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Model Railroad Hobbyist magazine™

September 2013

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HAVING FUN WITH TRAINS

Building John Wilkes' Virginia Southwestern



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Convention Report



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MRH-Sep 2013



Model Railroad Hobbyist magazine™

Front Cover: John Wilkes is building his new HO Virginia Southwestern: follow along as John goes from benchwork to completed scenes on this beautiful coal hauling layout. Photo by Greg Komar.

ISSN 2152-7423

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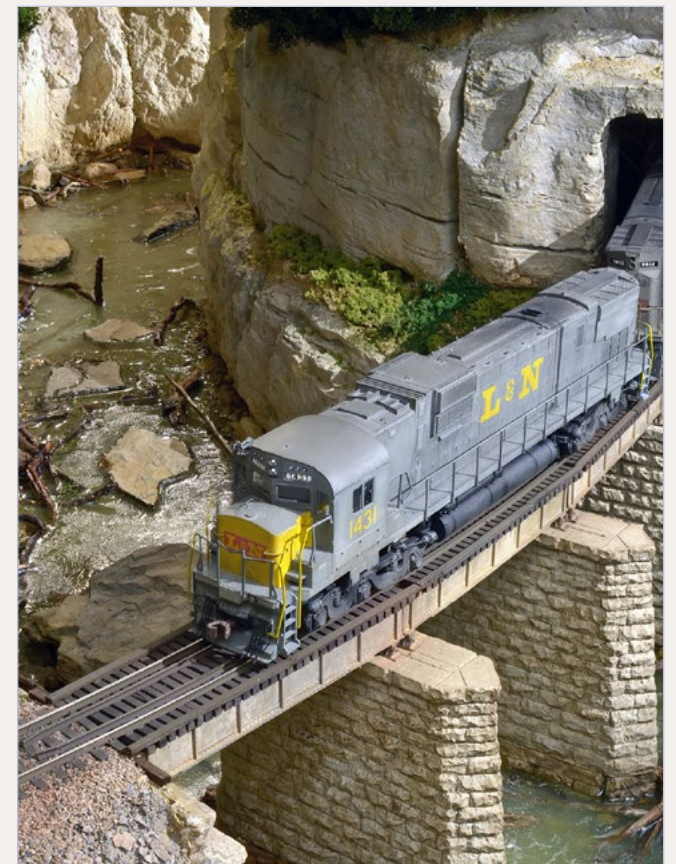
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Cover and MRH masthead





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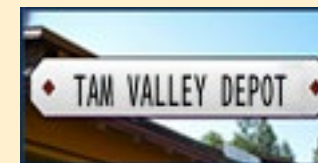
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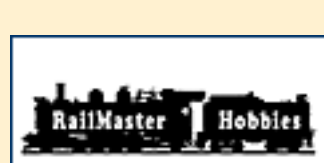
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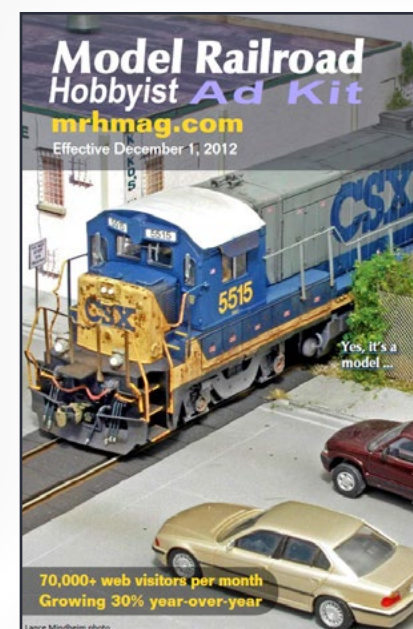


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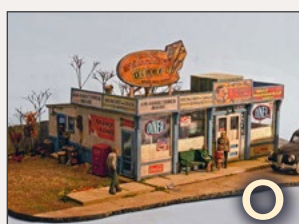
Yes, it's a model

MRH's great modeling photo feature
Compiled by the MRH staff



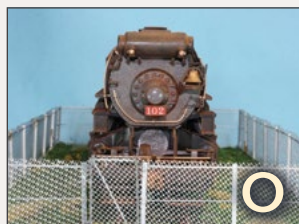
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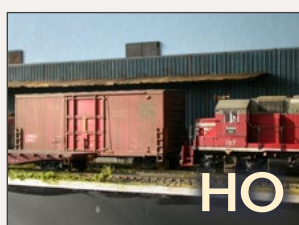
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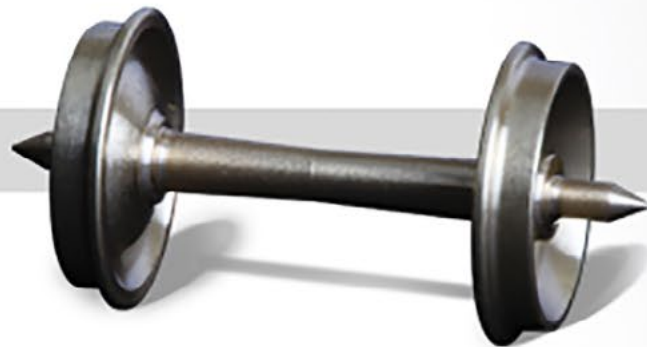
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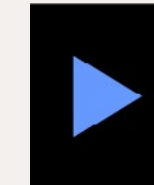
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Testing, 1, 2, 3 ...

What's right for you?



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Publisher's Musings editorial
by Joe Fugate



If you listen to media guys setting up for an event and testing the equipment, you'll often hear the phrase "testing, 1, 2, 3 ..." as they check things to make sure all works as expected.

So what does this have to do with model railroading? A lot, actually.

I often see questions on model railroading forums about various topics – questions like:

- What's the best benchwork height?
- What's the best separation between decks on a double-decked layout?
- What's the best train length?
- What's the best maximum grade?
- Is matte medium or white glue better for securing ballast?
- What's the best method of modeling dirt?
- What's the best commercial turnout?



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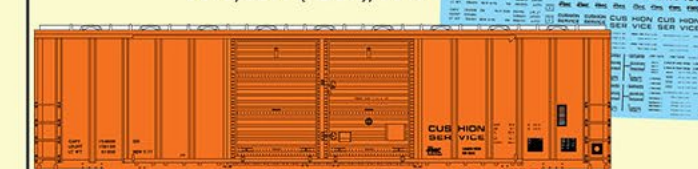
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MC-5025 & 60-5025
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As you read the threads that develop around these questions, you often see many different answers and opinions, with no clear and obvious answer. In many cases, the real answer is: "it depends."

Depends on what?

It depends on what YOUR goals and preferences happen to be.

Let's take the first question above: What's the best benchwork height?

How about testing it out yourself? Get some empty cardboard boxes and make a mockup at various heights, and see which one you like best. You can read opinions on forums all day long, but there's nothing like trying it out yourself!

I'm surprised more modelers don't think in terms of testing to get the answers to many questions like these they have.


Even the question of what commercial turnouts are best – is it worth a few dollars to

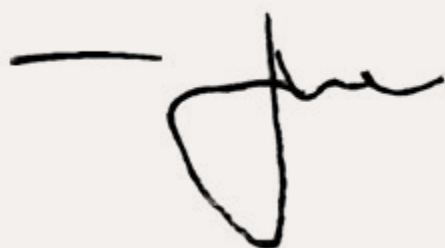


get a sample of three or four different turnout brands and seeing for yourself? Or would you rather follow a forum opinion, equip a whole layout with a certain brand, only to find out later you wish you'd gone with a different brand?

The ultimate manifestation of testing is the "chainsaw layout" concept introduced all the way back in MRH issue 1. It's a layout you build specifically to test methods and approaches. Just to make sure you don't get too attached, we suggested the term "chainsaw layout" to remind you to expect both great insights and terrible results (but great learning experiences) on this test bed project.

Don't get us wrong – there's certainly huge value in getting opinions, and the Internet makes gathering those opinions easier than ever. But in more than a few cases, making the final decision also depends on you knowing what YOU prefer, and the best way to get that answer is for you to do some tests of the options.

So, next time you have a question about what would be the best, consider doing some tests to see for yourself. And while you're at it, post the results on the MRH forum so we can all benefit from your discoveries! 



MRH's second annual

Start the hobby for \$500 contest



- You have a \$500 total budget.
- Assume basic tools: hammer, saw, drill, screwdriver, scissors, single-edged razor blades, soldering iron.
- Assume advanced tools like a table saw, router, or lathe are NOT available.
- Must design an operating layout or module (continuous running optional).
- Include a shopping list not exceeding \$500 - must cover benchwork, roadbed, track, wiring, control system, rolling stock, locos, structures, and scenery.
- Common items listed for sale on the web like eBay or Yahoo train yard sale okay.
- Thinking outside the box encouraged.

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Notes from the MRH STAFF

Visiting layouts at
conventions, MRH
Podcast, Thanks to Bill
Beverly, Sponsors vs
Marketplace, and more ...



Visiting layouts at conventions

We're just back home from the National Narrow Gauge Convention in Pasadena, and the layout visits from that convention remain fresh in our minds.



We've seen a lot of layouts over the years and the experience has been educational, to say the least. We've seen empty rooms with only drawings on the wall, all the way to amazing models with scenery and details that overload the senses there's so much to look at.

We've also seen micro layouts that cover less than 2 square feet all the way to warehouse-filling mammoths.

There's one truth to these layout visits – we walk away from every layout we visit having learned something. Frankly, we're



August 2013 MRH Ratings

The five top-rated articles in the [August 2013](#) issue of MRH are:

- 4.6 DCC Impulses: Where's my train?
- 4.5 SuperSize your trees - realistic foreground trees
- 4.4 Up the Creek: Entering a photo contest
- 4.4 Reverse Running: Just run trains for fun
- 4.4 Tool shed: Drafting tools for modeling, part 1
- Issue overall: 4.6

Tell us you want more (or less) by rating the articles!

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amazed at the creativity and energy represented by all the hundreds and hundreds of modelers behind these layouts.

This year's layouts at the National NG Convention in Pasadena, CA continued to delight and amaze us. Having built some amount of layout yourself helps give you a better appreciation for the total effort involved. You quickly learn to appreciate the hours of sweat equity put into even the simplest of layouts.

For example, we know building a curved trestle about 3 car lengths long and 3 car lengths high can literally take months of spare time to complete – and that's just one medium-sized trestle, that's not a whole layout.

Everything takes time, especially if the layout's done at all well. There's many hours in detailing the track and doing scenery or structures on even a modest-sized layout.

If you've not yet built a layout of any sort, then let us reissue our one module challenge from the May 2013 issue:
mrhmag.com/magazine/mrh-2013-05-may/rr_one-module-challenge

If you've never built a layout, then it's time to get started by building a single module. We guarantee you will learn a lot, and by keeping things small, you stand a good chance of finishing it!

If that's not enough, nothing says that one module can't be the beginning of an evolving sectional layout, with the ultimate in flexibility and scope. Literally, by using the modular approach as we suggested in last May's column, you can have an operational layout almost immediately and grow it at whatever pace you're comfortable with.

Which brings us to our recent MRH podcast conversation ...

Actor Michael Gross on MRH podcast

In July, MRH had actor Michael Gross (of "Family Ties" and more) as a guest on our podcast. Michael has been interested in trains, both prototype and model, since his youth. Currently, he's an avid FREMO modeler.

On our podcast, Michael advocates (among other things) the importance of not over-committing in your modeling. Michael feels, as we do, that modular benchwork instead of fill-the-room-benchwork gives you the most flexibility and freedom in your modeling.

For the full interview, make sure to check out podcast MRH13-07_01. You can access it here:

mrhmag.com/podcast/mrh.xml

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The advertisement features a man in a tuxedo and bow tie, smiling and pointing towards a small model train structure he is holding on a silver tray. In the top left corner is a circular logo for the Alpine Division Scale Models. The text "Structures of simple elegance ..." is written in a large, elegant font. At the bottom left, it says "Made in the USA". On the right side, there is a black box with yellow and white text that reads "ALPINE - DIVISION SCALE MODELS", "Click to Learn more...", and "alpinemodels.com".

Structures of simple elegance ...

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Michael also attended the Pasadena Narrow Gauge Convention and stopped by the MRH booth to say hello – here’s a photo (from left to right) with Jean-Francois Delisle, Michael Gross, and Joe Fugate.



Sponsors vs Hobby Marketplace

Model Railroad Hobbyist has two kinds of advertisers: Sponsors and Hobby Marketplace advertisers. Sponsors place ads with us for more months at a time, and they’re also larger ads (quarter page or larger).

Because a Sponsor spends more with MRH, they get the notoriety of being on the Sponsors page. Hobby Marketplace ads, on the other hand, are smaller ads, and they appear classified-ads-style collected together in the Hobby Marketplace section.

In the early days, we placed the smaller ads throughout the magazine just like we did the larger Sponsoring ads, but we received a lot of feedback that “we can’t find the ad” for the

smaller ads. So we collected the smaller ads all together in the Hobby Marketplace and the “we can’t find the ad” comments went away on these smaller ads.

Every so often, someone asks us why a given advertiser’s logo isn’t listed on our Sponsors page (in the front of the magazine) even though they’re an advertiser. The answer’s easy – they’re a Hobby Marketplace advertiser, not a Sponsor.

In other words, if you want to find *all* the advertisers hosted in MRH, then you need to look at *both* the Sponsors page *and* the Hobby Marketplace section.

Sending private notes to other subscribers

Did you know you can send private messages to other subscribers through the MRH website?

First, you have to be a subscriber – but subscribing’s free, so that should be easy enough. If you’re not a subscriber, just

September 2013

Subscriber-only bonus extras!

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DVD and HD quality versions of the videos in this issue, plus:

■ **Still more coverage of the National Narrow Gauge Convention**

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mrhmag.com/user/register

As we were saying, as a subscriber, you can easily send private notes to other subscribers on our website. All you need to do is click their user name when you see it on a post. For example here's a post from IrishRover, an MRH subscriber. To send him a personal message, first click on his name above the post:

Fri, 2013-09-06 14:51 — [IrishRover](#) Locomotives and rolling stock

I am building a freelanded diesel locomotive in HOon30. The loco is a (image) River and Rangely Lakes 2' gauge line in Maine. It begins running in 191 (The railroad was fortunate enough to get some demobilized navy subma structure built, and am deciding what else it needs.

When you click on the name like this, you get the person's subscriber profile that shows some basic facts and links for them. At the top of their profile section, you will see a tab labeled "Contact". Click that tab:

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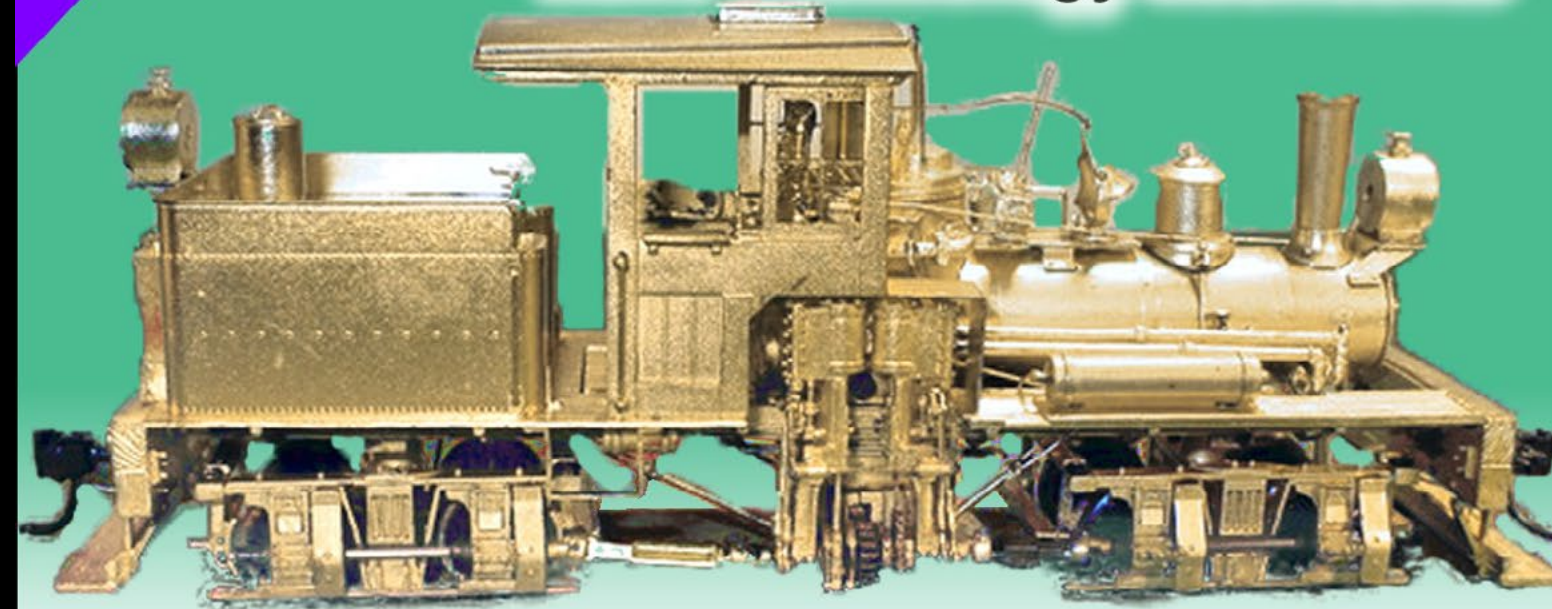
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Once you click the Contact tab, the system gives you a message screen so you can type in the subject and body of your private message, like so:

The screenshot shows a web-based email composition interface. At the top, the 'To:' field is filled with 'IrishRover'. The 'Subject:' field is marked with an asterisk and contains the text 'Personal question?'. The 'Message:' field is also marked with an asterisk and contains the text 'Hey Irish, I was curious about something, mind if I ask you a personal c'. Above the message field is a rich text editor toolbar with various icons for text formatting (bold, italic, underline, strikethrough), alignment, and other functions. The text 'Normal' is visible on the left side of the toolbar.

This sends the person an offline email so you can converse outside the MRH website. We recommend using the feature to speak directly with another subscriber about something you don't think is appropriate for public consumption.

TrainMasters update

Last issue we announced our new streaming video subscription site for model railroading, **TrainMasters.tv** ... we wanted to let you know the site will be available in November for our grand opening! If you'd like a sneak peak before November, watch the MRH website for details.

In this issue ...

We think you'll find John Wilkes' Virginia Southwestern cover story to hold a lot of great layout construction insights. Also in this issue we have a great article from Antonio Santana on getting fabulous looking stainless steel passenger cars, and an

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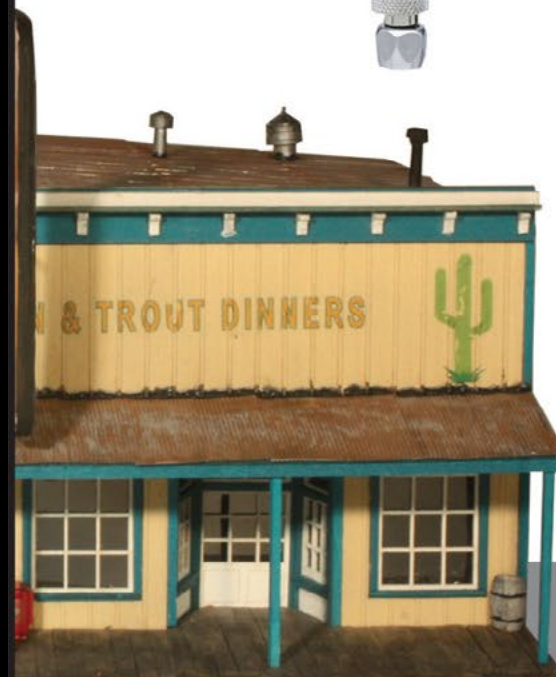
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interesting article from Daniel Klein on taking an unused loco and creating a static display loco scene on your layout.

We start a multi-part series by Mike Tylick on building a laser structure kit. You'll appreciate his clever construction techniques.

For columns, we have Bruce Petrarca on how to light your rolling stock with DCC, Tony Thompson's first of two parts on PFE operations and Ken Patterson's "This is nuts" train video and photos.

And we have our exclusive Pasadena Narrow Gauge convention report, right off the event that happened just a week earlier. Even if you aren't a narrow gauge modeler, there's some wonderful modeling to see.

Have a great read this time! ■



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About The Show

Every year late in January or early in February, the Amherst Railway Society holds its Railroad Hobby Show at the Eastern States Exposition Fairgrounds (The home of The Big E) in West Springfield Massachusetts. More than 25,000 railfans and public attended the Show each of the past three years.

The event features real life railroads and scale model railroads, historical societies, travel agencies, art shows, flea market dealers, importers, manufacturers and photographers. You have to see it to believe it!



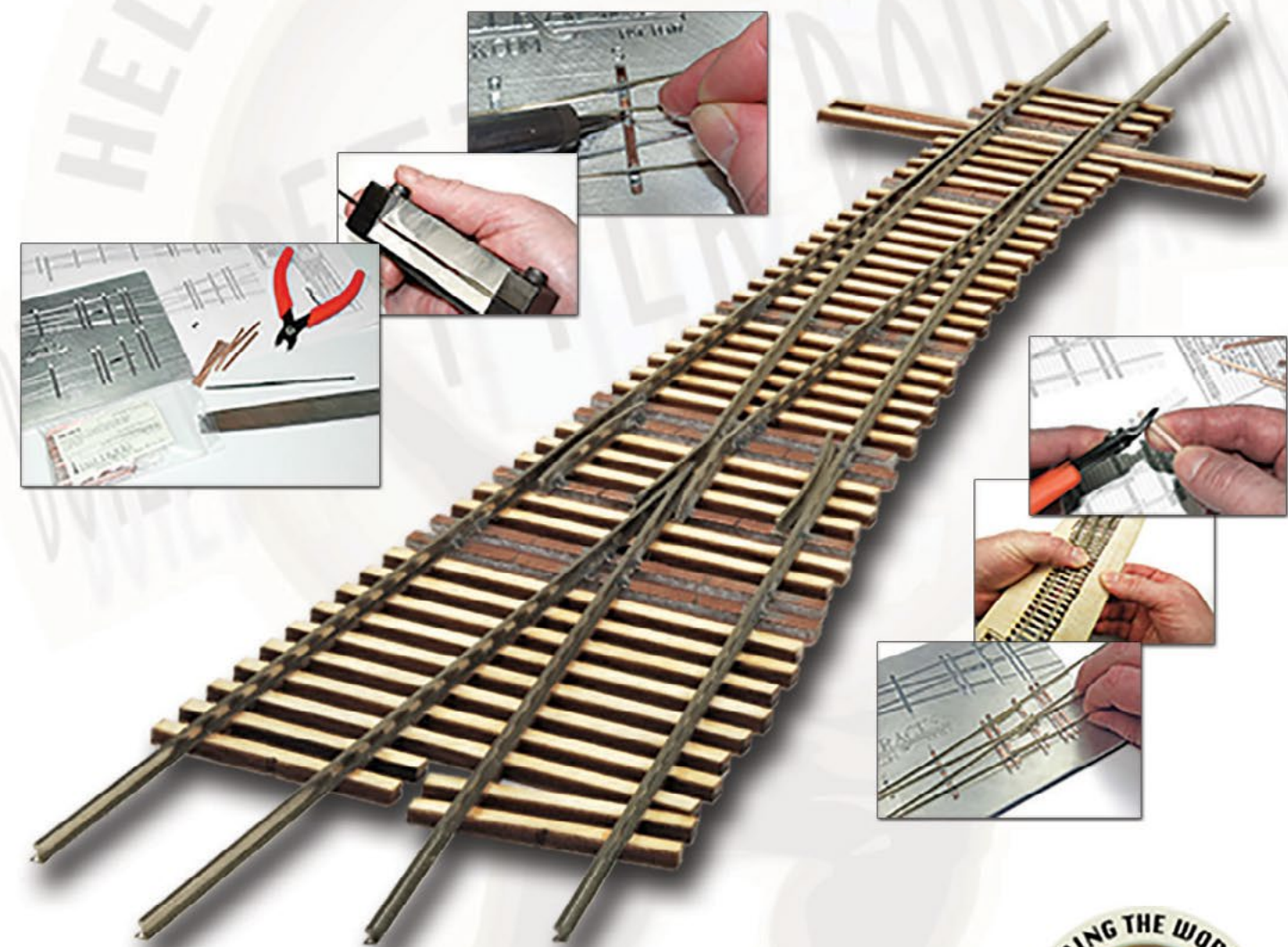
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Questions, Answers and Tips



QUESTIONS AND ANSWERS

Fine-tuning Sergent couplers

Q. I do a lot of detailing and weathering, and Sergent couplers (1) are the best as far as prototypical detail in HO scale. They make a big difference in photography. I have now built a small switching layout and immediately noticed issues with coupling. The Sergents seem very finicky. Many times the ball will not lift so I cannot get the knuckle to release, many times the knuckles don't close when coupling.

– Kevin

A. A club member uses them and said he has to burnish the coupler faces and back sides of the coupler faces. He also said careful attention to removing the flash is very important. Graphite lube is a must on all the moving parts.

– Pete

Sergent couplers YouTube video: youtu.be/9lT6tFmMlO8

I have Sergent couplers on my whole fleet, but they are more time-consuming to assemble and install than more traditional couplers. Wherever possible, I buy the kit couplers, and I find they tend to work better than the factory-assembled ones.

When I assemble the couplers, I inspect every casting and remove even seemingly insignificant flash before assembling anything. Just to be sure the ball pocket is clear on top, I usually stick the point of a hobby knife in there and spin it around a couple of times. Sometimes there is flash in there that is difficult to see. Next, I apply graphite to the working surfaces of the top casting, the place the knuckle sits, the ball opening, and any surface the knuckle will slide on or near.

With the top casting all graphited, I assemble the coupler. Once assembled, I remove it from the jig and glue it together. I have found the best way to glue them is to use as little as possible, so little that it flows into the opening by capillary action. If there is a drop or bead of glue when I am done, I have used too much.



1: Sergent HO scale couplers function like the prototype, with a ball dropping in place behind the knuckle arm to lock couplers closed. Graphite lubrication and careful removal of casting flash is vital to smooth operation.

After gluing, I set the coupler aside for several hours to dry. Usually I assemble 50 or so at a time, so I just line them up on a desk to dry.

The next day, I either start using the couplers or put them away. Before installation, I coat both sides of the knuckle with graphite, as well as the pushing surface of the coupler. I do this for a pair, usually to go on one car, and then I couple the couplers, and slide them up and down while stretched and bunched, several times in each state. Finally, with them bunched, I turn them over and let the balls get out of the way. Then I pull them apart and push them together in such a way that it forces both knuckles to open fully and close fully. I do this several times, until I am satisfied that both couplers are opening and closing smoothly. If any fail to open or fail to lock, they go in a separate pile for me to fix or toss, depending on the cause.



2: This Union Pacific diesel unit, eastbound at Rowena, OR, is a distributed power unit (DPU), not a helper. DPUs on level track can be represented by careful speed-matching with the head-end locomotives, or else by adding a dummy engine.

Some of the coupler styles only come assembled and are not available as kits. For those, I graphite both sides of the knuckle, the pushing face, and apply as much as possible in the slot on the back of the pushing surface, so that some graphite gets into the ball and knuckle tongue area. Before installing them, I go through the same break-in procedure as the kit couplers. The factory couplers can be disassembled if they have problems, but that must be done with some care. I have rebuilt a few particularly uncooperative ones, and they operate just fine now.

– James Ogden

The only thing out of your recommendations that I did not do previously was to apply graphite to all the internal parts. All the couplers passed the upside-down working test before installation, and all of the working surfaces of the knuckle were polished with a graphite pencil in the same manner that James suggested.

As an experiment, I went back and looked at some of the couplers I've been having problems with and applied some graphite inside. I took a tube of graphite, made a small pile of it, then took a fine brush and picked up some of it, carefully placing it inside the assembled couplers both upside-down and right-side-up. I then used the magnet wand to cycle the locking ball several times to be sure that all sides were coated. I'm happy to report significant improvement.

When I assembled all these, I was not a stickler for flash. I looked at only the two spots recommended on the instructions. Now I know a few other places to check.

– Kevin

Taming helpers

Q. We are trying to run helpers on my layout, which includes several 2% grades and 30" radius curves. So far we have shoved

trains together and pulled trains apart, derailling and damaging several freight cars in the process. What's the secret?

A. Most helper problems on model railroads are caused by having too much power available. The rest are caused by crews failing to talk back and forth.

Most model locomotives, on a 2% grade, can handle about two cars per powered axle without slipping. You can test your own engines to find a tonnage rating. Some are better and some are worse, but it's a good place to start experimenting.

Let's assume you have DCC or another system to independently control each engine set. If you have 24 or 25 freight cars to pull, a good diesel-era power arrangement would be two GP-style units on the head end, and another GP cut into the train 16 or more cars back. The helper can also be placed on the tail end (2), either ahead of or behind the caboose, according to your prototype and era.

To set the train in motion, the helper should start by pushing in the slack, with the head-end engineer making a matching low-speed power setting and then leaving his throttle at that setting. The helper engineer must watch the couplers in the train, and make very small power adjustments so the point where the slack between cars runs in and out is about 2/3 of the way back from the lead locomotives.

If all of the couplers are stretched out, the head-end engine is pulling more than its share of the load. The helper can speed up his engine a little, or ask the lead engines to reduce power. If all of the couplers are bunched, the helper is pushing too hard and should ease off the power until slack appears.

You say three Geeps aren't much of a spectacle? Adjust the power or the number of cars accordingly, but keep the front-end power

about twice as strong as the helper. The idea is that if the front end stalls for any reason, the overloaded helper will spin its wheels instead of shoving all of those freight cars up the track.

Do you need actually need helpers to move your trains, or are you going for more of a scenic effect? Adding dummies or sound-only units to the power consists will make them look more authentic. Remember to count unpowered locomotives as loads when setting up the power set.

Running helpers with crews is a lot of fun, but it calls for constant communication. Once the lead engineer has set his throttle, he should not change it. If the train looks like it's going to run away or stall, "down a little," or "up a bit" is enough talking to warn the helper crew of a speed change. But when engines are tuned and operated correctly, very few speed changes will be needed.

— MRH



TIPS

Ultrasonic wrench

I had tried repeatedly to remove a stuck cap from a jar of PollyScale paint with pliers, banging it on the workbench, and running it under hot water, all with no luck. I finally decided to punch a hole in the cap and transfer the paint to another bottle, and as I went to the workbench to do this spied my ultrasonic cleaner sitting there. I tossed the bottle

in and ran it for 20 seconds and tried it. It turned right off!
How about that!

I found another jar with a stuck lid, and being the brilliant Rube Goldberg that I am, dropped it into the cleaner for 20 seconds and it would not budge. Well, I put it in for another 20, nothing and another 20, and still nothing. It hadn't exploded, so what the hay, the "Full Monty." 180 seconds and guess what, it came off. So we now know two things. One, it works, and two, it won't go boom if left in for 180 seconds!

– Peter Herron

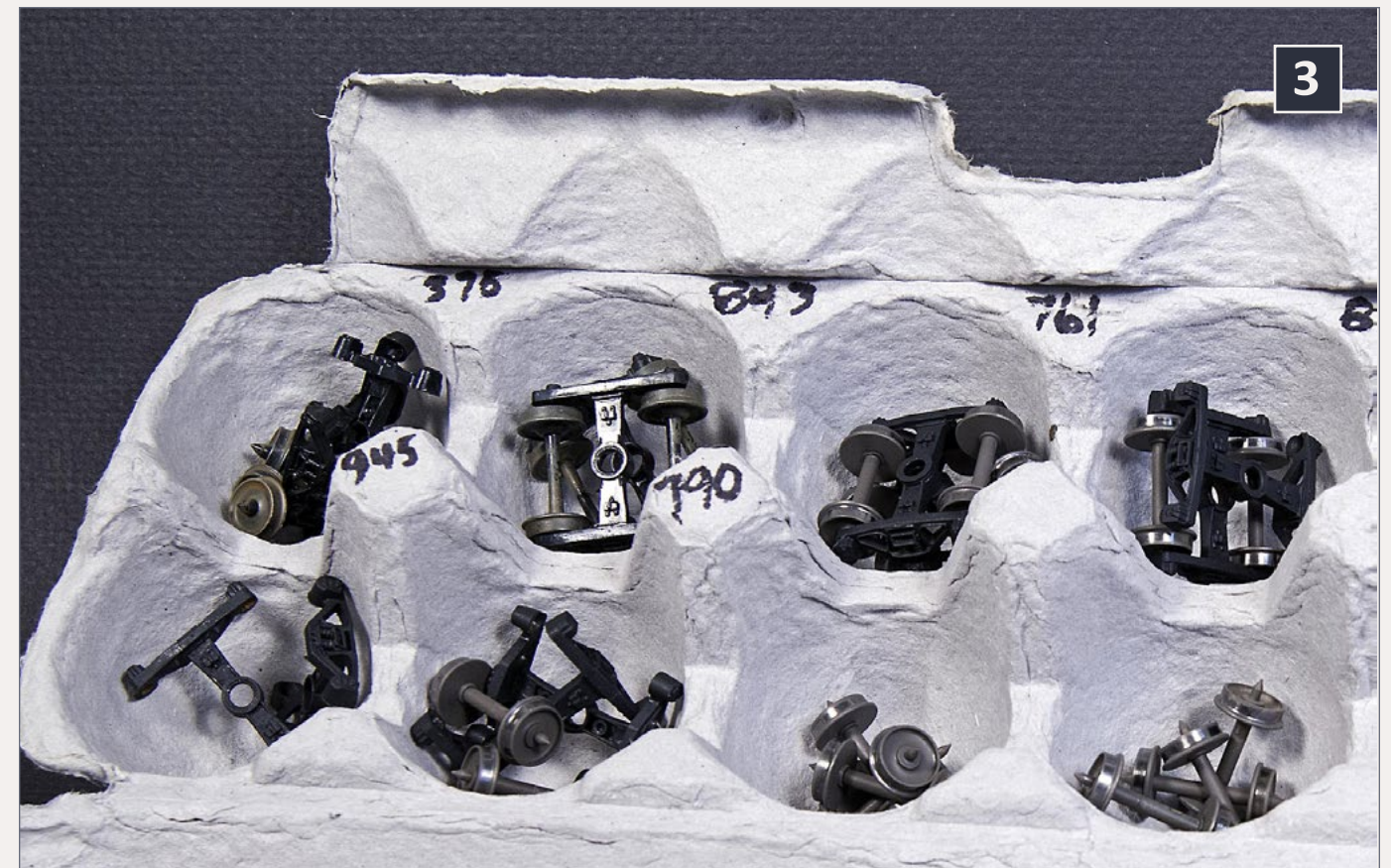
Egg carton organizer

After setting coupler heights on a group of eBay bargain log cars which used bodies, trucks, and wheelsets from several different manufacturers, I didn't want to get them all mixed up in the painting process. Most of the trucks had replacement wheels from Intermountain, but others had Kadee or Proto 2000 wheels.

The solution was as close as the paper recycling bin. An egg carton (3) gave me a dozen compartments – enough to hold the truck frames and wheels that needed to be painted. The individual spots are marked with the last three digits of the car numbers, using a Sharpie.

Egg cartons are easy to trim to the needed number of compartments and are a good way to keep small parts from running away when assembling a batch of freight cars.

– Graham Line



3: Foam or paper fiber egg cartons are a cheap way to organize project parts for assembly or painting and can be cut to the size needed.



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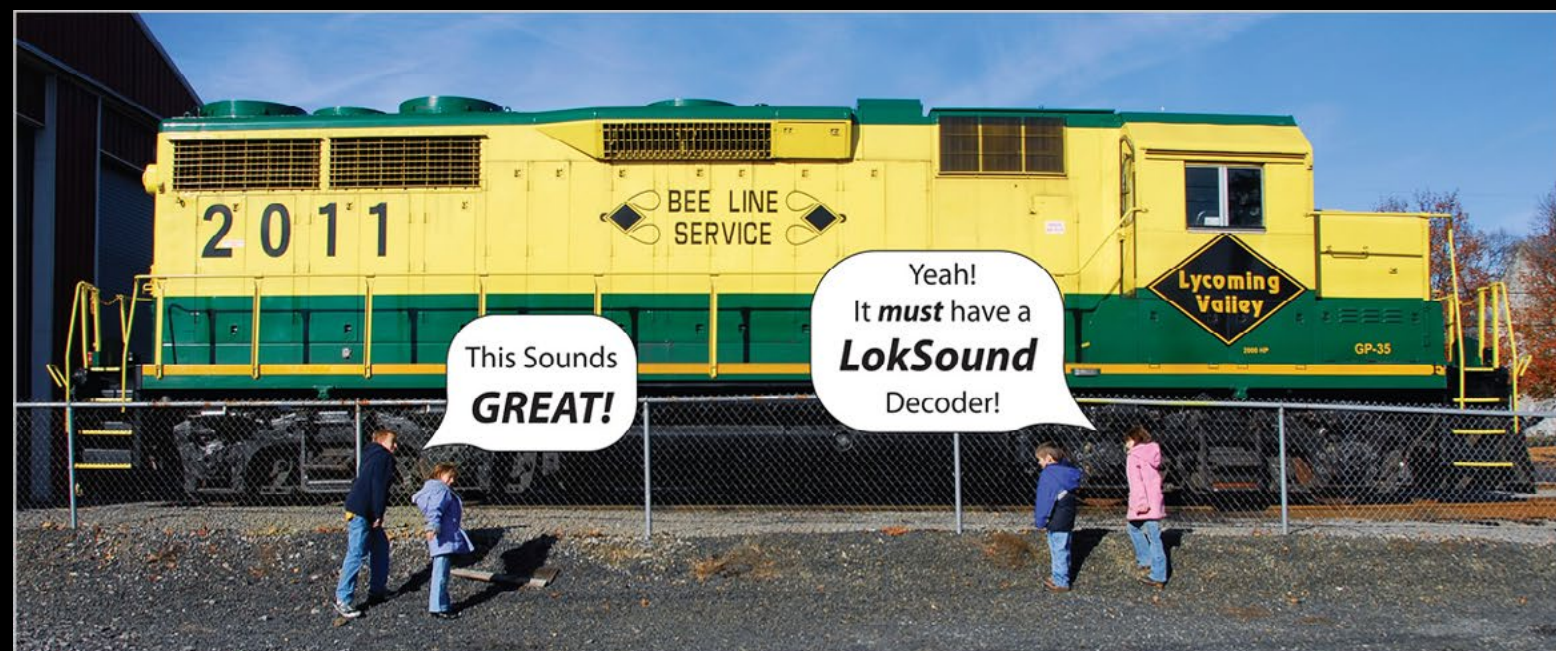
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DCC Impulses column

by Bruce Petrarca

Come on baby, light my car ...

Never fear, the signaling column that I mentioned my the August 2013 column (model-railroad-hobbyist.com/magazine/mrh-2013-08-aug/di_where-is-my-train) is in process. But it's not ready yet, so we'll go elsewhere for now.

In August, I mentioned one of the advantages of DCC is constant track power. This can be used to illuminate passenger cars and caboose. (I know that the official plural is cabooses, but if "geese" is good enough for a goose, give me a break. I like caboose.)

The techniques here are relatively scale independent. Variations in available room and track voltage may make a few changes. The basic concepts are universal.

Lighting and populating your cars can make the interiors pop out, especially when you are running at night.

Frequently, manufacturers make lighting kits for their cars. Some of these are DCC aware, but many are not. Some manufacturers' kits are even DCC friendly and include a



decoder, allowing DCC control of the lights. If you wish, you can always add a lighting decoder as part of your conversion, if you want to control the lights.

Initially, this seems as simple as putting power pick-ups on the car and stuffing a few bulbs into it. Yes, with some caution, this can work.

But folks frequently find that there is more to making a great looking and performing car than first meets the eye. Think of this as a kitbashing project. Here are some of my ideas. You may come up with something really innovative that I didn't cover here. Please share them on the MRH forum website. Just click on the link (to rate this column) above, and leave your comments in the associated blog.



1: Lighted passenger car (1:24 scale) for my RMP layout mrdccu.com/layouts/RMP.



2: Kato LED lighting kit in HO scale – photo courtesy of Kato USA, Inc.

Manufacturers' kits

Most kits include parts to add power pick-up to your car. This simplifies the process, for sure. But they can have other issues.

Many kits from the DC era had low voltage bulbs that were pretty bright at about 8 volts or so. Putting full DCC voltage (12 to 18 volts) on these bulbs can cause lots of issues, including melted plastic and short-lived bulbs. In addition, bulbs take a lot of power from the track (as much as 1/8 to 1/4 amp per car). Since there is no way to shut them off easily, running a bunch of these cars can overwhelm the DCC system's power rating.

Adding a resistor in series with the lights can drop the track voltage down to what the bulbs want to see, but won't reduce the current draw from the DCC system. Also, this resistor will probably take 1/3 to 1/2 of the power from the bulbs, getting very hot. Adding a decoder will allow you to turn the lights off. But the lighting kit and the decoder can add \$40 or \$50 per car.

Followers of my columns know that I am a fan of LEDs for lighting, due to low cost, low current consumption, long life

and cool operation. Some manufacturers, such as Kato (2), offer lighting kits with LEDs for their cars.

LED lighting kits don't use a lot of DCC power or generate a lot of heat. Since they have long (thousands of hours) life, they can be left on all the time, reducing the cost by not needing a decoder per car.

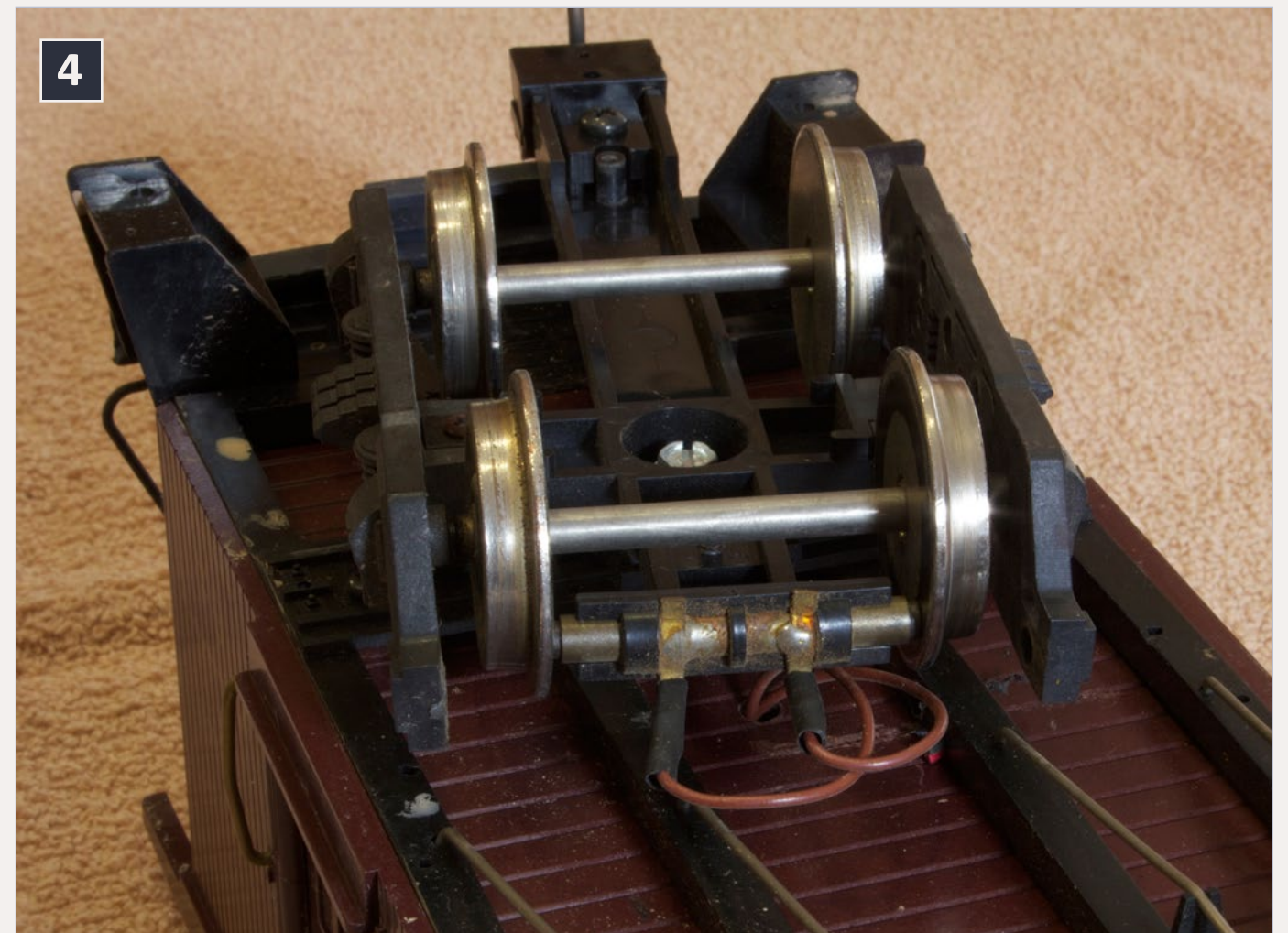
Miniatronics makes a couple of kits which include LEDs, a power supply and a large storage capacitor (more on this later). The longer one (475-100ICL01) is aimed at HO- scale passenger cars and the shorter (3) version (475-100CB201) is aimed at HO-scale caboose and N-scale passenger cars. These kits also include the metal to make power pick-ups for your cars. This total kit costs about what you'd spend on all the parts, if you set out to make your own. A real value, for sure.

