signal goes through 6 volts – DCC data = 111111000011.



6: Transition Detection – looking at the change in the DCC signal – DCC data = 111111000011.

Microprocessor

The block in figure 3, labeled Micro Processor, includes a lot of things, including the memory where the program and sound files are stored and the clock that keeps time for everybody. I lumped them together, as many times the microprocessor chip will have built in memory and the clock is typically not connected elsewhere.

Here is some of what the microprocessor is doing almost simultaneously:

- Interpreting DCC commands
- Calculating motor speed and direction
- Creating motor drive pulses

- Turning functions on and off
- Generating lighting features
- Generating sounds
- Monitoring for safe operations

Motor Driver and Motor Controls

The motor driver circuitry is basically a switch that connects the motor to the full power- supply voltage whenever the microprocessor tells it to do so. The microprocessor also tells the driver which wire to connect to which polarity, to achieve forward or reverse movement.

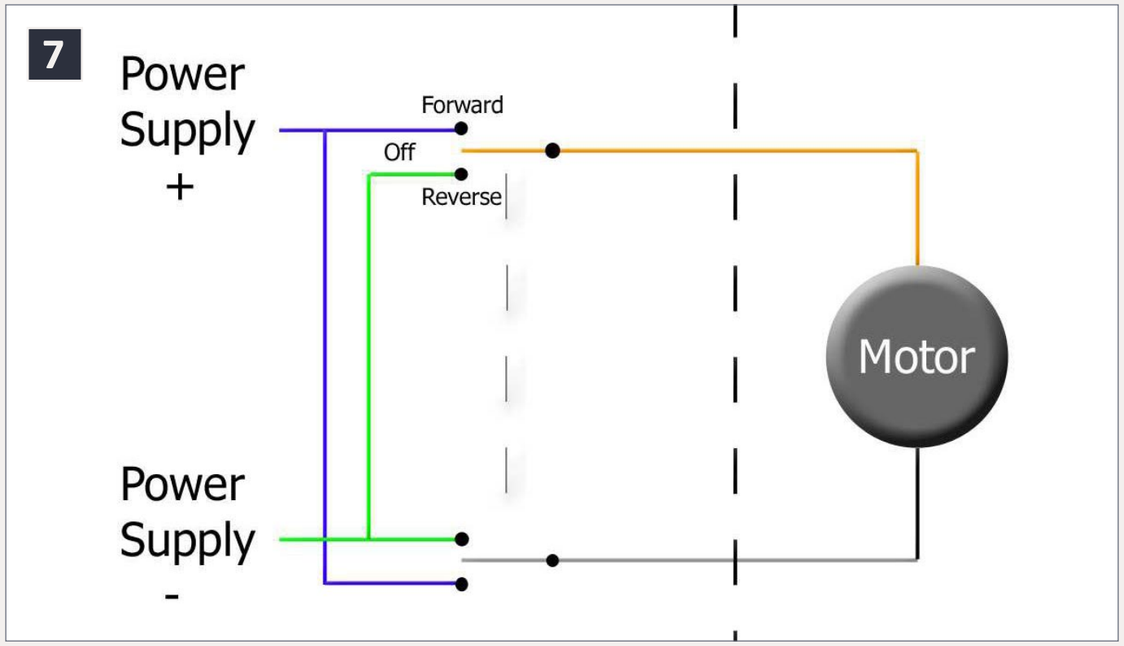
The brain says “on forward” and the driver connects the orange wire to the power supply positive and the gray wire to the negative. “On backward” will have the motor driver connect the wires to the opposite polarity from the power supply.

Okay, that will let the loco run forward or backward, but it will be at full speed. How does the decoder run the loco at slower speed?

Motor control uses Pulse Width Modulation (PWM) to control motor speed. The microprocessor is programmed to turn the motor on every few microseconds for some time. The longer the motor is turned on (the wider the pulses), the faster the loco will go (7).

Think about driving your car by selecting drive and pushing the gas pedal all the way to the floor for ½ second and then letting off completely for ½ second and then repeating the cycle. That might result in the car going 30 miles per hour.

If you increased the time you hold the pedal down to ¾ second out of every second, the pulse rate would be the same, but the car would run faster, due to the throttle being held down longer (wider pulses of power – 8, 9).



7: Motor Driver equivalent circuitry – a multiple transistor switch connects the motor to the power supply in one direction or the other or not at all.

Modern decoder designs have the pulse rate in the 15,000 to 30,000 times per second range. Why? This puts the drive pulses outside the range of human hearing. Even though the motor will “sing” just a bit, it will be beyond our ability to hear it. Manufactures call this feature things like “silent drive” or “supersonic drive”.

BEMF (motor control)

Most decoders today offer BEMF motor control. As I discussed in my December 2012 column on Basic Electronics (model-railroad-hobbyist.com/magazine/mrh-2012-12-dec/di_basic-electronics-for-dcc), the motor will generate a reverse voltage (Back EMF) that is directly proportional to its speed. A detector across the orange and gray wires can sense this voltage during the time that the motor driver is switched off. Providing

this data to the microprocessor allows it to adjust the width of future pulses based on the current speed of the motor, creating a feedback control system.

Various manufacturers utilize this in many different ways. Some allow the user to select a speed step beyond which the BEMF doesn't change the motor pulses, i.e. "BEMF Cutoff". Some allow the user to adjust the various components of the feedback control system.

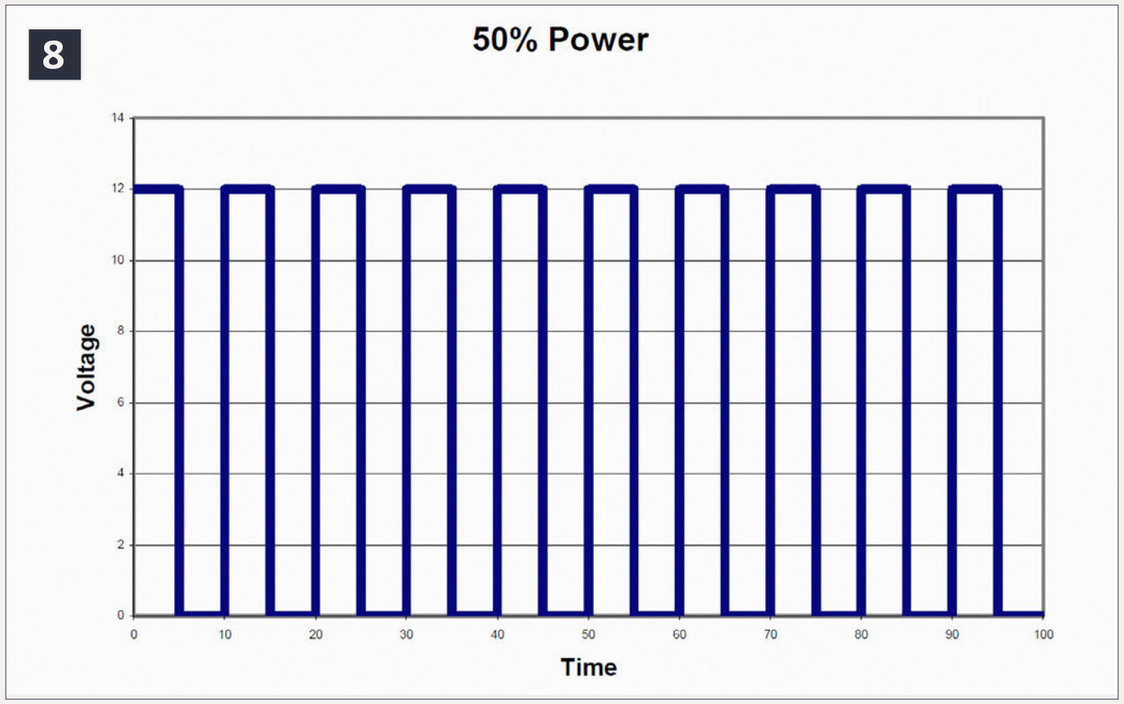
BEMF control needs a BEMF detector connected across the gray and orange wires. When the microprocessor tells the BEMF detector that the motor is off, then the detector reads the voltage from the motor and translates that into a digital value, which is sent to the microprocessor. This circuitry is not shown in figure 3, to keep the complexity of that figure down.

Dither (motor control)

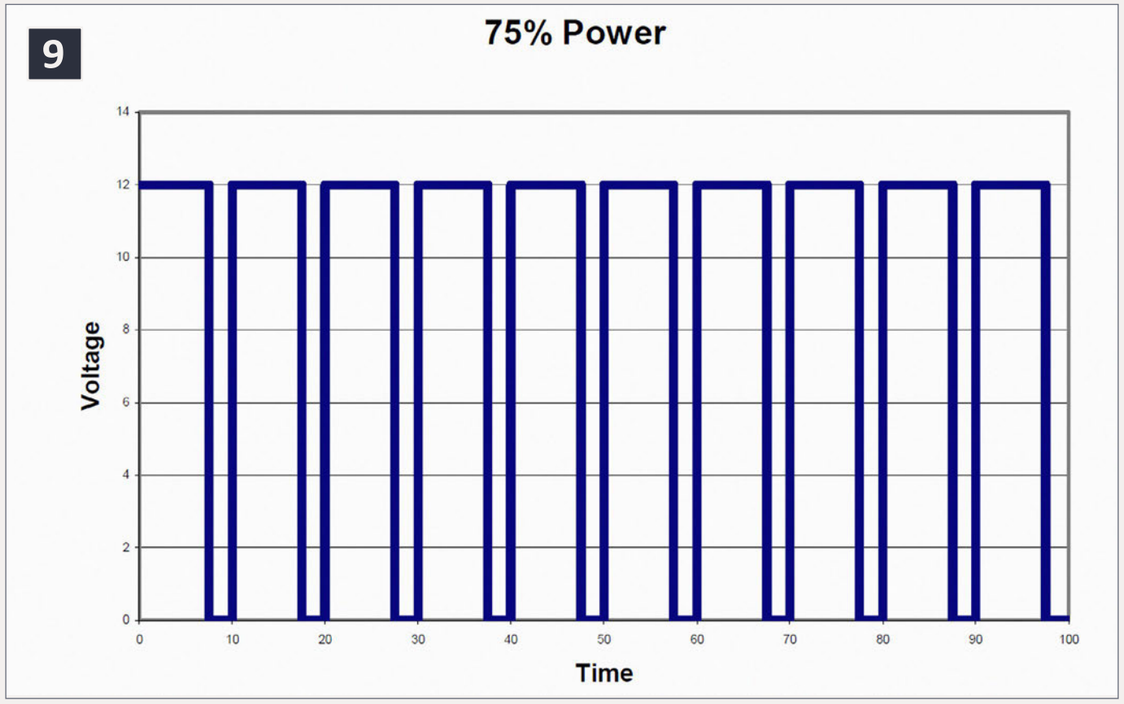
The disadvantage of driving the motor at a frequency above human hearing is that there is a loss of drive (torque) from the motor at low speeds. A solution for this loss was found. If the motor pulses are not exactly on time, much of the lost torque is regained.

Think of a teen-age garage band. They might be able to play a hit song, but they can't all stay on the beat. Assume that the drummer is spot-on with his beat, but sometimes the singer is ahead of him and some times behind. Various decoder manufacturers call this variation around the "correct" time "dither" or "torque compensation".

Yes, it is possible to have dither and BEMF in the same decoder. The current offerings from TCS and others do so.



8: Motor voltage pulses at 50% power going forward.



9: Motor voltage pulses at 75% power going forward.

Momentum

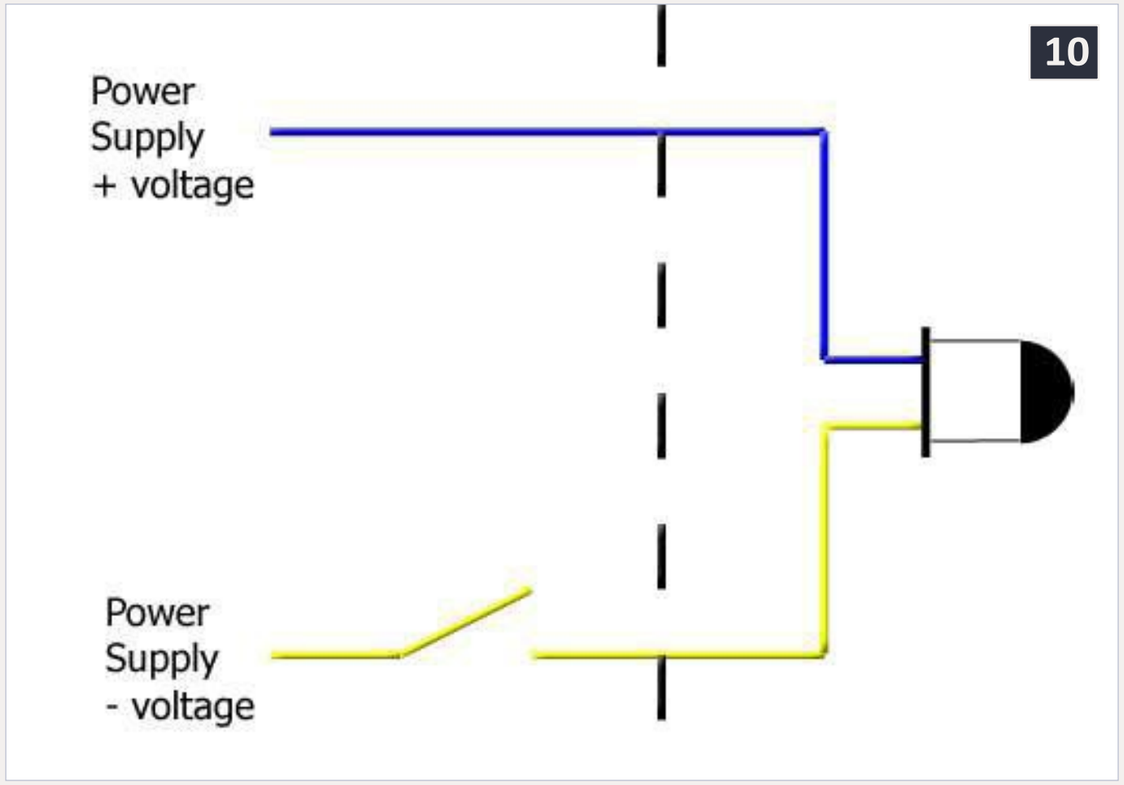
The delay in starting and stopping the motor is called momentum or acceleration and deceleration delay. It is generated by the microprocessor. You turn the throttle from 0 speed to 50% speed and the microprocessor tells the motor to go 0%, then 1%, then 2%, etc., until it reaches 50%. The quicker these commands to the motor are sent, the less the momentum.

Stopping works in reverse: 50%, 49%, etc.

Emergency stop removes the delay: 50% goes directly to 0%.

Function Driver and Lighting Functions

The function driver switches full voltage to the function pads or wires. It doesn't have to work with reversing the polarity, as the motor driver needs to do.



10: Function Driver equivalent circuit with an external bulb or 12 volt LED – rear (yellow) function shown.

The blue wire provides the positive voltage for the LED or whatever a function wire is controlling. The colored wire (yellow in figure 10) connects the bulb, in this case, to the negative voltage.

Once again, the driver is just a switch. If you have a light on at full brightness, the switch closes when you select a function and opens when you turn it off.

The microprocessor can be programmed to generate lighting effects, like Mars lights or firebox flicker. The decoder adjusts light level the same way that it adjusts speed, Pulse Width Modulation (PWM). Figures 8 and 9 show how PWM can provide 50% or 75% power to whatever is connected to it.

Some decoders have built in voltage regulators or current regulators or dropping resistors for direct connection of LEDs or low-voltage bulbs. Using these "features" may be addressed in a future column.

So, the designer of the decoder can tell the microprocessor that a sequence of pulses will look like a Mars light. Here comes a rub. Incandescent bulbs and LEDs generate different amounts of light based on the applied power. So, what looks good for a bulb won't look correct for an LED – the LED will come on sooner. Many manufacturers allow the user (through CVs) to tell the decoder whether a particular function is connected to a bulb or an LED. The decoder will change the algorithm (program) accordingly. Telling the microprocessor to generate a LED-style function won't (at least in currently-available decoders) adjust the voltage or current available on a function output for LED operation. The installer still needs to provide a resistor or other control component(s).

Half-Wave Lighting

In last month's column, I briefly discussed half-wave lighting (mrhmag.com/magazine/mrh-2013-01-jan/di_dcc-sound) and several situations where its use might be useful. Here is how it works.

To connect a function in a half-wave lighting fashion, a rail connection is used instead of the decoder power supply. Instead of connecting the positive side of the load to the blue wire, it is connected to, for example, the rail red wire.

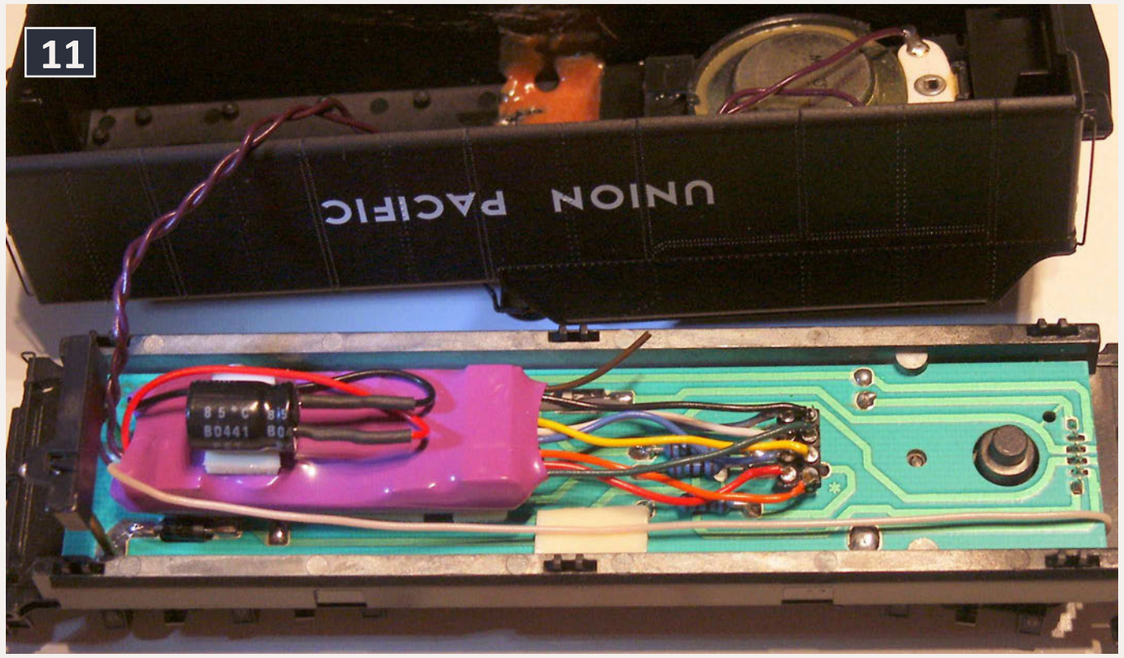
In figure 3, you can see that the only thing between the track and the blue wire is the power supply. Since the DCC track voltage (5) is positive about half the time and negative about half the time, connecting a load between it and the negative terminal generated by the power supply (through a function lead) will have current flowing through the load about half the time.

With LEDs, this technique results in a slight reduction in light output. Sometimes it is so little that you may not even notice. Reducing your series resistor by one standard value (1K to 910 ohms, for example) will probably restore any lost brightness, if necessary.

With bulbs, the light reduction is somewhat more pronounced. However, most folks seem to be happy with the results, with either bulbs or LEDs, with little or no changes.

Sound and the Audio Amplifier

The microprocessor in sound decoders is programmed to know when to generate what sound, based on throttle setting, momentum, load (measured by BEMF), and function inputs. It calls upon sound waveform files stored in memory to allow it to generate the appropriate sounds at the proper time.



11: Tsunami decoder plugged into a Proto Heritage 2-8-8-2 tender wired to the speaker in the shell.

In a full-featured sound decoder, the microprocessor is very busy. In addition to decoding the DCC data being sent to it, it may be generating 5 or 6 sounds, calculating what pulses to send to the motor and as many as 4 different function leads - all at the same time. Talk about multitasking.

Once the sound waveform is created by the microprocessor, the amplifier section of the decoder drives the attached speaker.

Keeping the decoders small limits the flexibility of amplifier design. They are typically designed to work with a specific speaker load (frequently 8 ohms). Higher impedance (say, 16 ohms) will work, but the volume may be diminished a bit. Lower impedance (4 ohms) may damage the amplifier.

How fast am I going?

One of the more difficult things to do right is to generate the proper sounds for the speed your loco is actually moving.

BEMF can tell the decoder how fast the motor is turning, which is related by the gears to how fast the wheels are turning.

In diesel sound decoders, the question is which of the 8 notches of the motor sound should be being generated. Simply, the decoder will divide the speed ranges into 8 parts and assign a sound to each one.

But a diesel running in, say notch 5, will sound different if it is pulling hard or if it is running light. Sophisticated sound decoders use user input and BEMF to decide where in the range of notch 5 sounds it should be.

Some decoders allow the user to manually move through the notches, for more realistic operation. All seem to come with an automatic selection process enabled.

Now comes the conundrum of steam locomotives. The chuff should be directly related to specific mechanical positions on the loco, either wheel position on rod locos or motor rotation on geared locos.

12: SoundTraxx 810038 chuff cam mounted on the inside of an HO steam driver – this is a cam for an articulated style of loco with two sets of cylinders and drivers.

Deciding when the chuff sound should be generated can be handled by the microprocessor, based on motor speed, once the user adjusts the chuff rate (via CV). However, this will only be correct for the single speed where the user calibrated the decoder to the locomotive.

How correct the chuffs are over a speed range is a big question. Some locos and decoders play well together and, once the chuff is adjusted at a medium speed, they will look in sync from a few scale-MPH until the wheels are turning too fast for the eye to follow. Others are in sync over a very narrow range of speeds.

The one sure way to synchronize the sound is with a switch that tells the decoder exactly when to make a chuff sound, based on wheel rotation. These chuff cams are usually very tricky to install. Most folks who use them do so out of a love of perfection. The time necessary for an after-market cam installation makes them very expensive if one is hiring the work done.

All the chuff cam does is tell the microprocessor, “now” when it needs to initiate a chuff sound. The chuff cam wiring is just a single wire into the microprocessor block. I left it off figure 3 for clarity.

Keep-Alive Circuitry

With sound decoders came sensitivity to power dropouts on the track. The loco could be running down the track at 1/3 speed and hit a bit of dirt. If that power dropout was long enough to reset the microprocessor, then when it woke up, it thought the loco was standing still and ran through the “fire up” sequence. Nothing is more concerting than a loco running down the track but emanating the sound of a diesel motor cranking over!

SoundTraxx supplies many of their Tsunami decoders with external keep-alive capacitors. Here is where the diode in figure 3 comes into operation (13).

If you wire a keep-alive capacitor external to the red and black leads in the TSU-1000 series, the capacitor stores energy on the microprocessor and amplifier side of the diode. Remember from my column on Basic Electronics

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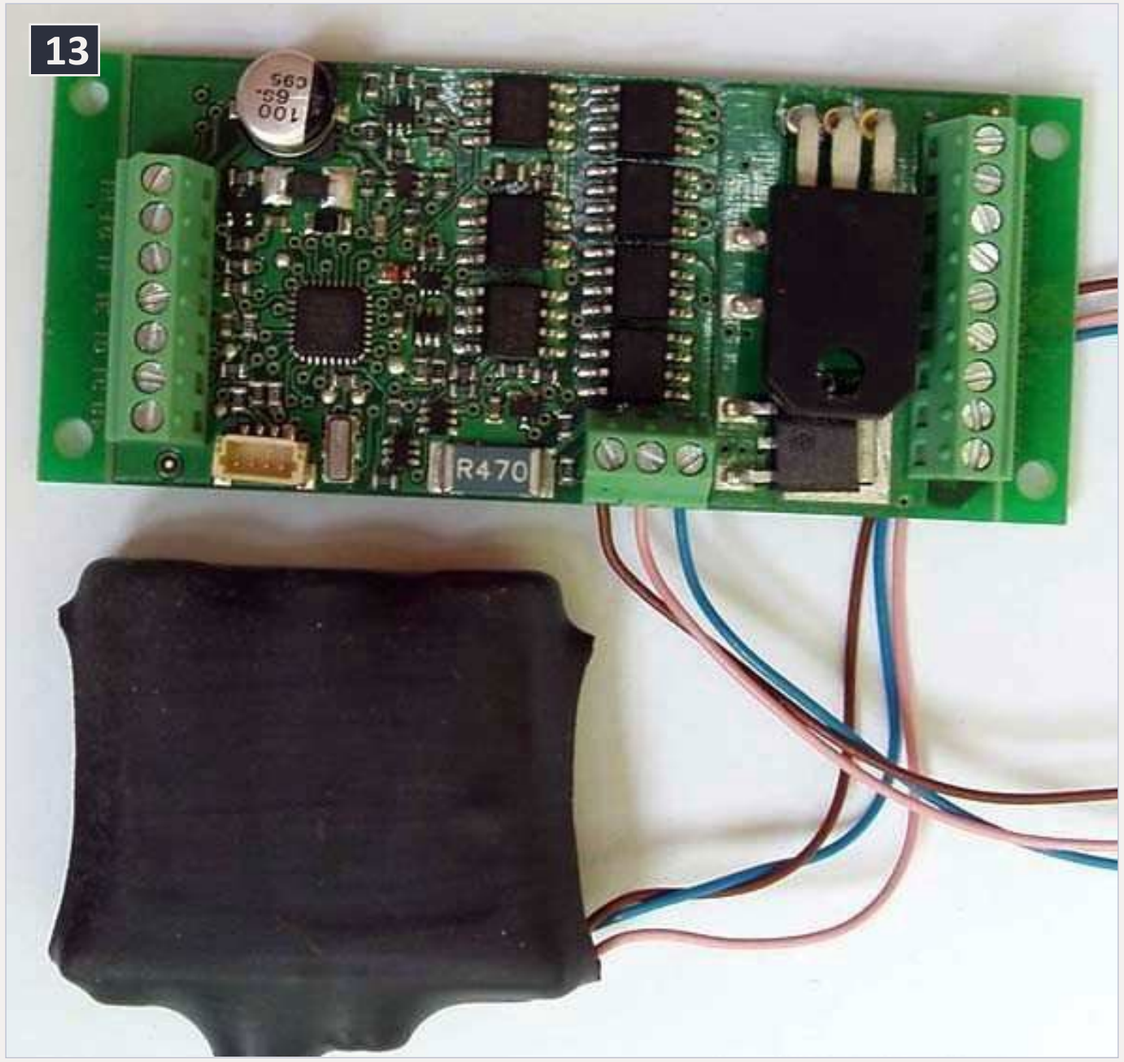

13: Lenz USP system – Gold-Maxi decoder and Power-3 module.

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(mrhmag.com/magazine/mrh-2012-12-dec/di_basic-electronics-for-dcc), a diode is like a check valve in plumbing. It will allow current to flow in one direction and not in the other. Thus, with energy storage on the microprocessor side of the diode, when a drop-out occurs, the microprocessor and the amplifier keep generating sounds. After the dropout, the rest of the decoder comes back to life and starts decoding packets of data again and running the motor and the lights on the function leads.

Lenz pioneered a concept called USP – Uninterruptible Signal Processing – based on the detector scheme I described earlier in this column. Along with that, they offered power storage modules that could connect to their decoders that would allow operation without track power for a period of time.

At the NMRA National convention in Seattle in 2004, Lenz demonstrated the combination of the two: their G-scale Gold-Maxi decoder with USP and their Power-3 energy storage module.

They ran a G-scale loco down the track – about 12 feet on a table in the clinic room. Okay, fine. Then they ran it back, but put a piece of paper covering one rail for 11 inches of the track. The loco slowed a bit, but ran across the complete power interruption, with its light on! The next demonstration, showing the power of the USP system, was when the Lenz folks ran the loco onto the paper, stopped it (proving it was receiving commands through the paper), turned off the light, turned on the light and drove off the paper! The final demo was to pick the running loco off the track and set it on the table. It continued running for about a foot.

I don't know of another manufacturer who is offering the USP style of DCC decoding today.

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However, lots of folks are working with energy storage in various forms, including batteries (hybrid drive), capacitors, supercapacitors, etc.

As you can see, we have just scratched the surface of this keep-alive concept and there is a lot more to discuss. Wait until March's column when we will be talking about "Stayin' Alive". This is fair warning for you aficionados to get your disco clothes out again.

Until then, I hope that you have green boards. If you liked this article, please click on the Reader Feedback icon and rate it awesome. Thank you. ☑

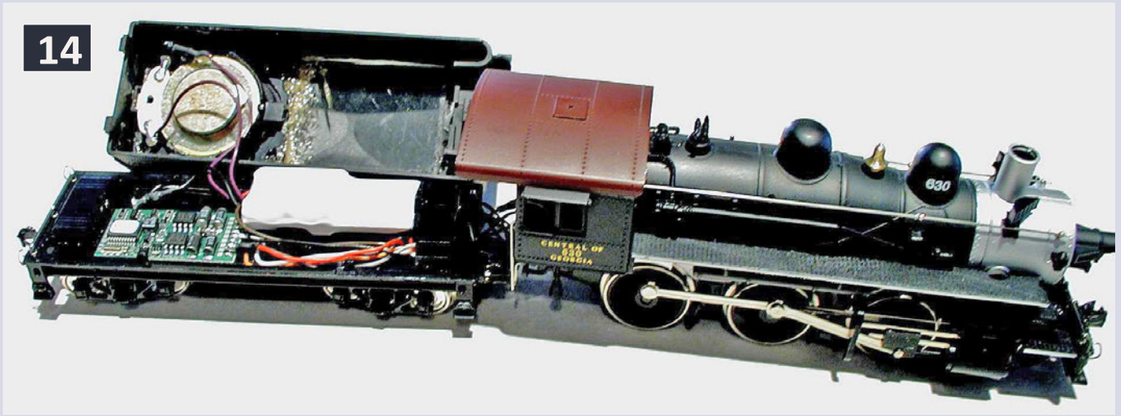
Reader Feedback (click here)

From Mr. DCC's workbench – One Loco with Two Decoders

There was a thread on the MRH website about working with two decoders in one loco. How to set them up and program them. That prompted me to deal with the topic here.

Recently the concept of decoder locking has become popular amongst decoder manufacturers. This involves setting CV 15 and CV 16. If CV 16 = 0, locking is disabled. If CV 16 is set to a value between 1 and 7, then the decoder can only be programmed when CV15 is set to the same value. When locked, the decoder will only allow you to change CV15 or CV16. There are some recommended values for CV16, depending upon what the specific decoder is doing. Check out the NMRA site for these ideas: (nmra.org/standards/DCC/WGpublic/0305051/0305051.html).

But what do you do if you have an older decoder without the lock feature? Here's what I do to keep it simple.



14: Two decoders in loco #630: Lenz motor and light decoder with SoundTraxx DSX sound module without the loco feature.

From Mr. DCC's workbench – One Loco with Two Decoders *Continued ...*

Let's look at the Central of Georgia #630.

I installed the Lenz decoder for motor and lights and programmed it to a short address of 30 and a long address of 630, with the short address active. I created a DecoderPro file for this decoder, called 630-motor.

Then I connected the DSX decoder to the speaker (to provide a load for programming) and clipped the track leads to my programming track – the loco was NOT on the track. I programmed the DSX to a short address of 6 and a long address of 630, with the short address active. The DecoderPro file for the DSX was called 630-sound.

When I finished the installation, the loco would run on address 30, but the sound controls were on address 6. So, I created a consist with 30 and 6 to run the loco while I used DecoderPro to tune the lights, motor and sound to my desires, using programming on the main and the two definition files previously created. DecoderPro will allow you to have two decoder files open and program on the main from either of them.

When I was happy, I changed both DecoderPro files to utilize the long addresses and wrote those changes to the locomotive. The loco then ran as 630.

