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# Model Railroad Hobbyist magazine™

November 2013

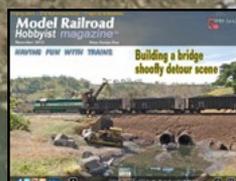
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# Model Railroad Hobbyist magazine™

Issue 45

**Front Cover:** M.C. Fujiwara builds a signature shoofly scene. Follow along as he shares how he constructed and detailed this scene based on a John Armstrong sketch.

**ISSN 2152-7423**

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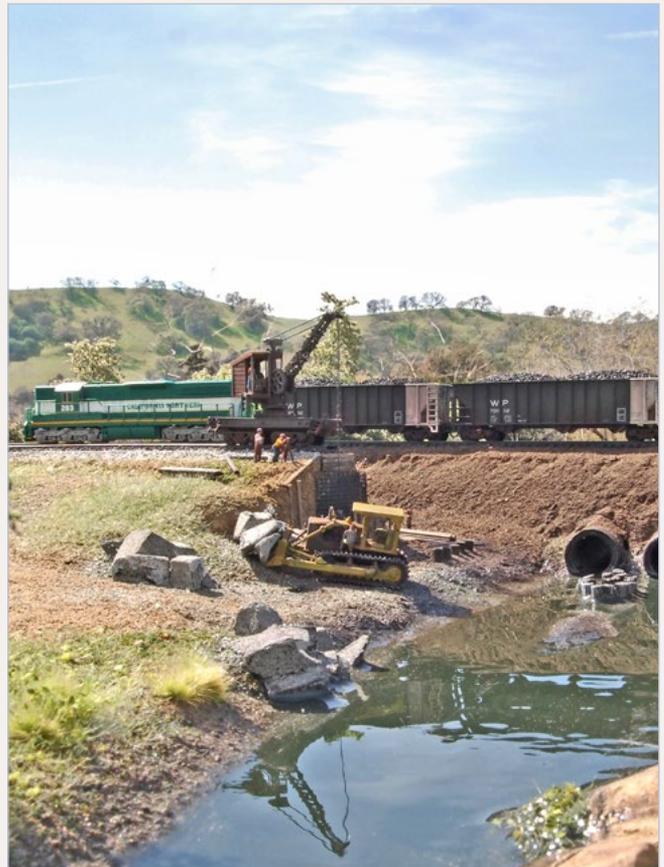
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Charlie Comstock, Contributing editor

Issue password: Nov2013

Cover and MRH masthead



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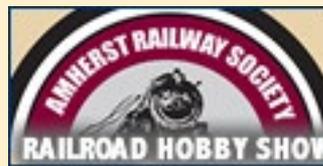
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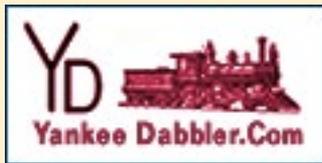
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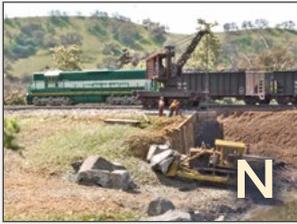
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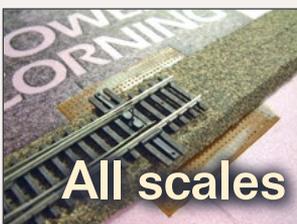
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MRH's great modeling photo feature  
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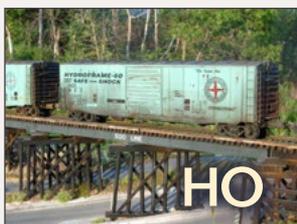
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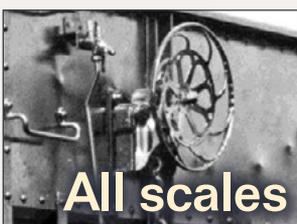
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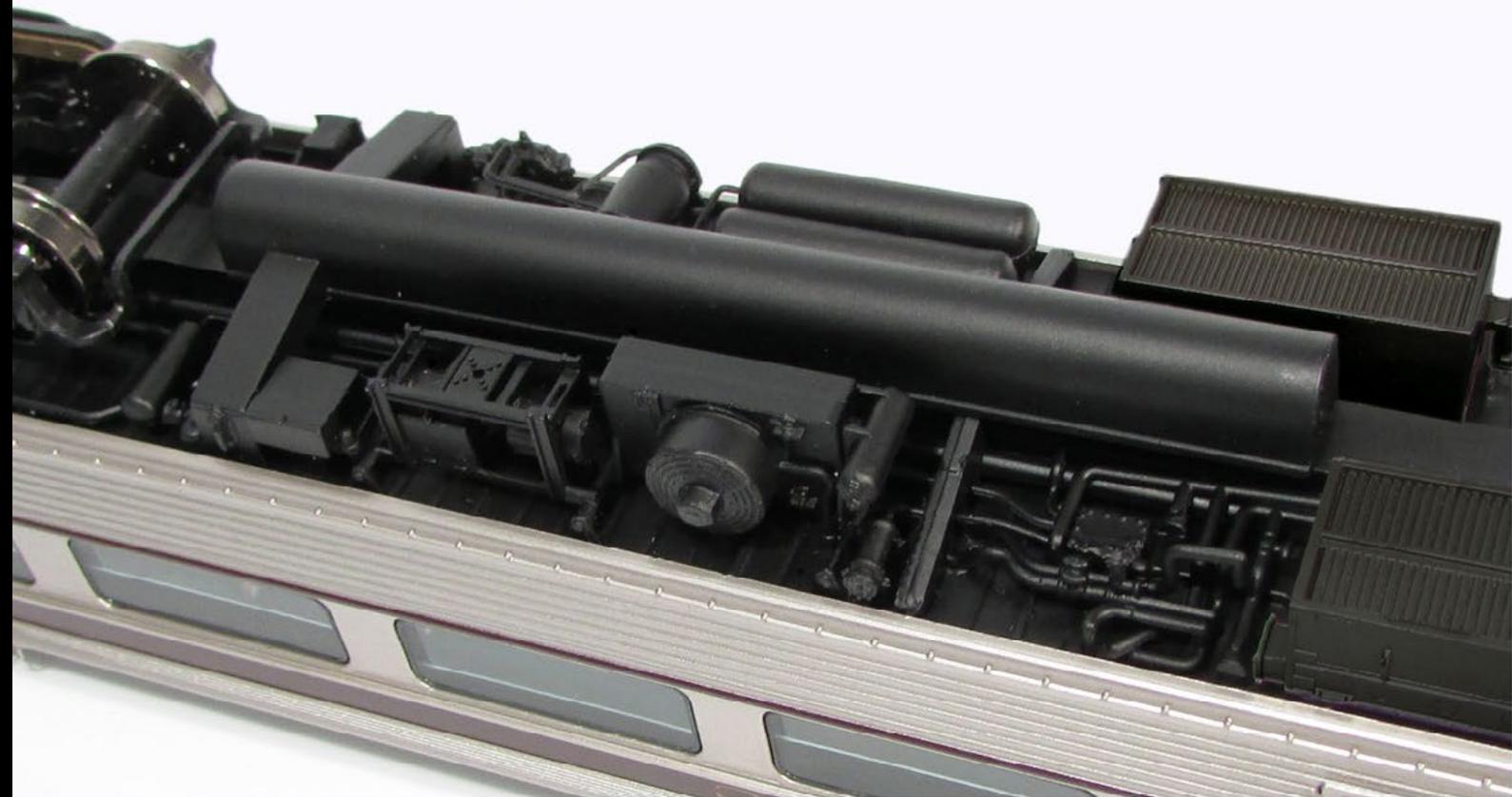
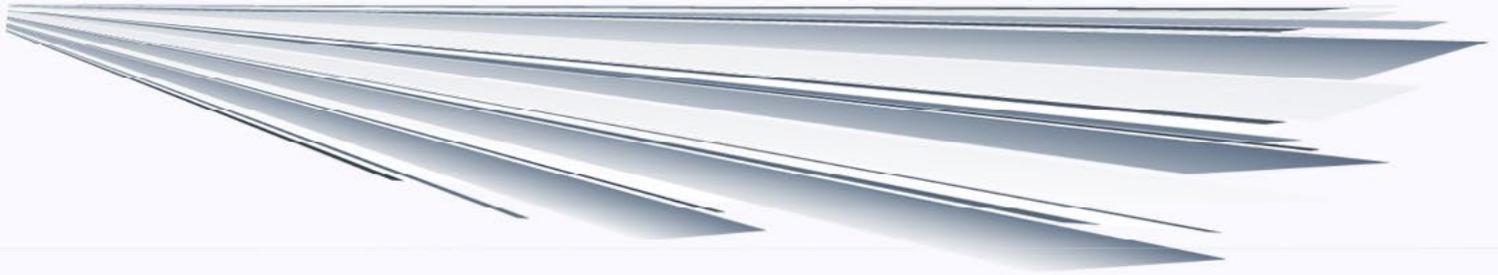
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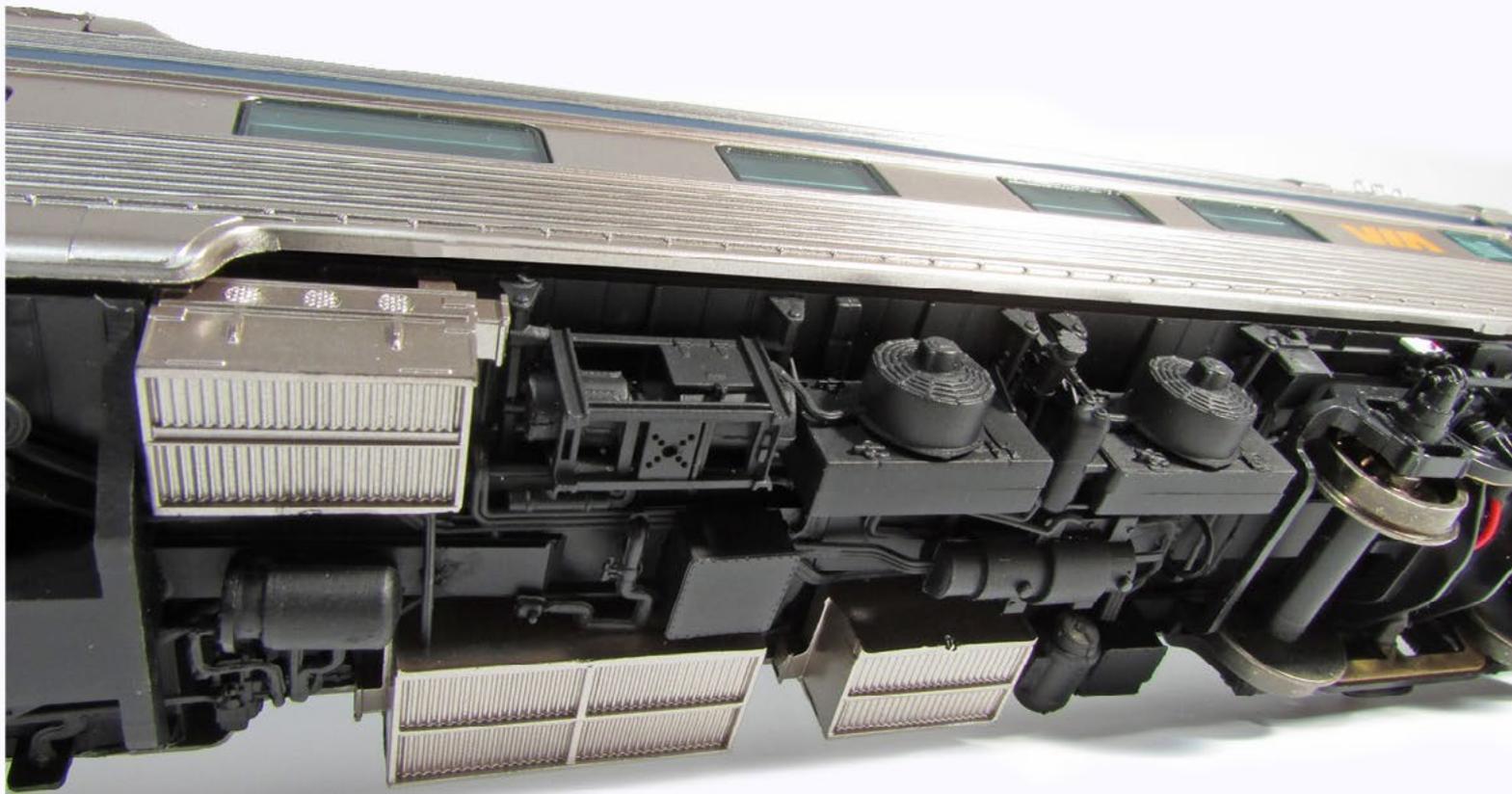
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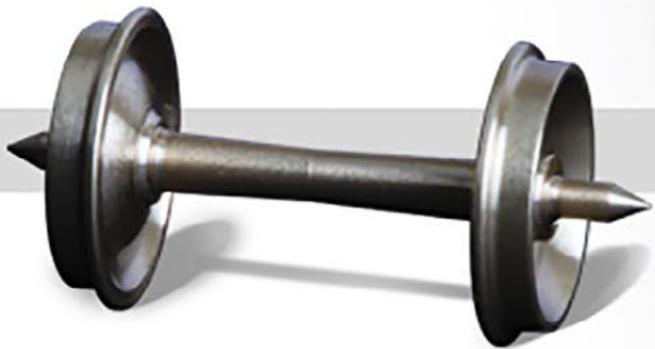




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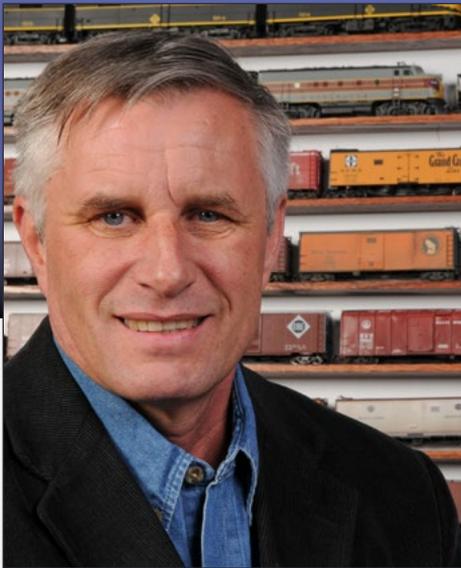
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# The art of model railroading



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## Assistant Editor's thoughts

by Don Hanley

**R**ecently I had the privilege of spending an afternoon with Tom Johnson, builder of the Logansport and Indiana Northern. One of the comments he made was that he views model railroading as three-dimensional art. I was intrigued by his statement and I have been thinking about it.

There are many different skill levels when it comes to art. There are the masters like Rembrandt, Monet, van Gogh, and others who have created priceless works of art. Then there are those of us who feel we would be doing well if we could just paint by numbers.

Why do some have the ability to make great looking layouts and others struggle? The fact of the matter is we are not all created equal. If we were, we would all be engineers or firemen. That would leave a lot of society's other needs unmet. As a member of the non-artist majority, what should we do?

Let's begin by looking at the definition of a model. Model: *A small object, usually built to scale, that represents in detail another, often larger object* [thefreedictionary.com/](http://thefreedictionary.com/). With that definition in mind, we need to think about what we are attempting to model.





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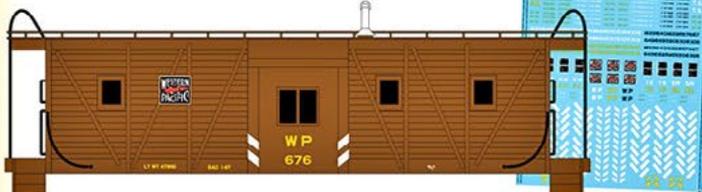
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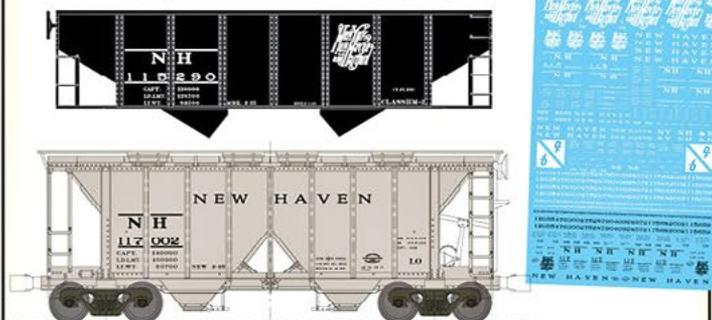


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Usually it's more than just a locomotive or structure, but rather the entire scene.

A key to the art of modeling is to trust your eyes. Most of us are blessed with the ability to see and observe our surroundings. In fact, we have been at it for so long, we instinctively know when something doesn't look right. Let's take that skill and apply it to the layout. Take time to assess your layout. Be honest with yourself. Take notes on what you are satisfied with and what you are not. Look for the areas that just don't seem right. Pick one. This is where you want begin making your improvements.

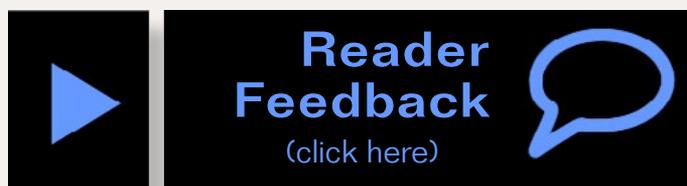
Don't expect to become a master overnight. If you compare early works of the great masters to their work later in life, you will see a difference in the quality and skill of the work. In the same manner, just because we can see that a scene we have modeled doesn't look right, that doesn't mean that we can immediately fix it.



There is a level of skill that our hands have to achieve to meet what our brain instinctively knows.

A problem we seem to have as adults is that we often don't want to take the time to go through the learning curve to develop the needed skills. There seems to be a sense of embarrassment or frustration if we can't master what we are attempting the first time out of the gate. Improving your modeling skills is a lifetime journey, so enjoy it and take time to smell the roses.

Finally don't beat yourself up if you are unable to achieve the artistic level of the masters. We are not all equal in our skills and abilities. The goal is to be the best that you can be as a hobbyist. When you do the best that you can, then you are a success.



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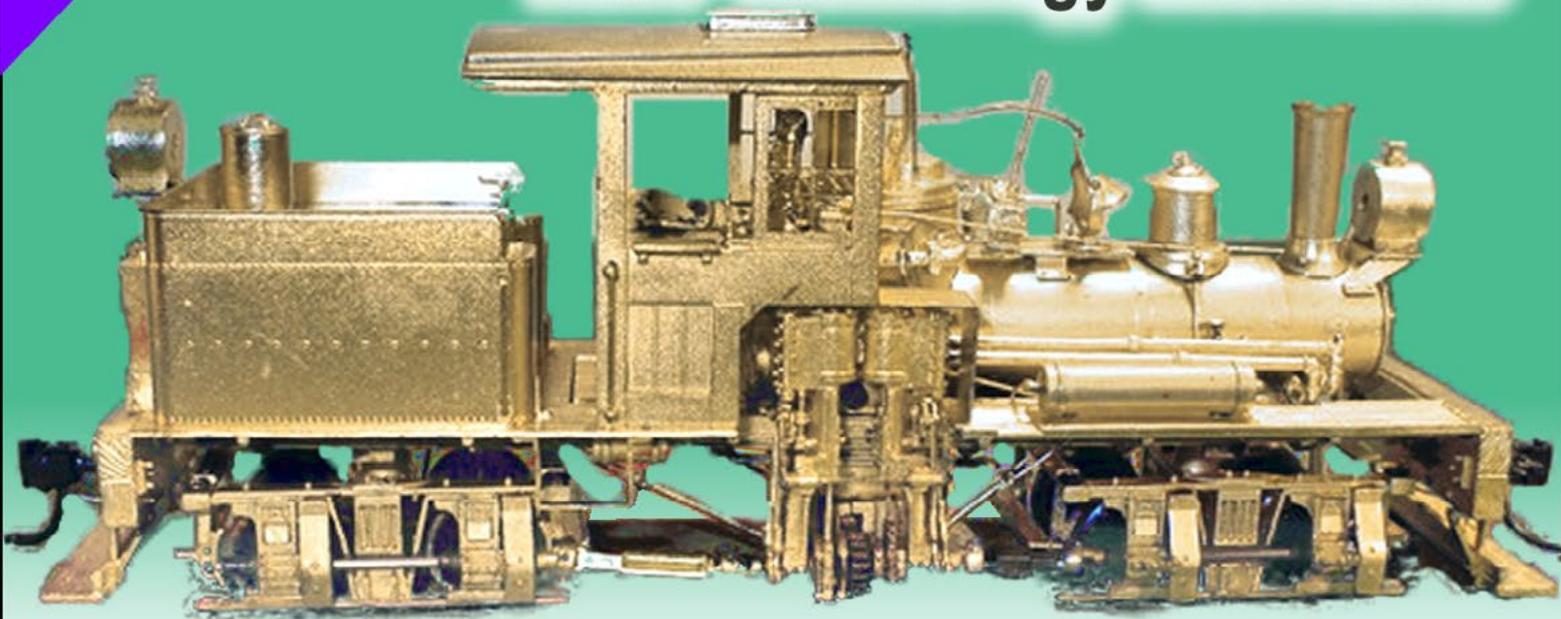
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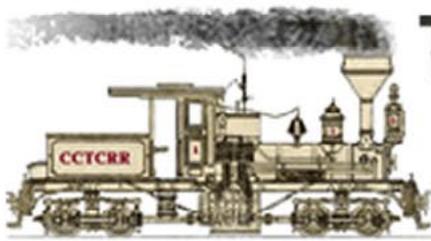
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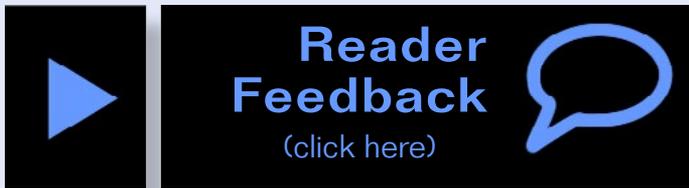
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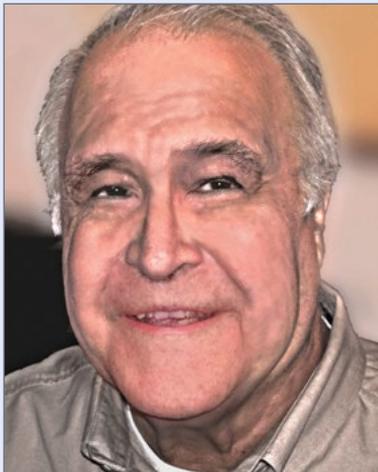


# Notes from the **MRH STAFF**

**MRH New Lite and Narrow columnist,  
TrainMasters TV coming Nov 11, and more ...**



## **MRH's new Lite and Narrow columnist: Larry Smith, MMR**



**W**hen we lost our Lite and Narrow columnist Lew Matt back in 2012, we started looking for a new narrow gauge columnist, but we never could quite find the exact fit we were looking for. We love narrow gauge and wanted it to get some fair representation in our pages.

We knew we wanted a columnist who had experience in more than just Colorado narrow gauge. We feel it's important to also give the eastern narrow gauge lines some coverage: the East Broad Top, the Tweetsie (East Tennessee & Western North Carolina RR), and of course, the Maine two-footers.

Along comes Larry Smith in Atlanta, and he mentions he misses our Lite and Narrow column. I told Larry that we've been looking for a new Lite and Narrow columnist. Larry came back to me later in the



# October 2013 MRH Ratings

The five top-rated articles in the [October 2012](#) issue of MRH are:

- 4.5 Getting Real: Pacific Fruit Express, part 2
  - 4.4 DCC Impulses: Getting the sound in
  - 4.4 Jim Ferguson's Great Northern Railroad
  - 4.4 Water lilies and cattails
  - 4.4 Yes, it's a model
- Issue overall: 4.8

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show and tells me he'd given it some thought and he'd like us to consider him for the position.

I outlined for Larry that we wanted a balanced representation over the full breadth of narrow gauge prototypes, and we wanted not only the popular scales like HOn3 and On30, but also some coverage of Sn3 and On3, and even some HOn30. (Anyone remember the Carrabasset & Dead River?)

I also reminded Larry the column is called the ***Lite*** and Narrow, meaning standard gauge shortlines and lighter equipment also needed some coverage.

Larry said this was all good with him and he outlined his background and hobby interests – they aligned well with what we were looking for in a new Lite and Narrow columnist. And it certainly didn't hurt that Larry's also a Master Model Railroader (MMR).

Larry's first column debuts in this issue, and we're delighted that ***Lite and Narrow is back!***

## **TrainMasters TV grand opening November 11th**

If you've been hanging around the MRH website, then you may know that some of our readers have been test driving the new TrainMasters TV website.

TrainMasters TV (TMTV) is MRH's new streaming vidcast website for model railroaders. Each week we deliver new programming, including layout tours, how-to videos, product reviews, event reports, and feature stories about people in our hobby.

We have oriented TMTV mostly to more seasoned model railroaders. The majority of MRH readers have more than basic experience in the hobby and want ways to improve their modelling skills.



The content of TMTV's videos both mirror and expand the content found in Model Railroad Hobbyist magazine. TrainMasters TV uses a fast-paced, highly focused network TV production style with a friendly, engaging approach – while maintaining a fun, casual atmosphere.

TMTV is a premium streaming video service you access by paying a small subscription fee. TMTV is now available for signups – just go to [TrainMasters.TV](http://TrainMasters.TV) and look around. Until our grand opening on the 11th, we won't have available all of the video content posted, but there's still be plenty to see!

Visitors can do a trial monthly subscription of \$5.99, watch our content, and decide if TrainMasters might be right for them. If you want to subscribe for a longer period, discounted subscription rates are available, down to as little as \$3.33 a month. Additionally, some previews are available without subscribing.

If you're still wondering what TrainMasters TV is all about, check out the video below.



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## Why the reader feedback buttons?

Our goal at MRH is to publish the best magazine possible for you. To do that we need your help, and that's what the reader feedback is for.

While the MRH staff has some idea of our readers' interests, we are not all-knowing. Your comments and rating of the articles helps guide us to publish more of types of articles you, the reader, are interested in.

So please do your part and use the reader feedback buttons!

## Saving off just certain articles to PDF

One question we get occasionally is how to save off just certain articles to its own PDF?

Our favorite way is to get a copy of the free software, [CutePDF](#) for your PC or [CUPS-PDF](#) for your Mac. Both of these applications are free.

To use one of these applications, open the source PDF up in your favorite PDF reader and print the pages you want to save – but select CutePDF on a PC, or CUPS-PDF on a Mac, then print the pages.

That's it! You get a new PDF with just the pages you printed. However, it's a "totally flattened" copy, meaning none of the hyperlinks or media are present. All the text and images remain so the pages look right, the links and media just don't do anything.

If you want to preserve the media and the links, then you need to purchase a PDF editing tool like Adobe Acrobat (\$250, PC and Mac), FoxIt Editor (\$99, PC), NitroPDF (\$140, PC), or iSkysoft PDF Editor (\$70, PC and Mac).



However, we do have to ask: why don't you just make life simple for yourself and keep all the magazines intact? You can get a 2 terabyte (2,000 GB) external USB passport drive (about the size of a pack of cigarettes) for about \$100. That drive will store over 13,000 issues of MRH!

You can get yourself a 16GB thumb drive for \$10 and you can carry 100 issues of MRH with you wherever you go. We're at issue 45 of this magazine, so you won't be out of space on the thumb drive until 2018. Or splurge and spend \$20 for a 32 GB thumb drive and you will be good saving every issue of MRH up until 2027.

Sometime back, Joe Fugate cut up his old NMRA Bulletins and saved the articles that interested him. Every now and then he goes looking for an article in those old bulletins and finds he didn't save it. Joe now remarks that his interests

## November 2013

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have changed and he regrets throwing out those other articles in his old NMRA Bulletins.

These days, space is cheap, especially for things like thumb drives<sup>1</sup>. We're talking \$10 to save every issue of MRH until 2018? Are we being penny-wise and pound foolish, maybe?

[Rod's index](#) will help you find whatever article you want to find fast, that's really all you need!

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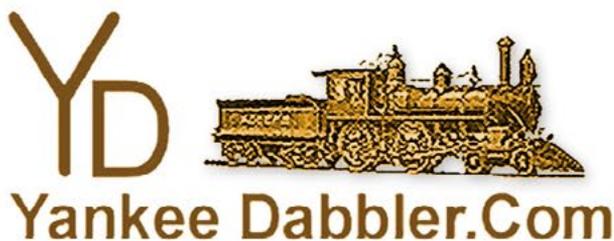
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## MRH Fifth Anniversary

January 2014 marks our 5th anniversary of publication. Can you believe it's been that long?

We started publishing in January of 2009. We have some very special things planned for the January 2014 issue, so you don't want to miss it!

### This month ...

M.C. Fujiwara tells us how he went from a John Armstrong sketch to building a signature scene. M.C. shares details of the construction and building the scenery. Some segments of this project has been featured in the MRH forum, but this month the project is presented in its entirety.

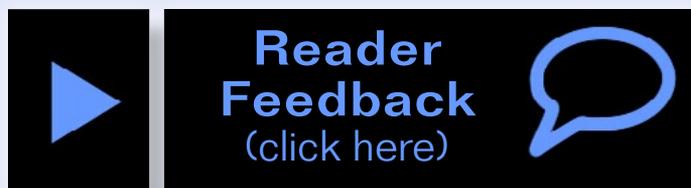
Using DCC? Having intermittent electrical problems? Dick Bronson shows tricks to find those pesky shorts. Chris Palomarez describes a neat technique for mounting powered switch



machines on a foam base. Mike Tylick finishes up building and detailing Mrs. Marshfield's in "Let's Build a Laser Kit" and staff member Richard Bale puts together the definitive modelers guide to freight car hand brakes.