Power Pick-up

The car that I show outfitted with lights in figure 1 was purchased for \$10 or \$15 at a local swap meet. Even though Bachmann didn't have lights in it, it had carbon wipers on the back side of one set of wheels on one truck (4). Notice that they are spring loaded against the wheels on opposite sides of the same axle. That keeps the wheels centered in the bolster.



3: Miniaturonics generic LED lighting kit



4: Carbon wipers on the wheels of a Bachmann 1:24 passenger combine

If you apply force against one side of one axle and the other side of a different axle, the wheels will tend to track poorly and may become a running nightmare.

Unless the car you are converting already has trucks with power pick-ups, your first task will be to add them. So, let's talk about that process.

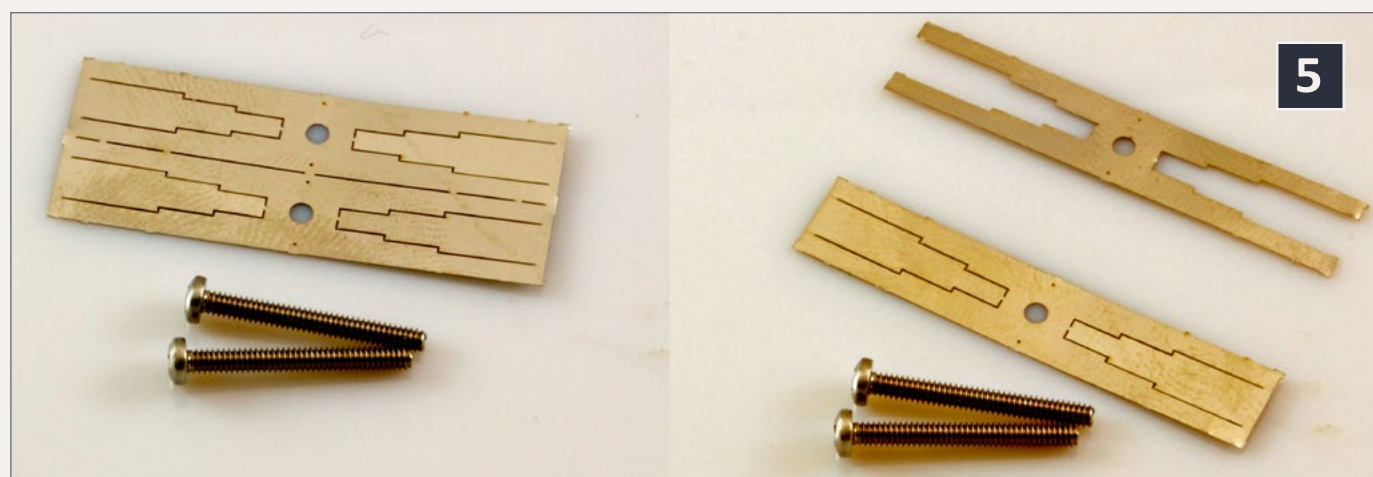
Copper doesn't make for good power wipers. Why not? While it is very conductive, it is soft and hard to keep in good contact with rotating wheels. I prefer a spring alloy of copper and beryllium. Tichy Train Group sells it in wire with sizes from 0.01 inches to 0.032 inches. It is also sometimes available in sheets. If not beryllium copper (BeCu), then I like stainless steel.

Jim Hinds of Richmond Controls has made it easy for us to electrify many cars, with each truck picking up off one rail. He makes kits (5) that I found when I owned Litchfield Station. There are two kits, one aimed at HO scale and one intended for N (litchfieldstation.com/xcart/product.php?productid=290007). These kits may be adapted for other scales, too. They have etched stainless steel wipers and mounting screws, allowing for an easy conversion as long as the trucks mount to an insulated area, such as a blue-box Athearn kit.

A pair of scissors makes cutting out the etched parts pretty straightforward. As you can see in figure 6, the HO parts are plenty long and will need to be trimmed to fit.

The wheel sets need to have metal axles which connect to all the way to the tire on one side. I like to use the Intermountain wheels for HO – good quality and a reasonable price (part number 85-40055 (litchfieldstation.com/xcart/product.php?productid=999003140)).

The supplied screws are 2-56 in the HO scale kit. To complete the installation, you will need some 2-56 nuts and, possibly, some washers. I like to use a ring terminal and jam nuts to hold the



5: Richmond Controls HO-scale wiper kit as received and with one part cut out



6: Richmond Controls wiper kit and Intermountain wheels on an HO scale truck

assembly together. However, it is hard to find ring terminals for #2 screws and folks usually want you to buy a hundred or so. I keep the copper rings that I take off motor tabs. The N-scale tabs are perfect to use as tabs for 2-56 screws.

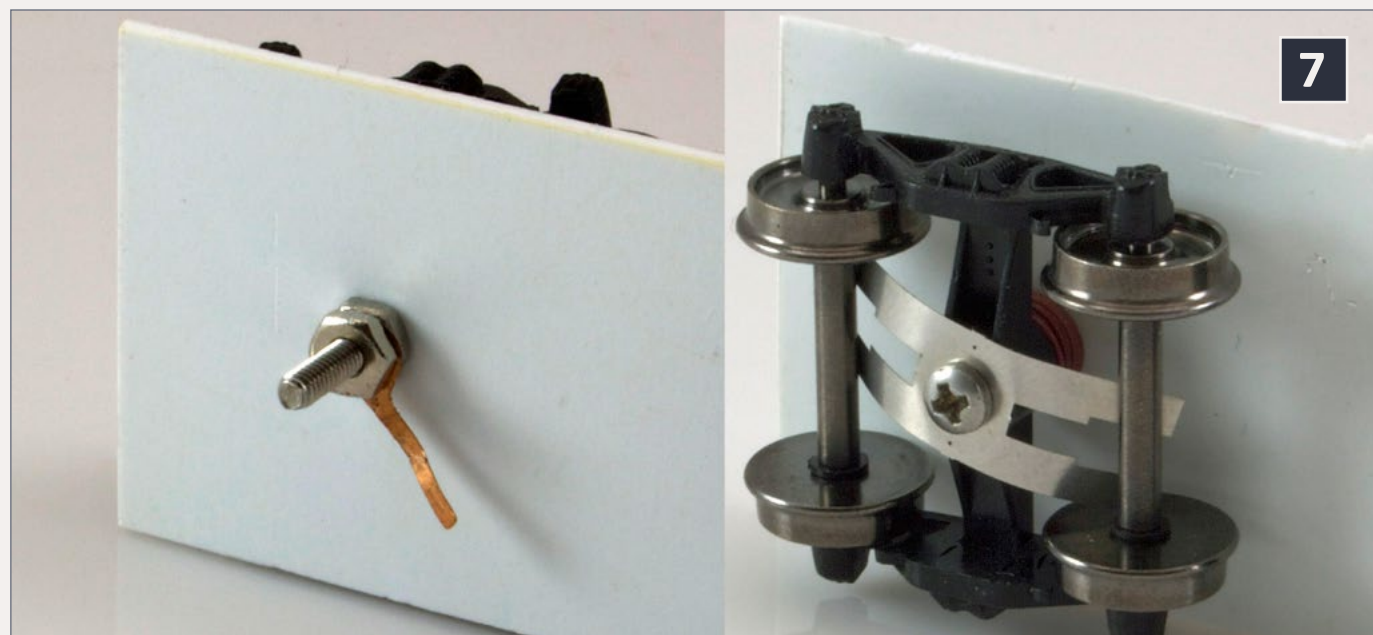
The wipers rub against the axle and transfer the power to the bolster mounting screw. Inside the car, an electrical contact transfers power to your lighting kit. The truck on one end of the car has the insulated wheels on one side. The opposite end has the other side insulated.

Figure 6 shows how much excess material there is, which needs to be trimmed for HO. This excess allows usage on much larger trucks, even as large as O scale. While the stainless steel isn't as conductive as copper, it is fine for this usage. Its ability to hold a shape helps keep it in contact with the axle.

To assemble the truck and wiper, I like to have the wheels out of the bolster. Feed the screw through the stainless wiper and through a hole in the floor of the car (7). Run one 2-56 nut down the screw until it is loose just above the floor inside

the car. Install the ring terminal (or make one by looping your pick-up wire around itself to make a ring and tin it in place). Then add a second nut to hold the terminal in place. Use a pair of wrenches or pliers to jam the nuts against each other making a tight electrical connection, while the truck is free to pivot through the floor. That's why they are called jam nuts. Then install the wheel sets, making sure that the insulators are on the same side (bottom in the photo 7). When mounting the trucks on the car, make sure each truck has the insulators on the same side and they are different between the trucks. Otherwise, there will be a rail-to-rail short.

Conductive lubrication, such as Never-Stall (litchfieldstation.com/xcart/product.php?productid=999003384), should be applied to the sliding surfaces between the contact strip and



7: top and bottom view of truck & wiper assembly attached to a mock-up of floor (using Kadее red washers to simulate the pivot surface) with jam nuts and ring contact – note wipers have been trimmed since figure 6.



8: Lighted passenger car from figure 1 with the roof off, showing LED packages installed

the axle and between the contact strip and the mounting nut-bolt-washer combination.

Lights

If I'm building my own lighting kit into a car, I prefer LEDs. They may be surface mount (SMD) LEDs or 3 mm or even 5 mm, depending upon the space available. Enclosed LEDs, such as 3 mm or 5 mm devices, frequently focus the light in a column so I tend to use SMD units whenever possible, as they frequently provide a broader area of illumination.

The large scale car that I've been featuring throughout this column (8) used two strips that had three SMD LEDs and a dropping resistor designed for 12 Volts. I bought them at an electronic surplus store online. They came with blue-white colored LEDs. While these make a good "fluorescent" look, they

don't fit in an 1930s vintage passenger car. So, I tinted them with Tamiya acrylic X-26 clear orange paint (litchfieldstation.com/xcart/product.php?productid=999003257). The variation between LEDs obtained by hand painting the LEDs helped the overall look. The light is not evenly distributed throughout the car, as it would be with factory tinted LEDs.

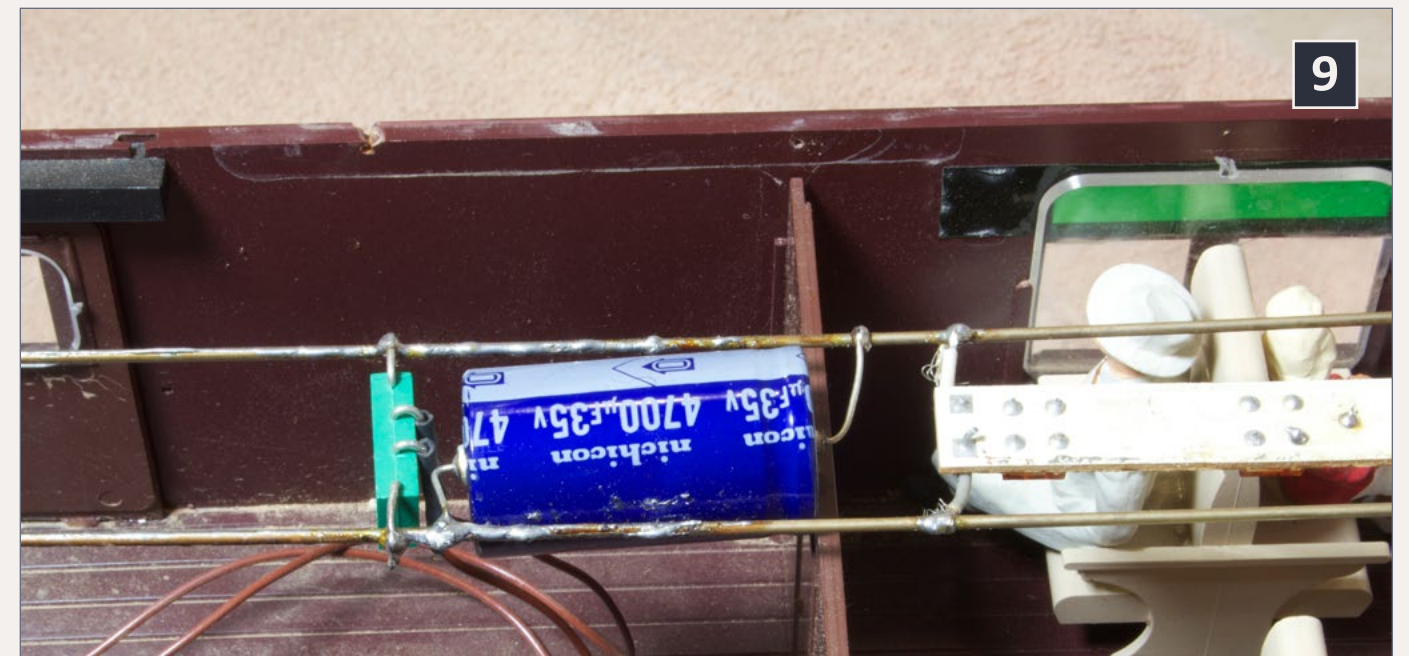
The two brass rods running the length of the car have rectified DCC on them. The LED modules connect between the rods. Alternatively, individual LEDs with dropping resistors, or 12 volt LEDs, could have been used. I just happened to have the modules in stock when I did this car, so I used them. I have also obtained some LEDs that flicker like candles or other flames (shop.evilmadscientist.com/productsmenu/partsmenu/189-candled). I'm going to experiment with adding some of them to this car to create an effect based like oil lamps.

Power Storage

What hasn't been mentioned so far, is that all of these concepts rely on sliding or rotating power pickup from the track and frequently have only one or two contact points per rail. The result is flickering lights. If one is modeling an era before electric lights, flickering lights can be fun, as I mentioned before. The entire car shouldn't flicker at once.

Eliminate the flicker with onboard energy storage. Since LEDs draw relatively little current, large electrolytic capacitors can fill the need. There is no need to revert to super caps or the large energy storage modules necessary to keep a motor turning.

Figure 9 shows closer detail of the power supply I built into the car. The brown wires bring track voltage from the truck (4). The green module is a bridge rectifier assembly. I don't remember



9: Detailed look at power supply in lighted passenger car from figure 1.

what the ratings for this one were, but 50 volts and 1 amp units are easy to find and inexpensive. Higher voltage or current ratings are okay, but not necessary.

The bridge rectifier puts DC on the two brass rods: positive on the far rod and negative on the near one. The LEDs can be hooked to these rods with a bridge rectifier connecting to the track. I did that originally and the LEDs flickered constantly. Time for energy storage.

I went back to my stock and found a 4700 uF 35 volt capacitor. This is the lowest standard voltage that is totally compatible with DCC standards (track voltage as high as 27 volts). However, if you promise not to use track voltages over 20 volts, you could use a 25 volt unit. Note that it is connected to the power rods correctly, with the negative lead connected to the one closest to the camera. This keeps the LEDs running for about 4 or 5 seconds with no power applied. If you want

to experiment, try values in the range from 1000 to 10,000 uF. The higher the value, the longer the lights stay on.

The advantage of using capacitors over rechargeable batteries is that there is no need for a switch to keep the batteries from fully discharging, which is hard on the batteries.

A decoder

Putting a lighting decoder into a car is not much different from doing a DCC installation into a locomotive. Only you don't have the motor connection to deal with. Some "function only" decoders have special things that need to be done to facilitate programming them. Be sure to read the instructions before you begin the installation. This way, you will reduce the repetitive rework.

Decoders require the same sort of energy storage whether they are for LEDs only or for motor, sound and lights: modules or external capacitors. The only advantage with LEDs is that you needn't have such large capacity units. A stayin' alive module that would power a motor for seconds will hold up LEDs for minutes!

So there you have a few of my views on car lighting.

If you liked this column, please click on the Reader Feedback link here and rate it awesome. Please join in the conversation that invariably develops there about the topics presented in the column. Share your experiences. Learn from others. Thanks.

Until next month, I wish you green boards. 



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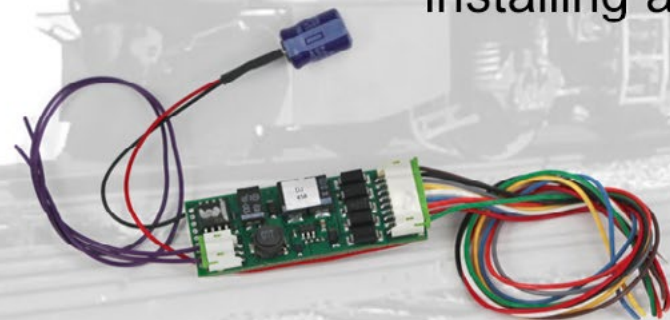
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From Mr. DCC's workbench

– Your Digitrax system can wake up HAPPY

One ongoing issue folks seem to have with their Digitrax systems (except for the Zephyr series) is that they don't want to start or they wake up grumpy.

For reasons that I do not understand, Digitrax has the default configuration set so that it takes intervention with a DT400 series throttle to bring the system to life. They then hide the way to change it in chapter 9 of the Super Chief Xtra manual (digitrax.com/static/apps/products/starter-sets/scfx/documents/SuperChiefXtra.pdf).

That section, starting on page 42 of the version referenced here, explains how to change the Option Switch (known as OpSw) settings that configure their command stations. The default for the command station is for all OpSws to be set to Thrown (t).

Here are the settings I recommend for the DCS-100 or DCS-200 system boxes. Note: I don't recommend the DB series boxes as system controllers; I only recommend them as boosters.

Close the following OpSws – this will require a DT-400 series throttle:



From Mr. DCC's workbench

– Your Digitrax system can wake up HAPPY

Continued ...

OpSw 5 – I don't know exactly what it does, but Digitrax recommends closing it. I don't understand why they don't have the default setting for whatever behavior they recommend.

OpSw 6 – If you are using circuit breakers to divide up your layout, close OpSw 6. That changes the booster shutdown time from 200 to 600 mS – from just under ¼ second to over ½ second. This gives the circuit breakers more time react before the booster shuts down and takes several districts with it.

OpSw 20 – Unless you are using your DCC system to run locos without decoders (a practice I recommend against), close OpSw 20. This will disable address 0000 running DC locomotives. The real reason for this is to stop the pulse stretching necessary to run DC locos. This will keep that feature from slowing down the DCC system response.

OpSw 33 and OpSw 34 – close these to have your system wake up and be ready to run when you apply power to the system. This saves you button presses on your DT-400 series throttle every time you power up. ■



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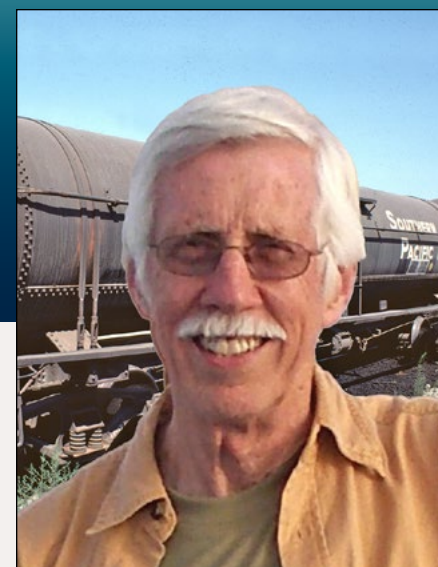
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Getting Real column

by Tony Thompson

Pacific Fruit Express, Part One

Delivering perishables across the nation



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PFE: Operations of a nationwide system

Pacific Fruit Express, or PFE, was in its day the largest perishable transportation company in the world. It had the largest fleet of refrigerator cars (nearly double its nearest competitor), the largest ice plants, and the highest rate of car utilization in North America. Its history is complex and interesting, and I only address it briefly here, as background for modeling.

Many readers may know, there is a very complete book about the company and its operations, *Pacific Fruit Express* (2nd edition), by A.W. Thompson, R.J. Church, and B.H. Jones, Signature Press, 2000. I'll refer to it as "the PFE book." It's 472 pages, with 744 photographs, complete rosters, and even color chips. But it does not address modeling.

There are several aspects to modeling PFE, and the PFE book is simply not organized with a modeling perspective. Information about operations is spread throughout the book, which is why I will summarize it here. The book contains considerable history

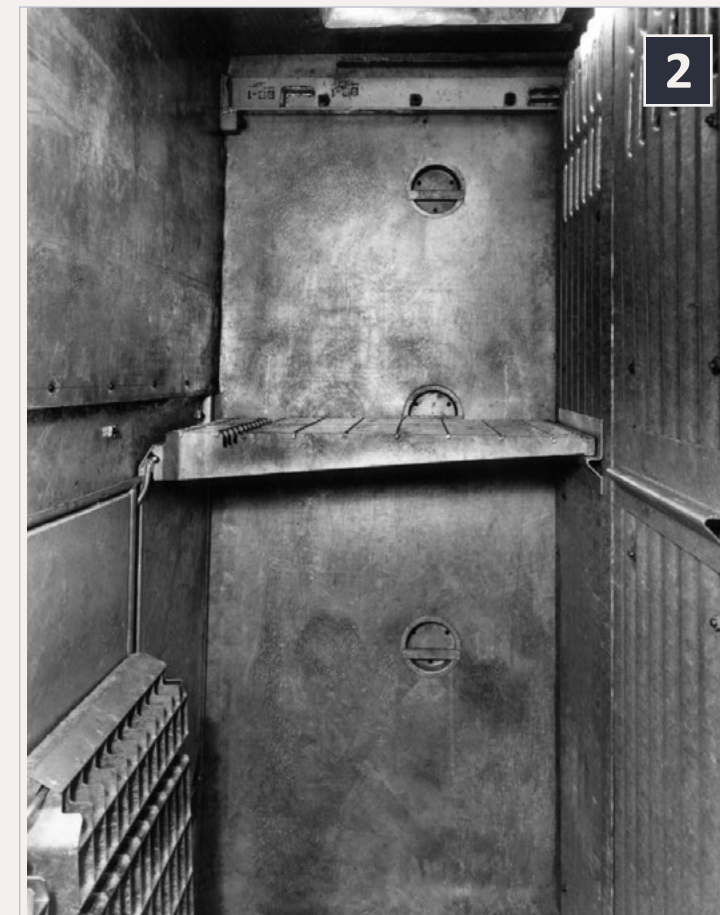


of PFE cars, but again, nothing directly on modeling. I will remedy that in this column.

For many modelers, refrigerator cars are the main thing to be modeled about PFE, and there are good, commercial models in several scales for major PFE car classes (I will restrict myself to HO in this column). I'll discuss the major classes, along with opportunities to model some of the non-major PFE classes.



1: The car cleanout track at Roseville in November 1962, showing a freshly unblocked drain at left discharging meltwater, and body ice being pulled out of cars (this was ice that had been placed within the original load). Note the broom on a clip on the open door. The men are repacking a journal. The cars are pretty dirty in this view because it dates from well after the cessation of PFE car washing. –PFE photo, author's collection.



2: An interior view of an ice bunker, looking toward the car side, with one of the grates raised to the half-stage level. These grates could be set at half-height in the bunker so only a half-load of ice is used. At top is an ice hatch opening. – “Dick” Whittington photo for PFE, courtesy California State Railroad Museum (CSRM).

Modelers in every corner of the country can and should include PFE reefers among their freight cars.

Not only can the cars modeled, operations can also be modeled, whether it's perishable loading locations in the far west, movement of blocks of cars across the country, or cars arriving at destinations throughout the North America. Understanding the kinds of operation conducted by a company like PFE is essential to successfully modeling the operations side. A significant part of this is the icing of cars in transit. I will include some brief notes on modeling icing facilities.

Many procedures and features of PFE operations were shared by the Santa Fe's Refrigeration Department (SFRD), Fruit Growers Express (FGE), American Refrigerator Transit (ART) and others. But because I know the details best for PFE, I will concentrate on it.

I will limit my discussion to a single era, my own modeling period of 1953. I hope by describing the way I have approached

the topic, and the kinds of resources I have exploited, will clarify how a similar approach could be taken for any era.

The Car Fleet

When PFE began in 1906, it purchased 6600 new refrigerator cars. Immediately it became the largest single fleet in the country of such cars under railroad control (Armour Car Lines



3: This photo is obviously posed, with the workmen static rather than active, but it clearly shows the two traditional ice tools used throughout PFE territory: one's forged steel with two prongs, called a “bi-dent,” probably by analogy with “trident,” and the other is a wood-handled tool for moving ice, having both a point and a hook, called a “pickaroon.” The small movable bridge hooks on the drop-down apron. Note the color of the hatch plug. – PFE photo, Rob Evans collection.



4: This is Pocatello, Idaho in January 1948. Pocatello had an Ice Manufacturing Plant, and this photo illustrates what a large PFE facility looked like. The 85-car island ice deck extends almost to the vanishing point in the distance (in 1960 it would be extended to 105 carlengths). It has typical PFE drop-down aprons and is roofed. At left are PFE cleanout tracks and repair facilities. – PFE photo, courtesy CSRM.

had the only larger fleet at that time). By 1910, PFE exceeded Armour, becoming the largest reefer fleet of any kind, a distinction it maintained throughout the life of PFE. Until 1978 it was a jointly-owned property of SP and UP. During the mid-20th century, the PFE fleet hovered around 40,000 cars. Specifics of various PFE car classes are included in the modeling section.

Operations

It is useful to summarize how PFE operated its fleet. In some ways it was quite different from most railcar operation, and probably not familiar to modelers. When PFE cars were unloaded, anywhere in the country, PFE wanted them back during most of the year, because harvesting was continuing in the western growing areas. Thus PFE had agents in all major eastern cities to keep track of the whereabouts of cars, and to stay in contact with yard-masters and car distributors to ensure that empty PFE cars were promptly directed westward.

As soon as cars arrived on Union Pacific or Southern Pacific trackage, they were sent to cleaning facilities like North Platte, Nebraska, or Tucson, Arizona, and then on to PFE shops like Nampa, Idaho, and Roseville, or Los Angeles California. This is an important detail, because it means that after nearly every loaded trip, a PFE car passed through a PFE facility on its return.

In addition to keeping cars in tip-top mechanical condition and making sure they were clean and suitable



5: A workman uses a pickaroon to manhandle ice out of an ice service car onto the chain which takes it up onto the ice deck at Hinkle, Oregon. – PFE photo, courtesy CSRM.



6: This superb photo by Jim Morley at Roseville shows men actively handling ice. The 300-pound blocks on the deck are being split into quarters. The man on the apron is called the “passer,” and he uses a pickaroon to move quarter blocks over a bridge, to the man working at the hatch. With the bident, the “chopper” at the hatch chops the ice to the needed size. – Author’s collection.

for loading, this process also meant that projects to repair, upgrade, or repaint PFE cars were carried out efficiently and rapidly. This is a major difference from free-running cars (box cars, gondolas), which might roam throughout North America for months or years without returning to home rails.

There was also a difference from most types of cars, for which cleanliness was not important, such as coal hoppers. PFE strongly believed that carrying food products made cleanliness essential to customer service. Until the 1950s, PFE actually washed its cars.

Once cars were inspected, cleaned, and repaired as needed, a complex dance began to get the right number of needed cars to the right areas. Since it would take from a few to several days to move cars to a particular harvest area, careful figuring had to be done on just how many cars were needed at each location, and when. Local PFE agents worked closely with major growers, agricultural agents, and weather people to try and predict harvest activity a week or more in advance.

Pacific Fruit Express, of course, did not move any cars to harvest areas itself. The SP, UP and WP did that. But PFE directed movement of those empties, with prior



7: In this photo, the typical two-man crews are doing much the same job as in the Morley photo, though in this case with a steel car of Class R-40-23. –PFE photo, courtesy CSRM

8: Another superb photo at Roseville, showing the icing process from above. All the classic components are here, from the ice tools to the deck apron and ice bridge. Note also the hatch plugs, and the latch hooks on the plug bottoms. – PFE photo, courtesy CSRM.



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arrangement for yard space wherever needed to make sure the car supply would be there.

At peak harvest times in August, September and into October, even PFE's enormous fleet of some 40,000 cars was not enough. Under agreements with other refrigerator car owners, PFE would borrow extensively from the fleets of American Refrigerator Transit (ART), Merchants Despatch (MDT), Fruit Growers Express (FGE), and others, to achieve a sufficient car



9-10: These two photos at Ogden in 1962 illustrate part of the icing process. At left, a workman is opening ice hatches, and at right the estimator chalks an amount of ice needed to top off the bunker (in hundredweights) on the hatch plug. The same amount would be noted on the clipboard in his left hand for that car number. This chalking operation is for the operator of the icing machine moving along the deck. Chalking was not needed in the days of icing with hand tools. –both photos, PFE, courtesy CSRM.



supply. Conductor's time books have shown that up to 24% of all empty reefers moving for loading could be foreign, that is, non-PFE cars, during peak season.

It was up to shippers to request the exact car needs for the next day or two, but a reservoir of cars had to be available so that these cars could be supplied. That was PFE's job, to get enough cars to the needed area in time to fulfill those requests.

For most crops, it was vital to remove "field heat" from the harvest. This means both the physical heat from sun and warm air, and also the biological heat from continuing life processes in the fruit or vegetable. Removing the heat slows down ripening and suppresses decay mechanisms during shipment. Shippers might have pre-cooling facilities for their produce, so it would be cool when loaded, or they might rely on getting the cargo cooled en-route by ice in the car bunkers.

It was up to the shipper to choose how they wanted the cars set up for Protective Services, as the tariff term was. They could choose (and pay) to have a car pre-iced, with ice bunkers filled with ice prior to spotting the car for loading. This would ensure a cool car interior, and would hasten the en-route cooling. Or they could simply have an un-iced empty spotted at their dock. For shippers that had their own precooling facilities for produce, there was less need for pre-icing.

Note the tariff language: cars are pre-iced, and loads are precooled, not the other way around.

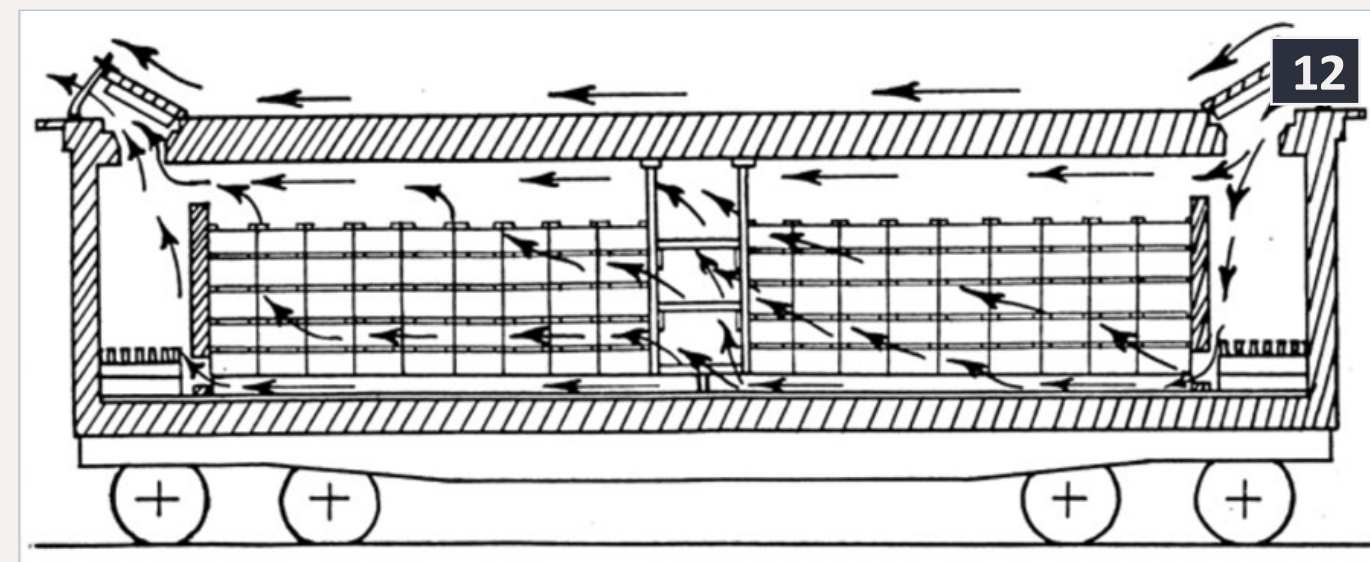
Then any loaded car was normally fully iced after being picked up by the local freight. This was called “initial icing.”

Whether any salt would be added to the ice, to hasten melting and increase heat absorption, was up to the shipper, for an additional fee.

The shipper also chose how the in-transit icing was to be conducted, for example to fill the bunkers every 24 hours, or to fill them at predetermined



11: This workman is “bar-ring” the ice in the bunker. Ice size appears to be “crushed.” This is a Union Refrigerator Transit (URTX) car. Note the separate hatch plug, of canvas-covered wood construction, lying atop the hatch cover. – Arnold Menke collection.



12: This SP diagram shows air flow through a car set up for ventilation service. Note that the load does not reach to the car ceiling, to help with air flow, and that dunnage at the car center will allow easier unloading. – Author’s collection.

locations only, or any other of a variety arrangements. In cooler weather, when less ice would be consumed, stage icing could be chosen. This meant setting ice grates at half height in the bunker, so that filling to the top with ice would leave the bottom half of the bunker empty (see Figure 2). This maintained good air circulation, while allowing all cars to be re-iced the same way: filling the bunkers to the top.

At an icing deck, foremen would go down the string of cars, opening ice hatches and estimating by eye the amount of ice needed to fill the bunker to the top. They noted this on a clipboard as they went from car to car. The ice usage for each car was charged to the freight bill for the car. Occasionally the ICC would conduct a field test, checking how accurate these foreman’s estimates were, and they were usually found to be quite accurate.

The process would continue all the way to the car’s destination. Many cars were directed to eastern or midwestern

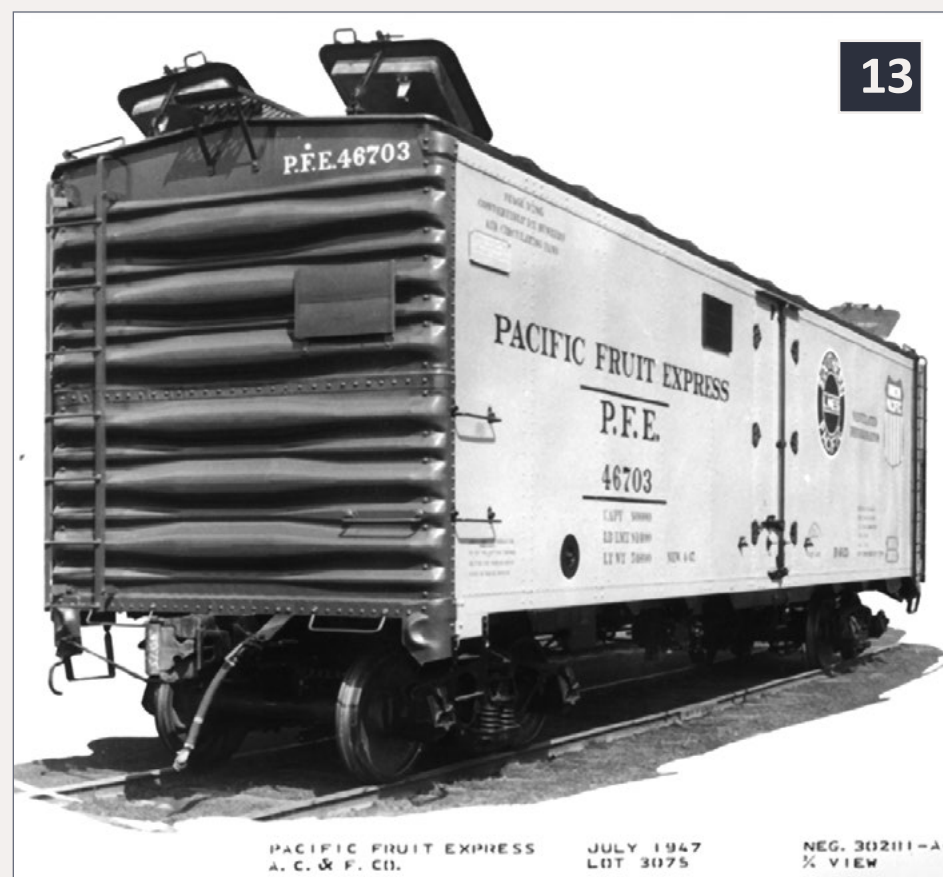
wholesale produce markets, with the expectation that local buyers would purchase the cargoes at that market. But many cars left the shipper's dock without a final destination. Fluctuating prices from city to city meant that last-minute choice of the best market could pay off.

Such cars might be waybilled to a railroad agent at an intermediate city, or to a broker in such a city, with the expectation that a final destination could be chosen while the car was en route. The "diversion" information would be telegraphed to that intermediate agent or broker in time to redirect the car. PFE allowed up to three diversions per car without charge.

Once the cars were unloaded, of course, the cycle began again, with PFE agents rounding-up cars and getting them moving westward again.

Icing

Modelers naturally find reefer icing an interesting topic,



13: This builder's photo of a Class R-40-23 car with ice hatches latched open clearly shows the one-piece design of plug and cover, along with the latching hook underneath the plug which permitted locking hatches from inside (mostly to prevent transients from riding in empty cars). – American Car & Foundry Company photo for PFE, courtesy CSRM.



14: This ice hatch is latched as far open as it can go (note top of latch bar), for ventilation service. The hatch plug underneath is separately hinged, thus is at a slightly different angle. – PFE photo, courtesy CSRM.

and modeling an ice deck provides additional operating activity as well as being visually interesting. The PFE side of this is complex because of the size of PFE's territory, encompassing all the lines of SP (and T&NO), UP and WP. All icing on those lines was PFE's responsibility, and facilities had to be provided.

It is understandable that modelers might like to model one of the big Ice Manufacturing Plants or IMP (as PFE called them), these were truly impressive facilities. A word of caution though: because these were usually mammoth in size (see Figure 4). The PFE IMP at Roseville, CA was the largest



artificial ice plant in the world in its day. In a number of places where mainline trains were iced in transit, such as Roseville and Ogden, PFE operated 110-car island decks, meaning a 110-car train could be spotted on each side of the deck for icing. Even a 20-car deck, fairly small in PFE terms, would be 880 feet long, or more than 10 feet long in HO scale, pretty large for most layouts.

Luckily for modelers, there were much smaller and more numerous icing facilities, called Ice Transfer Plants or ITP, where PFE did not manufacture ice. This might mean that a commercial ice company made the ice, Union Ice Company is an example throughout much of California. This might mean that the facility had only an ice storage house, and ice had to be brought in, usually by rail.

15: An illustration of loading orange crates into a PFE car, using a hand truck. Note that crates are not loaded to full car height, to assist air circulation, and that crate dimensions permit stacking so that no crosswise dunnage is needed. Standard interior dimensions of PFE cars were vital to shippers. – “Dick” Whittington photo for PFE, courtesy CSRM.



16: This packing box label features an attractive young woman. Masculine-oriented themes were commonplace on packing labels. This actual Phelan & Taylor label has been modified for a packing house on my layout at Shumala. – Author’s collection.



At an ITP using commercial ice, the ice deck part of the plant might be owned and manned by employees of the commercial ice company; it might be built and maintained by PFE but manned by the local ice company; or in some cases, PFE both built the deck and employed the deck workers, while using commercial ice. There were also ITP facilities entirely owned by PFE, such as Watsonville Junction, where ice was brought-in to an ice storage house.

The icing process normally utilized large ice blocks, the PFE standard being 300-pound. But these were not dropped directly into ice bunkers. Instead, they were split into quarters and then chopped to final size by workers on the deck. There were three final sizes specified in the tariff: chunk, coarse, and crushed. For reefer icing, these sizes had the following definitions. Chunk ice was defined as not more than 75 pounds per piece (a quarter of a standard block), coarse ice was 10 to 20 pounds, about the size of a melon, and crushed ice meant pieces the size of a man’s fist. Shippers would choose the ice size they wanted.

Modelers sometimes depict 300-pound blocks being placed directly in bunkers. This was not done, for two reasons. First, the ratio of surface area to volume of the ice was not very great, slowing melting and heat absorption. Second, such a large weight being dropped ten feet onto the ice grates at the bottom of the bunker would easily damage the grates.

Once the ice had been placed in the bunkers, a workman would “bar” the ice. They would jam a long steel or wood bar down through the mass of ice, to make sure no major void spaces are in the ice. Obviously, void spaces were more likely in the larger ice sizes. The process is shown in Figure 11.

Ventilation

During certain times of the year, particularly spring and fall, outside temperatures might not be too high. Even in summer, there are cool spells, or shipments routed through cooler areas. In that case, ice refrigeration might be unnecessary, although cooling

17: Buyers at a wholesale produce market, Chicago, 1952. It was these men at whom the label art on produce boxes was aimed, not housewives in grocery stores. The example in Figure 16 illustrates the kind of image in question. – courtesy CSRM.



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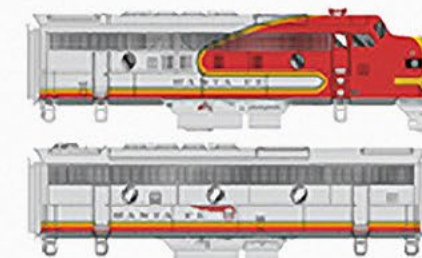
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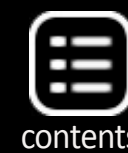


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with the external air would be desirable. For that situation, the tariff provided for ventilation instead of icing.

Ventilation involved opening the ice hatches and latching them in a raised position, allowing air to flow through the car while it was moving. The idea is shown by the diagram in Figure 12. Normally no ice would be placed in the bunkers of a car in vent service, although the tariff did have a category for combined service.

It is important to recognize how ice hatches in vent service looked. The hatch plug was usually visible, as was of some of its thickness. This can be seen in several of the accompanying photos. Older cars had separate plugs and covers, as can be seen in both the Figures 11 and 14

On the earliest cars, they were entirely separate, with the plug attached only by a chain. They were closed by setting them into the opening by hand. The hatch cover was primarily a weather cover, and was hinged. In later years the plugs remained separate, and were separately hinged to ensure alignment with the hatch opening. Then when steel ice hatch covers came into use, usually the plug was built onto the bottom of the cover, making a one-piece part Figure 13. This matters in modeling older cars versus newer cars, as the appearance of the plugs will be different.

I feel obliged to point out that there is a modeler's and railfans' legend that cars with the ice hatches latched open were always empty, being dried out in transit to loading areas. It is quite true that ice reefers were pretty damp inside most of the time, but no PFE employee I talked to had ever heard of drying out empties. No one would have bothered, because they would promptly get damp again with ice refrigeration. But in hot

Table 1: The U.S. Department of Agriculture table of desirable transit temperatures for produce. This was part of an extensive 1961 handbook on produce handling, shipping and marketing, USDA Handbook 195.

Desirable transit temperatures for certain fresh fruits and vegetables			
Fruits		Vegetables	
	Desirable transit temperature		Desirable transit temperature
	° F.		° F.
Apples.....	32-40	Artichokes.....	32
Apricots.....	32	Asparagus.....	32-38
Avocados:		Beans (snap).....	45
Most varieties.....	45	Beets (bunched).....	32
West Indian varieties.....	55	Broccoli.....	32
Bananas (green).....	56-60	Brussels sprouts.....	32
Cherries (sweet).....	32	Cabbage.....	32
Cranberries.....	36-40	Cantaloup.....	35-40
Dates.....	40-50	Carrots.....	32
Figs (fresh).....	32	Cauliflower.....	32
Grapefruit.....	50-60	Celery.....	32
Grapes (Vinifera).....	32	Corn (sweet).....	32
Lemons.....	50-55	Cucumbers.....	45-50
Limes.....	48-50	Eggplant.....	45-50
Oranges:		Endive and escarole.....	32
Ariz. and Calif.....	40-44	Honeydew melon.....	45-50
Fla. and Tex.....	32-40	Lettuce.....	32
Peaches and nectarines.....	32-45	Onions (dry).....	32-40
Pears.....	45-55	Peas (green).....	32
{.....	32	Peppers (sweet).....	45-50
Pineapples:		Potatoes:	
Mature green.....	50-55	Early crop.....	50-60
Ripe.....	45	Late crop.....	40-50
Plums (including fresh prunes).....	32-45	For chipping:	
Strawberries.....	32	Early crop.....	65-70
Tangerines:		Late crop.....	50-60
Calif.....	36-45	Radishes.....	32
Fla.....	38	Spinach.....	32
		Sweetpotatoes.....	55-60
		Tomatoes:	
		Mature green.....	55-65
		Pink.....	45-50

weather, empties being delivered sometimes had hatches open to vent any heated air from the car.

So, in general, cars with hatches positioned this way were probably loads, and the cars were in ventilation service. Vent service is an interesting variation on the appearance of refrigerator cars, and properly understood brings variation in operating patterns. To know which crops might ship properly at higher temperatures, Table 1 is a U.S. Department of Agriculture listing of desirable shipping temperatures for a variety of produce.