Future adjustments are easy, just set the decoders both back to the short address mode, run them as a consist while you tinker. Put them back in long address mode to finish. ■

Email Phone contents index

My workshop

A place to build realistic models

Reader Feedback (click here)

Getting Real column

by Jack Burgess

Getting a good workshop setup can help inspire you to do better modeling ...

When I started building my Yosemite Valley Railroad layout back in 1980, the only place I had available for a workshop was in the two-car garage that also housed the layout. That workshop was about 7' wide by 11' long and served me well. The only drawback was that it was cold in the winter and could sometimes be hot during the summers. But it gave me a dedicated, specially-designed space to build models.

When the last of our kids left home, my wife suggested that I take over the largest of the two spare bedrooms for my workshop. Not only did that give me a much larger space but also got me into the house with creature comforts such as central heating and air conditioning.

I designed and built my current workshop with some of the same design goals that I used for my first shop—to provide a

large space for model building; to have adequate storage for modeling materials, parts, photos, and research materials; and to be segregated into functional areas for things like assembly, machining, soldering, etc. Just as important, and since I spend a lot of time in my workshop, I wanted it to also be a bright, relaxing, and pleasant place to work.

1: An 18”x24” green self-healing cutting mat defines the main model building space. To the left of the mat is a yellow drawer organizer for holding parts for my current project, a vacuum base vise, and a power disc sander. The white Ikea drawer unit on the far left provides space for pens, scratchpads, and other stationery items. Along the back edge of the workbench is a 7” high by 5” wide boxed-in shelf. This raised shelf keeps items stored on it out of my working area. The primary task light is also attached to the top shelf. Electrical outlets along the face of it provide power for the disc sander and other power tools.

2: This is the view turning to the right from Photo 1. I am right-handed so my precision drill press is immediately to my right when I’m at the modeling bench. It has its own task light. Under the drill press is a roll-out storage bin which holds about 60 stockpiled resin freight car kits. The lowered area to the right of the drill press was designed for a full-size belt sander. (Lowering this area put the belt sander table at the same elevation as my workbench.) I eventually transferred that tool to my woodworking shed and now use this area for a soldering station, resistance soldering unit, and small table saw. The black 3-drawer tool box on the shelf above these tools provides storage for the mills, chucks, collets, etc. for my lathe and milling machine. Those power tools, and a band saw are stored to the right of this area. The lathe and milling machine are mounted to boards so that they can be moved onto the peninsula for use.

My workshop is about 11’ by 12’ in size. The cabinetry was all built from ¾” plywood protected with plastic laminate. All of the drawers are equipped with full-extension drawer slides. The only model building activities not accommodated by my shop are sand blasting and airbrushing. Sand blasting is done outside with a portable sand blast booth, while a paint booth under the lay-out provides everything needed for airbrushing. ☑

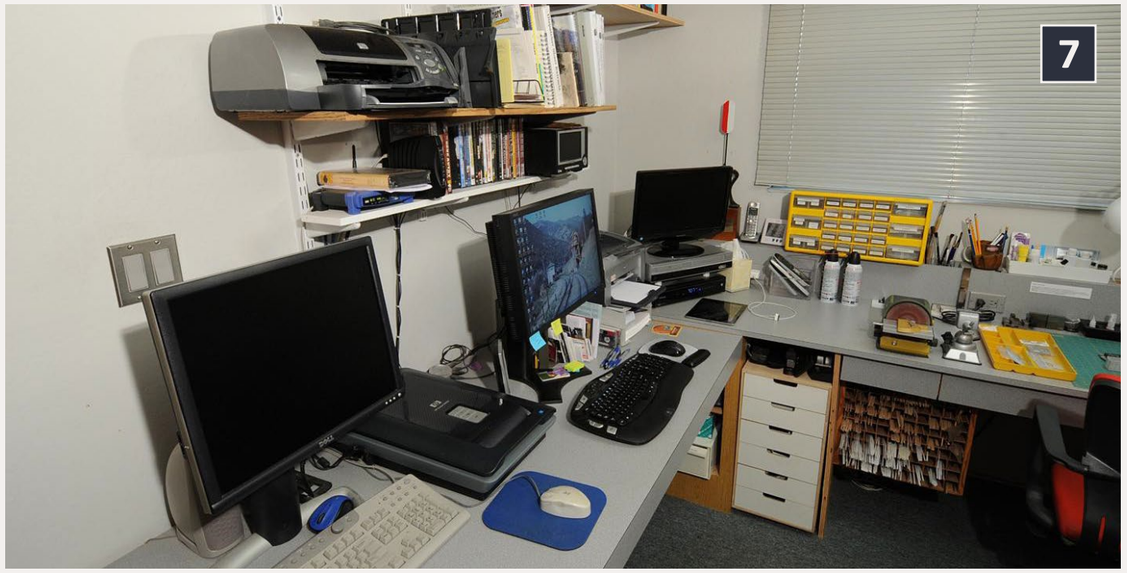
3: The main storage area on the wall above the drill press and machining tools provides a lot of storage space (but never enough). This section holds plastic storage boxes for items ranging from track laying parts (spikes, joint bars, and track gauges) to figures, rubber molds, and spare decoders. Another section provides storage for resin casting materials, wood stains, spray adhesive, etc.

4: The bookcase in the corner of this wall provides space for binders of YV tickets, timetables, passes, and other paper items (top shelf) plus two shelves of binders filled with historic YV photos. A riveting machine and a chop saw are stored on the next shelf.

5: Here is the peninsula partially visible in Photos 3 and 4. It is 32” wide and extends 6’ from the wall. The rounded corners cut back on the available space slightly but prevent banged knees when working around it. I can move my lathe, milling machine, band saw, chop saw, or riveting machine onto this table as needed.

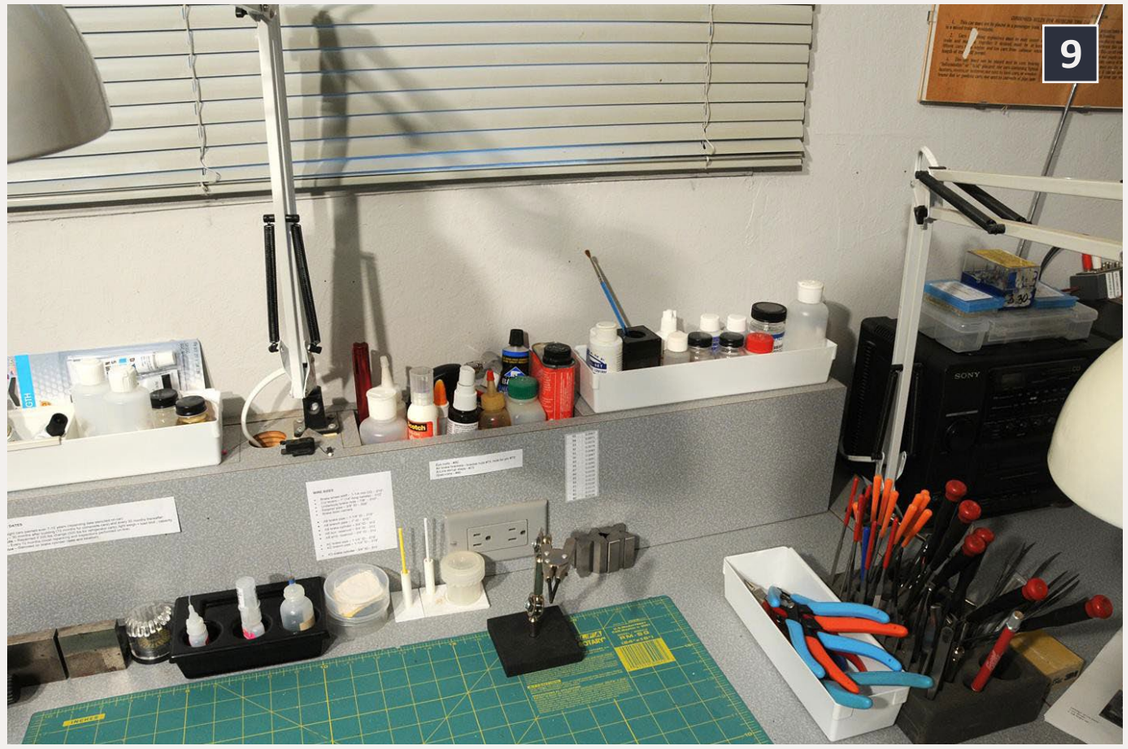
It is also useful for laying out large plans, photos, and reference materials for ongoing projects and space for building large models and dioramas. In addition, I use it to present scratchbuilding classes. The challenge is to avoid letting “stuff” simply accumulate on this large space.

6: This is a view of the wall to the left of the main modeling space and is my computer area. It includes two desktop computers: a 486 for CAD or computer-aided drafting, and a second tower for everyday tasks. There is also a flatbed scanner and a couple of printers. The shelves above provide easy-to-reach storage for continually-used research items including my book on the YV, binders of contact prints of the photos I have collected of the YV, and similar items.

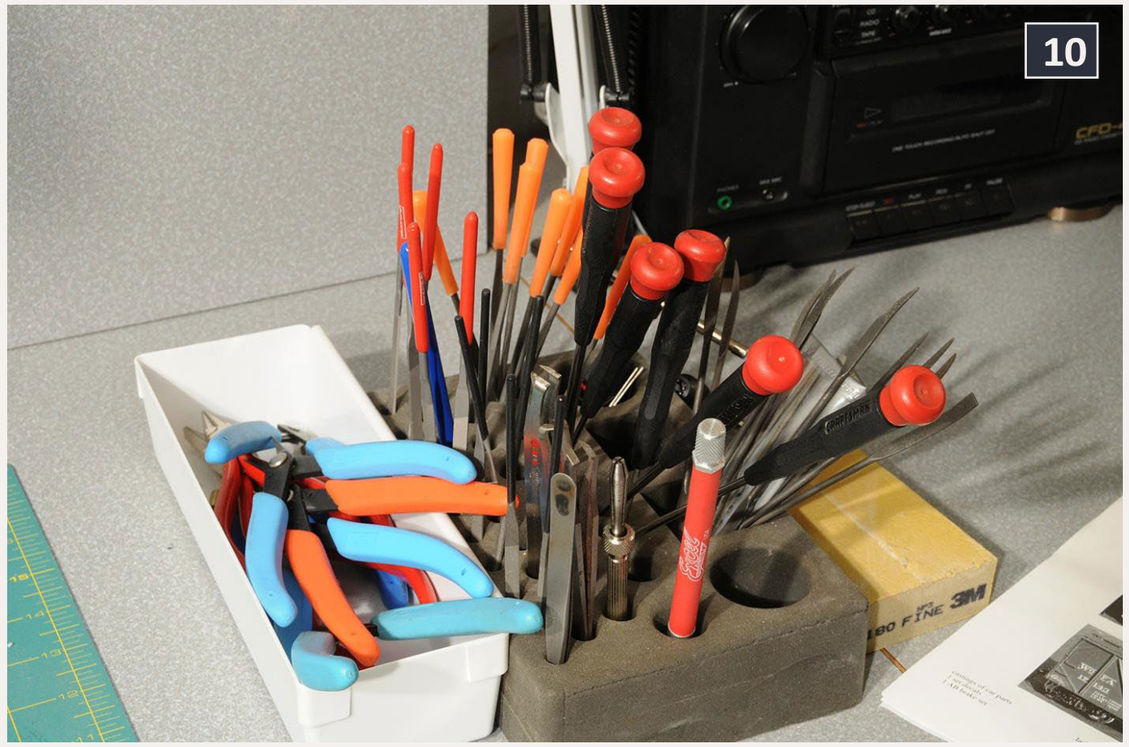


7: In the corner is a laser printer, TV, DVR, and DVD player.

8: To the right of the corner (and therefore to the left of the main modeling space) is a parts storage bin for freight car detail parts. Since my layout is finished and I have completed all of the structures needed for the lay-out, my main interest has turned to building my stash of resin freight car kits and scratchbuilding YV freight cars. This storage drawer unit holds freight car parts such as grab irons, brake sets, and air hoses. It is on the raised shelf above the workbench.



9: The other end of this same raised shelf provides easily-accessed space to store various glues, decal solvents, thinners, paint brushes, epoxy, etc.



10: Here is a close-up of the tool holders visible in Photo 9. They include a foam tool holder and bin for modeling pliers and sit to the right of the cutting mat;. I found the foam tool holder at a fly fishing show – it is designed to hold tools for people who tie their own flies. It has worked well for the tools I use all of the time such as tweezers, X-acto knifes, sprue cutters, files, screw drivers, etc. My plan is replace this holder (and the pliers bin) with my own holders specifically designed for each set of tools.

11: There are four drawers under the main modeling space. The one to the extreme left is for tools that are not used that often (metal cutting tin snips, a miniature hack saw, etc.). The drawer to my immediate left when sitting at the work bench and shown in this photo holds those tools which are not kept in the foam tool holder. These are less frequently used but I still want them handy. They include clamps, probes, X-acto blades, specialized pliers, box of drill bits, etc.

12: The drawer to my right is for scrap styrene. When cutting sheet styrene, some of the leftover pieces are too small to put back in the package with the uncut sheets but too large to simply throw away – instead they are tossed in this drawer. These pieces are often just what I need to make a jig, gusset, or fashion into a small part.

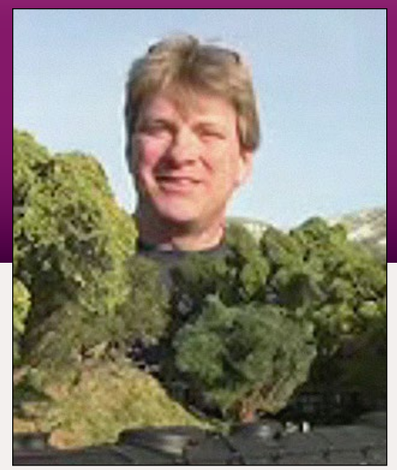
13: The drawer on the far right is my scrap drawer. I do filing over this drawer and sweep cutoffs from my modeling mat into it. It also serves as a "Trash Can" in "computer jargon". It is easy to find a part that I tossed into this drawer but I later realized that I actually needed. I have a 12"x12" ceramic fiber pad which can be placed over this drawer to provide a convenient space for soldering.

14: There are four drawers under the drill press visible in Photo 2. Different drawers are dedicated for ongoing projects, just couplers, or, like this one, just trucks for future projects.

15: There are two large storage drawers under the area where I store my soldering units, etc. visible in Photo 2. These are used to store detail parts as shown in this photo of one of the drawers. The other drawer holds brass tubing and flat brass stock, packages of styrene shapes, and other basic building materials.

16: My stripwood and styrene strips are stored in this unit. It is mounted under the main modeling bench and is visible to the left of my chair in Photo 1.This unit makes it easy to find the size material I need as well as continually monitor my stock on hand so that I can purchase more strips before I run out. I have been using my workshop for about 15 years now and it has worked out very well.

Reader Feedback (click here)



Weathering Artist Butch Eyler

Photos and video of superb models

Reader Feedback (click here)

What's neat this week column

by Ken Patterson

1: This is Butch Eyler removing some dust from the models during our photo shoot. These models are HO scale.

This month's "What's neat this week" features the weathering artistry of Butch Eyler of Biglerville, Pennsylvania.

Butch came to the St Louis Railroad Prototype Modelers Meet in July 2012 to show his artistic weathering talents to like-minded modelers. He agreed to bring some of his models to my outdoor studio where I could photograph them in modeled scenes to present them to MRH readers.

Butch, 57 years old, has been self-employed as a sign artist since he was 16 years old. He received his first train set when he was 10 but did not get really serious about modeling until his 30s, when he got involved with a train club. That is where he learned the basics of weathering, but always wanted to take it further than a few airbrush strokes along the side sill and wheels. Being a sign painter, he had a keen respect and

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back to previous page of text ...

appreciation for graffiti artists, and wanting to reproduce that same art on freight car models. At first, he used paint pens to create the graffiti work. His skills really took a jump after he connected with an Internet community of weatherers who were willing to share their techniques.

Internet freight car competition pushed and honed Butch Eyler's skills. Traveling to RPM meets around the country and meeting other likeminded modelers also enriches his hobby, Butch said. ☑

3: A consist of faded and graffitied RailBox and other freight cars gets a roll-by inspection.

4: A yard full of well-weathered box and coil steel cars gets an official inspection.

5: All of the graffiti on this ExactRail reefer was hand-painted in a custom-made outline.

3: Rust patches and accumulated grime tell the story of a coil steel car's hard service.

7: The lettering on this Intermountain PS 4780 hopper was weathered by using a stencil to bead blast weathering away. The reporting marks are custom made.

8: This model started life as a Walthers 53 foot Thrall gondola. The sides were replaced with .005 styrene. Sides were bulged /dented before painting. Decals were custom made for Soo Line wording. The interior walls were distressed with a Dremel tool to match the exterior damage to the car. The interior was painted by blotching paint to simulate anything and everything that would be spilled or loaded in this car. The load of Atlas Rail and Monster Modelworks.com scale tie plates were painted with PollyScale paint and Winsor Newton gouache.

Reader Feedback
(click here)


PICKENS
Railroad
HS
57
03
LD LMT 158600
LT WT 61400
RAIL
CROSSING
ROAD

9: "Salt weathering" to age this hand-painted car didn't work out as expected, so Butch hand-painted graffiti.

11: This is an Intermountain 5277 Pullman Standard box car custom painted a mixed green color. The graffiti is hand-painted. Microscale number sets were used for the car numbers. Door modifications were made by replacing lower door supports.

10: This Athearn 50' Pullman Standard box car was finished with PollyScale paint. The decals were custom made. The graffiti was hand-painted.

MRH HOBBY MARKETPLACE - 1

MRH HOBBY MARKETPLACE - 2

MRH HOBBY MARKETPLACE - 3

Tweezers

Tweezers might be one of the smallest tools we use but it is also one of the most important ...

Reader Feedback (click here)

by Jack Burgess

I've never counted the number of modeling tools I own, nor how much I've spent on tools over the years. But both numbers might be higher than I think. However, the most important tool in my tool box is my tweezers.

When I first started building structures and freight cars back in 1965, I was most likely using the same tweezers I had used to build plastic airplane kits in my youth. At least I don't remember buying new tools just because I switched from airplanes to freight cars. In those days my tweezers probably came from the Sears store, since their Craftsman tools were considered as good as you could buy and, as I recall, my hobby shop didn't carry tools.

Fortunately, soon after I started model building in those early years, I got introduced to some very skilled modelers in the San Francisco Bay Area. These modelers, such as Bob Brown (now editor of the *Narrow Gauge and Short Line Gazette)* and Gordon Cannon (who later founded Cannon & Company which produced diesel detail parts), were building highly-detailed

1: These are my Vigor tweezers that I purchased 35 years ago. They are 4¼" long, which seems just right.

structures with board-for-board construction and their own detail parts that they cast from Cerrobend, a low-temperature casting metal. Their work "raised the bar" for model building in the Bay Area.

This exposure to extraordinary model building caused me to re-evaluate my building efforts. At that time I was building freight cars using techniques more typical of the 1950s, not the late 1960s. So I made a decision to do better and scrapped all of my early models. I began building prototype freight car models based on cars that I had measured myself. I also made a real effort to duplicate these cars as closely as I could. As I improved my skills, I eventually became involved in the National Model Railroad Association model contests at both the local and national level for a couple of decades.

Building good models is much easier with good tools. A good set of tweezers was one of my first purchases. A very good modeler who lived near be told me about a Bay Area jewelry

supply company and I soon ordered the same tweezers that he used.

I have used these tweezers for the past 40 years. Based on years of using them, I feel that a good set of tweezers should meet the following basic requirements:

- Extremely lightweight - You don't want tweezers which require any effort to hold steady.
- Light touch – Tweezers used to bend wire and other such tasks need to have stubby, wide shanks to get a strong grip on an object. Tweezers for delicate work need soft shanks and a light touch.
- Sharp – Tweezers need to be sharp to pick up the thinnest of objects. Mine are Type 3C tweezers, one of the sharpest patterns.

Thirty-five years after purchasing my tweezers, I am still using them on every modeling project. They are also still very sharp—many years ago I accidentally dropped them and they stuck vertically into my thigh! Slightly painful, but I shouldn't have been surprised. Now when I drop them, I quickly get my legs out of the way and they end up sticking into the carpeting.

My tweezers were made by Vigor of Switzerland. Vigor has now merged with Peer and their tweezers are sold under the Peer-Vigor name. Similar tweezers are marketed by Dumont. Mine are stainless steel, which is more expensive than the carbon steel ones, but stainless steel won't rust. Carbon steel tweezers are less expensive than stainless steel but harder, which makes the tips more durable. But carbon steel tweezers are more likely to break if stressed, are easily magnetized, and can rust when exposed to plain water or even high humidity conditions. Plus, they require proper cleaning, oiling and storage.

I purchased my tweezers from Otto Frei, a jewelers supply outlet in Oakland, CA which now has an extensive online store. This following link will lead to a set of Dumont No. 3 stainless steel tweezers: **ottofrei.com/store/product.php?productid=7979&cat=0&page=1**.

These tweezers cost about $35 a pair which probably seems high for such a small tool. That is twice as much as the "tweezers sets" available from some hobby vendors. However, I have never found any need for more than my one No. 3 tweezers. Keep in mind that $35 for my tweezers is only $1 per year for the time that I've owned them so far. I fully expect to still be using them 10-15 years from now.

If you build any models, even kits, get yourself a good set of tweezers. They will serve you well for decades. ☑

Disclaimer - I love good tools and don't hesitate to invest in them.

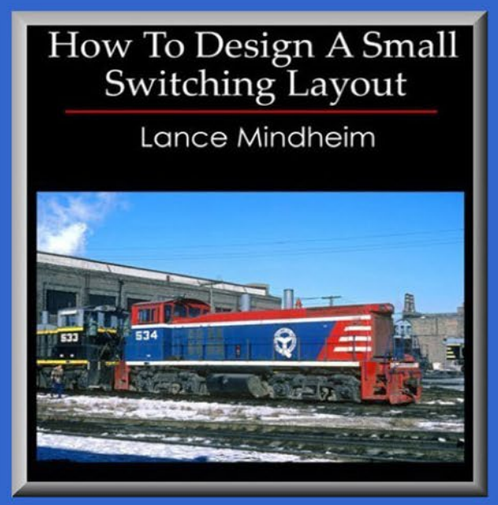
2: The tips on these tweezers are very sharp.

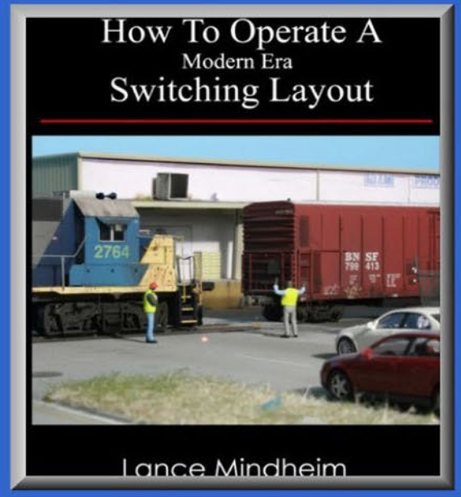
Reader Feedback (click here)

Advertisement

How To Books by Lance Mindheim

Design * Build * Operate





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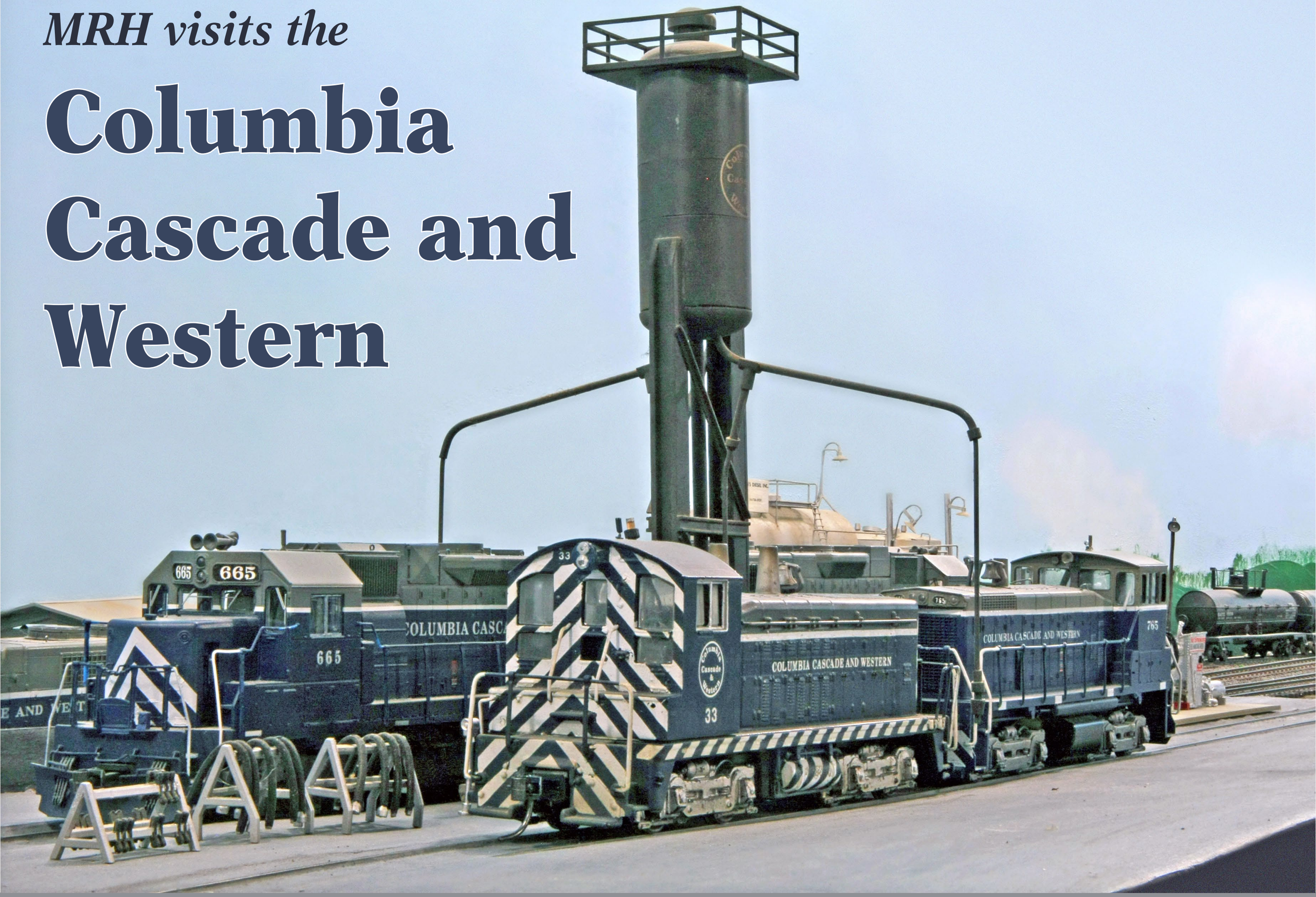
MRH visits the

Columbia Cascade and Western



1: EMD road and switching power waits for service on the engine tracks in Irvinville, just west of the Columbia, Cascade and Western yard at Lebanon. A regional, the CC&W mixes up-to-date locomotives with engines acquired second-hand from bigger companies.

Article compiled by the MRH Staff

Reader Feedback (click here)

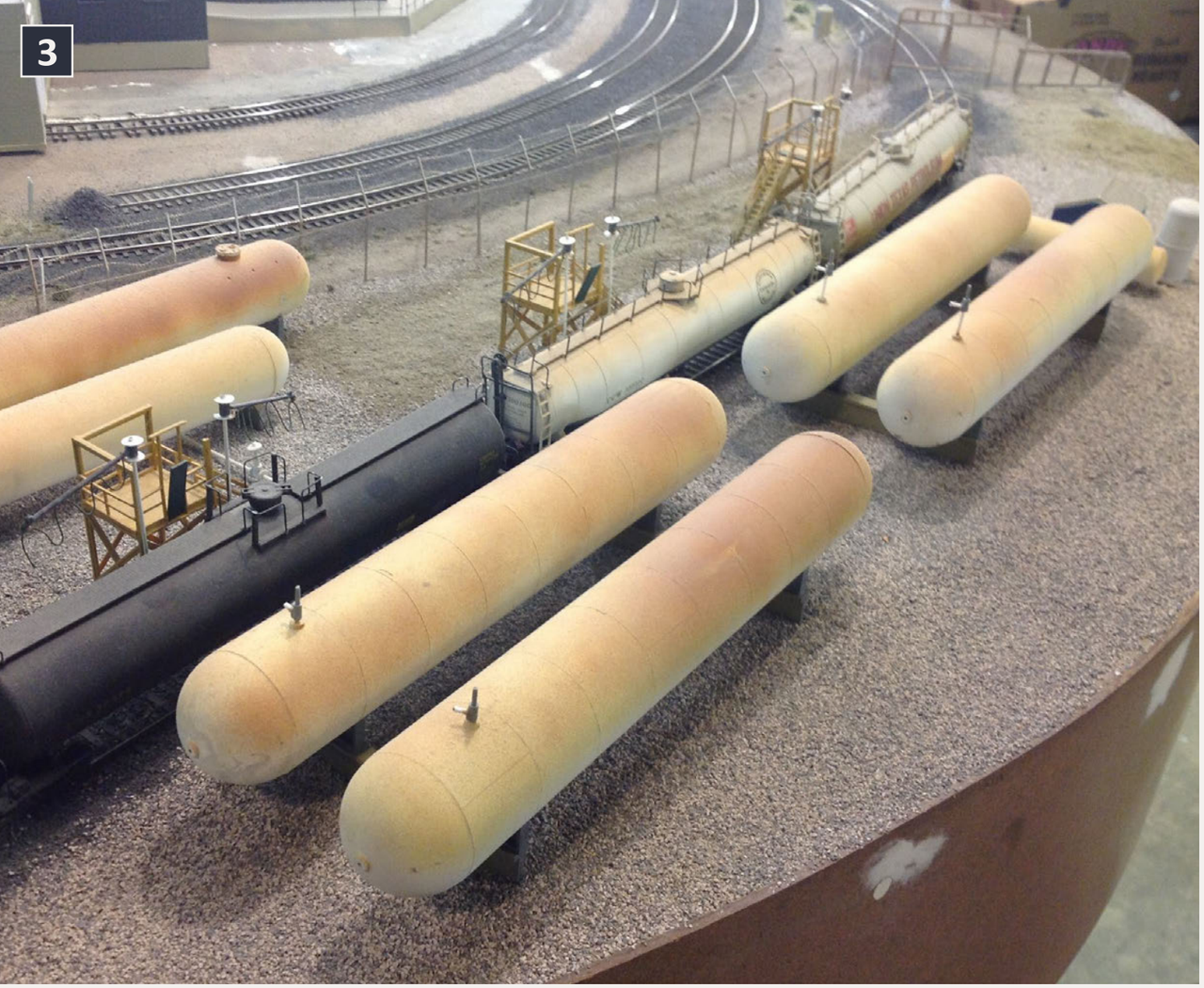
See how one club overcame challenges to become a group that's really going somewhere in the hobby ...

2: Rick Andrews, left, and David Biedermann, center, tell Jeff Shultz of MRH how the Willamette Model Railroad Club formed, and how it is building a large HO layout designed for operations.

MRH recently visited the Clackamas club in Portland, Oregon, known formally as the Willamette Model Railroad Club This group has faced some real challenges in building its Columbia Cascade and Western, yet is overcoming them to become one of the more operationally focused clubs we've encountered lately.

MRH: "Hi. This is Jeff Shultz of *Model Railroad Hobbyist magazine.* We're here in Clackamas, Oregon, with David Biedermann, the president of the club; and Rick Andrews, who has the honor of being the one remaining active charter member. Rick, give us a little bit of the history of the club."

Rick: "We were formed in late 1984, and we got a clubhouse, which was an old garage. We designed a layout, and were getting ready to build it until we realized that the lease was month by month and it was a possibility that the building was going to be sold. So we decided, let's find another place.



3: The propane tank farm at the west end of Tallman serves agricultural, residential and industrial customers in Oregon's mid-Willamette Valley. David Biedermann built the facility.