In our columns this month, we introduce our new narrow gauge columnist, Larry Smith. Marty McGuirk is back with an operating trial of his rebuilt layout, and Ken Patterson presents the work of Mike Morrison in "What's Neat This Week." Finally, Kenneth Frink poses thought-provoking questions in "Reverse Running".

All this and much more in this month's issue. Have a great read. ■



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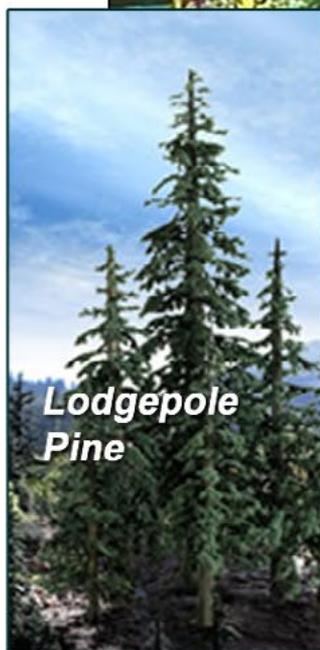
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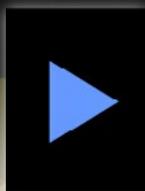


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### QUESTIONS AND ANSWERS

#### Rockwork

**Q.** After several years, I returned to my railroad to find the rock work looks really washed out. I had used Higgins India Ink as the base wash, getting great looking rock, and some thin acrylic color washes as variant coloring. The ink faded to almost white. There is about 20' of face to fix. What will redden it without losing the natural white/black grain? I tried another ink wash on a small spot, but it wiped out the grain and just turned dark. It's all plaster of paris rock.

– Berk

**A.** I know people seem to like India ink but I never use the stuff. I use good old black acrylic artists paint and thin it to a very watery wash. Acrylic pigment seems more resistant to aging than India ink.



A Google search on the fading tendency of inks versus acrylics suggests tube acrylics purchased in an art supply store will retain their color for decades, if not centuries. This is based on expert commentary on a number of websites. Cheaper craft acrylics, I suspect, would be more like ink in that they can fade noticeably in just a few years.

To restore the look of the rock wall (1), I'd get some artist tube acrylics and mix up some washes. Make sure the wash has no paint sediment in it. Use gentle plant misting spray bottles to mist on the washes. In addition to a black wash, consider washing the rocks with other colors, like brown, blue-gray, or yellow-tan, depending on the scene you're modeling.

Then you could mist the various washes on your rock wall to restore the vitality of the color. Several passes will probably help a lot.



**1: Flow on thinned washes of good-quality artists' acrylic paints to rejuvenate faded plaster rock formations.**  
– Joe Fugate photo.



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Once the rocks dry, consider applying weathering powders to enhance the dirty, gritty rock colors. You can find more on weathering powders in the Nov/Dec 2010 issue of MRH: [mrh-mag.com/magazine/mrh-2010-NovDec/weathering\\_powders](http://mrh-mag.com/magazine/mrh-2010-NovDec/weathering_powders).

– Joe Fugate

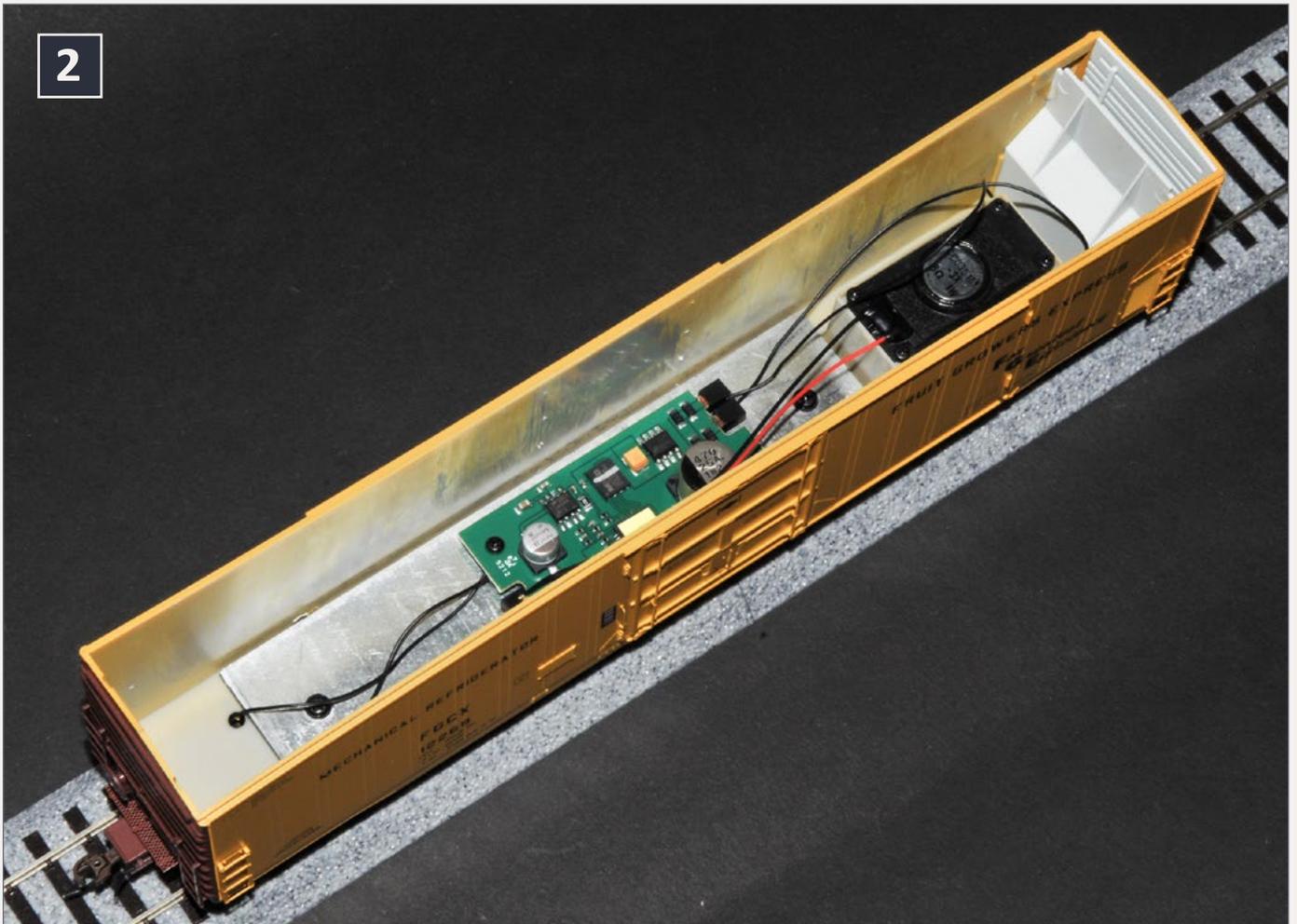
**Q.** Way back in the 1990s, *Model Railroader* published a DIY circuit for a reefer sound generator with a 555 timer, a pseudo-transducer, plus a myriad of parts and a 9 volt battery. As crude as it was, if you got two or more of these things together, it started sounding like a refrigeration unit.

Fast forward to now, Athearn releases the 57' FGE reefer (2) with vastly superior sound. Here's when things get fuzzy . . . I don't recall hearing a 1960s-1990s era reefer generator "cycling off" as the Athearn model does. I'm not claiming Athearn is wrong. I asked a modeler/real life BNSF engineer, and he recalled the same. He remembers them being always running. With Ring Engineering's pickup freight car truck, and ITTC's ([ittproducts.com](http://ittproducts.com)) sound unit, the timing seemed right to add sound to my existing PFE Cold Block. I have a few recordings of running reefers and am going to vary the sound among the cars to avoid phase cancellation and to make things sound more realistic. Does anyone else have any memory to the reefer generator "cycle off"?

– Chris Palomarez

**A.** Having spent some time around a large Pacific Fruit Express facility in the 1970s, our recollection was the same as that of Chris and his friend. Just a buzz. No automatic periodic starting and stopping. But we didn't work for the railroad or PFE, so we sent the question out to the experts. Here's what they said:

The compressor may cycle, but the engine might not. I can remember having to check the fuel level in mechanical reefers every time we humped one, and the engine was always



**2: Athearn Genesis sound-equipped 57' FGE mechanical refrigerator cars produce start-up, operating and shut-down sounds. The SoundTraxx output is different for '60s-'90s cars with diesel genset systems, and for modernized cars with tractor-trailer style refrigeration units. The system works on both DC and DCC layouts and the volume is adjustable.**

running on a loaded car. I don't think they were designed to shut down and restart automatically, the way modern refrigeration units are.

– Ken Rickman

The older reefers used to run all the time and the compressor cycled on and off as needed. When diesel fuel hit \$4 a gallon everyone wanted to save some money. Better insulation,



instant-on, and electronic control has saved millions in fuel costs. Better to start and run the diesel instead of idling it for hours while the compressor is not cycling. In the late seventies I pulled frozen foods out of Ohio and could burn up about 60 to 70 gallons of fuel just for the reefer in a 24-hour day. These new units would take a week to burn that much and still keep the load frozen.

– Pete

Read the whole thread, including Chris's sound experiments, at: [model-railroad-hobbyist.com/node/15205](http://model-railroad-hobbyist.com/node/15205).

More discussion about the Athearn sound-equipped refrigerator cars: [model-railroad-hobbyist.com/node/8781](http://model-railroad-hobbyist.com/node/8781).

More discussion about old and new mechanical reefers: [trainorders.com/discussion/read.php?1,3180325](http://trainorders.com/discussion/read.php?1,3180325).

**Q. Now that I can use the DCC decoder to control headlights on my locomotives, how do I use them? When should the lights be on, dim, or off?**

**A.** You didn't say when and where, but here are the Union Pacific rules from 1972. Rules on other railroads may vary in detail.

The headlight should be displayed, burning bright, at the front of a train both day and night.

Headlights are dimmed

- In yards where yard engines are employed
- When standing close behind another train
- When standing on the main track awaiting another train which is to take the siding, but not until the approaching train dims its headlight
- Approaching and passing head end and rear end of a train on an adjacent track

- Approaching locations where train orders or messages are to be handed up
- At other times to permit passing of signals or when safety of employees or others requires it.
- On yard engines, headlights must be displayed to the front and rear at night or at any time the view is obscured by storm or fog.

The exceptions to the dimming rule are in foggy or stormy weather, and when approaching or passing over public crossings.

Headlights are turned off when the train has stopped clear of the main track to meet a train, or is standing to meet a train at the end of double track or at a junction.

– MRH



# TIPS

## Make a service cradle

I frequently need to work on the underside of steam locomotives, and bought a pre-cut foam cradle that served me well for a time. When not working down below, I generally keep the locomotives on a sheet of ½" foam on the workbench to prevent bending small detail parts or scuffing of the finish on the workbench top.

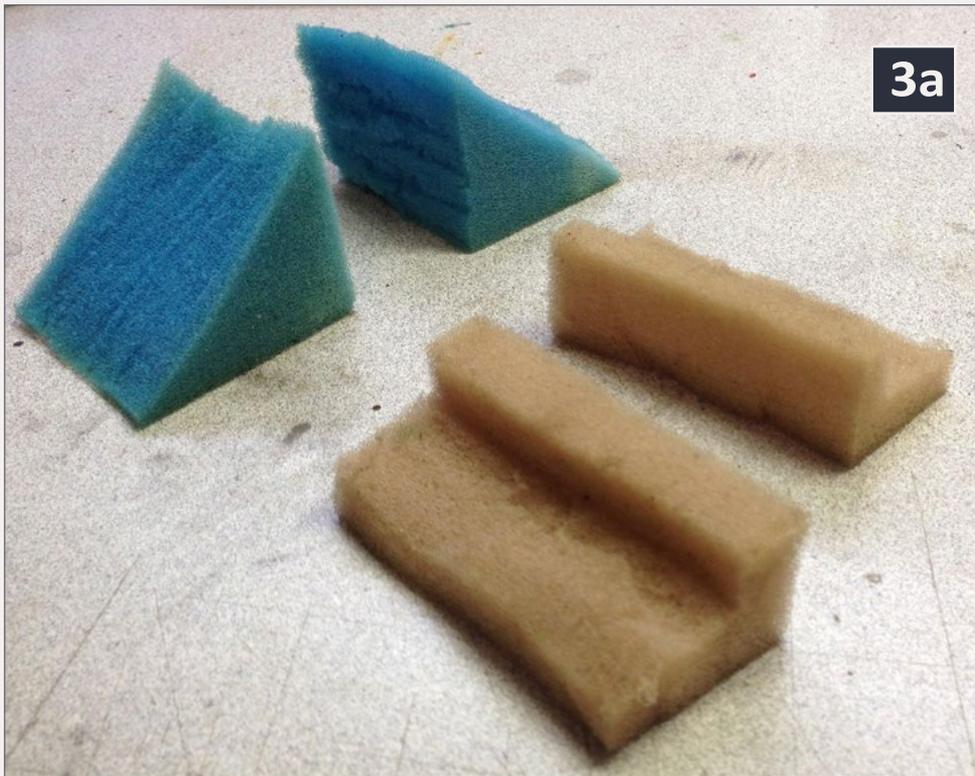
One day I happened to have several small foam cubes nearby and used them to prop up a tender at an angle to



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better visualize the surface I was working on. The thought struck me that a wedge would provide better support. So I pulled out a block of soft foam and started shaping it with a razor knife. What I wound up with is in

**3a - 3b (opposite): Flexible rubber foam on the workbench protects models from damage. Cut blocks and wedges from soft foam scraps to hold the work safely in place.**

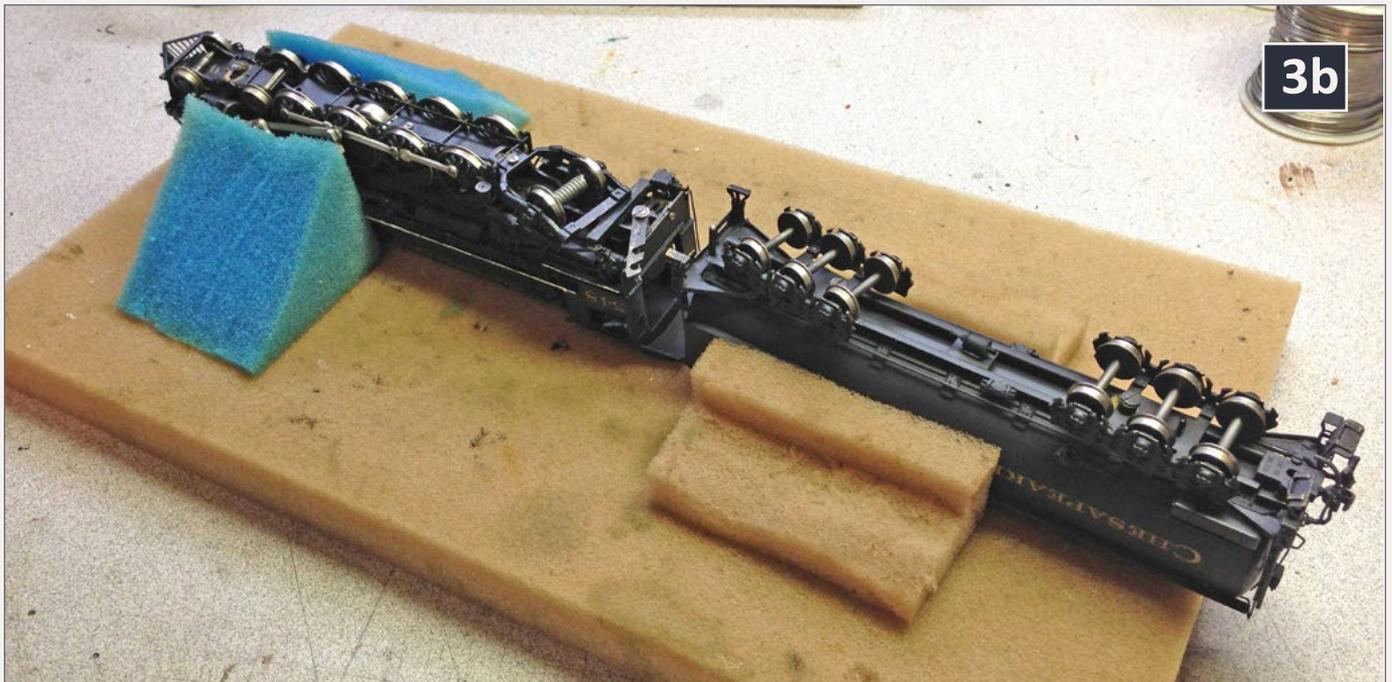
the photographs, which are self-explanatory (3). It works equally well for rolling stock and diesel units.

The foam surface has a very high coefficient of friction, particularly with other pieces of similar foam. Once placed on the surface, the block or wedge will not readily move, yet it provides unparalleled simultaneous access to both the sides and the bottom of the unit under repair.

– Matt Hardey

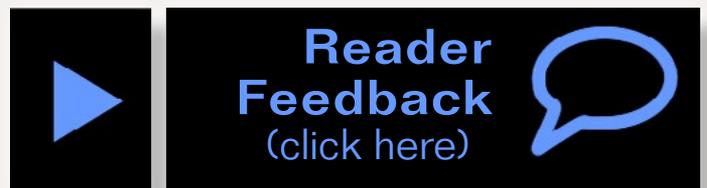
## **Blade Disposal**

Most model railroaders collect odds and ends that may come in handy later. A few years ago I was pondering the safe disposal of X-Acto blades and razor blades. Many areas still have manual garbage pick-up and unless the blades are protected there is always a chance that a trash hauler or landfill worker could get cut.



As I was thinking about how to dispose of the blades safely, I just happened to open a Tic Tac container to pop a mint. Voila! The mints were almost finished, so I quickly consumed the rest and tested the opening for the knife blades. They slid in perfectly. To store the used razor blades, the paper on the container needed to be split between the cap and the body to allow a bigger opening. Once this was done (using a dull razor blade), the cap could be pulled out and a razor blade safely stored.

Any small plastic container big enough for a razor blade works, but the candy/mint containers are heading to the trash anyway, so why not use them?



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# Solo DCC Operations



## DCC Impulses column

by Bruce Petrarca

## Confessions of a lone wolf DCC operator ...

**W**hy are some folks lone wolves? The reasons are as varied as the individuals. Here is one story.

I am a lone wolf DCC operator, at least in my home at this point. I don't want you to feel sorry for me. I'm writing this column so that you can understand why someone would have DCC on a layout operated by one person.

There are a lot of statements of "fact" in this column that really are my opinions. Yours may differ. Feel free to share them on the MRH blog by clicking on the Reader Feedback link above.

Understand, I do operate on other folks' layouts. The PebbleCreek Model Railroad Club ([pcmrc.org](http://pcmrc.org)) operates a couple of times a month. Some of the folks who have participated in Desert Ops weekends ([desertops.org/overview.html](http://desertops.org/overview.html)) have me over to operate, too.

So I'm not anti-social. I just don't have a setting for multiple operators at this point in the evolution of my pikes. But I



wouldn't give up DCC control on them for the world, even when I'm by myself! And I'm here to tell you why.

First, let me tell you about my two layouts.

My workshop is in the closet of the bedroom that is planned to be an HO model of the Santa Maria (California) Valley Railroad ([smvrr.com](http://smvrr.com)), as it ran in early 1962. Why then? Because they retired their last steam loco in February 1962 and I want to have at least one steamer. I have a basic operation scenario worked out. I am working on a floor plan which will allow room underneath the benchwork for my computer, some storage, etc. This space is necessary to support my workshop. I'm hoping to start on the benchwork soon.

When I owned Litchfield Station, I built a small (8-1/2 x 1 foot) shelf layout ([mrdccu.com/layouts/LitStn/westvalleyviewarticle.pdf](http://mrdccu.com/layouts/LitStn/westvalleyviewarticle.pdf)) that is basically a Time-Saver with an added arrival/departure track. That blue-foam-based-layout now rests atop a couple of cabinets along one wall in the “train



**1: 8-1/2 x 1 foot shelf layout sitting on cabinets. See From *Mr. DCC's Workbench* later in this issue for an explanation of the sheet on the wall over the center of the layout.**



## **2: The Rocky Mountain Pacific (RMP) under construction in my backyard – the cinder blocks are stand-ins for buildings (station and freight house in foreground).**

room”. That's it, for now. Yes, you have seen some shots from this layout in several of my columns.

It is currently powered by a NCE Power Cab and a Tam Valley Depot 5-amp booster. You can follow layout progress on my blog ([mrdccu.com/layouts/SMVRR](http://mrdccu.com/layouts/SMVRR))

In the back yard there is a start on a southwestern Colorado narrow gauge pike, called the Rocky Mountain Pacific – RMP. This layout is blogged on my website, too ([mrdccu.com/layouts/RMP](http://mrdccu.com/layouts/RMP)).

While these layouts are planned to support a few operators when they are finished, they aren't yet ready for prime time or multiple operators. So, I'm a lone wolf, for now.

My long-standing plan on the RMP is to use DCC control with hybrid drive. Toward that end, I have an 10-amp NCE PowerHouse Pro radio system.

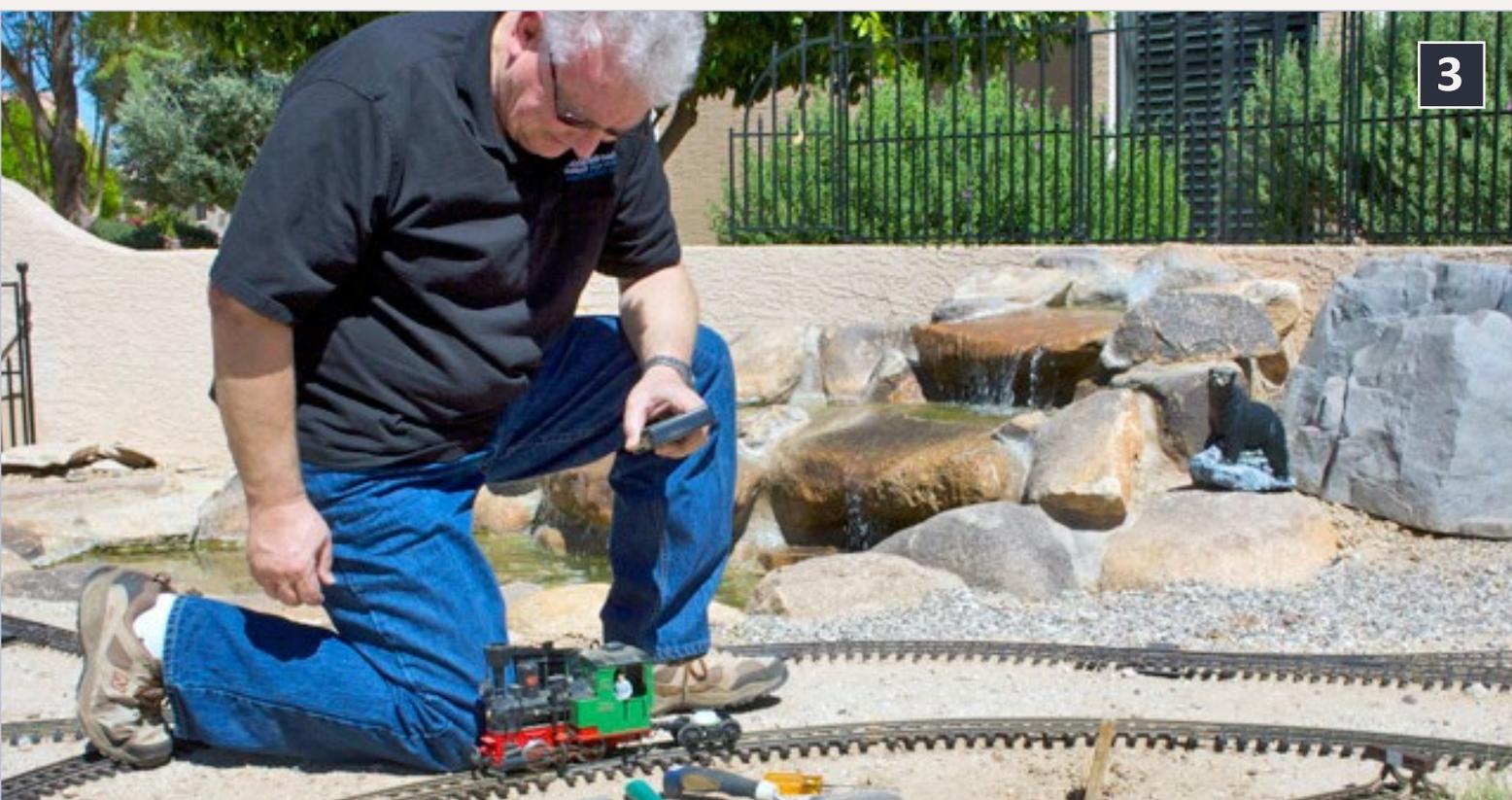


I have been an advocate for DCC since I got into model railroading almost 15 years ago. Since my background is electronics, sound and radio, it was a natural fit. However, I feel that there is a lot there for even non-technical folks. That's my reason for this column. If you find something here that makes sense, then perhaps you will consider the plunge now or in the future.

## **DCC in the garden**

Figure 2 shows the RMP as it was in May when it got too hot here in Arizona to work on the outdoor railroad. You can see that it will not support many operators even when it is finished.

During construction, I don't run DCC on the RMP all the time. I'm using both a DC power-pack and the DCC system in the shakedown process. Whenever I need to run on DC, I remember what it was like before DCC.



**3: Bruce testing recently leveled track on the RMP using DCC.**

- The tethered power pack means that I need to be in a fixed location to control my loco.
- Some of the locos respond to the LGB in-track magnets by whistling or ringing their bell in the specific location where the magnet is installed.
- Fine tuning of a section of track involves a lot of me running back and forth or extension cords to bring power to the test location.
- DC only lets me have one loco in each power district at any given time.

Over and over, this reminds me why wireless control is such an important part of having fun with your trains in the garden.

When I'm able to run the DCC locos again (3), I feel so free. There are no cables. I can control the loco from wherever I wish. This makes it easier to adjust trackwork or align things. I can ring the bell or blow the whistle whenever I wish, for however long I desire. Lights are of constant brilliance and controlled by the DCC system.

Okay, I hear you say, it makes sense in the garden, but why do you bother with DCC on a small shelf layout?

## **DCC on the shelf**

Here's why I run DCC on the shelf.

This may not be a startling revelation to you, but short shelf layouts tend to be switching puzzles, not huge mainline running operations. This is where DCC shines.

**LOW SPEED CONTROL:** DCC allows you, perhaps with a bit of practice, to make precision couplings, reversals and spots.

[... On to next page of text →](#)



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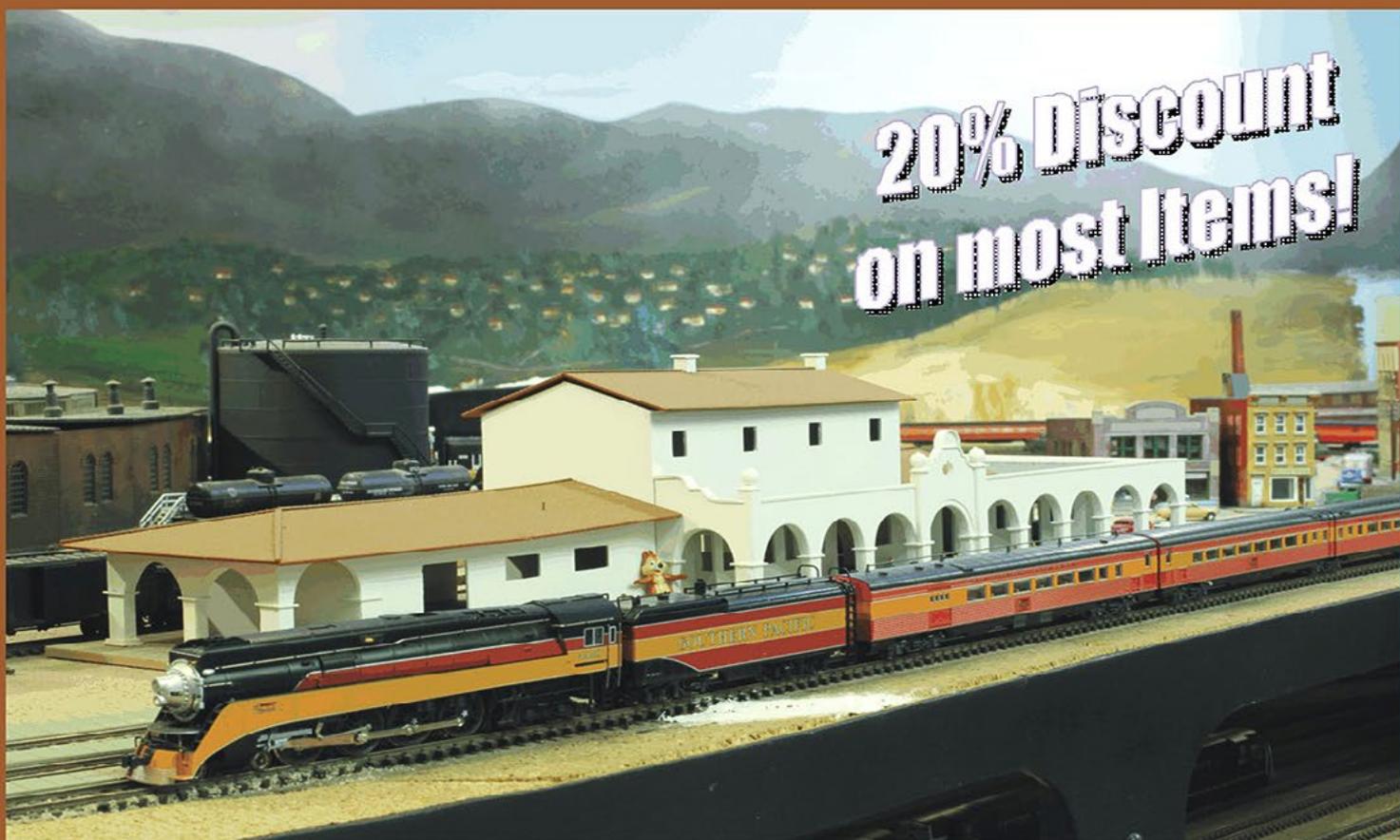


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#### 4: Details of shelf layout – card boxes and a train ready to run to Guadalupe – cabinet visible in lower right

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

Some decoder adjustment may be required, but you can usually get your locos to start moving with very little throttle.