It immediately recognized that there is a considerable range of temperatures. On any given day, different cargoes might have different needs for protective services.

The harvest season for each perishable fruit or vegetable differs by geographical location. An extensive table of these seasons in Southern Pacific territory is included as an appendix in the PFE book. Those choosing to model specific seasons or months can use this information for operational planning.

Modelers may not necessarily be interested in what is supposed to be inside their model freight cars, but if they are, produce certainly is one category of loads which can have quite different requirements at different locations and seasons.

Finally, I should mention a point that I know has puzzled some modelers. This is the question of why many packing box labels seemed to have themes appealing to men, rather than to the women who traditionally did the household shopping in that era. The answer, of course, is that the housewives rarely saw an entire packing box. Only the male (in those days) grocer's buyers saw the boxes, Figure 17.

In Part Two we will explore the modeling of a PFE fleet. [☑](#)



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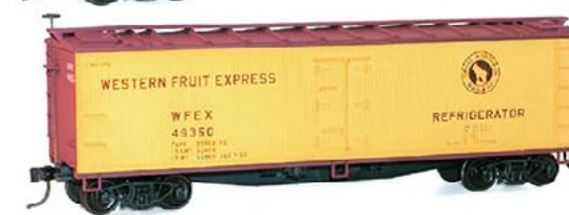
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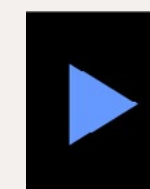


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What's neat this week column

by Ken Patterson

1



1: Mike Budde and Joe Steimann set up a few of Ken's modules, with extensions at each end. The sun had set, but Mike and Joe were committed. Ken just kept filming at first, telling the guys, "this looks unstable and nuts." Any wind and the models would be in the dirt. It was risky.

What's neat column - 1



This month, Mike Budde and Joe Steimann set up a few of my modules to film run-bys of some of Mike's auto racks. The weather called for clouds and colder temperatures – not well-suited for a photo shoot. I all but gave up and went back to calling for accounts. In that hour of cold calling, Joe and Mike broke out the tools and had three sectional photo modules set up and connected together with DCC and sound. Hanging off the back hill, the scenes were held 8 feet in the air with bar stools and mole traps, and foam shims holding the track joiners in line. It was nuts. One gust of wind and it would be “party over.”

I grabbed the video camera and started documenting the event. It was “game on” for capturing stunning video of long model run-bys on 24 feet of mainline outdoors. What could be better? It just worked. The sun was gone but video, unlike still

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photos which usually look washed out in overcast skies, seems to look OK on cloudy days.

In the remaining light, we shot Mike's models for a few hours. Joe's Frisco 1522 excursion locomotive makes impressive night time run-bys, with its sound, lights, and glowing fire box. Then it was the lighted California Zephyr consist, in nighttime run-bys stretching into the morning with a stunning sunrise run-by.

The video was shot in March. The sunrise shots were taken in May. All of the still photos of the racks were shot in the sun in




3: An overall view of the crazy set-up. By this time, the temperature had dropped to the low 30s, and it was chilly. The scene measured 26 feet long, which would allow a run of two locomotives and eight long cars, which is an eternity on video. I was getting excited and having fun watching the set-up progress!

4



4: BTTX 911422 displays a very faded as-delivered Wabash blue. The scratchbuilt rack is on a Walthers F89 flatcar and carries a load of Chevrolet station wagons built in the St. Louis assembly plant.

February, and our opening talk section was taped in June. So it took about four months to produce this video. I did lots of editing to try to get things in order just right.

So with that in mind, watch this month's video as we share fun times hanging out with the boys in my model photo studio on the bluff. This is some of the best model run-by footage to date. The photos and captions this month describe the models featured in the video. Hope you enjoy the presentation. 

Pictures continued on the next page...

5



7



6



5: TTBX 912837 is a scratchbuilt rack on a Walthers flat. The Chevy wagons are resin models Mike cast from a master based on the Classic Metal Works '78 Impala.

6: ITTX 913860 carries another load of Chevys. The Atlas step van sports a resin-cast Chevrolet grille. The chassis is a C in C Castings frame with scrap box details. A Trident box van and chassis cab round out the load.

7: ITTX 912796 hauls three Atlas step vans with Chevy grilles. Mike used a scratchbuilt master to reproduce the Chevy fronts in resin. MV lenses finish them off.



**Reader
Feedback**
(click here)





8b



8a-8b: A side shot of BTTX 911422. The wagons were finished using prototype photos and information. When you look at Mike's models, it really hits you how much time it takes to scratchbuild the rack. But then, figure he has to build eight more detailed models to fill the rack.

9



9: Joe Steimann spent three months finishing and tricking out this locomotive. It features every pipe, hose, and appliance on the exterior of this locomotive. Joe used prototype photos of every angle to know what details to apply. This is the best.

10



10: CB&Q F3's were used to pull the California Zephyr, and in this photo you see two sets from two respected manufacturers. On the right are Broadway Limited Fs, and on the left are Athearn F3s. I used the Broadway locomotives in this month's video.

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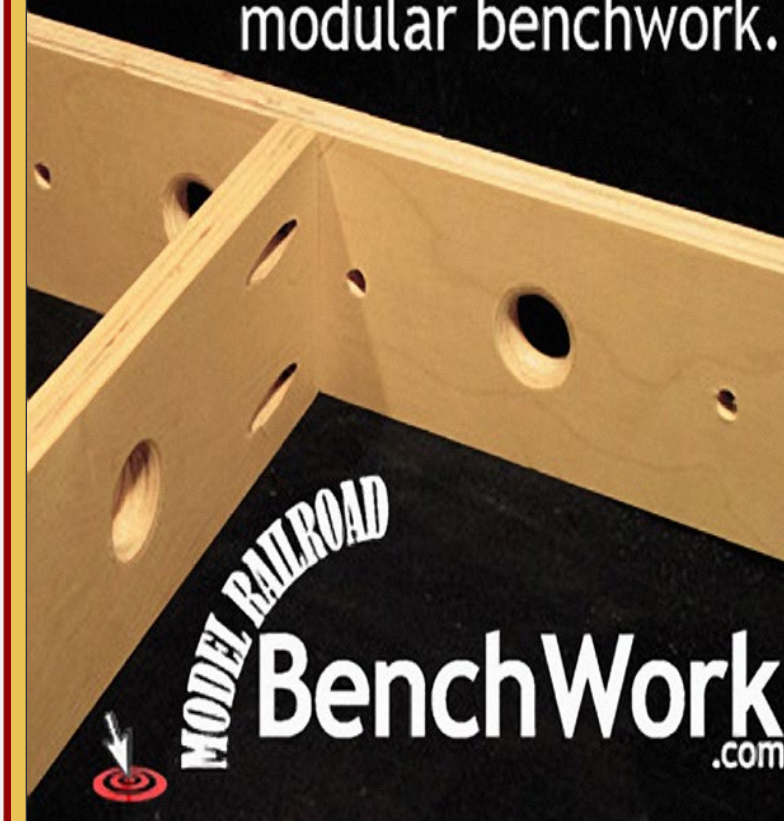
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L&N SD40-2 No. 3558, SD40 No. 1262 and N&W No. 1635 hustle southbound fast freight 425 across Powell River at Mills Gap, KY. Photo by Greg Komar.

Building the Virginia Southwestern

Techniques used to build a large layout ...



Greg Komar photo

This scene is on the middle deck at Mills Gap, on John Wilke's HO scale Virginia Southern layout.

My original layout, The Louisville & Nashville RR Thornhill Division, was built loosely following L&N prototype practices. I paid only minimal attention the operational aspects of the prototype and model railroad operations. I want my models to be creditable and believable, so as my modeling interests moved towards more specific model scenes and prototypical operations, I became less satisfied with my existing layout.



1: Walter Roberge and Morry Morris at work on initial frame construction. While some tools required are different, the socket wrench, many others are the normal tools that you need to build a wood-framed layout.

I did not design my layout to be operations oriented. It had the usual layout trappings: narrow aisles, a severe shortage of staging, and too much rolling stock. Add to these items a shortage of on-line industries and I had an operational mess.

The possibility of a job change and relocating raised the idea of dismantling the layout. When the job change did not occur, the thoughts of tearing down and rebuilding the layout lingered. I began thinking of the changes and improvements I could make with clean start.

I got lost on a railfanning trip and literally stumbled upon Norton, Virginia. I saw N&W power working the yard and L&N power tied up near the yard office. I also saw that the Southern Railway was also present. I ended up spending a great deal of time investigating the prototype operations, coal industries, and scenery in the area between Appalachia, Virginia and St. Paul, Virginia. If I had

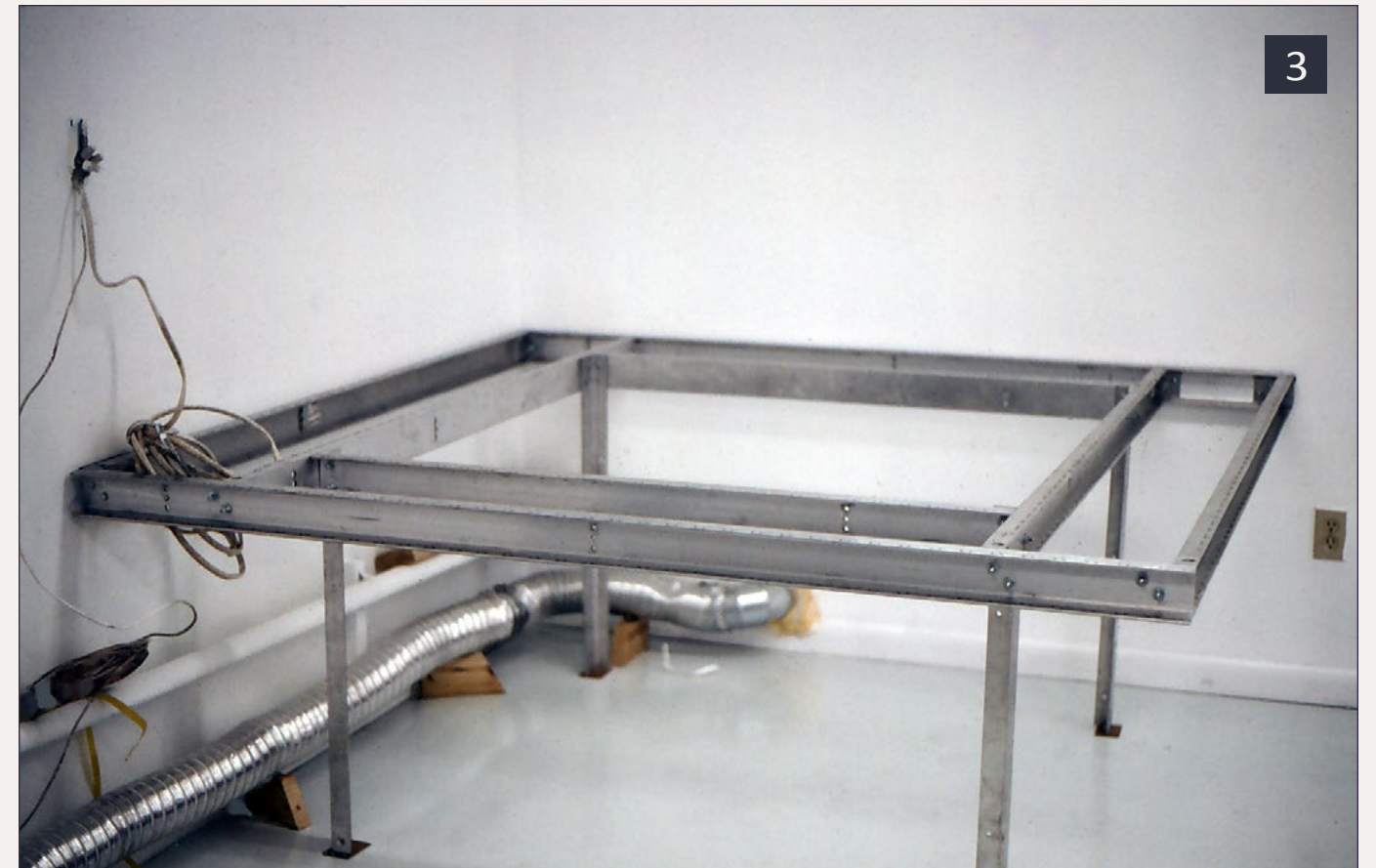
known of this locale before I started construction of the original layout, then the Thornhill Division would have been very different.

The area that interests me the most starts at Big Stone Gap, VA where the L&N and Southern travel upgrade through the Powell River gorge to Appalachia, VA. Both railroads, the Southern on ex Interstate RR trackage, proceeded eastward, crisscrossing each other into Norton, Virginia.

In Norton the L&N terminates at the N&W yard. The N&W forwards the traffic on to St. Paul, Virginia interchanging with the Clinchfield or on eastward. The Southern (ex IRR) went through Norton to an interchange with the Clinchfield at Miller Yard. The Southern had interchanges with the L&N at Dorchester, Virginia and the N&W at Norton.



2: Helix B aluminum table.



3: Helix A aluminum table.

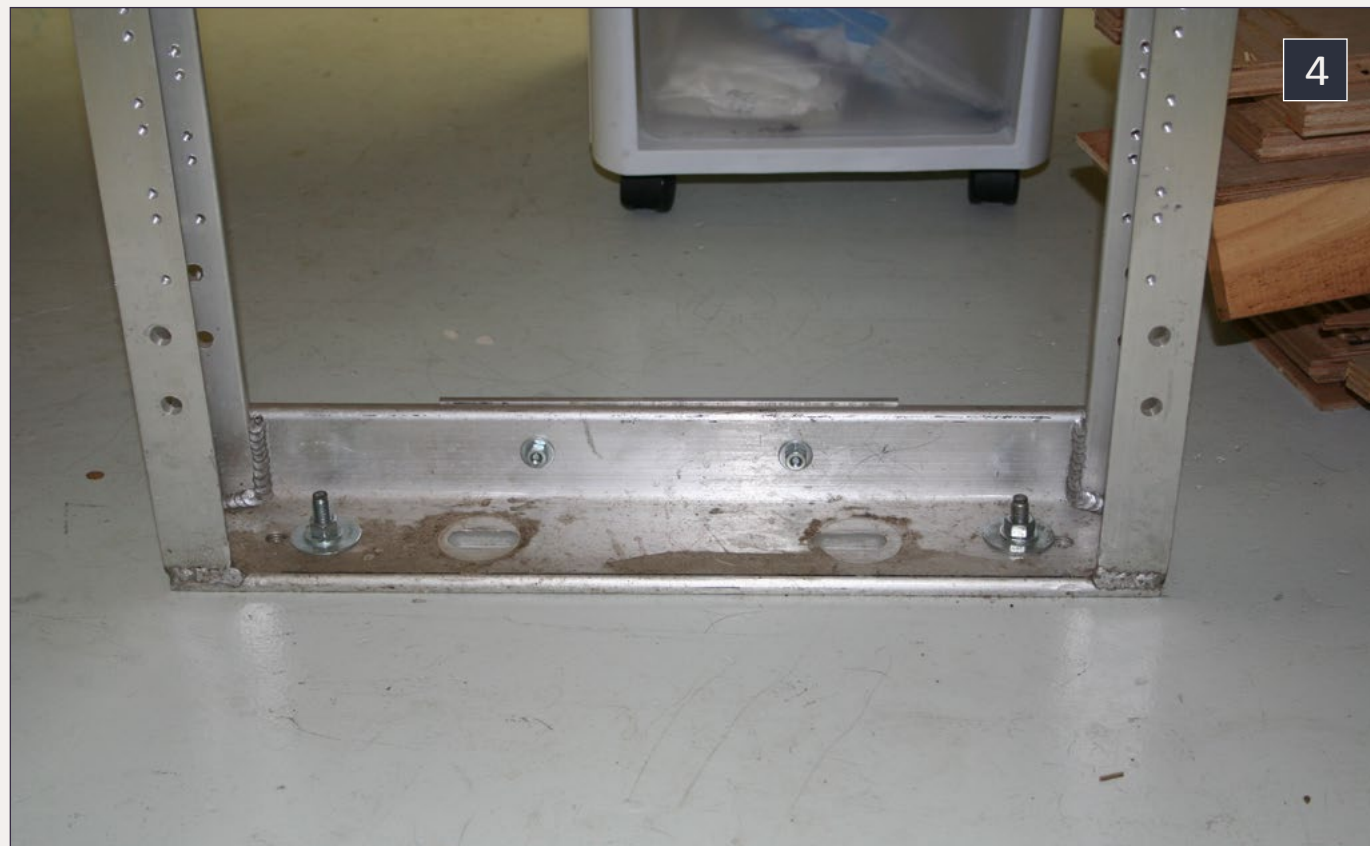
In designing a new layout, I wanted to incorporate the key aspects this region presented. In a relative compact area there are, four Class 1 railroads with lots of coal operations, interchange, and through traffic. The N&W yard in Norton is a good sized and an easily modeled yard which will serve as a focal point of the layout.

The railroads share the same rights of way through some towns and have parallel routes between these towns. Appalachia, Virginia is (was) a great example of this arrangement. The L&N and Interstate RR/Southern actually share the same road-bed with mainlines running side by side through town. The Southern and N&W have several branches coming off their main's serving various coal mine operations.

The Interstate RR/Southern had a unique coal gathering operation using soon to be retired hoppers in captive service to move coal from area mines to a trans-loader located at

Appalachia, VA. These car loads were known as “Yellow Balls” because the hoppers were marked with large yellow dots and are stenciled with “Andover Service Only”. When cars needed anything more than minor repair or were wrecked they were generally scrapped on site.

Some other aspects I wanted to include in the new design were a section of track where the Southern would have track-age rights over the L&N. This section of track will be a single track mainline. The L&N Corbin-to-Atlanta mainline travels through a beautiful but relatively unknown gorge just south of the Kentucky-Tennessee Line following Hickory Creek. I chose this



4: I mounted the aluminum equipment frame to floor. Holes were drilled into the concrete floor and secured with Wedge Anchors. With mounting the frames to the floor I need to be fairly accurate with my locations. Moving benchwork around is not much of an option without a lot of extra work.



5: View of the inside curved section of vertical aluminum posts' floor mounting. Every leg is anchored to the floor providing a very sturdy layout base.

were virtually no non-coal industries to justify the number of general freight cars I had. Some of the new industries to be included are a paper-container plant, plastic pellets, composite polymers distributor, chemical lime/limestone plant, feed mill, textile plant, and mine and mill supply.

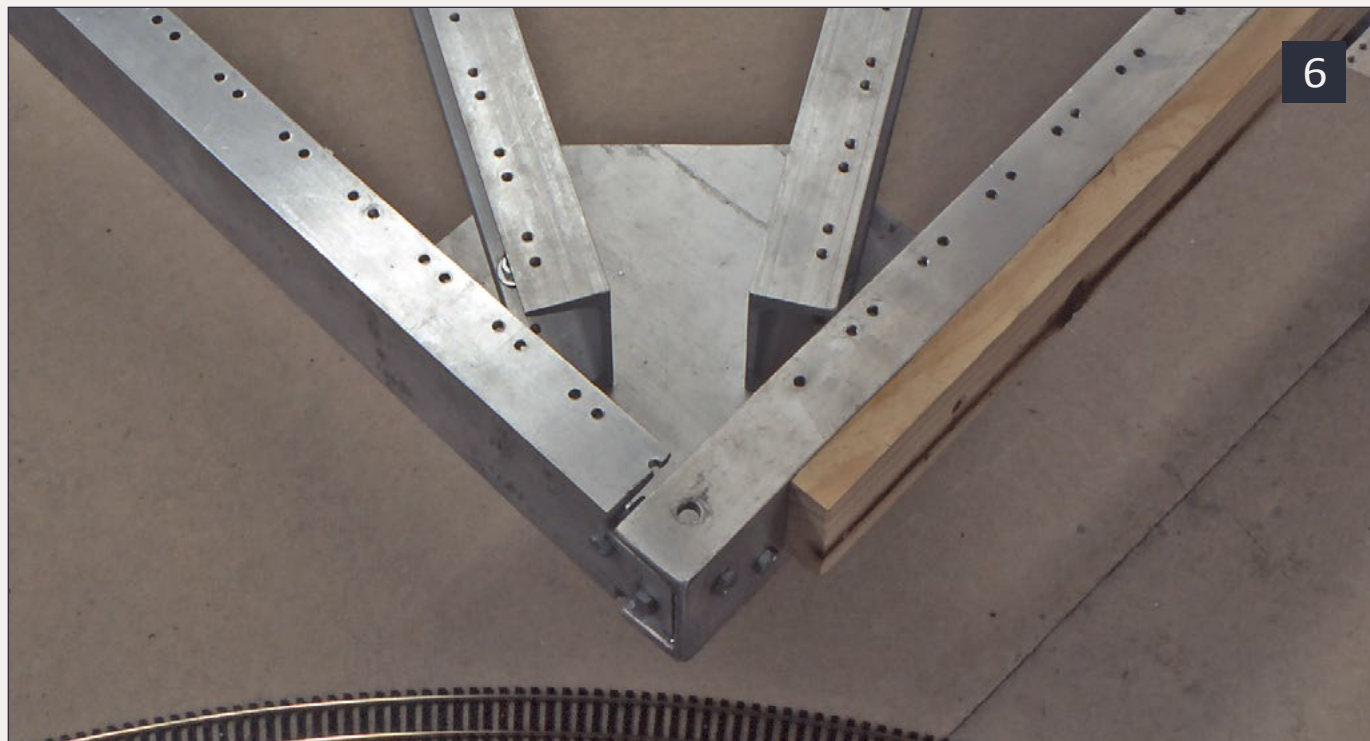
The new layout has some operational differences from the prototype. The L&N had trackage rights over the N&W from Norton to St. Paul beginning in 1974 due to the Southern not being able to handle (or not wanting to handle) the interchange traffic from Norton to the Clinchfield at Miller Yard. On the new layout I'll have the L&N control Norton Yard and the N&W will run with trackage rights into Norton. The layout will have a north-south orientation while the prototypes are actually east-west.

area to be modeled as the joint track section.

I also needed more industries and general freight traffic, along with interchanges for better operations. On the old Thornhill Division I had far too many cars. There

With the new plan I wanted to model both the L&N and Southern using a point to point layout. The L&N will be the primary line having several interchange points with the Southern. While working on different design ideas I found that a single level layout did not give the extra mainline, or operations I wanted to improve on the original layout.

After trying a combination of partial two-level designs, with and without a helix, the lack of staging and little additional mainline were always a problem. After about 2 years of drawing, I settled on a three-level design with two helices, a branch line for the Southern, a short spur for the L&N, and north/south staging yards for each railroad.



6: Looking down on mid level horizontal corner framework. Gussets are used to attach the parts together instead of attempting to bevel cut the angled pieces. This type of construction is very similar to steel framing in buildings. The outside corner framework has 1x3 wood attached. Sub-roadbed and risers are mounted to the framework using this wood piece.



7: The mid level outside corner framework. Protective plastic is being placed over the ends of the aluminum channels in heavy traffic areas. Unlike wood, the metal members can severely damage your body if you catch one of the corners.

The final design incorporates several specific prototype scenes and arrangements. Beginning on the upper deck at the town of Edison, VA the N&W/Clinchfield crossing at St. Paul VA. is represented. Moving south, a Southern/N&W over/under crossing at Ramsey VA. is depicted. At the town of Hawthorne a neat coal operation, Cumberland Collieries, is modeled. The East Norton area with the Southern branch and Norton Yard complete the upper deck.

After traveling down the helix the railroads emerge at Blackwood, VA on the middle deck. Here the track plan closely follows the prototype side-by-side track arrangement at Appalachia, VA. Major town industries will be Chesapeake Polymers, Virginia Wholesale, and Moody Plastics.

The town of Granfield, VA is next. This town will feature the Southern reappearing on scene to join the L&N on the joint track-age portion of the layout. The two primary industries are West End Paper Co. container plant and the S..J. Hunter feed mill.

The joint trackage starts at Granfield and runs through Goodbee, VA. to Blue Jay where the L&N and Southern main lines split. A very scenic portion of L&N mainline that negotiates the Hickory Creek gorge in Tennessee is modeled in this section. Goodbee will have four coal operations along with a small wood yard.

Next at Cawood, VA a short L&N spur runs up to Coalgood. The spur will feature a bank of modern coke ovens as well as two smaller coal operations. In addition to the spur line, Cawood



8: This photo shows the framework modification allowing for different track levels. This type of construction is not possible with wood framing, but with the metal members it is no problem. I used ¼" x 1" long bolts, nuts, and washers for my standard.

will also have a station, team track, the L.W. Harrell Lumber Co. pulpwood and pole yard, and another small coal dock. Leaving Cawood the main-line travels down the helix to south-end staging.

Some important design requirements of the new layout included no permanent wall attachments. I wanted sturdy, free standing

METAL BENCHWORK

Metal benchwork is outside the norm for layout construction, but can have advantages over a wood-framed layout. Anyone who has built anything using wood knows you can face warpage from atmospheric changes. Metal framing eliminates the warp-age problem.

Metal is much stronger than wood with a higher strength-to-weight ratio. When building a double-deck or a mushroom-style layout, you always need to deal with the support requirements for the upper deck, so using something other than wood could help.

With metal framing, additional bracing and support can be reduced or even eliminated. Metal also can take loads in both compression and tension, while too much tension loading on wood and it breaks.

If you do decide to use metal framing for your layout, be prepared. You will need to learn some new skills, and you'll require some different tools. That could actually be a good thing!

John had the unique fortune of finding obsolete equipment cases with aluminum frames he could use for benchwork. You may not be as fortunate and need to purchase steel studs. Two sources that we found located in almost in every city across the nation are: Menards and Home Depot.

Here's an instructional site that can help you get started if you're interested in using metal framing: wikihow.com/Build-with-Steel-Studs.

If you are currently in the planning stages for your layout, take the time to consider if metal framing might be right for you. ■

bench work with as few legs possible. I did NOT want any sagging bench work. With a 30" minimum aisle and a 36" standard bench width, it is important to maintain a comfortable reach and access to hidden trackage and equipment.

These design requirements necessitate strong, straight lumber. The horizontal joists would need to be on 12" or 16" centers. I thought that aluminum communication equipment frames could serve as sturdy bases for the vertical risers, with lumber filling the space in between frames. As I inquired about the availability of the equipment frames, I discovered that I could purchase enough aluminum frames at a reasonable cost allow-



9: This is a special framing situation. The horizontal piece to the left could not be attached to a vertical or mounted to another horizontal beam in the usual fashion, so small pieces of angle were bolted to the vertical and horizontal pieces to make the necessary connections. The metal provides a lot of flexibility on how you can connect pieces.

ing me to build the entire layout bench work out of aluminum!

Design and framing details

Using aluminum, I could spread the joists to 20-24" or greater in some places. I bought a metal-cutting bandsaw so I could cut the materials easily. Nuts, bolts, and washers are used to assemble the framework. The framework is attached to the



10: The lower level horizontal beams for the L&N's north Decoursey staging yard. The plywood decking to the right is the L&N's south Atlanta staging and the Southern's South Citico staging.

floor using wedge anchors. I had 2"x2" aluminum angles made for the framework corners. I did need to have the horizontal members welded later on. A slight bow in the ¾" inch plywood deck moved the horizontal members out of position.

1x3 pine was attached to the horizontal members using self tapping drywall screws in a 1/8" hole for the risers. One bonus I had was turning in the scrap aluminum to a salvage yard for money. Try that with scrap lumber!

The helix's roadbed is made with 1/8" door skin plywood. This was cut to the proper width and radius in different lengths. The length was determined by the position of the different arcs on the door skin sheet. These pieces were then laminated together with contact cement.

The risers are made from ¾" furniture grade pinewood. I cut dadoes at 4" intervals, then ripped the boards into ¾" strips to accept the helix roadbed. The track was glued to the roadbed

as the whole assembly moved upward. The helixes sit on an aluminum box frame with a $\frac{3}{4}$ " plywood deck.

The sub roadbed is $\frac{3}{4}$ " plywood laminated with $\frac{1}{2}$ " Homasote. The roadbed material is beveled $\frac{1}{4}$ " inch Homasote on the mainline track and $\frac{1}{8}$ " Homasote for passing sidings and branch lines.

Atlas code 100 flex track is used for the staging yards and hidden track. The mainlines are Micro Engineering code 83 weathered flex track. Passing sidings are either code 83 or code 70, with yard and industry tracks code 70.

The minimum mainline radius is 32" with most curves being 42" or greater. I took the time to add transitional spirals and super-elevated the mainline curves. Turnouts on the mainlines

are #8 minimum with #6 or so in yards and industrial tracks.

The majority of the turnouts are handlaid. I like to have the turnouts conform to the track plan, not have the track plan conform to commercial turnouts. I do have some commercial turnouts in places where a standard turnout will fit, or in a location that is too awkward to hand lay. Tortoise switch machines power the



11: This is the framework at east end of Norton Yard on the upper level. On several of the horizontal pieces you can see my markings for the location of the channel along with the length I need for the channel.



12: The end of the peninsula from the upper level. Note the good 1x2 lumber! One of the major advantages of the metal framing is I don't have to worry about warped lumber.

mainline and yard turnouts. Most industrial turnouts have hand throws.

I use CVP Rail Command for train control, with #10 track buss wire and #14 stranded with #16 feeders. I flatten the tip of the feeder so the connection to the track will be virtually undetectable. All connections are made using terminal splice taps (also called "suitcase connectors"). I find these splice taps are quick and easy to install and very reliable. Switch machine and signal wiring range from #18 to #22. All of the wire terminations on the layout are made using crimp connectors.

After the old layout was torn down and the room cleared, I had the ceilings and walls finished by drywall professionals. For the overhead room lighting I use T8 wraparound fluorescent fixtures. An advantage of these fixtures is that if one bulb fails the other bulb is unaffected. For middle level lighting I use 13 inch linkable fluorescent under-cabinet fixtures.

The layout power and lighting are separate circuits, with all 110v wiring run in conduit.

Time period

When choosing a time period I selected the 1976 to 1978 time frame. I found many interesting factors are in play during this time. The L&N kept the F units in service until June of 1975 and Alco RS3's until April 1976. The L&N had persistent power and car shortages, poor track, and high derailment rates during this time.

The power shortages in particular allow a wide variety of foreign road locomotives to operate on the layout. Leased locomotives during this time frame included Seaboard Coast Line (majority owner of the L&N), Penn Central, and after April 1976, Conrail, Canadian National, B&O, DT&I, Auto Train, Southern Pacific, N&W during a 1978 BRAC strike, and

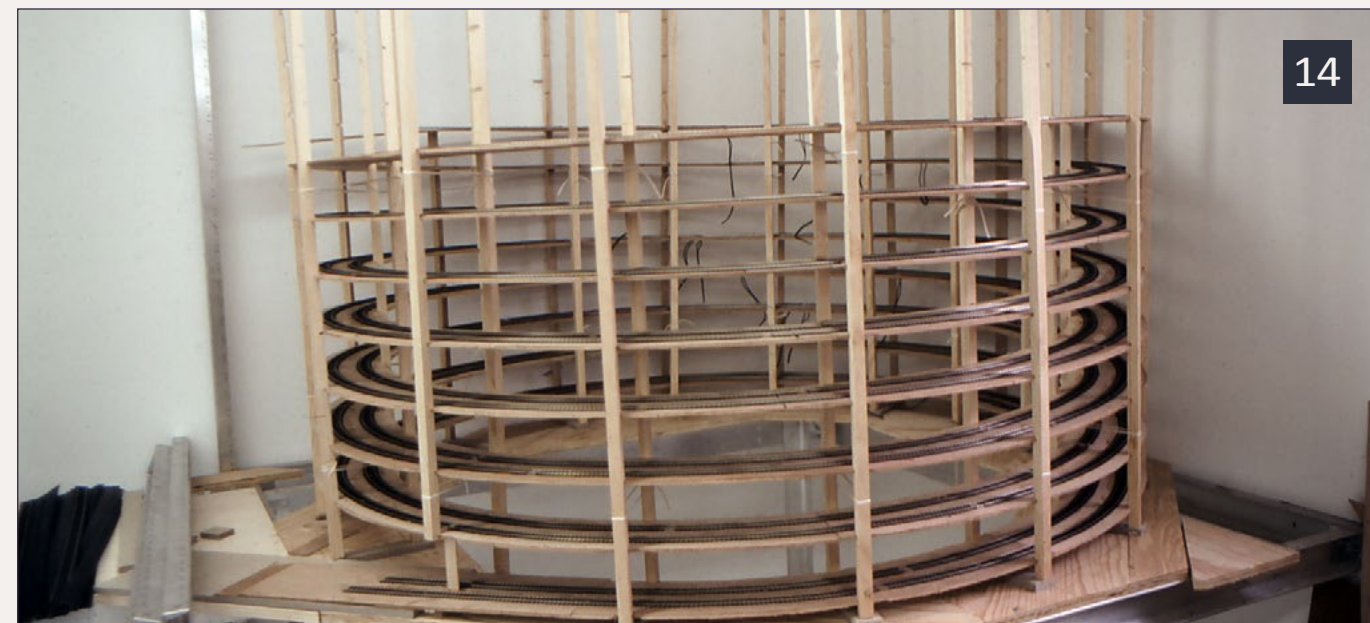
units ordered to the L&N from SCL by the ICC. Power from run-throughs and pool trains with BN and MP locomotives were also in service. New power ordered by the L&N in the Family Lines paint began arriving in 1977. Another important consideration for my layout is the track-age rights agreement with the N&W.

[... On to next page of text →](#)



13: My metalworking Crash Cart. I keep all of the tools that I need for working with aluminum in one place. Since it is on rollers it's easy to move around the layout.

Helix Construction



14: Helix B is under construction. The helix's roadbed is made with 1/8" door skin plywood.



15: Some of the vertical risers of the helix have been trimmed to their final height. The mid level area with the tool bin is the Coalgood branch. Above it is the sub roadbed for Eljobean.

[← back to previous page of text ...](#)

Operations will have the Southern and L&N being dispatched as separate railroads. One or two people can perform this job. The layout has separate north and south staging for each railroad. The layout will feature active interchange between the two railroads, with cars moving from an industry or staging yard on one railroad, through an interchange to an industry or staging yard on the other railroad. I use MiTrains & Waybills computer program from shenware.com to create car movements and switch lists for yard and local jobs.

Initial operational plans are for the Southern to have one through train each direction, two locals, one unit coal train, and a Norton area switcher working from the Southern's Three Post yard. The L&N will operate two through trains each direction, two Norton north locals, two Norton south locals, two Norton yard jobs, The Cawood turn and two unit coal trains. Both railroads will have coal gathering operations known as the "Yellow Ball" jobs. ☒

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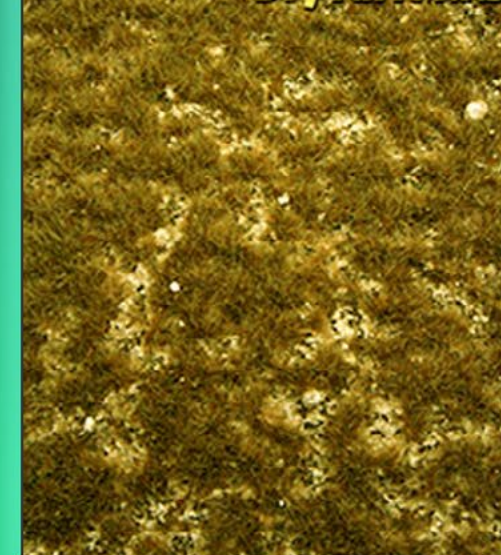
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16: Another shot of helix A showing track exits at the lower level at the far right, the mid level at the left and right part way up, and upper level in the center top.



Sub Roadbed

17: View of lower, mid and upper level plywood decking in place on the framework. The sub roadbed is 3/4" plywood with 1/2" Homasote over it. At this point I realized that this might be a good time to lay the staging yard trackage before access became difficult.



18: This is the plywood decking for the lower level L&N and Southern south staging yards.



19: More progress on the layout. The sub roadbed is in place for the town of Goodbee on the right and Cawood on the left. L&N and Southern staging yards are below each of these towns.



20: Here we can see all three levels with plywood and Homasote decking as the work progresses. The track has been laid on the lower level staging yard. If you look closely at the vertical posts you will see numbers on them that correspond to locations plotted on the layout drawing.





21: The track sub roadbed and the Powell River river bed at Mills Gap. The locomotives are sitting on their respective mainlines. Right now it's just imagination filling in the gaps.

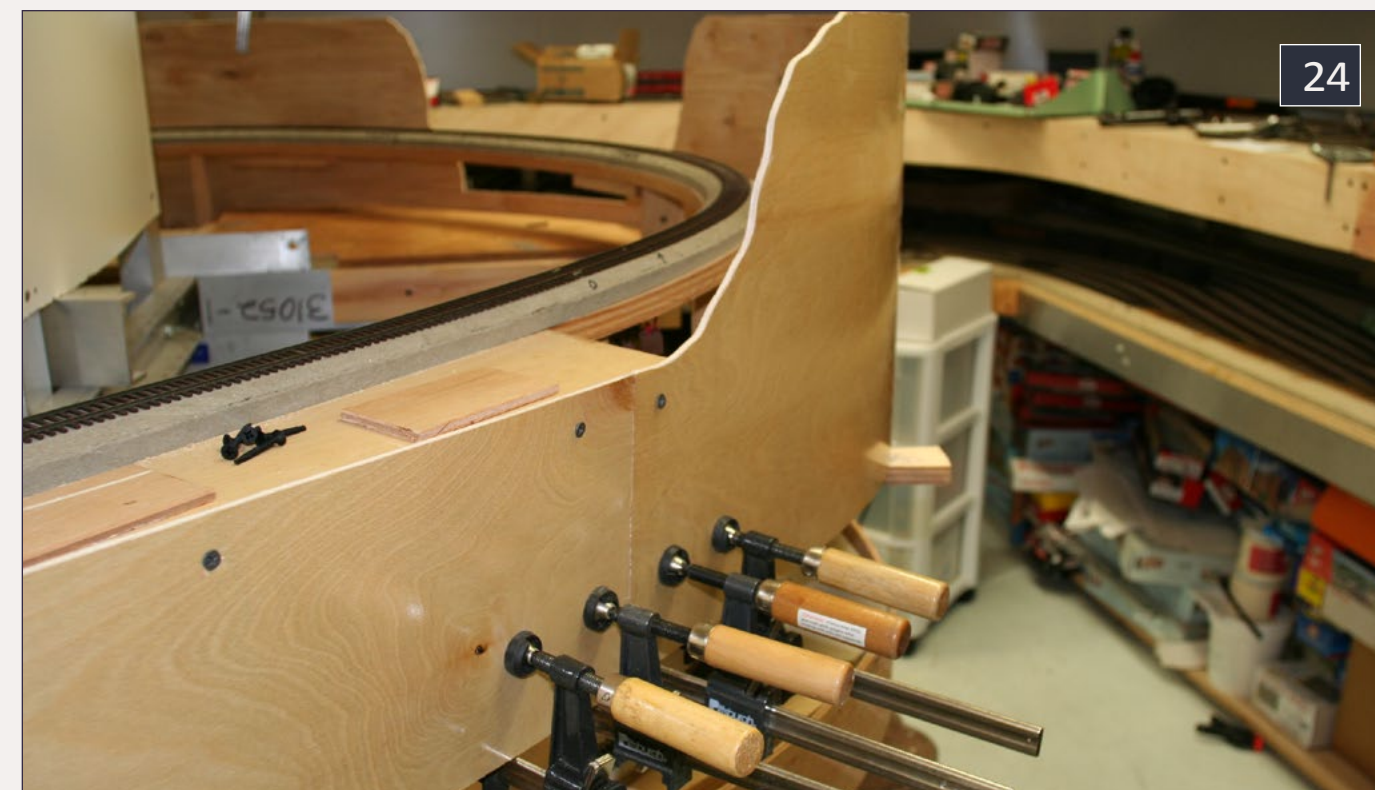
Fascia Construction



22: I am beginning backdrop construction. The plywood strips will help provide additional support and stability.

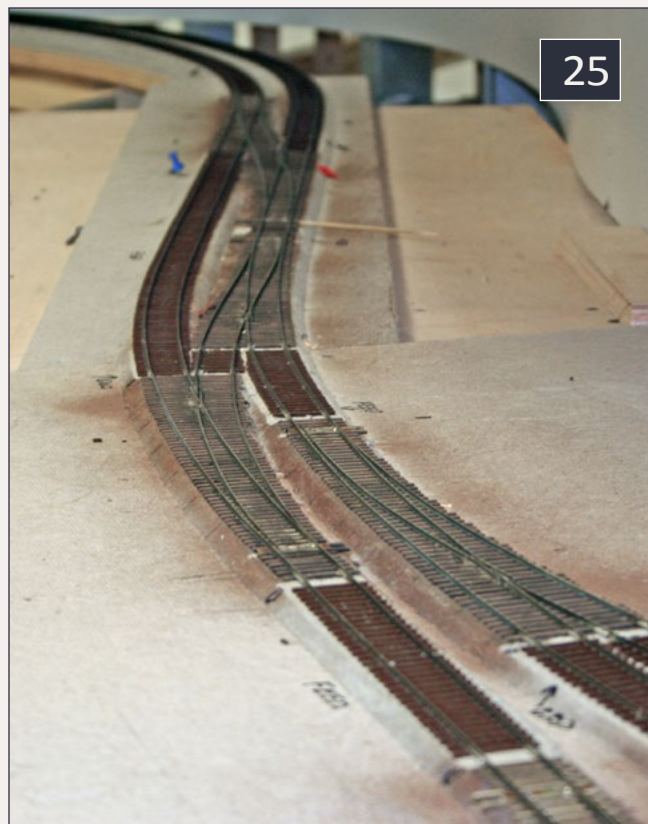


23: The finished side of the hardboard backdrop as it is being placed on the mid and upper level. By staggering the joints between the plywood strips and the backdrop, I don't have to worry about any unsupported joints moving at some point in the future.



24: A typical fascia splice joint. I use numerous clamps to make sure that the joint is smooth and easy to finish.

Trackwork



25: Blue Jay crossover. The switches are hand laid allowing me to make them conform to the track plan and not make the track plan conform to the requirements of manufactured switches.



26: West Norton. The Southern mainline is at the rear, with interchange track at mid point in the photo. The L&N's Norton yard is at the far end of the photo.

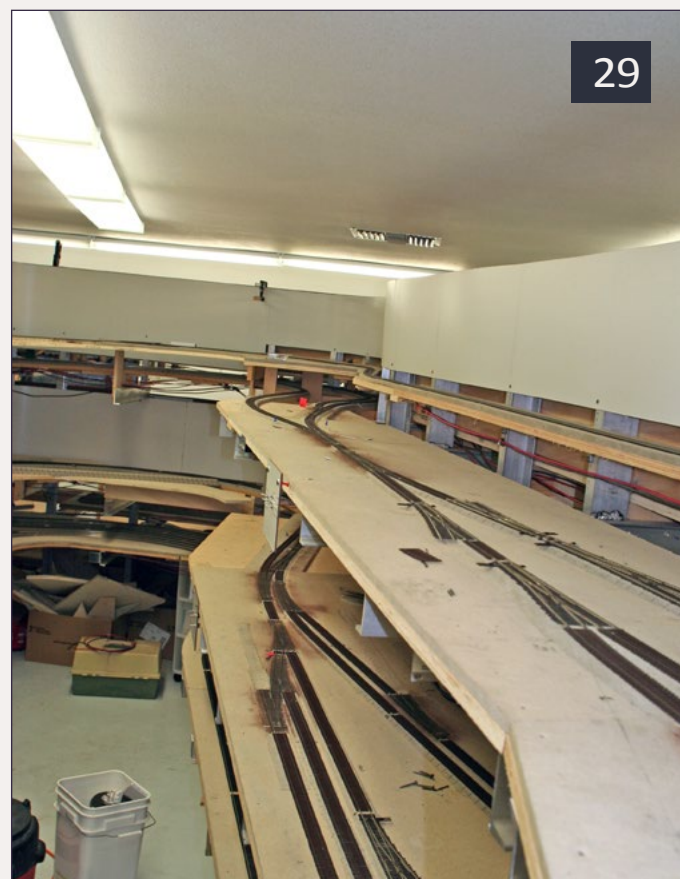


27: the north end of Norton yard. The Southern's mainline and passing siding are located along the backdrop.