"One of the members was a captain of the fire department which shared the parking lot with this community center. He said, 'I've got a spot, it's 27' x 30'. The catch was, it needed to be excavated out so we could have room for a layout.

"It took us three months to excavate it, and we put the layout in the 27 x 30' space. There was a basement beyond this that was 30 x 30. But that was going to be a harder excavation project. So we had a layout in this current basement until 2003.

4: ALCo diesels like the 442 rolling east through Tallman are popular on the CC&W. Some were acquired from the neighboring Spokane, Portland & Seattle after its merger into the Burlington Northern.

"Then there was a flood upstairs in the kitchen -- it flooded 90% of the ceiling. We realized we were going to have to eliminate the layout in order to fix the ceiling. We decided at that time, then, okay, since we were going to do that, let's go ahead and go into the other basement and do that excavation project.

"In five years we actually got it done. We started benchwork construction in early 2009 on the current layout."

MRH: "When you say excavation, how much material are we talking about?"

Rick: "Well, I don't remember exactly. What I can tell you is we took out approximately 32 full dump truck loads of dirt inside about five years."

5: Staging at the "Clackamas club" is split into Albany and Bend areas representing the west and east ends of the modeled railroad. Returning cars are sorted onto the shelves according to type, and then assembled into new trains according to traffic demand.

MRH: "Since Oregon has a tendency to grow rocks . . . ?"

Rick: (chuckling) "Yes, we had quite a few that were rather huge. Luckily we were able to expedite the project when one of the members had a friend who had a pneumatic jackhammer. If we couldn't have used that, we would've stayed in this room and just have a different layout."

"We took out some major rocks. In fact, we have four of them out in the courtyard. Those are the significant rocks -- the last rock that was taken out of the back basement and the last rock that was taken out of the front basement."

MRH: "David – about how complete is the layout?"

'Recipe cards" tell mole operators how and when to build each train. This is the Bend side; the Albany side is behind the photographer. Upper level staging is usually used for unit trains.

David: "The layout is about three-quarters complete. We will have about 500 feet of mainline when we finish. Currently there is 350 to 370 feet operating. As you can see in the video, we're currently finishing the last quarter of the four quarters of the rooms."

MRH: "And when it's done, 500 feet – that's mainline only?"

David: "That's just mainline only. We have two major yards, we have a major helix for moving out of the staging yards, and of course there are many spurs and short lines everywhere."

MRH: "What sort of staging is this going to be?"

David: "The railroad runs from Albany, Oregon, to Bend, Oregon, and beyond, and we stage from those two towns. We

6: Columbia Pipe at Irvinville is jammed because a previous local crew set out cars but missed its pickup. The company produces steel pipe and other products from rolled and sheet steel. Steve Cook built the scene.

have between five and 10 trains staged at any given time, running both directions. We designed and built this in such a way that we could run in a circular pattern but it's intended to be a point to point railroad."

MRH: "Are the trains made up on the fly during the session?"

David: "When we begin a session we will have three or four trains ready to go. But we run a dispatcher here, so the dispatcher is in control of the railroad and how many trains are coming out at any given time. In a full session there are approximately 40 trains that will go out. We stage the first four or five, but the rest of those are being made while we are actually operating." (Some run-through trains are simply turned; others, like log, chip, and grain trains, will shrink and expand.)

MRH: "Rick, why did the club pick this particular locale or freelance prototype to model?"

Rick: "Process of elimination. We decided when we were doing the excavating we were not going to make the same mistakes we made on the first layout. The concept of the original layout was just mythical. There was no rhyme or reason, the scenery was vaguely in western Oregon. If you asked someone where in western Oregon would it be, the answer was, well, somewhere in western western Oregon. (chuckling)

"The idea was to have a locale that was something like the Columbia Gorge, but that was already taken. We thought about the Siskiyou line, but that was too far south. Willamette Pass would be neat, but it wasn't operationally oriented, and that was a big prerequisite.

"So I was perusing the Internet, and I came upon the Bear Creek and South Jackson. I looked on his website and I saw he had a map of Oregon with his line cutting straight across from Toledo all the way to Ontario. I thought – that's interesting, what if? At that time I knew the SP Mill City branch was just a branch, but I didn't know they had actually surveyed it over Santiam Pass, and the actual idea was to connect with Ontario. Finally I saw that and I thought, now that's kind of interesting.

"I looked in Tom Dill's and Ed Austin's 'SP in Oregon' book and I read the history, so I thought, what if the line actually made it, and our railroad had the line over the Santiam Pass? So that was the seed that was planted in my brain.

"We had a design-off of four layout concepts. One was the Espee Valley Line, one was the Siskiyou line, and there were two Santiam Pass lines. One was a double-deck Santiam Pass line that ran from Yaquina all the way to Ontario. And then my

idea, which was dubbed Santiam Pass light, which was only single deck. My concept won, and then we went ahead."

MRH: "Did you mention something about the scale?"

Rick: (laughs) "No, but why not? We always wanted to do HO, so we stayed with HO. That was the most popular scale with all the members, so we went with it."

MRH: "Rick, how did you pick which era? It looks like you're in the mid- to late-70s here?"

Rick: "1979, and the membership picked the era. We had the 40s, 50s, 60s, 70s, and 80s and we just voted on it. The membership narrowed it down to the 50s and the 70s – the 70s won out. Originally was going to be 1975, but then we thought how about making it at the end of the decade, because that would add center beams and covered auto racks as well. So we ended up in September 1979."

MRH: "You had in that general time the Burlington Northern, the Southern Pacific, the Union Pacific, even the Milwaukee Road if you go a little further north. If you go farther back, you've got the SP&S in this area. Were any of those railroads a particular influence?"

Rick: "Not really. We connect with the SP in Albany, and the Burlington Northern at Albany, which are staging, and the Oregon Trunk in Bend, which is also staging. And we change history a little bit and say that the Milwaukee Road actually crossed over into Oregon and came into Bend and had a connection with the Milwaukee Road."

MRH: "I've noticed you run a pretty eclectic mix of motive power here."

7: Lebanon yard originates local trains for the Sweet Home and Woodburn branches, and builds local trains serving customers in Tallman and the Irvinville-Lebanon area.

Rick: "Yes, the railroad has picked up some orphans from other railroads – that's basically what the concept is. We do have some current power from that time, which is running our hotshot trains. The current power has a little different paint scheme – it's red, black, and white. Whereas the older units have the blue, gray, and white scheme on them."

MRH: "So you've got your own transition going on?"

Rick: "Yes, we are kind of sort of like the SP&S … you never know what color is what."

MRH: "Okay, David, construction? You're kind of doing it in multiple phases here?"

8: An abandoned branch curving off into the woods at Shelburn now serves as a convenient lead for the crews switching the grain elevator and other industries there. Shelburn also provides a crew to switch a paper mill at Lyons, several miles away.

David: "Construction started in this area, Tallman. And equally we were starting with the staging because because that's how the railroad runs. Then we simply followed on around the corner into Irvinville and then on to Lebanon and beyond. As each crew got farther and farther along, another crew would start up behind them. So everything is in stages.

"Once all the trackwork was in here, then along came ballasting, along came the turnouts, which are whole separate crews. Then we continued on through. Then scenery. The goal was to get operations up as quickly as possible. From the time we started this, which was approximately three years ago, we were up and operating in six months. We had it all the way through to Lebanon. Then we just continued.

"It was fairly well formed that there were four phases to what we were doing, this being the first phase taking us to Lebanon. The second phase continued on around toward Lyons, terminating at Shelburn.

"Then the major phase started from that, which was continuing on past Shelburn, into Lyons, on into East Lyons, and then around the corner to Mill City, and around to Gates. So Mill City was a lot of the second phase.

"Now we have started to finish this last quarter of the space, which is phase 3. We anticipate we will have this running in about 6 to 8 months.

"Our goal is to have the whole railroad running for the NMRA national convention in Portland in 2015. We have actually been able to exceed our expectations, partly because we have a very reasonable general manager as far as construction who gives us deadlines we can meet.

"And, we've got a really good group of people working here. There are seven or eight crews. The members get to choose which crew they want to be on. Each crew has a foreman. The foreman is responsible for the overall progress and success for that particular group. There has been turnover, but new people stepped up as others departed."

MRH: "Guys, you have what I would call floating staging. In fact, you have it named the USS Granite Mountain right now, and there was a USS Lyons on it previously. How does it work?"

Rick: "Well, we got into a dilemma: How do we operate? We hadn't been operating for nearly five years and we were getting operating withdrawal. We were able to go to a lot of other layouts and operate, but there were a lot of guys who were getting the twitches.

"We were trying to figure out – we can't really build the whole layout at once, because that's going to take a long time. We did

9: In addition to the main line and siding at Tallman, tracks serve an LPG farm, a oil and coal dealer; Birdseye, National Fruit, and Simplot packing houses; a farmers co-op, and a furniture frame maker.

10: New power like the EMD tunnel motors carries a bright red and black paint scheme instead of the '60s-era gray and blue on older locomotives. The CC&W lay-out is set in 1979.

have staging over here west and then we ran through Tallman here behind us, so the idea was, why don't we do it in stages? And why don't we have the other end be mobile staging?

"So one of the members came up with the idea, why don't we build an aircraft carrier with like three tracks on it that were the length of our longest train, and we could move it as we progressed.

"That's what we did. The first phase was over in Lyons as a three track staging, so we ran trains from staging in Albany to staging in Lyons. Then, we moved it on an angle because we wanted to start phase 2.

"Once we got phase 2 started, we pulled it out, and brought it in here. Now it's in its last location, the USS Granite Mountain. Once we get phase 3 in, we will be taking it out altogether and it will be scrapped."

MRH: "What has been the biggest challenge so far, aside from 30-odd truckloads of dirt?"

Rick: "I don't know what would be the biggest challenge. It's been really smooth. We've had some bonuses. When we were mapping out the valances we found out that both rooms were actually a foot wider each way. Thankfully, it was a foot wider and not a foot narrower. The only other, in the back room there are nine posts. We could not take them out, because they're supporting three beams.

"We miscalculated where the coordinates of some of those posts were. So it turned out we have track that, instead of going behind the post, goes in front of the posts.

"The other challenge designing the layout was trying to get it to meander around the posts. You're going to have your

maximum mainline radius set based on the distance between the posts. We wound up having to have 30” maximum – we couldn’t have anything more than that. Plus, the aisle space is a challenge because of the posts. We had a 30” minimum pinch point on aisles.

“We have a lot of pinch points and there’s going to be more when we get phase 3 in. But the decision was made, we want to put a layout in here, so this is what we’re going to do. When we have operating sessions we try to limit it to just having the crew in here and not spectators, because it creates bottlenecks.”

David: “The challenge is trying to keep the engineers and conductors who are off duty out of here. They want to come over and railfan and follow the train around. We’re having way too much fun here.”

MRH: “I know I have been guilty of that myself. I’m usually carrying around a camera. Tell me a little bit about the club: How many people, how is membership handled?”

David: “We have a 30-member limit on the club. Right now, all slots are filled with active members or probationary members.

11: These two cabooses wait on their track near the office at Lebanon yard. Most are bay-window cars based on Southern Pacific designs.

However, there are some cupola cabooses like these used on the local trains. Rick Andrews painted and lettered the fleet.

It's all word of mouth. I was talking with somebody the other day and they were saying, 'you don't advertise' and I said, 'we don't have to'.

"We are the only large club in this region, that I know of, which actually operates the layout. Other clubs are show railroads and they're beautiful in their own right, but they don't operate like we do.

"We have a full-time dispatcher, we're running four to five road crews at any given time during an operating session, two local crews, two yards, and of course, people staging trains and other support tasks.

"So there's a lot going on – and we attract everyone. We're starting to have a waiting list of people who would like to join the club. Membership is, generally speaking, of all ages. We have people in their 20s, in their 30s, their 40s, in their 50s … a lot of retired people as you can imagine. We have people who work for the railroad, we have people don't have anything to do with railroads – they just like to enjoy model railroading. So we have a nice cross-section."

Rick: " ... and lot of talent. There are a lot of talented people in this club."

David: " … electricity, computers, scenery, track, modeling – It seems like we just draw the right people at the right time. That's one reason why there haven't been any building challenges."

MRH: "Has there been like a favorite thing, or a least favorite thing in building the layout?"

David: "Not really. If there were challenges that way, it would have been operating, because a lot of people like to run trains.

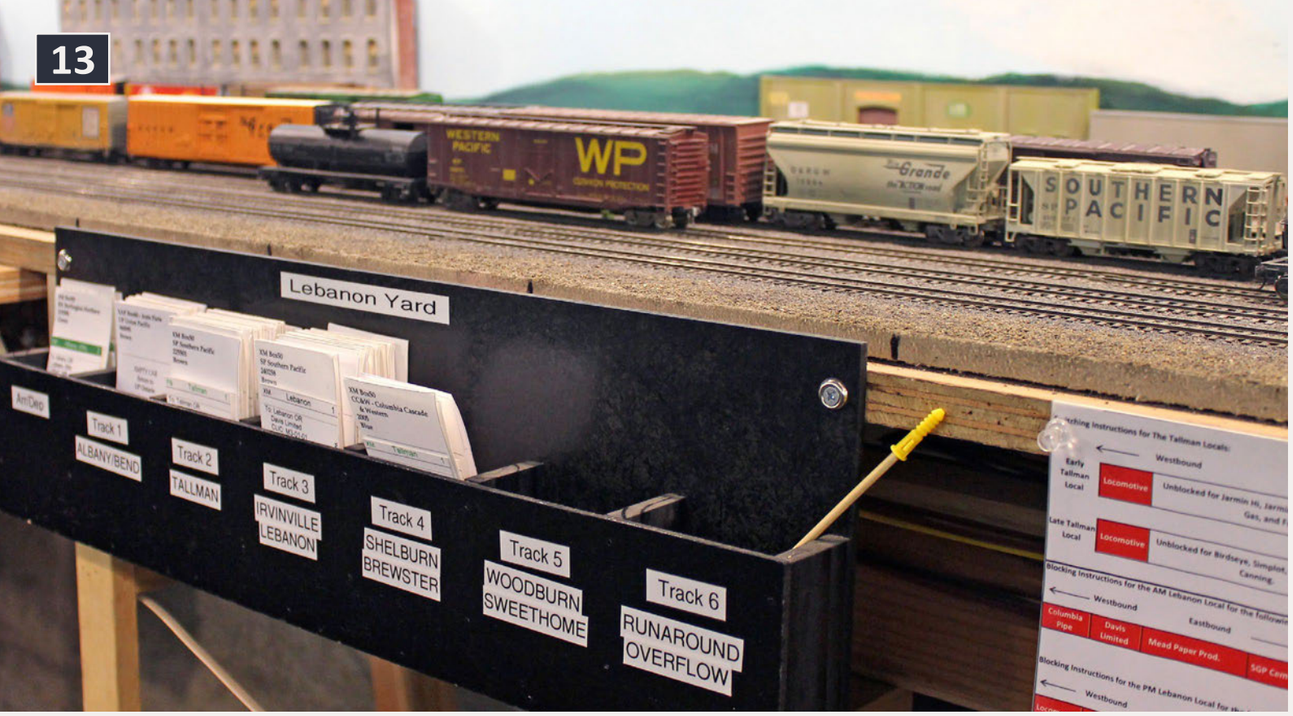
"When we choose assignments on operating evenings people go for the pool because they want to run the trains, and some

12: The dispatcher's office is in the club's meeting room and workshop, in a separate basement across a courtyard from the layout space. The extension phone, originally used on the Southern Pacific, was re-wired to work with FRS radios and is controlled with a foot switch.

of the positions, particularly staging the trains and dispatching – which are challenges in their own right, certainly -- tend to be the last to go. Obviously, we have to have both positions and there are a lot of people qualified to do it. When you see the trains running and how much enjoyment there is, you tend to want to be out here running the railroad."

MRH: "Dispatcher. Is there a training program for that job, or is it just somebody who thinks they've been around here long enough?"

David: "The dispatching, when we first started running trains, was like, okay who wants to do this? We had one particular



13: Each freight car has its own card, and traffic is generated by assigning waybills. A limited number of "spot cards" regulates the flow of cars from Albany, Lebanon, and Bend to destinations on the modeled part of the railroad.

member who is good at it, and he stepped up and started. Rick had done it previously. He stepped up, and then slowly but surely some of us said, okay, I'll give it a try. The way we do that is by having an assistant dispatcher.

"You sit down with one of the experienced ones, watch them, they school you in how to fill out the warrants. We operate on a warrant system that is transcribed across the radio to the conductor or engineer. So it's like, when you're ready you take it on yourself without help.

"We've been able to increase to about 10 people who can dispatch."

Rick: "Going into phase 2 with more of the mainline running attracted more guys into dispatching, because phase 1 was pretty intense. More of the mainline was double-tracked and it was high density industries, so you got a lot of switching and you've got to plan your moves ahead and you've got two yards that you have to navigate through – the locals had to come out and do their work.

"But when it got to phase 2, things are stretched out. There's not so much pressure on the guy who's dispatching – it became more fun. Guys who did dispatch on phase 1, when they would come and dispatch on phase 2, they loved it.

"The least glamorous job that nobody wants, is back in staging. You're in this room, putting trains together, tearing trains down – there's some guys that like it, but when we draw for jobs that's usually the last one to go.

"Some like to just sit back and watch how things play out. Then they'll have an idea of how the layout operates. It's probably a good idea to be on a pool crew for a while so you kind of get the lay of the land and learn the layout."

MRH: "Okay, along those lines – track warrant control now, are there any thoughts to timetable and train order, adding signaling in the future, maybe CTC?"

Rick: "To answer your first question – no. No timetable and train order. Not that it would not be fun, but I think most of the members would get really confused over it."

"I was skeptical of track warrants until I actually went down and operated on Joe Fugate's layout and saw how track warrants work, and listened on the radio, and found out that this works quite well.

"On our original layout, we had Direct Traffic Control and you had nothing to check box anything. It was all verbal. So you

had two things that happened. You had a lot of radio chatter because crews would have the permission to occupy the track between town A and town B, and at about town B they would be running and suddenly go, ‘where was I going to?’ So you had to call the dispatcher to find out, plus you had to clear blocks behind you, which also created more radio traffic.

“With this layout, with the amount of trains we were going to have running, if we had DTC there was going to be a lot of radio chatter. So I got a track warrant form off the Internet and tailored it to what we were going to do. I was a little bit concerned because I wasn’t sure if the members were going to like doing track warrants. They might figure it was going to be cumbersome, slow and all that stuff.

“The first session we did, for some of them, after two warrants they just went out of the gate running. Everybody likes it.

“As far as CTC, that’s a lot of money. We’re looking more towards ABS. We went to the Medford PCR-PNR convention in May and saw the Rogue Valley Club set-up, and those of us who were there really liked it. That might be a possibility. For right now, everybody seems to be happy with dark territory and warrants.”

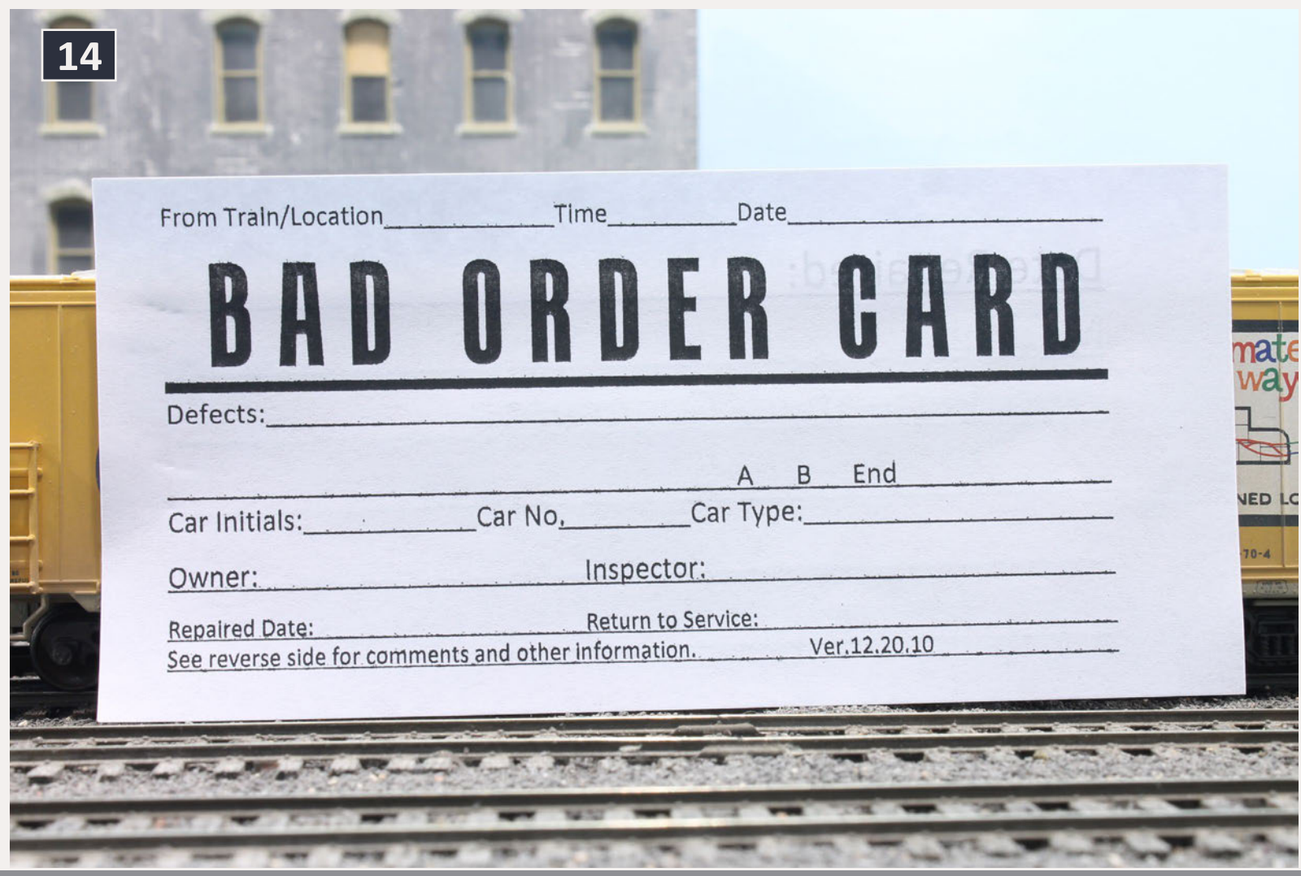
MRH: “A lot of different people in the club – a lot of different prototypes in the area – everybody tends to have their favorite prototype. How do you keep everybody in line instead of having rainbow fleet on the railroad?”

David: “When people join the club, they are given a very clear understanding of the conditions of the railroad – 1979, September, what kinds of equipment run, that we do operations – this is not a show club, this is not just bring down anything you want.

“Everything has to meet certain standards. All rolling stock has to have metal wheels, it has to use couplers that match up with everything else. Engines, as far as decoders you don’t just bring anything in for an operating session and say, ‘here, I want to run this.’ It has to come down early and have an approval given by the engine foreman.

“There are a lot of different interests. And we invite the different interests. But at the same time we make it clear that we cannot necessarily meet all the different interests.

14: All railroads run on paperwork. Track and rolling stock defects have to be written up, dated, and initialed. Another form is a checklist of coupler, weight, and rolling inspections for cars to be placed into service, and the club also has its own track warrants.



“What we finally agreed to do with the club was, twice a year the operating sessions will go open. You can bring whatever you want motive power-wise, as long as it meets the conditions and is OK’d to be compatible.

“That has pretty well taken care of the problem. And frankly, it’s fun to see. Twice a year, be standing here and see a Santa Fe steam engine go by, for something different!”

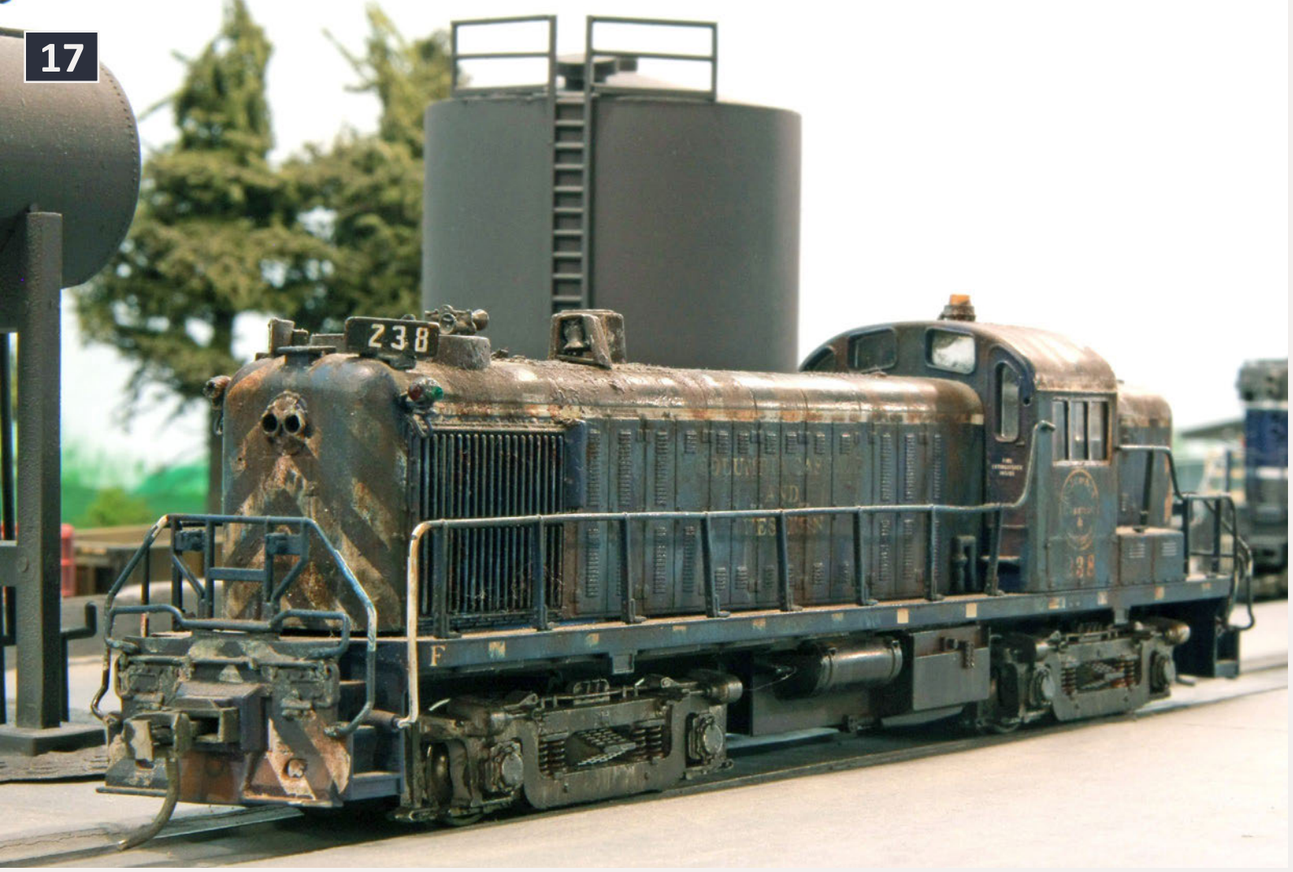
Rick: “One guy brings down his Amtrak. And we just take one of the hotshots, and he runs his Amtrak in that particular spot in the lineup. One of the ideas was to have era-specific operating sessions. The only problem is, I think our rolling stock fleet – if we were to do an era-specific rolling stock replacement -- I think our rolling stock now is over 600 cars. Logistically, that isn’t going to work.

“We have it in January and July. The rest of it is just club motive power and everybody seems to like that. We haven’t had any mutinies.

“Also, when you become a member you get a key. So you can bring down your motive power and rolling stock and run it on the layout if you want. You can run it back and forth to your heart’s content. The only thing is, if you’ve got rolling stock that doesn’t meet the standards and it hits the floor, it’s not the club’s fault.”

15: Sno Temp Cold Store at Shelburn regularly loads reefers with Willamette Valley produce. The restored Santa Fe PA units are apparently in transit. Shelburn is where the rural Woodburn branch splits from the main line. Shelburn also has an American Can plant, Meeker Fertilizer, and a large grain elevator.

16: National Wood Products, Simplot, Linn County Farmers and other customers at Tallman are worked by two trains. An afternoon job covers reefer traffic and the morning job handles the remainder. Anthony O’Carroll built the co-op and National Wood.



17: A well-used Alco road switcher is usually part of the power set on the Tallman, Sweet Home or Woodburn locals. Because of grades, almost all trains need two locomotives and some hot through trains will get three.

David: "The majority of rolling stock belongs to the club. Either purchased by the club, or donated to the club by members. There are a few member cars running around. It would be kind of a chore to try to find them – but those specifically have met the standards and are accepted by the car foreman.

"They've been tested out and everything – rolling ability, wheels, couplers, everything is tested before it's allowed on the layout. And it must be within era. You're not going to see any drop deck trailer loads here. That kind of thing, you won't see them on the railroad, because you would not have seen them in 1979."

MRH: "Car standards. What are they?"

David: "They're based on car standards from the La Mesa club. One of our members came from that group. We had the good fortune of the car foreman of the La Mesa club attending a small meet that was held up here,and some of us were able to attend that. That man has forgotten more than I will ever know about standards.

"Basically a standard car has just a little bit more than the standard NMRA weight. We've found that going a little heavier is better. We have a limit on the train length of 25 cars maximum, so our motive power has been matched to that.

"We standardize on the Kadee #5, mostly because of all the cars we already had, had 5s on them. Metal wheels, that's a track cleaning issue. All cars have to have metal wheels. So we've developed our own standards."

Rick: "For example, if you have a 50-foot boxcar, you have 5 ounces plus or minus 1/4 ounce. It just goes up incrementally. 60-foot, 6 ounces plus or minus half an ounce. The difficult ones to put weight in are the open auto racks. We managed to do it – the enclosed ones are easy – the open ones were a bit hard. But we did it."

MRH: "The club runs DCC. What system are you using?"

Rick: "We're running NCE – we switched over from DC to DCC in about 2002. One of the members did some extensive research on what was available at the time. It was Digitrax, NCE, and Easy DCC, and I don't remember what some of the other systems were – but his opinion was that he felt NCE was the best and the most reliable. So we put it to a vote of the membership, and we voted to have NCE.

“We converted over from DC to DCC, and about two months later the building flooded. And that was the good thing! We had a DCC system ready and in place when we built the new layout. So we didn’t have to spend a lot of money on starting from scratch with a new DCC system.”

MRH: “So how many throttles, boosters, and things are you guys running now?”

David: “We run approximately eight or nine throttles during an operating session. These are the little hand throttles, and we’re all radio. There are also at least two Pro Cabs and we got a Power Cab in for testing, setting up, and so forth.

“Many of the members have their own NCE throttles. There’s the main command station and two boosters. That’s largely because we have concrete walls here and it can be difficult to get the signal to go through, so that’s how we make sure we don’t get any dead spots. We run radio normally but we have tether spots all the way around, so if a person wants to bring in their throttle with a tether, they can run normally with that.

“My personal opinion, Digitrax and NCE and so on, I think all the DCC systems are certainly comparable. It really comes down to a matter of what you’re comfortable with. I personally have operated on layouts with Digitrax. Once you remember how to set the throttles to work with the locomotives, you’re on your way – you don’t have to know all the specifics.

“If you want to get into more the programming, that’s something separate. I think NCE is a little more logical in terms of how it goes about it. But that’s just a personal opinion. We found the NCE system is just fine. Some of our members here have Digitrax personally, but they will still come down and easily run the NCE system. It’s worked really well for us.”

18: The east-end staging tracks, now dubbed the “USS Granite Mountain,” have been used in two previous sites as the club builds its mainline east. The club focuses on operation, and movable staging assures that construction doesn’t interrupt monthly sessions.

MRH: “How many operating sessions does the club do?”

Rick: “We originally had a session on the fourth Saturday of the month. There were some members that couldn’t make it because they had weekend activities. So we decided to start the session on Thursday and end it on a Saturday.