**LIMIT TOP SPEED:** With DCC, you can pre-determine the maximum speed of every loco. This is very useful on a switching layout like mine or for yard locos. When you limit the top speed of a loco to 20 scale miles per hour (SMPH), for example, you expand the control range. Now you run from 0- 20 SMPH, vs. 0-100 SMPH. Two advantages: increased loco speed control and locos cannot run at "warp speed".

**STOP ANYWHERE:** You don't have to design stopping blocks into your layout. There is no need for track shutoff switches, making operations easier and construction quicker. With no

shutoff switches, a guest, no matter how rare they are, doesn't need to be trained to the layout. Larger layouts do need power districts for troubleshooting, but that discussion is beyond this column. I rarely run a second loco on the layout. Since I use DCC, I am able to do so with impunity (5).

**SOUND:** Sound is fun. I've said it for years, "DCC sells sound and sound sells DCC." If you have a road crossing your tracks, you can decide if it is necessary to blow for the grade crossing(s) or not. When you are in the yard, you can decide when and where the bell is needed, even on a whim. It's your pike, you make the rules. The sound of the loco shuttling back and forth makes solo operating less lonely. If you have a larger solo pike than mine, you might want to have one train running in circles while you are switching another. Sound helps you monitor the other train continuously, and, if needed, DCC provides quick control of it.



**Playback problems?** [Click to try a different version.](#)



## 5: Two locos and a DCC powered flagman on the shelf layout – lights are on, but nobody is moving.

**POWER ALWAYS ON:** With DCC, there is constant power on the track at all times. That means that the power for lights and accessories, like the illuminated brakeman (5) is available. Of course, care must be taken not to overload your DCC system with fixed loads, like buildings.

**NO CORD:** Radio allows me to run my pike and not trip over a cord. Remember, my current layout is a light weight blue-foam-on-small-wood endeavor sitting on top of some cabinets. If I were to snag a cord, I could easily pull the whole shebang off the cabinets. Using radio allows me to avoid that pitfall. Besides, it is more fun not worrying about the wires. If I didn't already have the radio for the garden, would I spend the extra bucks to have it on my simple shelf layout? Probably not. I'd screw the layout to the wall to prevent disaster and move on. However, my long term plans are for a two to three operator



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layout. Since I want to add radio later, it makes sense to have radio for the shelf layout now.

So, that's why I'm a lone wolf DCC operator, at this juncture. By the way, did I mention that I like the sounds?

In this month's From Mr. DCC's Workbench, I share how I expanded operations on my small shelf layout to make it more fun. Stay tuned for that.

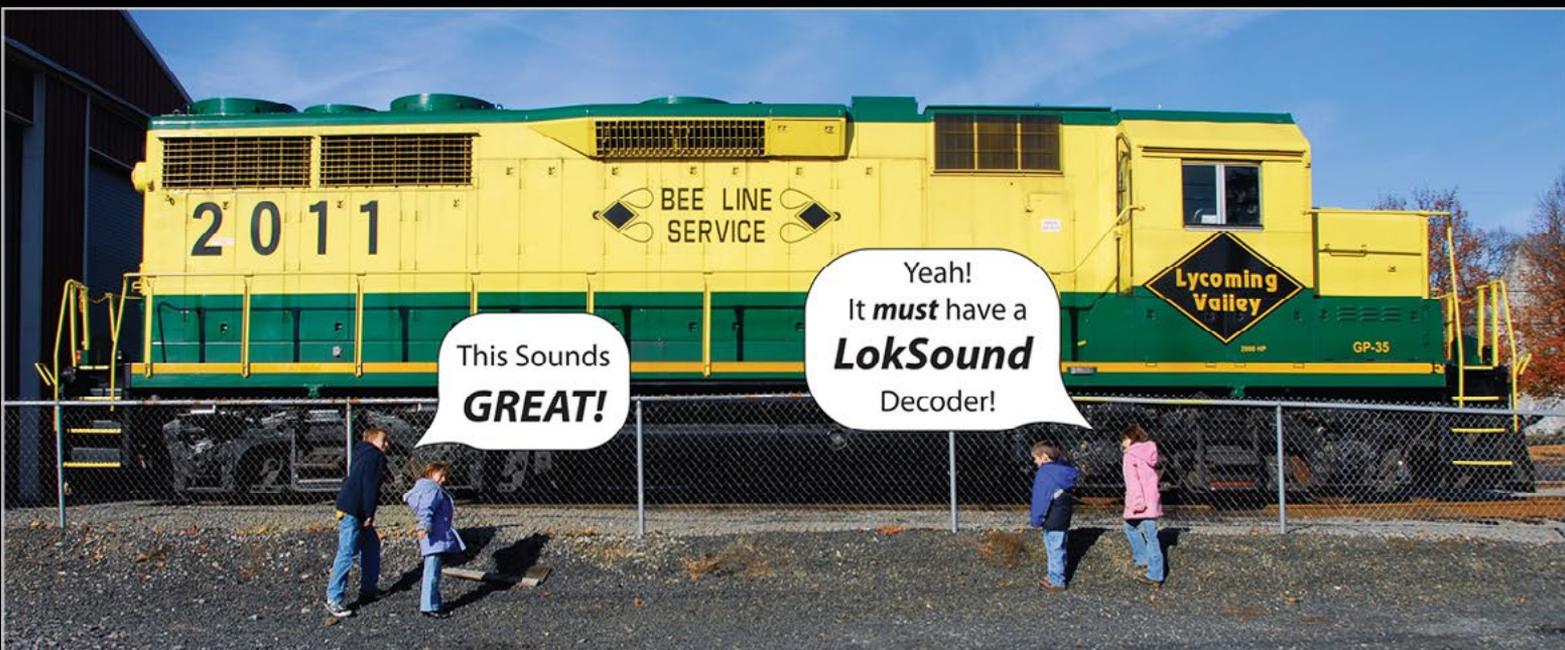
If you like this column, please click on the Reader Feedback link here and rate it awesome. Please join in the conversation that invariably develops there about the topics presented in the column. Share your experiences. Thanks.

Until next month, I wish you green boards.

[... On to Mr. DCC's Workbench →](#)



**6: Bruce, with a radio throttle, working on a switching puzzle.**



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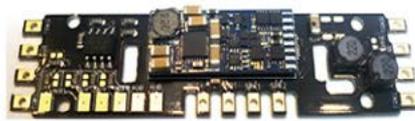
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## From Mr. DCC's workbench

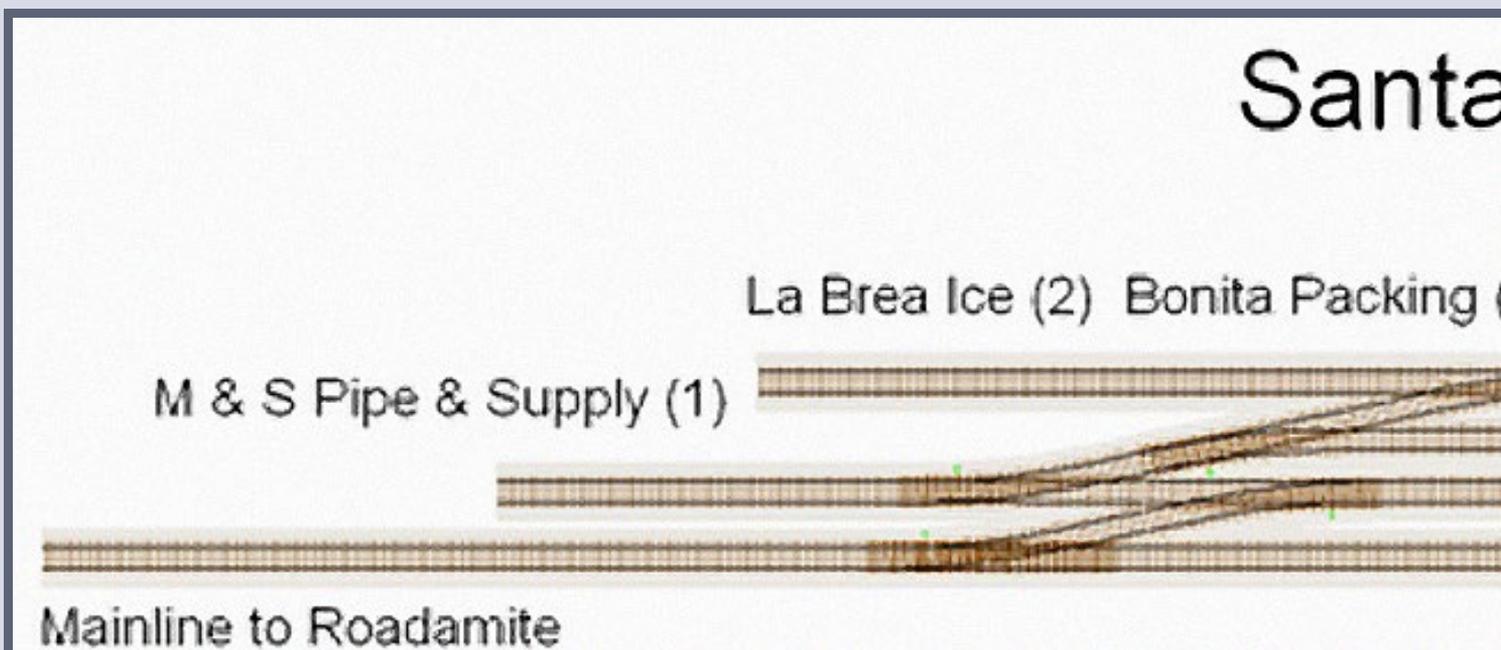
### Making your small layout run bigger

I'm enjoying some limited operations on the HO shelf layout discussed in this month's column. However, initially I couldn't do all that I wished to bring a session full circle. I'm going to introduce you to an operations tool that I have used to increase the fun on my SMVRR shelf layout. This layout is oriented as if you were looking south, with East to the left.

There are three geographically different areas that the Santa Maria Valley Railroad served:

- The Southern Pacific (SP) interchange and yard in Guadalupe on the west
- Industries throughout the valley
- The oil fields at Roadamite in the hills 12 miles to the east

I started operations by setting up my shelf layout to represent the industries in Santa Maria. That didn't have the realism of handling tankers coming from Roadamite to the refinery and



#### 7: The Santa Maria track allocation

out to the world (the original reason for the prototype). With the limited space, modeling of the Guadalupe interchange consisted of a single track with no run-around or yard track.

So, one day I got the idea for Dynamic Track Allocation. Sounds complicated, but it's not. It is just a way of saying that what a physical track models can change throughout a session. Let's look at a session using this method. It takes about an hour to run.

The engineer goes on duty in the center of the railroad – the original model. He services the industries. The tracks are allocated as shown in figure 7. The numbers after a location are the quantity of cars that can be spotted there. If there is a set-out for the M&S Pipe, it needs to be off-spot just now.

While servicing Santa Maria, there will, no doubt, be cars for Roadamite and Guadalupe. These cars are placed on the front track where labeled.

Next comes the run to Roadamite with empty tanks and cars hauling supplies. This is modeled by moving the cars being held on the "To Roadamite" section as far to the right

## Santa Maria

7

(1) Okonite Mfg (2) Mann Packaging (1)

Douglas Oil Refinery (1) Stockyard (1)

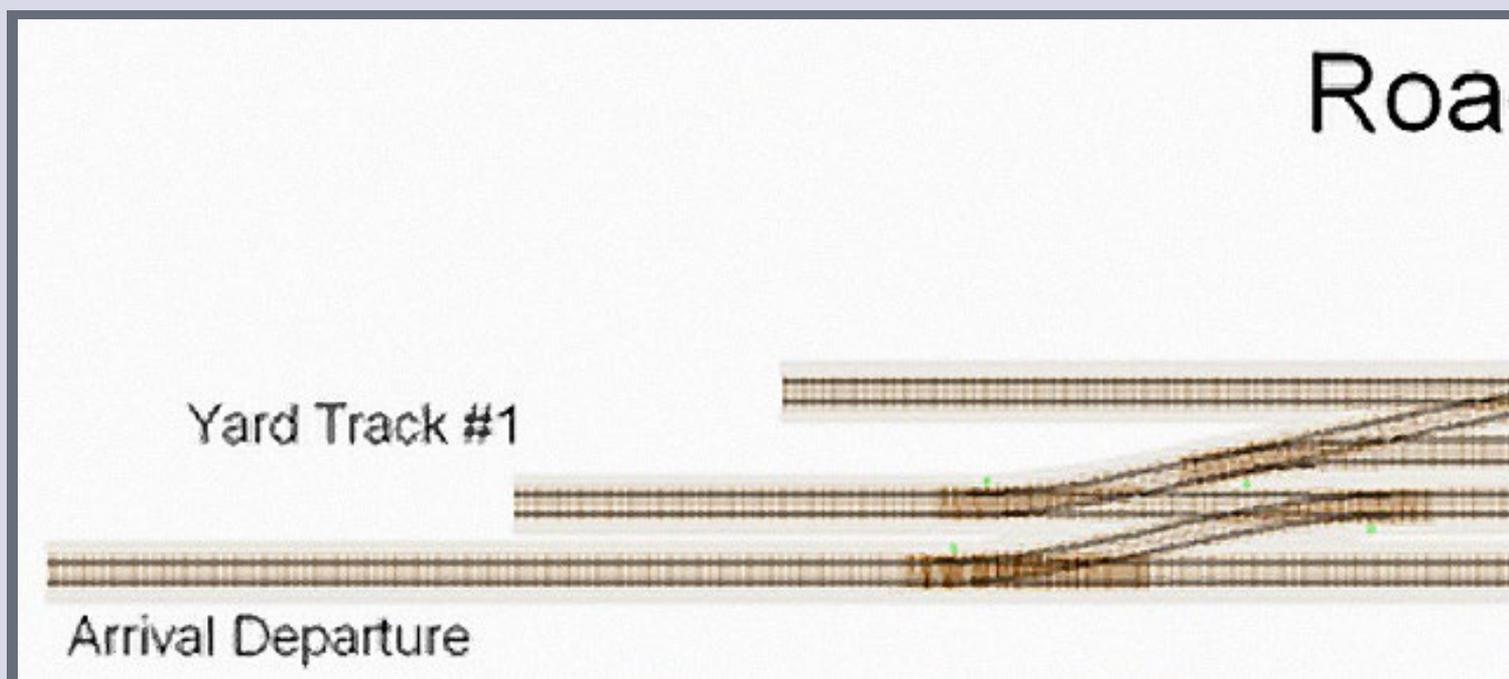
Mainline to Guadalupe



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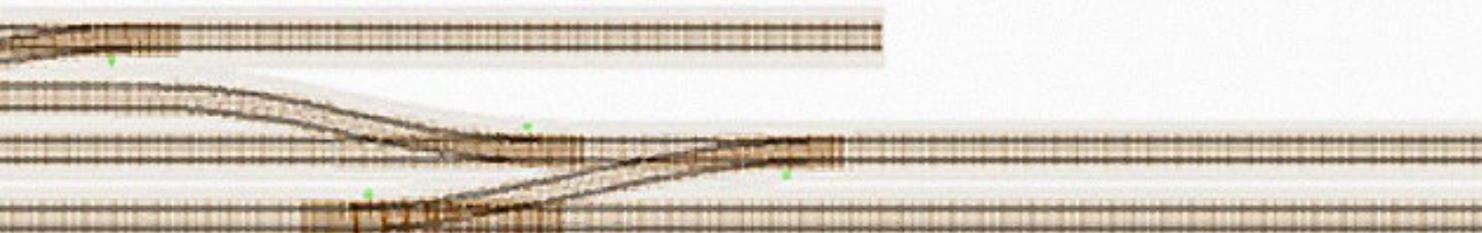


## 8: The Roadamite track allocation

as can be achieved so the loco can be positioned on their left, ready to pull the cars to Roadamite. Remember, there may be cars spotted at the industries and on the “To Guadalupe” tracks. The run to Roadamite (about ½ hour at prototype speed) can be simulated by leaving the made-up train and taking a break. After the break, the train is deemed to have arrived in Roadamite and the tracks take on new faces as shown in figure 8.

Note that the track layout is the same, just with some new labels. The Yard Track will be needed to shuffle cars – that is the reason for the M&S Pipe traffic being off-spotted previously. A runaround is needed to get the loco on the west (right) end of the train. Once empties are spotted on the Arrival-Departure track and loaded cars are attached to the loco, it is time to head back to Santa Maria, where the track definitions revert to those in figure 7. Time for another short break while this run is made.

Once in Santa Maria, off-spots are cleared, if possible. Any tankers for the refinery are off-spotted. The train for Guadalupe



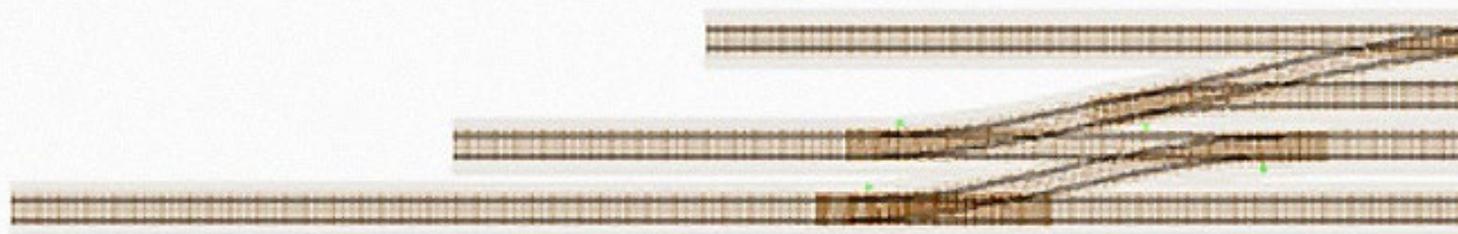
Mainline to Santa Maria

is assembled. The run to Guadalupe is simulated by another pause in the action, perhaps a soda this time?

When the train arrives in Guadalupe, the tracks are designated as shown in figure 9. Notice here there is a conflict between the refinery and stockyard tracks (8) and the Guadalupe Yard Track #1 (9). Any cars previously spotted at the refinery or stock yard are temporarily moved to some available space elsewhere, if the yard track is needed for moves in Guadalupe. Not prototypical, but needed to make the Guadalupe scenario function, just like we didn't spot a car at M&S in the first part of this session.

Once the interchange cars are spotted on the Arrival-Departure track and the loco is in the center of the layout, the future of the outbound cars is in the hands of the SP. That future consists of removing and replacing some cars and flipping waybills on others. Once the SP finishes its work, there is a new consist to pull back to Santa Maria, ready to spot any off-spot cars and start over servicing the industries.





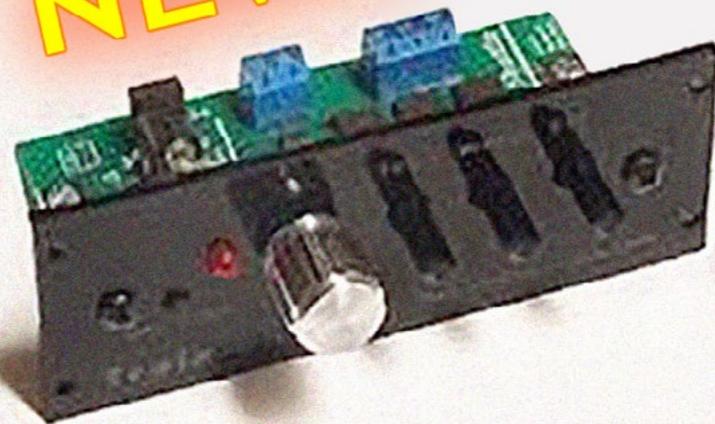
Mainline to Santa Maria

## 9: The Guadalupe track allocation

Changing the identification of physical tracks can make a small layout play bigger. I have these three track plans printed on a single sheet of paper and posted above the layout as a reminder, as shown in figure 6. ■

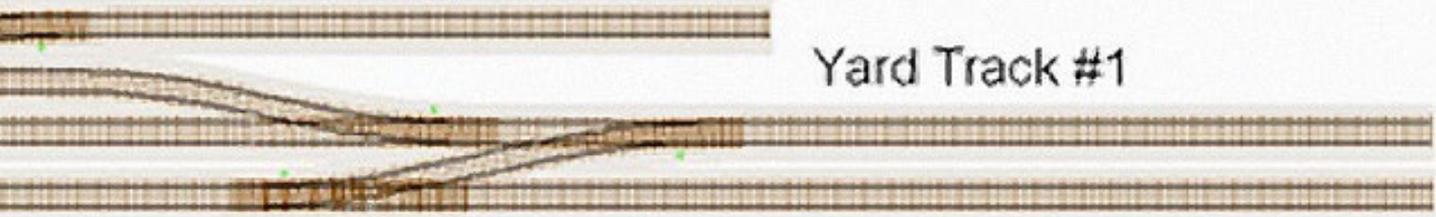
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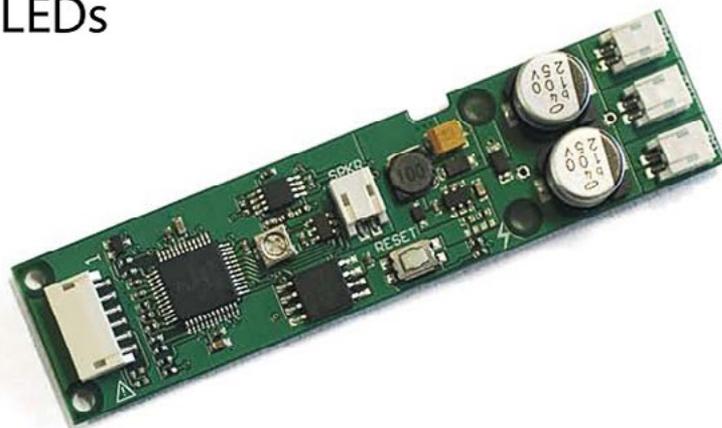
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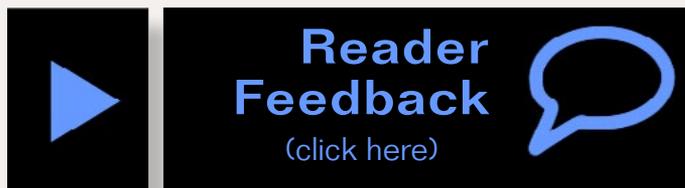
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## Sea Trial Test Operating Session #2



### Getting Real column

by Marty McGuirk

## How I spent my summer model railroading ...

**M**y good friend George Dutka (see his excellent blog at [whiteriverdivision.blogspot.com](http://whiteriverdivision.blogspot.com)) measures his model railroad progress in terms of “model railroad seasons.” In his case, the model railroad season begins in November and goes through April. Of course, he lives about two miles south of the Arctic Circle... (Well, maybe not quite that far north, but compared to me he’s pretty “up there.”)

In the area of the country where I live (northern Virginia) I’ve noticed the model railroading season is divided into two phases. There’s the winter of course, November through early March. Then in spring we spend time outdoors until the summer heat and humidity both reach the high 90s and drive many of us back into the air conditioned house or basement for a “second” model railroad season. So what have I been doing in the basement? Well, the major event this summer was a test operating session on my rebuilt railroad.

### **TEST OPERATING SESSION**

In my last Getting Real column ([mrhmag.com/magazine/mrh-2012-10-oct/gr\\_the-right-time](http://mrhmag.com/magazine/mrh-2012-10-oct/gr_the-right-time)), I discussed the major rework



of my layout that's consumed my hobby time for the last three years. Before the "model railroading winter season" ended I decided to try a test operating session. That way, if things worked out as I hoped, I could proceed with scenery, structures, and the like. If things didn't work out as hoped, well, let's say I preferred not to contemplate that possibility! The previous Sea Trials, on the older double-deck version of the railroad, (see [mrhmag.com/may-jun-2010-getting-real](http://mrhmag.com/may-jun-2010-getting-real)) produced enough issues that I spent the better part of two years completely rebuilding the railroad. So with some trepidation I looked at the

[... On to next page of text →](#)

1



**1. This issue's Getting Real is a report on the Test Operating session held on Marty McGuirk's HO scale Central Vermont Railway Roxbury Subdivision.**