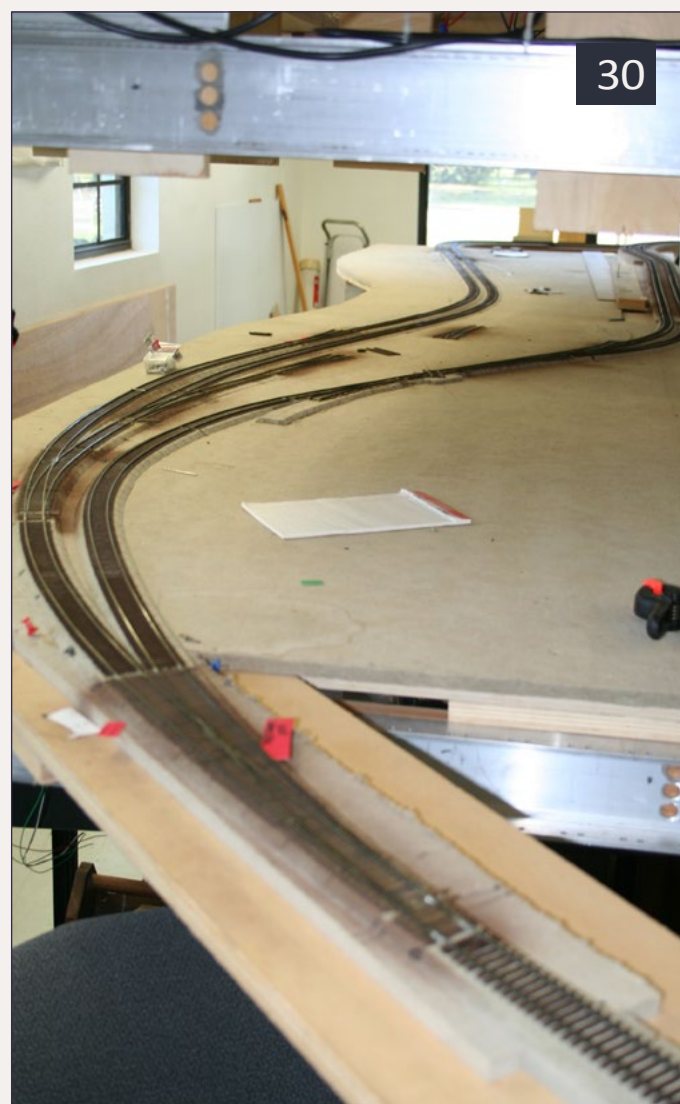
28: This is the east end of Norton. The Southern's mainline and Glamorgan branch wye are on the left. The right side trackage is L&N's Norton yard mainline and yard lead.



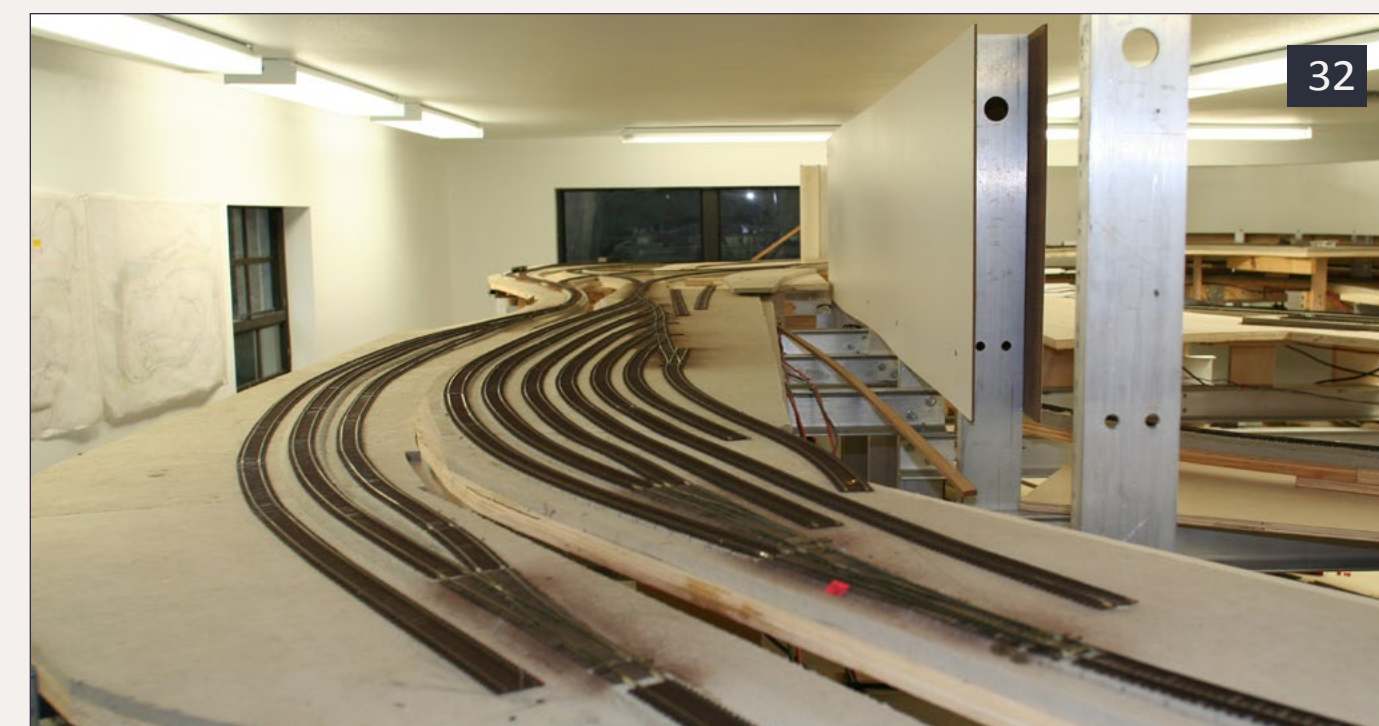
29: The track on the mid level is Cawood. The upper level is Edison Interlocking. Here the track plan allowed the use of some of the commercial turnouts. The Southern's Glamorgan branch is the single track above Edison. The branch will be hidden by a mini backdrop keeping the focus on the L&N.



30: On the mid level is Granfield. The joint track section between Granfield to Blue Jay begins at the bottom of the photo.



31: The mid level track work at Granfiled. This view looks south. The Southern's mainline is to the left against the backdrop



32: This is the Southern's Three Post yard at Hawthorne. Track work is progressing nicely, but there is still much to be done.

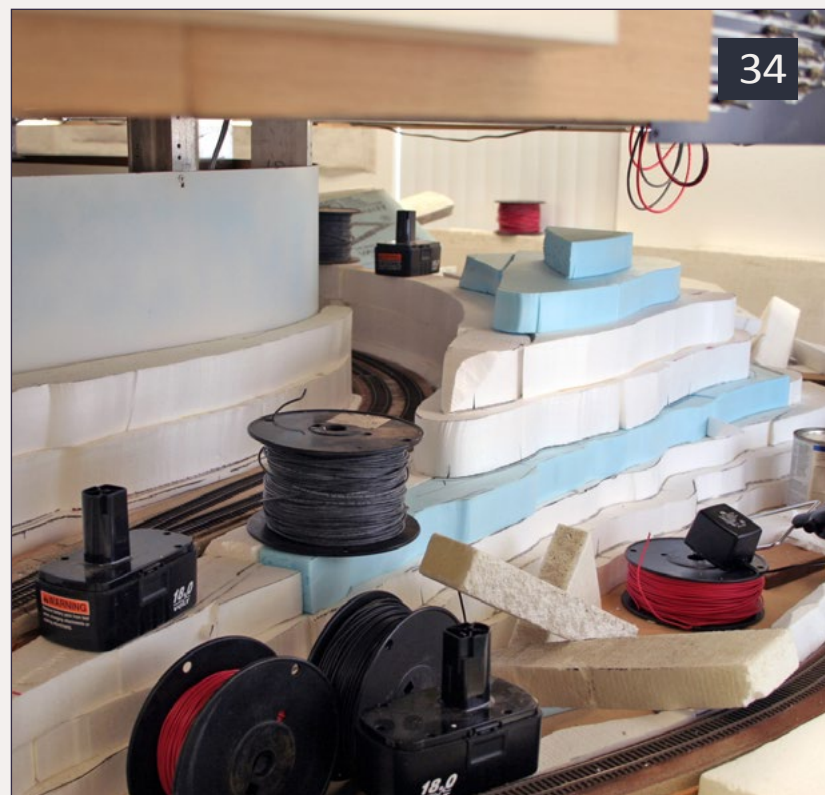


Early Scenery Construction



33: Bead-board construction that will form the tunnel at Granfield into the Hickory Creek gorge. I use different thickness of foam to put them together in combinations that give me the height that I want.

34: The foam board construction of the Mills Gap scene. Anything and everything with weight is utilized to hold the pieces in place while the glue sets.



35: Foam-board construction at Guest River. Rough shaping and clean up is completed. The L&N mainline follows the river through here.



36: Another view of the Guest River. The risers will be the bridge supports for the Southern's mainline.



37: The tunnel portal at Blackwood. The portal and rock castings were made in latex molds from rocks and lumps of coal I brought back from Appalachia. I ended up making over 90 molds. Each casting was numbered with the mold's corresponding number. I would try different castings in each area and when one would fit, I marked the spot, then make a casting from that numbered mold and set it in place in the previously marked spot. This shot also show the mess that the foam board can make. Be sure to have a vacuum handy.

38: The tunnel openings at Hickory Creek were natural openings made with fitted rock castings. I painted the plaster castings with a diluted wash of basic earth latex paint and sprayed with an india ink wash when they were removed from the mold.



39: At Mills Gap over 13 rock castings are being set. I soak the castings in water until saturated, then sprinkle plaster on the back of the casting. I add some water and mix the plaster on the back of the casting. When the plaster was mixed, I place the casting in its predetermined location and wait for the plaster to set up. Blue tape covers the track during this phase of construction. The foam and plaster can make a real mess of things.



Finished Scenery

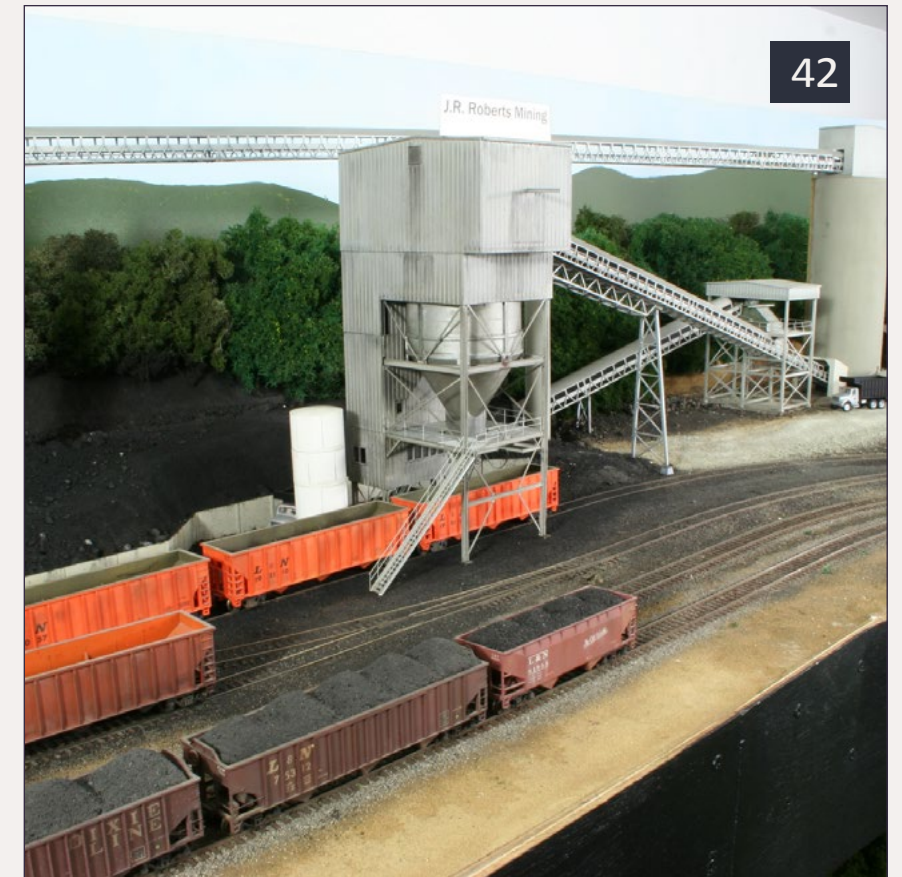


40: L&N ALCO C420's 1302 and 1300 are moving emptys through Blue Jay interlocking past Anndean Industries Joyce Ann #3 loadout. Compare this with photo 25.



41: L&N ALCO C420's 1300 and 1302 are busy working Cawood spotting empties at Wilson Coal Co. crush and load tipple.

42: J.R Roberts Mining's fast loader and coal stack located at Eljobean. The tower the left services the surge stack, allowing the mine to keep on operating even if there are no hoppers available for loading.



43: Even though J.R Roberts Mining's coal preparation plant is a sprawling facility, all of the rail operations are located at the the fast loader.



44: Cumberland Collieries loadout which is serviced by the L&N is adjacent to the Southern's Three Post yard at Hawthorne. Compare this to figure 32 where the track work was in progress.

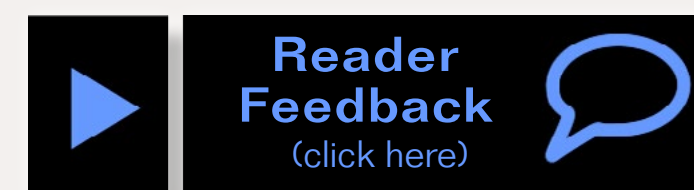


45: A Southern road freight has just cleared the joint trackage at the south end of Granfield and is winding its way behind the industries in town. Meanwhile L&N local 603 waits in the siding for more through trains.



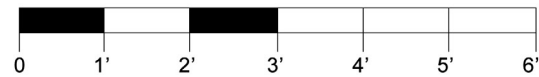
Greg Komar photo

46: Hoppers are being loaded with export coal at Cumberland Collieries tipple located in Hawthorne VA on the L&N. The N&W, using trackage rights, will pick them up and deliver them to Lamberts Point, VA for overseas shipment. On the far track, Southern's Three Post yard shifter rolls by bound for Bickerstaff Materials Limestone Plant. Photo by Greg Komar .



Bottom Level (Staging)

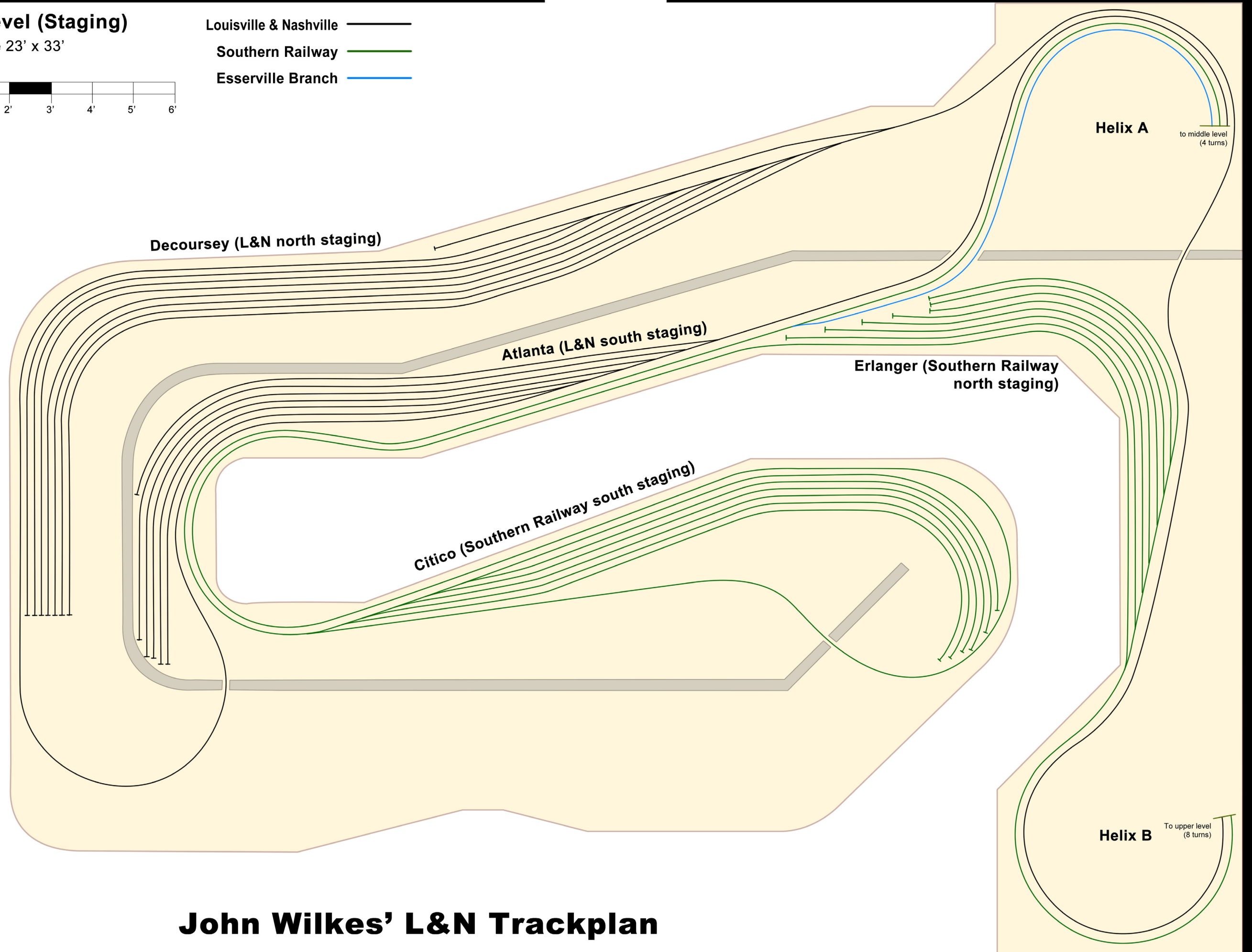
Room size 23' x 33'



Louisville & Nashville

Southern Railway

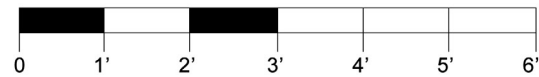
Esserville Branch



John Wilkes' L&N Trackplan

Middle Level (lower main)

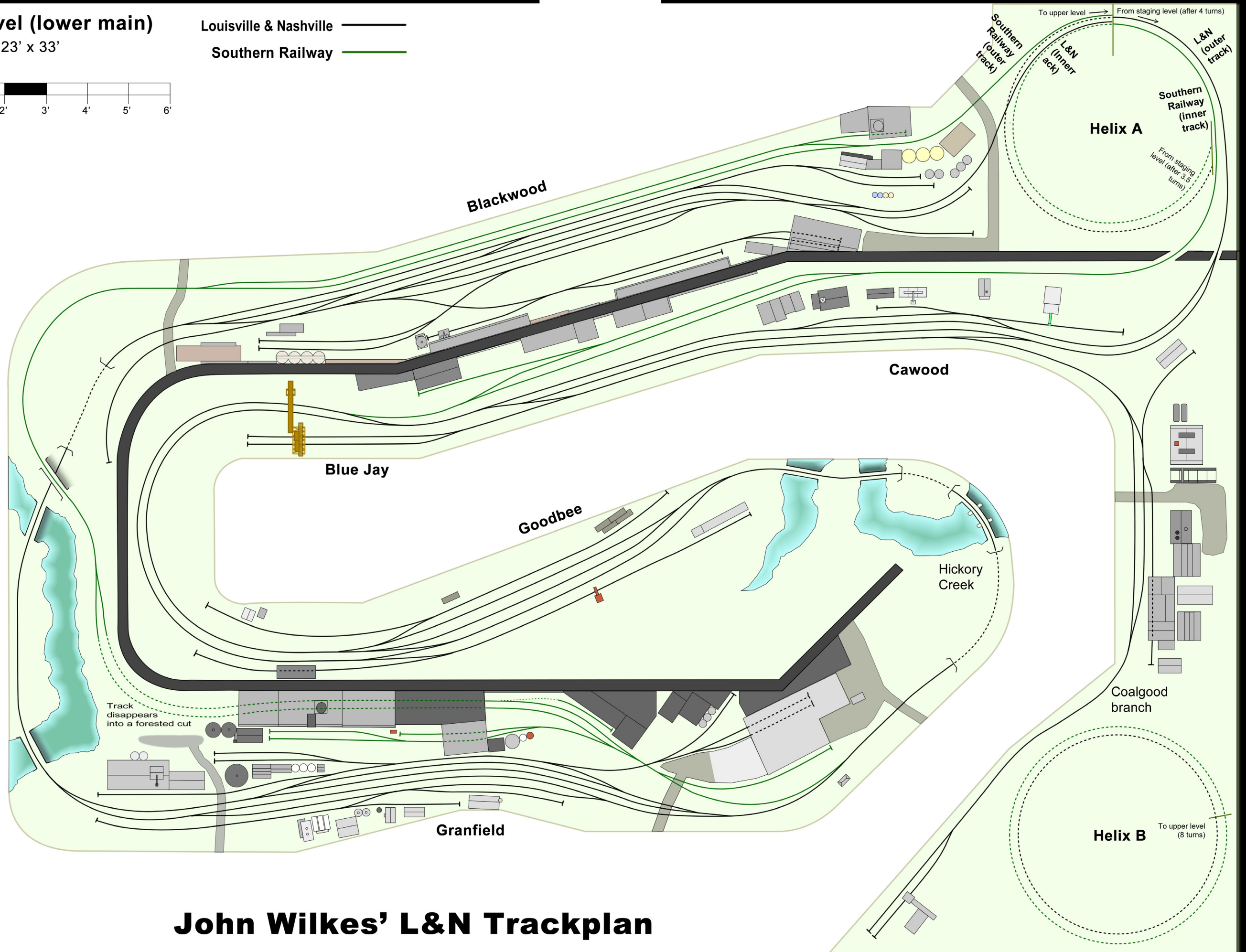
Room size 23' x 33'



Louisville & Nashville

Southern Railway

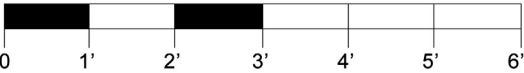
Mills Gap



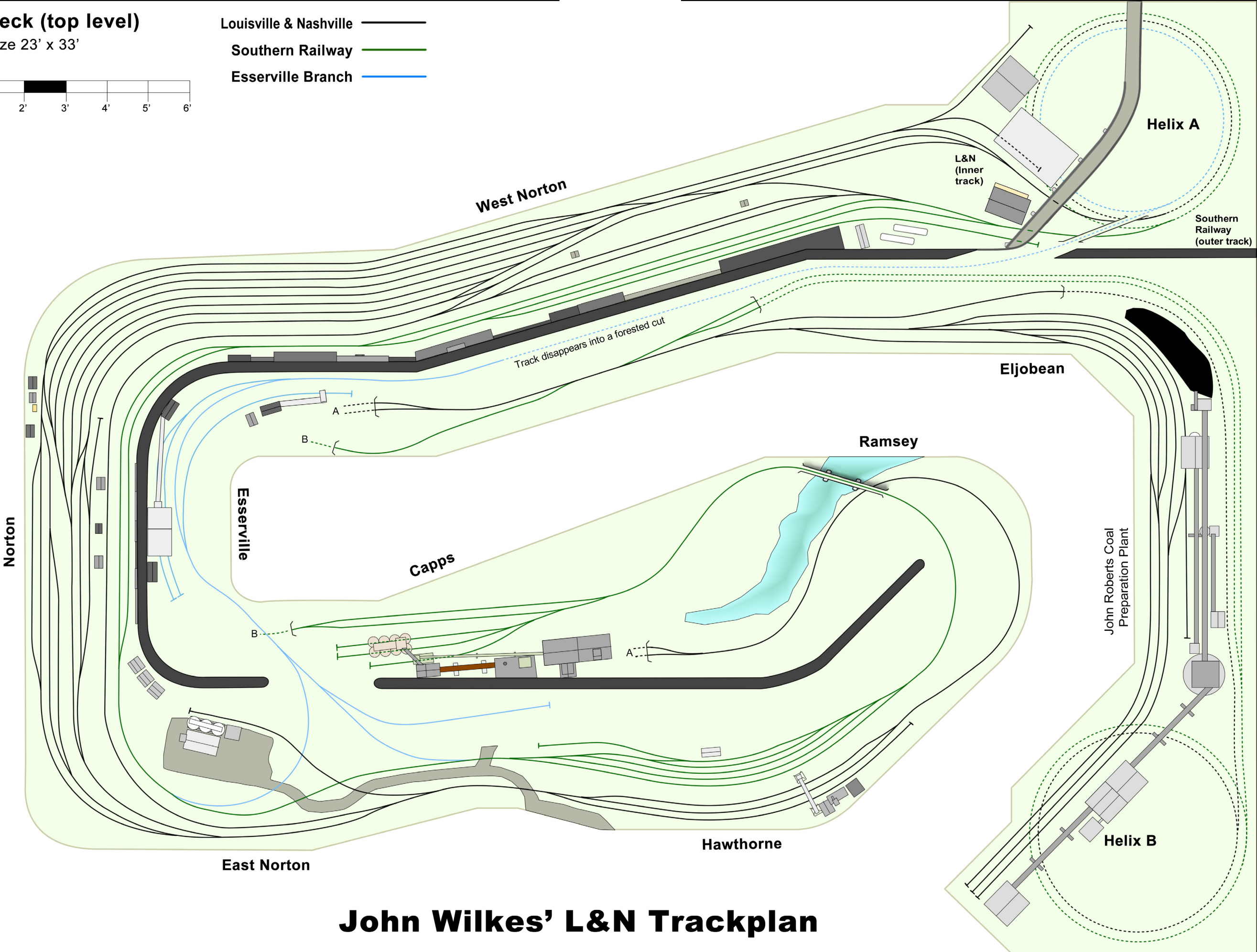
John Wilkes' L&N Trackplan

Upper deck (top level)

Room size 23' x 33'



- Louisville & Nashville
- Southern Railway
- Esserville Branch



John Wilkes' L&N Trackplan



John Wilkes has been active in modeling since the mid 1960's. He and his father built their first layout on the proverbial 4'x8' sheet of plywood. John joined the NMRA in 1980, earning his Master Model Railroader certificate in 1983. He belongs the Ridge Model Railroad Club in Winter Haven, FL

John is an accomplished author having several articles published in *Railroad Model Craftsman*, *Model Railroader*, and others over the years. He and his wife Joyce have been married for 34 years and have four children and six grandchildren. He recently retired from GTE/Verizon after 41+ years.



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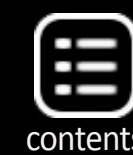
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Yes, it's a model

Model Railroad Hobbyist's monthly photo album



1: With the Missouri River in the background, Jeff Meyer photographed D&TS 7023, empty and heading to a steel mill in Gary, IN for another load of coiled steel.

Jeff built and photographed the model. He began with a Red Caboose kit and reworked much of the details, including new grab irons, brake rigging, and air hoses, Exactrail trucks and Sergent couplers. The model was weathered with acrylics and oil washes. The model is on a diorama using Micro Engineering code 70 track and Highball ballast.



2: B&O 604637 sits patiently in the Battlefield yard awaiting its next assignment. Most likely it will be sent somewhere in the Midwest to get another load that can be shipped out of the port of Baltimore.

The model is an Athearn hopper that is stock except for brake line hoses that have been added. The weathering was done by a combination of airbrushing and paint washes. Shannon Crabtree took the photo on his Virginia Midland Railroad.

More information on Shannon's layout can be found at: virginiamidlandrr.blogspot.com







3a-3b: The five-car New Paris turn steams out of town towards Goshen, IN and then on to Elkhart. In a few moments it will hit the diamonds of the Wabash RR. The photo was taken on Jim Six's former layout. Jim has done an excellent job of modeling the farmland of northern Indiana. Go to mrhmag.com/node/14150 to see more of Jim's work and current layout.

Can't remember what issue of MRH that article is in?

Have you checked the online index?

Click here to learn more ...



4: Peter Soulikias built this diorama of The Surf Line between Los Angeles and San Diego California. Attention to track detail as well as the beach colors and textures make this otherwise simple diorama into something exceptional. To learn more about the diorama's construction and detailing go to: mrhmag.com/node/14040?page=3



5

5: New Haven 0306 passes under a catenary breaker at S.S.55 tower.

Richard Abramson scratchbuilt the catenary anchor based on the prototype that is still in service on the Metro-North in Bridgeport, Ct. The NH built these gantry-like structures where the overhead wire was divided into different circuits.

The locomotive is a New Haven class EP-2 electric built by Railworks. The prototypes were built by Baldwin-Westinghouse between 1917 and 1927.



6

6: McCook's Landing – Union soldiers were aghast at the new Confederate weapon.

One private was heard to say "They move faster than our lead balls, we ain't never going to hit 'em."

The photo was taken by Bernard Kempinski on his U.S. Military Railroads layout and recently displayed at the the NMRA convention in Atlanta, GA where the layout was operated by many visitors.

To learn more about Bernie's US Military Railroad visit his blog at usmrr.blogspot.com.

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](#).

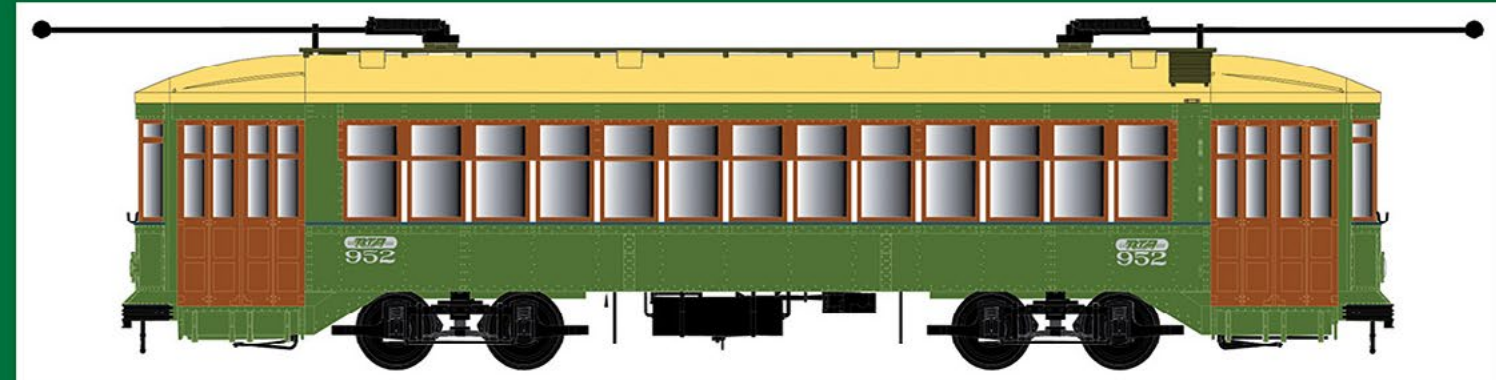


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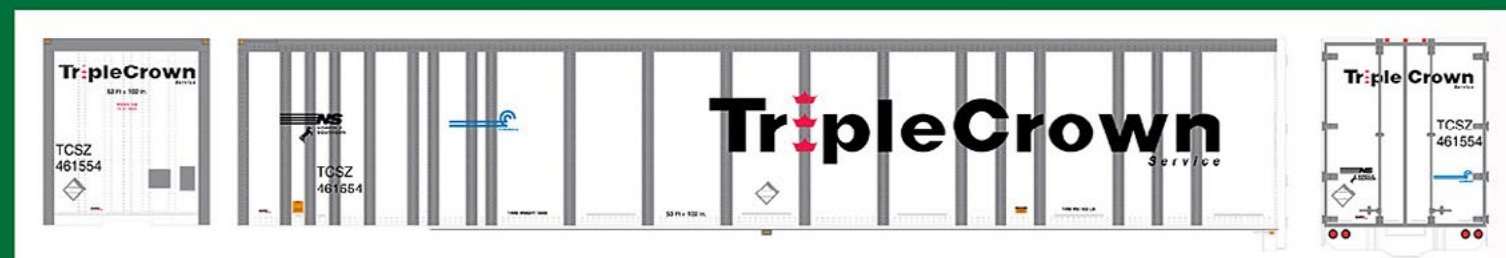


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MRH-Sep 2013





– Antonio Santana
Model Photos by the author

Use Alclad2 for a Natural Metal Finish

Refurbish a Walthers Pullman Standard Coach

I've been experimenting with Alclad2 Natural Metal finish alclad2.com for some time on my model passenger cars. I enjoy sharing my results, as well as encouraging modelers to give Alclad2 a try! Although there are slight differences, this unit is similar to a prototype that was part of an order canceled by the C&O Railroad. Eventually the car found a home on the Atlantic Coast Line, Seaboard Coast Line, and later, Amtrak. I modeled the car as it looked in 1967, just after the ACL and SAL merged to form the SCL. Passenger equipment was being updated into the new scheme. Since the prototype I modeled was in service on SCL's premier long distance trains, it was regularly washed and kept clean. I have modeled the car to reflect this regular maintenance.



STEP 1: Disassembling the car

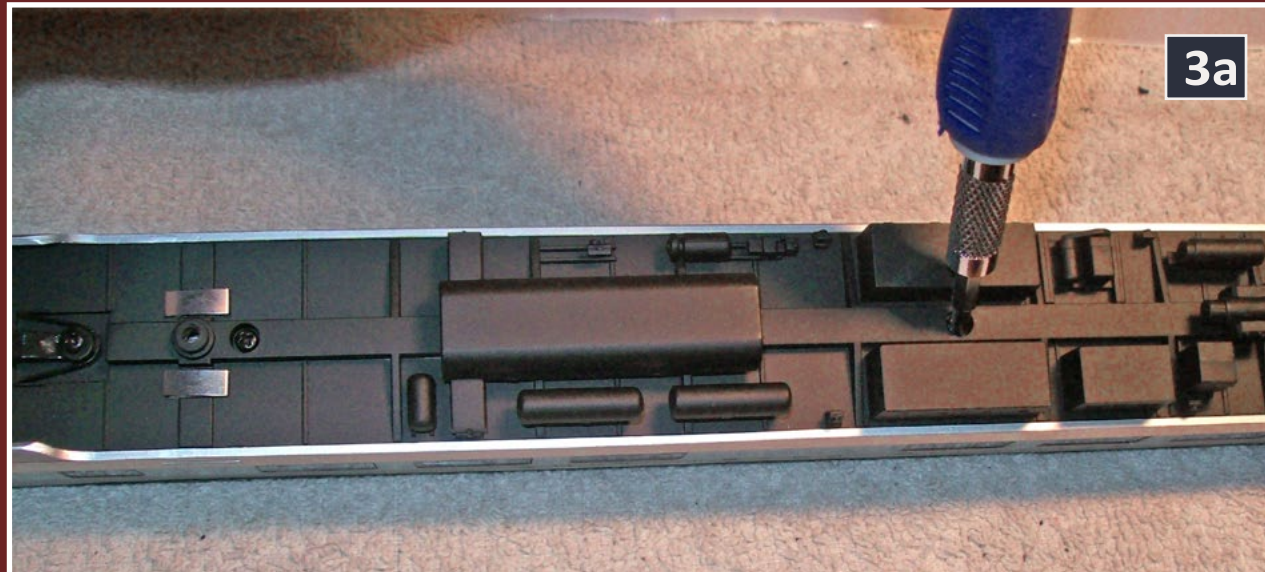


1: I am using a Walthers HO Pullman Standard 52 seat coach that has begun its life as an ACL coach. It will be refinished into Seaboard Coast Line #5251.



2: I remove the trucks and couplers and disassemble the floor, roof, and ends. To remove the roof, I employ the "twist" method that has been described on several model railroad web forums. This involves gently twisting the body in a side to side motion until one side of the roof pops up. I used a plastic spade to push a tab if it stubbornly clings to a wall.

STEP 1: Disassembling the car *Continued ...*



3a-3b: Removed the screws on the floor to the body, and remove the interior by carefully spreading the walls and slowly pulling the piece upwards from one end. Next, remove all of the glazing (strips and individual pieces on the doors) by gently pushing them inward. Be careful when removing the glass, it can be broken very easily.

STEP 1: Disassembling the car *Continued ...*



4a-4b: I filled my passenger car tub with 91% isopropyl alcohol immersing the shell. I fabricated the tub by welding together strips of 1/8" mild steel plate. Within 10 minutes the silver paint began to float off of the shell's surface. Scrub the shell and the ends in the tub thoroughly with a toothbrush. The factory paint and decals come off easily. With all of the paint removed I washed the shell thoroughly with warm soap and water.

STEP 2: Painting the car

5: I used Alclad2's new single action airbrush, the Accurate ALC-9200, to spray the paint on the shell for the first time. The needle adjusting screw was set to provide a 1" fan pattern. The airbrush atomized the paint very well and I am very pleased with the finish it provided.

6: The base coat paint is Scalecoat II NYC Dark Gray and it was thinned approximately 60%. Each coat was applied medium wet with a 50% stroke overlap. I waited 5 minutes between coats. After allowing the Scalecoat II color to cure three days at 77F to 80F temperatures, I proceeded to apply Alclad2 formula #105 by misting it on in long, even horizontal strokes. The air pressure was set at 12 psi and the airbrush was approximately 2 to 4 inches away from the car's surface.



STEP 2: Painting the car *Continued ...*



7: After the 2nd coat was applied, I carefully inspected the shell with an LED flashlight, looking for dry or rough spots. The surface appeared glossy and smooth.

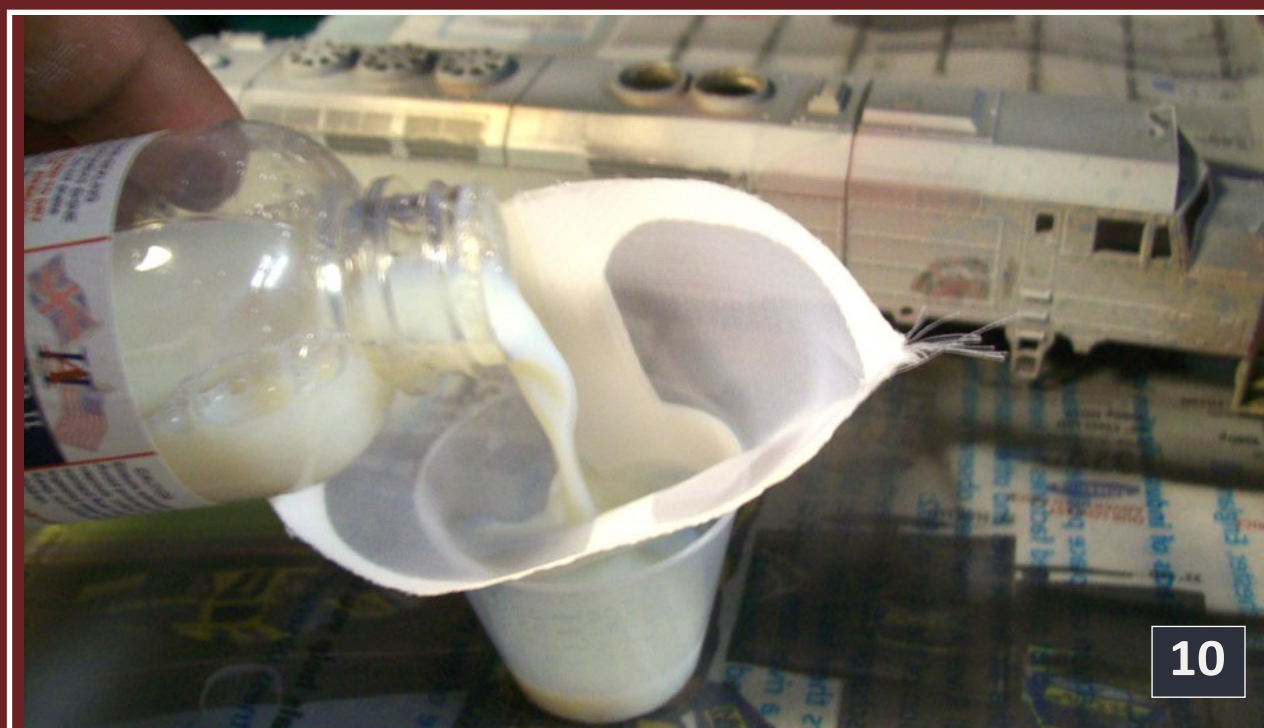
8: A second coat was applied five minutes after the first. Upon inspection, the Alclad2 finish appeared smooth and level. The finish is so smooth that the reflection of my camera can be seen on the side of the car.



STEP 2: Painting the car *Continued ...*

9: I let the Alclad2 dry overnight before I sprayed on the Alclad2 clear.

10: It may not be necessary but out of habit I strain my paints and clear finishes. I poured a small amount of the Alclad2 Aqua 600 Aqua Gloss into a cup through a strainer. For the Aqua Gloss I set the pressure at 25 psi. One coat was applied spraying long even passes.

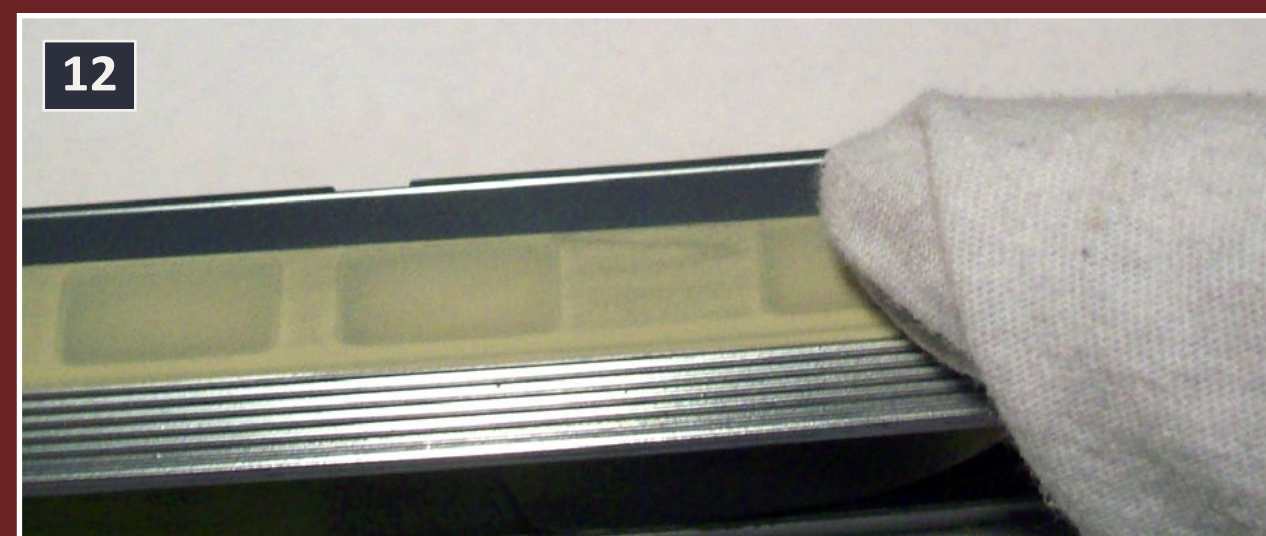


STEP 2: Repainting the car *Continued ...*

11: The Aqua 600 Aqua Gloss leveled itself evenly over the metalized shell's surface. The shell was now sealed and the sheen toned down very slightly to resemble a #7 reflective stainless steel finish. Just the look that I want.



12: The SCL name board is painted gray between the top of the windows and the roof line. I masked off for the gray with masking tape. To prevent paint from seeping under the paint, I burnished the tape with my index finger wrapped in a cotton cloth. I use the cloth to prevent any oils on my hands from being applied to the model surface and possibly causing blemishes in the finish.



STEP 2: Repainting the car *Continued ...*



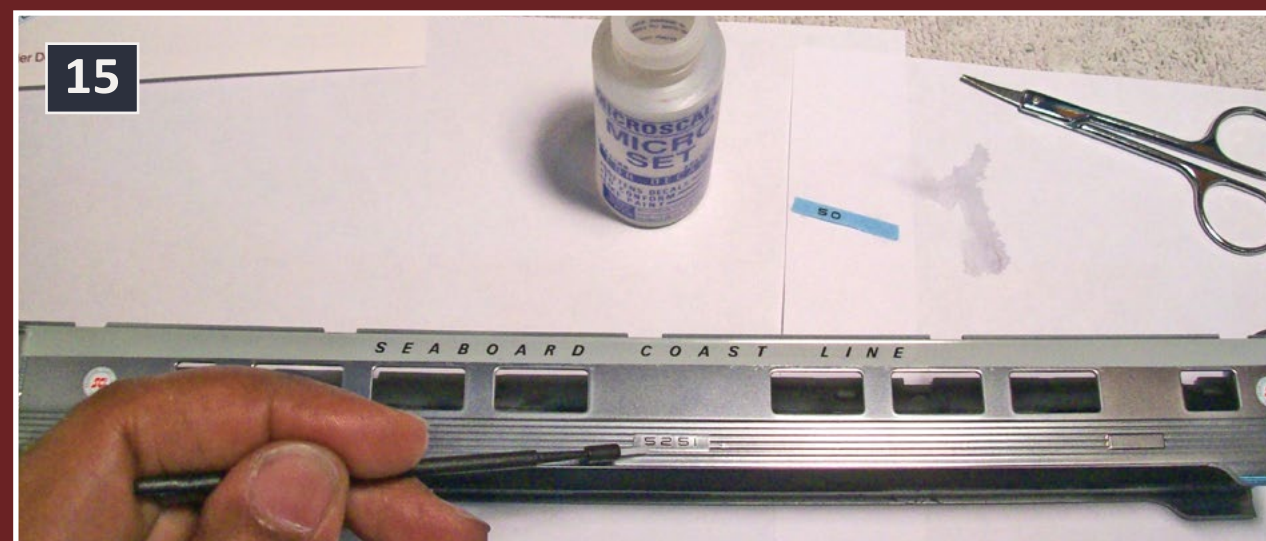
13

13: Because the masking tape I use is not wide enough to cover the entire car below the windows, I add another strip of tape attached to a piece of paper to cover the remainder of the car body. Now is not the time for any errant over-spray.