“We have two different sessions, an a.m. and a p.m., so we would start the a.m. on a Thursday evening and run from 7:30 until 10 o’clock. At 10 o’clock we literally turn the layout off, and everything stops. Then we pick up Saturday at 10 a.m., and operate the a.m. session until we finish, which is usually before noon. We break for lunch. At 1 o’clock we would start the p.m. session, we draw for jobs, and we run until five or six.

19: A helix will connect the east end of the railroad to Albany/Bend staging that originates east- and west-bound trains. At lower right is the upper-level "parking lot" built for grain, wood chip, coal, and TOFC unit trains. The vertical slot rack holds unused waybills.

"We have a set lineup for both sessions. I don't remember the exact number of trains. I think for the a.m. we run 18 trains and on the p.m. session I think we run 17 total trains."

MRH: "And you're not running a fast clock here?"

Rick: "No. We're running straight one to one time."

David: " … even so it will still take an hour and a half to get all the way from one end of the railroad to the other …"

MRH: " ... which is one of the advantages of a long main line."

Rick and David: "True."

MRH: "Let's go look at the benchwork and the structure of the layout itself. What standards do you have, say from the front of the layout to the backdrop?" **... On to next page of text ➔**

← back to previous page of text ...

Rick: "It was somewhere in the neighborhood ... I think I put it at 30" reach. Nothing longer than that. We had a scenic offset, especially out in the mountains, of 6" between the mainline and the backdrop. I think for industrial spurs we put that at 3"."

MRH: "How did you determine the benchwork height, and how are you dealing with where it changes from one level to the next?"

Rick: "When I designed the layout, I designed it for 48" base layout height. That turned out to be wrong, because on three walls in the back basement we have a buttress wall that is 48" high and 11" deep. For the mainline to be Tortoise-ized I had to add space over the buttress wall. Basically it's stair-step: when you come out of Albany you're at 46, you come to Tallman which I believe is 48, there's a grade up to Lebanon which is 50, and then it's 50 all the way around to Mill City. Then it starts the grade up the hill to Idanha. Everything has been raised up – it's the domino effect.

"The grade was going to be a lot steeper because we were going to go from 50 1/2" all the way up over the door. Now, since everything is raised up, the helper district is not going to be as steep. But we're still going to have a helper district."

MRH: "So for the higher portions of the layout, you've got relative shrimps like myself who tend to look up at the trains – Do you have plans for dealing with that?"

Rick: "Yes. Raised floor. Originally it was raised floor, but I think what we're going to do now is have benches around the perimeter that will be raised. We went to one layout in Corvallis and he has a similar challenge. He has his benchwork high, and he just made benches around on the perimeter following the lay of the layout,

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Playback problems? Click to try a different version.

← back to previous page of text ...

and you just walked along on those benches and then stepped down. So we're talking about doing that."

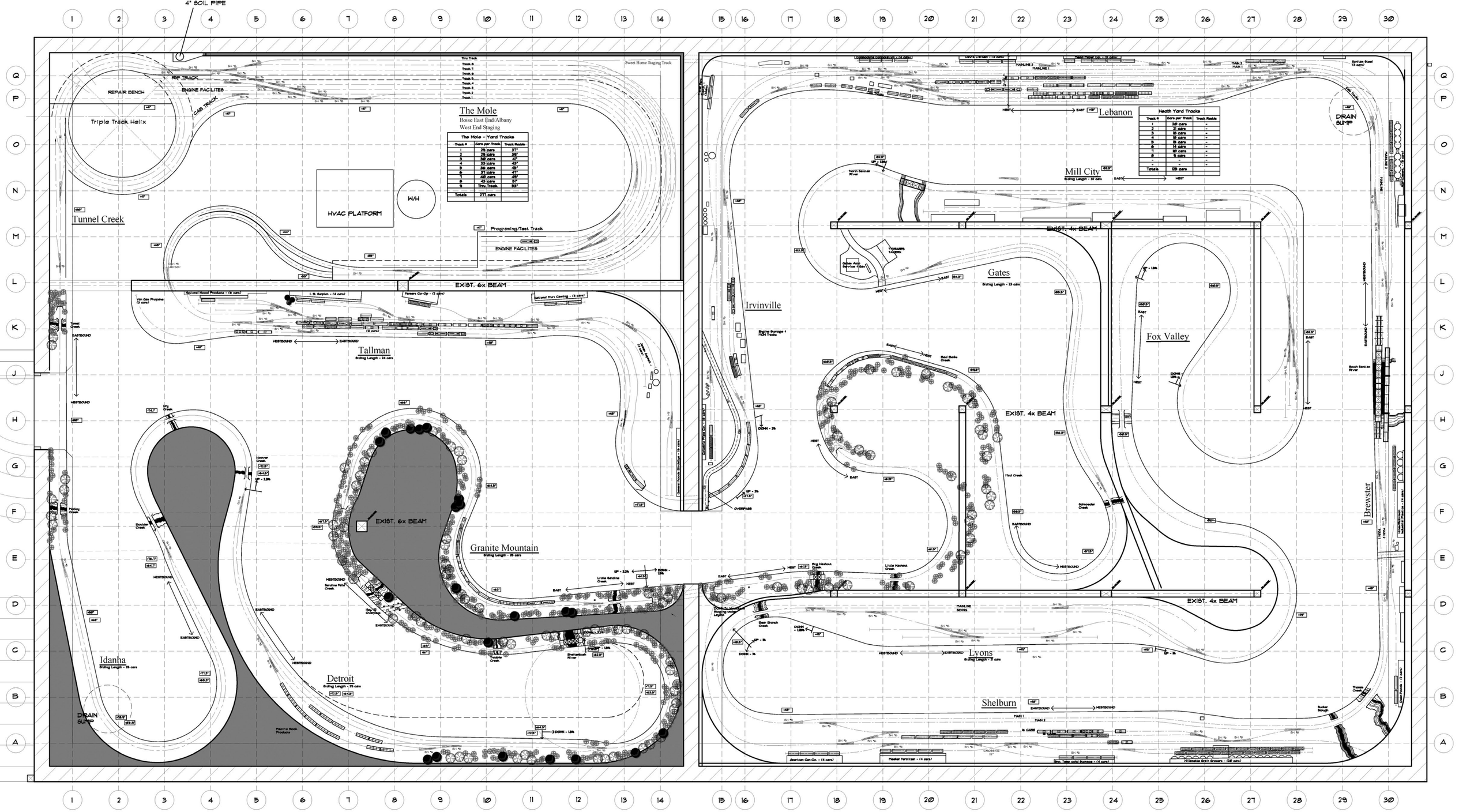
MRH: "Where do you go from here?"

David: "We're looking forward to the NMRA convention in 2015. We're ahead of schedule for having everything operating. We have lots of trees and buildings to make, but we've got lots of time. We look forward to having people coming to Portland in 2015!"

MRH: "All right! Thank you very much!" ☑

Track plan on the following pages ...

Reader Feedback (click here)



FLOOR PLAN

EXISTING WALL & POST LAYOUT

TRACK PLAN / BENCHWORK LAYOUT

BENCHWORK GRID = 2'-0" x 2'-0" (MAX.)

TURNOUTS TOTALS:

#8 CURVED (RADIUS=40"&50") TURNOUTS = 1

#8 TURNOUTS = 65
#8 - LEFT = 35
#8 - RIGHT = 30

#6 TURNOUTS = 60
#6 - LEFT = 27
#6 - RIGHT = 33

FEET 0 1 2 4

SCALE:1/2" = 1'-0"

20

20: Jan Klimas created detailed drawings of the Columbia, Cascade and Western layout from Rick Andrews' designs. Long stretches of open running were a design priority.

The drawings are updated as construction progresses. The second sketch (21, next page) shows the planned lower-level Woodburn branch. Get zoomable PDF versions of both plans in the bonus downloads.

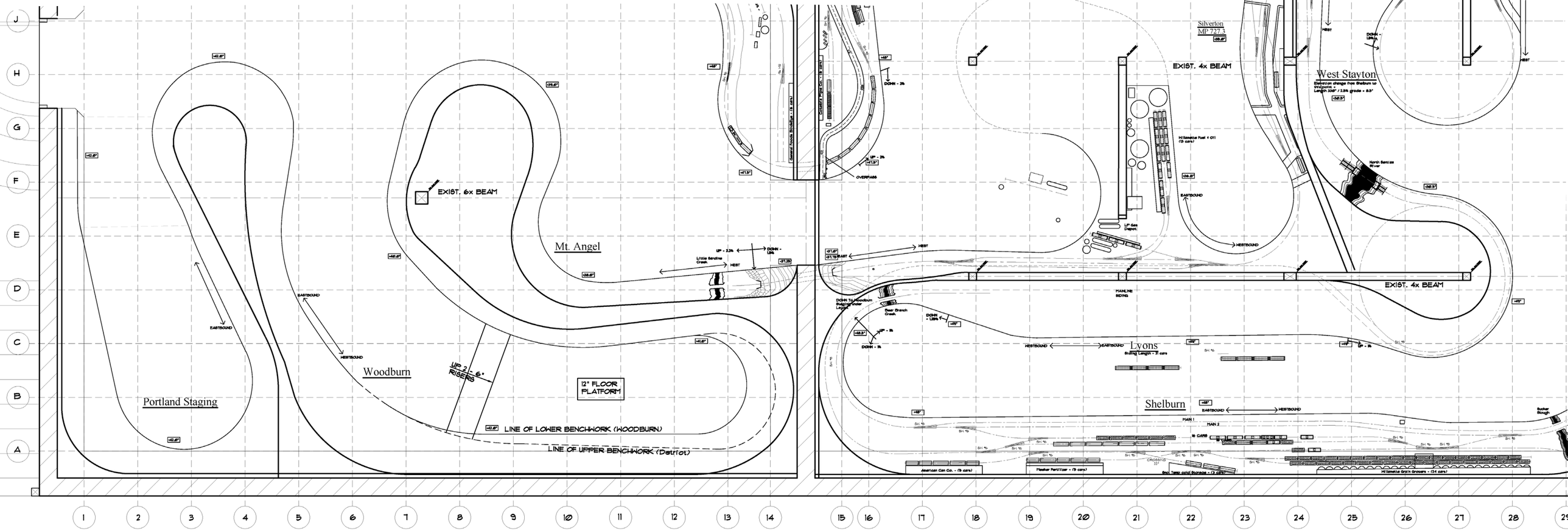
FLOOR PLAN Woodburn Branch

EXISTING WALL & POST LAYOUT

TRACK PLAN / BENCHWORK LAYOUT

BENCHWORK GRID = 2'-0" x 2'-0" (MAX.)

21



Layout Statistics

Era: 1979
Locale: Santiam Pass in Oregon
Style: Proto-freelance
Configuration: Two-level walk-around.
Scale: HO
Total layout area: 1890 square feet.
Mainline length: 583 feet

Maximum train length: 25 cars
Control: NCE DCC with radio throttles
Dispatching: Track Warrant control
Operating session crew size: 15 to 25
Elevations: 42" to 80" above the floor
Maximum mainline grade: 2%
Staging: 500+ cars
Location: Willamette Model Railroad Club, Clackamas, Oregon.

Yes, it's a model

Model Railroad Hobbyist's monthly photo album

Reader Feedback (click here)

1: This photo John Bortle (NYWB on the MRH website) posted recently on one of MRH's Weekend Photo Fun threads really grabbed us. John calls this photo *Steamin' on High*, and he says, "A long O&W freight pulled by a P-5 camelback consolidation rumbles its way across a towering viaduct in the sunshine of a late autumn afternoon. The locomotive is a rebuilt Mantua unit, while the viaduct is a mix of kit and scratchbuilt parts. All models are HO scale." Nice work, John – we love the dramatic low angle!

John continued, "I took this color photo out-of-doors using a real autumn scene as the background. The original print was obtained with a 35mm SLR film camera employing a specialized variation on a pin-hole lens design."

Here's some more of John's modeling and photograpy:

2: John says, "Commuter trains like these were a typical pre-war rush hour sight in North Jersey on the old CRR of NJ line. A host of aging camelback locomotives trains often hauled these trains. All the models in this scene are modified HO scale items.

"The photo was taken using a unique optical system that operated like a 14mm W/A lens with an f/55 pin-hole, but without creating any of the usual image distortion problems. This system kept everything between 1" and 30" of the lens in-focus simultaneously." That's some really wonderful modeling and photography, John, truly worthy of our "Yes, it's a model" feature!


PENN CENTRAL
PC 229432
VIRGINIAN & OHIO
V&O
THE RIDGE RUNNER
V&O
3767
CAPY 100000 XML
LD LMT 117 581 FN 6-75
LT WT 51900
WHEN EMPTY
RETURN TO V&O
SANTEL YARD

3: We like this nicely weathered model by Tom Patterson. It illustrates well the importance of paying special attention to realistic *car roof* modeling and weathering, since that's the part we generally see first when we look at our models.

Tom says, "This car was originally built as part of a 31 car order from American Car & Foundry in 1957. Here V&O 3767 is showing its years of service as it sits on the RIP track at North Pierce, WV in August of 1976. The car is an Accurail 50’ plug door boxcar that was produced by Cincinnati Division 7 of the Mid-Central Region of the NMRA as one of its car projects.

"This model depicts a steel, riveted AAR boxcar with 8’ wide Camel plug doors decorated for Allen McClelland’s famous Virginian & Ohio. The car features the as-built paint scheme, including the “Ridge Runner” slogan. I filled and sanded the holes for the roof walks and added additional decals to reflect a car in service circa 1976. I weathered the car using artist’s acrylics and gouache washes." Nice job, Tom. The weathering adds a lot of realistic character to this car.

4: Roy Hoffman's S scale modeling photo caught our eye – the reflections really make this scene on his layout "pop".

Roy says of this photo, “A pair of CNJ SW-1's make their way past the man-made lake at Cowans Gap State Park in Pennsylvania. These locos are from a recent purchase that the railroad made from S Helper Service.

"I built the station on the left from the B.T.S. Saltillo Depot kit. If you look closely, you can spot a rock climber up on Blue Mountain."

We missed the rock climber, Roy, nice detail touch! If there are any more S scale modelers out there, we encourage you to post more photos on our popular weekly **Weekend Photo Fun thread**, or come start a blog on the MRH site. We need more S scale!

5: David Salamon posted this scene of his N scale Deep River Southern layout. We love the railroady feel of this image!

David says, "The Deep River Southern interchanges with the Frisco in the town of Green Valley on my railroad. Here the Deep River Southern is stopped on the mainline while the Frisco Freight crosses the diamond. To protect the diamond there is a manually operated gate (scratch built with some brass soldered together). The Frisco was the first railroad through this area so they control the diamond, and all Deep River Southern trains must stop, call and get permission from the dispatcher to open the gate and proceed across. Also you can see one of the interchange tracks was pulled up recently and the rails are just laying around. The little shack is a Blair Line kit with a Classic Metal Works vehicle, plus modified Atlas telephone poles and trees and shrubs made using Scenic Express Super Trees. I did the backdrop to add more depth the scene.

6: There's a lot to like about this HO model photo by James McNab. There's the realistic cab headlight and ditch lights, plus the bridge handrail and bridge shoe detail, along with the nice weathering of the pier and the concrete abutment.

James says, “IAIS 708 leads the Des Moines Switcher across Hickman Road on its way back home from the Grimes Line. The ballasted deck girder bridge is the signature scene on the prototype Iowa Interstate's Grimes Industrial Track and I've replicated it here in HO.

"I built the bridge using a modified Micro Engineering kit with additional railings made from styrene rod. I used SMD LEDs for the headlights and ditchlights on the GP38-2 locomotive."

Nice modeling there, James, and we love the low angle railfan-style shot. Modeling the typical with simple details and weathering do a lot to make a satisfying, realistic model railroad. You can see more of James' modeling in his MRH blog: mrhmag.com/blog/jfmcnab ... be sure to check it out!

Here's James McNab's Hickman Road/US Highway 6 scene from above. Modeling prototype scenes faithfully like this certainly ups the realism factor a few notches.

Reader Feedback (click here)

Get your photo here!

Our *Yes, it's a model* monthly photo feature presents some of the most inspiring modeling and photos from the MRH website. If you'd like to get *your modeling* in our photo feature, just start posting your photos on the MRH website, especially in the **Weekend Photo Fun thread** created each weekend.

Many of the photos posted show HO modeling, but we'd like to encourage modelers in other scales to post on the MRH website as well. We don't want this to just be an HO photo feature!

For info on how to post photos to our website, **see this help how-to**. You need to be an MRH subscriber to post photos to our website, and becoming a subscriber is free, **just fill out this form here**.

Modeling Conrail's Ex-PC/PRR N5 Caboose Fleet

– John Frantz
Model Photos by the author

Conrail N5b 22885 bringing up the rear of a train at McClay Street in Harrisburg, PA. July 25, 1981 (Photo by Ivan Frantz Jr.)

Modernizing a Pennsy classic for a successor road ...

Reader Feedback (click here)

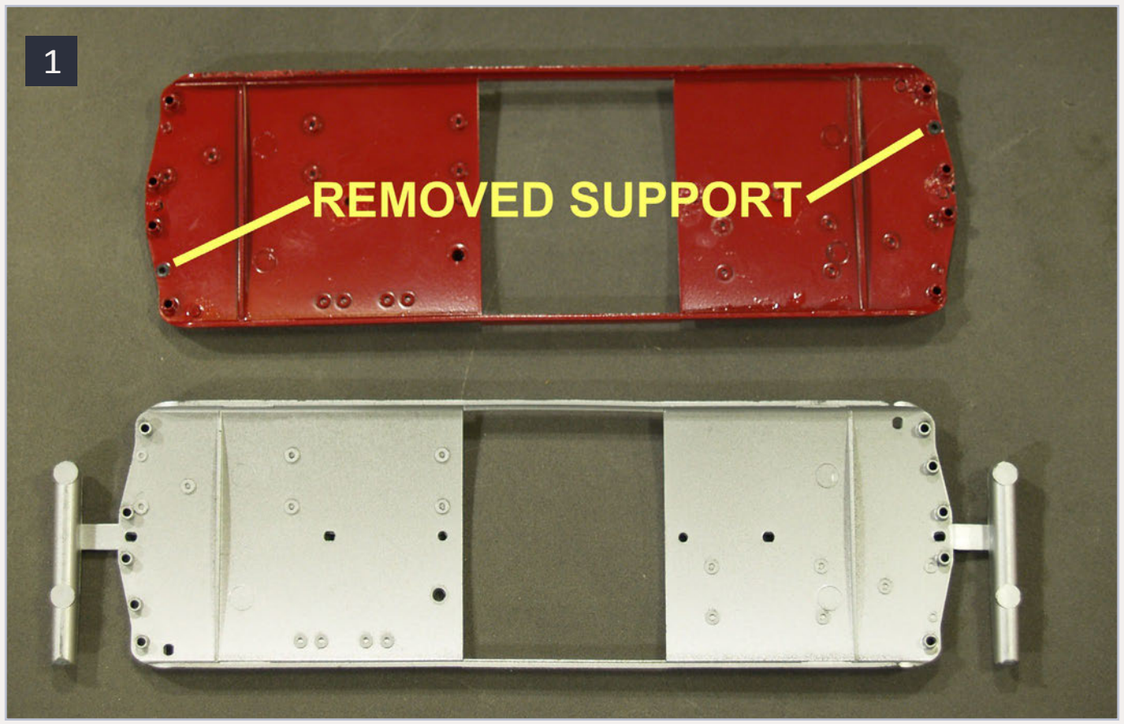
The Pennsylvania Railroad, known by most as the "Standard Railroad of The World" was an innovator in many of its practices; it standardized plans for unified completion of locomotives, structures, and its rolling stock. This was no different when in 1914 the PRR produced the world's first all-steel caboose (Cabin Car in PRR Terminology). The N5 became the major class of cabooses for use on trains throughout the PRR system, with various modifications resulting in subclasses from N5a through N5f, the most notable and recognizable of these being the N5b, with the easily-recognizable additions being end-collision posts and rounded window gaskets, as well as the N5c with its signature "porthole" windows and streamlined cupola. Examples of every class of these cars worked on lines of the PRR, Penn Central and then Conrail. More information regarding each class, rosters, and pictures can be found on Tom Wolfgang's Conrail caboose website found here: crcaboose.railfan.net.

To model my Conrail N5b in HO, I chose the easiest starting model, which is produced by Bowser in plastic. I picked up mine at low cost in an incorrect paint scheme at a hobby shop clearance bin.

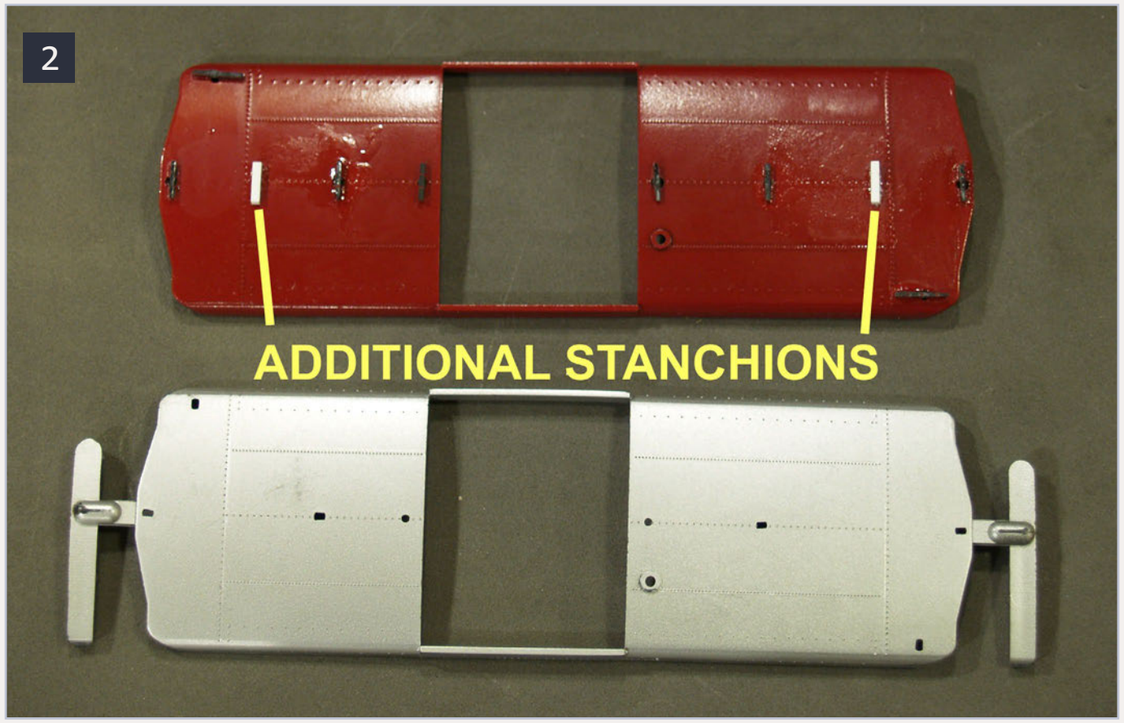
I started by making modifications to the roof. In the late 1960's roofwalks were removed from cars for safety reasons; my car will have it removed, but the support stanchions left in place. Removal of the roofwalk also meant removal of the ladder to get there. To do this, use a #11 hobby knife blade to remove the ladder rung support until flush, as shown in Figure 1. Then, flip over the roof to the curved side. Again, using a #11 blade, remove the stanchions from the roofwalk casting and glue them in place as if they were left when the roofwalk was removed. If some of these are too brittle, you can also use Evergreen #8404 4x4

styrene strips, as I did, shown in Figure 2. One option is to not have any of the roofwalk stanchions left, which was also done, but the holes must be filled in. I would suggest using Squadron Putty and sanding it flush to fit the roof profile. By this point in the career of each caboose, the roof would have been tarred many times to prevent leaks. This practice started in the mid-1950s by the PRR. Also, the handholds molded onto the cupola roof can be removed using a #11 blade. Once completed, glue the cupola onto the roof as shown in the instructions. Once dry, I also added Cal Scale #465 (Conrail Caboose Marker Lights) to each end of the roof. This completes roof modifications.

Next are the ends. Using photos and actual measurements as a guide, I removed all but three of the ladder rungs and grab irons,



1. Showing removal of the Ladder Rung Support. Can be seen on the top roof, by darker circle where support was removed.



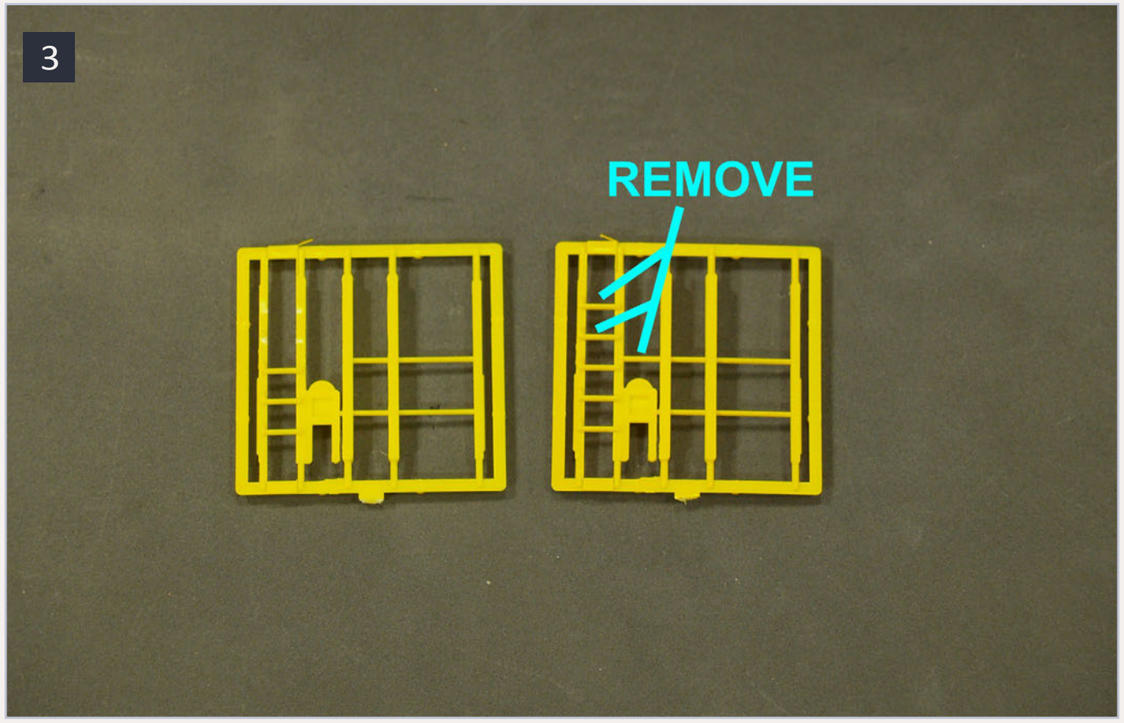
2. Additional roof stanchions made out of styrene and glued in place.

then using #80 wire, I measured up from the bottom based on measurements I took from an actual caboose, removed the ladder rung from that point to the roof, and added the wire grabs spanning the width of the end (3-4). This completes end modifications.

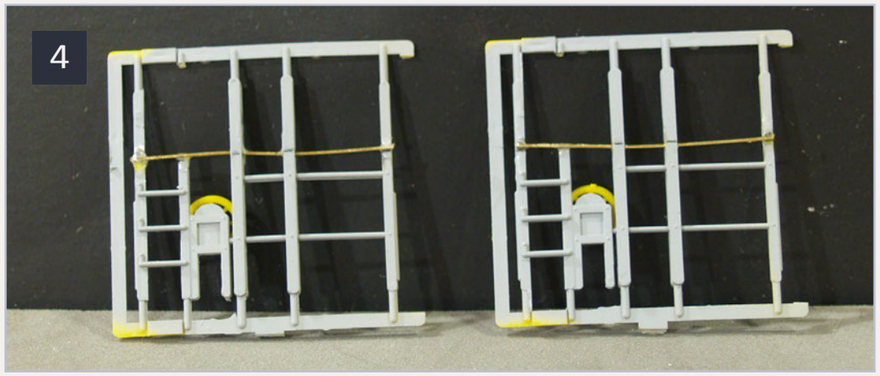
The body is next. First, I removed the end sill grab irons which were cast on, and replaced them with appropriately-sized grabs from Tichy. For the remaining side and end body grab irons, I used Bowser #74343, which is the grab iron set from the N8 caboose kit. These can be ordered separately from Bowser, but the color can't be ensured. I wound up having to paint mine despite them being molded in white or yellow plastic. Since the grab irons are added after painting, I carefully pre-drilled the body for the grabs on the sides and ends. Also, since

this caboose is having modifications done to represent it after its rebuild with replaced trucks, I used Cal Scale #475 (Pennsylvania Railroad Caboose Steps), which replaced the original steps, and were moved outward to allow space for the new trucks. A note of caution: despite the casting having two pins spaced at the same distance as the body-molded holes for the original steps, DO NOT use these holes. The steps must be glued at the extreme ends of the caboose to obtain the correct spacing for the new trucks, just like the prototype did. (I found this out the hard way.) This completes the body modifications (5-6).

Now that all the major component modifications have taken place, it's time to paint and letter the caboose, I airbrush using Floquil Railroad Enamel products. I first primed all parts to

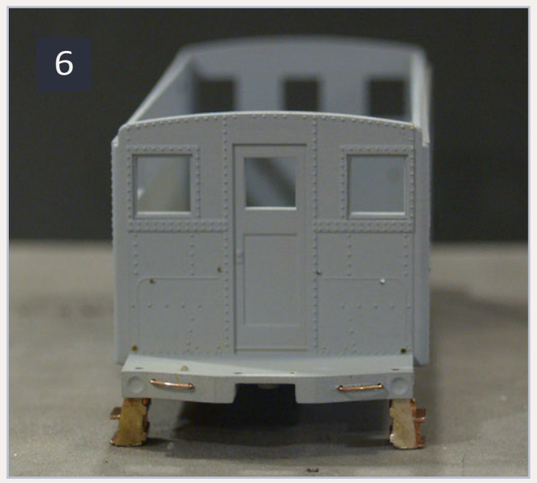


3. This shows the removed portions of the ladder and grab bar.



4. The added wire grab across the full width of the ends.

5. Do as I say, not as I do. As indicated, the steps should have been glued to the ends of the car. Otherwise, there will be clearance issues with the Atlas Caboose Trucks. Also, body is pre-drilled for grab irons.



6. An end view, showing the pre-drilled holes for grab irons and installed end sill grab irons.

give them an even base coat, just like the prototype, and then painted them using Floquil Conrail Blue and Engine Black. Once dry, I hand-brushed the underside of the roof Conrail Blue, to match the prototype, based on pictures.

I lettered the caboose using a combination of Champ and Microscale decals. However, since I modeled the car, Champ has gone out of business. As an inspiration for filling the void, I created the ultimate Conrail caboose decal set in HO, and now sell it through my own cottage decal company, Mount Vernon Shops. Since my caboose will have roller-bearing trucks, I had to find a picture of a car which had all of the modifications I did to this car (7-8).

The Bowser grab irons, made from Delrin plastic, were hand-painted using Pactra #RC51 Sprint White. Pactra is a paint commonly used by RC modelers, and is known for its excellent properties in adhering to Delrin and Lexan plastic. Once dry, the paint flexes along with the Delrin plastic during handling, and doesn't chip off. The additional body grabs were also painted this same color.

7. The end, now painted and decaled. The "reflective" red blocks and end lettering are from the Champ decal set.

8. The side, now decaled. The can-opener, "Conrail" and number are from the Microscale set, the remainder, from Champ.

Windows were done using the American Model Builders Window kit #345 Bowser Modernized PRR N5 Caboose. These are laser cut and etched, with a masking you can peel off to paint the window gaskets silver. Once the paint is dry on the gaskets, peel the remainder of the masking off to expose the clear glazing. Using the kit instructions, glue these into the caboose. Assemble the rest of the car. Once together, I carefully measured for the kick plate on the end of the car and used Evergreen #9010 .010" styrene, which was cut, painted, and then glued it into place. I would have liked to have MV Lens for installing with the marker light castings, but the size needed is indefinitely out of stock, so until suitable replacements can be found, I simply dabbed a dot of Floqil Reefer Orange on the marker lights.