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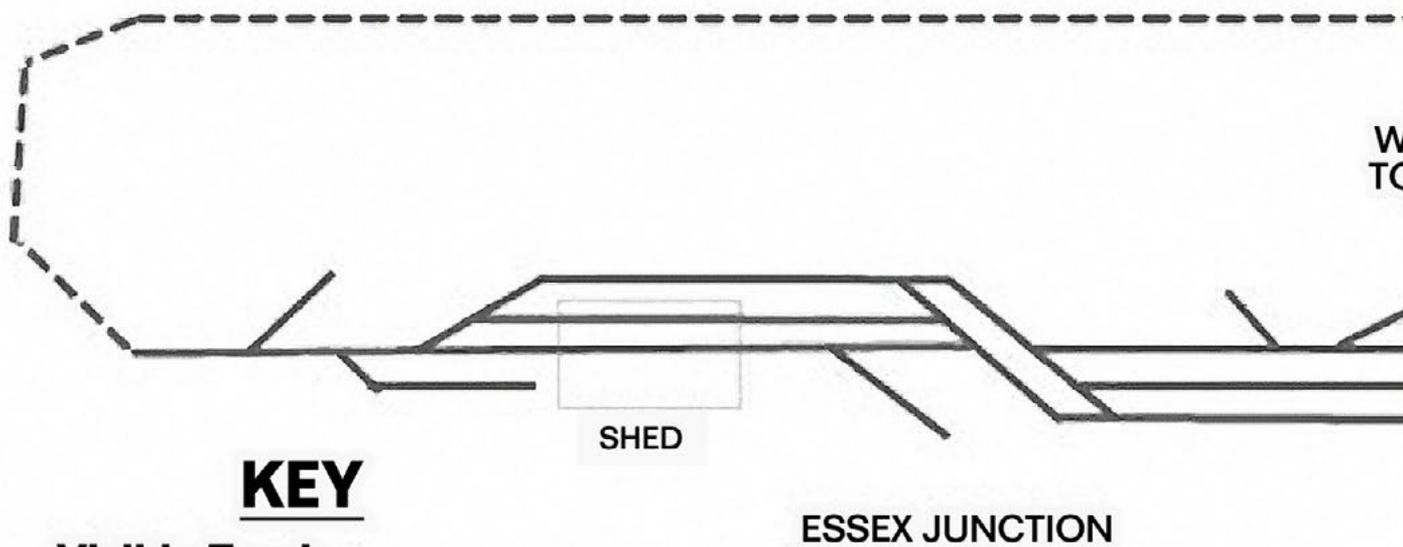
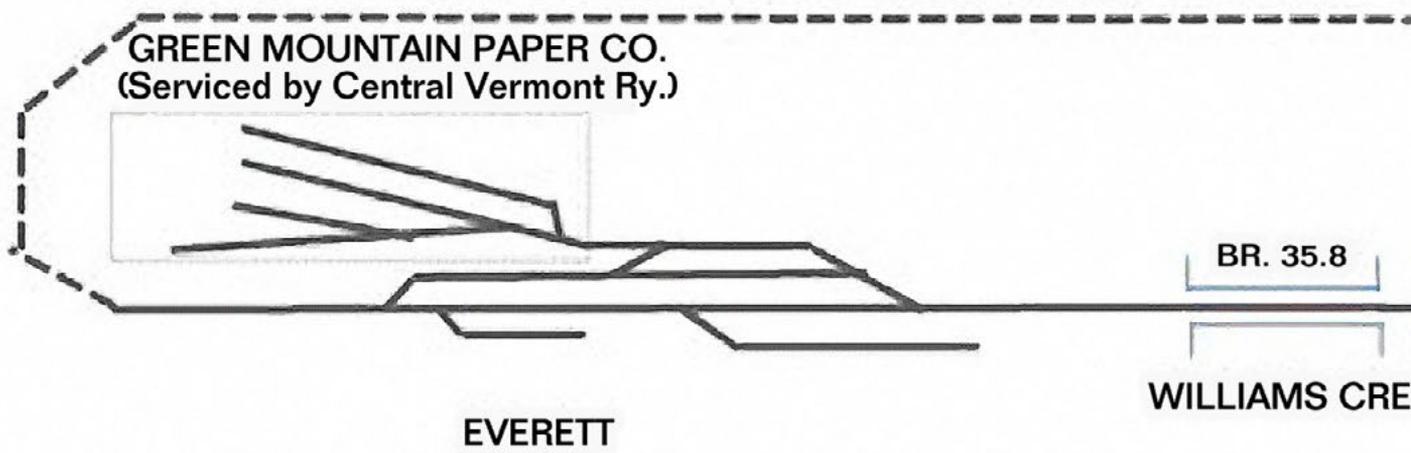
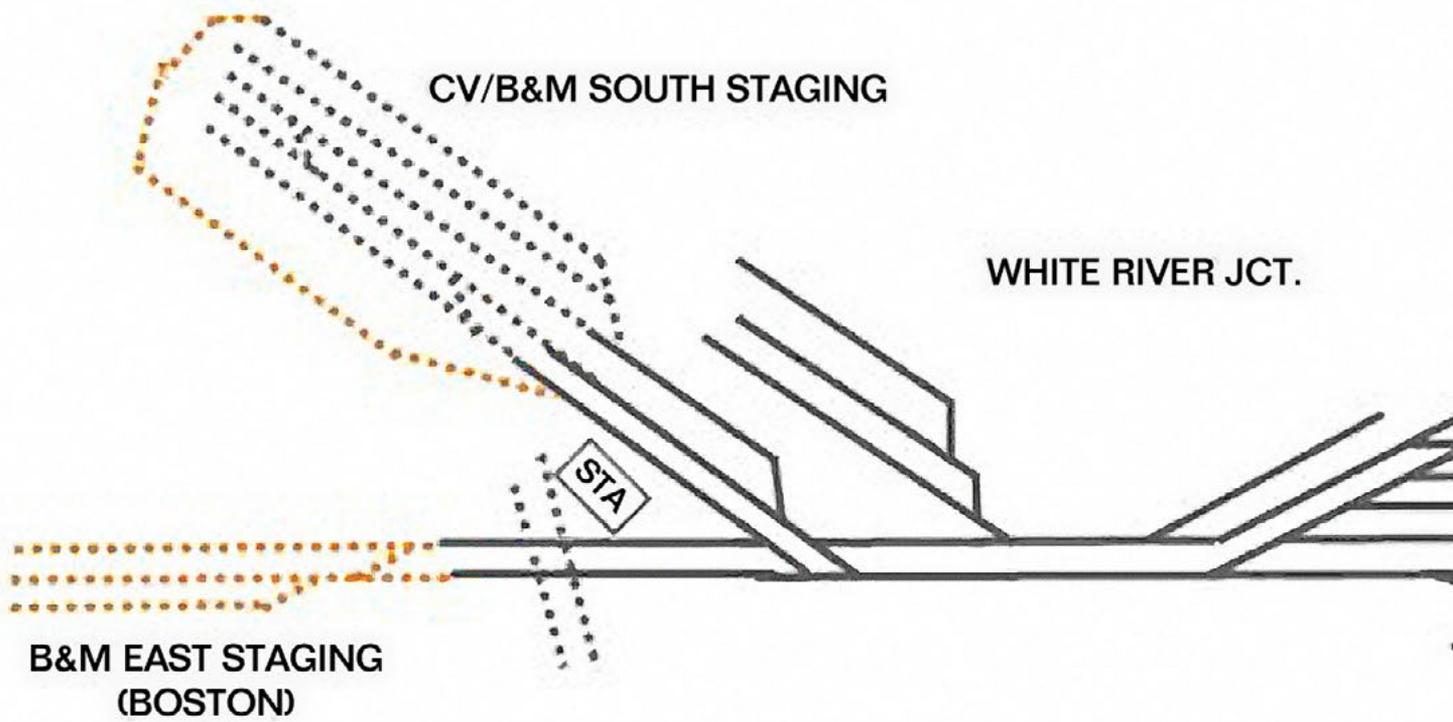
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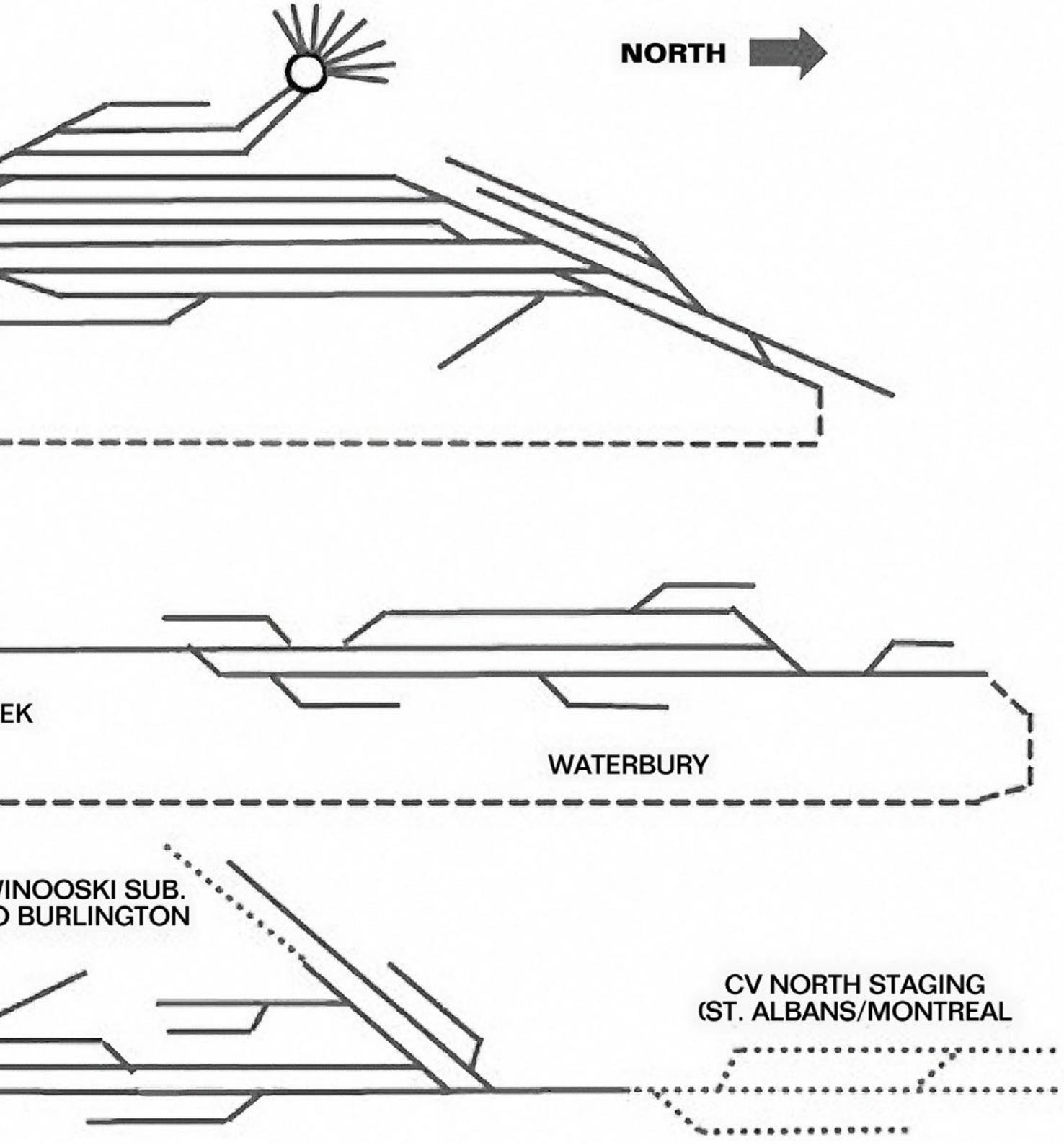




**KEY**

- Visible Track** ———
- Staging (Planned)** ·····
- Staging (In Place)** ·····

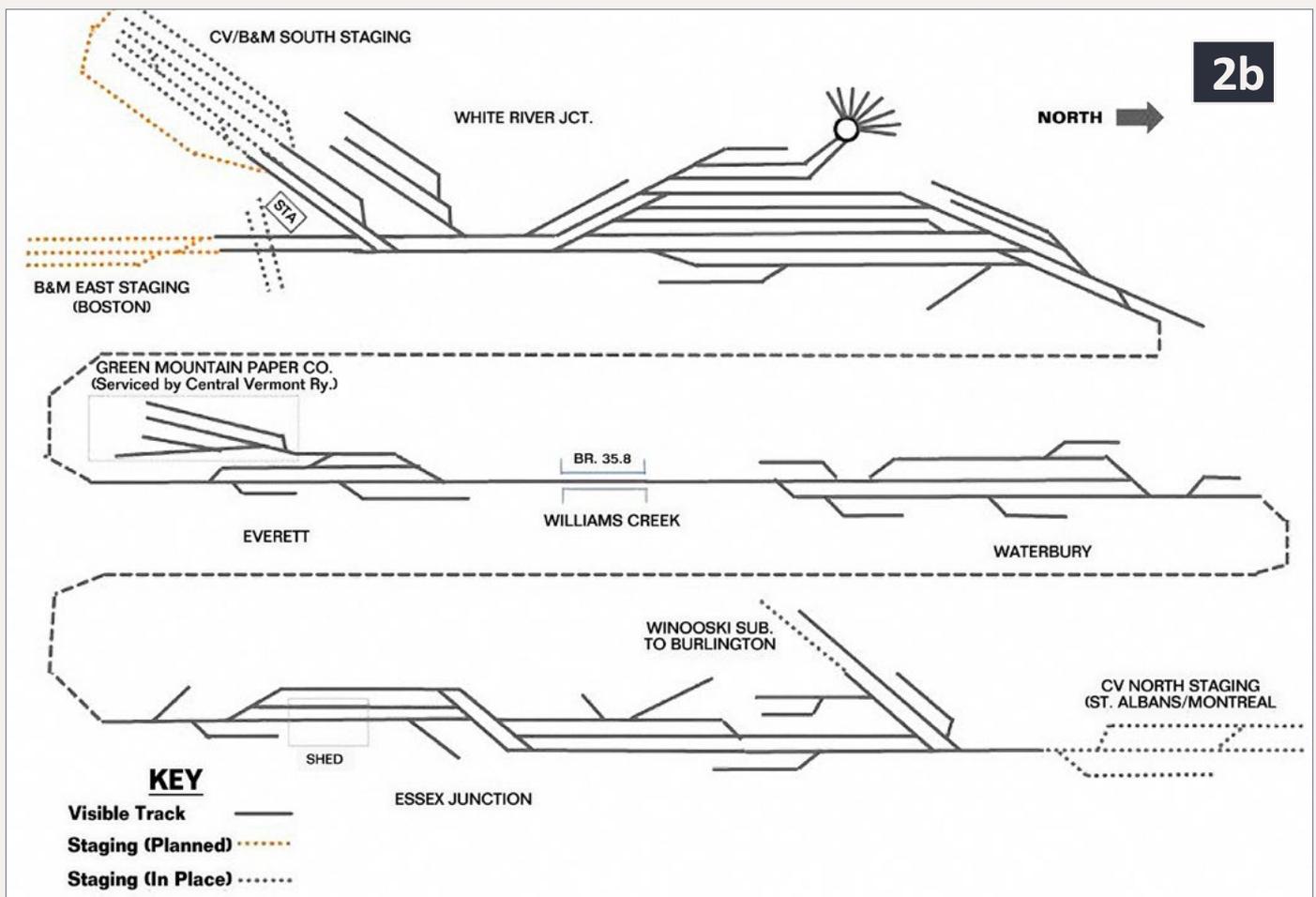




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**2a-2b.** The schematic diagram shows the mainline track and staging yards on the author's layout, and was instrumental in developing an operating scheme (zoom in to study).

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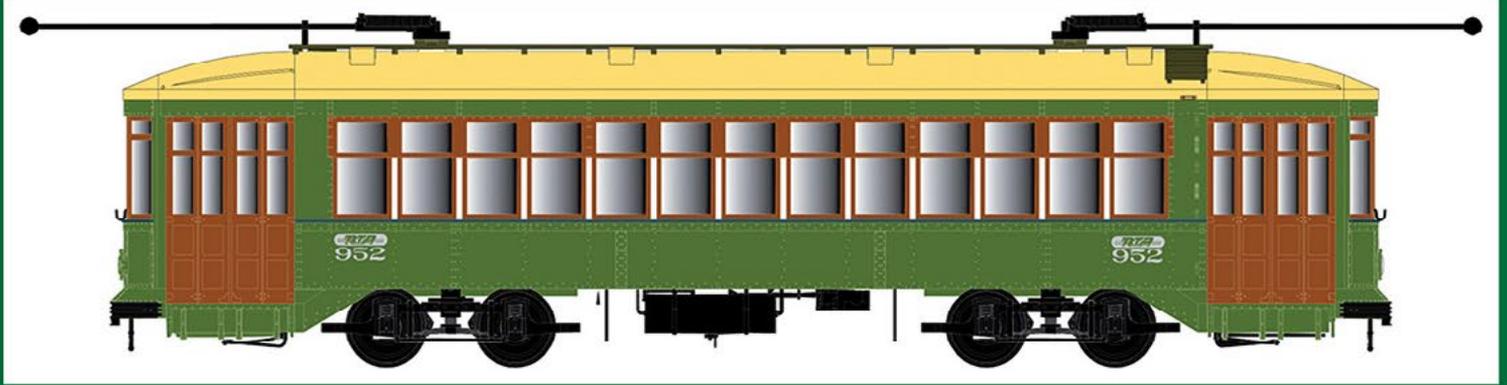
calendar, contacted several local friends, and picked May 19th as the “big day.”

Before the session I gave a great deal of thought to the various operating positions. I decided on a Dispatcher, a chief Yardmaster, an assistant Yardmaster (who also did double duty as a road crew), and four road crews. For variety, and to see if two-person crews would be practical, I assigned two of my operators to one local train. I played the role of host, chief troubleshooter and answer man. A few weeks before the session I sent the timetable, proposed lineup of trains and a

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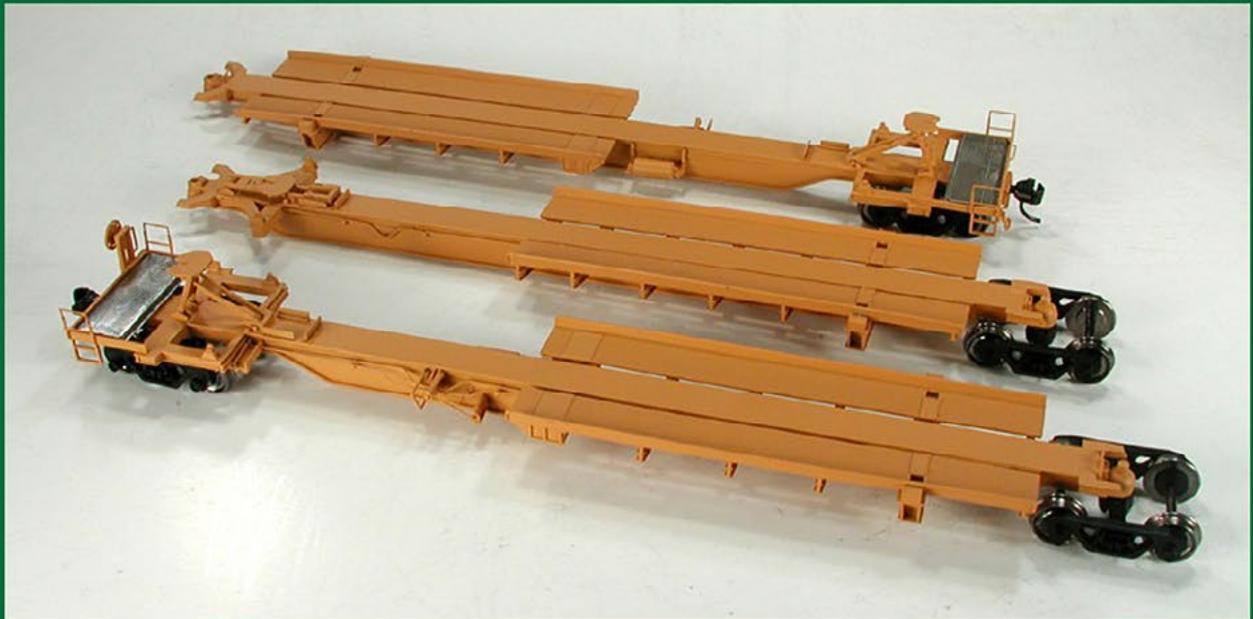
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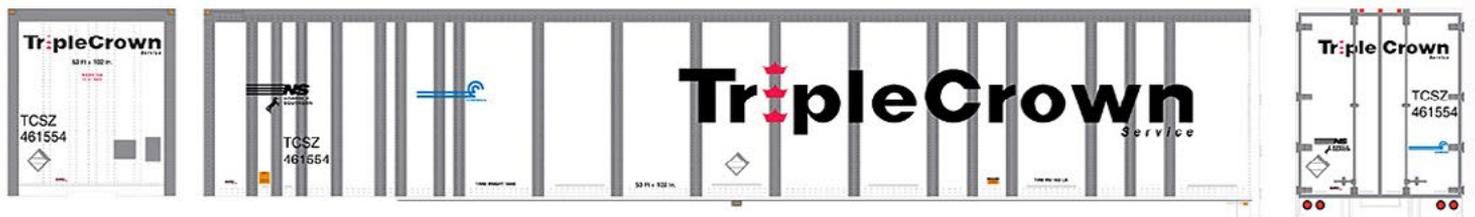


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schematic of the layout to Bob Warren, who'd volunteered to help me by dispatching the railroad. Bob came back with some great suggestions that streamlined the operating scheme. Of course, he also provided some great feedback after the session and I've implemented several of his proposed changes.

I tested every inch of track and every car and locomotive prior to the session. In some cases, if the track wasn't up to par, I replaced it before the session – including replacing a pair of troublesome turnouts with new Peco code 83 curved turnouts. My goal was to achieve as close to 100% reliability of track and trains as possible.

Then there was the paperwork (several examples of which are shown here). There's a little paperwork for a small layout, with more for a larger layout like mine. I had developed a timetable starting with a prototype Central Vermont timetable, for inspiration. I also made up a "call board" list of trains (basically a sequential listing of all the trains I planned to run during the session) for myself, the yardmaster, and dispatcher, and made up train cards for the train crews to know what to do with each train in each town. Finally, I created car cards and waybills for each car.

In preparation for the operating session, I spent several evenings getting the layout; and the associated operating paperwork; completed. The photos and captions describe some of this paperwork. I learned to never underestimate the amount of time and effort a layout owner has to put into getting ready for an operating session. Not only do you have to make sure the layout is ready – track cleaned and "debugged," decoders programmed, and trains staged; you also need to create the necessary paperwork.



In my case, layout preparations involved finishing a staging yard on the south end of the railroad (critical so all those trains had a place to go to and come from!), installing a fast clock, and developing track diagrams, like the one shown for Everett (4 next page), for each station.

I also installed shelves to give my operators a place to put throttles, paperwork, uncoupling skewers, soda cans, and the like without having them on the layout itself. All these preparations consumed the better part of a month of hobby time, but they were well worth it when it came time for the session to start.

So, how did it go? Truth be told, I just made it. I was programming decoders and assigning ID numbers to one of the radio throttles as the first crew members arrived.



**3. Prior to the session, every car and locomotive and section of track was tested. Anything that failed the reliability test was replaced. This included two old Walthers turnouts that were replaced with new Peco Code 83 curved turnouts.**



contents



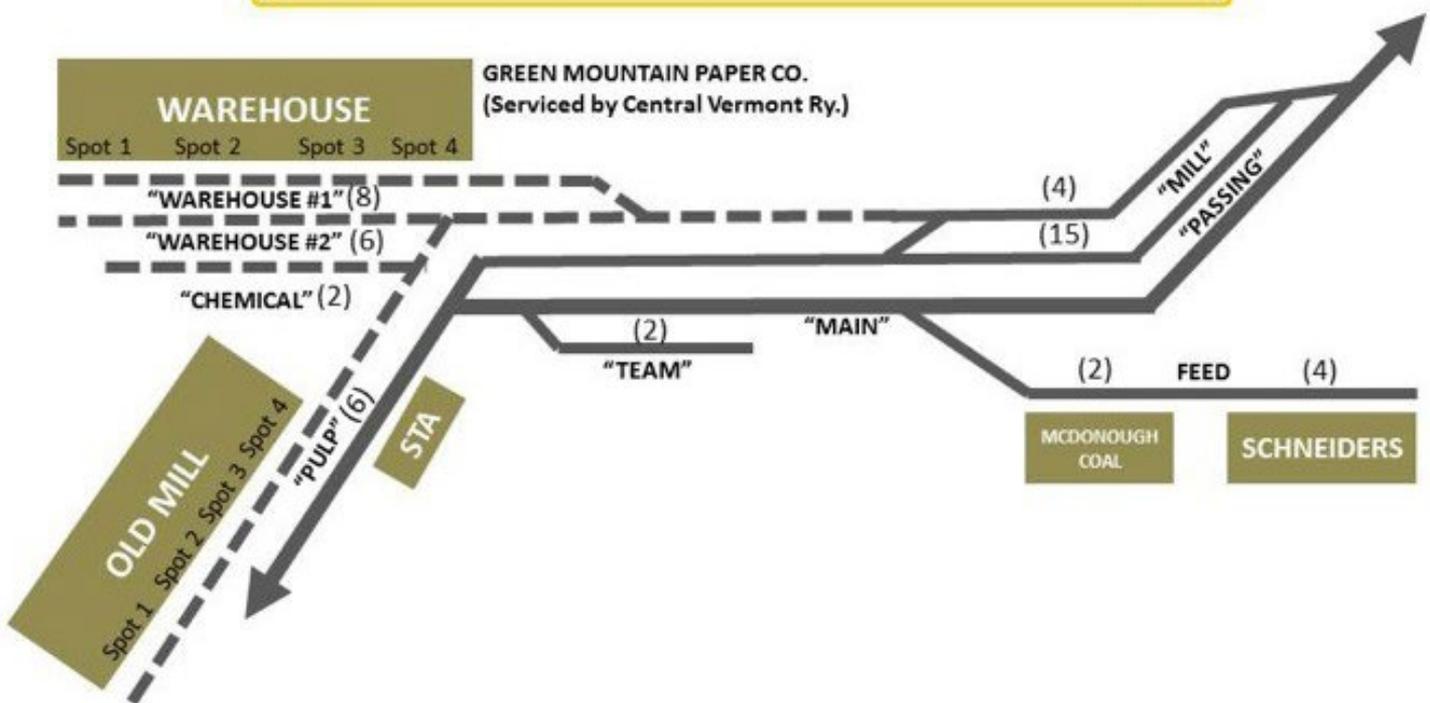
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In brief, it accomplished the primary mission of showing the layout was operable and ready for me to move forward with all the “fun stuff.” In fact, mechanically the railroad performed very well, with only one or two minor glitches. There’s a turnout in White River Junction that had some occasional issues, and we located some feeders that I missed here and there. The biggest issue was a track in the north-end staging yard that suddenly lost power about halfway through the session. I suspect it must be a loose connection, but haven’t gone under the layout to confirm that.

The biggest problem wasn’t mechanical or electrical; it was with the operating scheme. More specifically, it was the



4



4. Each town has a track diagram like this one. Since many of the industries aren't actually present on the modeled railroad yet, these diagrams were critical in answering the "Where does this car go?" questions.





**5. The hole in the wall marks the point where the visible mainline enters the staging yard at the south end of the railroad. This was the last major tracklaying task completed before the test session. I finished the track the morning of the test session.**

paperwork. In a completely bone-headed move, I prepared a timetable that didn't have the correct times for the layout! Instead, it had some prototype times, and some "layout" times intermixed. This is apparently an issue when trying to run a timetable and train order railroad. I didn't have train register sheets. I found I need to tweak the waybills a little before the next session. But hey, I ran out of time. All these were the result of making last minute "tweaks" to the paperwork.

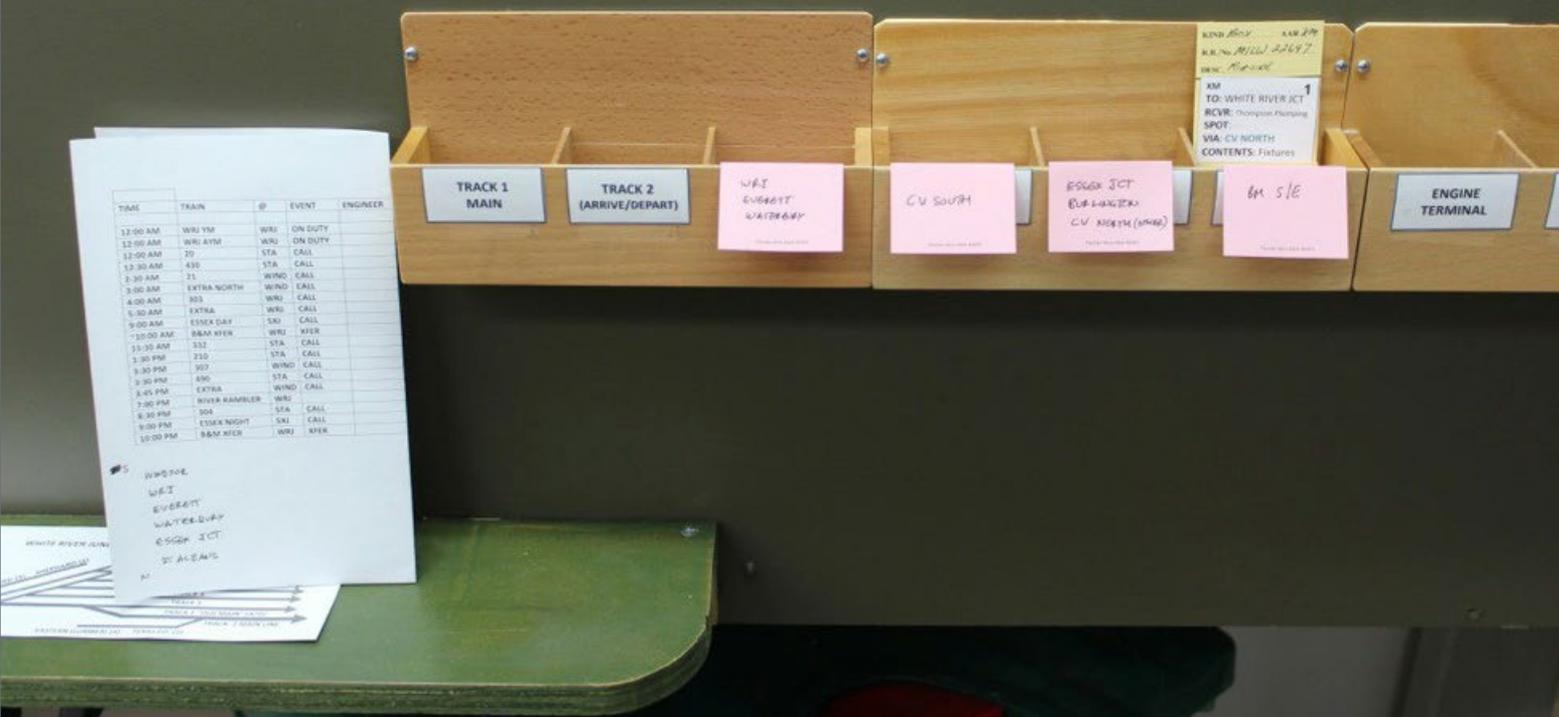
Another goal was to determine the "ideal" crew size. I started with eight plus myself. We ended up with seven. Despite the issues with the paperwork, the crew had a good time, and



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**6. An operator shelf and associated car card boxes were installed at each town prior to the operating session. These are a great way to encourage operators to keep paperwork and uncoupling tools OFF the layout. Author used Micro-Mark car cards but made his own "basic" waybills. Eventually prototype based waybills will be used, but all in good time.**

everyone seemed busy without being rushed. And, other than a local crew that waited in Waterbury for a meet, no one spent a lot of time sitting around.

I might be able to add one or two other operators when we try running the passenger trains, but seven or eight folks can certainly operate the railroad, especially now that they know where things are.

We also had numerous issues with the DCC system – especially the radio throttles. Frankly my biggest concern was the radio throttles, since I had no way to test a number of them running all at once with several people in the basement.

I'm happy to report that the balky throttle didn't need to be sent back. We were able to trouble shoot and fix the problem.

Yes, we ran an assortment of paint schemes on the locomotives - based on engines I could get my hands on that had functional decoders. And yes, we need more cars – some of the through freights were only eight cars long. But hey, the thing works, and that was the point of the session.

One of my operators told me the "acid test" for any layout was "Would I come back." To a person, they all said they would. So, all-in-all, I consider the session a great success.

TIMETABLE No. 3 EFFECTIVE 12:01 AM SEPTEMBER 12, 1954																				
CENTRAL VERMONT RAILWAY																				
SOUTHWARD - SUPERIOR DIRECTION READ UP									NORTHWARD - INFERIOR DIRECTION READ DOWN											
Fourth Class			First Class						First Class											
490	430	210	332	304	404	728	20	Symbols	STATIONS	Train Order or Telephone	Office Signals	Car Capacity		21	303	307	XTRA	XTRA	XTRA	XTRA
Freight	Freight	Local	Pagr.	Pagr.	Pagr.	Milk	Pagr.					Montrealer	Pagr.	Pagr.	Pagr.	"491"	"429"	"211"	PSGR	
Daily	Daily	Except Sunday	Ambassador Daily	Vermont Except Sunday	Vermont Sunday Only	Daily Milk Daily	Washington Daily					Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Manifest
PM	AM	PM	PM	AM	AM	PM	AM							AM	AM	PM	PM	AM	AM	AM
6.43	4.05		2.12						A Windsor (South Staging)	L	DN	WS		3.00		3.53	4.17	12.05		
6.30	3.55		2.05				1.45	CWK	L Jct. with B.&M. R.R.	A				3.05		4.00	4.30	12.18		6.00
5.16	2.18	5.00	1.32	12.30	12.42	2.13	1.30		A White River Jct.	L	DN	J	Yard	3.20	4.55	4.20	5.28	2.08	4.05	6.30
5.06	2.10	4.45 <sub>307</sub>	s 1.21	s 12.18	s 12.30				Everett		DN	EV			s 5.10	4.34 <sub>210</sub>	5.38	2.17	6.02	6.45
4.53 <sub>307</sub>	1.15	2.55	s 1.05	s 12.01	s 12.17	1.45	1.02	W	Waterbury		DN	W		3.48	s 5.28	s 4.51 <sub>490</sub>	5.51	2.32	7.20	7.05
				s 11.51	s 11.56	1.16			Dummerstown			DU			s 5.37					7.12
4.27	12.56	2.05	12.47	11.41	11.41	1.06	12.48	KWY	L Essex Jct.	A	DN	SX		4.02	5.42	5.03	6.04	2.45	7.40	7.00
	12.15 <sub>20</sub>	1.46	12.35	11.32	11.32	12.55	12.30 <sub>430</sub>		A Jct. with Winooski Sub.	L				4.06	5.53	5.16		3.05	8.10	
4.15	12.03	1.31	12.22	11.17	11.17	12.45	12.17		L St. Albans (North Staging)	A				4.21	6.08	5.31	6.19	3.18	8.3	
PM	AM	PM	PM	PM	PM	PM	AM							AM	AM	PM	PM	AM	AM	AM
490	430	210	332	304	404	728	20							21	303	307				

F - Fuel, K - Clock, W - Water, Y - Yard Limits.