There is no exact match for the Walthers gray on the name board section of the car, so I mixed my own. The mix, using PollyScale paints, is approximately 75% Reefer Gray, 10% CSX Yellow, 5% SCL Caboose Orange, and 10% White Primer. With the gray mixed, I sprayed the area of the name board with it..



14

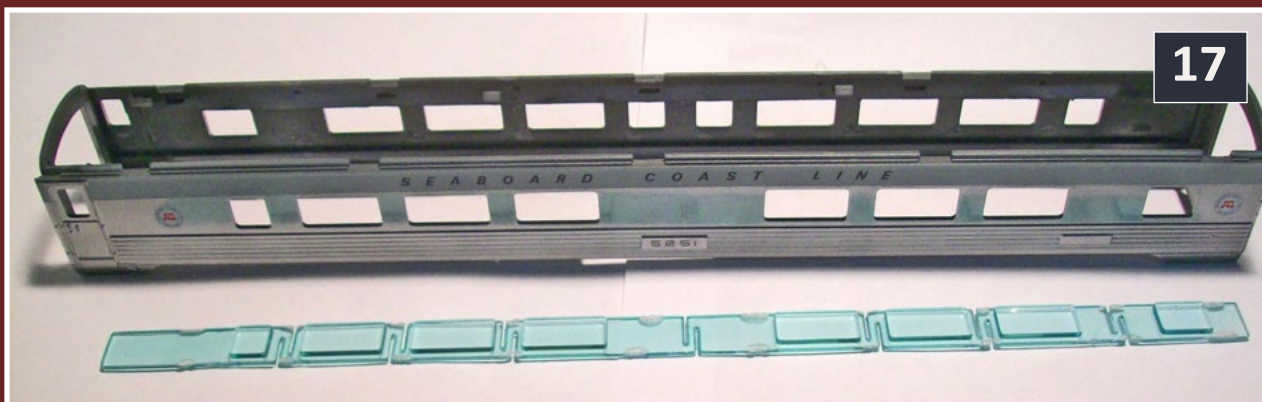
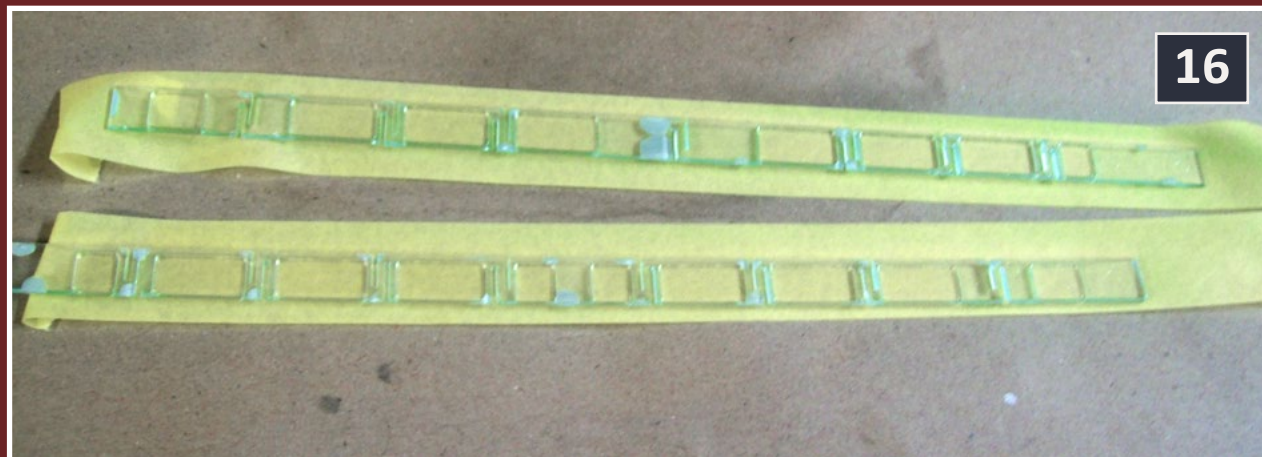


15

14: Removing the paper wrap and the masking from the side of the car.

15: The Seaboard Coast Line passenger car decals for this car were produced by Microscale for the ACL & SAL Historical Society. I begin by brushing on a thin layer of Microset to the name board areas where the decals are to be applied. The number boards were cut from 0.010x0.156 styrene strips. The strips were painted "metalized" the same time as the car body.

STEP 3: Tinting the windows



16: The SCL cars have tinted windows. To tint them I clean the glazing strips with a cotton cloth lightly dampened with isopropyl alcohol. The individual pieces are then taped on to a clean sheet of paper for tinting. Alclad2 Armoured Glass #408 was applied with the airbrush in two light coats. The air pressure was set at 15psi. I held the airbrush 3 inches from the glazing. I waited two minutes and applied the second coat. The Armoured Glass dries quickly.

17: I inspect the results by placing the newly tinted glazing on a clean sheet of white paper. I was satisfied with the level of tint on the glazing. If the tint is too light, I can go back and spray on additional layers as needed.

STEP 3: Tinting the windows *Continued ...*



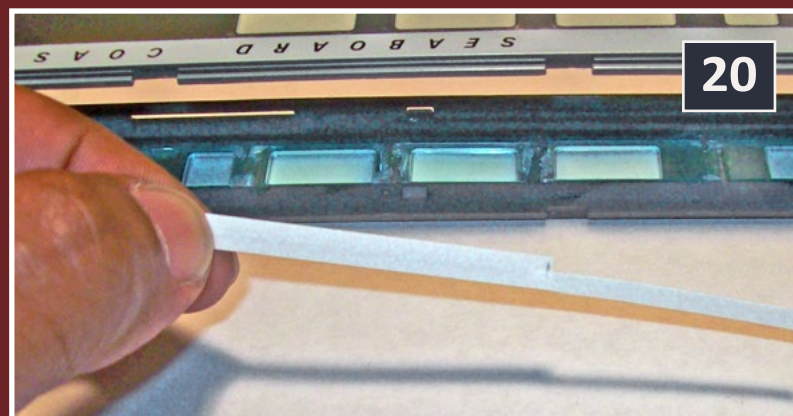
18: To secure the glazing into the window openings, I apply small beads of Model Master Clear Parts Adhesive sparingly on the posts inside between the window openings. I prefer water based modeler's cement products for these applications since any "glue-ooze" accidents on painted surfaces can be quickly cleaned up with a cotton cloth moistened with water. After waiting one minute I install the glazing in place on one side. I wait 1/2 hour for the glue to dry, then turn the shell over and repeat the process to install the glazing on the opposite side.

STEP 4: Window Shades



19: To make the window shades I use Plastruct .010 x .250 and .010 x 0.187 styrene strips. Varying width of strips, plus additional trimming with cutters helps convey the illusion of window shades in multiple positions.

20: To make the varying widths of shades, I simply lay the strips inside the shell against the window openings and then marked the areas to be trimmed with a pencil. I make the mark approximately 1/16" past the desired window opening so that the shade will completely cover the length of the window



STEP 4: Window Shades *Continued ...*

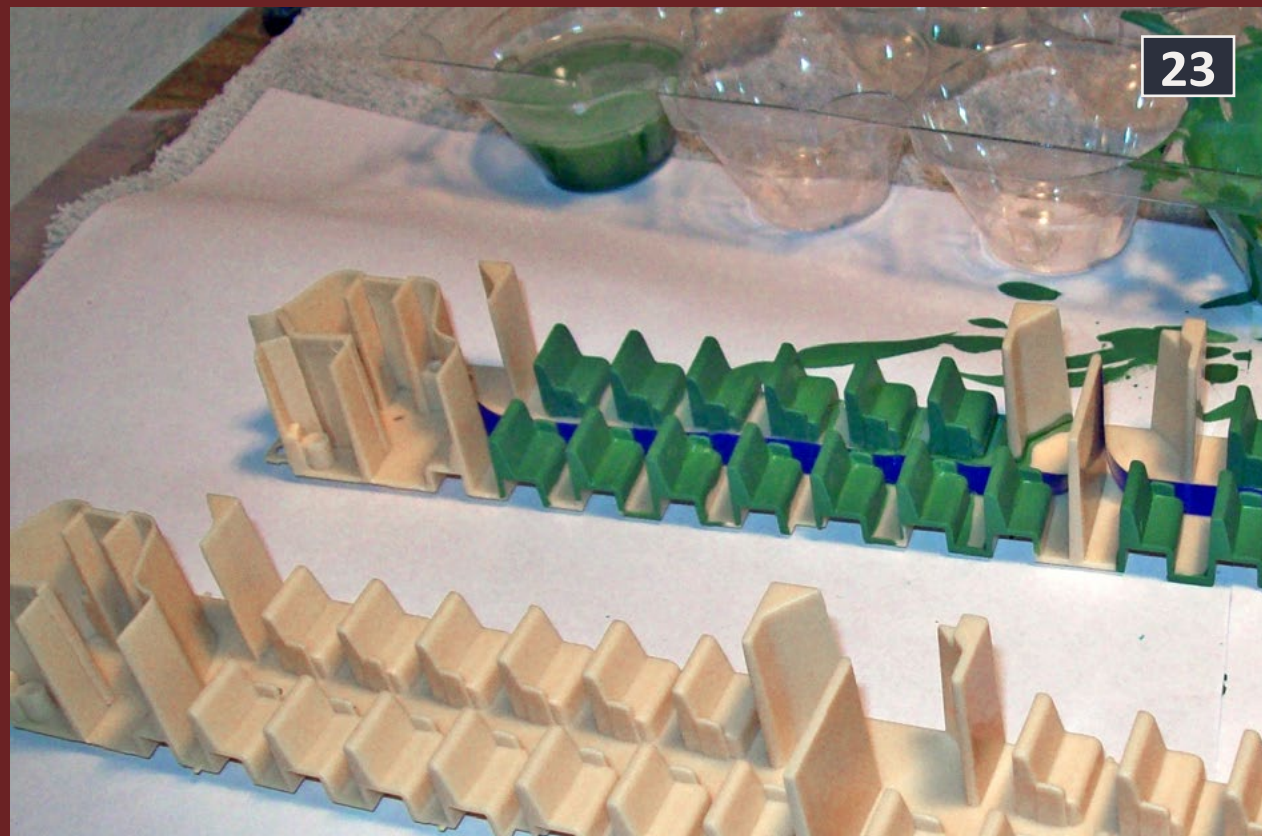
21: To secure the "window shades" Model Master Clear Parts adhesive is applied, sparingly, between the window posts and on a few spots above the top window row.



22: The corridor window has a handrail across it for passengers to hold onto. I made the corridor handrail from 0.012 brass wire that was cut slightly longer than the individual window opening. I used the same adhesive to attach the handrail.



STEP 5: Interior Detail



23: The seat color is another custom mix of PollyScale 1/3 Intern Blue and 2/3 Penn Central Green. This mix simulates the green coach seat color that I saw in a photograph of the prototype. I did not paint antimacassars (headrest covers) on the seats as I normally do. I am currently experimenting with producing them from white adhesive labels on a printer that can cut very small, rectangular shapes. Prior to painting the seats I paced tape on the center isle of the car to protect it from any wandering paint.

STEP 6: Weathering



24a-24b: PollyScale Dirt, Aged Concrete, Earth, and Earth Red were used to make color washes. I thin the paints 70% with water – seven drops of water to 3 drops of paint. The washes are applied "medium wet" on to the trucks and underframe in vertical strokes with a #1 Taklon paint brush. Capillary action enables the paint mixes to fill in the tiny nooks and crannies on the underframe and trucks.

STEP 6: Weathering *Continued* ...



25

25: To me, these colors resemble the soils in the southeastern USA where torrential rain storms splash them up to the car's underframe and trucks. For rust, I add thin streaks of Earth Red throughout the underframe.



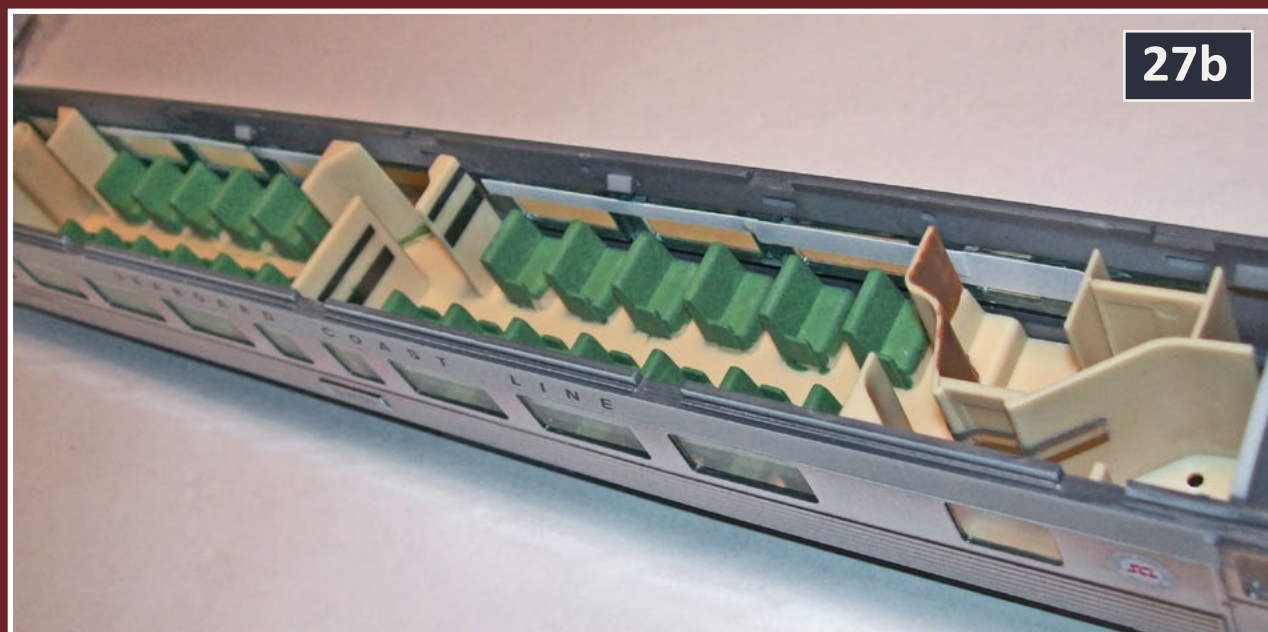
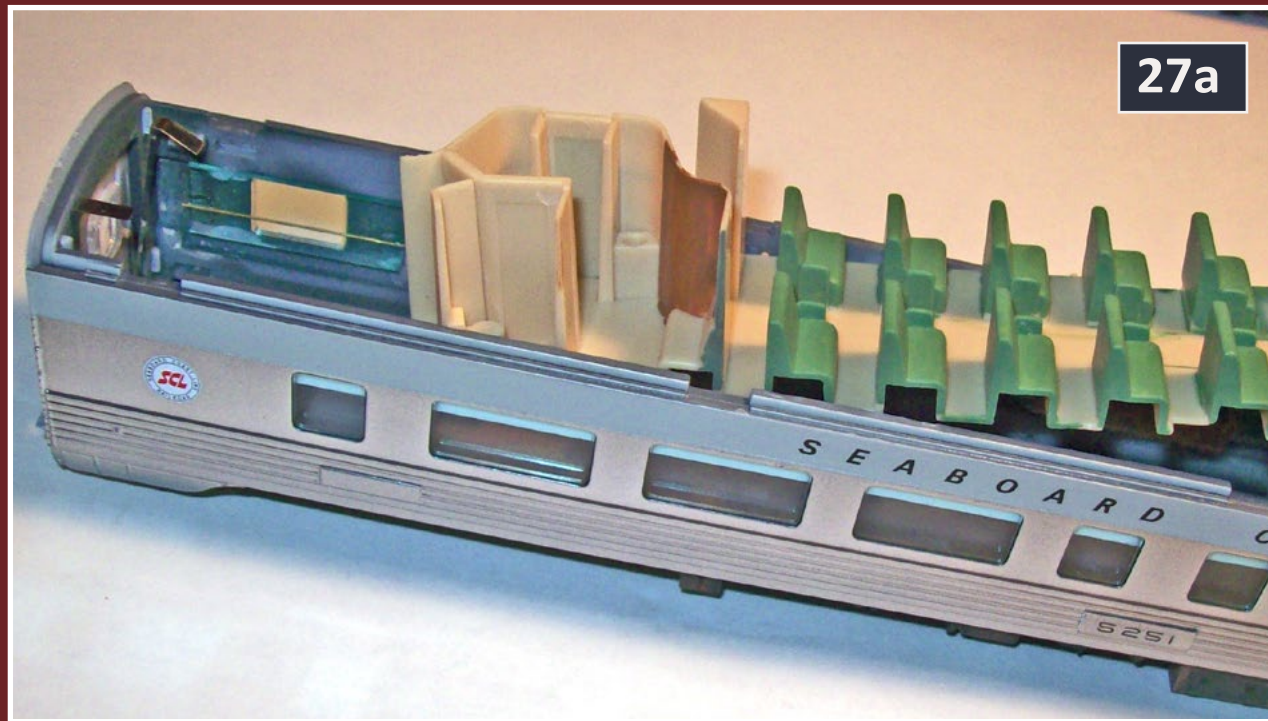
STEP 7: Reassembly



26

26: Now it is time to put the car back together. Proceed slowly to avoid marring the tinted windows and dislodging the window blinds. First, I install the forward vestibule bulkhead.

STEP 7: Reassembly *Continued ...*



STEP 7: Reassembly *Continued ...*



27a-27b-27c: Next, to reinstall the one-piece interior, I gently spread the sides with two fingers and slowly slid them the length of the car as the interior dropped into place. In 27b, you can see the different widths of the Plastruct "window shades".

STEP 8: Diaphragms



28a-28b: Since prototype passenger car diaphragm striker plates are typically grimy and scuffed up. I took advantage of the diaphragm's shiny black factory color and airbrushed a light mist coat of Alclad2 #105. I wanted the black to show through, giving the appearance of heavy grime build up while still retaining a metalized appearance. The air pressure setting was at 15 psi and the airbrush held at 2" distance to achieve the effect.

STEP 9: Assembled car



29a-29b The ends were lightly weathered with the washes applied to the underframe. I do plan on installing hand rails and the air hose/steam pipe details on the ends. However, since handrail installation is usually a time consuming task for me, I've decided to metalize the majority of my HO "stainless steel" fleet first, then install handrails and hose details. The weathering will be applied in varying degrees to the other cars.

Conclusion

This was a fun car to do and I know that there is always room for improvement, but I was happy with the results. The goal when I began was for the model's surface to resemble the authentic stainless steel as used on the prototypes. I always respectfully recommend that passenger car modelers aiming for a natural metal finish use Alclad2.



Antonio Santana was born and raised in New York City. His interest in trains began at an early age growing up across the street from the New Haven RR 4 track Northeast Corridor. In the early 70s his family relocated to Tampa Bay, Florida. He worked 15 years in the local transit system and currently teaches collision repair and custom paint refinishing at a technical career school . Antonio is ASE-certified in collision & paint refinishing.

Antonio has been railfanning since he was a teenager, with a special interest in stainless steel passenger equipment. As a modeler he enjoys modeling passenger equipment, with a special interest in replicating the stainless steel finishes of the classic Budd, Pullman Standard and ACF cars.

Antonio is an Alclad2 volunteer Beta Tester for the model railroad related finish. In this capacity he is providing extensive input to the manufacture of the Alclad2 metalizer paint products.

Parts List:

Alclad2 #105 (Natural Metal Finish)

Alclad2 Aqua 600 Klear (Sealer)

Alclad2 Armoured Glass #408 (window tint)

Scale Coat II NYC Dk. Gray (Base coat color foundation)

Microscale SCL Lightweight Passenger Car Decal Sheet D-69

Model Master Clear Parts Adhesive

Plastruct .010 x 250 (window shades)

Plastruct .010 x .187 (window shades)

PollyScale Intern Blue (mix color for seats)

Penn Central Green (mix color for seats)

PollyScale Reefer Gray (mix color for name board)

PollyScale CSX Yellow (mix color for name board)

PollyScale SCL Caboose Orange (mix color for name board)

PollyScale White Primer (mix color for name board)

Frog Tape 3/4" inch masking tape.

Pactra 1/4" inch masking tape.

.012 Brass Wire



Let's build a laser kit – part 1



Reader
Feedback
(click here)



– By Mike Tylick

Model photos by the author



Building Miss Marshfield Diner ...

Recent technology has made model kits cut with laser beams possible. Commonly known as laser kits, the parts are usually cut from wood. Economies of design and production have made small production runs possible, allowing for a great variety of offerings.

Laser kits usually assemble into structure models, but there are also rolling stock, boats, and aircraft models for sale. Featuring extremely accurately made parts and simple instructions, laser kits fall midway between shake-the-box and advanced craftsman kits. Many offer the advantages of both worlds; now it's possible to achieve the built-from-scratch look with a short learning curve.

Every town needs a place to meet and eat, and the small coastal town of Marshfield is no exception. Bar Mills Modelworks is one of a number of manufacturers who offer quality laser products, and their Sweaty Betty's O scale kit was just what I was looking for. I've added a quick interior, new graphics, and altered the kit with a little kitbashing. So let's plunge in and get to work.

Did you know you can use the email and phone buttons on ads to contact advertisers directly?

STEP 1: Painting

1: Wood parts must be painted on both sides to prevent warping. I like using the inexpensive aerosol cans sold by Walmart. The fine pigment allows me to spray a thin even coat of paint and does not clog the nozzle.



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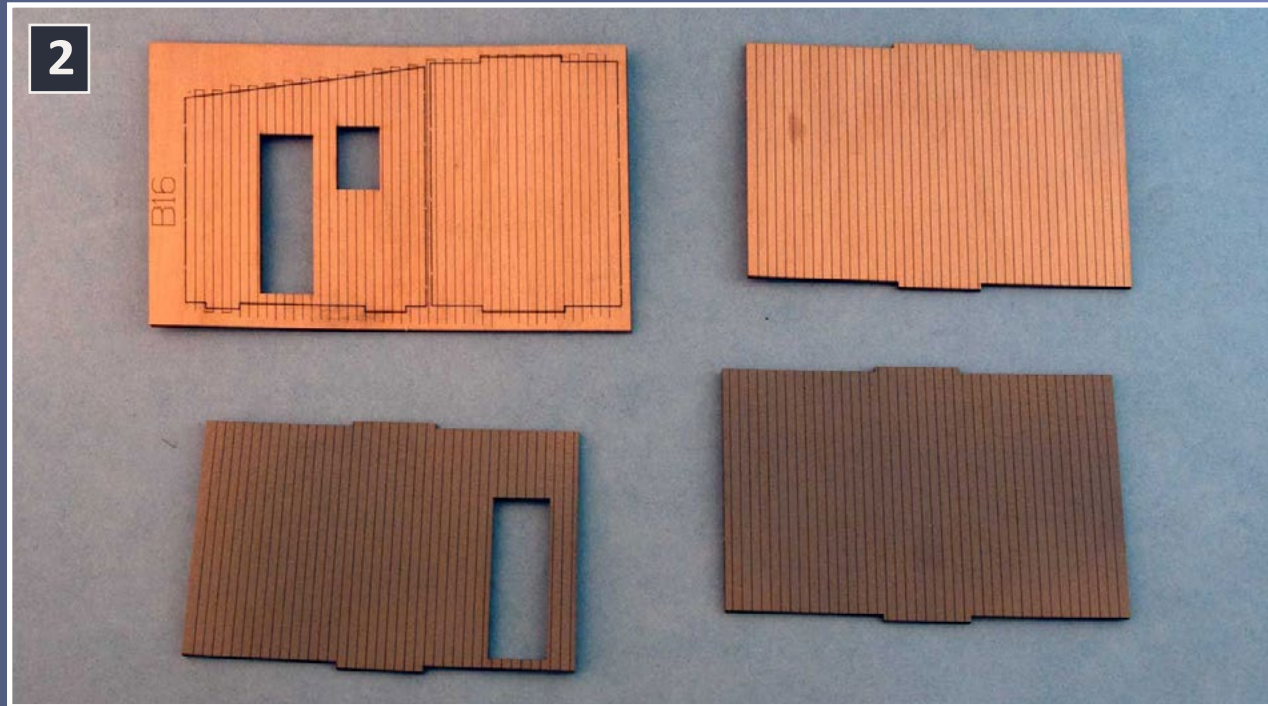
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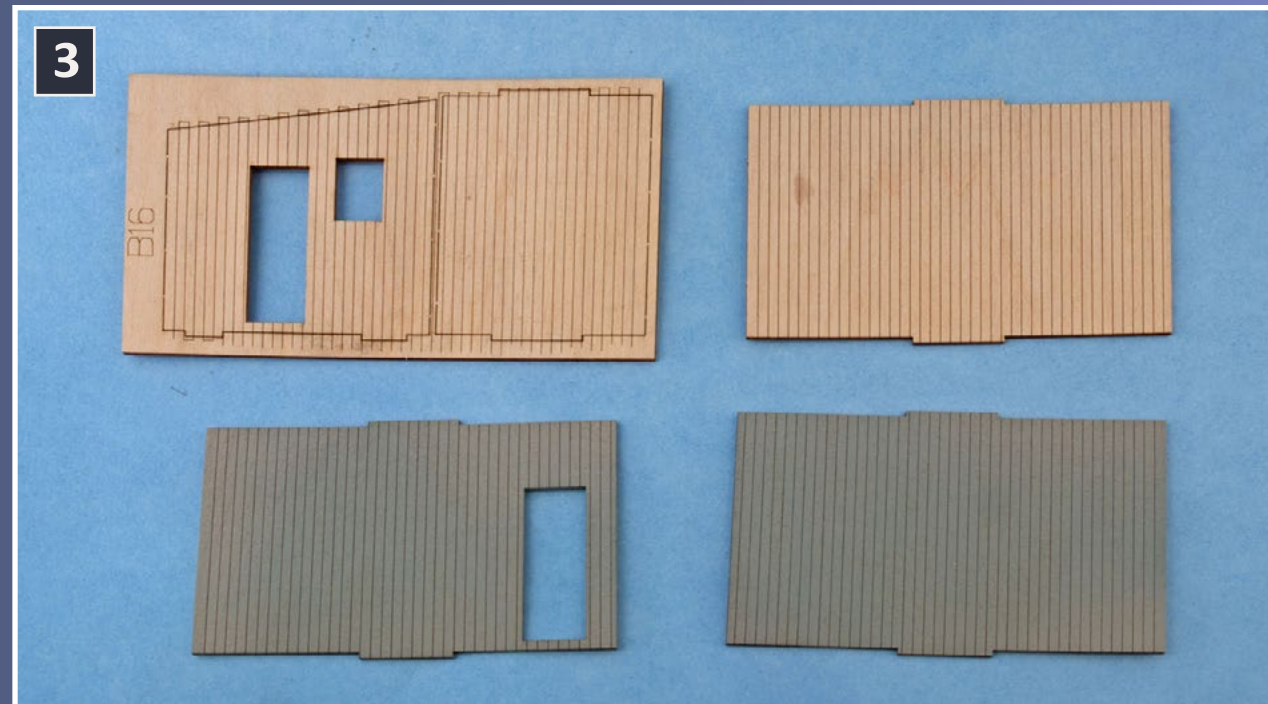


STEP 1: Painting *Continued ...*

2



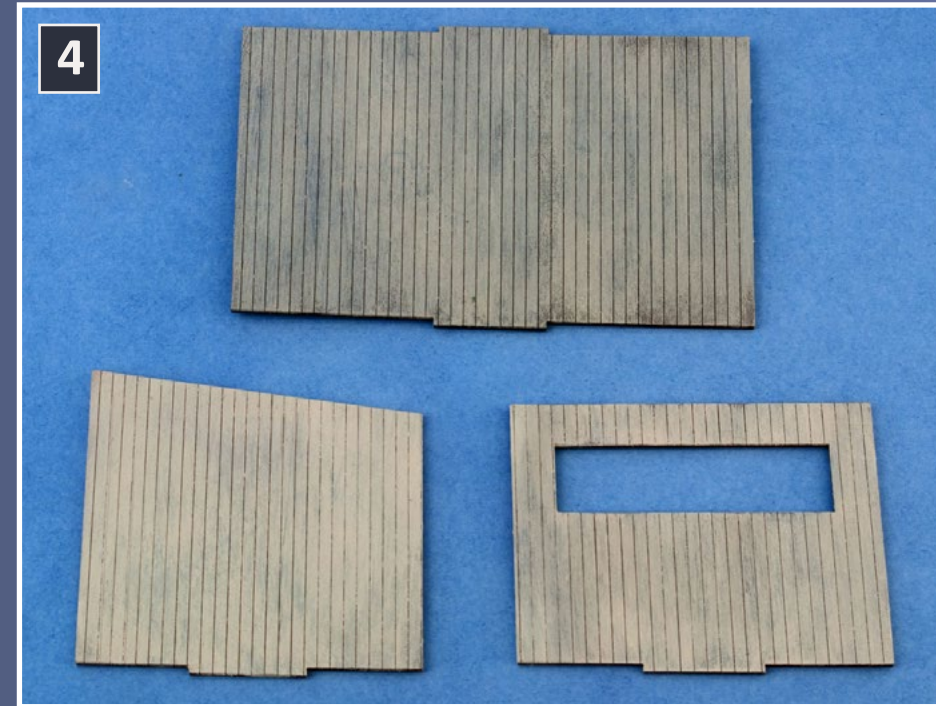
3



2-3: Primed wood. I began with a red primer, but decided to change the structure color, so I sprayed a gray over the first coat. The choice of primer color will influence the final paint color. Different effects can be achieved with different prime coats.

STEP 1: Painting *Continued ...*

4

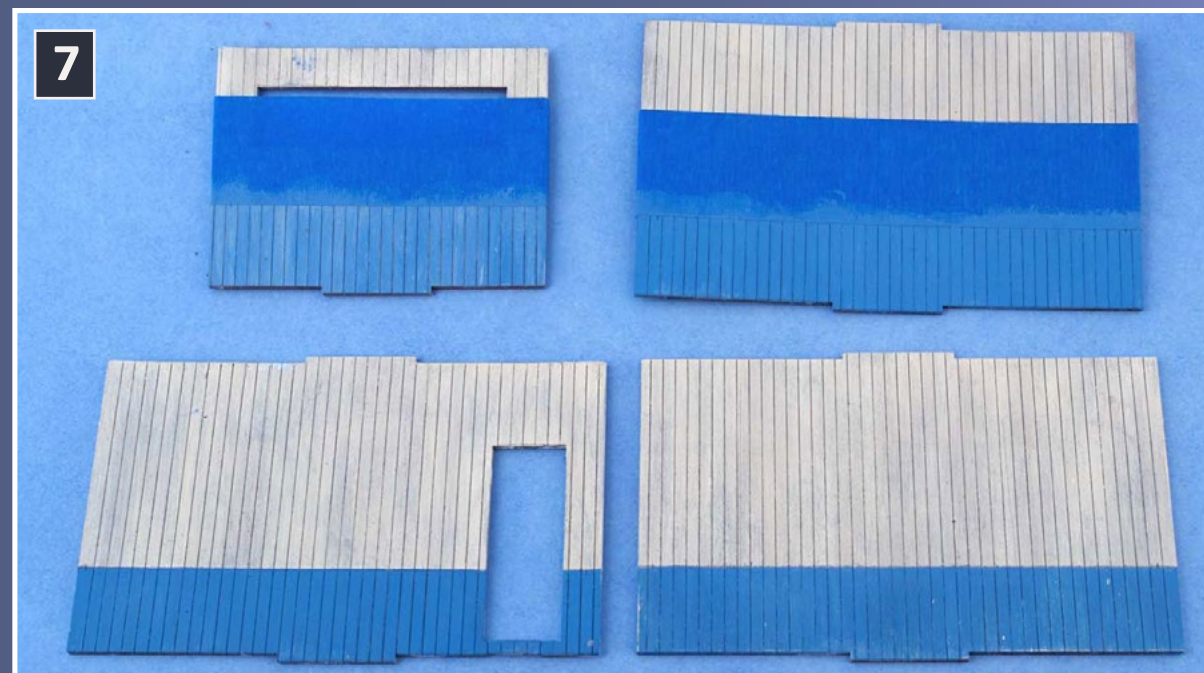
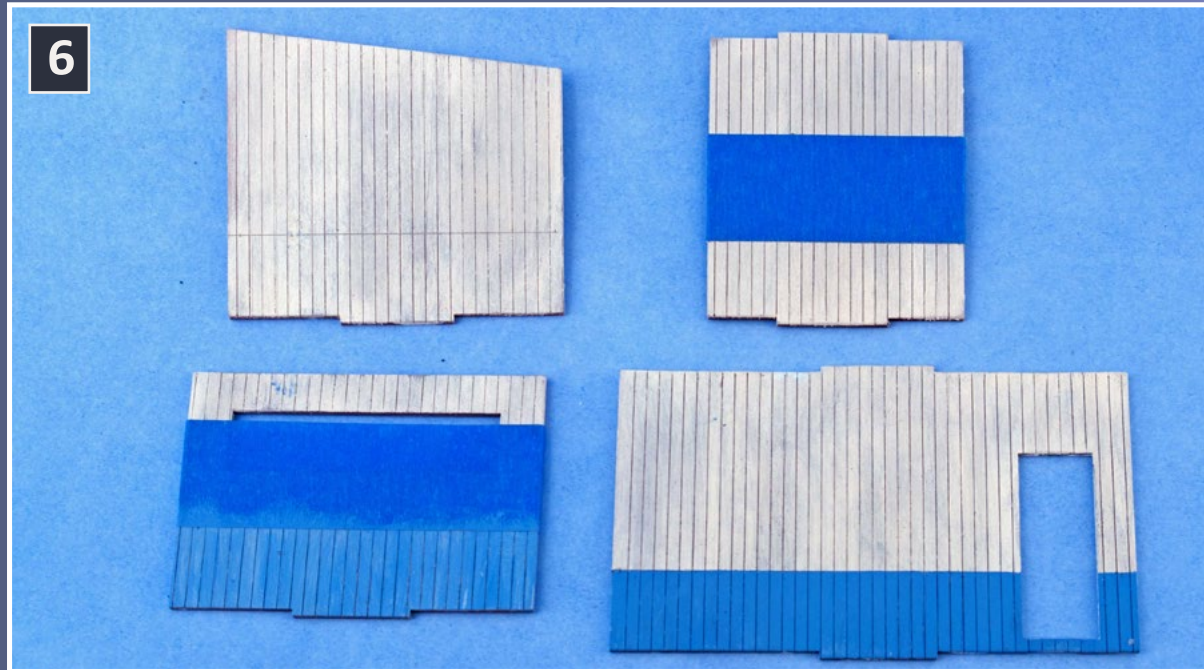


5



4-5: Off-White paint is brushed on in a succession of thin coats, gradually making the paint appear newer. Knowing when to stop is important, since I am aging the model while painting it. I prefer a stiff brush, and like the widely available inexpensive acrylic craft paint bottles. I used Apple Barrel Antique White.

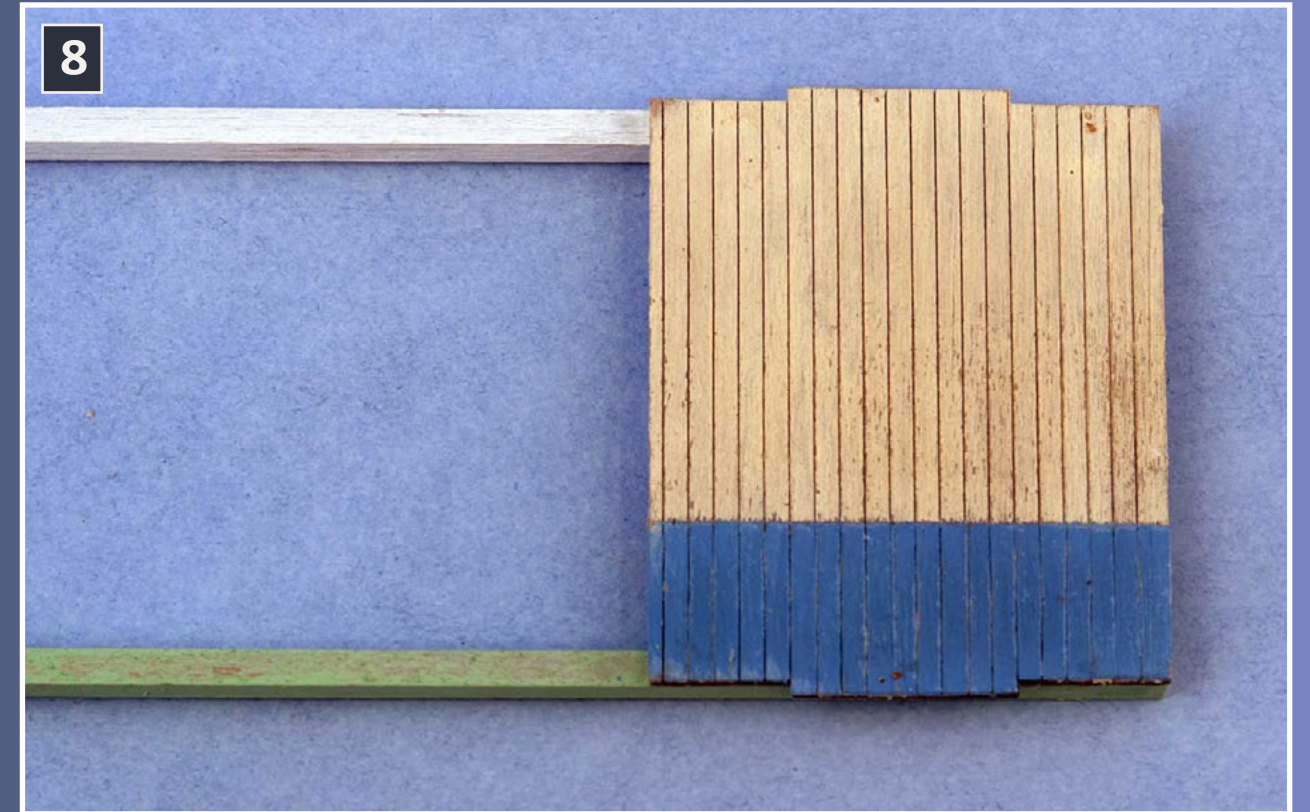
STEP 1: Painting *Continued* ...



6: Blue painter's tape masks the white so I can paint faux wainscoting. The wainscoting is Apple Barrel Blue lightened with white.

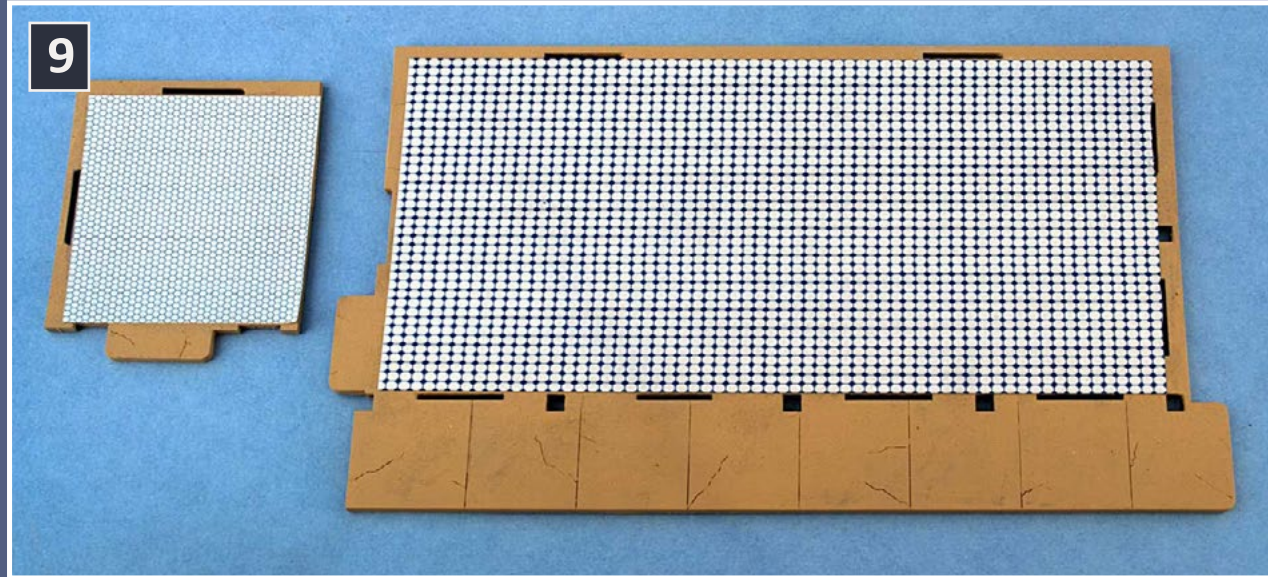
7: When the paint is thoroughly dry, a gentle sanding of the wood further weathers the walls. I use wet or dry sandpaper, always sanding in the direction of the woodgrain.

STEP 1: Painting *Continued* ...

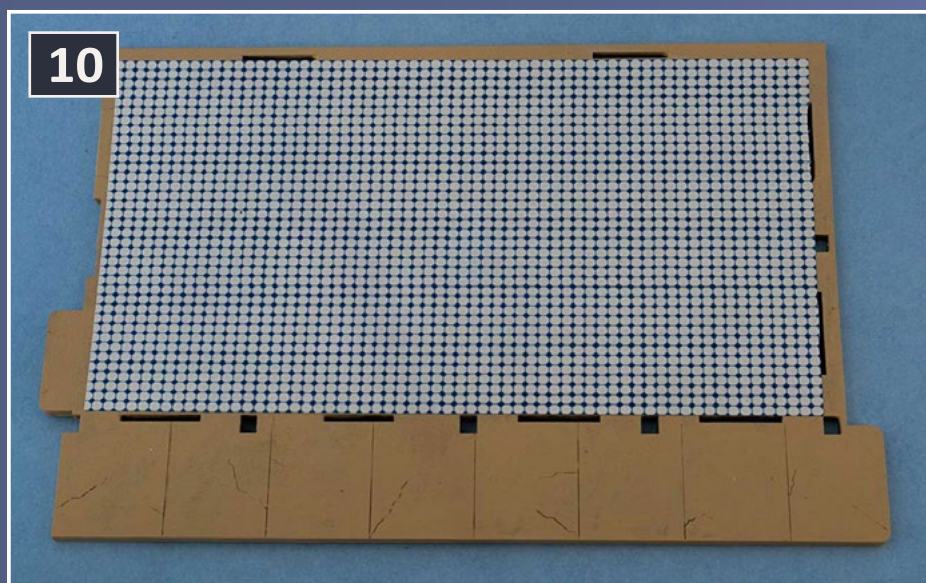


8: Washes of umbers (browns) and blacks have been applied to the outer walls. It is easier to do as much work as possible while the walls are flat. Once the paint is dry, the walls lie almost flat. I find only a little bracing is required to pull out any warp, and insure a strong assembly. While 1/8" square stripwood is supplied with the kit, I generally use 3/16" square wood where possible for the additional strength.

STEP 2: Printing tile floors *Continued ...*

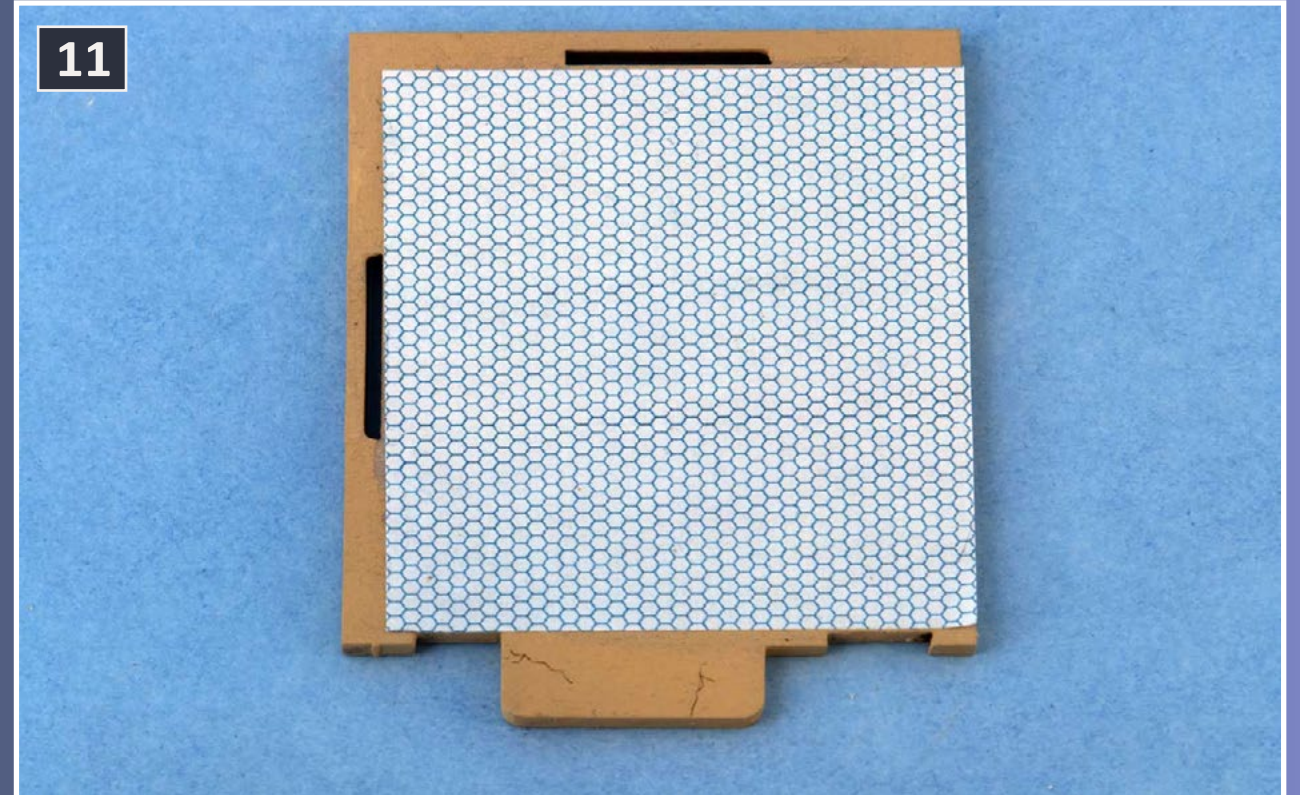


9: I use computer illustration software to make the floor tiles. The cut, paste, and replicate commands make simple work of these repetitive patterns. Once drawn, the floors are saved for use on future projects. The drawings can easily be enlarged or reduced for different scales. With a few mouse clicks I can change the colors as well. Wood and carpeted floors can be drawn also.