Then all that's left is to install the trucks. Atlas makes a friction and roller bearing version of the correct caboose trucks, I used the roller bearing version, which fit onto the existing king pin boss and then screwed them into place. After adding

Kadee Couplers of your choice (I used #158 scale whiskers), your Conrail caboose is ready to roll down your railroad in service for Big Blue (9-11). ☑

Continued on the following page ...

9. The converted side.

10. The converted end.

11. The finished project on the layout.

John Frantz grew up around model railroading and full-size trains from birth, having experienced his first excursion trip before he was one year old. Since then, John's gone on to get a degree in drafting and design.

After working for Custom Model Railroads in Baltimore, MD for four years, he started his own model business, Mount Vernon Shops (**mountvernon-shops.com**), first selling structure kits, then transitioning to decals. Primarily modeling the Pennsylvania and Western Maryland Railroads from 1940-1945 in his hometown of York, Pennsylvania, John also models Conrail and Chessie from 1978-1980 in the same area. Embracing railroading as a hobby and a living, John works in management for a regional railroad company.

Reader Feedback (click here)

Parts List

AMERICAN MODEL BUILDERS:
#345 Bowser Modernized PRR N5 Caboose
laserkit.com

ATLAS MODEL RAILROAD CO.:
#190000 HO Roller Bearing Caboose Trucks
#191000 HO Friction Bearing Caboose Trucks
atlasrr.com

BOWSER:
#55000 Undecorated N5b Caboose Kit
#74343 N8 Caboose Grab Irons
bowser-trains.com

CAL SCALE:
#465 Conrail Caboose Marker Lights
#475 Pennsylvania Railroad Caboose Steps
bowser-trains.com

CHAMP DECALS:
#HC-633 HO Conrail Caboose
(Out of business - use Google to search for sources)

EVERGREEN SCALE MODELS:
#8404 4x4 Strip
#9010 .010" Sheet
evergreenscalemodels.com

FLOQUIL:
#F110058 Conrail Blue
#F110010 Engine Black
testors.com

KADEE:
#158 Scale Whisker Couplers
kadee.com

MICROSCALE INDUSTRIES:
#87-161 Conrail Freight Cars and Cabooses
microscale.com

PACTRA:
#RC51 Sprint White
testors.com

MOUNT VERNON SHOPS:
#HO-CRC Conrail Cabooses
mountvernonshops.com/files/MVS_Decal_Catalog_121612.pdf. ■

Teach Your Engineers to Turn Heads

– Dr. Geoff Bunza

Photos by the author

Reader Feedback (click here)

Here's a short project that you can finish in an evening or two that will really turn heads! ...

John Armstrong described an O-scale project in Model Railroader back in November 1989. He used a geared mechanism tied to an open frame motor to turn a scale model engineer's head. In this article we'll do the same for HO scale cabs with a small motor that can be run with both DCC and DC locomotives.

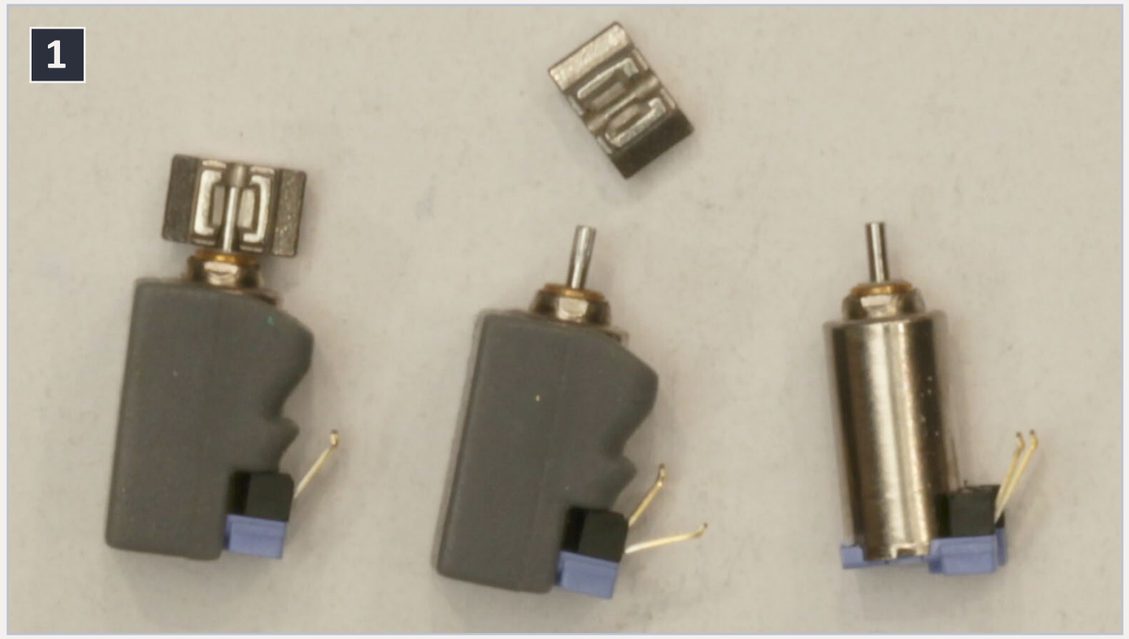
After choosing a locomotive with enough cab room next to the engineer's window (I used an Athearn GP9), obtain a small

pager motor. Tiny pager/vibrator motors are readily available on the surplus market (AllElectronics.com, goldmine-elec.com, and ebay). These are normally used to vibrate cell phones, pagers, tooothbrushes, etc. They have very little torque, but use very little current – typically 25-40 milliamperes. Obtain the smallest one you can find (mine was only 0.47 inches long!). Begin by removing the eccentric weight from the motor shaft – carefully! I've done this two ways: Either by clamping the weight in a vise and punching the shaft out with the blade of a small screwdriver, or by mounting a small (#73) drill bit in reverse in a drill press and pushing the shaft out (1).

Next I chose to re-shape a Bachmann figure of a Minister into an engineer leaning out a locomotive cab window (see figure 2). The motor will turn a block of .080 styrene about 0.30 inches square. Drill two holes: one to accommodate a press-fit of your motor axle, and the other about a #67 drill to fit the

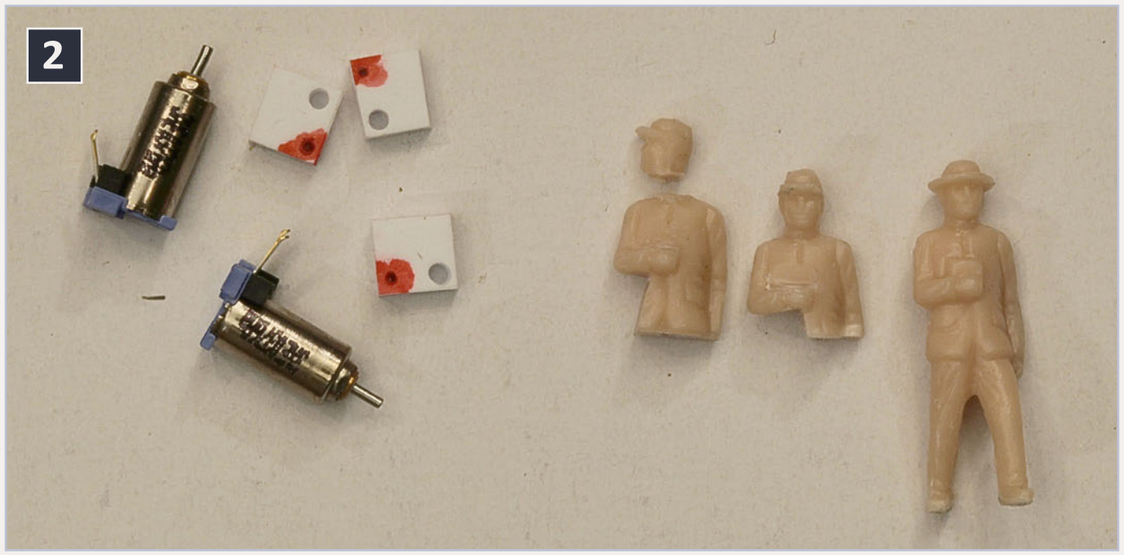
end of an S-shaped crank, made from 0.015 inch brass or steel wire (3-4)..

To make construction, adjustment, and mounting easy, I screwed a strip of black styrene onto a small wood block to hold the assembly. Take the trimmed and shaped plastic figure, and cut its head off(!) using the thinnest saw blade you can get. Otherwise a thick kerf will remove too much material. The cut needs to be flat and level. I had to practice this a few times before I got it right. Drill down from the center of the neck through the torso with a #77 bit. This hole should exit the bottom of the torso the same distance as the motor shaft center to the outer can of the motor. Next, drill a #79 hole in the center of the neck into the head. Then glue the torso onto the top of the block-mounted plastic strip, which should protrude above the wood just a tiny bit. I angled the torso so it would “lean” towards the outside of the window (5-8).

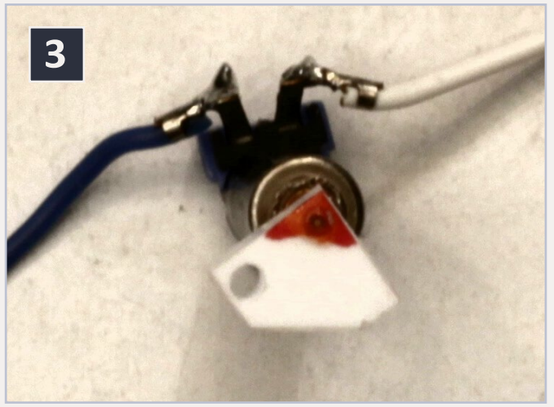


1: Original pager motor and weight removed.

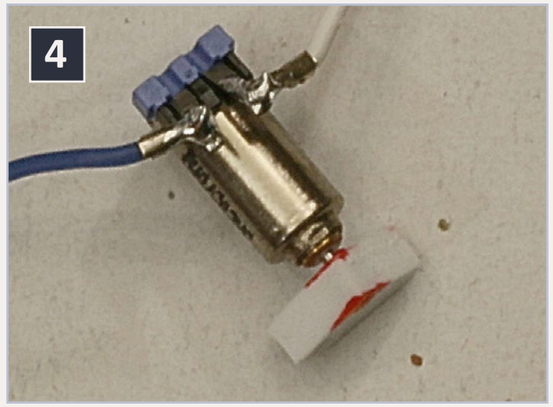
Now press fit the motor onto the styrene block you drilled above. Shape and cut the S-shaped crank, and insert it into the torso. Attach the motor onto the black strip with a small strip of masking tape, inserting the crank as you do. Now make sure your motor/block/crank alignment allows you to move the crank in an approximately 90 degree turn effortlessly. The axis of the crank shaft in the torso should align with the axis of the



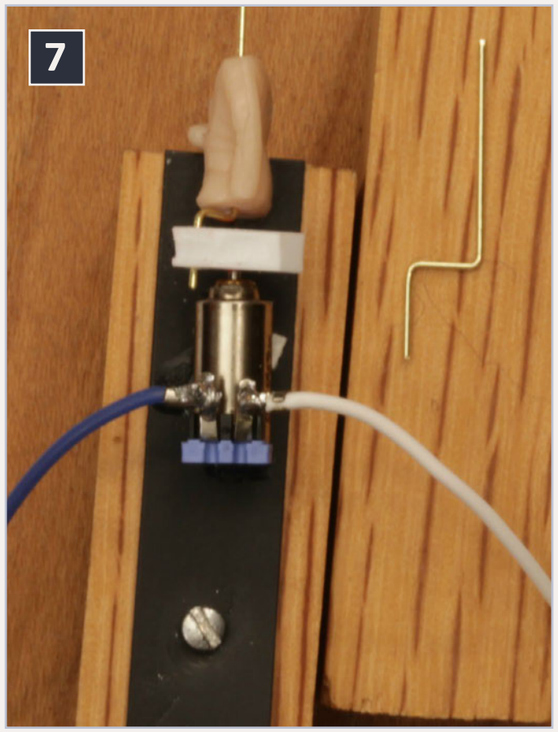
2: Motor coupling pads and figure reshaping.

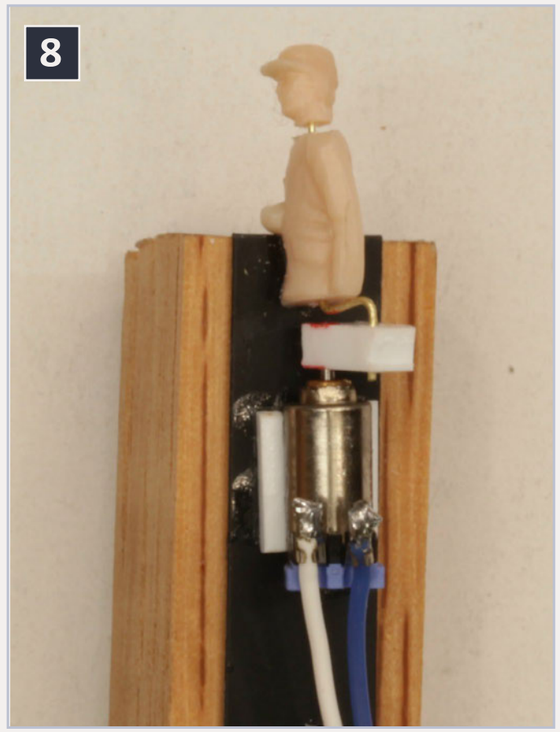


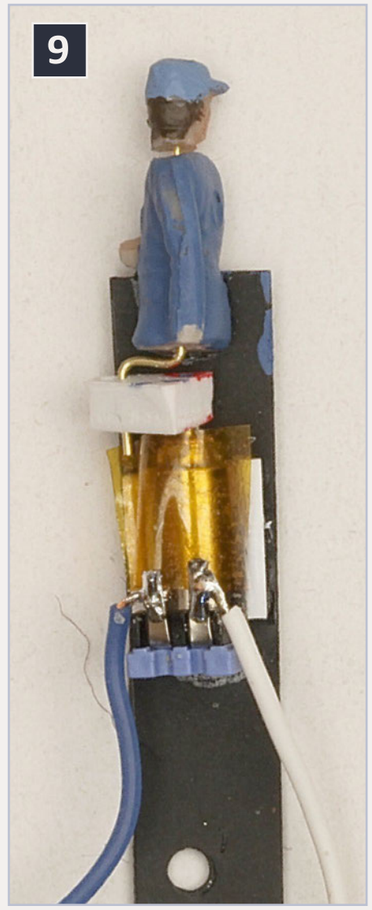
3: Motor and block top view.

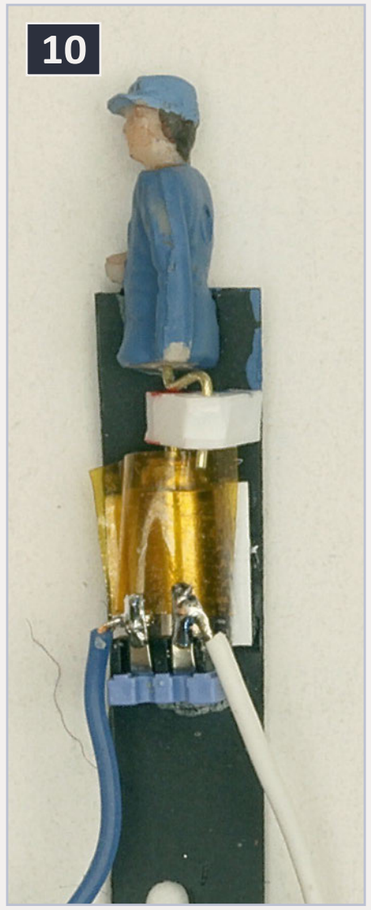


4: Motor and block side view.









5: Torso mounted, window view.

6: Leaning torso mounted, side view.

7: Subassembly and linkage.

8: Subassembly with head mounted.

9: Finished engineer head to rear.

10: Finished engineer head to front.

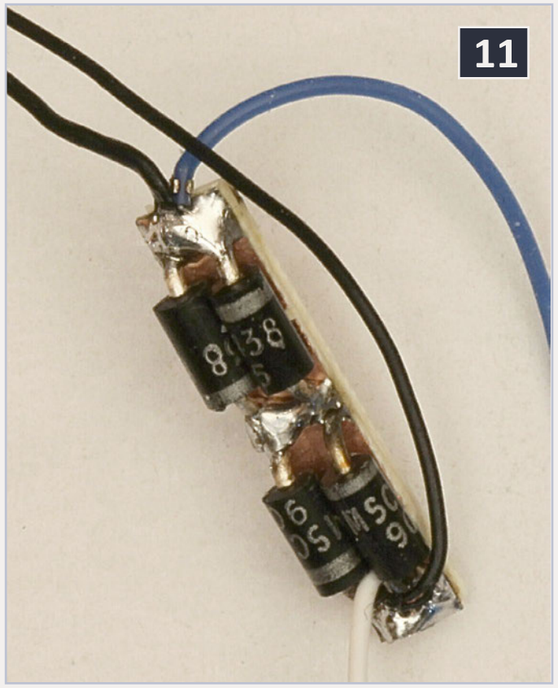
Geoff Bunza started Model Railroading at age 6. By the time he was in college, he became a member of the Tech Model Railroad Club (TMRC) at MIT. He has collected Lionel HO trains for many years, which spawned his interest in realistic model animation and lighting. Primarily, he models the New York Central Railroad, and sometimes the Great Northern too, paying little heed to timeframe. He is blessed with his wife, Lin, in marriage for 33 years and their two terrific sons. He is a life member of the NMRA and holds an Extra Class amateur radio license.

motor shaft. My test was to move it with a thin flexible wire. If it moves easily, ACC the motor in place. If not, adjust until it does. Every one of these I've made requires this attention. After initial gluing, I add two 0.080x0.080 inch strips to cradle the motor in place for added support. Next I press-fit the head on in appropriate position so it will rotate from forward to rear (remember to view the figure from the "arm-out" side). Next, paint the engineer as you like (9-10).

Powering the head motor uses an old trick, relying on the forward voltage drop of diodes. Diodes exhibit a small voltage drop across them of somewhere from 0.3-0.8 volts depending on the type of diode and the amount of current they are passing. These diodes will need to be able to handle the stall current of your loco motor. The 1N4001 through 1N4006 series of diodes are rated at one amp – more than enough for my loco motor. These diodes are cheap and readily available. My Athearn GP9's were running between 250-400ma (actual measurements). So at these currents, my 1N4002 diode has a voltage drop of 0.56 Volts (measured) – or two in series have 1.12 Volts. This is perfect to power the pager motor, using it as a "rotary solenoid" equivalent in a stall motor configuration.

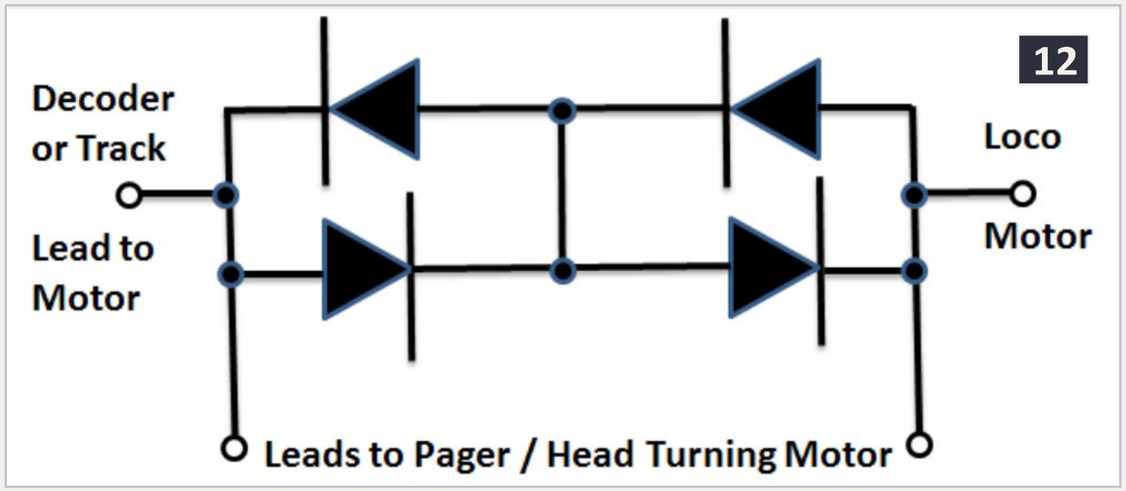
By feeding the motor lead either from a DCC decoder or from the track lead directly in a traditional DC-controlled layout, we can energize the head motor in either direction based on the power delivered to the loco motor. Wire the diodes as shown in figure 12. Disconnect one wire that runs from the decoder (or track, for conventional DC) to the loco motor. Connect that wire to one end of the diode assembly. Connect the other end of the diode assembly to the motor terminal.

The leads from the head motor go to either side of the diodes. Test before making the connections permanent that the pager motor is wired in the correct orientation, so the head will turn in the direction that your locomotive is traveling! It doesn't matter which side of the loco motor connection you insert the diodes. I used a small piece of single-sided printed circuit board (or PC tie material) with cuts and holes in the copper to isolate, mount and solder the connections. The cuts in the copper are actually under the diodes in picture 11. I wrapped the diode assembly in tape after all wires were attached to insulate it.



11: Diode assembly wired.

12: Diode assembly schematic diagram.



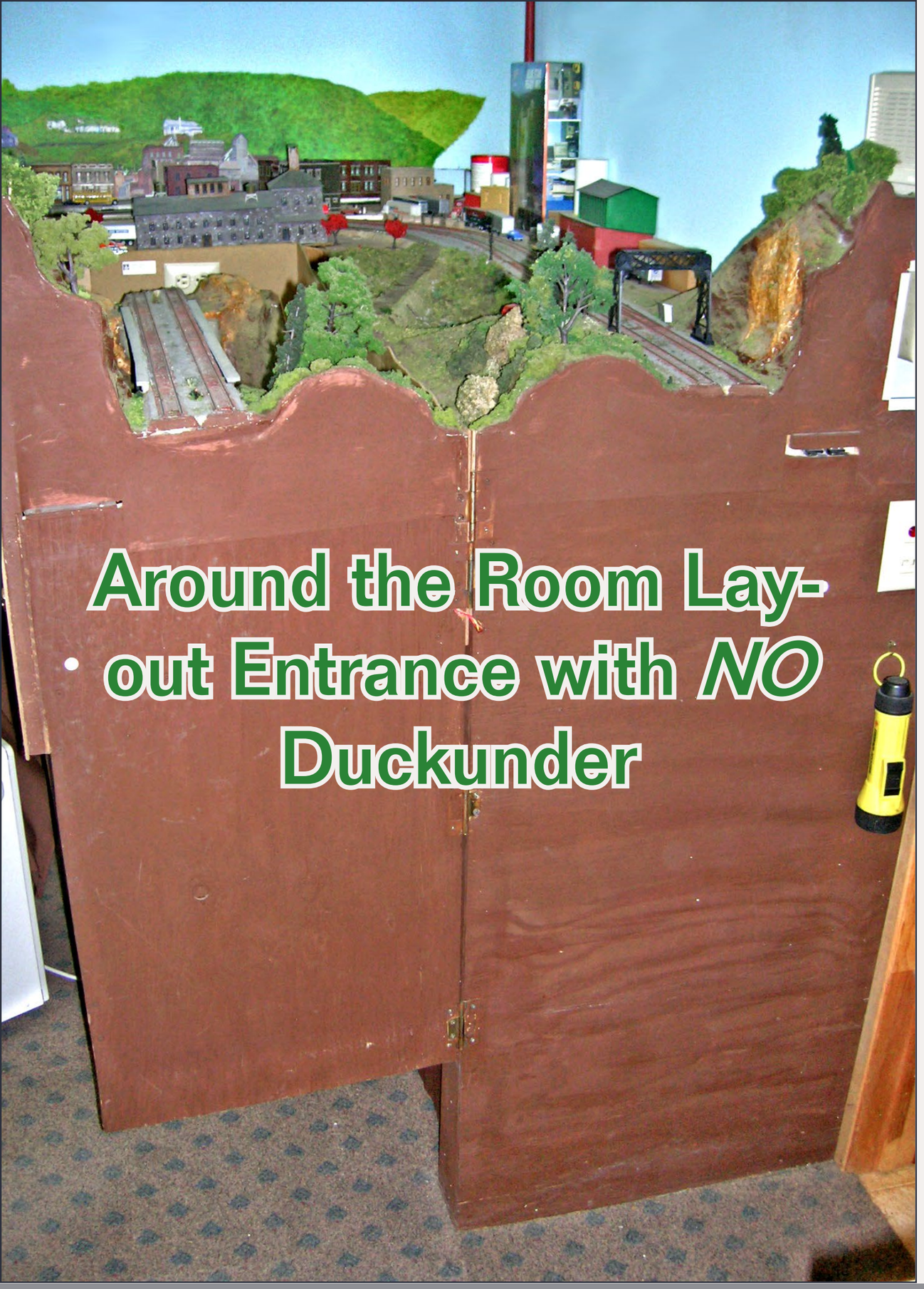
Playback problems? Click to try a different version.

I later wrapped the diode assembly in tape after all wires were attached to insulate it.

Carefully remove the assembly from the wood block and glue it to the inside of your favorite loco cab window. I used Hob-E-Tac Adhesive to attach it, in case I needed to remove it later. Lastly, reassemble your loco.

Now watch your engineer pay special attention to his locomotive handling! It may well turn some other heads visiting your layout. ☑

Reader Feedback (click here)



Around the Room Layout Entrance with *NO* Duckunder

Are you ready to get up off your hands and knees and really enjoy that walk-around track plan? ...

– Bob Bucklew

Model Photos by the author

Reader Feedback (click here)

When I was considering track plans for my Quaker Valley Railroad back in the early 1980s, I wanted to incorporate a walk-around style layout plan. The entrance to the basement layout room could accommodate large turnback loops on either side of the entrance, but they would consume a lot of space.

A track plan that was essentially an around-the-room plan worked best, but with double tracks at 47” high, how do operators and visitors enter the room without getting on their hands and knees? My western Pennsylvania locale for the railroad precluded using a lift bridge. And I wanted something that would be sturdy and work for years. What I developed has been in service for more than a quarter century, with only seasonal adjustments to account for changes in humidity.

I considered a skeletal (minimal) drop down or swinging bridge, but decided that a sturdy gate could be scenicked benchwork and become a part of the railroad, perhaps even a focal point.

Because I would be swinging a large and heavy gate, it had to have sturdy support on both sides. I started with ¾” plywood sheet on both sides, fastened to the wall, and resting on the floor. With the approach track and roadbed installed, these became very sturdy anchor points for the gate.

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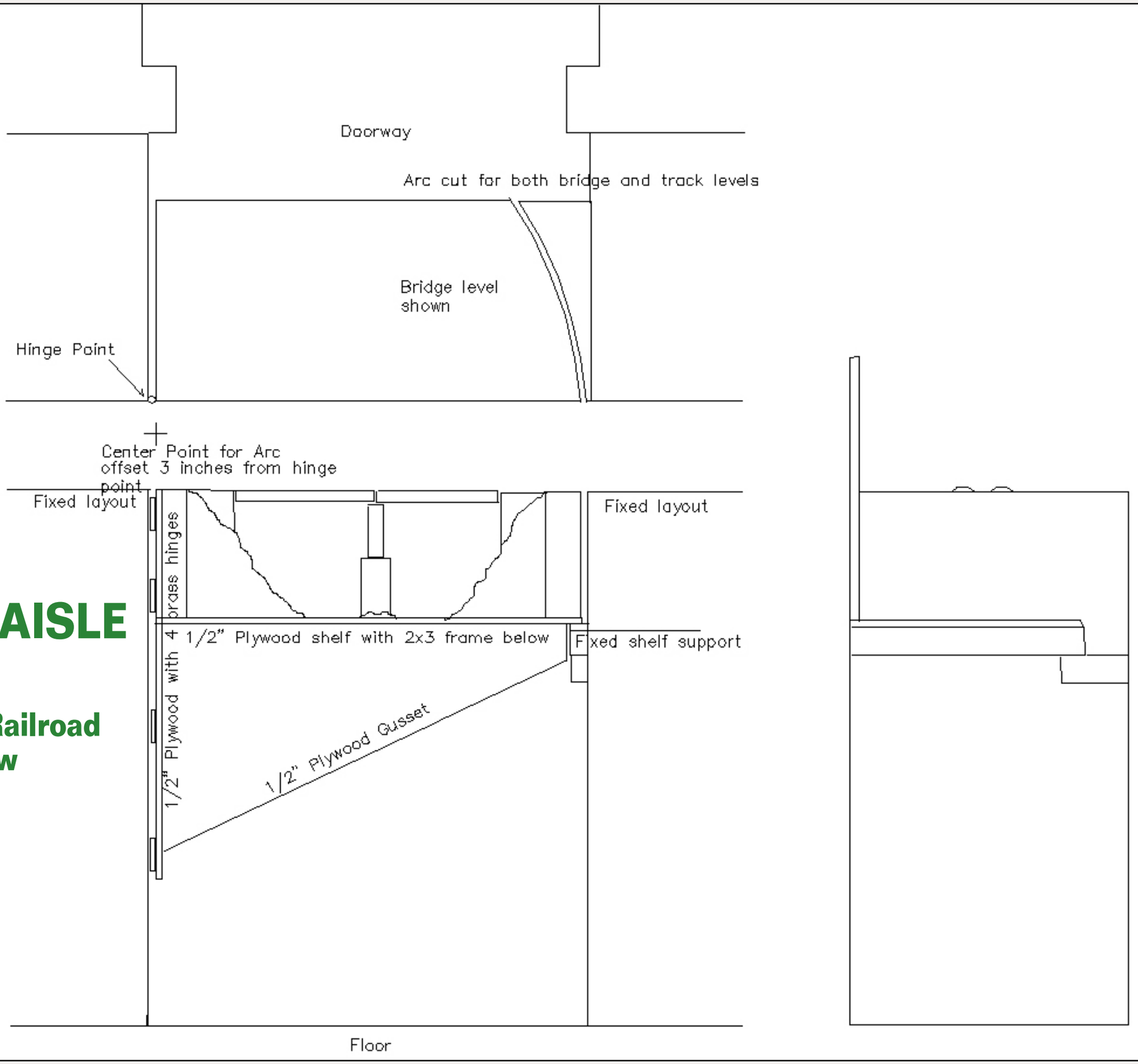
1: Hinge side of layout entrance with flex wire.