Southbound Trains are Superior to Northbound Trains of the same class  
Scheduled meets shown in BOLD  
Freight Trains between Essex Junction and St. Albans and White River Junction and Windsor not to exceed sixteen (16) 40 ft cars plus engine(s) and van  
RESTRICTIONS:

Siding and Arrival/Departure Track Length (40-ft. cars + engine and caboose)  
White River Jct. Arrival/Departure (Track 2) - 16 cars  
Everett Siding - 12 cars  
Waterbury Siding - 16 cars  
Essex Junction - Back and Passing Track - 18 cars; Shed Track 2 - 14 cars

7a

7a-7b. Timetable developed for the test session based on prototype Central Vermont timetable but modified to reflect the towns on the layout. (Zoom in to study closer.)



contents

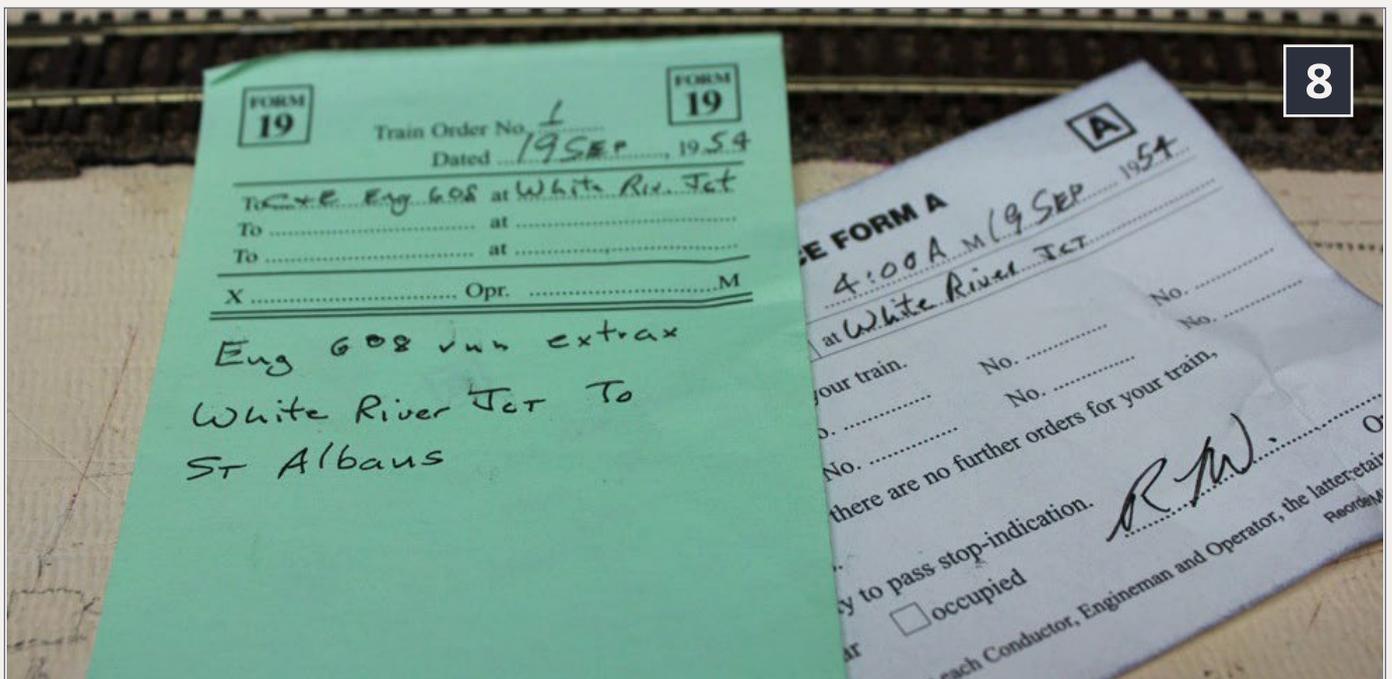


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SOUTHWARD - SUPERIOR DIRECTION

READ UP

Fourth Class			First Class					Symbols	ST
490	430	210	332	304	404	728	20		
Freight	Freight	Local	Psgr.	Psgr.	Psgr.	Milk	Psgr.		
			Ambassador	Vermont	Vermont	Daily Milk	Washingtonian		
Daily	Daily	Except Sunday	Daily	Except Sunday	Sunday Only	Daily	Daily		
PM	AM	PM	PM	AM	AM	PM	AM		
6.43	4.05		2.12				1.52		A Windsor (
6.30	3.55		2.05				1.45	CWK	L Jct. wit
5.16	2.18	5.00	1.32	12.30	12.42	2.13	1.30		A White
5.06	2.10	<b>4.45</b> 307	s 1.21	s 12.18	s 12.30				E
<b>4.53</b> 307	1.15	2.55	s 1.05	s 12.01	s 12.17	1.45	1.02	w	Wa
				s 11.51	s 11.56	1.16			Dum
4.27	12.56	2.05	12.47	11.41	11.41	1.06	12.48	KWY	L Ess
	<b>12.15</b> 20	1.46	12.35	11.32	11.32	12.55	<b>12.30</b> 430		A Jct. with
4.15	12.03	1.31	12.22	11.17	11.17	12.45	12.17		L St. Albans
PM	AM	PM	PM	PM	PM	PM	AM		
490	430	210	332	304	404	728	20		



8. Operating adds another dimension of realism to any model railroad. The scenery isn't done, there's lots of work on the locomotive and car fleet to come, but things like clearance cards and train orders look the same be they model or prototype.



Subdivision				NORTHWARD - INFERIOR DIRECTION READ DOWN									
STATIONS	Train Order or Telephone	Office Signals	Car Capacity		First Class								
			Sidings	Other Tracks	21	303	307	XTRA	XTRA	XTRA	XTRA		
					Psgr.	Psgr.	Psgr.	"491"	"429"	"211"	PSGR		
					Montrealer	Vermont	Ambassador	Manifest	Freight	Local	UVM		
					Daily	Daily	Daily						
AM	AM	PM	PM	AM	AM	AM							
<i>South Staging</i> ) <b>L</b>	DN	WS			3.00		3.53		4.17	12.05			
h B.&M. R.R. <b>A</b>					3.05		4.00		4:30	12.18		6.00	
River Jct. <b>L</b>	DN	J	Ya	rd	3.20		4.55		4.20	5.28	2.08	4.05	6.30
verett	DN	EV				s	5.10		<b>4.34</b> 210	5.38	2.17	6.02	6.45
terbury	DN	W			3.48	s	5.28	s	<b>4.51</b> 490	5.51	2.32	7.20	7.05
merstown		DU				s	5.37						7.12
ex Jct. <b>A</b>	DN	SX			4.02		5.42		5.03	6.04	2.45	7.40	7.00
Winooski Sub. <b>L</b>					4.06		5.53		5.16		3.05	8.10	
<i>(North Staging)</i> <b>A</b>					4.21		6.08		5.31	6.19	3.18	8.3	
					AM		AM		PM	PM	AM	AM	AM
					<b>21</b>		<b>303</b>		<b>307</b>				



9. Steve Williams runs a passenger train through what will be the Vermont countryside. Perhaps he's wondering why there's a Western Maryland RS-3 on the point. Answer – it's what we had with a decoder in it.



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10. John King, operating the northbound local freight at Waterbury. John had carefully planned several moves ahead – only to discover the siding he thought was double-ended was in fact a single-ended spur.

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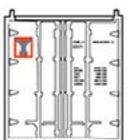


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**11: Paul Dolkos (rear) and Stic Harris (foreground) worked the southbound local as a two-man crew. Paul's having a great time. Stic looks a little distressed! Lesson learned was two-person local crews slow things down nicely.**



**Reader  
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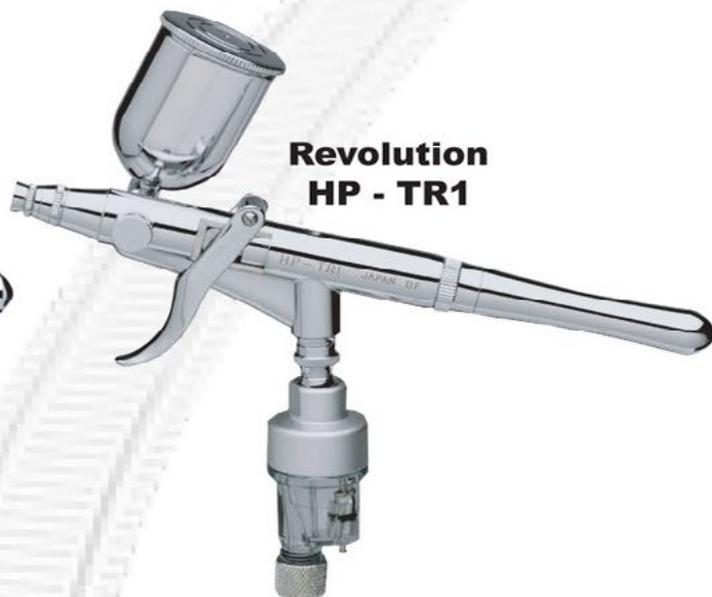
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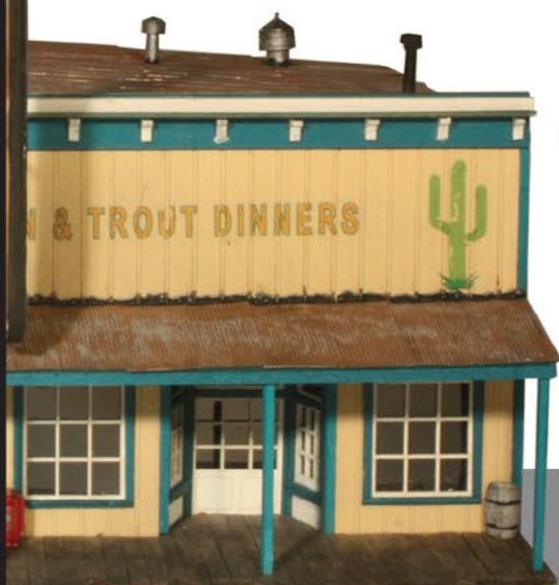
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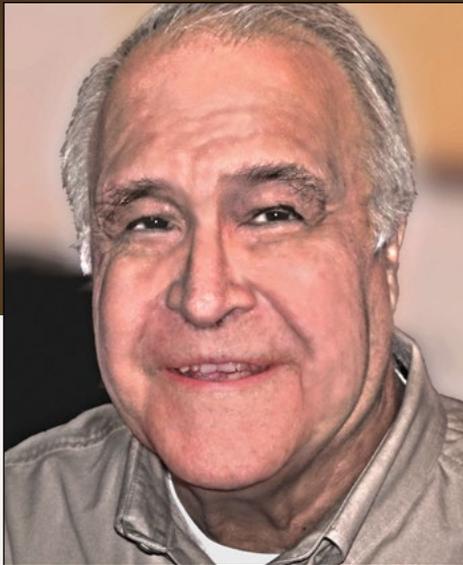
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# Evolution of my Railroad

Ramblings on Narrow Gauge  
and Branchline Modeling



## The Lite and Narrow column

by Larry Smith, MMR

## Fifty years of ideas in one layout ...

**W**elcome aboard the newly resurrected The Lite and Narrow. To give you, the reader, a glimpse into what we will be exploring over time, I would like to give you an idea of what I am modeling and how I got there.

I am, first and foremost, an Eastern narrow gauge modeler with HO being my scale of choice. I do have other projects that I am working on in standard gauge HO and assist with the On30 layout that my club is building for display. I have also built an S scale layout for an individual and a small HO layout for another individual.

This will be the sixth layout that I have built for myself. Some never developed much past the benchwork stage, while others became operational (see *Railroad Model Craftsman*, October 1987). After several years of development the layout featured in this article was found to have some operational problems that were difficult to overcome, especially in the pre-DCC days. Lack of planning also created difficulties in the best use of



space for towns and industries. All of these factors led to the layout being torn down in 1995.

Shortly thereafter, the space for the layout became unavailable, making it impossible to have a layout for several years. However circumstances have changed and I currently have in the early stages of construction, a small, 5' x 9' layout. I can move the layout, which is on wheels, outside to work on it or reposition it within my garage. I am also building dioramas which eventually will be incorporated into the layout.

The concept for the layout is a narrow gauge shortline in Southwestern Virginia in 1942. It follows the premise the railroad is similar to the Buffalo Creek and Gauley and is owned by the Clinch River Coal and Lumber Company. Unlike the BC&G, other coal companies have tipples along the right of way and ship on the railroad to the transfer point.

The railroad operates from Wise, Virginia, the staging yard, through Coal Valley, exchanging empties for loads and placing them for pickup on the return trip, to the town of Oak Crest.



**1: Side view of Selkirk Company store, aka Sodaville Store by Sidetrack Laser with the addition. This is a simple base to be installed into larger diorama.**



**2: Former company house that has been converted to a doctor's office and drug store in the town of Adams. This is taken from the creek side of the building. Scenery is sifted leveling sand with textures added. Additional textures will be added when diorama is installed.**

Oak Crest is the terminus for the rod engines, and the empties are exchanged for loaded hoppers and other cars for transport back to Wise. Shays operate from Oak Crest through Selkirk, the location of Pearson Coal, switching the mine with empties and then proceed past the coke battery at Stewart's Gap and into Adams. Into this mix will also be the operation of a gas-electric which will operate from Wise to Adams and return.

The layout track plan is a slightly larger version of the 2012 *Model Railroader* project railroad, the Virginian Railroad. While the layout is portrayed as a branch line of the Virginian, it really is more appropriate for a short line or a narrow gauge railroad due to the tight radius and, while not excessive, the grades. The layout also limits the size of motive power and cars that can be used on it, which is ideal for a short line or narrow gauge than for the welterweight Virginian. There are also what I consider to be glitches in the placement of structures on both the layout and the extensions that were attached to the layout.



Two examples are: a track scale on the mainline without an engine bypass on the main layout, and company houses right up against the tipple on both the main layout and the Turtle Creek extension.

Also in the preliminary planning stages are the three extensions that *Model Railroader* did for this railroad, the Turtle Creek, Thin Branch, and the staging yard. The Turtle Creek will have the most drastic changes, as I am using a condensed track plan from the Buffalo Creek and Gauley at Widen, WV as the prototype. Widen is an ideal prototype for a peninsular layout, since it is located in a narrow valley and was a company town serving a coal tipple. As plans develop for this extension, I will share them with you. Presently there are two dioramas under construction for this extension.

The Thin Branch, another *Model Railroader* project, which I now refer to as Coal Valley, will be backdated with my version of the Sam Swanson's Hall Hollow diorama. For those who are



**3: Four of the Adams Company houses with the doctor's office taken from creek side. Notice the location of the outhouses and where the runoff goes. More details will be added later to the rear of the houses.**



**4: Street side showing the doctor's office and two of the company houses. The street is impregnated with coal dust dropped from the many trucks running from the tipple with loads for local use. The tracks will be at a slightly higher level with a retaining wall and a steam pipe running along the top of it.**

unfamiliar with Sam's work, this diorama consists of several small buildings which include a dog mine and a gravel crusher. A dog mine is a small coal tipple, if you can really call it that, where large dogs are used to bring the mine cars out of the mine. Most of these mines were low-output and for local consumption, but there is a track at the mine for shipments by gondolas to the outside world. Other structures are still to be determined for this section.

In keeping with the theme of a backwoods narrow gauge railroad, the track for the layout will be laid using Code 55 rail, either flex track or hand-laid, and the turnouts will be assembled using the Fast Tracks jigs for numbers 4, 5, and 6, as required. The use of lighter rail will greatly enhance the look and feel of the railroad, making it more appropriate for the mountain areas that it is supposed to represent. Because of the



layout construction, 1" foam board laminated to ½" plywood, all of the track will be laid on 1/32" basswood that has been attached using foam board glue. Rather than cutting the plywood, the method used with the project layout, Woodland Scenics risers will be used with the basswood roadbed.

I have briefly mentioned some of the structures I will be using on the layout. Some of these have already been constructed and are being incorporated into the dioramas that are being assembled. This is not a new idea, and has been presented in the model press previously. I adopted the idea from Sam Swanson after seeing it used effectively to build his Hall Hollow diorama. It is so much easier to work scenery into hard to reach spaces when working on your workbench than on your layout, no matter how small it is.



**5: Rear of open air engine shed that will be located at Oak Crest. The derelict Shay is a casting from Rusty Rails.com. The scenery is incomplete on this diorama, as additional structures have not yet been built. Also, there are more details to be added to the engine house.**



**6: Scene from side of Oak Crest engine shed showing the derelict Shay. More detail will be added to the shed including a welder with a working arc. Scenery is yet incomplete.**

I am using materials that range from  $\frac{1}{4}$ " foam core board to 1" extruded foam board, depending on the structure and the topography for the bases. For a complete article on how these mini modules are used to develop a large diorama, see "Developing Hall Hollow" in the *2010 HOn3 Annual*. For the other structures on the layout, the goal is to either scratchbuild or have high quality laser kits for wooden structures. While this is the goal, it is not meant to exclude resin and plastic kits when they are better suited for the location or purpose.

Just what are these other structures, you may be asking. They are all in keeping with the theme and location of the railroad, which is a rural backwoods narrow gauge shortline, set in 1942, and located in southwestern Virginia. The primary structures will be company houses, company stores, coal tipples, and truck dumps.



The company houses and stores were most common, and the majority were of wood construction; this will be reflected on the layout. A typical company house had board-and-batten siding and was small, usually no more than two or three rooms. Other types of sidings were used and are reflected in the kits offered by different companies. If you don't want to go to the trouble of either scratchbuilding or kit-building, there are several houses on the market that are easy kitbashes. Those kitbashes are a possible future column, as they fit perfectly into the theme of this column. A hint – one of the kits is an inexpensive one with lots of extras produced by a major manufacturer.

Coal tipples are the primary reason my railroad exists, and there will be several, as there were on the Virginian layout. However very few were identical in their looks, based on the type of mine they served.



**7: Shay 8 sitting at the Oak Crest engine shed. Detail includes a service pit and an overhead chain hoist. A timber retaining wall will go below the engine house when it is installed on the layout.**



**8: Martinsburg Tipple No.1 from Laser Kit. This tipple will be located in Coal Valley. The view is of the truck chute and the end of the hoist house. That is an actual steel cable that hasn't had tension relieved before installation. More detail will be added in the way of resin castings and typical tipple junk.**

A main criticism that I have of both the Virginian layout and the Turtle Creek extension is the heavy reliance on the Walthers New River tipple for kitbashing. The Walthers New River tipple is based on the Edna tipple located on the D&RGW in Colorado. Being from Colorado doesn't make this an objectionable model for eastern coal tipples, but there are only so many modifications you can do to alter its appearance. The kit also has some shortcomings, especially the legs under the loading building, which are too thin in cross-section. These need to be beefed-up even if you use the kit straight out of the box.

In addition to the dog mine, mentioned earlier, there are currently four other tipples under construction, and two that are finished, ready for installation on the layout when the time



arrives. One of these tipples is a kit for the Mill Creek Coal and Coke from BTS.

This is a massive structure, and will be the primary tipple on the layout. This structure is very interesting in that you have to add your own mine trackage. If you want to have some “real” fun, try laying code 40 rail for mine trackage and kick switches (single point turnouts that move by kicking them). This kit is still under construction due to its massive size and the development of the diorama for it.

Of the two finished tipples, one is an Industrial Heritage Models kit, Riley Coal Company, based on a drawing by Charles McCoy of a soft coal tipple in the March, 1976 *NMRA Bulletin*. This kit is long out of production; but it does have the distinction of being one of the first laser kits that was



**9: Rear of Martinsburg Tipple with the hoist house and changing office. The garage is scratch built using plans from the Coal Mine series by Jack Work in 1959. The corrugated walls and roofing are the new corrugated paper from Northeastern Lumber.**



**10: End of Martinsburg tippel showing the run out trestle. Across from it is the open end of the garage. A corrugated blacksmith shop will be added in the near future. It is also from the Jack Work articles.**

produced. The design is for a tippel that was used as a truck dump for a very large strip mine, but with very little effort it can be changed into one that is serviced by mine cars with just the addition of some track and then letting it disappear into the backdrop.

The second finished tippel is the Martinsburg tippel by American Model Builders. This is a small shaft tippel that served by both the railroad and trucks.

The other two tippels that are under construction are the Joller tippel from the East Broad Top (“Modeling Miller Coal Company’s Joller Facilities, Part I, Part II, and Part III,” *Timber Transfer*, Volumes 13, Numbers 2, 3 and 4, 1996-97 by Ron Pearson), and the White Rapids tippel that was built in a series of articles in *Model*



*Railroader*, October, November, and December, 1959, by Jack Work. Both tipples are very complex, with multiple buildings, and represent three different types of mines.

The Joller tipple is unique in that it has two types of mines, a drift mine and a shaft mine that it serves. The White Rapids tipple serves a slope mine. The different types of mines are as follows: A drift mine has a horizontal shaft directly into the hillside where a coal seam has been exposed. A shaft mine is a vertical shaft that goes deep underground, and the coal, ore, or other products are brought to the surface in buckets. A slope mine is on an angle, and the mine cars are brought to the surface with cables. Each type of tipple associated with these different mining techniques has a distinct shape. The shaft tipple is the most identifiable with its tower and hoist house.



**11: Front of the Martinsburg tipple showing the run out trestle and the loading chutes for the hopper cars. On the left is the truck chute with a 1934 Ford dump waiting for its next load. Mine cars will be added to the trestle.**



**12: Close up of the rear of the company houses at Adams. These structures were scratchbuilt using board by board construction. More detail will be added in the future when these are installed on the layout.**

Slope mines are a little more difficult to distinguish from drift tipples, but a hoist house without the tower is usually a dead giveaway. An overhead trolley system is the spotting feature for a drift tipple.

It was not unusual to have multiple tipples close to each other tapping different coal seams in the Appalachian fields. It is also not unusual to have multiple tipples tapping into the same seam, much like the ones on the East Broad Top at Robertsdale or the Mann's Creek at Clifftop. These are just two examples of where this occurred. Don't get hung up on just having one tipple on the whole railroad if you are modeling the coal industry.



The third most numerous structures on the layout will be company stores. While there were stores constructed of brick, for the most part they were of wooden construction and all of them had a family look to them. For this layout, there will be four company stores. Three will be based on the buildings on the Buffalo Creek and Gauley and will be at Dundon, Swandale, and Widen. These were large, multiple-story buildings with feed buildings as annexes. The only exception to this will be the store located near the Joller tipple (Pearson Coal Company). This will be an expanded Sodaville country store from Sidetrack Laser. I took a background kit and added a rear annex to the building to enlarge it.



**13: Close up of the rear of the Company houses at Adams. These structures were scratchbuilt using board by board construction. More detail will be added in the future when these are installed on the layout.**

Other structures will include a company-owned dairy, located in Coal Valley. This will be based on the prototype at Cressmont, WV on the Buffalo Creek and Gauley. At Adams, on the Turtle Creek extension, will be a bank, café, and post office, as well as additional structures in support of the coal tipple. At Oak Crest, will be an open-air engine shed plus other structures that are still to be determined.

**“Although the primary reason for the railroad's existence is coal, there still is the need for other types of cars.”**

The motive power for the layout is three rod locomotives, East Broad Top numbers 11, a 2-6-2, and 12, a 2-8-2, and Nevada County Narrow gauge 9, also a 2-8-0, that has been changed to a coal-burner. East Broad Top M-1 gas-electric with a trailer will provide the passenger service, and two Mann’s Creek 32-ton Shays, 5 and 8, will work the mines because there aren’t turning facilities at the end of the line. Of course the rod engines could operate like the C&O did on their coal branches and back down the branches. They also operated with two cabooses as well, front and rear. All of the locomotives and the gas electric are being changed to DCC.

Over the last several years, I have been accumulating rolling stock for the layout. Most of my hopper fleet is C&BT Car Shops EBT 35-ton cars. Eventually, there will be 10 of the 30-ton hoppers in the fleet, consisting of Funaro and Camerlengo kits and cars cast from masters I made. At least two of the wooden hoppers that the EBT had from the Hancock and Calumet will be in the fleet as well. A representation of ET hoppers will be on the layout as well, for variety.



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Although the primary reason for the railroad's existence is coal, there still is the need for other types of cars. Boxcars are needed for carrying merchandise to the company stores, and feed for the annexes, plus numerous other items for the mines. These are represented in the fleet by EBT wood and steel boxcars. Both types of ET boxcars are also represented.

On occasion, there will even be standard gauge cars with narrow gauge trucks on them that show up. Tank cars are also in the fleet, with two from the ET and two from the EBT. I have seen interesting photos of a tank car being unloaded on the ET where the hose was run across the main line to a tanker. This would make an interesting scene on a model railroad as well.

The approach I am taking to develop and build my railroad may not be for everyone. For myself, it is the culmination of over fifty years in the hobby and trying some, if not all of the ideas. Some of these ideas have stood the test of time, and in some cases

with the changes in materials, we use have gotten better and we still use them.

Others are best left unmentioned. I hope you enjoyed our first journey into the world of narrow gauge and shortline railroads.

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# Weathering Artist Mike Morrison

3 day photo shoot



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## What's neat this week column

by *Ken Patterson*

1



1: Both CV RS-11 (Atlas) units are weathered with artists oil paints right out of the box. Mike Morrison tried to match prototype photos, but decided to take the units a little further and make them look like they spent long days in the north woods.



**M**ike Morrison, a member of the Rustbucket group, came all the way from Alaska to attend the St. Louis Prototype Modelers show in August. What a terrific guy, and funny, too.

Mike is a weathering artist in N, HO and O scales. I shot stills and video of his HO and O work in three shoots over three days.

Day One was overcast, so the scene was lit with 3000 watts of light to make his O scale models look good. Day Two was sunny and perfect – lots of train switching footage for the video and great stills. In the video, I show how to shoot a photo using Helicon Focus software on a wonderful Central Valley train. I interview Mike and he explains his weathering philosophy.

Day Three was a night shoot with perfect people shots and freight car stills. The sounds of the night add to the ambiance

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of what is my best and longest video to date, 17 1/2 minutes. There is a prototype runby that mixes models with scene, accuracy and timing, making the overall effect work surprising well, down to each car in the consist.

The real treat comes at the end of the video. Joe Stiemann gets involved by making a Soo Line locomotive come alive in a still image, complete with fantastic-looking smoke effect with real smoke.

It took the work of four people to achieve the shot. Just a fantastic behind-the-scene photo shoot with Mike Morrison, for “What’s Neat This Week.”

3



**3: Mike originally wanted to model the Chessie SD30 (Atlas) as a TORCO unit after seeing a picture of one online. He just could not patch the B&O reporting marks on the loco, so he left them. Maybe one day, but for now, this is staying B&O. All weathering done with the artists oil paints.**

4



4: The SP/UP SD50 (Athearn) is a time traveler. Mike just hammered it. He found prototype pictures of the UP/SP patched units, and they are not this faded or rusted up. Maybe they will be after another 10 years of heavy use. All weathering was done with artists oil paints, and Microscale decals were used.

5



5: Mike weathered this Southern waffle box (Exactrail) right out of the box. The white marks and yellow striping are Microscale decals.



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6



6: On the SOO F7 (Intermountain), Mike added a Microscale ACI plate and called it a day. Love that bloody nose!

7



7: The AGR box car (Athearn) is loosely based off the prototype. He added Details West air hoses and used balsa wood for the tack boards. All weathering done with artists oil paints.

8



8: Walthers Front Runner was weathered right out of the box. One day he might add some air lines to detail the model.

9



9: All weathering on this DRGW box car (Atlas) was done with artists oils.