10: The typical diamond and octagon tile floor plan that I used.

STEP 2: Printing tile floors *Continued ...*



11: This is the hexagon tile pattern used in the kitchen. Both tile patterns are glued to the prepainted floors. Wrinkling can be avoided with the use of full strength while glue applied to the wood surface.

Yes, MRH is indexed. To learn more, click here.

STEP 3: Painting the interior walls

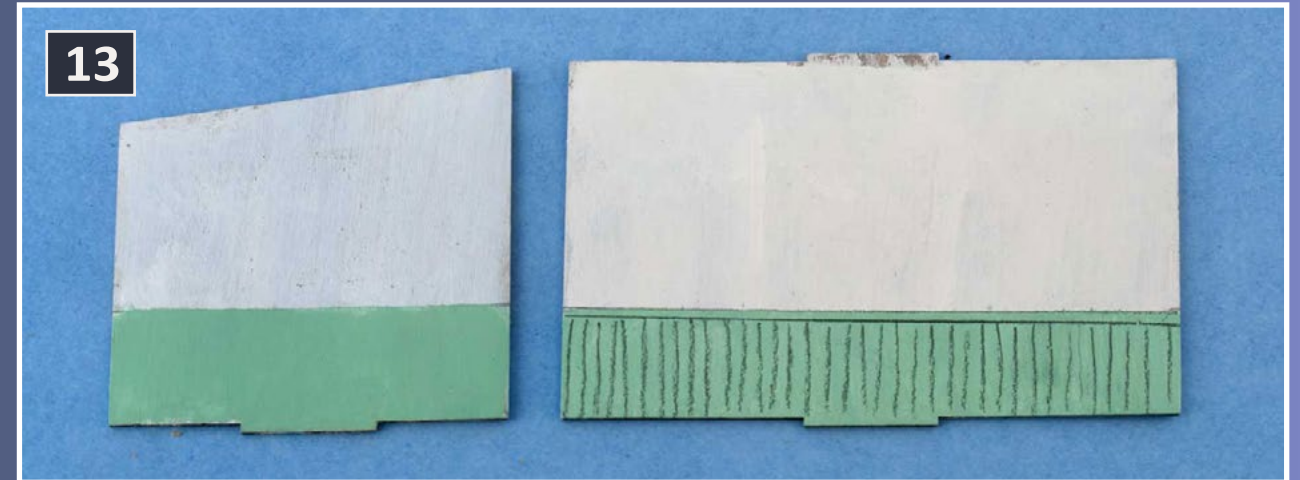
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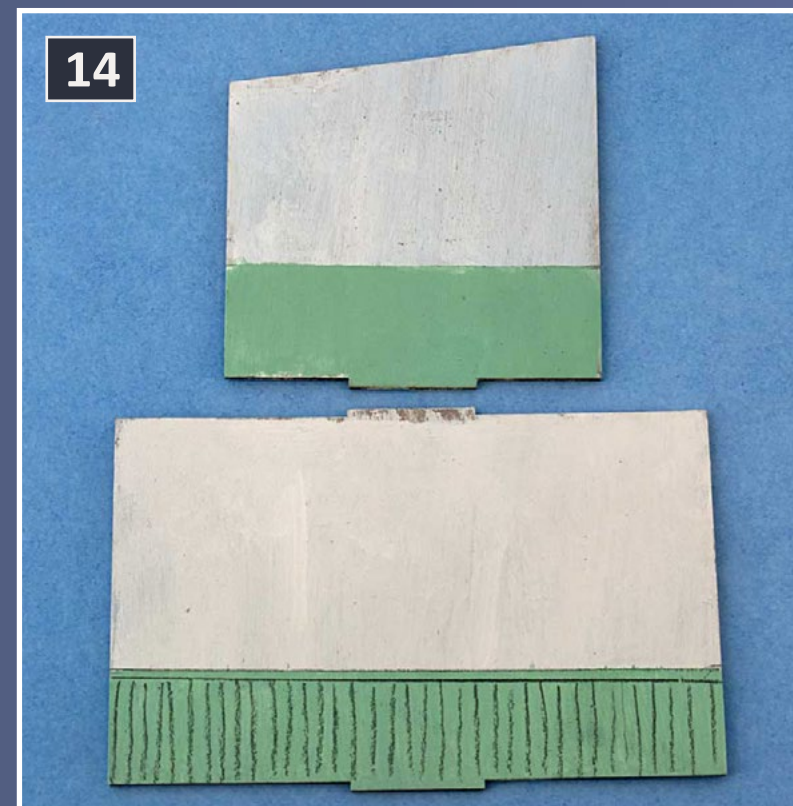
12: The large windows that are a part of the kit make a good incentive to model an interior. The interior walls are painted white, with an Apple Barrel Victorian Green for the wainscoting, a typical interior paint scheme.

STEP 3: Painting the interior walls *Continued ...*

13

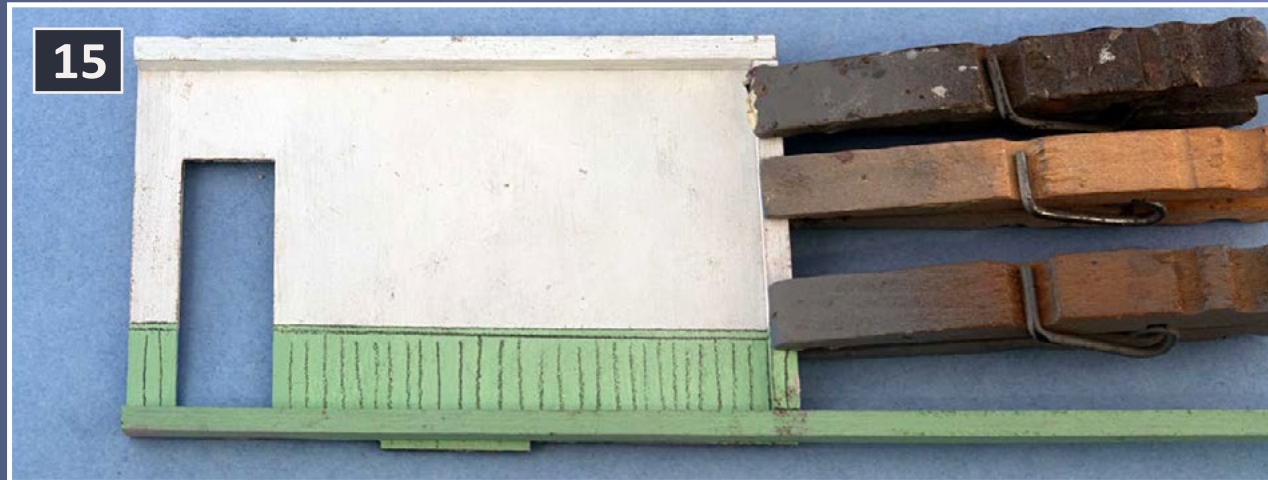


14



13-14: Since the walls will only be seen through the windows, I saw no reason to spend the time and effort to build a true wainscot. Some quickly drawn pencil lines provide the desired effect.

STEP 4: Building the walls



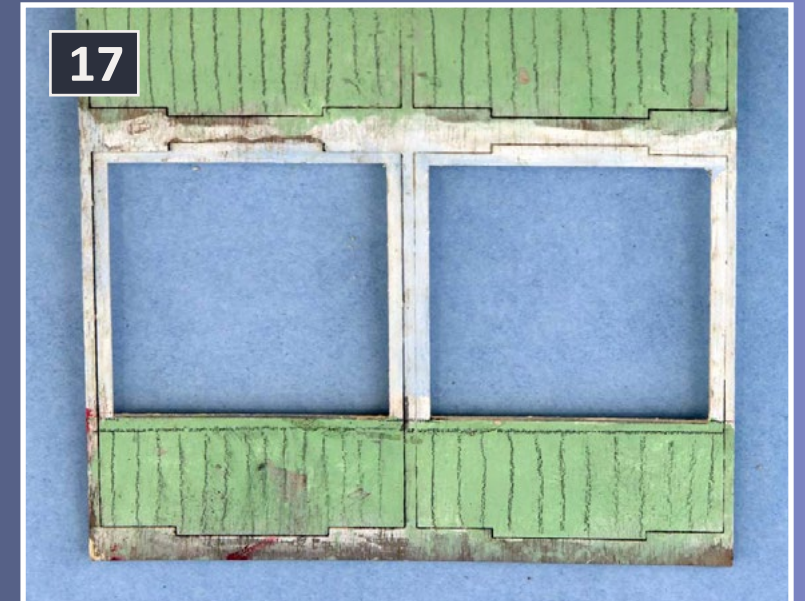
15-16: Reversed spring clothespins make handy clamps. There is considerable controversy over which is the best glue to use. Yellow carpenter's glue is often recommended for its great strength.



However I find it does not adhere as well to painted surfaces. It can also leave yellowish stains on the paint. Aileen's Tacky Glue is excellent, but I find once it's opened, it has a very short shelf life. I prefer white glue. It is stronger than necessary and dries absolutely invisible. It adheres well to painted wood and paper, an important quality with pre-painted parts. White glue does take longer to dry, but I use the waiting time to work on several different projects. The white glue is usually dry enough for handling in approximately ten minutes.

STEP 4: Building the walls *Continued ...*

17: A view of a storefront window from the interior. The interlocking-tab construction is typical of laser kits. The tabs make a positive and secure fit. Multicolor paint jobs are made easy when each layer is a separate part. The interior walls have become rather dirty from exterior weathering and handling, but this will not be seen from the outside, so it's not a problem.



18: The front door is painted on the carrier sheet. I find it is always easier to do as much work on the carrier sheet as possible. The small wood ties are easily cut with a hobby knife and smoothed with a sandpaper block.

STEP 4: Building the walls *Continued ...*

19: The rear wall is too large to be cut from one piece of wood, so two wall sections are spliced together. The bracing aligns the parts holding them together. A cardstock strip seals the gap to prevent separation and light leaks. The wainscoting does not



line up perfectly, but since it will be covered with kitchen equipment, it isn't a problem. Unless you are absolutely certain something will be covered, it is better to paint interiors assuming they will be visible later on. Easier to be safe than sorry for an extra few minutes.

20: The 1/8" square posts located between the windows serve both as decoration and bracing. A neater end is possible by cutting the bracing oversized and trimming them once the glue is dry. ☑



Michael Tylick has built a number of smaller layouts of various types and scales over the years. Mike has been a long time contributor to Model Railroader, Railroad Model Craftsman, the National Model Railroad Association Bulletin, and other hobby publications. He has also delivered numerous clinics and presentations on various railroad and historical subjects.

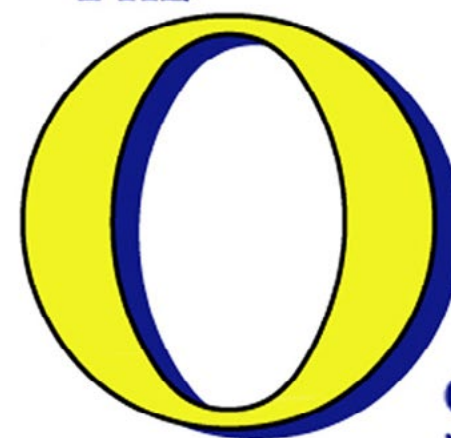
He now works as a custom builder of railroad structures and rolling stock, and has recently formed Rail Design Services, for design and graphic aspects of model railroading.



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Static loco on display

– **Daniel Kleine**
Model Photos by the author

Recycling that unused locomotive ...

Years ago I built an O Scale Indiana Harbor Belt engine model. It's un-powered, collecting dust, and really does not fit as an operating unit with my 1950s themed layout. Unlike full-sized railroads, I could not simply send it to the open hearth via a scrap dealer. It is disappointing that no IHB steam engines were ever preserved, so I decided to make my own vintage engine display.

Rather than weathering it like a running engine, I used powders to make it look like it has been sitting outside for years, patiently waiting for local volunteers to repaint it. I assumed that a static engine would not have a coal load but might have a



steel sheet welded across the bin to give it some shelter from the weather. To protect the engine from graffiti and over-enthusiastic railfans, a chain link fence was needed.

Starting from the ground up, a piece of 3/8" plywood painted gray forms the base. A length of O scale flex track provides rails for the unit. I painted the rails a rust color and put down a little ballast and ground foam between the ties. Track under a static engine is definitely not up to mainline standards. So gave it a buried, over-grown look. I glued down ground foam and weed tufts to the base to complete the un-kept look. Then I sealed everything with a heavy coat of matte medium.

To construct a 6' scale fence, I drilled holes in code 100 rail for the posts. I mounted them on the base, and soldered music wire through the holes as pipes. A gate was formed out of brass rod.

Tulle was wrapped around the frame as fence fabric and tied off at intervals. Then a fresh coat of silver paint finished the



1: An overhead view of IHB 102, an 0-8-0 locomotive on display. The rails along with the locomotive are slowly rusting away. Weeds beginning to grow in the display are due to lack of maintenance.

fence. I chose not to weather the fence in order to provide a little contrast with the locomotive. I drilled holes in the base between the rails and wired the engine and tender down to make it a single portable unit.

I loaned the display to a local historical society for a year. It is now used on the modular train club layout as part of a museum scene where it always generates interesting conversations since it represents the Indiana Harbor Belt, a well-known local railroad.

If you have any defective or dummy locomotives, cars, or cabooses that are otherwise interesting, you may want to



2: A close up of the front of the locomotive. Notice how the ballast is almost nonexistent and the heavy rust on the rails. The locomotive displays a heavy coat of rust, the result of years of neglect.



3: The fence details can clearly be seen. I drilled a hole in the code 100 rail to insert the top rail of the fence. The gate was fabricated from brass wire. Tulle was used as the fence fabric and it was all painted silver

consider putting them on display in your own railroad park. They can be displayed weathered or as “just painted”.

Indiana Harbor Belt U-4 A Class

The Indiana Harbor Belt operated three U-4 A Class switch engines from 1927 until about 1950. They were numbered 100, 101 & 102. These were claimed to be the most powerful 0-8-0 steam engines ever built.

Constructed by ALCo, they were unusual in that they had a third cylinder in the center and a booster engine on the tender. The extra exhaust blast from the third cylinder gave the

locomotive an unusual sound, causing the listener to think that it was running faster than it actually was.

The wheel arrangement meant that the massive weight of the engine was on the eight driving wheels. The small diameter of the wheels limited the speed, but that was acceptable in freight service. The feed-water heater tank in front gave this class a distinctive look.

The three cylinder and booster configuration packed a lot of power into a relatively short, maneuverable locomotive. It was claimed that one engine could move a 6000-ton train up a 2.2% grade at a steady two miles per hour. This was a normal task in the IHB hump yards of the 1930's. The compact design did make maintenance and repair difficult. Sadly, all three of these engines were scraped in the early 1950's. ☒

Wheel arrangement 0-8-0

Boiler Pressure 200 psi

Cylinders 3 each – 23.5” in diam.

Drivers 57”

Length 73' (approximate)

Tractive Effort 75,700 lbs.

With Booster 89,500 lbs.

Tender Capacity

Coal 15 tons

Water 12,000 gals

Pictures continue on the next page ...

4a





4b

4a-4b: The fireman's side of the locomotive.



5

5: A father and son take time to look at the locomotive and imagine what it must have been like to watch one of these monsters working.



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Daniel Kleine is a retired systems analysts and business owner. He has been involved with model railroading on and off for over 50 years, crediting his older brothers along with growing up in a railroad town for his interest in trains.

He believes that the Internet is the best thing to happen to model railroading since John Allen. Dan is grateful to those who have provided him inspiration for his hobby, with a special thanks to his wife Elizabeth who supports and encourages him with the hobby.



MRH \$500 CONTEST CHICAGO FORK

A starter layout you can build for under \$500

– By Prof Klyzlr

A switching layout on a budget ...



Total honesty? Chicago Fork was not designed as a build-a-layout-to-a-price project. The original Chicago Fork is an O scale 2-rail micro layout, Inglenook, built to answer a challenge from local modelers. Following its exposure on the Small/Micro Layout



1: CB&Q GP38 # 187 prepares to make it's next switching move on Chicago Fork.

website carendt.us/scrapbook/page97a/index.html#chicago many visitors to the site requested a HO version track plan, and the Chicago Fork layout shown here was born.

As a minimum-space switching layout, Chicago Fork utilizes the popular 3:2:2 Inglenook track arrangement, with a twist. Instead of two discrete turnouts, a simple sector plate is used to replace one turnout, thus saving the length of the turnout and associated clearance distance. The Inglenook provides a veritable wealth of potential switching scenarios for the modeler to choose from. A generic warehouse as shown with car spots can fit just about anywhere in the USA. Any industry which uses car spots could be easily substituted.

In the case of a layout on a budget, switching tends to give the most play value, so it is a logical option for this challenge. The



2: An overhead build-stage shot of the Chicago Fork scene.

Inglenook track arrangement can be operated in simple play mode, where the order of the cars and switching is guided by any simple random-draw system. Or a prototypical switch list or car spot sheet can simulate the real-life cellphone conversation between a local switch crew and the industry dock manager. The simplicity of the Inglenook configuration also significantly helps keep the budget under control.

While I personally prefer to switch with an SW1500, the HO version Chicago Fork is equipped with rolling stock duplicating that on its larger O scale predecessor. An Atlas CB&Q DCC-ready GP38, a CB&Q caboose, and handful of cars are the starting stock on this project. The contest budget needs to be carefully watched here. The difference between MSRP and eBay prices for the same roster of equipment can be significant!

Splurging on one DCC sound-equipped loco could immediately decimate an already tight budget. It's interesting to note that opting for kit rolling stock may or may not represent a savings when compared to inexpensive RTR options. However, for the dollars, a good-quality kit such as those by Tichy and Red

Caboose represent a greater opportunity for learning modeling skills than its equivalent RTR car.

Benchwork

Some modelers love to build it, some will do anything possible to minimize the pain. In Chicago's case, 5mm foamcore has been used to create a monocoque structure. The module is super-light, yet more than strong enough to handle regular movement in a home setting.

Building benchwork is often written off as a noisy, dusty, messy process, which is all but impossible in the average apartment. Using foamcore, I constructed Chicago in one sleepless night, without waking my wife or any of the neighbors. I achieved this easily using quiet-operation modeling tools, which most modelers will likely already own. You might need to stock up on X-Acto blades, though.

Design

The module design includes an integrated coved backdrop/ceiling, benchwork fascias, and lighting system. This cameo scene can be appreciated in its best light under any conditions.





1a-1b: Schematic trackplan of “Chicago Fork”, as drawn and presented by the late Carl Arendt.

Most small shelf layouts are perceived as nothing more than switching-planks due to lack of presentation framing and lighting. Lack of fascia and lighting really does sell the potential of micro/small layouts short and a terrible disservice to what can be amazingly-detailed modeling.

Speaking of the design, I know some may be looking at the foamcore and sector plate thinking, “nice stand-alone unit, but there’s no way to expand it”. Not true. With careful attention to the track geometry, the angle of the sector plate is such that it can be removed, and a second PECO Code 83 #5 turnout dropped in place. From there the options are: extending the layout to complete the Inglenook as-is, or build more foamcore modules and connect them end-to-end, limited only by available space and the motivation of the modeler.

The track used on Chicago Fork is PECO Code 83 US-geometry flextrack and turnouts. PECO turnouts are designed with a built-in over-center spring. This permits positive manual-throw operation right out of the box. Personally I prefer Caboose Industries ground throws, and use N scale #218s mounted at the layout edge. A short wire-in-tube extension allows fully-manual control without having to reach into the scene.

After Chicago Fork was built, it occurred to me that another option is the turnout kits from Proto:87 Stores. These would



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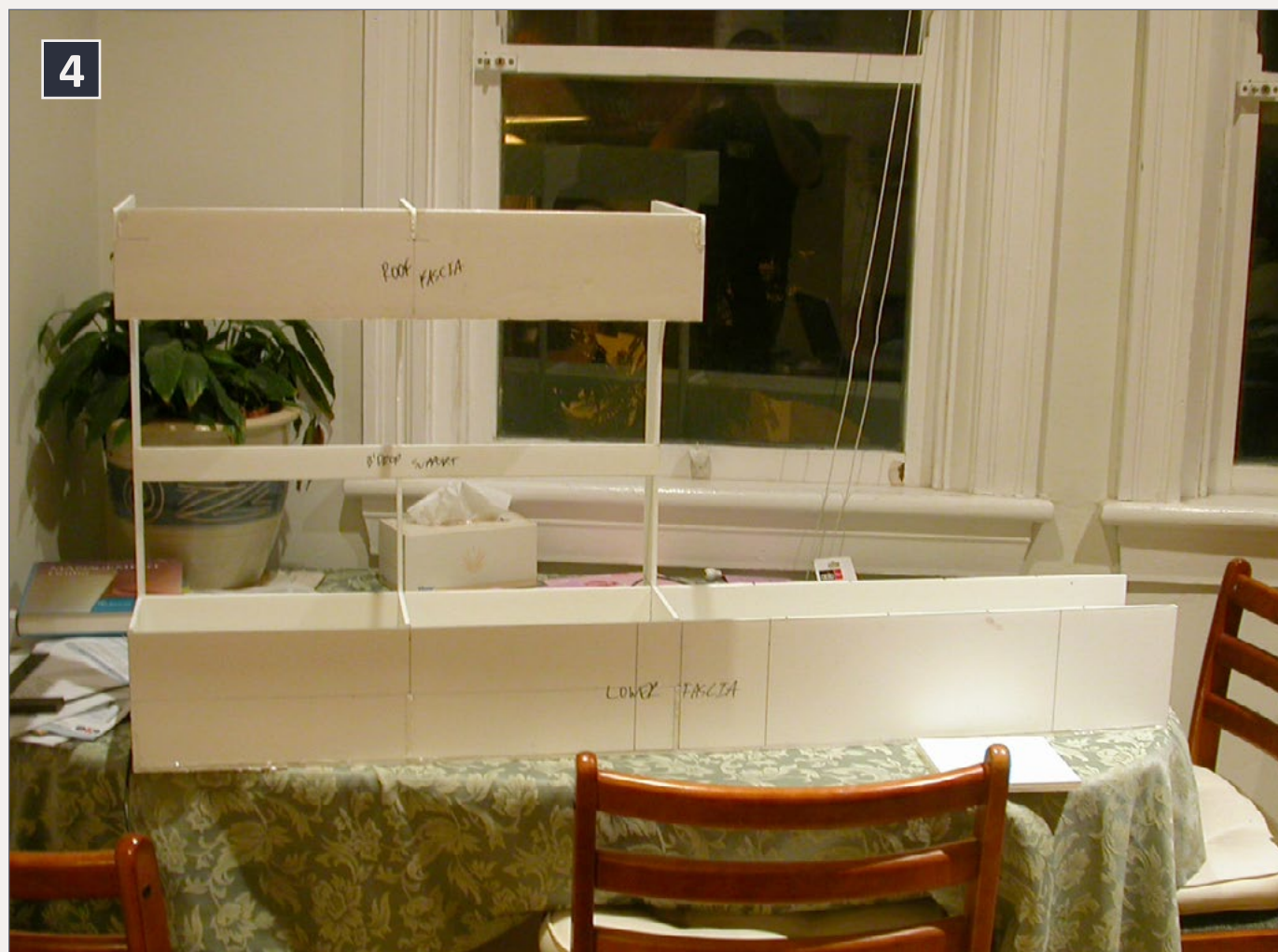


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4



4: It's 3 am, and the all-foamcore base of Chicago Fork takes shape. No sleeping spouses or significant-others were awakened in the construction of this layout.

not only represent an upgrade in visual detail and mechanical performance, but would also save some money. It also matches with the ethos of quality-over-quantity, which is an inherent part of wringing the most out of any small layout.

Wiring and control

Wiring and control can be a pleasure or a chore on any layout. The difference comes down to making the most appropriate choice for the layout design and its envisioned operations. On a small switching layout, it's less about corralling a roster of locos, but rather optimizing the slow-speed crawl performance of the few active units in play.

5



5: Note the overhanging module roof/fascia/lighting pelmet and 6" deep "L-girder" base. Foamcore is imminently suitable for benchwork building as long as basic structural principles are respected.

The Parts list/Budget is as follows:

Qty	Description	Cost each	Total
2	60"x40" x 3/16" Foamcore sheet (white)	\$20.00	\$40.00
1	30"x40" 2.5mm matte board (white)	\$5.00	\$5.00
3	(PECO) Code 83 flextrack	\$5.57	\$16.71
1	(PECO) Code 83 LH #5 turnout	\$27.25	\$27.25
1	PECO SL14 pins	\$2.87	\$2.87
1	Rail Joiners	\$4.60	\$4.60
1	Caboose Ind N scale 218S ground throw	\$3.25	\$3.25
1	Analog DC Controller (MRC Railpower 1300)	\$40.00	\$40.00
1	Walthers "Buds Trucking" bkgnd structure	\$35.00	\$35.00
1	Fine rock ballast	\$10.00	\$10.00
1	Woodland scenics mixed turf	\$6.30	\$6.30
1	Heki "pull-apart" foliage matting	\$15.00	\$15.00
2	DC Power cable	\$1.00	\$2.00
1	2-light 50W Halogen lighting kit	\$15.00	\$15.00
2	20W Phillips MR12 Halogen "brillantline" bulbs	\$8.00	\$16.00
2	"Fiddly Bits" spraypaint (1x Matte Black + 1x Lt Blue)	\$6.95	\$13.90
1	Atlas GP38 CB&Q (DCC ready)	\$80.33	\$80.33
1	Altas Wide-vision caboose	\$24.00	\$24.00
1	40' Red Caboose tankcar kit	\$17.27	\$17.27
1	40' Red Caboose flatcar kit	\$13.57	\$13.57
1	Athearn 40' HiCube Burlington boxcar	\$13.56	\$13.56
1	LBF MILW boxcar	\$13.27	\$13.27
		Total Cost	\$414.86
		Minus Trains	\$161.99
		Layout Only	\$252.87

Table 1: The "Chicago Fork" levered eBay to come in under the target \$500 limit. I purchased all layout benchwork, trackage, lighting, paint, and wiring items new from local stores. However, the rolling stock and locomotive came from eBay. This saved money and also provided items not available locally. For the contest, I set prices by summing the 3-highest and 3-lowest price auctions for each item, and averaged the result. The \$85 remaining from the budget actually forms a "Misc/consumables" fund to accommodate variances in eBay auction prices, minor tool upgrades, extra X-acto blades, etc.

This is one area where the budget really bit hard on the realistically-doable options. Even a starter DCC system from most of the major manufacturers easily eats almost half the contest budget. Analog DC is the option which best fit the budget criteria. That said, at eBay prices, a Bachmann E-Z Command DCC system potentially could be substituted, if needs and whims really required one. Whichever system is chosen, the wiring is easily accommodated by less than 6' of DC power cable, and a microswitch to handle the turnout frog switching.

Structures and scenery

Structures and scenery are another area where spending time instead of money can pay dividends in improved modeling skills and the wow-factor impression. While the three car-spot Chicago Hoist and Fork warehouse shown was kitbashed from a Walthers Buds Trucking Co kit, a sheet of styrene and some foamcore could easily achieve a comparable result.

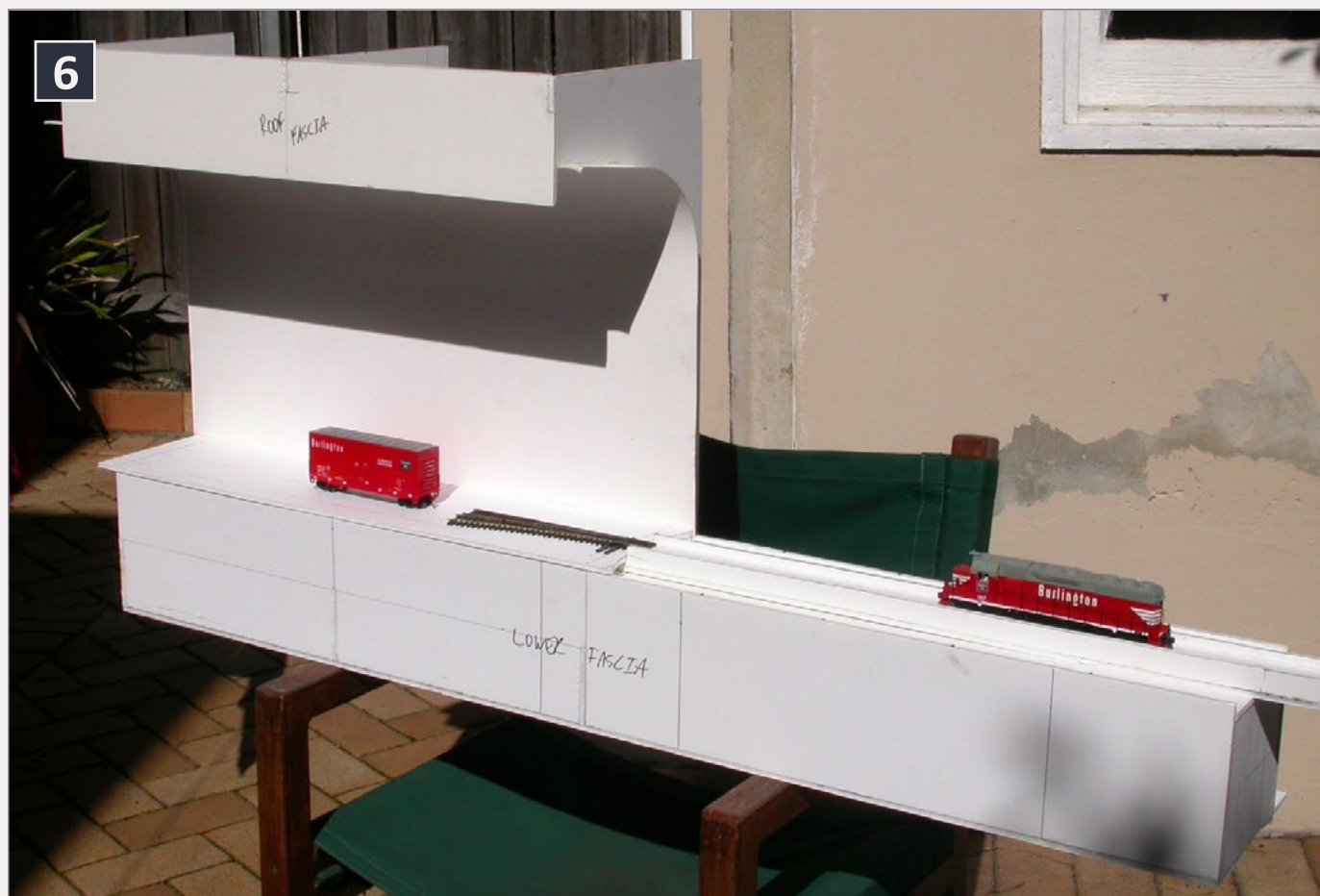
Another alternative is using some of the cost-effective card structure kits available from KingMill Enterprises and Scalescenes. Whatever the preferred option, a few lengths of styrene I-beam, brass wire, and scale corrugated metal can form an effective scratchbuilt awning. The chain-link fence is simply brass wire soldered together to form a frame and draped with \$2 worth of decorative plastic mesh.

Bottom-line

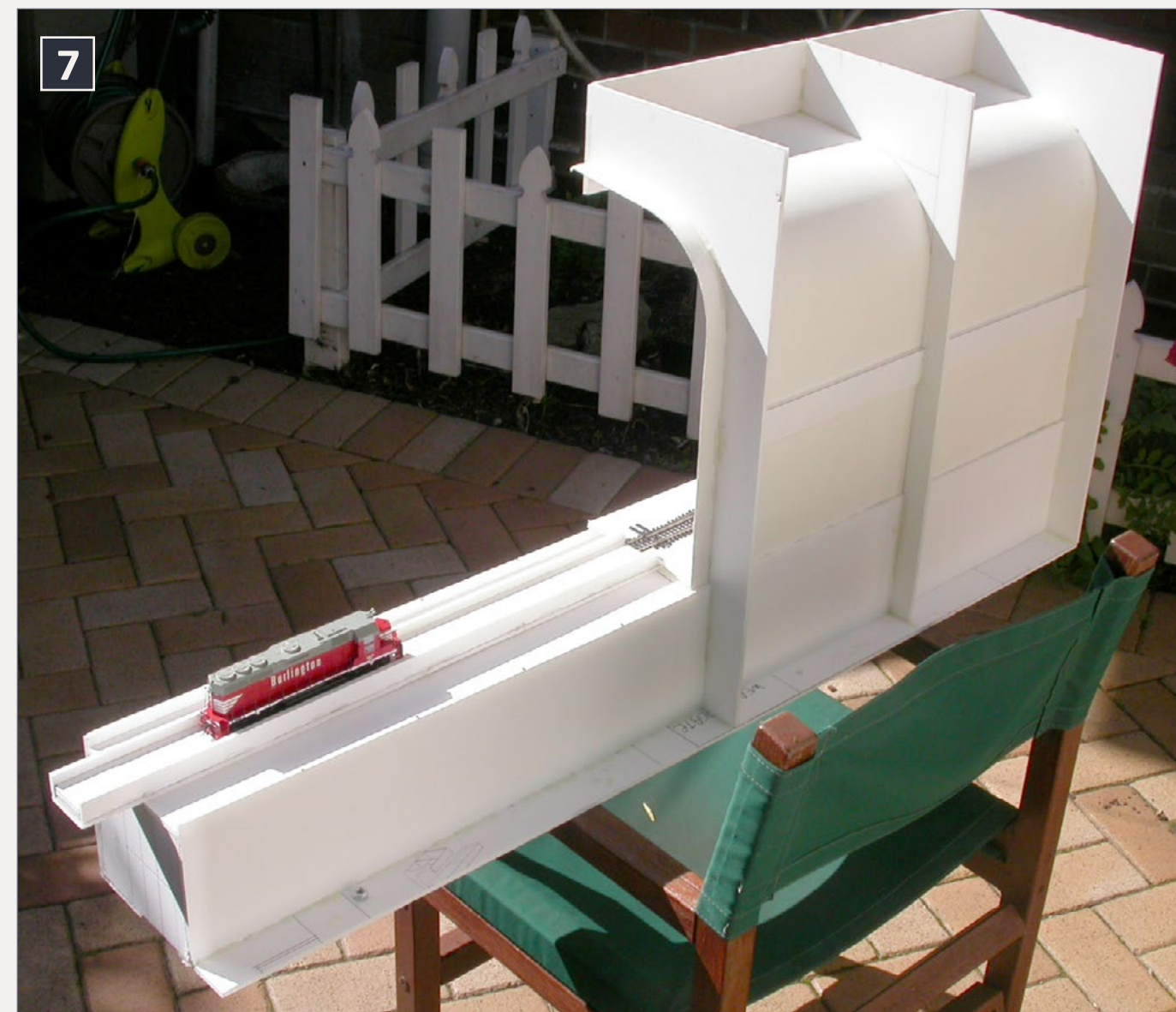
So how did I do on the budget? The layout itself, (everything including benchwork, lighting, track, structures and scenery, throttle and wiring) ended up at around 50% of the budget. The rest was taken up by the locomotive, freight cars, and a small "miscellaneous expenses" fund to cover minor extras, consumables, or budget overruns. Without the savings

available via eBay, even this modest layout could well have exceeded the target \$500. When working to a fixed budget, spending carefully and wisely is not just advisable, it's essential.

What did we get for our money? A “fully presentable” single-scene layout which will fit in almost any home. It needs no custom tools to assemble, and no noisy/dusty/messy power tools, which immediately gains points with the Domestic Authorities. It's fully capable of quickie game type operations for sharing the hobby with children and non-train visitors. It is equally capable of hosting more prototype-inspired operations for the hardcore ops-minded modeler.



6: The day after the night before. Chicago Fork shot outside in raw foamcore stage. The PECO Code 83 #5 turnout, Athearn boxcar, and Atlas GP38 look strangely at-home...



7: The rear of Chicago Fork, showing the profile supports for the roof and lighting system. The coved backdrop/ceiling is 2mm matteboard.

A high quality locomotive paired with a basic quality throttle, reliable track, and manual turnout controls present an easy-to-use human interface and satisfying operating performance. It can be ready to run at the flick of a power switch. The layout provides many opportunities for expanding the modeler's skills, while not imposing so much of any given discipline that the tasks become a burden.

So who's keen to start building? ☒

Photos continue on the next pages ...



8: Ahh, that's better. A quick shot of sky-blue spraypaint on the backdrop and Matte Black on the fascias makes the foamcore module immediately more presentable.



9: "Chicago Fork" and its larger O scale 2-rail predecessor set up side-by-side at a local O-scale modelling get-together.



10: Chicago Fork displayed at forearm height, just begging to be operated...

“Chicago Fork” Tool List

The Tool list for “Chicago Fork” is largely made up of items found on any modeler’s workbench. With the exception of the Hot glue gun and Soldering iron, the tools do not require power, making operation virtually silent. This along with the use of foam core permits building of layout sections at times and in locations which might otherwise be domestically impossible.

The tool list is as follows:

- Minimum 600mm (24") ruler
- “Sharpie” marker or equivalent
- X-acto knife + spare blades (!)
- Lo-temp hot glue gun (art and craft version)
+ spare glue sticks (!)
- Rail nipper/rail-cutting saw
- Needle-nosed pliers
- Fine file (track tweaking)
- ACC
- PVA (White) glue
- Isopropyl alcohol
- Soldering iron + 60/40 General Purpose solder
- Paints for painting/weathering (Tamiya XF series acrylics
+ Jo Sonja Goache)
- Disposable brushes



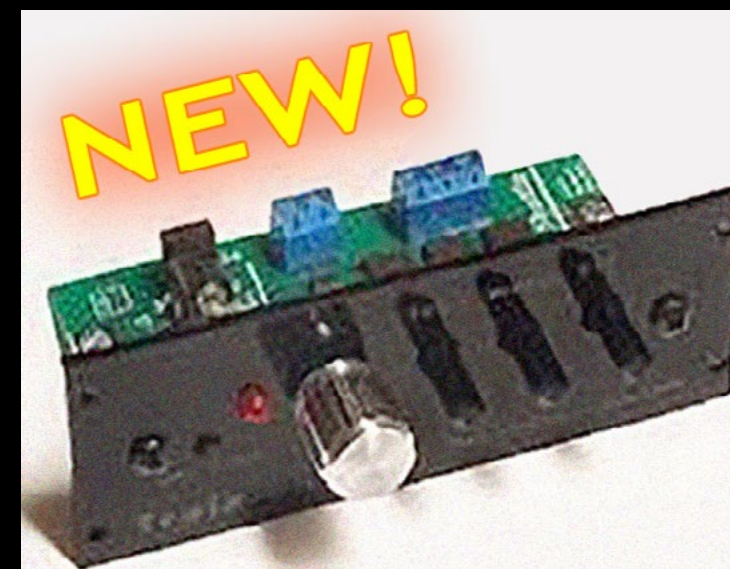
Prof Klyzlr’s parents report that from a young age, he showed significant interest in anything train-related. However, it was through the support and encouragement of local narrow gauge modelling mentors that the

seeds of scale railway modelling really took hold.

Prof’s modeling interests cover a lot of ground, including narrow gauge Australian logging, standard gauge US shortline, and switching operations. He is also active in Small/Micro Layout design and Layout-Sound modelling.

Prof actively promotes model railroading to the general public at exhibitions and events, and can be often found encouraging and assisting fellow modellers in and around Sydney, Australia.

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**DCC Train Shuttle ...
aka, “Prof Silencer”**

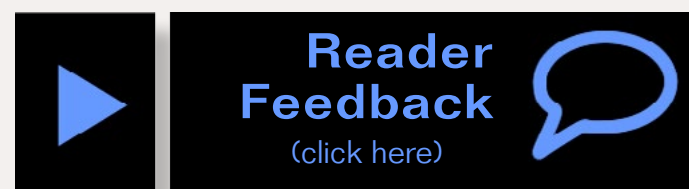
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An MRH Exclusive Report from Pasadena



Model Railroad Hobbyist attended the 2013 National Narrow Gauge Convention in Pasadena, California this summer from August 28 - August 31.

We took lots of photos and had a table at the National Narrow Gauge Convention, which ran from Wednesday to Saturday.

Here's our exclusive report of what we saw on the convention floor and got to see on some layout visits. The subscriber bonus downloads for this month have even more!



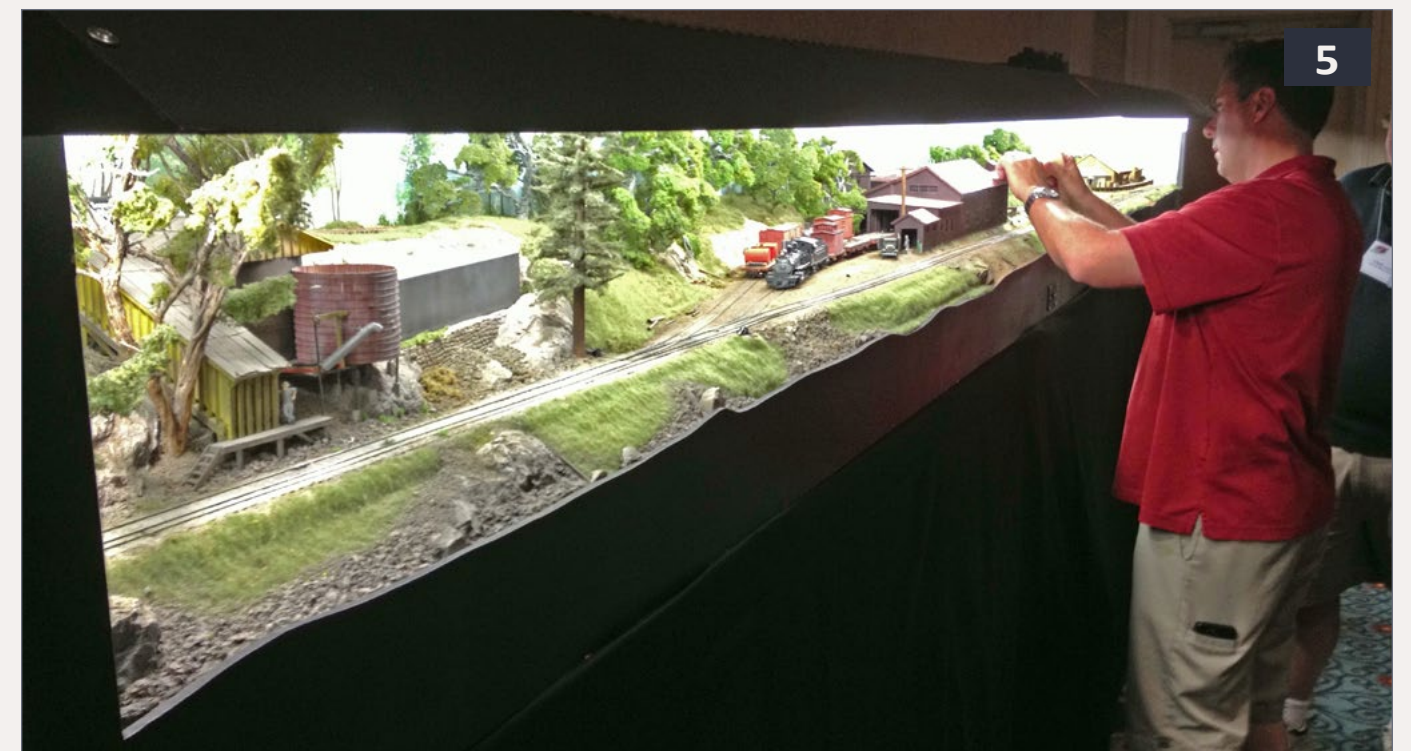
1: A good example of the modeling you see at a National Narrow Gauge convention is this modular layout presented by the North Coast Narrow Gaugers. This HOn3 layout was a feast for the eyes.