1

SWINGING AISLE GATE

Quaker Valley Railroad
R. Bucklew



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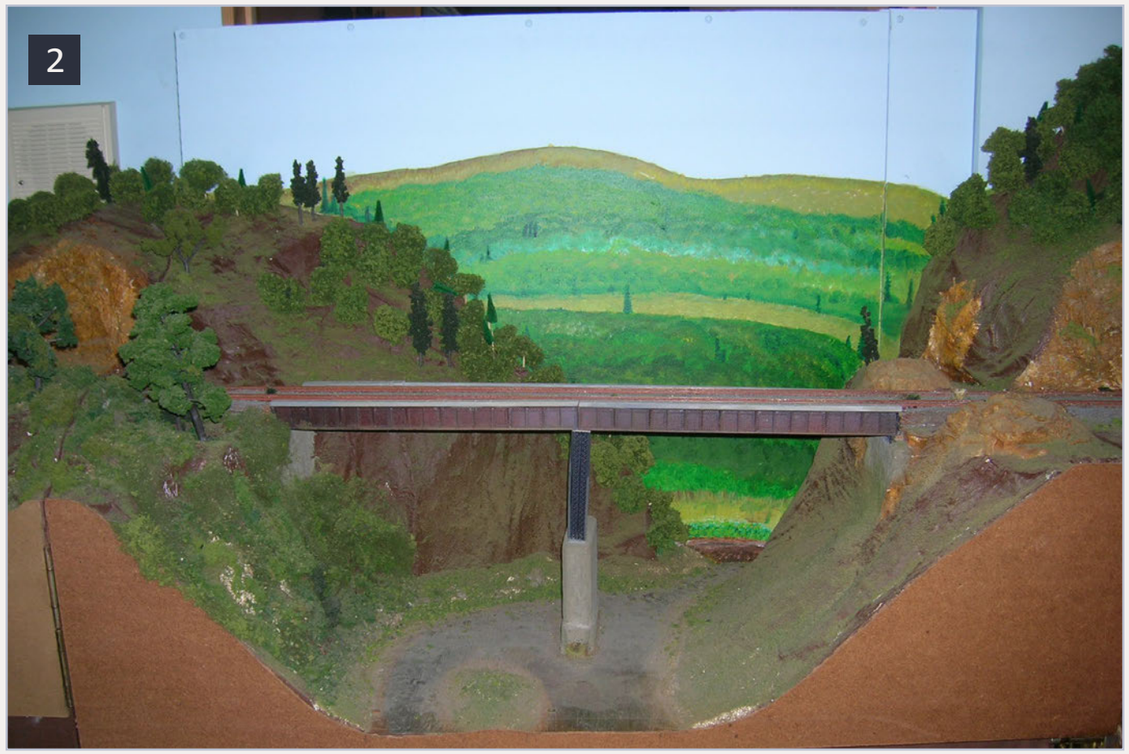
I started by constructing the hinged side of the gate. It is also a piece of ¾” plywood and joined to the fixed part of the layout by four 3” brass door hinges (1). You could also use a full length “piano” hinge. This needs to be substantial as everything turns on it. On the open end of the gate, I used a piece of 2x4 to construct a ledge for the gate to rest on. The front edge was beveled to catch the gate as it is closed (4). After 25 years, this wood is showing some wear from use, but the vertical adjustment has been accommodated at track level.

With this in place, I constructed a shelf across the aisle at 37” high. For a flat land railroad, this could be nearer to track level, but I built mine to accommodate a two-track plate girder bridge. The shelf is also ¾” plywood and fastened securely to the hinged side of the gate with glue and wood screws. The open end has a curve, so it does not interfere as the gate is opened. But it only needs to rest on the 2x4 support, and there is no interference with the fixed side of the layout. I added a diagonal brace under the shelf to transfer some weight from the open end back to the hinged end of the gate, as shown in the drawing. I added a length of stair railing diagonally, as an additional support brace for when the gate is left open (5).



With this shelf complete, it is sturdy enough to sit on when in the closed position. I built the rest of the track supports and scenery on this sturdy base, using scrap construction materials I had left over from our home construction. To

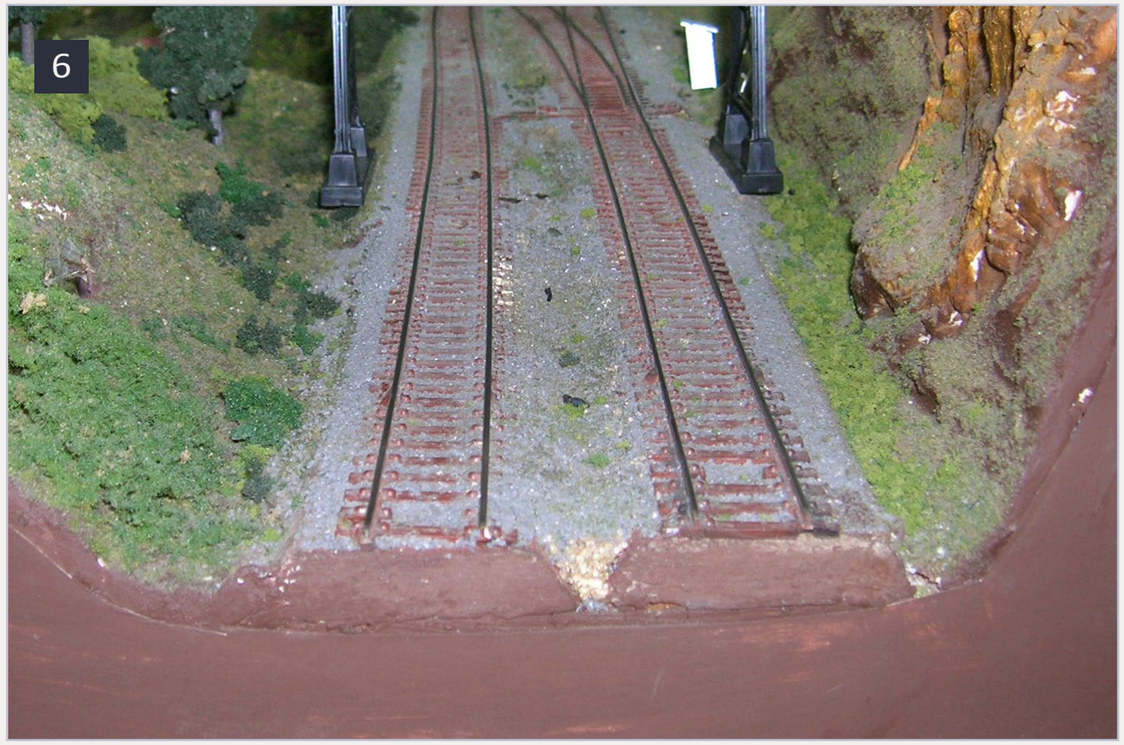
2. Closed gate overview.

3. Backside of gate.

4. Ledge to support closed gate

make sure the trackwork fit with the fixed roadbed on either side, I laid a continuous piece of plywood sub-roadbed across the entire aisle gate area, and secured it to the fixed benchwork on both sides. I placed supports under it and secured it in place with glue and screws. I only cut the moving parts of the sub-roadbed free after ensuring that all supports were in place.

To eliminate the possibility of interference of wood on wood, or rail on rail, I used a cam action when cutting the sub-roadbed. Instead of having an arc centered on the hinge pins, I placed a tripod 3” out in the aisle and marked a circle at the open end with the circle center offset by that 3”. I used a jigsaw to cut the plywood sub-roadbed in a straight line at the hinged end, and on the cam action curved line on the open end. Once these cuts are made, the gate can be opened, closed, and checked that nothing binds or interferes with smooth operation.



6. Detail of shimmed rails and roadbed.

5. Underside of gate.

7. The gap beneath is big enough for a “crawl under.”

To account for vertical alignment of the track at both the hinged and open ends of the gate, I used wood screws when fastening the three inches of Homasote roadbed on both sides of the rail gaps (4). The balance of the Homasote roadbed is glued to the plywood sub-roadbed. Adding (or subtracting) cardboard or paper shims between the Homasote and plywood permits very small vertical adjustments.

After 25 years, I have still not found a need to adjust the hinged end of the gate. These tracks align very reliably both winter and summer.

On the open end of the gate, I remove shims in the early summer as humidity causes the wooden structure to expand slightly. As the wood dries out in the fall, the shims are put back in place, raising the railhead to match the fixed part of the layout. Other than the twice a year vertical adjustment, no other adjustment has been necessary.

By placing a continuous strip of the Homasote road bed across the entire gate area, I made sure everything started life in perfect alignment. I used a razor saw to cut the Homasote so there is a close fit for the roadbed.

After checking for smooth operation with the roadbed in place, I added the track. I used code 83 flex track for my HO layout, but you can use any track used on the adjoining fixed portions of your layout. I again used the razor saw to cut the gaps on the hinged and open ends of the gate. I then filed small chamfers in the ends of the rails to ease wheel sets across the gaps. Building the roadbed and trackwork across the entire gate area, before cutting them, ensured that everything lined up.

The cam action design for the gate allows the gap between the moving and fixed parts of the gate to increase as it opens, moving the vulnerable rail ends away from each other (8, 9). This feature allows me to have a double track scenicked gate with no interference.

The cam action also provides a solid stop when the gate is closed. Most times I don't even find a lock necessary to secure the gate in the closed position. I did add a common brass gate lock to the front edge of the gate, as shown. I considered replacing it with an electronic door latch to permit the dispatcher to control access. In 25 years, we have not had an accidental opening of the bridge under a train.

Power to the rails on either side of the aisle is straightforward. I routed this power up through the wall and across the suspended ceiling to make both sides part of the same electrical block. I then ran wires to the four rails on the bridge, and have them crossing to the fixed part of the layout almost parallel

Bob Bucklew began his modeling career at age 8 with a Lionel train set from his uncle. Though the Lionel was traded for HO scale, the pleasure of model railroading has remained.

Bob got serious with model railroading while working for Excelsior Truck Leasing, a Penn Central and later Conrail subsidiary.

His current layout was begun almost 30 years ago, an HO scale free-lanced Quaker Valley Railroad set in western Pennsylvania in 1977. It employs a JMRI CTC panel to control the NCE layout. He recently authored an online tutorial on construction of the panels using JMRI software.

Bob and his wife, Lynda, live near Reading, PA.

to the hinges on the gate. That way, the stranded wires are twisted each time the gate opens and not bent back and forth which would surely break them over a period of time.

When my niece was young, there was almost an incident where a train was driven into what Charlie Comstock would call the “The Gorge of Eternal Peril.” That near-miss encouraged me to add an electric interlock to stop trains approaching the open access gate.

I placed two micro switches on the hinged side where the opening gate would activate them (10). The switches cut track power to the two blocks on the gate, and on the approaching tracks at least 2 feet on either side of the gate. That worked with DC operation for more than 15 years. More recently, I added a magnetic switch sensor that connects to my JMRI

9. Cam action – opening.

8. Cam action – closed.

7. Detail of limit switches.

monitored Loconet to provide an alert to the dispatcher when the aisle gate is open. It also drops signals on the approach to the gate.

I have added a cloth skirt to my gate, matching those fastened by Velcro to the fixed benchwork of the Quaker Valley. But the opening between the gate and the floor is still accessible and my daughters and the dog would often come in when the gate was in the closed position (see 7). I'm getting too old for that now.

I would avoid placing very complex trackwork on a moving gate, but a turnout or crossover could easily be accommodated by keeping the frog and moving parts away from the ends.

Charlie Comstock, in his April 2009 article in MRH (mrhmag.com/mrh2009-Q2/up_the_creek) indicated that a swing gate

Playback problems? Click to try a different version.

Video 2: Aisle cam action – Cam action of gap when opening.

Playback problems? Click to try a different version.

Video 1: Aisle gate operation – Train across bridge, open and close, second and third train.

Playback problems? Click to try a different version.

Video 3: Aisle hinge side – Hinge side when opening.

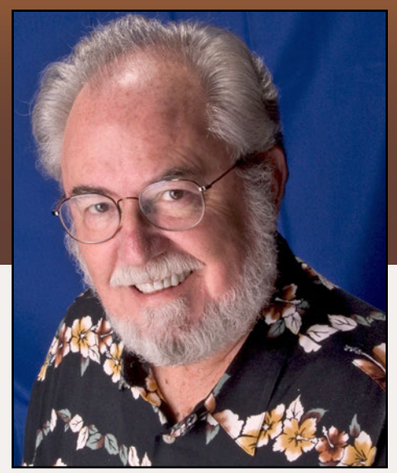
was not appropriate “where there is a high volume of train and foot traffic. Opening and closing the swing gate for people will disrupt train operation or worse, someone may open the gate while there’s a train on it!” Constructing a gate as I have minimizes these issues, as shown in the videos.

Here are the issues to consider before you can find if an aisle gate will work for you:

- Is there room for the gate/ bridge to swing out of the way?
- Can it open wide enough to be useful for entry/exit?
- Can the side supports be made very solid?
- Can you route layout wiring for track power and control around the bridge?
- Will you permit duck/crawl under traffic when the gate is closed?
- How will you lock the gate in place when closed?
- How will you provide safety for trains when the gate is open? ☑

Reader Feedback (click here)

contents index



The Old Yardmaster

Reader Feedback (click here)

February 2013:

The latest model railroad products, news & events

by Richard Bale and Jeff Shultz

New Self-Contained Power Truck

Kato USA has posted a video of a new HO scale drive mechanism currently in use in Japan on the EF510 locomotive. The compact power trucks are fitted with a coreless motor and a small flywheel. Although rare in North America, coreless motors have occasionally been used in the European market by such manufacturers as Märklin and Fleischmann. Unanswered is the question of how to keep two independent motors operating at the same speed, and how Kato's snap-in trucks can be adapted to DCC. To view the video click on youtube.com/watch?v=lLK2tKssj5M ...

iHobby Returns to Chicagoland

After just one year in Cleveland, the nation's largest hobby trade show is returning to the Chicago area. The 2013 event will be held October 3-6 at the Schaumburg Convention Center in Schaumburg, Illinois. The announcement was made by the Hobby Manufacturer's Association which sponsors the event.

Prior to last year, iHobby Expo had been held for many years in Rosemont, Illinois. The new location features free parking and easy access to the I-355 and I-90 expressways. It is 12 miles from O'Hare International Airport and is connected to the four-star Renaissance Schaumburg Hotel. For additional information visit ihobbyexpo.com ...

Freight Car Trucks

A helpful new guide that includes an invaluable summary of HO trucks has been posted by freight car historian Richard Hendrickson. The 14-page 22 MB pdf file can be accessed at docs.google.com/file/d/0Bz_ctrHrDz4wMkpBYU-w1RjhmRkE/edit ...

New 4750 C-Hop

No details are available yet, but we've learned that Accurail is currently preparing tooling for an HO scale Pullman-Standard 4750 cu ft three-bay covered grain hopper ...

Alpine Division Flooded

Alpine Division Scale Models is recovering from a serious flood that inundated their Los Angeles office and factory. Owner Michael De Ghetto arrived at work one recent morning to find water from a broken water main in his parking lot was shooting 15 feet in the air. He said their recovery is complete but there will be some delays in production schedules ...

Tank Cars and More

Tony Thompson maintains an interesting blog on a variety of modeling subjects, his most recent being about rust on freight car roofs. Among my favorites is an earlier posting on modeling tank cars. Check out Tony's blog at modelingthesp.blogspot.com ...

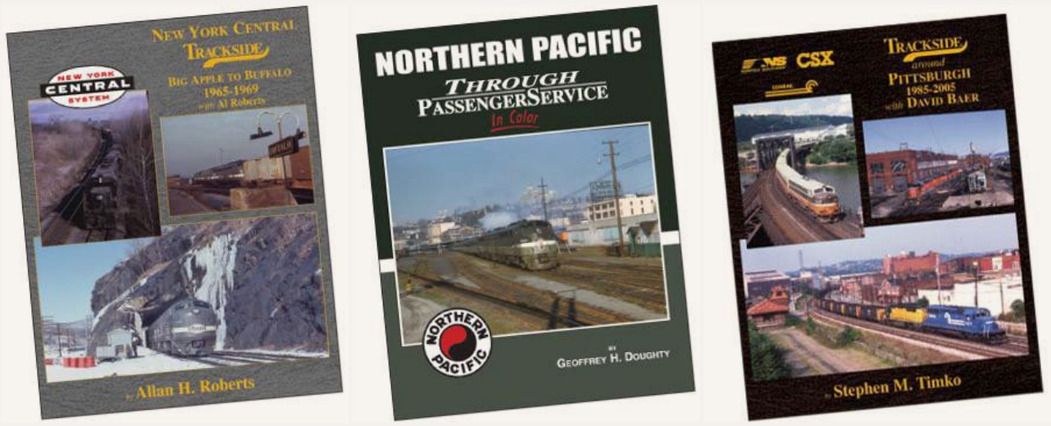
Santa Barbara Hobby Store Closed

Sad to report that after 67 years in the same location, Hobby Central of Santa Barbara, California, closed its door on the 19th of January. Known originally as Atkins Hobbies, the popular store was founded in 1946 by Tom and Vern Atkins. The current owner, Vern Morseman, began as an employee at the store many years ago. Closing the Santa Barbara store does not effect Ventura Hobbies which Morseman will continue to operate in nearby Ventura, California ...

Rapido Relocated

Rapido Trains has moved into a new facility which, not surprisingly, is adjacent to an active railroad line, in this case the York Subdivision of the Canadian National Railway. Effective immediately the new mailing address is Rapido Trains Inc., PO Box 30059, RPO New Westminster, Thornhill, Ontario, L4J 0C6 Canada. The phone number remains 905-738-6445. The FAX (which will not be operational until February 6) will be 905-738-6265 ...

NEW PRODUCTS FOR ALL SCALES

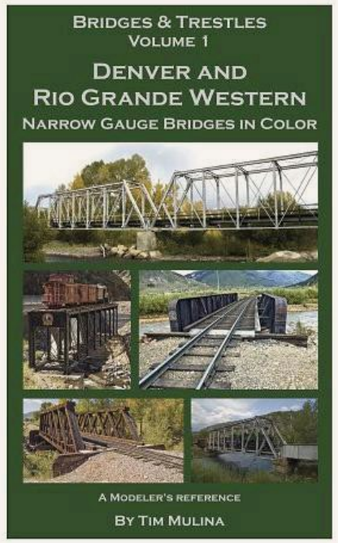


Morning Sun Books (morningsunbooks.com) has released three new picture books of interest to both railfans and model railroad hobbyists. All are priced at $59.95 each.

The new titles include *"New York Central Trackside - Big Apple to Buffalo 1965-1969"* by noted rail photographer Allan H. Roberts. Readers are given the lowdown on the east end of the fabled "Water Level Route" during the eras of both the NYC and Penn Central.

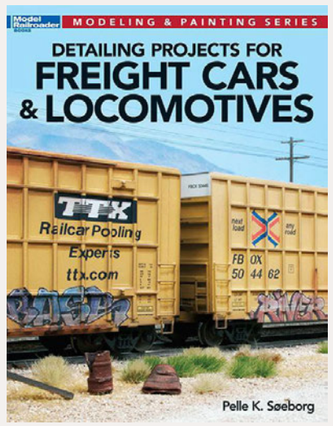
Also *"Northern Pacific Through Passenger Service In Color"* by passenger train expert Geoffrey H. Doughty. The author guides readers through the streamliners of the Northern Pacific, one of the few railroads that took pride in its passenger service right to the end.

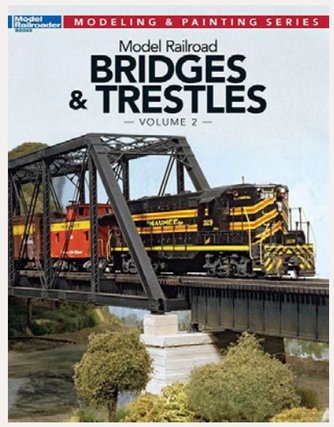
The final publication set for release this month is *"Trackside Around Pittsburgh 1985-2005 with David Baer."* Much has changed since the days when PRR, B&O, P&LE, and dozens of mills blanketed the steel city with smoke. Author Stephen M. Timko has assembled a collection of Baer photos that document how railroading has changed in Pittsburgh and the surrounding area.



BHI Publications (quickpicbooks.com) has released *"Bridges & Trestles, Volume 1"* which illustrates details and weathering variations on the deck, through-truss steel, pony plate girder, and wood pony truss bridges that still exist on the former D&RGW narrow gauge lines. An abundance of views are provided including many that can only been seen from the bridge tracks. Abutments and piers range from cut stone to concrete to cross ties with each type weathering differently. The 8.5" by 5.5" 54-page spiral-bound book includes 179 color photos. The MSRP is $24.99.

Also new from BHI are two Quickbooks that provide detailed information on several surviving DRGW narrow gauge flangers. Volume 1 covers OJ, OK, and OL flangers on the Cumbres & Toltec in Chama. The focus of Volume 2 is on flangers OC, OD, OF, and OT. To order or for additional information visit the above web site.





Kalmbach (kalmbachstore.com) has released a new book titled *"Detailing Projects for Freight Cars and Locomotives"* by Pelle K. Søeborg. Pelle is an Danish author and an accomplished modeler of American prototype railroads. He shows how to easily improve the look of both locomotives and rolling stock. His clear, easy-to-understand guidelines are supported by some 300 detailed photos of both models and prototypes. The book is helpful to both experienced and novice modelers. The 88 page, softcover, 8.25" x 10.75" publication is priced at $19.95.

"Model Railroad Bridges & Trestles: Volume 2," is a reprint of twenty projects from the pages of Model Railroader magazine. Authors of the original articles include such respected model builders as Lance Mindheim, Rand Hood, David Popp, Stephen Priest, Lionel Strang, Harold Russell, Tony Koester, and Andy

Sperandeo. More than 200 photographs, sketches, and scale drawings of both model and prototype bridges, trestles, underpasses, and viaducts combine to make this a valuable collection for modelers working in any scale. The 88 page, softcover, 8.25” x 10.75” book is priced at $17.95. Both publications are available at hobby stores and from Kalmbach Books at the above web site.

Monster Model Works (monstermodelworks.com) is selling highly-realistic 3D stone work engraved on 1/8” thick basswood. The computer controlled laser process replicates the textured surface of real stones. Multiple sheets of the engraved material interlock, making the seams in the stone pattern virtually disappear. The sheets are currently available in three sizes making the material suitable for all popular scales.

Large Mixed Cut Stone 11.8” x 3.9” sheet with stones ranging from .28 to .83” (2’ to 6’ in HO, 1’ to 3’ in O scale); Medium Mixed Cut Stone 11.4” x 3.9” sheet with stones ranging from .15” to .55” (1’ to 4’ in HO, 6” to 2’ in O scale); and Small Mixed Cut Stone 11.3” x 5.85” sheet with stones ranging from .07” to .28” (6” to 2’ in HO, 3” to 1’ in O scale).

An additional bonus is that using the light weight basswood engraved stonework rather than resin or cast plaster can greatly reduce the weight of traveling dioramas and layouts. For additional information including suggestions for assembly and weathering visit monstermodelworks.com/MCS-Info.pdf.

NEW PRODUCTS FOR O SCALE

Atlas O (atlaso.com) has scheduled delivery in the third quarter of this year for its Master® series streamlined dining car and a 16-section sleeping car. Throughout its illustrious 21-year run that ended in March 1970, the California Zephyr operated with cars of mixed ownership split between Chicago, Burlington & Quincy, Denver & Rio Grande Western, and Western Pacific. The mixed consist generally depended on what cars were available at the terminals rather than which railroad it was operating on at the time. Today, the original California Zephyr

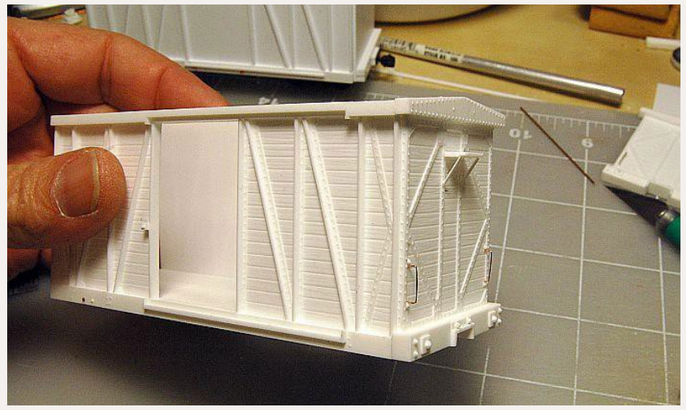
stainless steel cars are popular with private collectors and several operate in charter service.

Road names on the CZ diner include CB&Q Silver Café, D&RGW Silver Banquet, Western Pacific Silver Platter, Amtrak Silver Diner (above), and Amtrak Silver Restaurant. Names on the sleeping car are CB&Q Silver Maple, D&RGW Silver Aspen (below), WP Silver Palm, Amtrak Silver Larch, and Amtrak Silver Cedar. Both cars will also be available unlettered.

Key features include working diaphragms, accurately represented stainless-steel corrugations and welding seams, and interior LED lighting using a choice of either track or self-contained battery power. The cars will be available for 3-rail at $149.95 and for 2-rail operation at $154.95.

Atlas O has scheduled a second quarter release for its Master® series three-bay and six-bay covered hoppers in new decorating schemes. Three-bay cars will be available for SHPX-Agrico, NAHX- Amerthene, NAHX-Dresser Minerals, and JHPX-Huntsman Chemical. Cars with six-bays will be Detroit & Toledo Shore Line, and Wabash (above). Undecorated models will be available for both versions. Special features on the O scale ready-to-run models include see-through roof walks, operating hatches, die-cast 100-ton roller-bearing trucks with rotating bearing caps, and separately applied grab irons and brake detail. Three-rail models will have an MSRP of $64.95, with 2-rail models priced at $69.95. The minimum radius track for reliable operation on 3-rail versions of the car is 0-31 for the three-bay car and 0-42 for the six-bay car.

Bachmann (bachmanntrains.com) has an On30 articulated 2-4-4-2 steam locomotive with a choice of two cabs and four paint schemes. The locomotive is available with a steel cab decorated in plain black or black with red windows and white stripes. The same decorating options are available on the locomotive with a wood cab (above). The model comes with a choice of three stacks, three types of headlights and an optional bunker to convert the fuel to oil. An optional type of pilot is also included. The ready-to-run locomotive comes with DCC for speed, direction, and lighting. A companion Plug-and-Play 16-bit Tsunami® sound module that can be plugged into the factory installed decoder provides sound specific to the prototype. The DCC-equipped locomotive has an MSRP of $525.00. The special 2-4-4-2 sound module is sold separately at $119.00.



Here's a preview of a resin On30 box-car under development by **Boulder Valley Models** (boul-dervalleymodels.com). According to BVM owner Dallas Mallerich, the design of the 18' single- sheathed car was inspired by low-riding U.S. Army cars that once rode the rails of the East Broad Top. Details on availability and pricing will be announced soon.

San Juan Car Company (sanjuancarco.com) has new detail parts for narrow gauge C-16 Consolidation locomotives that are suitable for either On3 or On30 models. Available in limited quantities are both fluted and round dome sets (the sets include both steam and sand domes), tender air tank, locomotive bell, sander details, and a tool box. Also available are Jackson & Sharp passenger car parts including car sides and ends, floor and clerestory roof sets, sides and ends with (early) round top windows, duckbill roofs, and end fascia. For additional information including pricing go to sanjuancarco.com/pindex.asp.

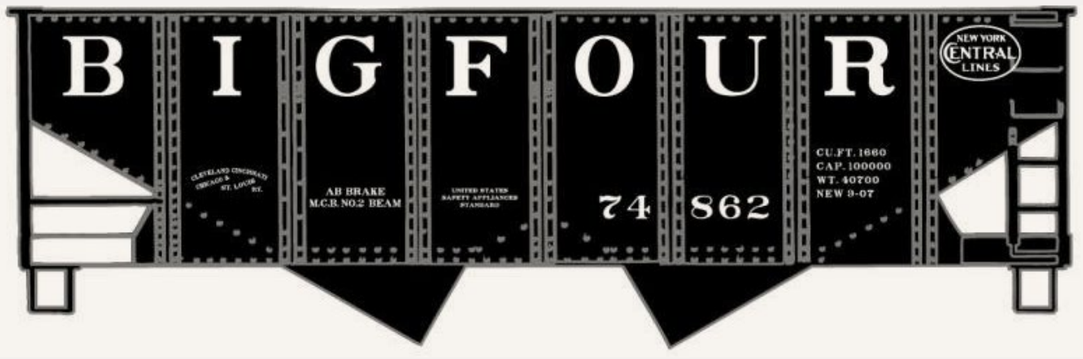
Morgan Hill Models (morganhillmodels.com) has introduced two new kits for 16' On30 scale flat cars with special loads. The new kits (next page) are for an Industrial Water Car (left) and a three-tank Fuel Oil Car (right). The kits are composed of cast resin frame and detail components, plus basswood for decking and supports. The instructions include suggestions for painting, staining and weathering. The kits are priced at $29.95 each. Note that the Morgan Hill kits do not include decals, trucks, or

couplers. For purposes of illustration only, the assembled models shown here are fitted with Macleod Western T-16 trucks and Kadee® No. 5 couplers.

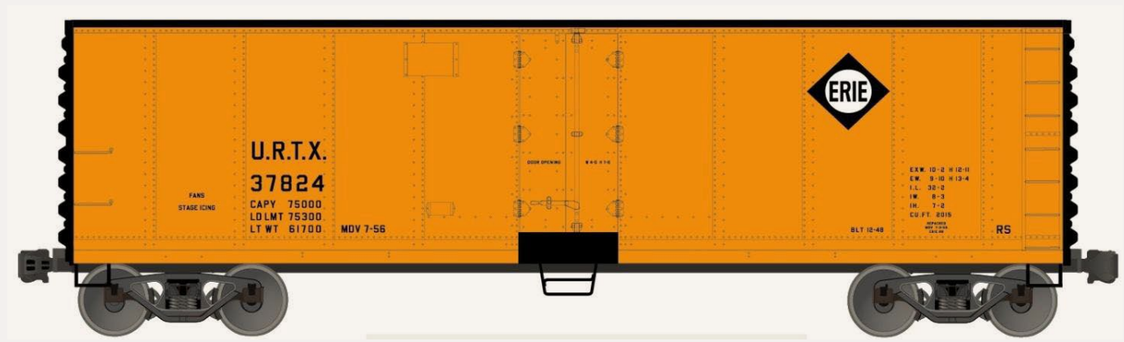
RSlaserKits (rslaserkits.com) has introduced an O scale kit called Randolph Depot. The model is based on a prototype that served the 2-foot Kennebec Central Railroad in Randolph, Maine. More than 230 pieces of precision laser-cut wood are included in the kit which can be built in either the early or late version of the depot. The overall footprint is 12.75" wide x 10" deep. The main structure without the platform is 9" x 9". The kit has an MSRP of $198.99.

NEW PRODUCTS FOR HO SCALE

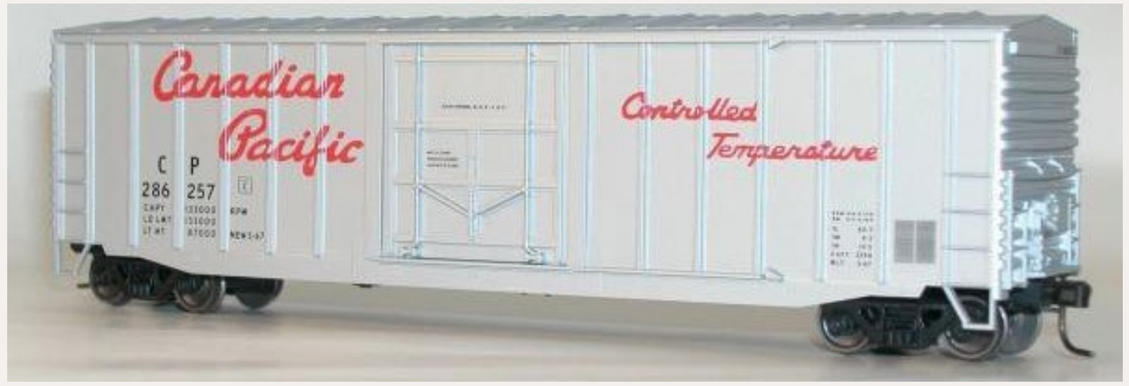
Accurail Inc. (accurail.com) has introduced five new kits for HO scale freight cars this month. Each of the easy-to-assemble kits includes appropriate trucks and Accumate couplers. All prices mentioned are MSRP. The kits include:



A 55-ton USRA two-bay hopper car decorated for New York Central - Big Four at $14.98 each.



Accurail is selling a kit for an HO scale 40’ steel refrigerator car with swing doors at $16.95 each. The car is decorated for URTX with an Erie herald.



A Canadian Pacific 50‘ exterior-post steel boxcar at $15.98. The silver body is decorated with black and red lettering including a Controlled Temperature slogan. The car is also available in a special 3- car limited run with different road numbers at $45.98.

This three-bay Soo Line covered hopper built by American Car & Foundry for grain service is available as an HO kit at $16.98 each. The decorating graphics includes a stylized golden wheat stalk. In addition to single kits, Accurail is selling the Soo Line car in a 3-pack at $47.98.

Also new is a kit for a 41’ steel gondola decorated for T&NO with a Southern Pacific herald at $15.98 each. A limited-run 3-pack of the cars with different road numbers is available at $45.98.