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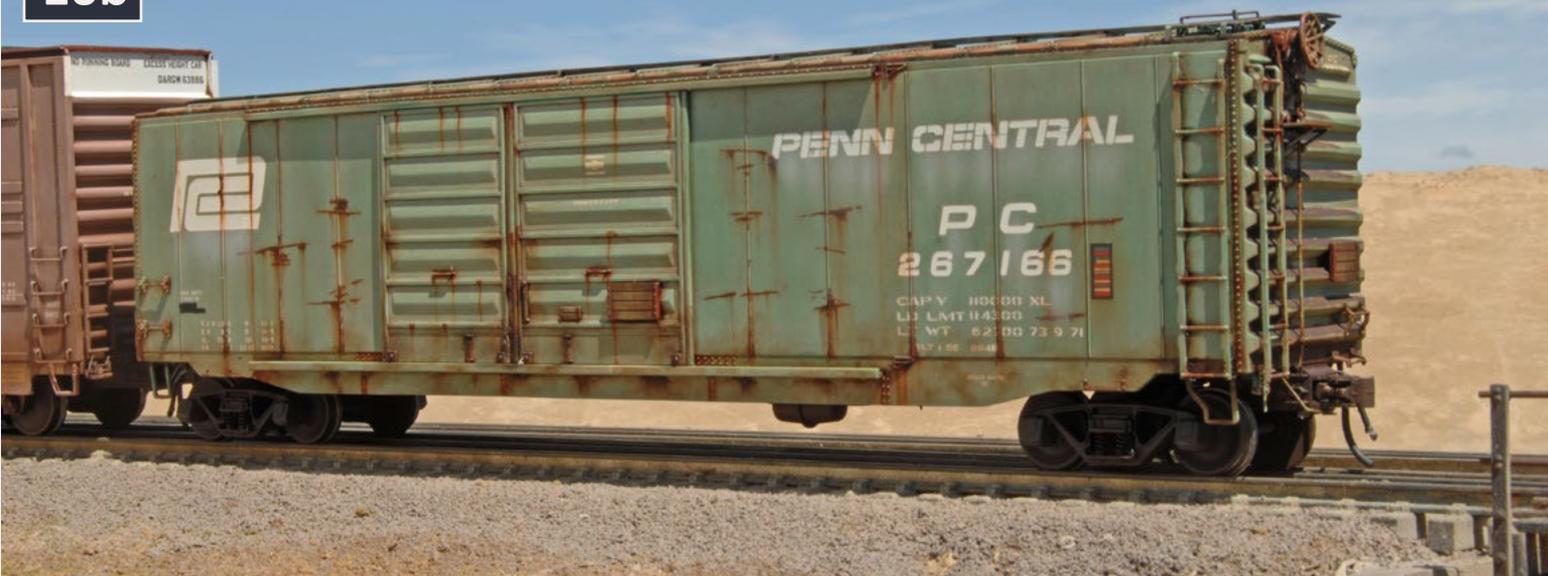




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10a-10b: The bleeding heralds on the Penn Central box car (Atlas) were done with Tamiya weathering chawks. ACI plates are Microscale decals.

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11: Mike originally could not find any prototype pictures for this Boise Cascade car (Atlas), so he just laid into it, using other pictures of Evans box cars for reference. His buddy Cal found a picture of one, but it was “newer” in the picture. Microscale decals were used for the patch, lube data, and ACI plate, and balsa wood was used for the tack boards. Weathering is with artists oils.

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What's neat - 6



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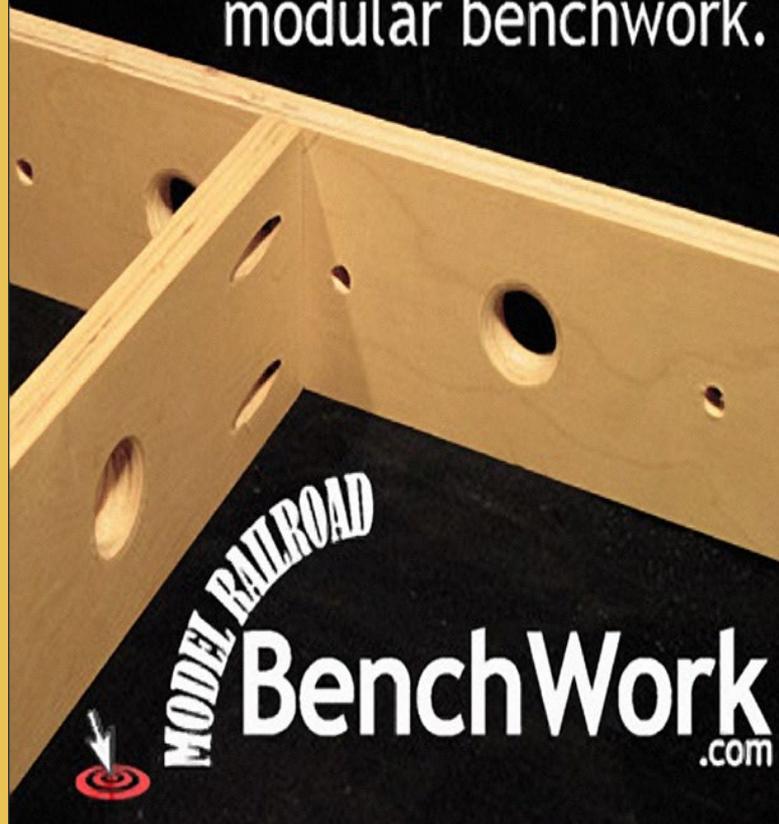


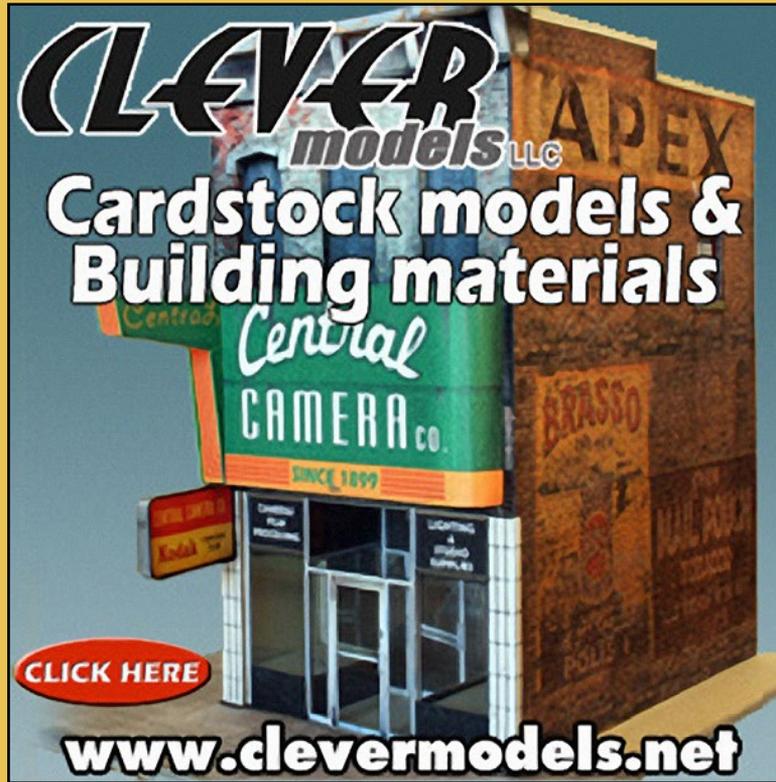
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# Build a shoofly scene

– M.C. Fujiwara

Model photos by author



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## From a John Armstrong sketch to super-detailed signature scene ...

**W**hen I returned to the hobby a few years ago and read John Armstrong's "Track Planning for Realistic Operations (3rd Edition)" (Kalmbach, 1998) for the first time, I was struck by the simplicity and story potential of his small sketch of a "shoofly" (page 123). A shoofly is a section of track, usually laid down on a temporary dirt embankment, that bypasses a washout or construction site on the mainline and allows rail traffic to continue while the main is repaired or a new bridge constructed.

What a great idea for a scene on a layout! The scene doesn't take up much room, requires only one turnout, and provides a stage for a highly-detailed scene that shows something rarely seen on layouts: a bridge under construction. Given the kabilion bridges and trestles that people model on layouts, how often do you see one in the process of being built? Scenes that show something in process immediately create a dynamic story, a snapshot of something for the viewer to participate in rather than just telling him or her to enjoy what's finished.

Armstrong's shoofly sketch stuck in my brain for quite a while as I built some small practice N scale layouts. The largest

1



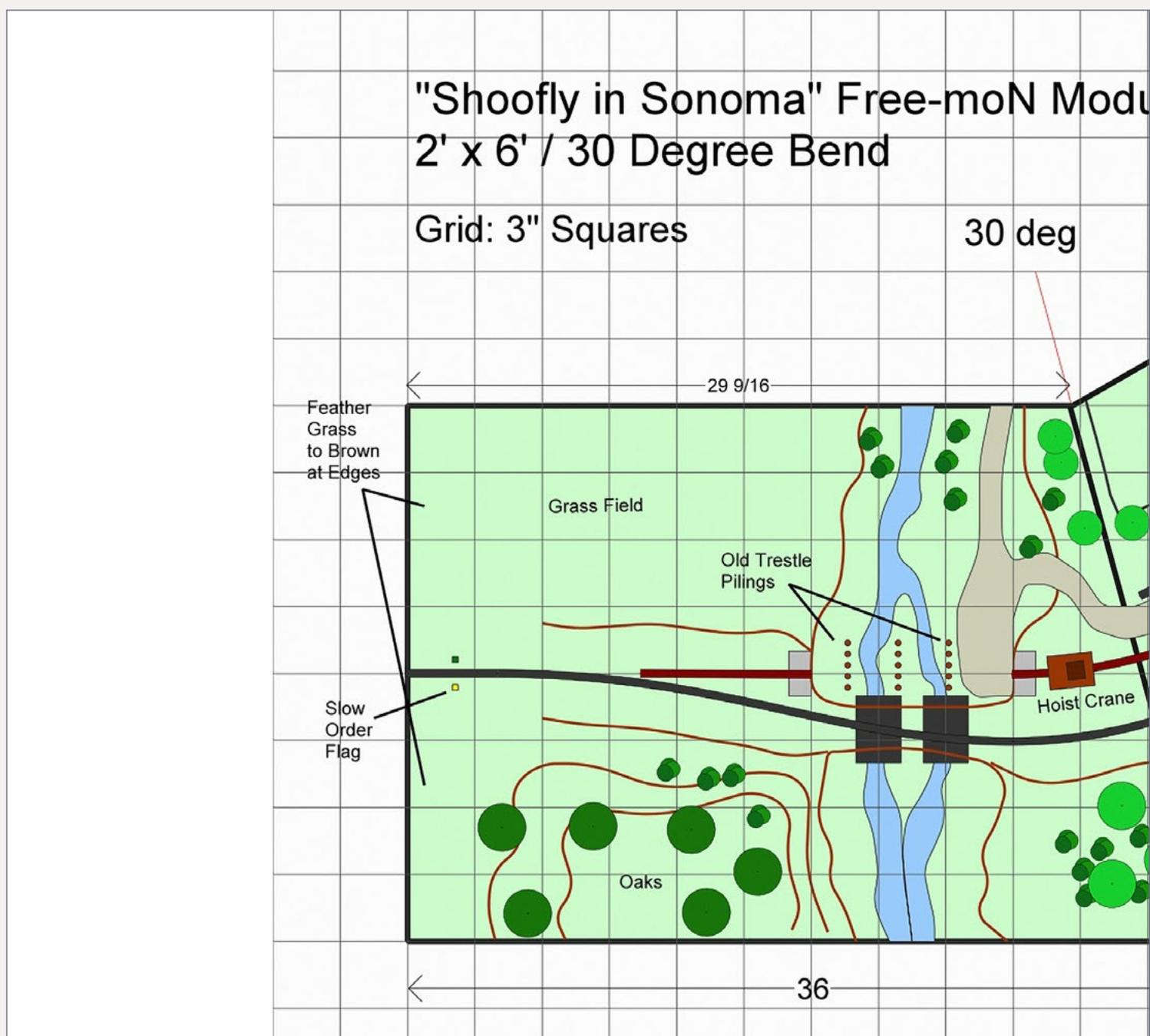
**1: California Northern 203 pulls a cut of coal cars slowly over a shoofly in Sonoma on a sunny California spring day.**



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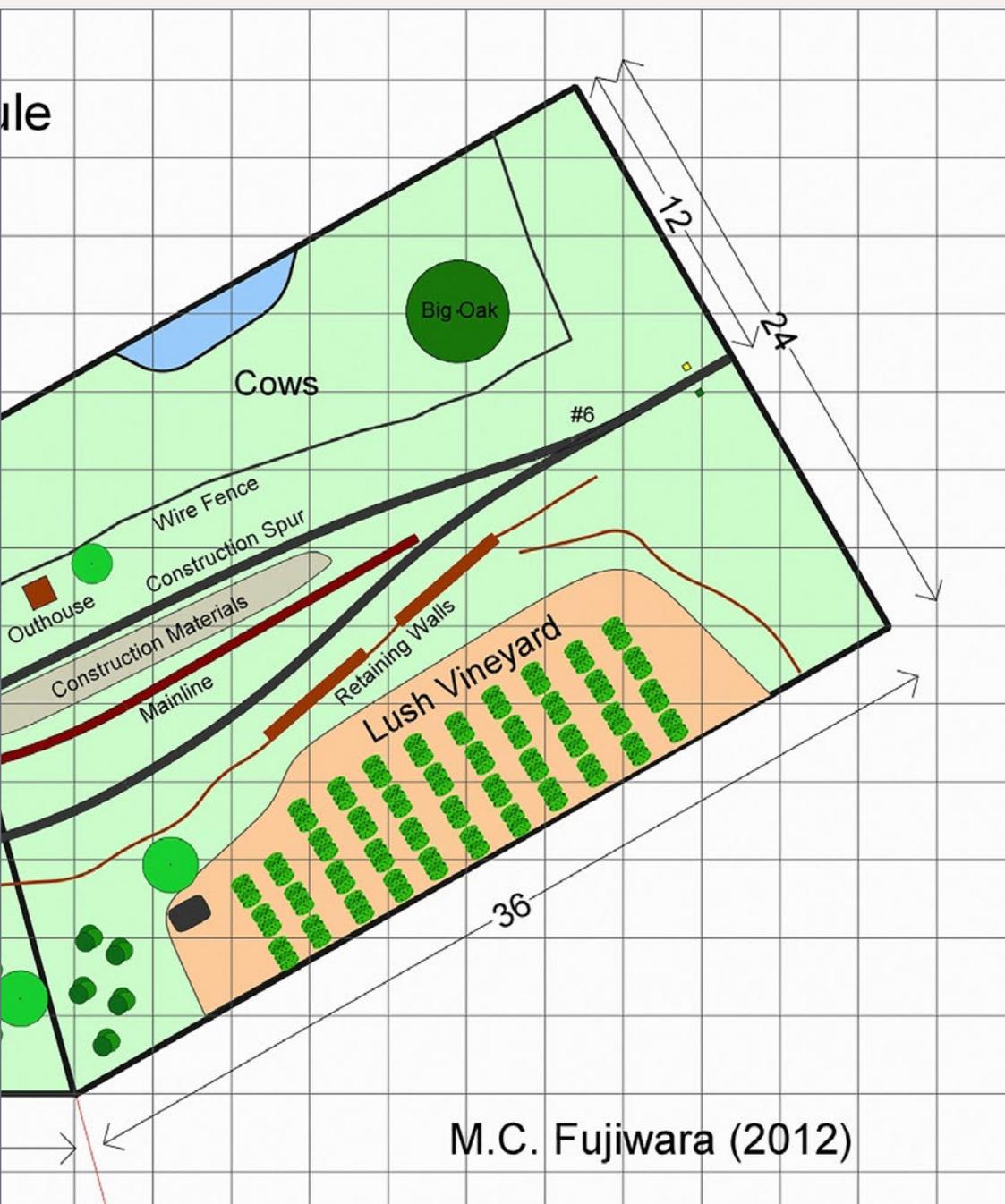
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## 2a-2b: A simple design, based on Armstrong's sketch, set in Sonoma, California (zoom in to study).

was my 2'x4' Mt. Coffin & Columbia River layout (see Model Railroader for September 2012, and MRH March 2013), which featured quite a few scratchbuilt wooden structures such as a Howe truss bridge and causeway trestle, but not much room for a shoofly scene.

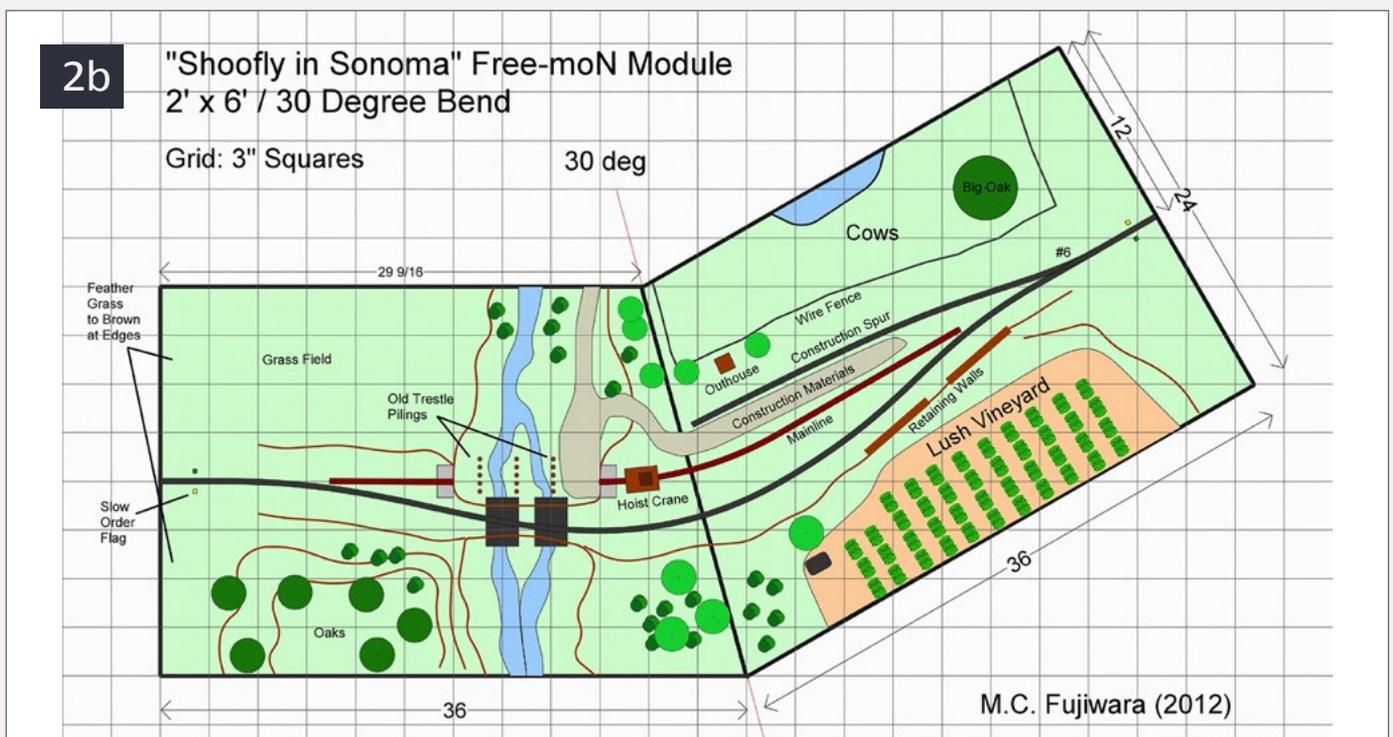
So last year, when Steve Williams of the Silicon Valley Free-moN group finally talked me into building a Free-moN module,



I knew exactly what scene to create. The Free-moN focus on a single mainline and realistic scenery and operations made a shoofly a perfect candidate for a first module, especially since I wouldn't have to build a bridge (I was trussed out!), only a bridge construction scene.

I decided to set "The Shoofly" in the Northern California's Sonoma Wine Country because it is not only local and beautiful, but also because I wanted to try my hand at making a vineyard, as well as the ubiquitous oaks that stand sentinel on the green and yellow hillsides.





## Layout Planning

The “Free” of Free-moN can be deceptively intoxicating: between the standard end plates I can do whatever I want! Full yards! Turntables! Turnback loops and winding grades up into dramatic mountain passes! And, while you can realize all those free-ranging dreams with some careful planning, the Number One Free-moN module design consideration actually has nothing to do with minimum radii, turnout frog number, or length of train, but with ... your car.

Measure the interior for the space you have to transport the module. The most high-detailed, creative module is useless unless you can transport it to the show or meet to join up with the other modules!

That’s why the #1 “unofficial” rule of Free-moN is “If you can’t fit your module into your car or truck, then IT DOES NOT EXIST!!!”

So I cleaned my Toyota Rav4, folded up the back seats, measured the space available, and determined I could build a module in multiples of 2’x3’ sections. (If I had realized then that I

could unbolt and remove the back seats, I might have ended up with a much longer module.)

In a modular layout like Free-moN, a slight curve gives more operational options and more stability to the layout as a whole, so I decided to build two 2'x3' sections set at a 30 degree angle (2).

Given the rather sharp curves for the mainline to go around the shoofly, an angled module actually helped ease both the S-curve and the overall radii. Free-moN standard mainline radius minimum is a generous 22" so the long modern freights and passenger trains look good.

**“In a modular layout like Free-moN, a slight curve gives more operational options and more stability to the layout as a whole...”**

In addition to the bridge-building scene at the center, I wanted to include some signature Sonoma scenes such as a vineyard, a cow pasture, and some rolling hills riddled with yellow mustard flowers and oaks. I had never made grapevines, oaks or pastures, but I firmly believe that each new model railroading project should challenge your modeling skills in some way. Learn by doing!

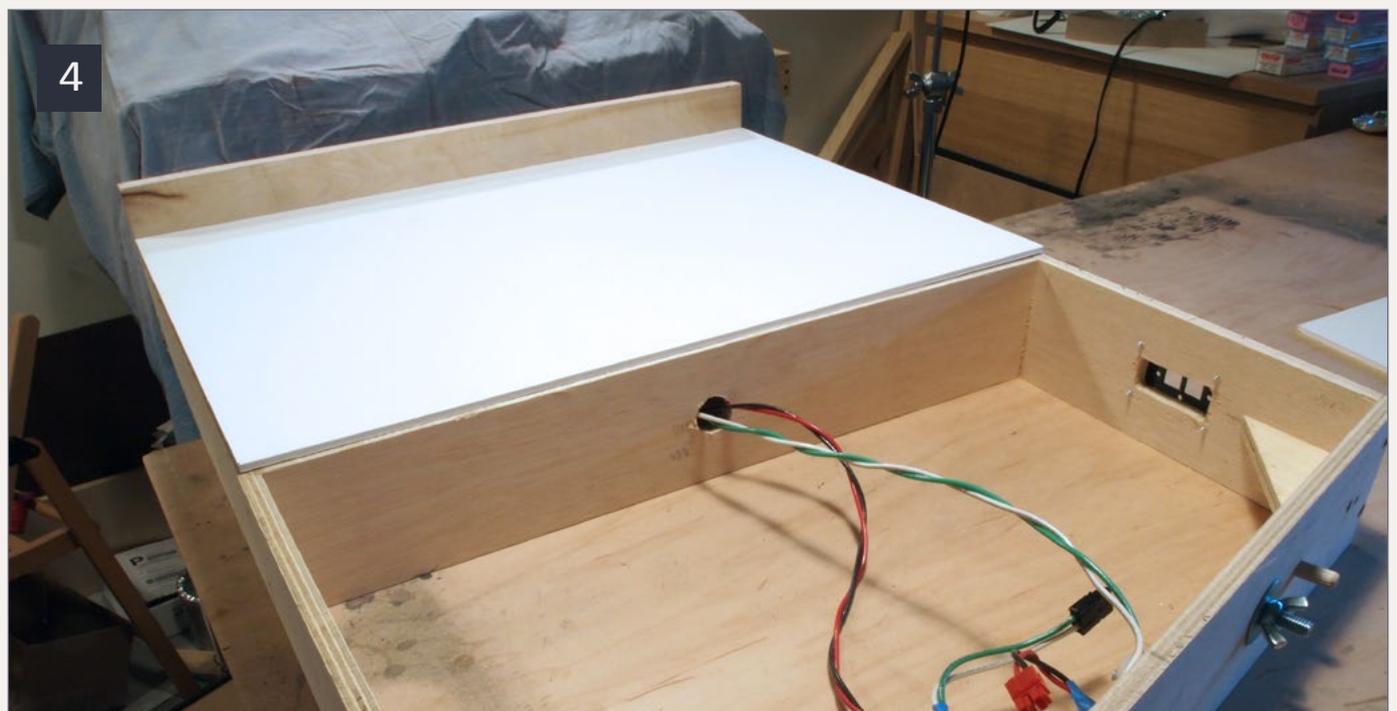
I set the module width at 24" wide, mainly because, first, that's the "recommended practice" called for by the standards and, second, that's what Steve Williams had on his module. However, after building and operating many more modules, the voice of experience has taught all of us that 16" to 18"-wide modules are optimum for operational potential, scenic expression and transportational ease.



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**3-4: Free-moN requires  $\frac{3}{4}$ " birch ply module end plates. The rest of the module is made out of  $\frac{1}{2}$ " sanded plywood. While I used foam core between the frame and the 2" pink foam,  $\frac{1}{4}$ " lauan plywood would have been a sturdier choice, despite the slight weight increase.**

The more high-quality detail you have in your scenes, the more the viewer is sucked in. They don't even realize the empirical measurements of the module benchwork while you, as the module owner, will appreciate the slimmer size when transporting and storing them.

## **Benchwork Sections:**

Just to same-page our terminology: in Free-moN a “module” is a unit bound by standardized end plates, and may be made up by two or more “sections” that interface in any way the modeler wants.

**“The more high-quality detail you have in your scenes, the more the viewer is sucked in.”**

Free-moN standards call for  $\frac{3}{4}$ ” birch plywood end plates. The high-quality ply ensures the non-warping surface necessary for clamping smooth butt-joints together but unless you have the arm strength of (Charles) Atlas, you don't want to build the entire module out of the heavy wood. So I glued-and-screwed  $\frac{1}{2}$ ” sanded ply to construct the rest of the benchwork, with angled gussets to reinforce the crossbeams and sectional end pieces (3) An adjustable miter chop saw made the angles a snap.

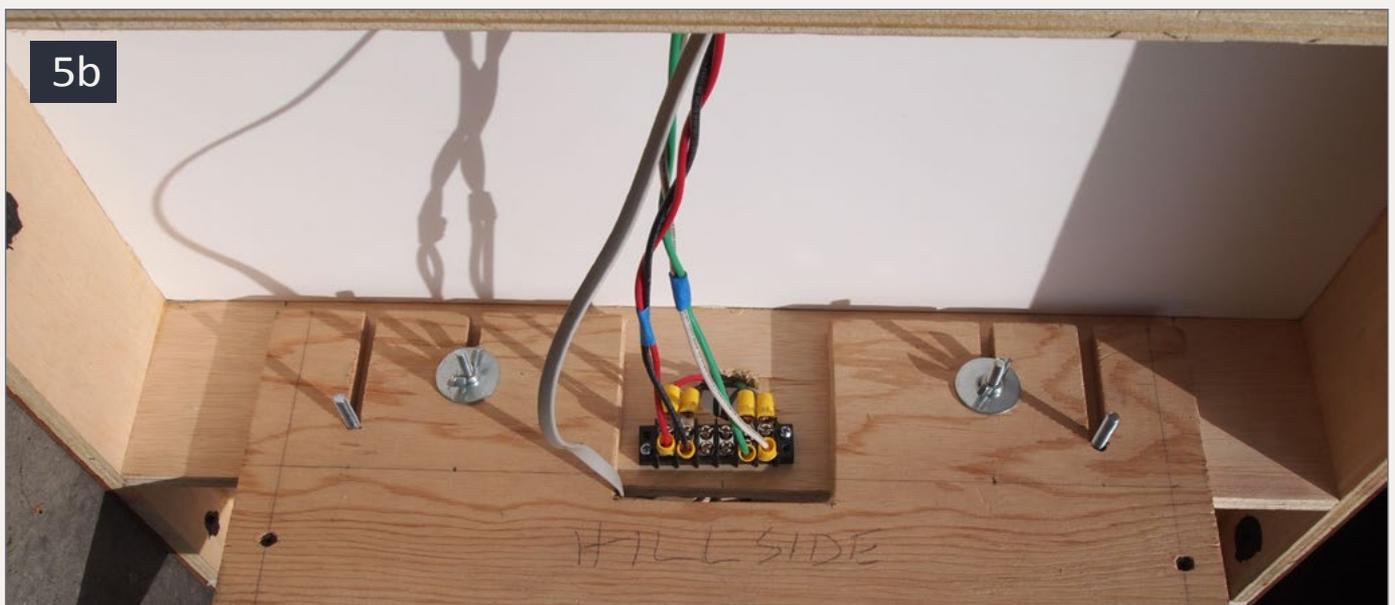
Mindful of using more wood with its increased weight, I glued a section of foam core under the 2” pink foam (4) to cap the ply sections. While the sectional benchwork has held up well over the past two years, the Voice of Experience notes that a  $\frac{1}{8}$ ” or  $\frac{1}{4}$ ” lauan baseboard would have bonded better to the framework, provided a sturdier base for the turnout control, and probably prolonged the structural life of the module over time.



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**5a-5b: At first I passed 1/4" bolts through both cross supports and leg plate. Cutting notches to allow the legs to slip onto the bolts saves much time and energy during setup and take down.**

I also did not extend the section end plates up to bookend the foam, instead allowing the foam from each section to butt up against each other. Again, it's held up so far, but The Voice of Experience says it's better to have a solid butt joint with ply, rather than only the softer foam, to extend the life of the module, especially given the constant set-up, take-down and transport.