2: A train rolls through Rio Suerte on the North Coast Narrow Gaugers layout.



3: This is Buffalo Landing on the Westside Lumber system modeled in HO_n3 by Burton MaxWell. At this location on the prototype, logs were transferred from trains to trucks.

4: Closeup of the Buffalo Landing module. The module hosts a working logging donkey, two locomotives, log cars, trucks and buildings built to follow the prototype as closely as possible.



5: This Sn3 display hosted by PBL is maintained and transported by Aaron Splawn. That's Aaron in the shadows touching up some structure weathering.

6: Here's a closer view of the right-hand end of this display which models Tuolumne, California at the foot of the Sierra Nevadas on the Westside Lumber company 3-foot gauge line.

7



8



7: This is probably the largest public modular On30 layout that's been done to-date. This setup has 66 modules and over 10 scale miles of track. Several On30 modular groups cooperated to put this massive layout together.

8: California South Coast Lines lucky 13 pulls a mixed passenger and freight special around this huge On30 modular layout.



9: Rob Caves' standard gauge HO layout had a total of 5 levels, from the floor to almost shoulder height! Rob managed to get a *lot* of railroad into a single car garage using this approach.

10: Rob's scenes on the various decks were well executed, as this lumber mill area demonstrates.



11: Jim Spencer's HO and HOn3 Tennessee and Marshall pass fills a long narrow basement. Jim's layout is based on the early 1940's steam era Denver and Rio Grande Western.

12: This impressive roundhouse scene on Jim Spencer's layout includes both HO and HOn3 trackwork.



13



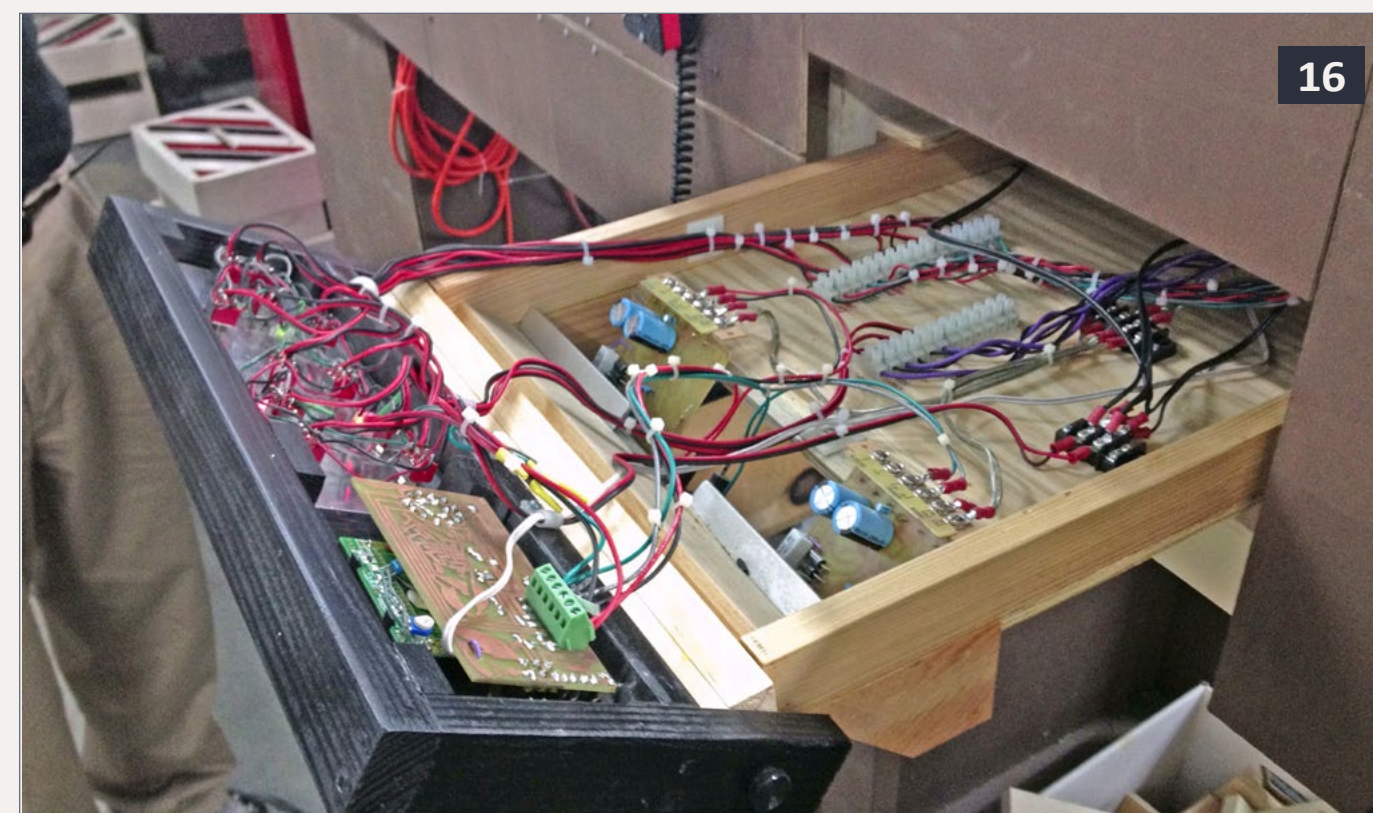
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13: This 20 foot x 25 foot layout of Alan Wallace models both HO and HOn3 in the arid Sierra Nevada foothills of California. That's MRH's Richard Bale in the background.

14: Texas Mines LTD shay number 1 switches a mine on Alan Wallace's layout. Alan handlaid on the visible trackage on his layout.



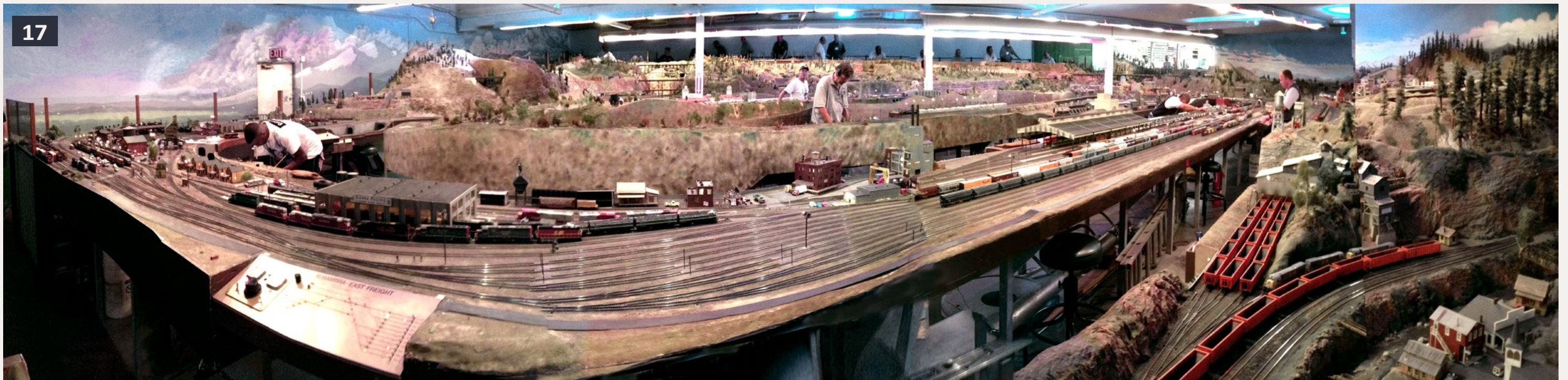
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15: The East Valley Lines N scale club layout covers 1500 square feet and is currently in the early stages of construction. This scene was the only scenery on the layout when we visited.

16: The East Valley club uses a clever "sliding drawer" method to build their control panels. This provides easy access to all the wiring and makes maintenance super-simple.



17: This panoramic view shows the Pasadena Model Railroad Club's massive layout. This HO layout is perhaps one of the largest club layouts in the world.

18: Here's a nicely executed lumber mill and log pond scene on the Pasadena club layout, complete with structure lighting.

19: On one corner of the Pasadena club layout, you will find this impressive roundhouse and engine facility. This extensive facility is probably larger than many home layouts!



20



21

20: A Rio Grande narrow gauge train runbles down the tracks on the Slim Gauge Guild's Sn3 layout. The Guild's Sn3 layout models a freelance composite of narrow gauge lines.

21: The Slim Gauge Guild's HOn3 layout includes many scenes from the Denver and Rio Grande Railroad and the Rio Grande Southern circa 1920 to 1949.



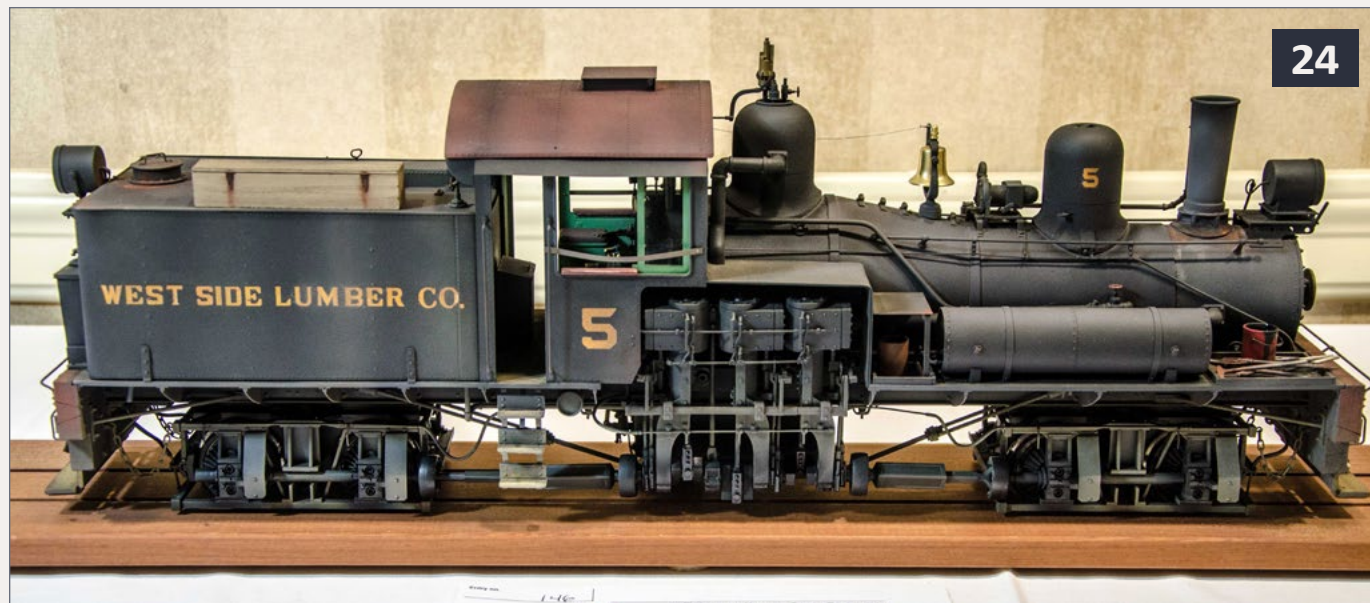
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23

22: Randy Scott's On3 layout depicts the high desert of New Mexico. Randy uses DCC battery power for his trains, and told us all his power pickup issues are now history.

23: Randy Scott's around-the-walls garage track plan includes many great scenes like this one. His layout includes both steam and diesel power for his trains.



24



25



26

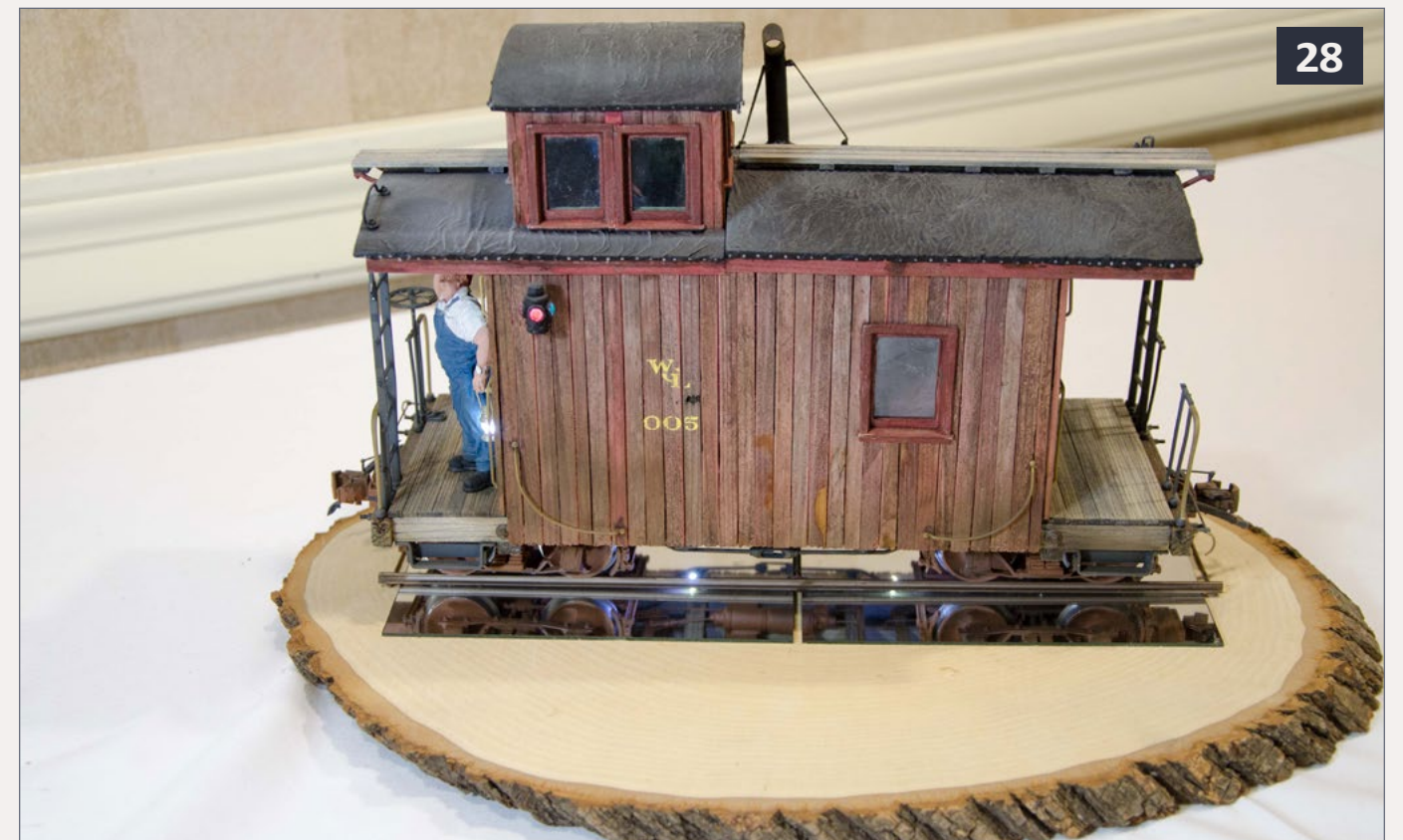
24: Best of show, geared loco by Bob Poli.

25: Rod loco, first place by Bill Herkey.

26: Motive power internal combustion, first place by Joe Hendrickson.



27



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27: Passenger car, first place by Dale Angell.

28: Caboose, first place by Pete Watson.



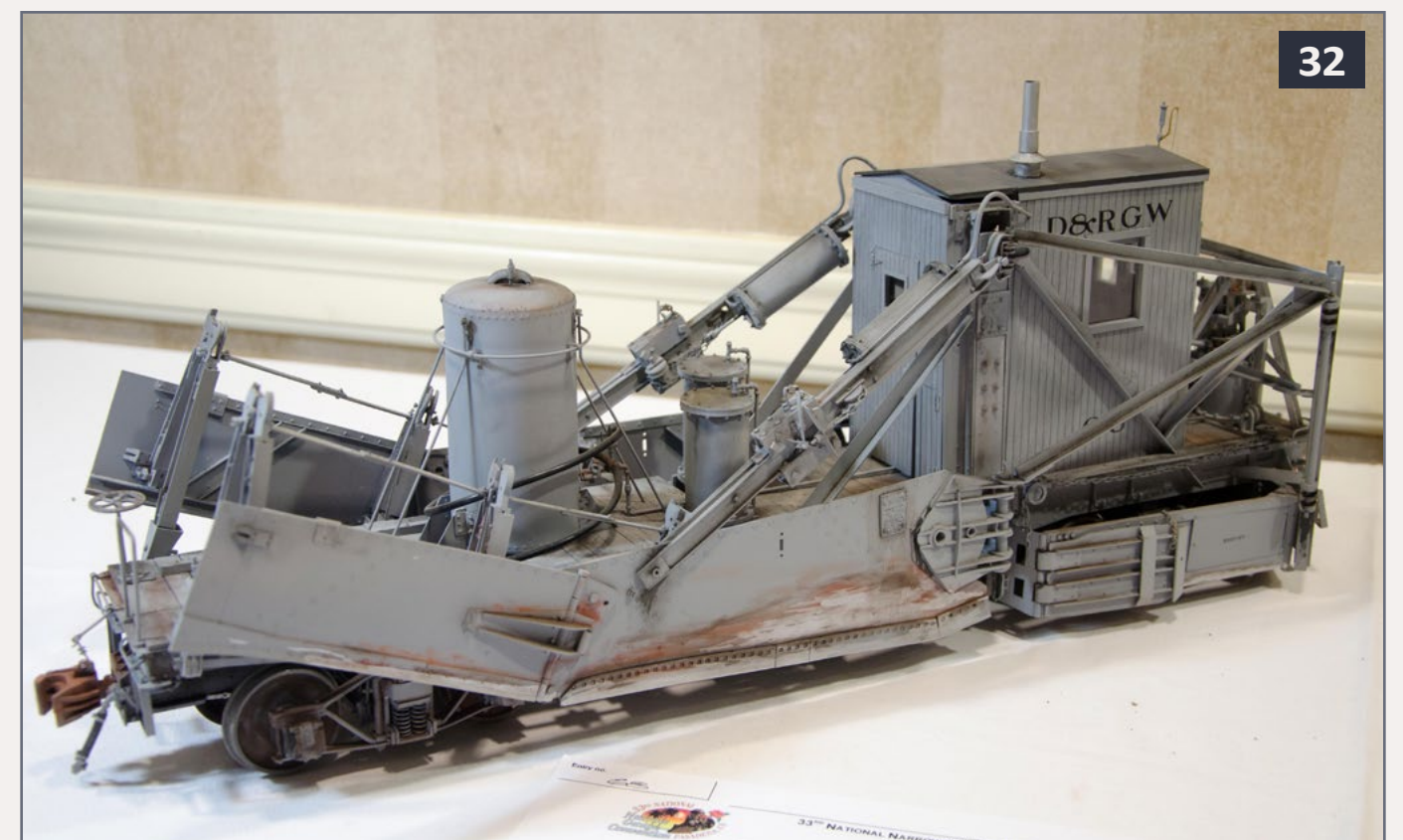
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29: Structure, first place by Kevin Barnett.

30: Youth below 18 first, place by Tyler Virga.

31: Special equipment, first place by Frank Markovich.

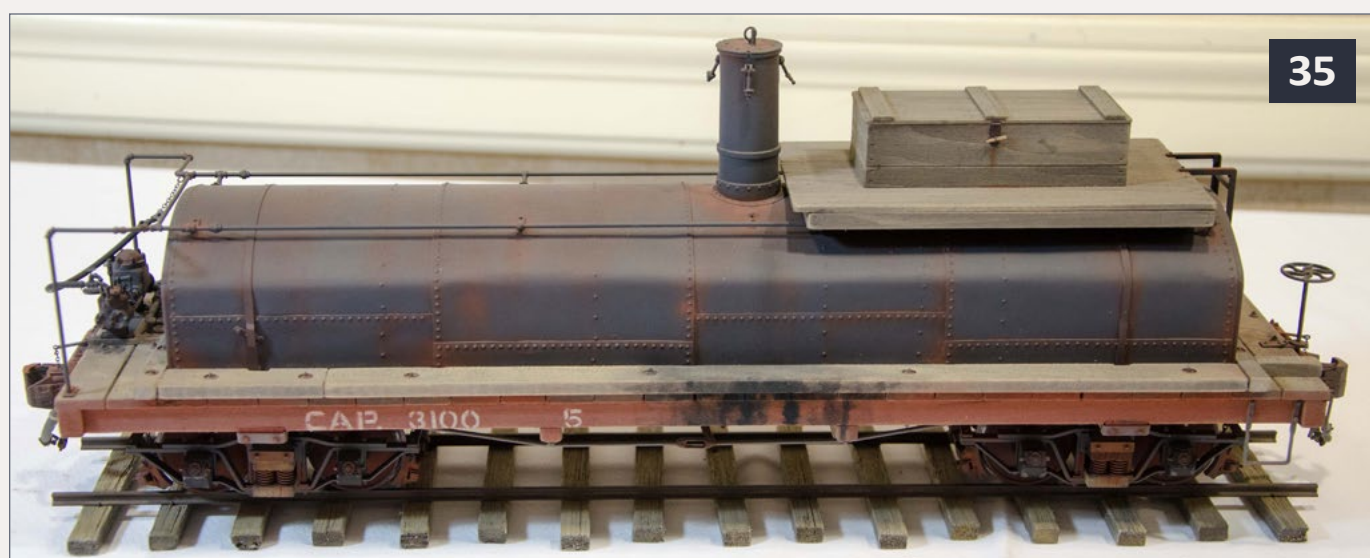
32: Maintenance equipment, first place by Mike Gray.



33



34



35

33: Freight car, first place by Dale Angell.

34: Favorite train, first place by Chris Stark.

35: Logging equipment, first place by Bob Poli.



36

36: Diorama, first place by Doug Ramos.



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Blackstone Models: HOn3 C-19 Consolidation



Over the next 4 pages, MRH presents a special product showcase of Blackstone Models 3-foot narrow gauge C-19 steam loco. The model shown here is Rio Grande Southern number 41. Blackstone makes these models in **HOn3**. The lettered models are sold out at the factory, but they may still be available from hobby retailers.



Blackstone Models D&RGW and RGS C-19 Consolidations represent various prototypes from the 1920s through the early 1950s. With more than 100 hand-placed detail parts, these models feature variations in cabs, pilots, tenders, domes and decorations.

Each version also comes equipped with a custom SoundTraxx Digital Sound Decoder.

As of this writing, the non-weathered versions have shipped, with the unlettered edition the only one still available from the factory. The weathered versions will be shipped at a later date.

These ready-to-run locos use a diecast metal construction, with plastic, metal and wire details. They host a precision can motor with a balanced flywheel. Detailing includes a cab interior, along with individual grab irons and handrails plus piping and valve detail. The loco runs on both DCC and DC and has an 18" operating radius.

The Tsunami Digital Sound Decoder by Sound-Traxx has sounds recorded from the prototype.



PROTOTYPE HISTORY

Baldwin Locomotive Works built twelve 2-8-0 locos for the Rio Grande narrow gauge lines in 1881 and numbered them 400-411. With cylinders at 16"x 22" and drivers of 37" diameter, these locos became the largest consolidations in service on the Denver and Rio Grande, intended for helper service on the 4 percent grades over Marshall Pass, Cerro Summit, and Cumbres Pass.

As larger versions of the Class 60 consolidations, these new class 70 locos weighed in at approximately 70,000 lbs. Five of these locos got converted to standard gauge in 1889 and given a class 74 designation.

In 1900 these five were all switched back to narrow gauge and put back into the original 400-411 series, but not given their original numbers. They retained the class 74 designation, however.

In 1916, the Rio Grande Southern acquired the 409 and the "second" 402 (originally 411), re-numbering them to RGS 40 and 41.

In 1921, the D&RG re-organized to become the Denver and Rio Grande Western. In 1924, the ten remaining Class 70 (and 74)



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engines from the 1881 group became D&RGW numbers 340-349 and were given the new power designation of C-19.

In early 1936, the D&RGW leased three C-19s – 343, 345, and 346 – to the Colorado and Southern. When the C&S narrow gauge ended in April 1937, all three locos were returned to the D&RGW.

Today, four locos survive:

- D&RGW 346, ex-D&RG 406 resides at the Colorado Railroad Museum.
- D&RGW 340/RGS 40 runs at Knott's Berry Farm in California as D&RGW 340.
- D&RG 409/RGS 41 runs at Knott's Berry Farm (California) as RGS 41.
- D&RG 420 / RGS 42 is cosmetically preserved in the museum inside the roundhouse at Durango.

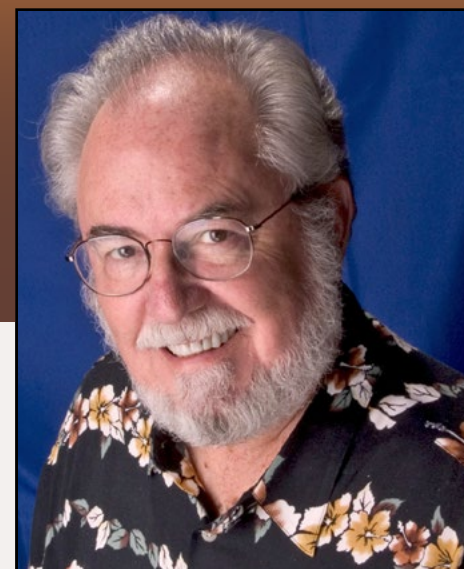
For more historical details, see the Blackstone Models website:
blackstonemodels.com/new/c19/c19history.php



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September 2013: The latest model railroad products, news & events

by Richard Bale and Jeff Shultz

Manufacturing overseas becoming less attractive

Hornby reports that production of its Airfix line of airplane and train models will be repatriated back to the United Kingdom from China. Earlier this year Hornby brought portions of its Humbrol paint facility back from China following labor disputes and concerns about quality control. A Hornby spokesperson said they can now react to market changes much faster as well as keep an eye on production quality.

Marklin, another important European brand of models, recently moved its remaining production of LGB products from China to Hungary where the rest of LGB line is made. In addition to quality control issues, the dramatic rise of wages in China is rapidly reducing the cost savings of overseas manufacturing. China's National Bureau of Statistics reports that private-sector wages there rose 14% in 2012. This comes on top of a 12.3% increase the previous year...

New HMA officers announced

Congratulations to Stacey Walthers-Naffah (Walthers Inc.), Jarrette Ireland (SoundTraxx/Blackstone), and Gale Cousins (Woodland Scenics) who have been elected to the Model Railroad Industry Division Council of the Hobby Manufacturers Association. Newly elected officers of the board of directors include Richard Janyszek (Bachmann), Mark Schwing (Electronic Model Systems), and Don Banes (Stevens International) ...

Brass modeler and collector

Do any of our readers remember the slick periodical “Brass Modeler and Collector” published by Jack LaRussa in the 1990s? In addition to details about the models themselves, the short lived bi-monthly was full of interesting information about the builders and importers of handcrafted brass models. Only six issues were published and they have since become collectors items commanding high prices on eBay. John Glaab, who owns the rights to the magazine, is considering reprinting all six issues along with some added material, as a handbook for owners and collectors of brass models. If you might be interested in such a project, send John a note of encouragement. His email address is peachcreek@aol.com...

Getting it right

Last month we reported that Bud Reece, Bachmann’s vice president of sales and marketing, had relocated from the company’s headquarters in Philadelphia to Colorado for health reasons. We are happy to report that Bud’s health is just fine and that the move is something he has planned for several years. Bud told MRH that he wanted to cut back on his travel

schedule, especially long overseas trips to Europe and China. Bud’s new responsibility as western regional sales manager will involve less travel and allow him to spend more time with his family. We did not intend to offend anyone in our original report and send our best wishes and continued good luck to Bud in his new endeavor...

Walthers reference books

The 2014 edition of Walthers HO Reference Book is available this month. The N and Z scale version is scheduled for release in October. Both books have been updated with new information on all Walthers products as well items from the hundreds of suppliers whose products are available from Walthers. The popular Magic of Model Railroading section continues in the 2014 editions with full-color photos showcasing the inspiring work of modelers from around the world. The HO and N/Z books are both priced at \$15.98. See your dealer or visit Walthers.com for additional information ...

NEW PRODUCTS FOR ALL SCALES

Morning Sun Books (morningsunbooks.com) has released three new all-color book titles. They are “Erie Lackawanna Power, Volume 1;” “VIA – The First 25 Years;” and “Steel Mill Railroads, Volume 5.” Visit the above website for details.

“**Western Maryland Gondolas**” is the latest book in the Revenue Series published by the Western Maryland Railway Historical Society. Authored by William J. Oertly and D.A. McFall, the new volume covers gondolas of WM and predecessor roads from the 1880s to 1971. In addition to a brief history of the cars, the 192 page soft-cover book includes

car rosters, data sheets, painting diagrams, and numerous photographs of gondolas and container cars. The 8.5" x 11" B&W book is priced at \$37.00 (\$28.00 for WMRHS members). To order or for additional information visit moosevalley.org/wmrhs/giftshop/wmrhsgiftshop.htm.

O SCALE PRODUCT NEWS



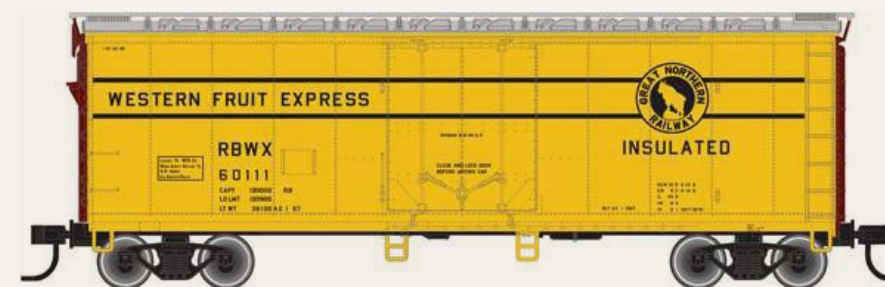
models will be available for PFE (silver), Illinois Central, and U.S. Army (camouflage scheme). The trailers will have an MSRP of \$34.95 each. An 89' 4" intermodal flat car with new paint schemes will also be released early next year. Road names will be D&RGW, Pacific Fruit Express, Department of Defense, and TTX (with a PRR Heritage logo). The MSRP for 3-rail cars will be \$104.95 with 2-rail versions listing at \$109.95. The flat cars will accommodate Atlas-O 45' Pines trailers available separately.



Atlas O (atlaso.com) has scheduled the next run of its Master series 45' refrigerated trailers for delivery in the first quarter of 2014. In addition to the Santa Fe and D&RGW units shown, the ready-to-run

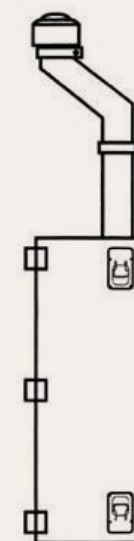
O scale 53' Evans Double Plug-Door Boxcars are scheduled for release during the second

quarter of next year. Road names on the Atlas-O Master series model will be Toledo, Peoria & Western; Plywood Marketing; Union Pacific; Multnomah Plywood; Weyerhaeuser; and Ralston Purina (HO model shown). The MSRP on 3-rail models will be \$64.95 with 2-rail versions having a list price of \$69.95.



Also scheduled for release in the second quarter of 2014 is an Atlas Trainman series 40' plug-door boxcar.

Decorating schemes will be American Colloid-BiCentennial, CNW, Green Bay Western, Thermice Corp., and GN/WFE. The MSRP on 3-rail models will be \$56.95 with 2-rail versions having a list price of \$59.95.



Burlington Roundhouse (burlingtonroundhouse.com) is selling several O scale detail parts for EMD GP7 and GP9 locomotives. Shown is a Vapor-Clarkson overnight heater box as used by CB&Q. Additional items in the growing line include steam generator intake and exhaust ports, steam lines, and MU stand. Visit the above website for details and pricing.

A Backwoods Water Tank is among the newest items from Morgan Hill Models (morganhillmodels.com). Components in the O scale craftsman kit include a detailed rectangular



water tank cast in plaster, pre-cut basswood parts, a barrel, nut-bolt-washer details, and piping material. Also available is a Fuel Pump & Storage Tank (above right). The kits are priced at \$49.94 each. Visit the above website for more information.

HO SCALE PRODUCT NEWS



Accurail Inc. (accurail.com) continues to provide hobbyists with a stream of quality HO scale kits at affordable prices. As seen in these pre-production test shots, the next model under development is a Pullman-Standard 4750 cu. ft. triple-bay grain hopper. Beginning late this year, we can expect to see Accurail release kits for the 4750 in a wide range of road names, over a

period of time, that will eventually include Santa Fe, BN, BNSF, C&NW, D&RGW, UP, CSX, Soo Line, Southern Railway, Rock



Island, Farmers Co-op, and CP Rail. White, light gray, and

mineral red cars lettered with data only are also on the production schedule. Prices are pending.



New car kits available this month from Accurail include a 40' Detroit Toledo & Ironton double-sheathed boxcar with a steel frame.

The HO scale model is based on a prototype built in 1919 and rebuilt in 1929. It is priced at \$15.98.



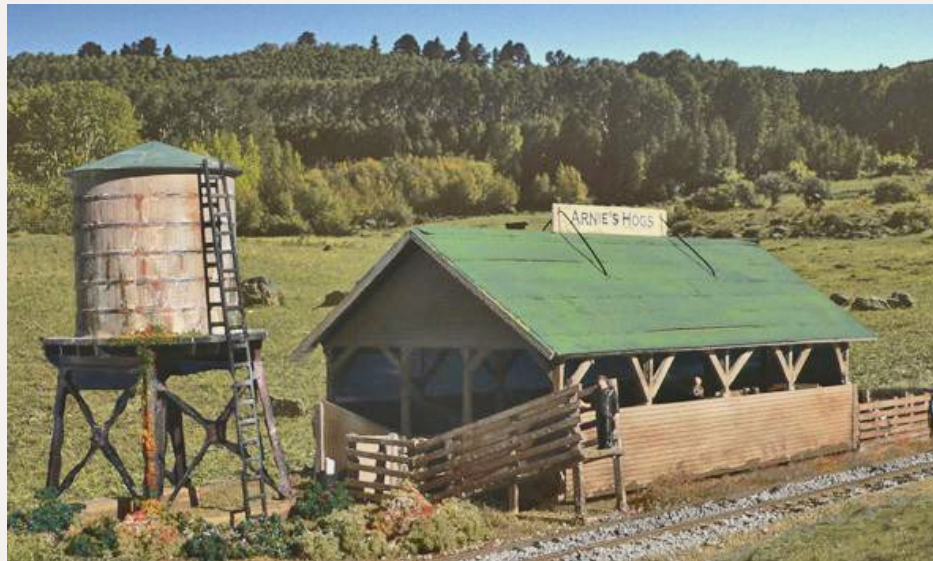
A kit for an HO Philadelphia & Reading twin-bay USRA hopper is available at an MSRP of \$14.98. The same car decorated for

Pennsylvania Railroad is available in a 3-pack at \$42.98.



Also new is a kit for a Burlington 50' Exterior-Post Steel Boxcar based on a prototype built in 1967. The HO scale kit has an MSRP

of \$15.98. All Accurail kits include Accumate couplers that are compatible with Kadee and other knuckle-type couplers.



The newest structure from **Alpine Division Scale Models** (alpinemodels.com) is Arnie's Hogs. The HO scale kit includes a covered stock pen, holding pen, loading ramp, and

water tank. The assembled model has a footprint of 5" x 10". The kit is available now at an MSRP of \$57.00.



Athearn (athearn.com) has announced plans to produce HO scale GATX TankTrain cars. The distinctive tank cars are typically grouped into interconnected sets ranging from two to 13 cars. The large-diameter flexible hose connecting the cars allows the commodity to be siphoned off at the end of a set of cars while being "pushed" at the opposite end with an inert gas. TankTrain cars can be loaded or unloaded at a rate of approximately 3,000 gallons per minute, allowing a train of 90 cars to be serviced

in under five hours. Although TankTrain cars can be spotted in several regions of North America, few can match the drama of a Southern Pacific train of "oil cans" traversing the famous Tehachapi loop. Appropriately enough, Athearn unveiled their new model at the HO scale Tehachapi loop at the San Diego Model Railroad Museum on August 17.

Athearn will replicate the original 23,000 gallon GATX 282 series cars from 1977 (above) and the 486 series cars built in 1982. Both versions of the prototype are still in service. The Genesis series models will have all of the correct transfer plumbing and rigging including a soft vinyl transfer hose that bends as the car negotiates curves. Intermediate cars will have an MSRP of \$49.98. A matching pair with A/B end tanks will list for \$99.98. Delivery is expected in April 2014.



Athearn's Genesis series GP38-2 locomotive is scheduled for arrival in March 2014 decorated for Frisco, Lehigh Valley, L&N (in simplified yellow nose scheme), Penn Central (three versions with cabs stenciled Stanley, Enola, and Collinwood), Union Pacific, and EMD Leasing (four paint schemes including one ex-Conrail with fading CR logo). Standard DC non-sound units, priced at \$169.98 each, will be DCC-ready using Quick Plug™ technology. Sound-equipped models have Soundtraxx® Tsunami® DCC decoders and are priced at \$269.98. DCC equipped models come with a chart and instructions for altering numerous CV functions.



It has been close to 10 years since Athearn made the last production run of this diminutive industrial locomotive.

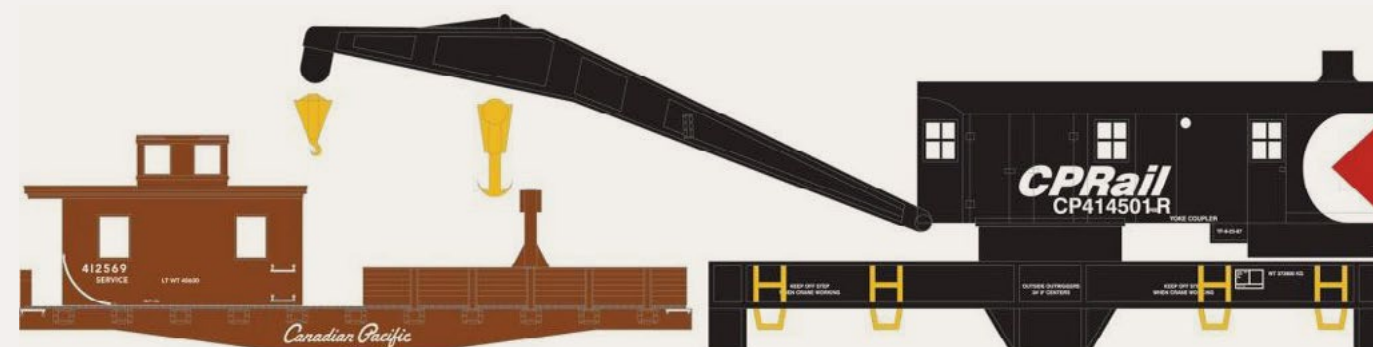
In addition to the demo scheme shown on the EMD Model 40, the “Critter” will also be available decorated for the U.S. Navy. Painted but unlettered versions of the HO scale ready-to-run locomotive will be available in black, blue, red, and a combination of green and gray. The MSRP is \$99.98. Operation is standard DC with 8 and 9 pin connectors to simplify installation of an after-market DCC decoder.



A new run of GP35 locomotives is scheduled for March. The HO scale ready-to-run model will be produced using tooling originally developed by Rail Power Products. Details such as triple louver sets on the battery box cover, open 36" radiator center fans, flat bottom cab number board housings, flat inertial air filter hatch, and low profile fuel tanks help identify this as a Phase 1a locomotive. Road names will be Atlantic Coast Line, Baltimore & Ohio, BNSF (Heritage III), N de M (Ferrocarriles Nacionales de México), Western Pacific, and Santa Fe. The standard DC model, priced at \$119.98, will be DCC-ready using Athearn's 8 and 9 pin Quick Plug™ technology.



Also scheduled for release in March is Athearn's ACF 2970 cu. ft. twin-bay covered hopper decorated for Burlington Northern, Chicago & North Western, Northern Pacific, Rock Island, Western Maryland, and Monon. The cars have a photo-etched roof walk and either round or trough roof hatches depending on the road being modeled. The MSRP will be \$39.98 each.



Additional new models due from Athearn in March include a 250-ton railroad crane and boom tender at an MSRP of \$59.98. The tender with the CP Rail crane has a paint scheme from a different era and is fitted with a recycled bobber caboose (above). In a similar arrangement, a Santa Fe crane (yellow and blue scheme with Kansas City Derrick on the boom) is matched with a tender and caboose in MOW gray. Cranes and tenders without the caboose body include Southern Railway (Industrial Brownhoist on the boom), and Southern Pacific painted in Daylight colors.



An HO scale Mack R tractor with an exterior post trailer is also scheduled for release in March. The matched tractor-trailer units will be available for Eazor Express, Mushroom, Holmes, and Fredrickson. The MSRP will be \$34.98.

Additional items scheduled for March include 53' reefer trailers (from old A-Line tooling), and 60' bulkhead flat cars. Check the above website for pricing and decorating schemes.



The **Akron Canton & Youngstown Railroad Historical Society (acyhs.org)** is selling a kit for a post-war AC&Y caboose. The one-piece polyurethane cast resin kit was

produced for the society by Wright Track Railroad Models using builder's equipment diagrams. Authenticity was augmented by field measurements of a prototype car built for AC&Y by the International Railway Car & Equipment Co. The kit is priced at \$59.95. For additional information including ordering details, visit the above website.

Atlas (atlasrr.com) reports that factory scheduling issues have been resolved and its HO scale track is now in full

production. Shipments from overseas are now arriving regularly every month.



An HO scale 4-door version of the 1993 Ford Explorer® will be released by Atlas in the first quarter of 2014. The popular SUV

will be available for Amtrak, CN, CP, Conrail, KCS, NJ Transit, and NS. Painted but unlettered models will be available in orange, white, and yellow. The MSRP will be \$19.95 each.



Atlas reports that models from the next production run of its 53' Evans double plug door boxcar will arrive during the second

quarter of 2014. Road names on the AtlasMaster series model will be British Columbia Railway, Plywood Marketing, Chicago & North Western, Coin Millwork, Multnomah Plywood, Vermont Railway, Weyerhaeuser, and USLX-PMA. The MSRP will be \$26.95. An undecorated version will list at \$21.95.



Also due in the second quarter of 2014 is a run of Atlas Master series 1932 ARA boxcars. Road names will

be Central of Georgia, Erie (1942 scheme), Maine Central (1949 scheme), Norfolk Southern ("Tarwheel" slogan), NC & StL, and Seaboard Air Line (Silver Meteor). The MSRP will be \$33.95, with an undecorated model available at \$26.95.



Bowser (bowser-trains.com)

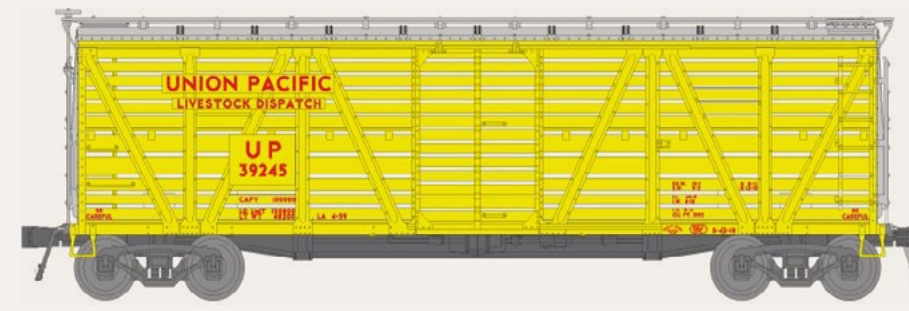
has released a new production run of its Executive series

100-ton triple-bay open hopper car. In addition to the PPLX-Pennsylvania Power & Light car with Ready Kilowatt slogan, three road numbers each will be available for R&N-Reading & Northern (black body, red end), R&N (black body, blue end), PRR (yellow dot), Wheeling & Lake Erie, NS, NS (new logo), C&O (Progress), Conrail, NW, and C&NW (green body, yellow end). A PPLX car with yellow ends will be available in five numbers. Six numbers will be offered for cars displaying the Chessie Cat logo for C&O, B&O, and Western Maryland. The MSRP will be \$24.95. The plastic cars will be molded in the US, then sent to China for assembly and packaging.



Broadway Limited (broadway-limited.com) is planning an October release date for its HO scale

Southern Pacific cab-forward steam locomotives. Several class AC4 and AC5 models are in the mix, including AC4 number 4121 with a gray boiler (above). Although BLI has released the cab-forwards in the past, this is the first production run with factory-equipped Paragon2 sound and control system. A complete list of specifications, including pricing, is available at the above website.



Also due from BLI in October is a series of K7-type stock cars equipped with a motion-

activated system that creates the sound of cattle. It is adjustable for volume and motion sensitivity. The system functions on both DC and DCC layouts. Road names include CB&Q, CN, CP, GN, N&W, NYC, PRR, UP, and unlettered. The HO scale ready-to-run models have an MSRP of \$79.99. Selected road names are offered without sound at \$99.99 for a 4-pack.