The first all-new locomotive coming from **Athearn** (athearn.com) this year will be an EMD GP50. Three versions of the HO scale Genesis series ready-to-run model are scheduled for delivery in September. They

will be available in four road numbers each for Santa Fe (blue and yellow warbonnet scheme), Chicago & North Western (yellow scheme), and Southern Railway (Tuxedo scheme).

Athearn's non-sound GP50s will be DCC-ready using Quick Plug™ technology. They will have an MSRP of $189.98 each. Sound-equipped GP50s will have Soundtraxx® Tsunami® DCC decoders. They will list at $289.98.

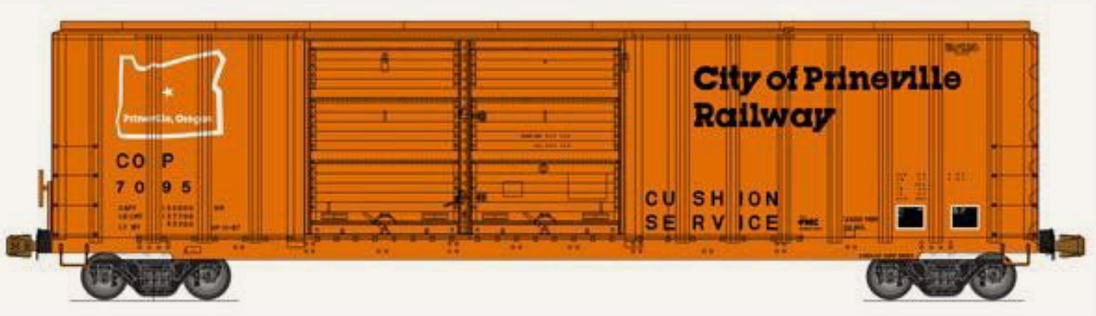
Prototype-specific details for the three road names are outlined in this chart.

Athearn GP50 Features	ATSF	C&NW	So.
Anticlimbers, Phase I		X	
Anticlimbers, Phase II	X		
Anticlimbers, Notched			X
High Short Hood			X
Interior Setup for Long Hood Forward			X

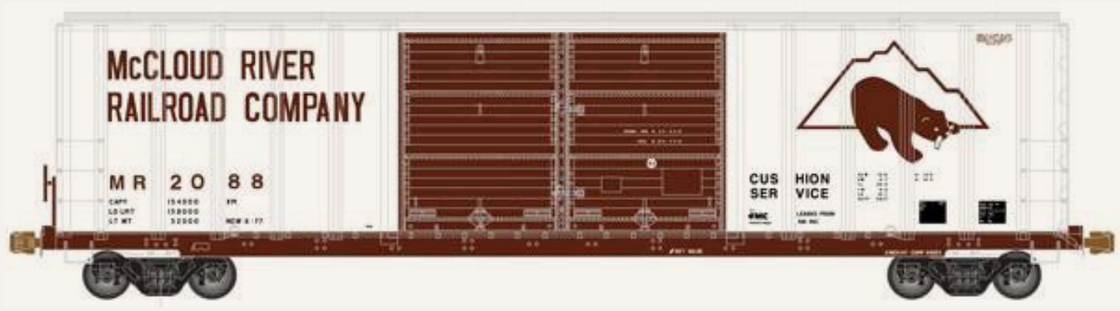
Athearn GP50 Features *Continued...*	ATSF	C&NW	So.
Bell, Mounted on Long Hood			X
Gong Bell		X	
Horn, Leslie S-3 Mounted on Bracket	X		
Horn, Leslie S-3		X	
Horn, Dual Nathan P5			X
Toilet Hatch	X		
Air Conditioner	X		
Beacon, Stratolite, Operates with DCC		X	
Beacon, Western-Cullen Rotary, Operates/DCC		X	
Sunshades, Standard with Track	X	X	
Sunshades, Small			X
Mirrors/Windwings		X	X
Battery Box Doors, Hinged and Latched	X		
Battery Box Door, Bolted with Long Louvers		X	
Battery Box Door, Bolted with Center Stiffener			X
Antenna, Sinclair Ice-skate	X	X	
Antenna, Firecracker-type for Loctrol*			X
Loctrol Conduit			X
Blower Housing, Phase I		X	X
Blower Housing, Angled Phase II	X		

Athearn GP50 Features *Continued...*	ATSF	C&NW	So.
Tall Handrail	X		
Sill, Straight Side	X		
Sill, Stepped Side		X	X
Winterization Hatch		X	
Number Board, White with Black Numbers*			X
Dual Vertical Fuel Gauges			X
Walkway Lights			X
Dropped Grab-iron at Fan			X

**Southern GP50s numbered 7008H and 7010H will have three firecracker antennas, conduit for Locotrol, and white number boards with black numerals. SR locomotives numbered 7059X and 7072H have one firecracker antenna and black number boards with white numerals. Locomotive No. 7059X is sub-lettered CNO & TP. Locomotive No. 7072H is sublettered NS.*



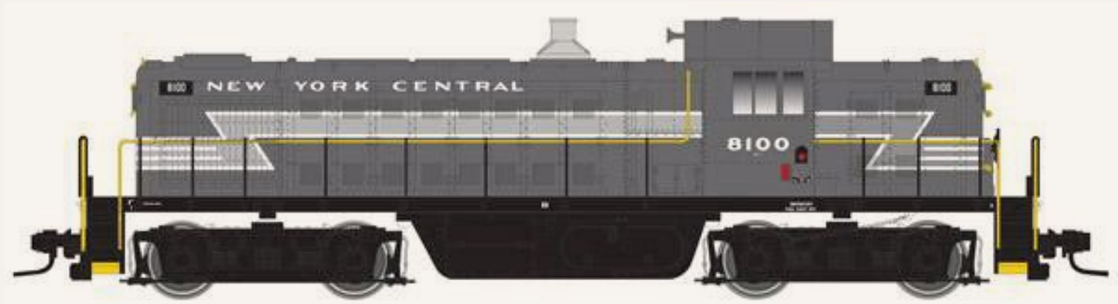
Atlas (atlasrr.com) will begin delivery of a brand new FMC 5077 cu ft double-door boxcar during the second quarter of 2013. Details on the Plate B car include an X-panel roof; corrugated, non-terminating ends; wire grab irons; etched metal parts; and 70-ton roller bearing trucks. The initial release will include cars with offset doors decorated for Texas Oklahoma & Eastern (blue and white scheme), and City of Prineville Railway (previous page).



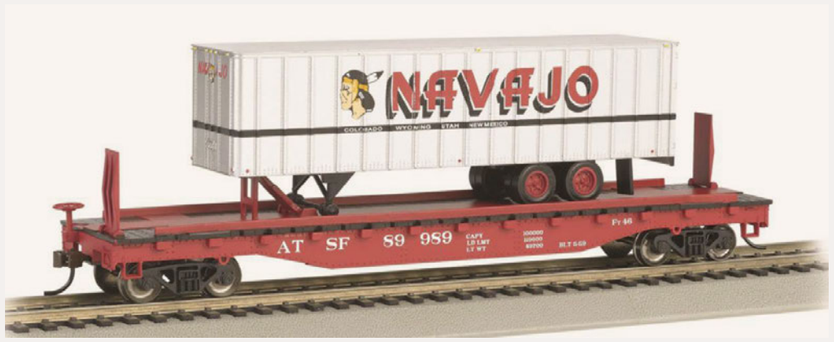
Road names for cars with centered double-doors will be Western Pacific (brown and white feather scheme), and McCloud River Railroad Company (above). The Atlas Master® series ready-to-run HO scale car have an MSRP of $35.95. Undecorated versions of both door styles list at $29.95.

Also due from Atlas in the second quarter is a third production run of its Trainman® series 1937 AAR 40’ boxcar. The standardized prototype had a 10’ interior height, Dreadnaught ends, and a straight panel roof. Atlas applies a Youngstown door to cars decorated for Lackawanna, Lancaster & Chester; Monon; Ontario Northland; Soo Line; and Santa Fe (above with straight map and Scout slogan on

opposite side). The HO scale ready-to-run model will have an MSRP of $15.95. An undecorated version will list at $11.95.



Atlas has retooled the die-cast chassis of its Master® series ALCo RS-1 diesel locomotive and plans to release the HO scale model with new paint schemes in the third quarter of this year. Road names with two locomotive numbers each include Milwaukee Road; National Railway of Mexico; New York, New Haven and Hartford; Soo Line; Spokane International; Tidewater Southern; and New York Central (above). Atlas Classic Silver models for standard DC operation will have an MSRP of $149.95. Classic Gold models with an ESU LokSound dual-model DCC decoder will list at $259.95. A complete data sheet on the LokSound system can be accessed at atlasrr.com/Images/HOLocomotives/hors3/0812/Revised%20ESU%20Data%20Sheet.pdf.

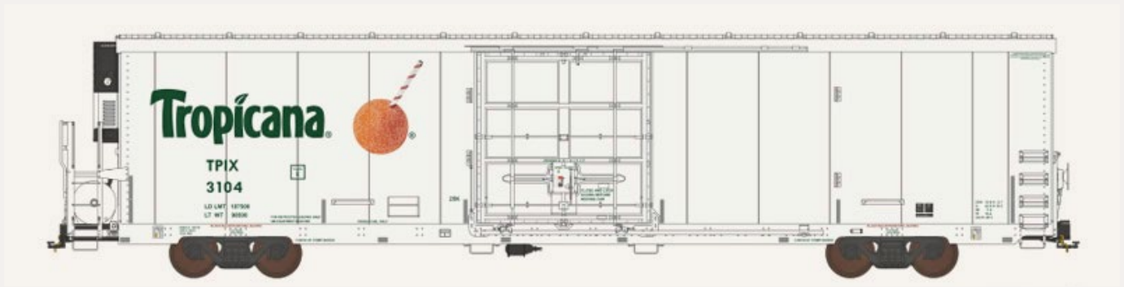


Bachmann (bachmann-trains.com) is selling a 52’ 6” flat car with a 30’ truck trailer. The HO scale ready-to-run flat car features a positionable ramp and appropriate trucks with metal wheels. Road names include Santa Fe with a Navajo Freight Lines trailer, Baltimore & Ohio with a REA trailer, New York Central flat with an NYC trailer, Reading flat with a Reading trailer, Atlantic Coast Line flat with a Yale trailer, and a Western Maryland flat with a WM trailer. Bachmann’s combination flat car with trailer has an MSRP of $39.00.

Blackstone Models (blackstonemodels.com) has scheduled a second release of its 2-8-0 class C-19 Consolidation locomotive for delivery this spring. The HOn3 models represent the narrow gauge locomotives as they appeared from the mid-1910s through the 1950s with variations in cabs, pilots, tenders, and domes.

Blackstone’s C-19 will be available decorated as D&RGW No. 342 with Royal Gorge Route herald, D&RGW No. 345 with Flying Grande herald, D&RGW No. 346 post-wreck version with Flying Grande herald, D&RG class 70 No. 401, and RGS numbers 40 and 41 with Rising Sun heralds. Painted but unlettered versions are also be in the mix including a model fitted with a diamond stack and painted to simulate Russia Iron (above). All of the locomotives will be equipped with golden-white LEDs, Kadee® No. 714 couplers, and a custom SoundTraxx® Tsunami® sound system. The MSRP is $499.95

for non-weathered versions and $554.95 for weathered versions.

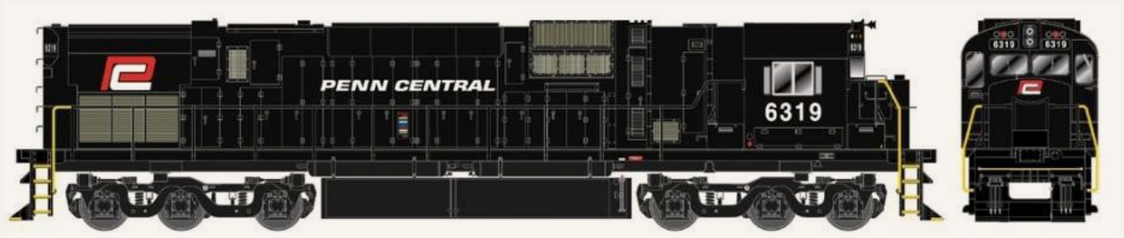


BLMA (blmamodels.com) is applying new contemporary graphics to its 64’ TrinCool refrigerator car. The distinctive TPIX-Tropicana car is equipped with a ThermoKing refrigeration unit at one end. Additional features of the HO scale car include separately applied wire grab irons, wire uncoupling bars, 100-ton trucks with 36” metal wheels, and Kadee™ #156 couplers. BLMA is offering the ready-to-run model in 24 unique numbers at an MSRP of $34.95 each. For the benefit of modelers who adhere strictly to prototype practice, BLMA noted that it is offering this model as a stand-in since it differs slightly from prototype that wears this particular decorating scheme.

Bowser (bowser-trains.com) will release a new HO scale Executive Series streetcar this fall. The injection molded plastic body will be fitted with window glass, operating roof poles, and a functioning headlight. The ready-to-run model will be

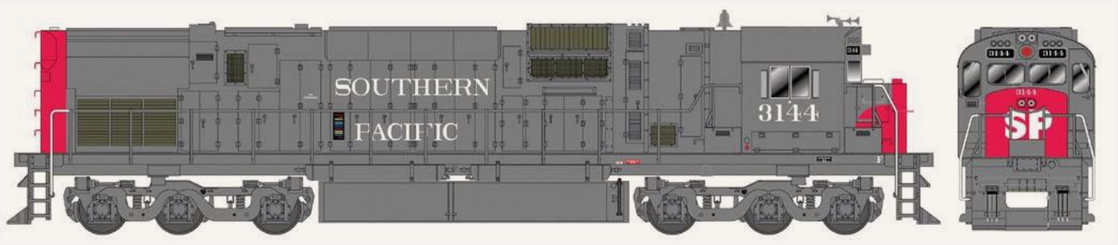
powered by Bowser’s new 4’ 10” wheelbase truck with a can motor and flywheel.

Decorating schemes on the initial production run include three car numbers for New Orleans RTA with destinations signs for Canal Run, Ferries, and St. Charles (green body with brown doors, above). Two car numbers each will be available for Atlantic City (orange and white), Chicago (red and cream), Philadelphia PRT (orange body with brown doors, above), and Philadelphia Red Arrow Line (dark red and cream). DC models will have an MSRP of $149.95. DCC models come with Tsunami®Sound decoders and will list at $249.95. Orders for fall delivery are due by March 15.



Reader Feedback (click here)

Bowser is now selling an HO scale version of an ALCo Century C-630 diesel locomotive. The Executive series ready-to-run model has brass MU and air hoses, etched windshield wipers, steel grab irons, steel uncoupling lever, operating headlight, and window glass.



Depending on the prototype being modeled, Bowser's C-630 will come with either General Electric HiAd™ or GSC Tri-Mount trucks (see sidebar). Bowser is offering the HO scale ready-to-run model in sixteen different decorating schemes including Reading (Bee Line scheme with GE Hi-Ad™ trucks), Reading (Rocket II version with Tri-Mount trucks), Penn Central (large, small, or red PC logo, all with Tri-Mount trucks), Conrail Patch (ex-PRR and ex-Reading with Tri-Mount trucks, also ex-Reading with HiAd™ trucks), Conrail (blue with a choice of Tri-Mount or HiAd™ trucks), C&O (HiAd™ trucks), Southern Pacific, Pennsylvania, and Union Pacific (all with Tri-Mount trucks). The DC model will be $189.95, with the SoundTraxx Tsunami DCC digital decoder version priced at $299.95.

High Adhesion Trucks

High adhesion diesel locomotive trucks are designed to minimize the weight transfer that takes place within the truck when a locomotive accelerates, especially as it is getting under way. The problem is similar to what you experience in an automobile when, during acceleration, the rear hunkers down and lifts weight off the front end. General Electric's HiAd™ trucks utilize mechanical design characteristics and microprocessors to control weight transfer and wheelslip. General Steel Casting Corporation's Tri-Mount truck minimizes weight transfer with a three-point support for the locomotive body. In addition to the truck center plate, pads on the top surface of each truck sideframe mate with slide plates on the underside of the locomotive frame.

Funaro & Camerlengo (fandckits.com) has kits for two versions of a 36' rebuilt New Haven double-sheathed wood boxcar. Item 5093, shown here, has Youngstown steel doors and Dreadnaught ends. Item 5094 has wood doors and braced ends. These HO scale kits are composed of one-piece cast resin bodies, detail parts, and appropriate decals. The kits are priced at $44.99 each. Trucks and couplers are not included.

InterMountain Railway (intermountain-railway.com) has announced plans to produce an HO scale GP16. For those not

Reader Feedback (click here)

familiar with the relatively rare prototype, GP16s are generally remanufactured from worn out GP7s that have been stripped and completely refurbished with new and/or rebuilt electrical components including all wiring, generators and truck motors; cabs are rebuilt with new windows, interiors and controls; prime movers are sent to engine specialists that rebuilt them and add the latest fuel efficiency devices; and the exterior is stripped, dents are pounded out and rusted areas replaced. Within a relatively short period of three months or so, a fresh GP16 emerges at about half the cost of buying a new locomotive. Exterior details such as the location of various cabinets and fans sometimes varied from one GP16 to the next, which will present an interesting challenge to prototype modelers.

InterMountain notes that both DC and DCC versions of the newly-tooled HO model will be offered. A list of about 24 railroads that have owned GP16s are listed on InterMountain's web site, but the road names for the initial release are not yet identified. Pricing and arrival dates are also pending.

InterMountain will release another production run of the ever-popular F3 locomotive in late spring. Both A and B units of the HO scale diesel will be offered in six new paint schemes plus a rerun of two previously issued road names. New road names will be Nashville, Chattanooga & St. Louis (blue and gray); Great Northern (orange scheme); Great Northern (two-tone green); Southern Railway (black); Chicago Great Western (maroon); and Lackawanna (freight scheme). The reruns will be for Santa Fe warbonnet, and Union Pacific (above). DC versions of the ready-to-run locomotives will be priced at $119.95 for the A units and $109.95 for B units. A and B units with factory installed DCC sound decoders will be $189.95 and $179.95 respectively. All prices are MSRP.

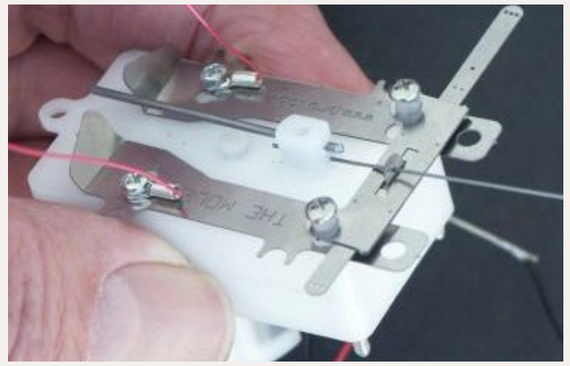
Coming this month from **Kadee Quality Products** (kadee.com) is a Norfolk & Western 40' PS-1 boxcar with an 8' Youngstown steel door. Built new in 1956, the HO scale model reflects the black paint and bold lettering the prototype received when shopped in 1980. The ready-to-run model has an MSRP of $33.95.

Kadee has scheduled an April delivery date for a 40' PS-1 boxcar decorated for Birmingham Southern Railroad, the Alabama-based shortline that primarily served U. S. Steel Corporation. The HO scale ready-to-run car will be fitted with a 6' Superior

door and painted in the 1952 as-delivered red oxide. The MSRP is $32.95. A similar Chicago North Western boxcar with an 8’ P-S door is also scheduled for delivery in April. It will have an MSRP of $35.95.

The third new Kadee car due in April is a 40’ PS-1 boxcar with an 8’ PS door decorated for Missouri Pacific. In addition to MP’s familiar circular-saw herald, the car displays slogans for both DF2 Loader, and Route of the Eagles. The ready-to-run HO scale model has an MSRP of $34.95 and is painted in 1960 as-new boxcar red.

Moloco (molocotrains.com) is offering its Freightmaster ME-10 EOC cushioning unit in a Fleet-Pak of ten pair. The ME-10 EOC cushioning unit is designed for Kadee™ Whisker® couplers. It is correct for application on 50’ through 89’ box, refrigerator, caboose, gondola, and flat cars. The EOC units are applied to cars with a fixed sill for a 10” travel in each end. This kit reproduces the fixed draft end sill and cushion unit all in one part with an external return spring. Each EOC includes fixed end sill/cushion unit (same width as Kadee #78 coupler box), coupler covers, screws (use 1/16” tap drill for car body mounting), air hose brackets, and Hi-Tech rubber air hoses. The Fleet-Pak is available direct only at $66.00.



Proto87 Stores (proto87.com) has introduced The Mole V1.1, a versatile stall-motor switch machine that offers several mounting options. In addition to its small size, the V1.1 features a double acting sideways operating arm and built-in SPDT contacts for power routing to frogs and signals.

The V1.1 can be installed under the layout, surface mounted by the turnout, or in any location with mechanical action by a wire-in-tube or other mechanical linkage. The unit operates from switched +/- 12 volt DC at nominal 30 mA stall current. The V1.1 comes with two 200 ohm resistors which require soldering. The Mole V1.1 weighs approximately 3 ounces and is available at $12.95 each.

RSlaserKits (rslaserkits.com) has introduced an HO scale kit called Randolph Depot. The model is based on a prototype that served the 2-foot Kennebec Central Railroad in Randolph, Maine. More than 230 pieces of precision laser-cut wood are included in the

kit which can be built in either the early or late version of the depot. The overall footprint is 7” wide x 5.5” deep. The main structure without the platform is 5” x 5”. The kit has an MSRP of $124.95.

Walthers (walthers.com) will begin shipping its Proto™ ACF Type-21 10,000 gallon insulated tank car this month. Six decorating schemes have been produced. Cars with black tanks and white lettering include EORX-City Service (above), GATX, MPCX, and SDRX-Sinclair. MPCX will be available on a white tank, and TCX-Texaco on a silver tank. The ready-to-run HO scale models have an MSRP of $39.98 each.

Walthers has introduced a new idea with three restored private passenger cars plus a Cornerstone® structure kit for a Railcar Restoration and Charter service. The HO scale structure has an MSRP of $49.98. The assembled model measures 13.62” x 8.75” x 5.13” high.

The HO scale ready-to-run cars include a Pullman-Standard club lounge (above) and a 6-4-1 sleeper observation. Both are colorfully decorated in a purple charter scheme with smoke tinted windows. Also available is a Budd-built drawing room / lounge car that is depicted while still undergoing restoration. The fluted car has both partially tarnished and partially restored stainless sides. Each of the three cars has an MSRP of $69.98. The purple charter cars are also available with interior lights at $79.98 each.

Also new from Walthers is an HO scale kit for a 3-story brick Jewelry Store featuring curved glass display windows and a simulated marble façade. Dimensions of the assembled building are 3.56” x 5.87” x 6.0” high. Printed interior details are included with the kit which has an MSRP of $39.95 each.

N SCALE PRODUCT NEWS

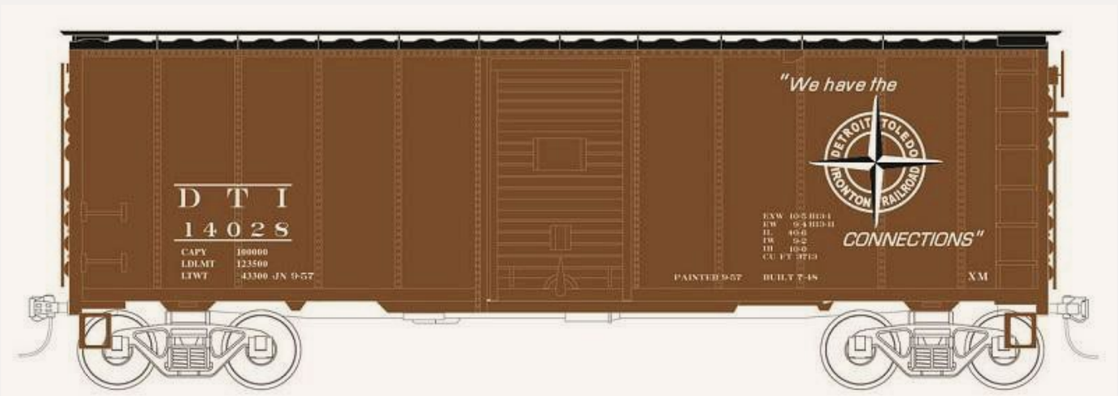
New N scale models scheduled to arrive from **Atlas** (atlasrr.com) in the second quarter of 2013 include a Trainman® series C&O-style all-steel cabooses. The

ready-to-run cars follows prototypes built originally built by Magor and later by both ACF and St. Louis Car Company. New road names will be Alaska Railroad, B&M, Delaware & Hudson, Grand Trunk Western, Norfolk Southern, Santa Fe, and Providence & Worcester. New numbers on previously released roads include Pere Marquette, C&O (yellow and blue scheme), and C&O in red with white lettering as seen here. The MSRP will be $18.95. An undecorated model will be available at $13.95.

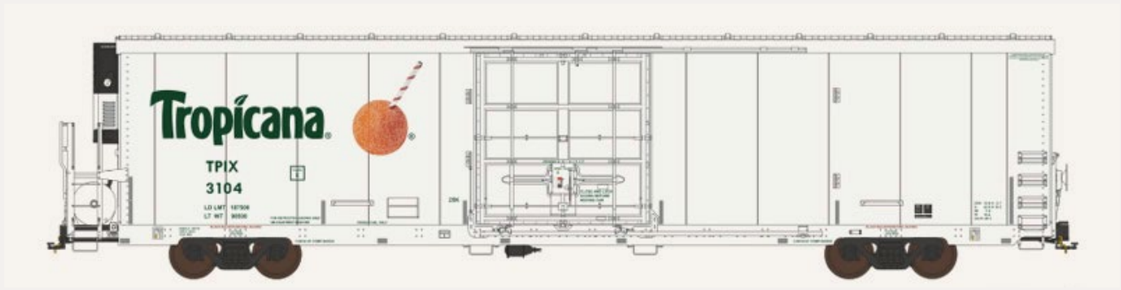
Also scheduled to arrive during the second quarter of this year is an Atlas Trainman® series two-bay Centerflow hopper car. Road names on this third production run of the ready-to-run car will be ACFX, Conrail, CSXT (here), Winchester & Western, NAHX, and Southern Pacific. The N scale ready-to-run model will have an MSRP of $14.95. An undecorated version will be available at $11.95.

Atlas plans to deliver its Master® series GP38-2 diesel locomotive in new paint schemes during the third quarter of this year. Road names on the N scale ready-to-run model include CP; DT&I; Elgin, Joliet & Eastern; Guilford (B&M); ICG; KCS; St. Laurence & Hudson; and SP (above). Undecorated versions both with and without extended dynamic brake housings will also be available. Standard DC locomotives will have an MSRP of $119.95, while units with a factory installed NCE DCC decoder will list for $154.95.

New contemporary graphics will be featured on the next release of **BLMA's** (blmamodels.com) 64' TrinCool refrigerator car. The distinctive TPIX-Tropicana car is equipped with a ThermoKing refrigeration unit at one end. The N scale ready-to-run model will be available in 24 unique numbers at an MSRP of $26.95 each. For the benefit of modelers who adhere strictly to prototype practice, BLMA noted that it is offering this model as a stand-in since it differs slightly from the prototype that wears this particular decorating scheme.



Deluxe Innovations (deluxeinnovations.com) has scheduled a third quarter delivery date for a 1944 AAR 40' boxcar decorated



for Detroit Toledo & Ironton. The decorating scheme consists of a brown body, black roof, and DT&I's distinctive compass herald. Additional details are positionable Youngstown doors, and etched metal running board, brake wheel and sill steps. The N scale ready-to-run model will come in six road numbers with an MSRP of $23.95 each. Also new are 40' refrigerated containers decorated for Transamerica Leasing in a 2-pack at $18.95, and decorated for APL in a 5-pack at $39.95.

Great Lakes Models (greatlakesmodels.com) has added a kit for an N scale version of a nondescript shed. It is based on a farm structure in Holland, Wisconsin, however the design lends itself to numerous applications including railside as a tool or light equipment shed. The principal components of the kit are laser-etched styrene. It is available with either a wood shingle roof or a metal roof as seen above. Either style is available at an MSRP of $22.36 each.

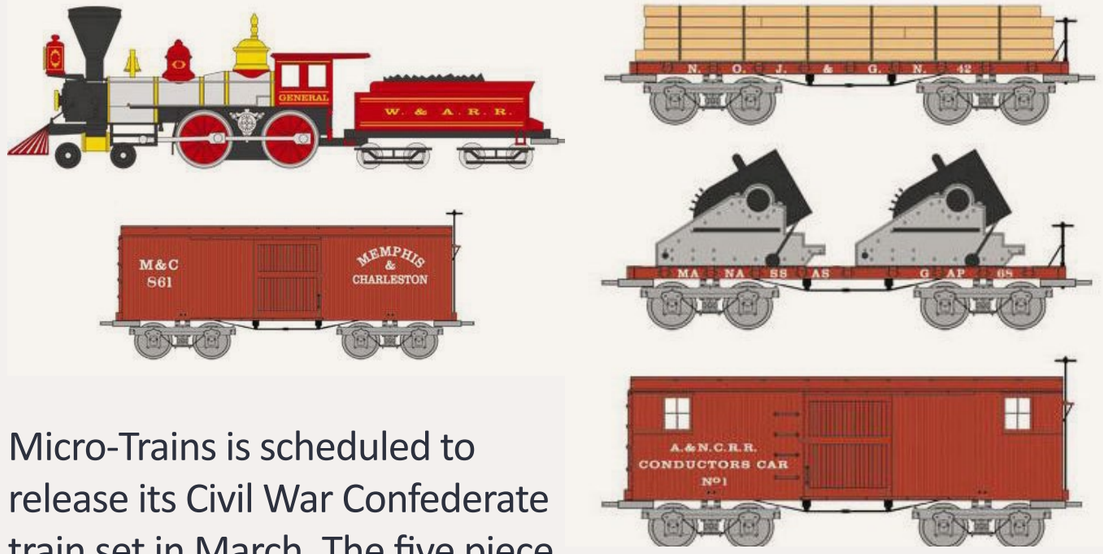
InterMountain Railway (intermountain-railway.com) will release another production run of the ever-popular F3 locomotive in late spring. Both A and B units of the N scale diesel will be offered in six new paint schemes plus a rerun of two previously issued road names. The reruns will be for Union Pacific and Santa Fe warbonnet. New road names will be Nashville, Chattanooga & St. Louis (blue and gray); Great Northern (orange scheme); Great Northern (two-tone green); Southern Railway (black); Chicago Great Western (maroon); and Lackawanna (freight scheme). The A units of the ready-to-run locomotives will have an MSRP of $99.95 each. B units list at $94.95.

Kato (katousa.com) has N scale models of General Electric's 4200 horsepower P42 Genesis locomotives in five different Amtrak paint

schemes. The selection includes 40th Anniversary Phase I (road number 156), Phase II (#66), Phase III (#145, top photo), and Phase IV (#184, above). Amtrak phase Vb versions will be available for road numbers 61 and 80. The ready-to-run models have an MSRP of $120.00 each.

Also available from Kato are three variations of Metra F40PH locomotives. The colorful commuter units are distinguished by names on side of the cabs that read City of West Chicago, City of Elmhurst, and Village of Winfield. The new models are equipped with a revised circuit board that provides directional head and tail lights on the nose for push-pull operation, and new Metra-specific roof detailing. The ready-to-run N scale models have an MSRP of $120 each.

Micro-Trains Line (micro-trains.com) will release a 4-car pack of Chesapeake & Ohio three-bay covered hopper cars in March. The ready-to-run set of N scale cars has an MSRP of $109.95. Scheduled for arrival in April is a 4-car pack of CP Rail boxcars in yellow with the distinctive Pac-man scheme in black and white at one end of the car.