**6a-6b: Using  $\frac{1}{4}$ " bolts in T-nuts as leg levelers was cheap but operationally time-consuming and tiring. Rockler leg levelers are well worth the cost and are easy and quick to adjust.**

## **Legs:**

The legs are 2"x2"s with a simple frame of  $\frac{1}{2}$ "-plywood stiffening plates affixed to top and bottom. The top plate extends 4" above the legs with  $\frac{5}{16}$ " slots cut from the top down, allowing them to slip onto the  $\frac{1}{4}$ " bolts attached to the cross-supports (5b). Originally I had loose hardware to pass



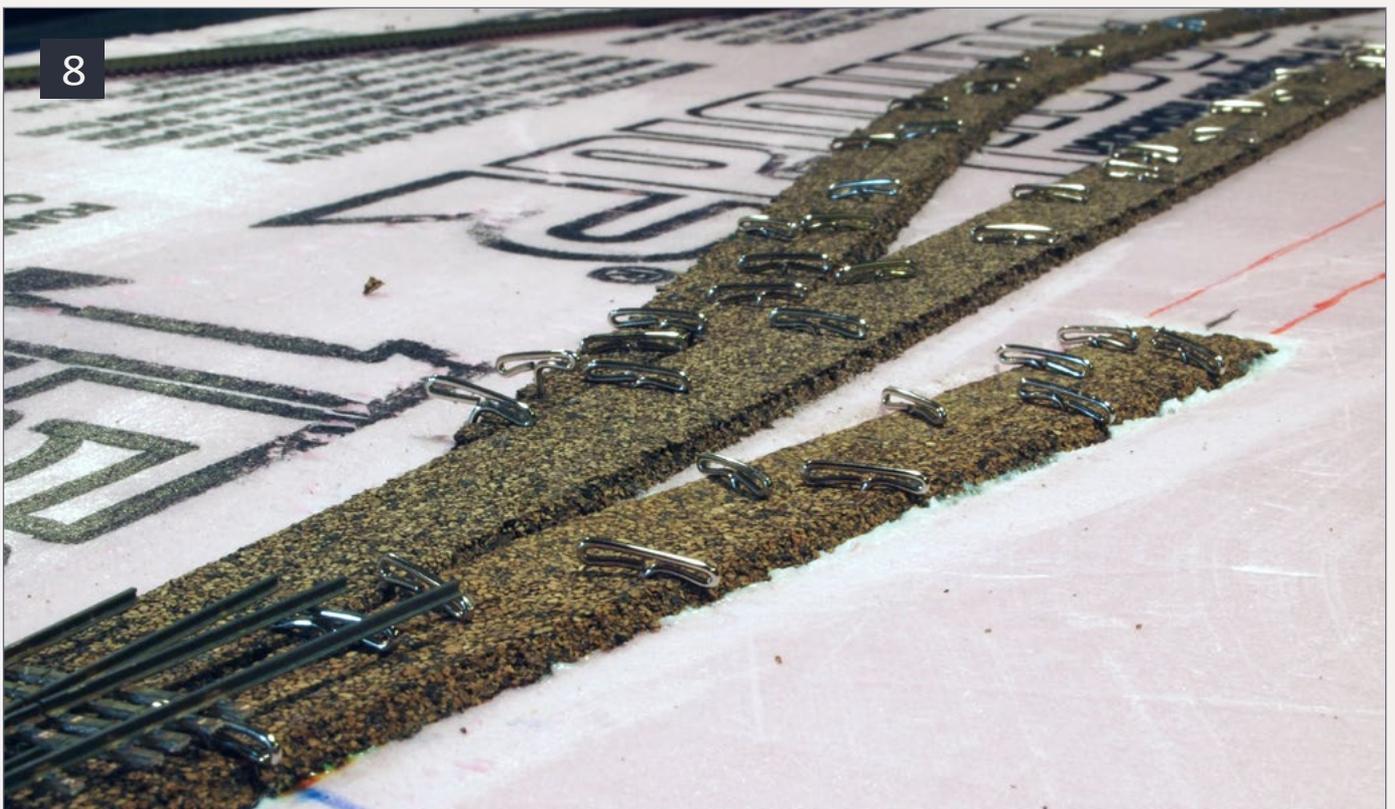
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**7-8: Trimming about 1/8" off of the center of the cork roadbed strips gives the track a more branchline appearance. T-pins hold the cork in place while the caulk cures. The transition from roadbed down to ground was made by sanding down the pink foam into a sloping channel.**



through holes in both cross-support and leg-plate, but securing the bolts to the cross-support with Gorilla Glue and cutting the channel in the leg plate allows for a much quicker “slip-on” system, the ease of which proves invaluable during setup and take down (5).

**“I used clear silicone caulk to secure both the cork to the pink foam, and the flex track to the cork. ”**

As the two module sections are clamped securely before legs are attached, only two sets of legs are necessary for the entire module.

At first, because I was building the basics of this module in a month to participate in a show, I used ¼” bolts secured by t-nuts to level the legs. Adjusting those small bolt-heads under the 2”x2” legs, over and over again, is hard on the fingers, so after nine months of use I replaced the bolts with Rockler leg levelers. The Rockler leg levelers take up 4” more space length-wise, and a true 2”x2” width-wise, but they are heavy-duty, easy to adjust, (especially when the weight of the whole module is on them) and make set-up 20 kabillion times easier. (6)

## **Track & Turnout Control**

The module required only a couple lengths of Atlas code 55 flex track and cork roadbed. As N scale cork roadbed is still very wide, I like to trim about 1/8” off from the center side on each piece (7).

I used clear silicone caulk to secure both the cork to the pink foam, and the flex track to the cork. T-pins keep everything in place while the caulk cures. (8) The trick for laying track on Free-moN modules comes at the module and section ends.



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Given the constant head-butting at the butt-joints, super-secure rails are a must.

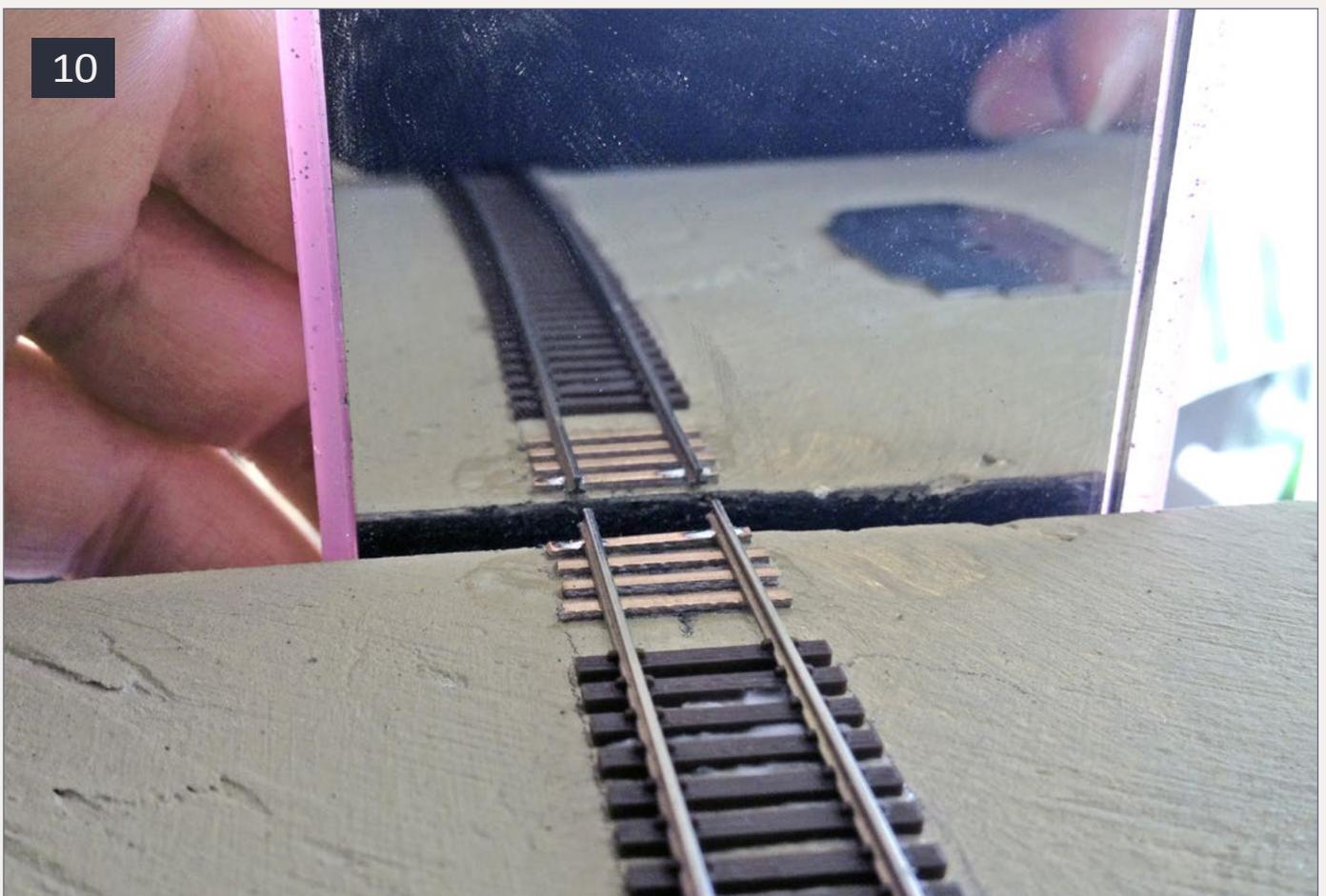
The first step is to secure the cork firmly on the birch-ply end plate: while some like to glue a roadbed-contoured wooden plate to create a firm base, I've found that just soaking the cork in wood glue makes a rock-solid base for the track. This involves pulling up the cork at the end plates and reapplying wood glue a few times before weighing it down to set.

After the cork cures, sand it to an even shape. Apply a thin layer of Gorilla Glue at the ends and place 3 or 4 PC board ties cut to standard tie length. American Tie and Timber [americantieandtimber.com/](http://americantieandtimber.com/) now produces pre-cast and pre-gapped PCB tie units for many scales. Cut away the plastic ties from the ends of the flex track and solder the rails to the PC board ties to create a secure section that will not wiggle or shift over time (9).

**“I hand built the turnout using PC board ties and Micro Engineering code 55 rail, though a #7 commercial turnout would make a fine substitute.”**

Placing a small pocket mirror square against the end helps ensure the track is perpendicular to the end plate (10). Using a broad file, carefully work the exposed rail back flush to the end plate. Go easy, as it's much easier to take more rail away than to add some later if there's a gap.

I hand built the turnout using PC board ties and Micro Engineering code 55 rail, though a #7 commercial turnout would make a fine substitute. With Free-moN, turnout control needs to be accessible on both sides of the module. Unlike NTRAK, we never know which side of the module will be the



**9-10: Free-moN modules clamp together with flush butt-joints, so the track must be firmly anchored to the end plate. We use Gorilla Glue to secure gapped PC board ties to the roadbed, then solder to secure the rails. A mirror helps ensure the track is perpendicular to the end plate.**



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“front,” so I installed a Fast Tracks Bullfrog underneath, using a piece of 0.080” styrene caulked to the foam to create a firm base plate for the Bullfrog. I didn’t want turnout control rods and knobs to extend beyond the fascia, so I used stiff music wire for rods, attached a thick styrene pad at the ends, and then secured the rods a few inches before the fascia with a metal corner brace jerry-rigged with an aluminum tube. (11)

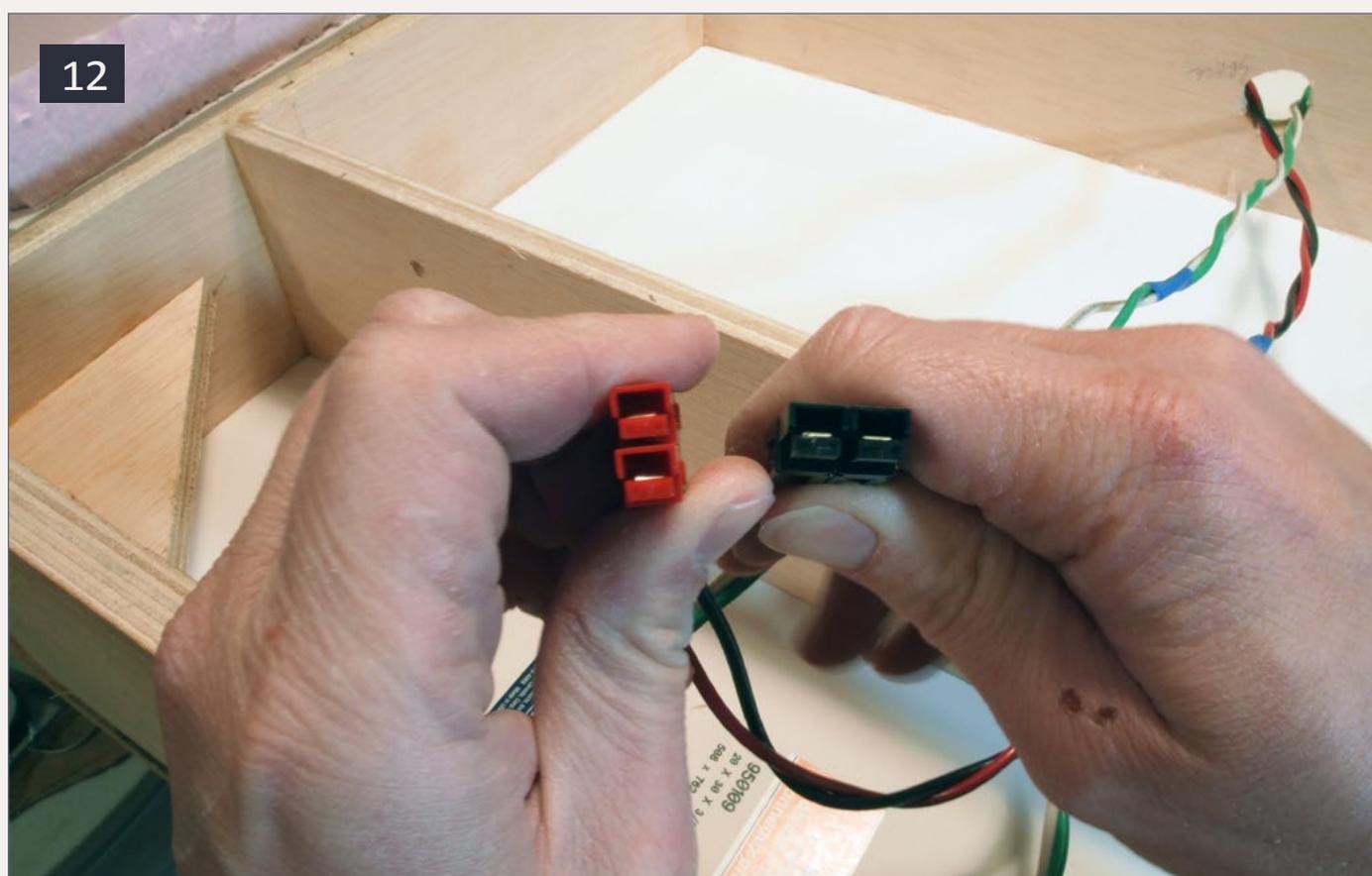
A printed symbol of a harp switch stand is secured to the outer fascia to indicate where one may slip some fingers underneath to push or pull on the styrene pad to throw the turnout points.



**11: I prefer manual turnout control, so I assembled and installed a Fast Tracks Bullfrog with homemade control rods made out of music wire. Given the 50” layout height and the 24”-or-less module width, the control rods are actually unnecessary as we’ve found it’s easier to just reach underneath from either side and throw the Bullfrog itself.**

The Voice of Experience says that control rods are not even necessary and just get in the way: given the normal 12"-24" module widths, operators are able to easily reach under modules from either side to throw the Bullfrog itself, especially with a short piece of dowel or paintbrush handle attached to the mechanism.

While the turnout was intended for work trains and delivery of bridge-building supplies (metal girders, rock fill, rebar, retaining wall wood, etc.), we've had some surprising visitors on the siding, including Budd RDC cars and wayward freight cuts desperate for refuge from highballing through trains.



**12: Free-moN modules use Anderson Power Pole connectors for both the track power bus (red) and the accessory bus (black). For the track power bus, the “Left Over” rule — looking from the end plate, the bus wire with feeders to the left rail goes over the right — ensures proper polarity no matter which direction the module faces.**



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After slipping stripwood replacement ties under the turnout rails, I spray-paint my track with Floquil Grimy Black. On past layouts I would touch up around the turnout points with paint and a Microbrush, but paint just gums things up. Now I stain both rails and replacement ties around the turnout points with NeoLube. Not only does it get the rails and ties dark, but it also improves throwbar movement.

The mainline ballast is a mix of Woodland Scenics Fine Grey and fine-sifted gravel dust. The mainline ballast goes through right up to the “new” bridge, while the replacement shoofly track base is pure dirt to visually reinforce the temporary nature of the track.

While it appears a busy scene, there are only three sets of feeder wires: Main left section, main right section, and spur. The “main” around the bridge construction area doesn’t need any power as the rails are isolated. Connect the feeders to the track bus, solder on the Anderson Power Pole connectors at each end of the sections, and you’re ready to run trains. (12)

## **The Signature Elements of a Scene**

The availability of ready-made materials for scenery has expanded exponentially over the last few years, especially in the realm of static grasses and tufts. The key to encapsulate a specific scene and location still comes down to identifying and replicating the few signature elements of a particular place.

As I set the Shoofly in the Northern California confines of Sonoma County, I needed to include such “Wine Country” scenic elements as a vineyard, cow pasture, oak trees and the ubiquitous yellow flowers and miner’s lettuce that blanket the rolling hills through our rainy springtime. (13)



**13: A scene set in the Sonoma Wine Country in spring isn't complete without vineyards, cows, oak trees, and rolling green hills flecked with yellow flowers. Never having made any of those before, I chose the scene as a challenge to my modeling skills.**

## **Ground Cover & Static Grass**

After carving the pink foam into shape, I painted the whole surface with a tannish latex paint I found in the “mis-tint” bin at the local hardware store. While the paint was still wet, I sprinkled some baked and fine-sifted tan and brownish dirt over the whole area, followed by various fine-ground foams. After misting with 70% isopropyl alcohol, I used a pipette to saturate everything with a 50-50 mix of white glue and water. And while that was still wet, I used my home-made 12V static-grass applicator to lay down a mixture of Woodland Scenics (2mm) and Heki (4mm) grasses. Free-moN Standards call for brownish ground cover at the end plates to ensure color-palette



continuity between modules, but I wanted the Shoofly scene to portray Sonoma in the spring, so I quickly graduated the grass from browns at the edges to greens for most of the module. Animal paths and hiking trails were created by dragging the smooth top end of a pair of tweezers through the static grass before it dried. (14)

Later I went back and added more fine-sifted gravel and “churned mud” (craft paint and Durham’s Water Putty) to the construction areas. The swaths of yellow blossoms on the



**14: A late 1800s home-built wooden boxcab pulls a reefer and a pair of ventilated boxcars past some towering oak trees. The ground cover includes several shades of fine-sifted real dirt, gravel, various colors of ground foam and a blend of 2mm and 4mm static grasses.**



**15: Cows seek shelter from the warm California sun under the shade of a solitary oak tree. More ground foam and very little static grass created the effect of shorn pastureland, and rubbing fingers around the pond exposed the dirt and smoothed down the granules for a baked-mud effect.**

hillsides I created by brushing the grass tips with diluted white glue and then sprinkling on fine yellow ground foam. The sprinkling lays the yellow foam (or green, for Miner's Lettuce) down a bit thick, but going back carefully with a vacuum thins the "flowers" and "leaves" out into a more natural pattern.

## **Cow Pasture**

Cows are nature's lawn mowers, so I kept the static grass in this area to a minimum. Given the heavy rains in spring and the few



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number of cows recently released into the pasture, it's OK that some areas still haven't been "mowed" (moo-ed?) completely down (15).

The watering hole is a thin layer of Magic Water tinted with Floquil BNSF Heritage Green and Grimy Black. Silfor tufts rim the edges, and the rest of the area surrounding the water was laid bare and made "muddier" by rubbing a finger to remove any grass and ground foam that got too close.

**“The signature scenic element of the cow pasture, however is a single, large oak tree that provides shade for the cows...”**

The 3-wire fence that rings the perimeter of the pasture turned out to be an exercise in patience: after poking holes at 8'-scale-foot intervals and then planting stained scrap strip-wood for posts with CA, I tried wrapping Berkshire Junction E-Z Line around each post as I went down the line. Mind-boggling tedious and a bit hard on the eyes and fingers in N scale! Then I figured (fingered?) out a short-cut: tack the E-Z Line to each corner post with thin CA, then go back and wrap the line around each post, tease into an even position, and secure with thin CA. The Voice of Experience says that three lines of wire look better than two, and that the time spent on a wire fence is well spent to add a great detail to a scene. See my "[How-To String an E-Z Line Fence](#)" video on my YouTube channel.

Detailed fences like these, in addition to looking great, can also serve a practical function: by running one side of a wire fence near (but not right on) the edge of the section split, it draws the eye away from the slight line in the grass when the sections



**16: The wire fence approaching the module's edge keeps the cows out of the construction zone and also distracts the eye from the section joint just beyond it. Looks like Farmer Brown's got some repair work to do on that last post.**

are joined together and helps create a continuous landscape across what could be an incongruous chasm. (16)

The signature scenic element of the cow pasture, however, is a single, large oak tree that provides shade for the cows resting among its gnarled roots and a compositional counterbalance to the oak-covered hillside at the other end of the module. Creating the tree is covered in the next section.



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**17: California Northern 203 creeps over the shoofly with a coal drag. Basic ground cover is similar in a variety of locations across continents, so you need to really spend the time on those details that are specific to a particular place. Nothing says “Springtime in Northern California” like great oaks standing sentinel over green hills flecked with yellow flowers.**

## **Oak Trees**

Not much says “Northern California” more than old oak trees twisting over gold and green grassy hills. (17)

While there are a few commercially-made oak trees available on the market, they are expensive and not quite correct in color and texture for Northern California.

After stripping a few 6” sections of 16AWG stranded wire, I twisted the strands around a bamboo skewer to create a trunk and then started twisting small sections of wire into major and minor branches.

This is a time-consuming task, best done while listening to a game on the radio or sitting with the kids while they do their homework. (18)

To create the bark texture over the wire frame I applied 2 or 3 separate coats of a paste of white glue and fine-sifted sawdust. (19) After that completely dried, I spray-painted everything Floquil Grimy Black and then misted highlights on with Floquil Concrete.

**“After stripping a few 6” sections of 16AWG stranded wire, I twisted the strands around a bamboo skewer to create a trunk and then started twisting small sections of wire into major and minor branches. ”**

When the paint was dry, I dabbed Aileen’s Clear Tacky Glue on the branch ends and affixed thinly teased-out tufts of Woodland Scenics polyfiber to create the smaller branches because it was what I had and it is already green (20). You can use generic polyfill (same price for 200-times larger bag) but you have to tease it and paint it before use. Since the polyfiber is green, only a light dusting of Grimy Black from below is necessary to create the illusion of full branches. Douse with extra-hold hairspray, and then sprinkle dark green coarse ground foam, followed by lighter green fine ground foam for leaf-top highlights. (21)

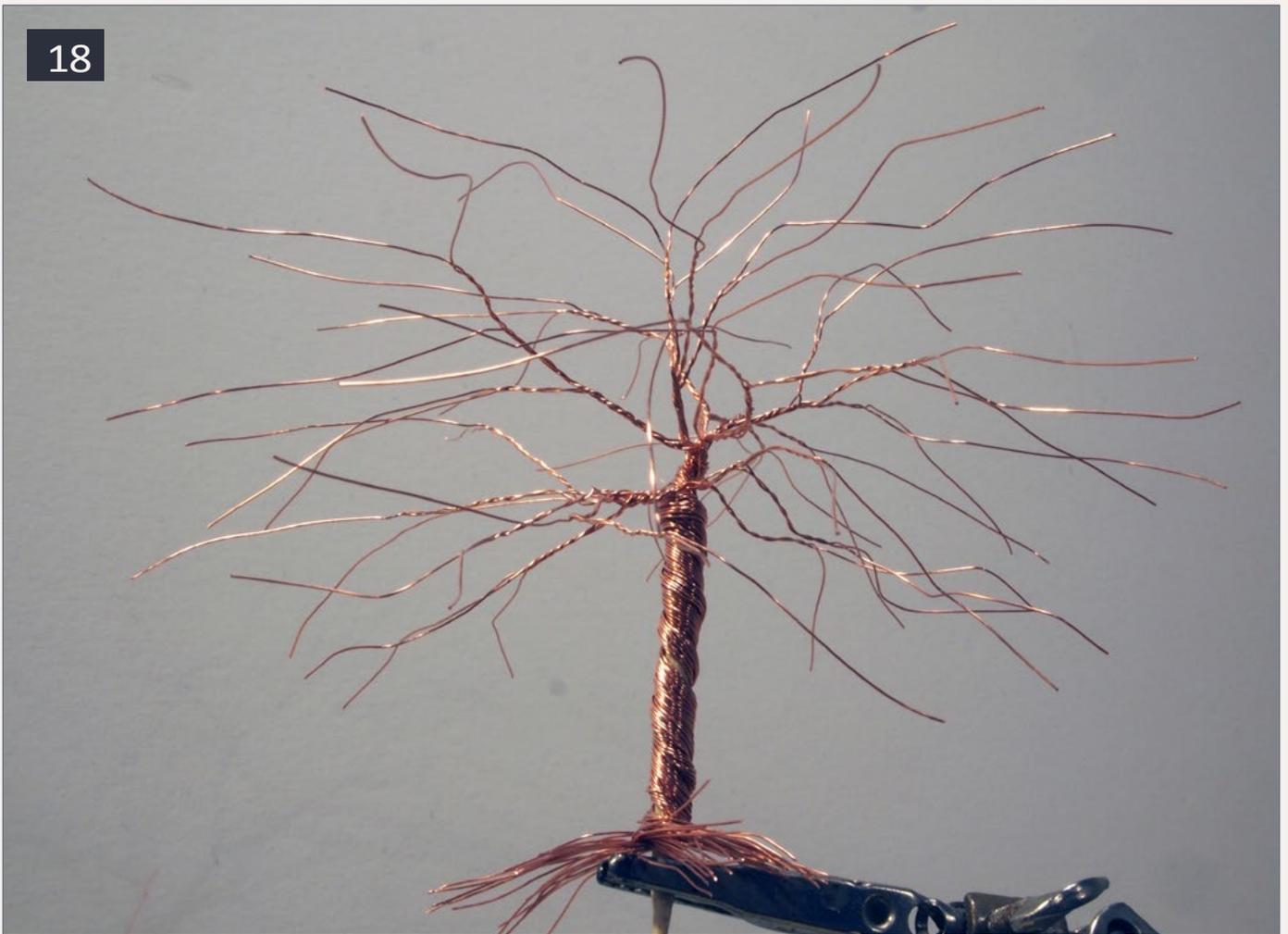


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**18-21: Making twisted-wire oaks takes about 1-1½ hours for each tree (not including drying times), but, as the super-detail that signifies the location of Sonoma, CA, it's time well spent. Fortunately, you need only a few to suggest many more!**

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**22: Enjoying the shade provided by a deep-rooted oak, cows keep an eye on a Southern Pacific NW2 as it shoves gons into the shoofly construction siding, While many oaks have branches that twist down to the ground, it's OK to keep yours up to reveal the great sawdust-&-glue bark texture.**

Poke a hole in the pink foam, glue the tree in, bend the roots into position, and then sprinkle some dirt around the roots to give the appearance of an old, firm foundation. (22)

As Northern California oaks grow mostly in their own space, a full flock of “puffball oaks” is not necessary: only six trees (and a fallen trunk) sit on the hill to create the impression of a larger landscape.

For both an abridged and a step-by-step video tutorial, see [“How to Make N Scale Oak Trees”](#) on my YouTube channel.



**23: Just like a real vineyard, I had to plant stakes and wire them before planting the vines. Stakes are spaced 24' apart, vines about 8' apart and rows are 8' to 9' apart to accommodate tractors and other equipment.**

## **Lush Vineyard**

A single mature grape in N scale is 0.003125"! Fortunately, I'm modeling Sonoma in the spring, and before the bunches of grapes would bow down the boughs. That still left the "simple" challenge of creating rows of vines and mature leaves across a good swath of scenery. When in doubt, follow the tried-and-true footsteps of prototypical planting.

Using scrap stained stripwood, I used CA to stick stakes into the ground at 24' intervals, leaving each stake 5'-6' high. Rows are 8'-9' apart to accommodate tractors and other machinery.



I leave a slight dusting of static grass between tread tracks. Slightly larger sections of stripwood were secured at 60 degree angles at the end of each row, to bear the tension of the “wire.” Using the same technique employed to create the cow pasture fence, I strung two levels of E-Z Line down each row, and Lush Vineyard was ready for planting. (23)

While a vineyard towards the rear of a layout could make do with flocked twine to create an impression, Lush Vineyard is



right next to the edge of the module, which means that both operators and audience will be up close, and thirsty for detail.

So, 182 individually-made vines it was! I stripped 1”-long sections of small feeder wire, evenly separated the strands to create a “T”, and then painted/stippled them with Liquitex Ceramic Stucco Paste. (24)

**24: While not as textured as fine-sawdust-&-white glue, ceramic stucco paste is easier to work with and dries faster, which is important when you have 182 individual grape vines to make.**

At first I tried the same white-glue-&-sawdust mixture as the oaks, but it took more applications and much longer to dry, with little improvement of



**25: 182 individual grapevines?? Why? Because “The 3-Foot Rule” is “The 3-Inch Rule” in Free-moN. With a 50” layout height, viewers are literally inches away, so those details have to be done well. Plus, the grapevines really help set and sell the scene. Plus, the vines look very cool.**

texture quality. Ceramic Stucco paste is easy, fast and looks good enough. Spray paint Grimy Black, apply a thinned tuft of polyfill, hair spray, and then sprinkle a healthy dose of light green ground foam. I used AMSI ground foam: In addition to having many colors and textures beyond those available in the mass market, AMSI is also a Northern California company based in the very region I’m modeling, so “Go local!”