Best known for its diesel detailing components, **Cannon and Company (cannonandco.net)** has expanded its product line to include freight car parts and

craftsman-style kits. Cannon's initial kit (item FC-4001) is for a 50' 1" 4644 cu. ft. boxcar. The prototype was built in the early 1960s by Pacific Car & Foundry for Southern Pacific and Cotton Belt. Special details include 10' Youngstown plug doors, a Hydra-Cushion underframe, and Car Pac loaders. The kit consists of laser-cut styrene sides and door detail, plus an injection molded Youngstown door. The model is appropriate for several SP & SSW classes that are described in detail on the above website. The kits, priced at \$18.00 each, are of limited production and are available direct only

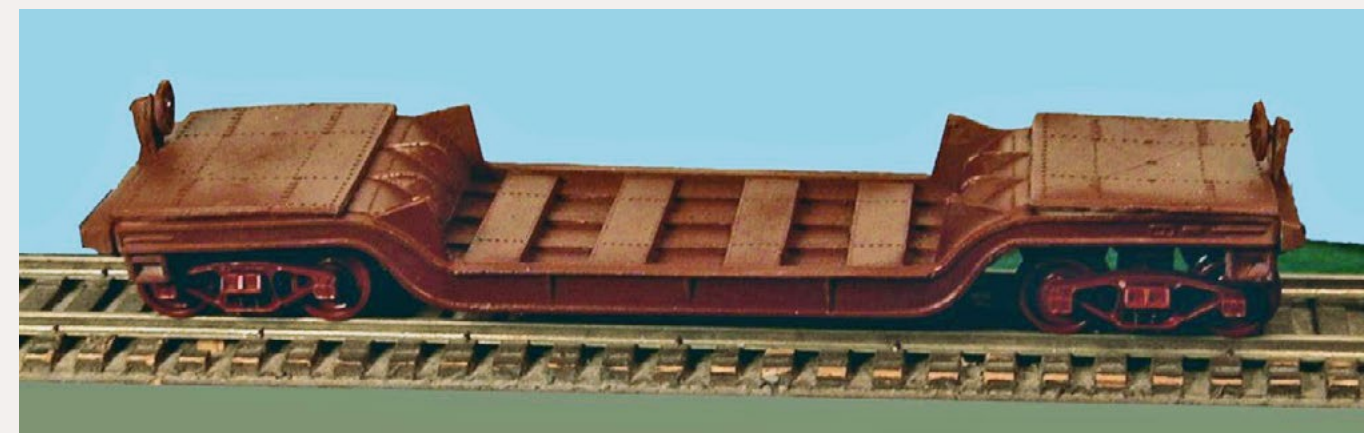
through the above website. The modeler will need to supply ends, roof, trucks, couplers, rivet decals, underframe, and ladders. Recommended suppliers and part numbers are provided in the instructions. The photo shows a pilot model displayed at a recent RPM meet in St. Louis. A pBase album containing some in-process and prototype photos is available at pbase.com/dh30973/cannon4001.



City Classics (cityclassics.biz) has introduced four new sets of HO scale window dressings. The material provides an extensive assortment of signs, business names, logos, and window blinds from the 1940s and '50s. The images are

silk-screened on clear PVC and may be positioned behind existing windows in built-up structures, or they can be used in lieu of the usual clear window material that comes with most kits. Available now are Vintage Window Signs, Modern Era Signs, Crooked Venetian Blinds, and Generic Window Signs for Businesses. They are priced at \$6.95 each. Visit the above website for more information and dimensional data.

Concept Models (con-sys.com) is selling cast resin body kits for depressed center flat cars. Kits for 36' and 40' cars are \$19.99 each. A kit for a 50' depressed center car is priced at



\$24.99 each. Also available is a kit for a 200-ton flat car with decals for PRR and C&NW at \$14.99 each. Concept Models kits consist of resin cast bodies only. Detailing parts such as grab irons, ladders, piping, trucks, and couplers are not included. See the above website for full details.



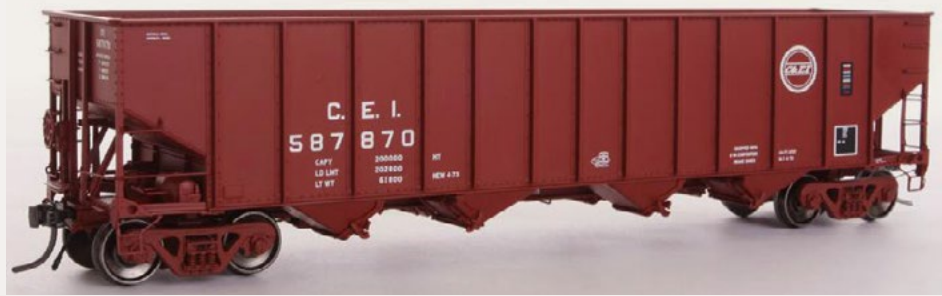
Digital Fox (digitalfox.com) is selling kits for a USRA twin-bay hopper car decorated for Interstate with a "Coal Goes To

War" slogan. Based on an Accurail kit, the model is available in six road numbers at an MSRP of \$14.99 each.



Also available is an HO scale kit for a D&RGW single-sheathed wood boxcar with a Rio Grande Scenic Line Moffat Tunnel herald. The kit

lists at \$15.99. Digital Fox kits come with Delrin wheelsets and Accumate (Kadee compatible) couplers.



ExactRail (exactrail.com) showed a pre-production sample of its new Bethlehem 3737

cu. ft. open-top hopper car at the recent St. Louis RPM meet. Although similar to the 3483 cu. ft. car ExactRail unveiled at the National Train Show in mid-July, the most obvious difference between the two Bethlehem-built cars is the noticeably taller end-sheet on the 3737 (above). Some of the fine details on the 3737 include Wine single door locks, the slack adjuster and guard between the hopper bays, vertically mounted brake cylinder lever, floor-mounted air reservoir, and details on the special corner gussets. Road names will be Rio Grande, Great Northern, Burlington, Burlington Northern, Chicago & North Western, Missouri Pacific, and C&EI. Pricing and a release date on the HO scale ready-to-run model are pending.



ExactRail's up-graded Johnstown America AutoFlood II Open Hopper is now avail-

able in six new paint schemes. Multiple road numbers are available for CSXT, BNSF (green end), BNSF (brown end), NRLX, CEFX, and MAXX. In addition to a newly contoured coal load, ExactRail has re-tooled the vertical support on the A-end and the U-channel reinforcement on the underside of the slope sheet. The ready-to-run HO scale cars are priced at \$32.95 each or \$29.66 each for 12 or more.



Fine Scale Miniatures (finescaleminiatures.com) will release its newest kit, The Jamestown Water Stop, during the

first week of October. The craftsman-type kit includes a hand-car shed, a pump house for the water tank, and an abandoned freight car that has been turned into a supply shed. The kit, priced at \$235.00, will include nearly 100 metal detail castings. FSM plans to produce only 600 of the limited-edition kit. Visit the above website for more photos and ordering information.



Fos Scale Models (fosscalemodels.com) has released the Engine House at Caldwell Junction. The HO scale structure has a footprint of 3" x 16" and will

accommodate an engine up to 8.5" in length. The kit features plastic and laser-cut doors and windows, laser-cut clapboard and scribed walls, mat board walls, corrugated panels, and colorful signage. Workshop tools including a metal cast drill press, band saw, and table saw are included. The Engine House at Caldwell Junction is priced at \$175.00 each. Additional photos

can be viewed at the above website. Figures, vehicles and scenery shown in the photo are not included.



side will be available for “The Scout” and “The Chief West.” Cars backed by the “Ship And Travel” slogan on the reverse side will be “El Capitan,” “Grand Canyon,” “Texas Chief,” and an alternate version of “The Super Chief.” The deep steel center sill is a reminder that the reefers began life as wood-bodied cars based on a USRA design. Santa Fe’s Wichita Shop rebuilt them with steel bodies in the early 1940s. Among the many features of this prototypically accurate model are the ASF self-aligning, spring-plankless trucks with double-truss sideframes. The HO scale ready-to-run cars will have an MSRP of \$36.95.



InterMountain’s Modified AAR 40’ boxcars featuring improved Dreadnaught

InterMountain Railway (intermountain-railway.com) has scheduled a re-run of its esteemed SFRD steel reefers for release in January/February of next year. In addition to the Super Chief car shown here, additional cars with a straight system map on the reverse

ends are also scheduled for release early next year. Road names will be Canadian National (maple leaf herald), Canadian Pacific (script), CP Rail (Pac man), CP Rail (grain symbol), CB&Q (“The Way of the Zephyrs” slogan), Burlington (1967 rebuild), Erie Lackawanna, and Pacific Great Eastern (Caribou herald). The HO scale ready-to-run model features etched-metal running boards and metal wheelsets. The MSRP will be \$34.95.



InterMountain’s February/March scheduled includes a re-run of its R-70-20 Modern

Reefer with a cushion underframe. Road names will be SPFE (above), UPFE (three color shield), BNFE (green), WFCX (large GN goat), VCY-Golden West, ARMN (R-70-24), NRDX-Cold Train, and SFRC-Santa Fe. The HO scale ready-to-run models will have an MSRP of \$34.95 each.



New releases from **Kadee** (kadee.com) this month include a

Western Pacific 50' PS-1 boxcar at an MSRP of \$34.95. The HO scale ready-to-run model is based on a prototype built in 1960 with dual doors that allowed a 15' wide access opening to the car’s interior.

Two additional 50' PS-1 boxcars scheduled for release in November include a Gulf, Mobile & Ohio car with a 9' six-panel Pullman-Standard door; and a Delaware & Hudson car built in



1966. The D&H car features a cushion underframe and the as-built decorating scheme of a yellow body with green lettering and a silver roof.



Kadee also sells undecorated kits for 40' and 50' PS-1 boxcars. Visit the

above website for details and pricing.

Kato (katousa.com) is working on a new sound system that does not utilize DCC or decoders installed in rolling stock. It is said to be a plug-and-play system using Kato's Unitrack. Modelers will be able to select their preferred sound schemes. A video demonstrating an early prototype of the new analog sound system is available at youtube.com/watch?v=D2pXndpVTe4.



In other news, Kato has added Union Pacific and the San Luis & Rio Grande road names to its lineup of

EMD SD90/43MAC diesel locomotives. The HO scale ready-to-run models are scheduled to be available late this month. The MSRP is tentatively set at \$195.00 each.



Scale Model Masterpieces (debenllc.com) is selling a Stone Gas Station craftsman-type kit. The basic structure was originally sold by Thomas A. Yorke in the 1980s as the Short Line Stone Depot. Production rights to the kit were acquired by Richard Bendever of

Deben Llc, who upgraded the kit with Kappler scale lumber; Grandt Line windows, doors & roof detail; added detail castings, signage (Flying A, Shell Oil, and Sinclair); and full-size drawings and assembly instructions. The molds for the structural castings are taken from Yorke's original hand-carved masters. Visit the above website for additional information on availability and pricing.

Rapido Trains (rapidotrains.com) is now selling its GMD-1 chassis as a separate item. Each chassis comes fully powered and includes all lighting. The DC chassis is priced at \$125.00 and the DCC/sound chassis is \$225.00. Product information and part numbers are available at rapidotrains.com/gmd1.html#chassis. Rapido offers a detailed review of the prototype GMD-1 at rapidotrains.com/gmd1class.html.



Roundhouse, Division of Athearn (athearn.com) is scheduled to deliver

an outside braced caboose in new decorating schemes next March. Road names on the 30' car will be Fort Worth & Denver (with Burlington Route herald), Missouri-Kansas-Texas, Rock Island, and Western Pacific (model shown above is from a previous run). The HO scale ready-to-run model will have an MSRP of \$25.98.



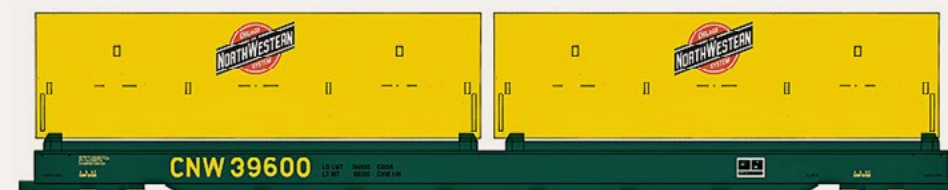
Virginia Foundry & Model Works produces limited runs of HO scale resin cast kits for

old-time freight equipment like the SAM ventilated boxcar shown above. The company does not carry any stock on hand and makes only enough kits in each production run to fulfill advance orders. Anyone interested in learning about future kits can send a note to John Canfield at jcan2x@hotmail.com requesting that they be placed on the mailing list at Virginia Foundry & Model Works.



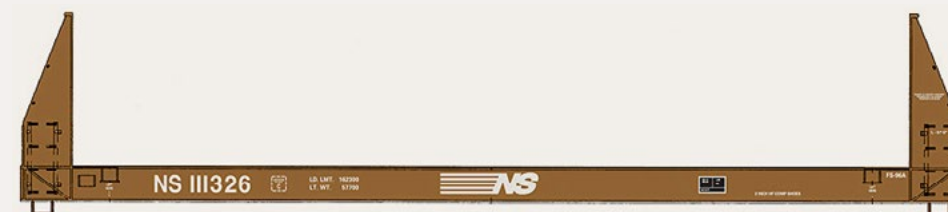
Walthers (walthers.com) is making a second run of its Great Northern Empire Builder train set with delivery expected in February 2014. The Proto series F7 locomotives and collection of passenger cars depict the prototype equipment of the

famous name train from 1955 to 1971. Eleven Empire Builder cars will be produced including a baggage-mail, baggage-dormitory, coach, coffee shop-lounge car, diner, two dome cars, sleeping cars in three configurations, and an observation car. Complete specifications, options, and pricing can be viewed at the above website.



Walthers has a large assortment of new HO scale ready-

to-run models scheduled for release in October including a Proto® series 50' Evans Cushion Coil Car with removable hoods. In addition to the CNW car shown here, road names will include ATSF, Conrail, Union Pacific, and Detroit, Toledo & Ironton. The MSRP is \$44.98.



The October release includes a Proto® 50' SIECO pulp-

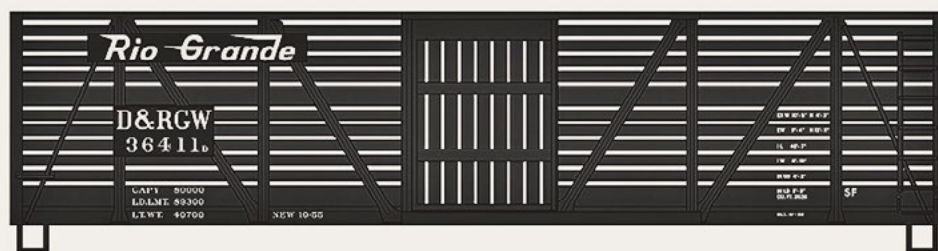
wood flat with bulkhead ends. Decorating schemes will be CSXT, MEC, Illinois Central, and Norfolk Southern. The MSRP is \$29.98.

Several Walthers Mainline series models are also set for release next month including 50' Front Runner cars with a mix of 45' and 48' trailers. Check the above website for a detailed listing.



Also coming in October are four Mainline® series 40' plug door boxcars

at an MSRP of \$24.98. Road names will be Norfolk & Western, Canadian Pacific, New Haven, and Union Pacific.



A rerun of
Walthers
Mainline 40'
Stock Cars with
Dreadnaught

ends are also due next month. The ready-to-run model has an MSRP of \$24.98. Road names will be ATSF, NYC, D&RGW, and UP.



Two additional
Mainline series
models, a 61'
wood chip
gondola and
a 36' twin-bay

ribbed hopper, will also be available in October. Visit the above website for pricing and road names.



Wheels of Time
(wheelsotime.com) is
scheduled to release
an HO scale model of
a PC-90 Piggy-Packer
late this summer.
The nicely detailed
model is based on
an FWD Wagner

/ Raygo Wagner PC-90 prototype. The arms of the model rotate and the boom is positionable. Decorating schemes will be Raygo Wagner, BNSF, CN Intermodal, Conrail, Milwaukee Motor Transportation Co., Southern Pacific, Union Pacific, and Seaboard System. The HO scale model has an MSRP of \$78.99.

N SCALE PRODUCT NEWS



Athearn
(athearn.com)
has scheduled a
March release
date for an N

scale Mack R tractor with an exterior post trailer. The matched tractor-trailer units will be available for Eazor Express, Fredrickson (Fleet Foot Service), Mushroom (orange trailer with gray exterior posts), and Holmes. The MRSP will be \$29.98.



Also due in March
is a new produc-
tion run of ACF
2970 cu. ft. twin-
bay covered hop-
per cars. Road

names will be ACF, CNW, Monon, and Burlington Northern. The ready-to-run N scale cars will have an MSRP of \$22.98.



Atlas (atlasrr.com) will release
a new run of its
53' Evans double
plug-door box-
car in the sec-
ond quarter of

2014. Road names will be Chicago & North Western, Plywood Marketing, Coin Millwork, Multnomah Plywood, USLX, Vermont Railway, Weyerhaeuser, and British Columbia Railway. The MSRP on the N scale ready-to-run Atlas Master series model will be \$17.95. An undecorated version will be available at \$12.95.



Also scheduled for release in the second quarter of 2014 is an Atlas Master series pulpwood flat car. The

model is based on a 1950s-era General Steel Casting V-deck prototype. Road names will be Delaware & Hudson, L&N, Frisco, Maine Central, Santa Fe, and Seaboard Coast Line. The N scale ready-to-run model will have an MSRP of \$19.95. An undecorated model will be offered at \$15.95.



An N scale 4-door version of the 1993 Ford Explorer® will be released by Atlas in the first quarter of 2014.

The popular SUV will be available for NS, CN, CP, Conrail, KCS, NJ Transit, and Amtrak.

Painted but unlettered models will be available in orange, white, and yellow. The N scale models will be sold in a 2-pack at \$32.95.



Bachmann (bachmanntrains.com) is scheduled to begin delivery of an N scale USRA 55-ton twin-bay open top hopper in October.

Road names will be Pennsylvania, Western Maryland, Baltimore & Ohio, Chesapeake & Ohio, and Clinchfield. The MSRP on the ready-to-run model will be \$25.00.



Fox Valley Models plans to release two N scale ready-to-run models this winter with new numbers

and road names. The popular Trinity RD-4 open-top hopper will be available in three new road numbers for UC EX-Union Electric, and LNXT-Alliant Energy. The coal haulers will have an MSRP of \$18.95 each, or \$227.40 for a 12-pack. Two different 12-packs will be available, for a total of 24 road numbers.

A re-run is also scheduled this winter for Pullman-Standard 5344 cu. ft. boxcars. Road names with four numbers each will be Milwaukee Road, Ann Arbor, The Rock, and Wisconsin Central. The cars will list at \$18.95 each. InterMountain Railway is responsible for marketing Fox Valley products. For additional information visit intermountain-railway.com.



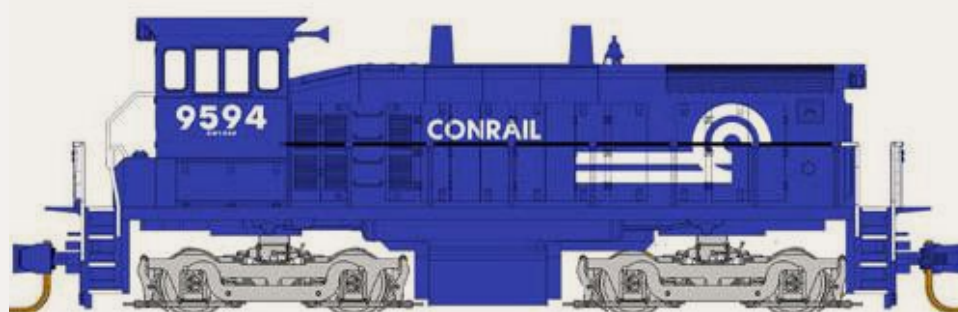
The availability of Norfolk Southern SD700ACe Heritage Locomotives from Kato (katousa.com) has been

expanded to include Erie, Illinois Terminal, Lackawanna, New York Central, Reading, Jersey Central, Penn Central, Savannah & Atlanta, Wabash, and Virginian. This group of Heritage road names are expected to be released late this month or in early October. The N scale ready-to-run models have a tentative MSRP of \$135.00.



Alaska Railroad and Chicago & North Western have been added to Kato's

lineup of EMD EA diesels scheduled for arrival in December. The N scale ready-to-run locomotives are tentatively priced at \$95.00 each. Matching smooth-side passenger car sets for both Alaska and C&NW will also be available. Pricing and other details are available on the above website.



Micro-Trains (micro-trains.com) plans to begin delivery of a new SW1500 diesel locomotive next spring.

Road names will include Union Pacific, Norfolk Southern, Burlington Northern (green), and Conrail. Additional details including pricing for the ready-to-run N scale model are expected to be announced soon.



A 3-pack of Burlington Northern 56' general service tank cars is scheduled for release in January. The MSRP will be \$89.95.



Micro-Trains is selling a 4-pack of Union Pacific 40' steel gondolas at an MSRP of

\$64.95. The N scale ready-to-run model is available now.

The N scale FT locomotive and caboose decorated in a Smithsonian Civil War scheme has been cancelled. Micro-Trains reported that the problem centered on continued delays in operating chassis components from an overseas supplier.



Organ Mountain Models (fiferhobby.com) is a new supplier of cast resin structure models. The company's initial offering is Ghost Town Building #1. The N scale building has a footprint of 2" x 2.375". It is available from Fifer Hobby at \$15.99.

Trainworx owner Pat Sanders reports that the company's Rock Island 85' TOFC flat car is not on the correct body. It is supposed to be the straight sill car but the production is on the fish-belly car. Pat will replace the faulty car. He asks that consumers deal directly with the factory rather than through a dealer or wholesaler. For additional information visit train-worx.com or contact Pat at trainworx@wic.net.

In other news, Trainworx, has added 10 new road names for its N scale 52' 6" gondola. The lineup includes Detroit, Toledo & Ironton; Burlington Northern; Chicago & North Western; MKT (green); MKT (red); Soo Line; Southern Railway; Southern Pacific; and Wisconsin Central. Delivery is expected early next year. The MSRP will be \$26.95 each.

Z SCALE PRODUCT NEWS



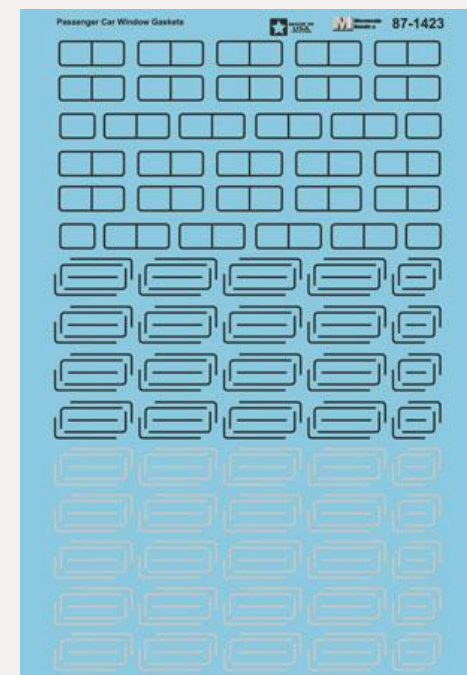
Full Throttle (wdw-fullthrottle.com) is selling a 51' 2013 cu. ft. cylindrical covered hopper decorated for Toledo, Peoria &

Western. The ready-to-run Z scale model features trucks with metal wheelsets, and knuckle couplers. They are available in a 2-pack at \$54.00. Visit the above website for full details.

NEW DECALS, SIGNS AND FINISHING PRODUCTS

Archer Fine Transfers (archertransfers.com) is selling Generic Metal Fasteners textured surface decals. The sheet (item AR88001) has .008", .011", and .014" diameter fastener heads arranged in three different spacings. Also new is a starter sheet with 30 linear inches of arc weld beads. The sheet (item AR88006) comes with 30 linear inches of .015" wide arc weld beads, 24 linear inches of both .025" and .030" wide arc weld beads, and 20 linear inches of .040" wide arc weld beads. Individual sheets are priced at \$17.95 each. A catalog with full-size illustrations of nearly 100 Surface Details including resin rivets, weld beads, louvers, tread plate, foundry symbols and more, is available for \$4.00. Visit the above website for more information.

A helpful 12-minute tutorial on modeling with Surface Details can be viewed at youtube.com/watch?v=aptnvFeEqio.



Microscale Industries (microscale.com) has released six new water-slide decals, for Genesee & Wyoming (GWRR); Western

Operators & Shortlines for Washington, Oregon, California, Utah, and Arizona Railroads; Milwaukee Road 50' SIECO, 60' Berwick, and 86' Thrall yellow boxcars; Trailer Train (TTX) Maxi IV well cars and 53' HUB Group containers; Miscellaneous Road Signs - parking signs and clearance signs; Great Northern Railway blue and gray passenger cars including stripes and car names; and Passenger Car Window Gaskets in black and silver. All of the decals are available in both HO and N scale.

New lettering sets under development at Microscale include FMC boxcar data, GenSet data for NRE and Railpower models, Nickel Plate passenger cars, BNSF Heritage Trinity hopper cars, CryoTrans cryogenic reefers, and Union Pacific Operation Lifesaver safety billboards.

Mount Vernon Shops (mountvernonshops.com) is selling HO scale Circle Keystone decals for Pennsylvania Railroad class

X26c all-steel boxcars at \$9.00. Decal set #HO-X26C has enough material to letter four cars. Also new in HO scale is a lettering set for Penn Central Pennsylvania Power & Light class N5c cabooses. Additional new lettering from Mount Vernon Shops includes Pennsylvania-Reading Seashore Lines for RDC units in O, HO, and N scales. The set covers RDCs from their delivery in 1950 through 1979 when they were taken over by New Jersey Transit. More information can be found at mountvernonshops.com/PCPPL.html.

William Mosteller has yellow N scale decals for Pittsburgh & West Virginia twin-bay hopper cars. The set includes the Alphabet Route herald. Full details are available at greatdecals.com/GreatDecals/WSM-126.JPG.

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Briefly noted at press time...

... Congratulations to the hard working team of volunteers who contributed to the success of the 2013 **National Narrow Gauge Convention** that concluded just nine days ago in Pasadena, California. Special recognition also goes to modelers who, by popular acclaim of attendees, won first prize in various contest categories. Winners were Chris Stark – color prototype photo, Michael McClure – color model photo, Bob Treat – B&W prototype photo, Bob Treat - B&W model photo, Tyler Virga – youth award, Doug Ramos – diorama, Kevin Barnett – structure, Chris Stark – favorite train, Mike Gray - maintenance of way, Frank Markovich – special equipment, Bob Poli – logging rail equipment, Dale Angeli – passenger car, Dale Angeli – freight car, Pete Watson – caboose, Joe Hendrickson – internal combustion motive power, Bob Poli – geared locomotive, Bill Herkey – rod locomotive, and Bob Poli – best of show for his 2-truck Shay locomotive. Next year's event will be in Kansas City ...

... **Western Scale Models'** line of machinery and structures has been purchased by Mike Pyne of **Wild West Scale Model Builders** (wildwestmodels.com). At the NG Convention, Pyne told MRH he is moving forward quickly and expects to have all WSM products, except publications, available before the end of the year. Bill Gustafson, who developed the highly-regarded line of WSM products and authored several related books, will continue to handle the sale of his publications through his website (westernscalemodels.com) ...

... **Blackstone Models** (blackstonemodels.com) is taking advance reservations for its new D&RGW K-36 and K-28 2-8-2 steam locomotives. The first release of the HOn3 Mikados will include ten road numbers in various decorating schemes. According to company officials at the National Narrow Gauge Convention, the project is still in the engineering stage and the best guess for delivery is late 2014. Final pricing is pending ... ■

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Selected Events



September 2013

CANADA, MONTREAL, September 28-29, Montreal Model Train Exposition, with vendor tables and operating layouts. At Sun Youth Centre, 251 Urbain St. Send inquiries to i.dow@videotron.ca.

CALIFORNIA, SAN BERNARDINO, September 25-29, NMRA Pacific Southwest Region Convention with contests, manufacturers displays, clinics and Big Boy raffle. Prototype tours include Union Pacific hump yard, the Victorville CEMEX plant, and the Columbia Park Live Steamers. HQ at Hilton Hotel 285 E. Hospitality Lane. Details at psrconvention.org/sb13/index.html or contact Bob Mitchell at CajonDivision@coastinet.com.

CALIFORNIA, PERRIS, September 7, Fall Railroadiana Swap Meet at Orange Empire Railway Museum, includes trolley rides, caboose rides, and access to all prototype collections. Info at oerm.org.

CALIFORNIA, SONOMA, September 20-22, 5th Annual Redwood Empire Train Show featuring family fun, sponsored by NMRA Redwood Empire and Redwood Empire Garden Railway Society. Info at sonomacountyhomeshows.com.

COLORADO, COLORADO SPRINGS, September 13-15, TECO-Train Expo Colorado at Freedom Financial Services Expo Center, 3660 N. Nevada Ave. Info at tecoshow.org.

FLORIDA, LARGO, September 7-8, Suncoast Model Railroad Club, train show with vendor tables and operating N scale layout (HO is under construction). Info at suncoastmrrc.com/pdfs/Show_Flyer.pdf.



INDIANA, INDIANAPOLIS, September 6-7, 30th Annual Hoosier Traction Meet and educational conference with more than a dozen presentations on rail-based mass transportation, plus a public swap meet. At Clarion Hotel, 2930 Waterfront Parkway West Drive. Visit trolleybuses.net for fees and additional information.

MISSOURI, SPRINGFIELD, September 28, Annual Fall Railroad Show, sponsored by Ozark Model Railroad Association, at Howard Johnson Conference Center, 3333 South Glenstone Avenue.

NEBRASKA, NORTH PLATTE, September 20-22, North Plate Rail Fest and Model Train Expo, includes tour of Bailey Yards and live steam locomotive display, at National Guard Armory. info at nprailfest.com.

NEW JERSEY, MERCHANTVILLE, September 7, Cherry Valley Railroad Open House and Swap Meet hosted by Cherry Valley Model Railroad Club at Grace Church, 7 East Maple Ave. Info from Chris Crane at cherryvalleyrr@verizon.net.

VIRGINIA, STAFFORD, September 13-14, Mid-Atlantic Railroad Prototype Modelers Meet, at Hope Springs Marina Clubhouse, 4 Hope Springs Lane. Info at marpm.org.

WISCONSIN, MONROE, September 28-29, Green County Model Railroaders Show, at Stateline Ice & Community Expo, 1632 4th Avenue West. Info at gcmrrinc.org.

October 2013

ALABAMA, MOBILE, October 5-6, Model Train Show with operation layouts, clinics, and dealer tables, sponsored by South West Alabama Railroad Modelers, at Mobile Via Health Fitness & Enrichment Center, Arlene F. Mitchell Campus, 1717 Dauphin Street. Info from Glenn Samuel at Gasamuel@aol.com.

CALIFORNIA, BANNING, October 19-20, The Banning Centennial Train Festival, includes a judged model display and contest (to provide quality contest railroad models to the general public). Banning Community Center, 789 N. San Geronio Ave. Info at banning100birthday.com/2012/11/26/centennial-train-fest.

CALIFORNIA, SAN PEDRO, October 19-20, Belmont Shore Open House & Swap Meet, sponsored by Belmont Shore railroad Club, at Angels Gate Park, 3601 South Gaffey Street, Building 824. Info at belmontshorerr.com/documents/flyer.pdf.

CONNECTICUT, ORANGE (Metro New Haven), October 13, 21st Annual Train Show sponsored by The New Haven & Derby Model Railroad Club. Vendor tables, operating layouts, door prizes, food, free parking, and more. High Plains Community Center, 525 Orange Center Road (Rt. 152). Info at newhaven-derbymodelrailroadclub.org.

FLORIDA, BRADENTON, October 11-13, Manatee Rails, NMRA Sunshine Region 2013 Convention, Courtyard Marriott Bradenton Convention Center. Info at sunshineregion.org.

ILLINOIS, LISLE (formerly at Naperville), October 17-19, 20th Annual RPM-Naperville Conference. Guest speaker Charlie Getz. Clinicians include Bob Van Arnhem, John Brown, Richard Hendrickson, Tony Koester, Clark Propst, Mont Switzer, and Tony Thompson. Hosted by Joe D'Elia at Wyndham Lisle Hotel (new venue), 3000 Warrenville Road, Lisle. For info visit rail-roadprototypemodelers.com.

MARYLAND, ROCKVILLE, October 10-12, NMRA Mid-East Region Convention includes tour of Howard Zane's Piedmont division and clinic by Marty McGuirk. At Rockville Crowne Plaza Hotel. info at home.comcast.net/~candp2013.

MARYLAND, TIMONIUM, October 26-27, Great Scale Model Train Show with more than 800 vendor tables. Hosted by Howard Zane at Cow Palace, Maryland State Fairgrounds. Info at gsmts.com.

MASSACHUSETTS, GARDNER, October 5, Southern New England O Scale Model Train Show Sale and Open House, United Methodist Church, 161 Chestnut Street. Info at snemrr.org.

MICHIGAN, FARMINGTON HILLS (Detroit area), October 27, Trainorama & Flea Market, hosted by Redford Model Railroad Club. At Costick Activities Center, 28600 Eleven Mile Road. Info at redfordmodelrailroadclub.com.

MISSOURI, KIRKWOOD, October 12-13, 23 Annual Greater St. Louis Metro Area Train Show, sponsored by Mississippi Valley N Scalers, at Kirkwood Community Center, 111 South Geyer Road. Info at mvns.railfan.net/ShowFlyer.htm.

NEW MEXICO, SANTA FE, October 10-13, 14th Annual Model Train show, sponsored by Santa Fe Model Railroad Club of Northern New Mexico, at Santa Fe County Fairgrounds. Info at santafemodelrailroadclub.org.

OREGON, WILLAMINA, September 28, Rural Industrial Modelers' Congress Meet, with clinics on logging, mineral/mining, and agricultural modeling, plus model contests and dealer tables. Old Willamina High School, West Valley Community Campus, 266 SE Washington Street. Details including fees at modelerscongress.com.

NEW YORK, GARDINER, October 25-26, Semi-Annual Mid Hudson On30 Meet at St. Charles Borromeo RC Church, 2212 Route 44/55. Details at groups.yahoo.com/group/midhudsonOn30meet/?yguid=120653266.

OHIO, WEST CHESTER, October 19-20, 46th Annual Cincinnati Train Show, sponsored by NMRA Division 7, at Lakota West High School, 8940 Union Center Avenue.

TEXAS, FORT WORTH, October 11-13, Southwest O Scale Meet and Fall Train Show, sponsored by Lockheed Martin Railroad Association. At Lockheed Martin Recreation Center, 3400 Bryant Irvin Road. Info from swoscalemeet@gmail.com.

WASHINGTON, SPOKANE, October 13, Fall Spokane Model Train Show sponsored by the Inland Northwest Rail Museum and River City Modelers, with operating modular railroads in G, HO, N, and S scales; railroad art, photos, videos, and trains of all scales for sale. At Spokane County Fair & Expo Center, 404 North Havana, Ag Buildings C and D.

Future 2013 (By location)

CANADA, BRITISH COLUMBIA, BURNABY, November 9-10, NMRA Canada presents Trains 2013 model train show and meet with operating layouts, displays, commercial displays, Operating sessions, clinics, RPM exhibits at Cameron Rec Centre, 9523 Cameron Street. Info at bctrains.org.

CANADA, QUEBEC, LAVAL, November 9-10, 2013, Laval Expo Train Modelisme Show, Quebec's largest hobby show with more than 550 tables, train displays, operating layouts, and family fun. At Georges Vanier School, 3995 Boulevard Levesque East, Duvernay. For additional info including hours and fees visit expo-train.com or contact didier.piette@videotron.ca.

CALIFORNIA, DEL MAR (Metro San Diego), December 7-8, Great Train Expo, Del Mar Fairgrounds, 2260 Jimmy Durante Blvd. Info at greattrainexpo.com.

COLORADO, LONGMONT, December 14-15, Annual Train Show, sponsored by Boulder Model Railroad Club, at Boulder County Fairgrounds. Info at bouldermodelrailroadclub.org.

INDIANA, DANVILLE, November 23, NMRA Central Indiana Division Train Show & Meet, at Hendricks County 4H Fair Grounds, 1900 East Main St. info at cid.railfan.net. Vendors contact John Pancini at jpancini@indy.rr.com.

MASSACHUSETTS, MARLBOROUGH, December 7-8, Annual New England Model Train Expo hosted by NMRA HUB Division featuring operating layouts, 200 plus dealer tables, manufacturer displays, railroadiana, Build-a-Car Clinic for ages 8-14, and a Boy Scout merit badge clinic. Best Western Royal Plaza Trade Center, 181 Boston Post Road West (US 20). Info at hubdiv.org.

MASSACHUSETTS, PITTSFIELD, November 7-9, Fine Scale Model Railroader Expo 2013. Major show dedicated to the art of model structure building, Speakers include Jon Addison, Michael Duggan, Dave Frary, Brett Gallant, Ken Hamilton, Bernard Kempinski, Marty McGuirk, Bob Mitchell, Dave Revelia, and Bill Sartore, at Berkshire Crown Plaza Hotel, One West Street. Info at modelrailroadexpo.com.

MICHIGAN, LIVONIA, December 1, Model Railroad Show & Workshop, presented by NMRA North Central Region Division 6. Includes demonstrations on power systems, scenery, kit building, structure building, backdrops, wiring, track laying tips, and basic building techniques, plus historical displays, videotape shows, and operating and switching layouts. Also Boy Scout merit badge activities. At Livonia Seniors Building 15218 Farmington Road. Direct inquiries to Mark Ellis at emark@sbcglobal.net.

MISSOURI, SEDALIA, November 2, Sedalia Rails Train Show, featuring operating layouts, vendor tables, door prizes, and The Eagle operating outdoor railroad, at Liberty Park Convention Hall. Info from Ken Bird at klbird@embarqmail.com.

OHIO, DAYTON, November 2-3, 38th Annual Train Show, sponsored by local division of NMRA, with operating layouts, clinics, and 400 vendor tables, at Hara Arena, 1001 Shiloh Springs Road.

OHIO, KIRTLAND, November 1-2, Cleveland 2-Rail O Scale Train Meet & Sale. Friday night O scale dinner social. Sales and layout tours on Saturday. Info from Sam Shumaker at j1d464@yahoo.com.

UTAH, SALT LAKE CITY, November 1-3, Wasatch Rail Show, sponsored by NMRA Northern Utah Division, featuring three floors of operating trains in all scales, vendor tables, and Boy Scout merit badge clinic, at Utah State Fairpark, 155 North 1000 West. Info at nmrawasatch.org.

WISCONSIN, WEST ALLIS (Metro Milwaukee), November 9-10, Trainfest 2013, hosted by Wisconsin Southeastern Division of NMRA. Info at trainfest.com.

Future (2014 and beyond, by location)

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

GEORGIA, SAVANNAH, March 27-29, 2014, Savannah RPM meet.

INDIANA, INDIANAPOLIS, July 3-10, 2016, NMRA National Convention and National Train Show.

MAINE, AUGUSTA, 2016,
date TBA, 36th National
Narrow Gauge Convention.

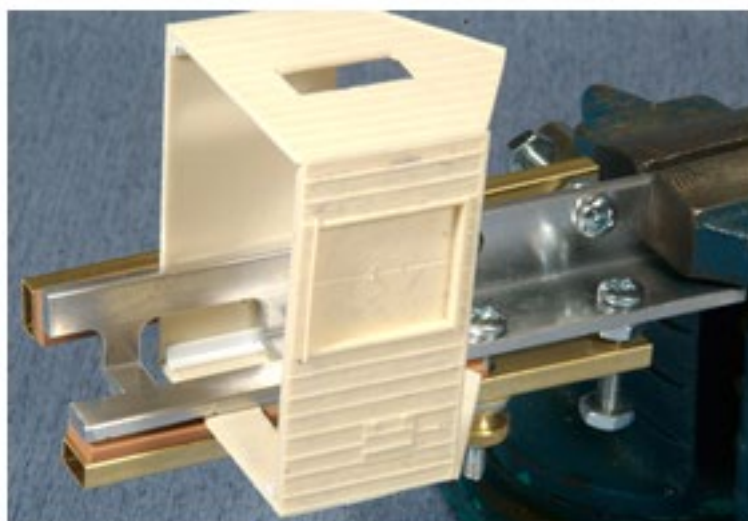
MISSOURI, KANSAS CITY,
September 3-6, 2014, 34th
National Narrow Gauge
Convention.

NORTH CAROLINA, SPENCER,
May 29-June 1, 2014,
Streamliners at Spencer, a
gathering of prototype loco-
motives of the 1930s through
the 1950s at the North
Carolina Transportation
Museum, with opportunities
for daytime portraits around
the 37-stall Robert Julian
Roundhouse turntable. A
dozen or more restored die-
sel locomotive are expected
to join the museum's own
Atlantic Coast Line E3, and
the Southern Railway's E-8
and FP-7. Arrangement
for routing and transport-
ing visiting locomotives is
in cooperation with Norfolk
Southern Corporation.
Details at [nctrans.org/
Events/Streamliners-at-
Spencer-\(1\).aspx](http://nctrans.org/Events/Streamliners-at-Spencer-(1).aspx).

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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.

TEXAS, HOUSTON, 2015, date
TBA, 35th National Narrow
Gauge Convention.

TEXAS, IRVING, February
27-March 1, 2014, Sn3
Symposium. ■



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Build a Smaller Layout

Reverse Running: Designing the layout for the human factor

by Joe Brugger

Look how much railroad I got in here – 36” curves, a 350-foot mainline, the Mississippi River ...

We all do it. Build the biggest layout possible. Three peninsulas in the room instead of two. 10 yard tracks instead of eight. Four levels. A dozen hidden staging tracks. Bigger is better, so the biggest must be best?

Nope. Bigger can become a royal pain a couple of years down the line when thoughts turn from construction to running trains.

We all know that a big layout can turn into a maintenance monster when switch machines start to show their age and when those little shortcuts in the undocumented wiring come back to haunt us.

We all know how inaccessible track makes cleaning track and rereiling cars difficult.

This time, we are talking about the human factor. How easy is it for operators to move around the railroad? Can you actually get a good line of sight on those marvelous scenes you created? Can visitors really see Fraulein Preiser showering in her third floor room at the Empty Arms Hotel?

More importantly, on an operating layout, if there is a passing siding for opposing trains, is there a passing space in the aisle for the



crews? Can the yard gang go about its work without butt-bumping with the conductor and engineer on the through freight?

For the guys switching local yards and industries, is there a place to sit down once in a while to rest their feet?

Probably not, because model railroaders – big, generous people though we are – are notoriously stingy when it comes to leaving floor space for people.

Yes, most adults can make their way down a 20” aisle. But in seven or eight trips, they're going to elbow out some scenery, snag themselves on the fascia, and eventually will meet someone coming the other way. At some point the owner will find that he has plenty of space in which to move around, because his friends have tired of visiting the Claustrophobia Southern.

A couple of years ago, on an operations weekend, several of us were invited to help run a nice mid-sized layout built in a family room. The instructions were helpful, the theme was pretty well worked out, and it had a Goldilocks line-up that was not too busy and not too slow.

What the operators enjoyed most, after the carpeted floor, was the ample space left open in the middle of the room for people to move around for their work without resorting to “aisle warrants.” Everyone, even the guys who rarely say anything, commented how relaxing it was.

Afterward, we were looking over the owner's original layout design, tacked up on the wall. In the center where we were standing was – you guessed it – a 10' long peninsula loop that added a couple of car spots and an extra 20' of track.

“Yeah,” said the owner. “I keep stalling on building that. I can't decide if it's going to make the railroad better, or ruin it.” Well, my friend, take a guess what I think. ✓

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Derailements

humor (allegedly)



Jim Loves Trains ... Washington Lottery video with a fun railfan theme.

We think you'll find this tongue-in-cheek video to be a lot of fun. It also treats model railroading as a hobby that's a respectable pursuit by grown-ups, not some kind of offbeat fringe interest. If you know of other videos that would be a good candidate for our humor section, please pass them along!

If you're the first to [submit a bit of good humor](#) and we use it, it's worth \$25!



For the love of model trains

Coming October 7th

- Kitbashing a Norfolk Southern GE 70-tonner loco
- Building a craftsman structure kit, part 2
- JMRI - More than just for decoders
- Mounting switch machines under foam roadbed
- Scenery tips for modeling cattails ...and lots more!



More Derailements humor ...

One Saturday, a drunk miner missed the last train home. He wandered across to the rail yard, found an engine in steam, backed it out onto the main line, and drove it to his bunk house, stopped it and went home to bed. He was charged with "theft of a locomotive" by the railroad.

Defense counsel: Was the engine on railroad property before my client moved it?

Railroad Attorney: Yes.

Def: Was it still on your railroad line when he left it?

RR: Yes.

Def: Did it at any time leave your railroad line's tracks?

RR: No.

Def: Then where is the theft?

Magistrate: Case dismissed.