Micro-Trains is scheduled to release its Civil War Confederate train set in March. The five piece set includes the W&A Railroad's 4-4-0 General steam locomotive, a Memphis & Charleston boxcar, NOJ&G flat car with a lumber load, a Manassas Gap flat car with two 13" siege mortar guns, and a side-door caboose decorated for the A&N Railroad. The cars feature new underframe and truss rod detail, rigid-frame trucks, and simulated link & pin-style couplers. The set has an MSRP of $189.95. The locomotive is produced by Bachmann®. The simulated link & pin couplers are not designed for automatic coupling and uncoupling.

Individual Civil War-era cars decorated for the United States Military Railroad will be released in March. They include a boxcar and side door caboose at $17.70 each, and a flat car with a load at $16.90 each. All prices are MSRP. The same cars decorated for the W&A Railroad are scheduled for release in April.

RSlaserKits (rslaserkits.com) has introduced an N scale kit called Randolph Depot. The model is based on a prototype that served the 2-foot Kennebec Central Railroad in Randolph, Maine. More than 230 pieces of precision laser-cut wood are included in the kit which can be built in either the early or late version of the depot.

The overall footprint is 3” wide x 3.75” deep. The main structure without the platform is 2.625’ square. The N scale kit has an MSRP of $49.95.

Trainworx is taking advance orders for a new North American Car Company (NACC) PD 3000 covered hopper the company plans to deliver this summer. Road names on the N scale ready-to-run model will be Conrail Flexi-Flo (patch), NAHX-Demonstrator (red, white and blue NACC logo), NAHX-Filtrol Catalysts, NAHX-National Minerals Corporation, NAHX-IMCO Services, Penn Central Flexi-Flo, CEFX-CIT Group/Capital Finance, BJHX-BJ Titan, PPGX-PPG Industries, and BCAX-Blue Circle Cement. The model will have an MSRP of $27.95. Trainworx brand products are marketed by InterMountain Railway.

For additional information visit **intermountain-railway.com**.

Reader Feedback (click here)

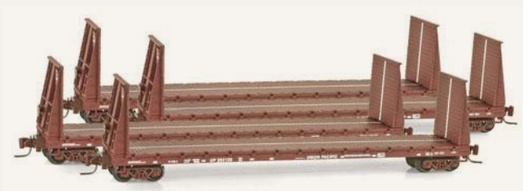
NEW PRODUCTS FOR Z SCALE

American Z Line- AZL (americanzline.com) has a Union Pacific 4-8-8-4 Big Boy steam locomotive available now in five road numbers. The Z scale ready-to-run model has an MSRP of $1999.00.

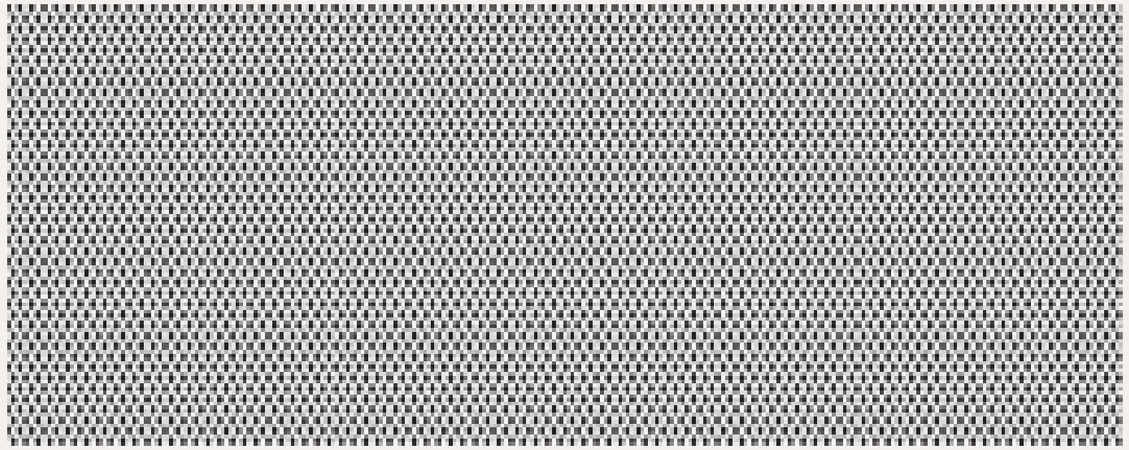
Also new from AZL are four different heavyweight passenger cars decorated in two-tone grey. The cars include 12-1 and 10-1-2 Pullman sleepers, a 28-1 parlor car, and a 36-seat diner. The Z scale models are available with several different car names. They have an MSRP of $48.00 each.

Next month **Micro-Trains Line** (micro-trains.com) will release Northern Pacific two-bay hopper cars with a simulated coal load. The 4-pack of ready-to-run Z scale models will have an MSRP of $109.95.

Scheduled for release in April is a new bulkhead flat car decorated for Union Pacific. The Z scale ready-to-run cars will be available in a 4-pack at an MSRP of $74.95.



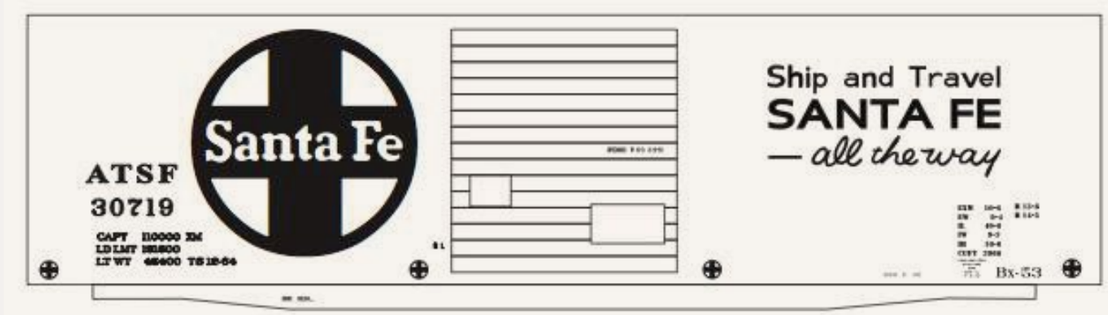
NEW DECALS AND FINISHING PRODUCTS

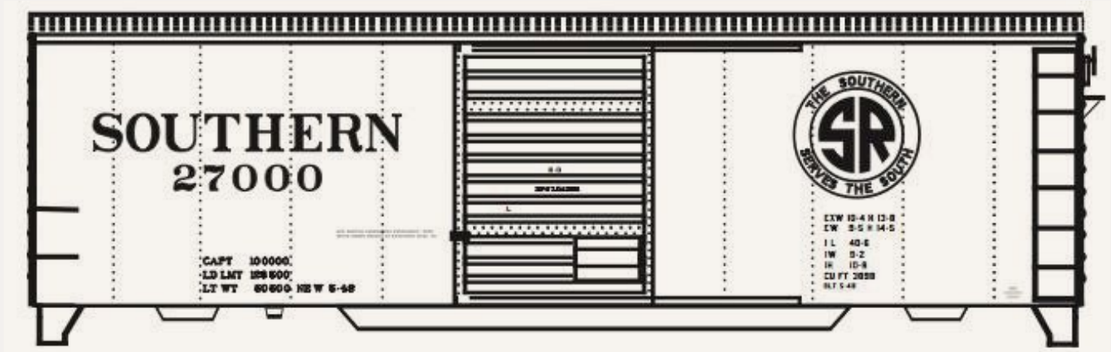


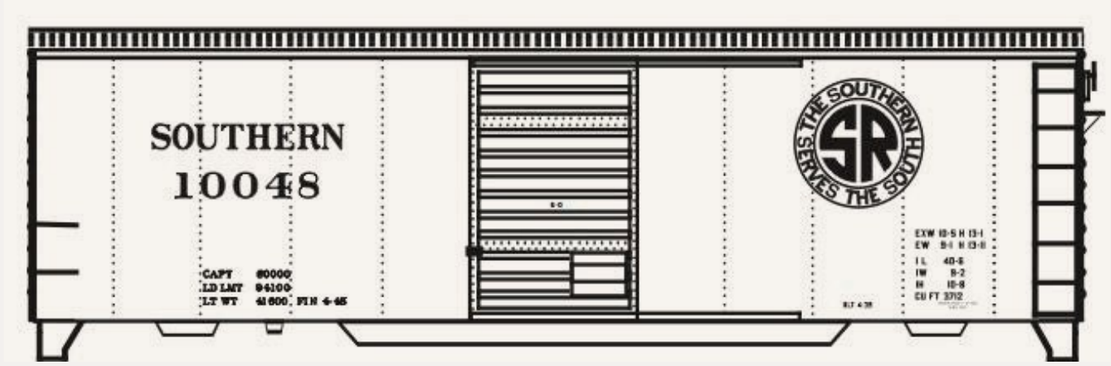
Archer (archertransfers.com) has introduced a waterslide decal that simulates mesh or expanded metal grilles commonly used on industrial equipment including railroads. This is a simple and inexpensive alternate to photo-etched material. The item is available for G, O, and S scale, with the latter being suitable for some HO applications. The grille decal comes in 6.4” square sheets at $6.95 each.

Jerry Glow (home.comcast.net/~jerryglow/decals) has released new decals for CNJ PS-2 covered hoppers, CNJ XM3 and XM4 boxcars, and CNJ Bethlehem clone gondolas. HO scale decal sets are $4.50. Decals are available for Z to G scale. Visit the above website for a full list of decals currently available.

New HO scale decals from **Mask Island** (maskislanddecals.com) include Santa Fe 40’ boxcar with large herald and Ship and Travel slogan (above), Texas & Pacific (MP patch) 50’ boxcar, and Southern Railway 40’ boxcar with two styles of letters. The SR set will decorate one of each style shown below. Mask Island decals are priced at $6.00 per set.







Microscale (microscale.com) has new decals for Herzog and RailGon gondolas, Ontario Northland hood diesels, UP yellow sans-serif lettering for dark green heavyweight passenger equipment, and modern graffiti (next page). Also new are sheets of miscellaneous tank car data for Trinity 17,600 gallon, ACF 17,300 gallon, and ACF 13,000 gallon acid and LPG cars.

The tank car decals are available in both black and white lettering. Future releases under development include decals for Ferromex diesels, L&N ACF Centerflow hopper cars, Reading 40’ and 50’ boxcars, and C&O passenger cars.

Prime Mover Decals (primemoverdecals.com) of Long Valley, New Jersey, has released new HO scale decal sets for Erie Lackawanna 50’ red boxcars, and Erie Lackawanna/NIRX leased 50’ RBL boxcars. Both sets offer multiple lettering variations for different classes of EL cars. The decals are priced at $5.95 per set. Currently under development are decal sets for DL&W boxcars, and EL gondolas, flats, and boxcars.

DISCLAIMER ..

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Briefly noted at press time...

. . . Here's a quick summary of some of the new items shown at the recent Amherst Railway Society Railroad Hobby Show.

MTH displayed an early production sample of its O scale GP30 with Proto-Sound 3.0 decorated for Norfolk Southern, Burlington, Chessie, and Alaska Railroad. The MSRP is $439.95.

InterMountain Railway displayed both HO and N scale samples of an ACF two-bay covered hopper with new paint schemes. They included The Rock, ACFX-Saskatchewan Minerals, CNW, Southern, BN (green), BNSF (boxcar red), GTW and Great Northern.

Atlas O showed samples of its Trainman® series 62' bulkhead flat cars scheduled for release during the second quarter of this year. Road names will be BNSF, CP, IC, TTPX, and UP. Cars with 3-rail trucks will have an MSRP of $46.95, 2-rail at $49.95.

Also in the Atlas booth were N scale Thrall 4750 cu ft covered hopper cars scheduled for release this quarter. Road names will be First Union Rail, Illinois Grain, Scoular, and SSAM. The cars have an MSRP of $22.95. Undecorated versions will list at $18.95.

For the HO crowd, Atlas showed its ACF 23,500 gallon general purpose insulated tank car in six new paint schemes including Ennar Latex, Exxon, Invista, J&J Railcar Leasing, and Southern

Continued on next page ...

Briefly noted at press time continued ...

Rail Associates. The MSRP will be $32.95 with an undecorated model listing at $27.95.

Fox Valley released its 2013 schedule which includes class M-53 wagon top boxcars decorated for three well-known model railroads: Allegheny Midland, Virginia & Ohio, and Cumberland Valley System. Prototype roads will include B&O in a bold billboard scheme. All of the above cars will have Youngstown doors. Flat door versions of the M-53 wagon top cars will be available for B&O Express (green), and the 1939 Worlds Fair. HO models will be priced at $30.95 with N scale versions priced at $19.95.

Additional N scale items on Fox Valley's production schedule include three body styles of a B&O Canstock car, three-bay class H-30 hopper cars, and Milwaukee Road rib-side cabooses with oil tanks and modernized end ladders with splash guards. Paint schemes on the caboose will include MOW and St. Maries River. Fox Valley said both HO and N scale models of a Silverside gondola built from Southern Railway blueprints will be released later this year.

. . . **Charles Martin Lofton,** founder of Sunshine Models died in Springfield, Missouri, January 4, 2013. He had been ill for several months. Known to his friends and associates as Martin, he and his supportive wife Tricia have supplied hobbyists with detailed HO scale cast resin freight car kits for the past 30 years. The Loftons are credited with helping to build a national community of prototype modelers through their annual RPM meet which they introduced in Naperville, Illinois, in 1993. Martin was a member of the first graduating class of the Air Force Academy in 1959 and served his country as a pilot during the Viet Nam War. In addition to his wife Patricia, Martin is survived by a son, Charles, and daughter, Elizabeth, who also graduated from the Air Force Academy. RHB. ■

Selected Events

February 2013

ARKANSAS, SPRINGDALE, February 23, Sugar Creek Model Railroad Historical Society 10th Annual Great Northwest Arkansas Model Train Show. Holiday Inn and Convention Center, 1500 S. 48th St. Info at railroadclub-sugarcreek.org.

CALIFORNIA, SACRAMENTO, February 23-24, The World's Greatest Hobby on Tour with dozens of manufacturers displays, demonstrations, and operating equipment. Sponsored by the Model Railroad division of the Hobby Manufacturer's Association, this traveling event is designed to introduce the general public to model railroading in an entertaining, lively and family-friendly atmosphere. California Exposition & State Fair (CAL-EXPO), 1600 Exposition Blvd, 95852. Info at wghshow.com.

CALIFORNIA, SAN DIEGO, February 9-10, The World's Greatest Hobby on Tour with dozens of manufacturers displays, demonstrations, and operating equipment. Sponsored by the Model Railroad division of the Hobby Manufacturer's Association, this traveling event is designed to introduce the general public to model railroading in an entertaining, lively and family-friendly atmosphere. Del Mar Fairgrounds, 2260 Jimmy Durante Blvd, Del Mar, CA 92014. Info at wghshow.com.

CALIFORNIA, SANTA ROSA, February 16-17, The Great Train Expo, at Sonoma County Fair Grounds. Info at greattrainexpo.com.

COLORADO, ESTES PARK, February 16-17, NMRA RMR 2013 Rails in the Rockies Meet, sponsored by Estes Valley Division. Rocky Mountain Park Inn and Conference Center at Hwy 36 and Hwy 7. Details from Laura Trump at info@railsintherockies.org.

GEORGIA, ATLANTA, March 9-10, The Great Train Expo, Cobb Galleria Center. Info at greattrainexpo.com.

KANSAS, WICHITA, March 16-17, The Great Train Expo, Century II Center. Info at greattrainexpo.com.

KENTUCKY, LOUISVILLE, February 16-17, The Great Train Expo, Kentucky International Convention Center. Info at greattrain-expo.com.

TEXAS, HOUSTON, February 9-10, The Great Train Expo, Reliant Park. Info at greattrainexpo.com.

TEXAS, HOUSTON, February 16, Greater Houston Train Show, features 20,000 sq ft of operating layouts, instructive classes, model and photo contests, train videos, and vendors. Also tours of local home layouts. Hosted by San Jacinto Model Railroad Club at Stafford Center, 10505 Cash Road at Murphy Road. Info at sanjac.leoslair.com/resources/2013-Public-Flyer.pdf.

WEST VIRGINIA, CHARLESTON, February 9-10, 8th Annual Train Show, sponsored by Kanawha Valley Railroad Association at Clubhouse in Coonskin Park. Details from Joe at (304) 539-6721, or email at horter@suddenlink.net.

March 2013

AUSTRALIA, MELBOURNE, March 29-31, 11th Annual Australian Narrow Gauge Convention, Carwatha College, Noble Park North. Info at cngg.org.au/ozngc2013.

CANADA, ONTARIO, TORONTO, March 16, Annual Railway Prototype Modellers Meet, with clinics on auto frame cars, detailing prototype track work, and realistic freight car weathering. Also show-and-tell program and an open forum on

prototype modeling. Attendees are urged to bring a model(s). Humber College, North Campus, Building B, rooms B201& B202. Free parking. Fordetails including fee info contact Brian Gauer at bdgauer@rogers.com.

CALIFORNIA, BAKERSFIELD, March 9-10, Annual Model Train Show & Swap Meet, with 100 dealer tables, operating model train displays and hourly door prizes. Sponsored by Golden Empire Historical & Modeling Society Model Train Club. Kern County Fairgrounds, 1142 South 'P' Street. Hours and fee information at gehams.net.

CALIFORNIA, PERRIS, March 2, Spring Railroadiana & Swap Meet, at Orange Empire Railway Museum. Info at orem.org/upcoming-events.

CALIFORNIA, SAN MATEO, March 2-3, The World's Greatest Hobby on Tour with dozens of manufacturers' displays, demonstrations, and operating equipment. Sponsored by the Model Railroad division of the Hobby Manufacturer's Association, this traveling event is designed to introduce the general public to model railroading in an entertaining, lively and family-friendly atmosphere. San Mateo County Event Center, 1346 Saratoga Drive. Info at wghshow.com.

CALIFORNIA, STOCKTON, March 9, Winterail 2013, 35th Anniversary multi-media event featuring railroad photography from well-know photographers, plus vendor tables. Scottish Rite Masonic Center, 33 West Alpine Avenue.Info at winterail.com/Winterail_News.html.

ILLINOIS, LOMBARD, March 15-17, Chicago O Scale Meet, Westin Lombard Yorktown Center. Info at marchmeet.net.

MASSACHUSETTS, PEABODY, March 9, Annual Spring TRAINing Show, sponsored by NMRA Hub Division, Northeastern Region, with operating trains, vendor tables, and clinics ranging from fundamental to advanced including a special clinic by Paul Dolkos. Holiday Inn, 1 Newbury Street. Info at hubdiv.org.

MICHIGAN, MOUNT PLEASANT, March 24, 33rd Annual Mid-Michigan Model Train Show, with operating layouts, door prizes and more than 200 vendor tables. Proceeds to Clare Depot Preservation, Inc. & Dog Tales, Inc. Finch Fieldhouse, Central Michigan University. Free parking. Info from John Thompson at redwings48618@yahoo.com or call 989-465-6459, or Dan Foltz at MidMichiganModelTrainShow@gmail.com.

MICHIGAN, TAYLOR, March 10, Bluewater NRHS & Society of N-Scalers railroad memorabilia and all-scale model train show. Taylor Town Trade Center. Info at bluewaternrhs.com.

OHIO, KIRTLAND, March 16-17, Railfest 2013, sponsored by NMRA MCR Division 5. Ohio's largest two-day train show. Lakeland Community College near SR306 and I-90. Info at railfest.org.

OKLAHOMA, TULSA, March 22-24, 4th Annual Layout Design and Operations Weekend, hosted by NMRA Indian Nations Division. Program includes presentations by Mike Porter, Barry Karlberg, Jim Senese, Robert Bornfleth, Steve Newton, and Marc Montray. Op sessions on local layouts Friday and Saturday evening plus Sunday morning. Info at picturetrail.com/salamon.

OREGON, PORTLAND, March 9, Willamette Model Railroad Club Swap Meet, featuring more than 110 vendor tables of model railroad equipment, railroad memorabilia, books,

photos, and more. Kliever Memorial Armory, 10000 NE 33rd Drive. Free parking. For hours and fee info contact wmrswap-meet@yahoo.com.

PENNSYLVANIA, PITTSBURGH, March 22-23, RPM-East, usual learning and sharing of prototype and model railroad information, display room, and vendor exhibits. Partial speaker list includes Jim Dalberg, Jeff English, Fred Lagno, Jim Panza, Bill Schaumburg, Stan Rydarowicz, Mont Switzer, John Teichmoeller, and Tony Thompson. Thursday evening operating session on local layout, Sunday layout visits. Info at hansmanns.org/rpm_east/index.htm.

UTAH, OGDEN, March 1-3, The Hostlers Model Railroad Festival, Ogden Union Station, 25th and Wall Avenue. Info at hostlers.info.

Future 2013

AUSTRALIA, MELBOURNE, April 12-14, 13th National Australian N Scale Convention, at Rydges Bell City Event Centre, Preston. Info at convention2013.nscale.org.au or send email to nscale2013@bigpond.com.

CANADA, ALBERTA, CALGARY, April 20-21, SuperTrain, with live demonstrations, clinics, and manufacturers displays. Subway Soccer Centre, 7000-48 Street SE. For fees and hours visit supertrain.ca.

CANADA, ONTARIO, MISSISSAUGA, April 26-28, Streetsville Junction, NFR-NMRA Regional Convention featuring clinics, self-guided layout tours, and special Canadian manufactures show Friday evening. Clinicians include Chris Lyon, Graham Macdonald, Pierre Oliver, Dave Patterson, John Spring, and Paul Taylor. Awards Sunday morning at Hobo breakfast. Four Points Sheraton Hotel, 2501 Argentia Road. Call 905-858-2424 for hotel reservations. Meet info at streetsvillejunction.com.

CANADA, ONTARIO, OTTAWA, May 4-5, Ottawa Train Expo. A social and recreational event for people who enjoy railroading and model railroading. With operating trains, displays, and railroad exhibits. Carleton University Field House. Details at ottawatrainexpo.com.

CANADA, ONTARIO, SCHOMBERG (Toronto area), April 13, 8th Annual Ontario Narrow Gauge Show, Canada's only exclusively narrow gauge model train event, featuring displays, contests, clinics, and layout tours. Co-sponsored by the Narrow Gauge Madness Gang, Fast Tracks, and Mt Albert Scale Lumber. Schomberg Community Hall. Hours and fee info at narrowgaugemadness.com.

CALIFORNIA, DUBLIN, April 3-7, NMRA Iron Horse Express PCR Convention, Holiday Inn, 6680 Regional St. Info at pcrnmra.org/conv2013.

CALIFORNIA, LOS ANGELES, April 6-7, April 9, and April 13-14, Annual Spring Open House of Sierra Pacific Lines at Pasadena Model Railroad Club, one of the largest HO scale-operating model railroads in the world covering almost 5,000 square feet. Operating trains from all eras including steam, diesel, modern freight, old freight, classic passenger trains, and Amtrak. Huge layout features dramatic scenery and theatrical lighting. Club at 5458 Alhambra Ave. Info at pmrrc.org.

CALIFORNIA, PASADENA, August 28-31, 33rd National Narrow Gauge Convention. Hilton Hotel, 199 S. Los Robles St. Info at 33rdnngc.com. Volunteer clinicians please contact Carl Heimberger at clinics@33rdnngc.com.

CALIFORNIA, RICHMOND, June 22, San Francisco Bay Area Prototype Modelers meet sponsored by BAPM. St. David School, 871 Sonoma Street. Info at **bayareaprototypemodelers.net**.

CALIFORNIA, SAN BERNARDINO, April 13, Western Prototype Modelers Meet, featuring model displays, manufacturer exhibits, vendor tables, raffle prizes, and special presentations by Michael Gross and Gary Robinson -- plus live BNSF mainline railfanning. Amtrak/Santa Fe Depot (and museum), 1170 West 3rd Street. Info at **railroadprototypemodelers.com/sbdmeet.htm**. Vendors contact Joe D'Elia at **ppw-aline@att.net** or phone 760 -721-3393.

COLORADO, LONGMONT, December 8-9, Annual Train Show, sponsored by Boulder Model Railroad Club, with operating layouts, prize winning models, vendor tables, and layout raffle. Boulder County Fairgrounds. Info at **bouldermodelrailroadclub.org**.

CONNECTICUT, COLLINSVILLE, May 31 – June 1, New England/Northeast Prototype Modelers Meet. Info from Dave Owens at **daowens@gmail.com**, or **neprototypemeet.com**.

GEORGIA, ATLANTA, July 14-20, NMRA Annual Convention. Cobb Galleria Centre with convention HQ at adjacent Renaissance Waverly Hotel. Info at **nmra2013.org**.

GEORGIA, ATLANTA, July 18-20, National Train Show, in conjunction with annual NMRA convention. Cobb Galleria Centre, 2 Galleria Parkway. Info at **nmra2013.org**.

GEORGIA, PORT WENTWORTH (Savannah area), April 4-6, 13th Annual Savannah RPM. Usual RPM format with clinics, model displays, vendors, historical societies, and brotherhood. Port Wentworth Community Center on Appleby Road. Info from Bob Harpe at **Rharpe@comcast.net** or Denis Blake at **dblake7@columbus.rr.com**.

ILLINOIS, WATSEKA, April 20, Annual Meeting of Chicago & Eastern Illinois Historical Society includes swap meet, modeling display, photography, and railfanning at Woodlawn Junction. Info from Dave Forbes at **altamontc_ei@yahoo.com**.

INDIANA, INDIANAPOLIS, May 2-5, Mile Post 50, annual convention of NMRA Central Indiana Division, with layout tours, operating layouts, op sessions, clinics, and contests. Banquet speaker is Thomas Hoback, president/CEO of Indiana Railroad Company. Event info at **cid.railfan.net**. Marriott Indianapolis East, 7202 East 21st Street. Hotel reservations at 317-352-1231.

INDIANA, MIDDLEBURY, April 19-20, NMRA Michiana Division 2013 Education and Training Conference (formerly GLMRS Symposium) and Friday evening banquet. Das Dutchman Essenhaus. Info at **michiana-nmra.org**.

MARYLAND, TIMONIUM, April 13-14, Great Scale Model Train Show. One of the nation's largest shows with more than 800 vendor tables. Hosted by Howard Zane at The Cow Palace, Maryland State Fairgrounds. Information at **gsmts.com**.

MINNESOTA, BLOOMINGTON, April 25-28, 28th Annual Sn3 Symposium. Ramada Mall of America Hotel. Info at **Sn3-2013.com**.

NEW MEXICO, ALBUQUERQUE, June 6-9, Rails Along the Rio Grande, NMRA Rocky Mountain Region, Rio Grande Division 6 Convention with clinics, layout tours, train show, OpSig sessions, UPRR and BNSF modelers showcase night, and banquet. Marriott Pyramid North. Info at **rarg2013.org**.

OHIO, MARION, April 25-27, Central Ohio RPM Meet at Marion Union Station. Info from Denis Blake at **dblake7@columbus.rr.com**.

OHIO, MIAMISBURG (Dayton area), May 15-18, Operation Dayton 2013, NMRA-MCR convention with clinics, model contests, layout tours, railfanning, and more. Wyndham Gardens Hotel. Info at MCR2013convention.com.

OREGON, PORTLAND, June 28-30, West Coast 2013 Garden Railway Regional Meet, hosted by Rose City Garden Railway Society. Info at rcgrs.com.

WISCONSIN, WEST ALLIS (Milwaukee area), November 9-10, Trainfest 2013, sponsored by Wisconsin Southeastern Division of NMRA.

Future

FLORIDA, COCOA BEACH, January 9-11, 2014, Cocoa Beach RPM meet.

OHIO, CLEVELAND, July 13-19, 2014, NMRA National Convention and National Train Show.

OREGON, PORTLAND, August 23-30, 2015 NMRA National Convention and National Train Show. ■

Reader Feedback (click here)

What are you waiting for? GO!

Reverse Running: Stepping outside the box with a contrary view

by Joe Fugate

Reader Feedback (click here)

Have you started that diorama, module, or layout yet? No? Then what's the holdup?

Sometimes I think the hardest part of model railroading is getting started. If you will get started on that next big project, you will have licked the hardest part!

So what keeps us from getting started?

I think fear of messing up is probably the most common.

A lot of model railroading is planning or research-oriented. This part of the hobby can be fun in its own right, and that's good. However, it can also become a crutch because it's seen as "safe".

Plans are difficult to get wrong, and if you need to change something in a plan, all it takes is the backspace key – or or if you still prefer paper and pencil – an eraser.

So watch out for paralysis by analysis. Those laurels can be pretty comfy. Getting started is risky – what if you're wrong?

So what if you're wrong? See mistakes as your friend. There's another word for mistakes: it's called *learning*. And if you've made a lot of mistakes, there's an even better word for that: *experience*.

Be open to redoing something if you do mess it up. This is especially true of things like trackwork. I've learned from dealing with trackwork issues through the years (now 46 years in the hobby) that you get the best results if you replace bad trackwork instead of trying to "tweak" bad trackwork into shape.

Poor trackwork that's been tweaked just never seems to perform well. In my experience, tweaking bad trackwork leads to just one thing – continued mystery derailments and still more tweaking. Replacing bad trackwork almost always solves the problem and ends the tweaking black hole.

Okay, with the fear of messing up behind you, what else may be keeping you from getting started?

No time, perhaps?

While getting big blocks of time to start a project can help, don't overlook just doing something, no matter how small. Some modelers I know make tremendous progress by following one simple time trick: resolve to *go work on the layout* every day for at least 10 minutes.

Yes, some days you might not even find 10 minutes. But more often than not, once you go get started, you will find momentum turns that 10 minutes into an hour or two. Even 10 minutes per day adds up to 60 hours per year. Many projects will see significant progress with 60 hours applied to them.

And once you've gotten started, post some photos or videos of your progress on the MRH website so we can all celebrate your entry into the ranks of active model railroader.

So what's the holdup? Step on it and get going! ☑

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Derailments

humor (allegedly)

His original Pullman green sample....

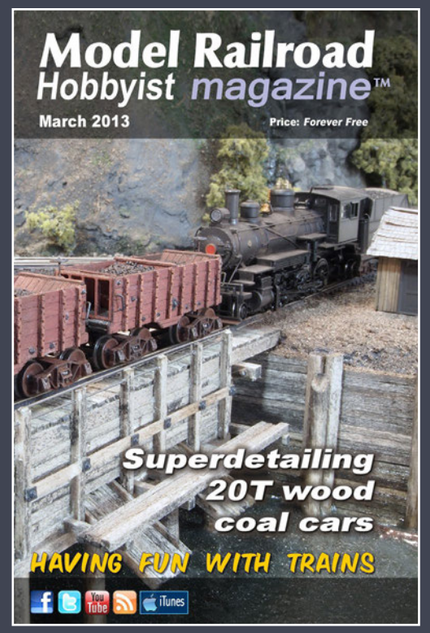
If you're the first to **submit a bit of good humor** and we use it, it's worth $25!

Reader Feedback (click here)

For the love of model trains

Coming in March

- Superdetailing 20T wood coal cars (in N scale, no less!)
- DCC decoder keep alive
- Turnout ground throws
- Tool shed: Pin vices
- Another $500 starter layout contest winner
- *...and lots more!*



More Derailments humor ...

Dan the rear brakeman swears the following is true. In the mid '20s there was a conductor by the name of Ferdinand who was partial to dogs. He had a four-legged friend nicknamed Spots by the yardcrew. Spots liked to ride with Ferdinand in the cupola and being a dog usually stuck his nose out the window. The problem was, with it being so dusty in the summer, Spots' eyes would get all gummed up. One trip Spots was having a particularly miserable time of it up in the cupola, but being a stubborn dog he adamantly refused shelter inside.

Spots' eyes got so bad Ferdinand debarked at the next station while the fireman was getting water and fuel. He and Spots dashed for the general store across from the depot. Inside Ferdinand inquired about some motorcycle goggles and tried them on his canine companion. Eventually he found a pair that fit fairly well, paid for them and was halfway out of the store when he remembered leaving his shaving brush and razor home that morning instead of putting them in his overnight kit. So he returned to the counter and asked for them. The clerks eyes bugged out and he cried, "Oh Lawdy! Don't tell me that dawg shaves too!"