Using a T-pin to punch holes at 8’ intervals, I used CA to plant each vine plant, working the leaves around the support wires.





After each row of 10-12 vines was planted, I snaked a section of green floral wire through the stakes and trunks to simulate irrigation hoses and secured it with CA. Slightly sloppy application? No problem: that's water!

An elevated water tank, spare stakes, and workers inspecting and repairing the rows help create an active scene that just awaits a few rose bushes at the row-ends (the vineyard's



equivalent to the canary in a coal mine). (25) [For a detailed step-by-step see my [“How to Plant an N-scale Vineyard”](#) video]

## **The Shoofly**

The centerpiece scene, the shoofly, shows a temporary track running on a dirt berm around the site of workers replacing an old wooden trestle with concrete abutments for a new girder-deck bridge (26).



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One of the paradoxical issues inherent in model railroad-ing involves the dynamic “live” trains traveling through static “dead” scenery, a situation which becomes readily apparent when trains pass by people frozen in position. Creating a scene with people in the middle of a job helps increase realism as the eye, following the train, catches enough cues to allow the brain to “fill in” the scene with the appropriate movement, sounds and smells of action just outside of the train’s path.



**26: A bulldozer takes a break from clearing a miscast abutment while workers, with the help of a hoist crane, raise up the rebar and wooden forms for the new. A survey crew ensures this one will line up correctly with the cast-concrete abutment across the creek. The water is low and slow but the crew needs to hurry: though warm and sunny today, the rains are on their way.**

A shoofly automatically implies action — a “story in progress” if you will — by its very existence as a temporary structure during a specific construction project that’s “on the clock.” Raising questions draws viewers in and allows them to participate in the scene: “What happened to the old wood trestle? Was there a washout? How long is it going to take? What are they going to replace the wood trestle with?”

In addition to having a scene the viewer enters *en medias res* (“in the middle of the action” and, according to Aristotle, the only way to start a successful story), I wanted the scene to show the story of bridge construction in itself. So just as a comic book artist can frame close-ups, freeze time, and offer an “exploded view” of specific details in the middle of intense action, I set up the Shoofly to focus the viewer’s eye certain sections of the scene which, taken together, tell a larger story of replacing the bridge than a single frozen picture.

**“Creating a scene with people in the middle of a job helps increase realism as the eye, following the train, catches enough cues to allow the brain to “fill in” the scene with the appropriate movement, sounds and smells of action just outside of the train's path. ”**

Any construction crew building a bridge would pour both abutments at the same time, but I wanted to show the wooden frames and rebar before the concrete pour on one abutment. Solution? One abutment was miscast and demolished. So within the same scene we see the remains of the wooden piles, a railcar crane helping build the rebar and form-framing of one



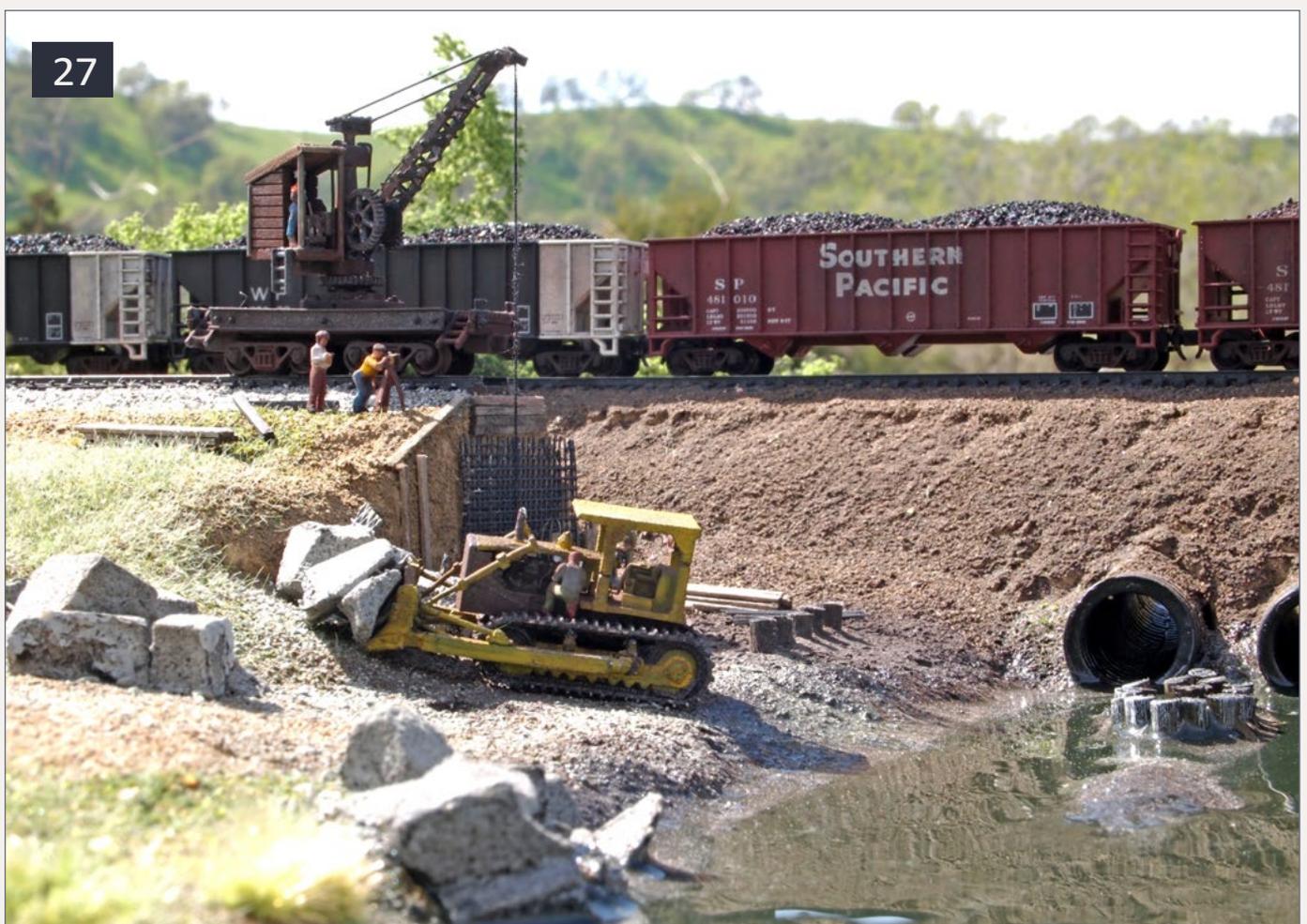
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abutment, workers removing the wood framing of a finished abutment, and a surveying crew aligning both abutments while a bulldozer clears the miscast concrete chunks. (27)

I scratched the finished abutment out of styrene, while the crumbled remains of the miscast abutment are the crumbled remains of balsa foam with some wire and screen mesh pieces sticking out. The rebar was shaped from a screen door repair patch with a few of the horizontal wires teased out from the top, and the forms created from stained stripwood. A Model



**27: Each section of the shoofly scene tells a different part of the story. The remains of the wooden trestle poke out of the ground and water. Chunks of miscast concrete are being carted away, rebar and wooden forms begin to rise around the hoist crane, and surveyors ensure this time everything will work out right.**

Tech Studios hoist crane and a GHQ bulldozer provide some mechanical muscle to help get the new bridge built before the spring rains really start slowing things down.

The scene must be somewhat successful because, even after explaining what's going on and why I chose the specific moments of tableaux, people still ask me, "So ... when's the bridge going to be finished?"

## Water

The Voice of Experience says, "Pour the water last!!" No matter what material you use for water it immediately becomes a magnet for dust, dirt, foam, glue, static grass and any other type of debris floating around during construction.

**"No matter what material you use for water it immediately becomes a magnet for dust, dirt, foam, glue, static grass and any other type of debris floating around during construction."**

Or, pour a thin layer early on to mark off the water area and to seal ground around it and then do another pour at the end of construction to cover over any blemishes or trapped debris. I used Magic Water, as it doesn't smell like epoxy, doesn't crack, is easy to tint with solvent-based paints, and you can pour up to ½" at a go (which is more than enough for deep N scale water). I tinted the Magic Water with a few drops of Floquil BNSF Heritage Green and Grimy Black, which results in a muddy green color similar to many Northern Californian creeks and rivers.



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The Magic Water does creep up the sides a fair bit, especially when using real dirt for the ground cover. But as the stream is supposed to be low anyway, the higher waterline works out well. You can always place some tufts, bushes, or more “dry” dirt later along the creep area to cover it. Given how slow-moving the water is at the end of winter (it doesn’t really start raining until mid-spring), only a few Gloss Mod Podge ripples are necessary around the piers and the temporary culverts I made from cheap plastic wire-bundle tubing.

## It’s All in the Details

Urban modeling requires hundreds of small details to be believable, but a small countryside allows you to spend the time on the few little things to sell the scene: dead trees fallen over, animal paths through the grass, removed rails and ties from the mainline, cows lounging in the shade and among the exposed roots of a massive oak tree. And while I try to scratchbuild as much as I can, a single module also gives me the chance to try out a few new products with details difficult to craft. For this module I assembled and installed a “back saver” turnout throw and a D-2 Caterpillar, both offered by NZT Products. The back saver — a non-operational machine — helps establish the temporary nature of the construction siding, and the D-2 Cat — smaller than a dime — makes Lush Vineyards 160 times more productive as well as gives the workers a ride back to the barn after sweating in the hot California springtime sun. (28a-28b)

Both add a simple splash of yellow amid the great swath of green, and both contribute a significant segment to the Shoofly’s story.



**28a & 28b: A Free-moN module is a great opportunity to try out a few fine details without breaking the bank. The “back saver” dummy ground throw and the D-2 Caterpillar (both offered by NZT Products) add a lot of life to the layout, yet have enough detail to be a story all by themselves.**



## Storage & Transport:

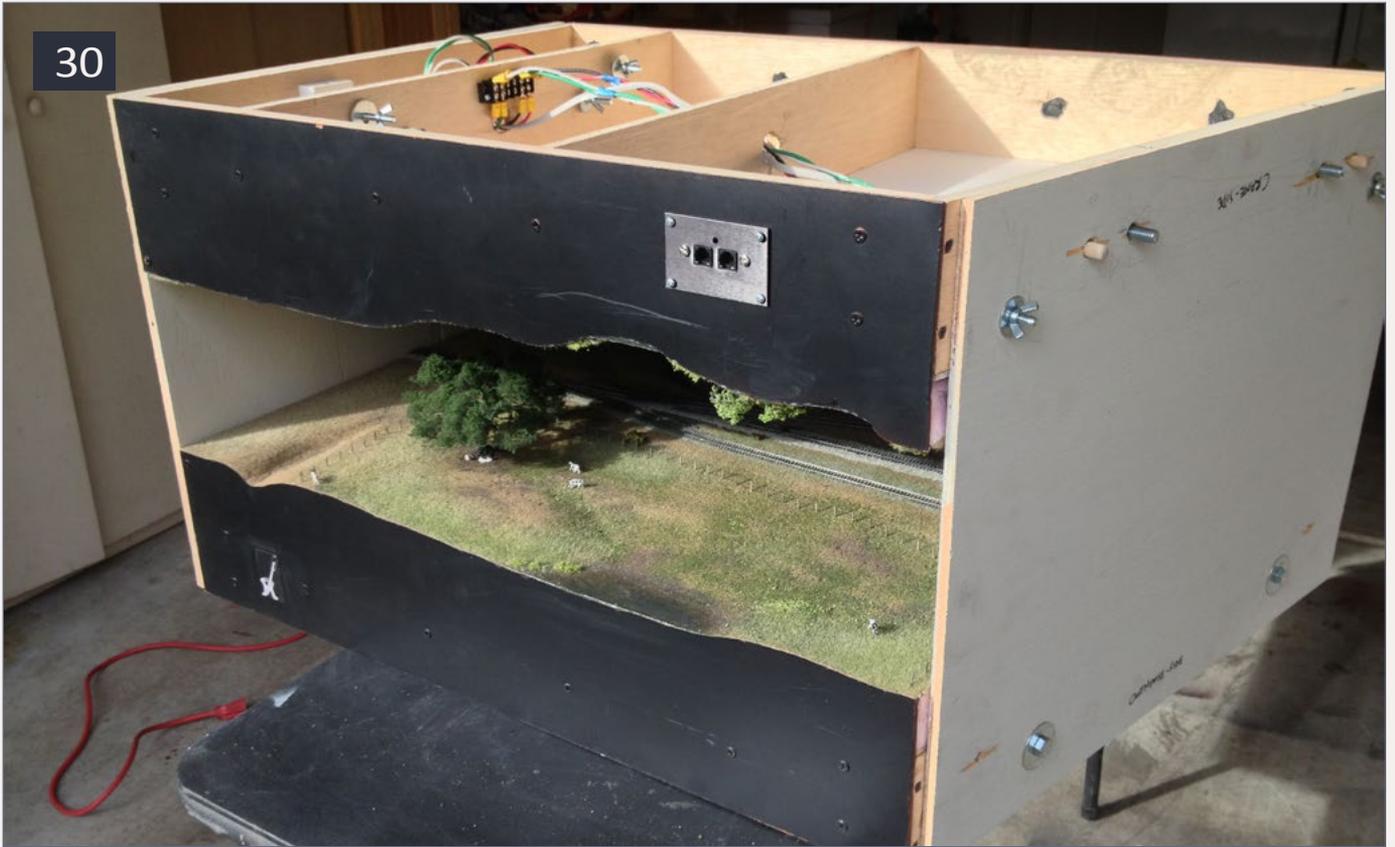
When the Shoofly was my only module I built a plywood storage / transport box with a shelf for each section. (29) The box just fit in the back of my car and I could place the legs on the side.

However, as I built more and more modules over the year, I needed the space in the car that the box took up, as well as a better way to protect the Shoofly's delicate scenery. I seemed to always whack an oak tree top when pulling a section out.

Steve Williams showed me, with his own Lockhart, TX module, the secret to successful section transport and protection: by building the modules in two congruent sections, you can



**29:** This storage box fit in the back of my car and protected the module sections during transport. By adding a cover I could stack more modules on top, but the box still took up a lot of room.



**30: By flipping one section over the other and bolting on end plates, not only is the scenery protected but the module takes up much less room in the car: very important when building more and more modules!**

flip one section over the other and secure them with plywood end plates.

The end plates create a box out of the two sections: the scenery on each section faces each the other and is protected, while the entire box can join a stack of similarly-packed modules (30). By removing all the seats of my car (save the drivers' seat!), I can pack in three major modules, 4-6 smaller ones, a folding storage yard, and all of their accompanying legs and clamps without damaging any of the scenery (31).

The inverted-sections-and-endplates arrangement also allows for easy storage at home under (and on) workbenches. Remember: it's very, very easy to build many, many modules



— the true trick is to find a way to store and transport them all to shows!

## A Signature Scene at Shows:

The module, which took about six months in total to build and scenic, has turned out to be a real crowd-pleaser at shows. Kids like to count the cows, adults enjoy the local setting and the details of the vineyard or bridge construction, and experienced



**31: If your module doesn't fit in your own car, then it does not exist! By using end plates on paired sections and by unbolting all the seats (except the driver's), I can fit my entire "home layout" in my car: Three major (over 6') modules including a yard and a return loop, 6-8 smaller (2') 45 deg modules, and all of the legs and clamps that go with them. With help, I was even able to release the parking brake.**



**32:** In addition to running long trains, the best part of Free-moN is sharing the fun with fellow Free-moNsters and others at shows. Here fellow Silicon Valley Free-moNster Steve Williams switches his Lockhart, TX module at a World's Greatest Hobby show while future model railroaders watch.



**33:** Hundreds of feet of mainline running at shows – like here at the Great Train Expo in Santa Clara, California in September 2013 – far exceeds any possible layout space at home, plus every setup results in a brand new layout.



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model railroaders immediately recognize the scene from John Armstrong's inspirational sketch. So thank you, John, for providing such fertile ground for a first Free-moN module! 



## Fun Free-moN Facts

Free-mo and Free-moN are a set of modular standards, developed from "Fremo" in Europe about 20 years ago. The standards defines the end plates, track type and wiring, but leave what goes on between the end plates up to the modeler. That's the "Free" part. The 50" display height, single mainline, and focus on realistic scenery and operations inspires the modeler to create simple yet highly-detailed modules that, when joined together in any order, form a compositionally cohesive "layout" that's fun to operate in a prototypical fashion.

The complete Free-moN Standards can be viewed at [free-mon.wesleysteiner.com/FreemoNStandards.pdf](http://free-mon.wesleysteiner.com/FreemoNStandards.pdf).

## The basics include –

### Module Benchwork:

- 50" rail height at setup
- Endplates are ¾" birch ply
- Endplates are 6" tall and between 12"-24" wide
- Section joints are up to the modeler, and each module may include as many sections, and in whatever shapes, the modeler decides

## Track:

- Code 55
- 22" radius minimum curves on mainline
- #6 minimum turnouts on mainline
- At end plates, first 4" of the single mainline is straight and centered

## Wiring:

- 12 AWG stranded for main power and control busses
- 22 AWG stranded for feeders
- Anderson Power Pole connectors used at module ends, following the "Left Over" rule: Looking at the end plate, whichever power pole and bus is connected to the left rail goes above the right
- Each section of track has feeders or soldered rail joiners

## Scenery:

- First few inches from the module ends are brownish and flat, with no roads or rivers terminating at the end plates. This is to ensure some continuity between modules
- Scenery is realistic and (preferably) based on a specific prototypical location.

BUT! While not a Standard, the #1 "unofficial" rule of Free-moN is: "If it doesn't fit in your OWN car, it doesn't exist!!"

In other words: if you can't get your module to a show with your own transportation, it's probably not going to be at the show! So measure your car/truck space first and design a module based on that. And don't build an 8' module and then buy a Mini Cooper! Get the Mini first, and then build four 2'-sec-



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tions that stack and pack up in the back seat, and then you'll have your 8' module at the show! (Though getting the legs to fit in the car might be an issue, and remember you need space to sit and drive!).

Free-mo and Free-moN are very prevalent in space-challenged Europe, and the modular movement is becoming more popular in America.

In addition to looking at Wesley Steiner's Free-moN and our Silicon Valley Free-moN website, you can see many ideas for modules on the Southern California-based N-Land Pacific, or the European "americaN" groups' websites.

## Parts

Bullfrog Turnout Control (Fast Tracks): [handlaidtrack.com](http://handlaidtrack.com).

30 Amp Anderson Powerpole Connectors (Powerwerx.com): [powerwerx.com/anderson-powerpoles/powerpole-sets/30-amp-red-black-anderson-powerpole-sets.html](http://powerwerx.com/anderson-powerpoles/powerpole-sets/30-amp-red-black-anderson-powerpole-sets.html).

Adjustable Leveler Legs (Rockler Woodworking): [rockler.com/product.cfm?page=5217](http://rockler.com/product.cfm?page=5217).

Static Grass Applicator (Home built, following Kevin Rowbotham's article in MRH): [mrhmag.com/magazine/mrh-2010-MarApr/static\\_grass\\_applicators](http://mrhmag.com/magazine/mrh-2010-MarApr/static_grass_applicators).

"Thin" E-Z Line (Berkshire Junction): [berkshirejunction.com/ezline.html](http://berkshirejunction.com/ezline.html).

Green PolyFil (Woodland Scenics), or any polyfiber from a craft store (just make sure to spray paint green before applying to tree!)

Ceramic Stucco Paste (Liquitex): [liquitex.com/ceramicstucco](http://liquitex.com/ceramicstucco).

A.M.S.I. Ground Foams: [amsistuff.com](http://amsistuff.com).

D-2 Caterpillar (Nzt Products): [nztproducts.com/nd-018.htm](http://nztproducts.com/nd-018.htm).

"Backsaver" Ground Throw (Nzt Products): [nztproducts.com/nd-gt.htm](http://nztproducts.com/nd-gt.htm).



Industrial Brownhoist Crane Car (Model Tech Studios): [modeltechstudios.com/nscaleindustrialbrownhoistcranecarwoperatorscabkit.aspx](http://modeltechstudios.com/nscaleindustrialbrownhoistcranecarwoperatorscabkit.aspx).

Bulldozer (GHQ): [ghqmodels.com/store/53001.html](http://ghqmodels.com/store/53001.html).

N-Scale 4-Tie GapMasters (American Tie and Timber): [americantieandtimber.com](http://americantieandtimber.com).

## Free-moN reference sites:

Free-moN (Standards, info): [free-mon.wesleysteiner.com](http://free-mon.wesleysteiner.com).

Free-moN Yahoo Group: [groups.yahoo.com/neo/groups/Free-moN/info](http://groups.yahoo.com/neo/groups/Free-moN/info).

Silicon Valley Free-moN (website): [sv-free-mon.org](http://sv-free-mon.org).

SVFMN (Facebook): [facebook.com/SiliconValleyFreeMoN](https://facebook.com/SiliconValleyFreeMoN).

N-Land Pacific Free-moN: [nlandpacific.com/home.html](http://nlandpacific.com/home.html).

Fremo americaN (German-based modular group): [fremo-net.eu/168.html?&L=6](http://fremo-net.eu/168.html?&L=6).

Modutrak (similar to Free-moN): [modutrak.cgwrr.com](http://modutrak.cgwrr.com). ■



M.C. Fujiwara is a freelance writer and editor as well as the model railroad layout designer of Yardgoat Layout Design [yardgoatlayoutdesign.com](http://yardgoatlayoutdesign.com). He participates in the Silicon Valley Free-moN anarcho-collective and enjoys helping other modelers by making “How To” videos. He lives in the San Francisco Bay Area with his wife and two kids.



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# Yes, it's a model

**Model Railroad Hobbyist's  
monthly photo album**



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**1: Iowa Interstate 708 deadheads home across Meredith Drive after delivering two loads to Beisser Lumber in Grimes, Iowa.** Meredith Drive is the only grade crossing on the prototype Grimes Line that has crossing gates, so crews don't have to stop and ensure protection is active before proceeding. James McNab took the low-angle photo on his HO scale IAIS Grimes Industrial Track layout. To see more of his work visit [model-railroad-hobbyist.com/blog/jfmcnab](http://model-railroad-hobbyist.com/blog/jfmcnab).





**2. UP 183351 and a Rock Island boxcar sit at one of the many elevators along the MoPac Bagnell Branch, waiting to be loaded.** Charlie Duckworth photographed the scene on his Missouri Pacific layout. The layout uses Micro Engineering code 70 track for the mainline and code 55 for siding and industry tracks. This layout is Charlie's first foray into scenery. We think he has done an excellent job at creating the feel of a branch line that is lightly maintained. To learn more about his layout visit [mopac51.tripod.com](http://mopac51.tripod.com).



**Reader  
Feedback**  
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**3. Washington Northern GP60 700, in Operation Lifesaver paint, runs light back to Port Andrews** after dropping a string of center-beam flats for loading at the Sappho Lumber Mill.

The locomotive is a Life-Like Proto 2000 model with custom paint and decals. Weathering is a combination of oil paints and weathering powders. Kevin Klettke took the photo outdoors on a 2'x2' diorama. To learn more about Kevin and his Washington Northern, visit [wnrr.net/index.html](http://wnrr.net/index.html) or check out his work on the MRH forum. He goes under the name caboose14.



**4. N&W GP38 4129, along with a sister GP38, are painted in the short-lived experimental "F8" or "Skunk" paint scheme.** The locomotives are at the N&W engine terminal in central North Carolina in the early 1980s.

Tim Kristophel built the loco shop and support structures from kits which he painted and detailed. The code 83 track and the locomotives are by Atlas. The apartments in the background are kitbashed, with details added. The scene is not altogether prototypical, but some of the individual pieces are really close. Tim put the individual pieces together in such a way to create a very typical railroad scene.



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5. Tracy McKibben built this beautiful two-story depot based on plans of the Lawler, MN depot built by the SOO Line. He adapted the station for his DM&RI Hill City Subdivision. The HO scale shelf layout is based on an alternate history for the DM&RI. The road has expanded beyond being an ore carrier, and services Hill City in 1920 as a general purpose railroad.

Tracy scratchbuilt the depot and detailed it inside and out. The exterior was sheathed board by board. The double-hung windows are scratchbuilt, and the shingles were cut from paper using a special pair of craft scissors. To see more of Tracy's work, visit his blog at [dmirhillcitysub.blogspot.com](http://dmirhillcitysub.blogspot.com) and click on "depot."

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6. The crew of the 28 didn't know what to make of the tender attached to their locomotive. It has a hole in the top, no coal, and no hatch to add water, in addition to being white. The roundhouse foreman said it would work just fine. So, with some grumbling, and being laughed at by another crew, they began preparing for their day's work. Ken Rickman is building a series of tenders for his locomotives and posted this "in progress" shot. To see more of his work, go to his blog [model-railroad-hobbyist.com/node/15139#comment-116982](http://model-railroad-hobbyist.com/node/15139#comment-116982).

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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 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](#).



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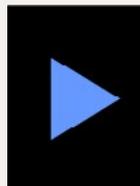


# DCC short circuit detection



– Dick Bronson  
Model photos by author

## Finding those pesky shorts ...



Reader  
Feedback  
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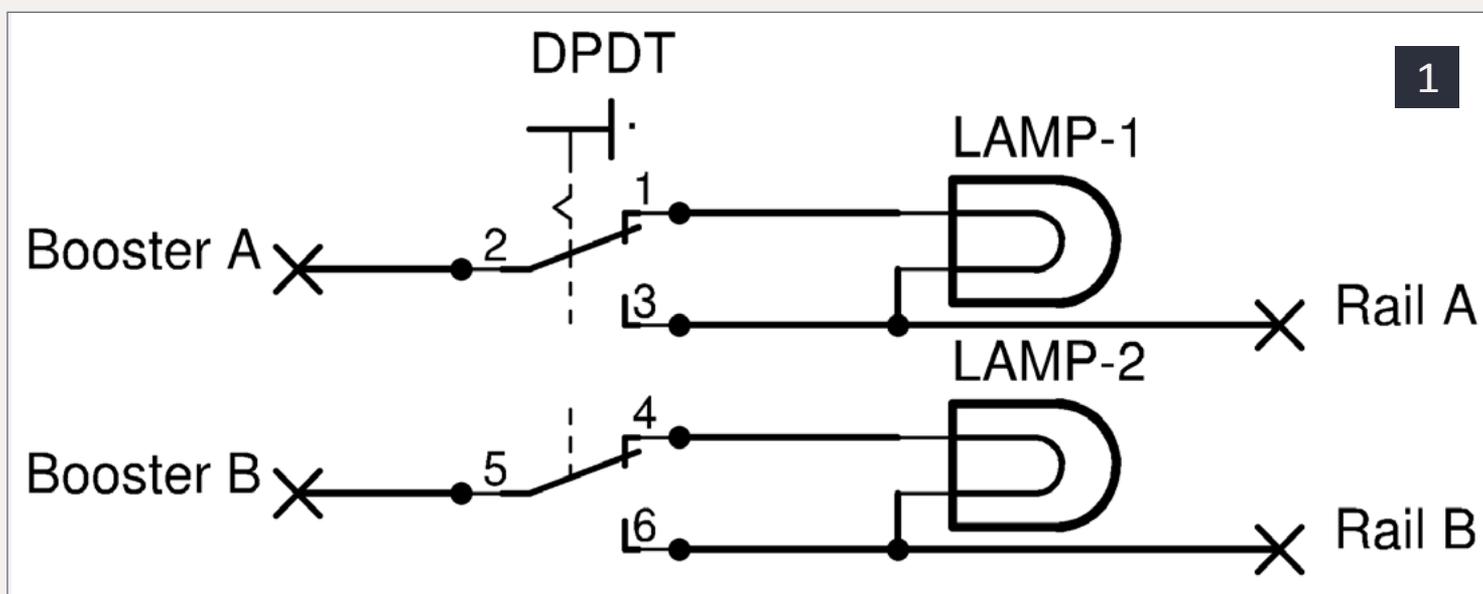
**L**ike many other model railroaders, I find that troubleshooting short circuits on a layout, even a modest one such as my own, can be one of the most frustrating things we ever do. The good news is, I discovered that it is possible to use an inexpensive clamp-on amp meter (ammeter) and a pair of automotive taillight lamps to rapidly track down short circuits on a DCC layout by actually measuring the current flowing in each wire. (This is yet another reason to switch to DCC, as this fast and easy troubleshooting method will not work for conventional DC layouts.)

A few years ago, when our local Charlotte, NC round robin group met at my house, a gremlin appeared on my Little Mountain and



Possum Hollow Railroad just as we were ready to run trains. After an hour of troubleshooting with flashlights, screwdrivers, and test lamps, we finally located one branch of the DCC power bus that, when disconnected, would allow the entire main line to operate once again.

After this disheartening situation, I began to wonder if there was some easy way to trace the current flowing in a short circuit without breaking any wires to insert an ammeter. I wondered if a clamp-on ammeter would measure or indicate the current flowing through a DCC track circuit. I knew that these meters are designed to measure normal 60Hz. sine wave household current, not the high-frequency square-wave used by DCC. Low-cost clamp-on ammeters have become available from outlets such as eBay and Harbor Freight for as little as \$10. With such a low initial investment, I thought it was worth a try.



**1: Schematic of DPDT switch and #1156 lamp wiring. In one position, the power goes directly from the DCC booster to the layout power bus lines. In the other position, the lamps are connected in series with each bus line to limit the short circuit current to a safe value while the trouble is tracked down.**



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## Keeping the current flowing

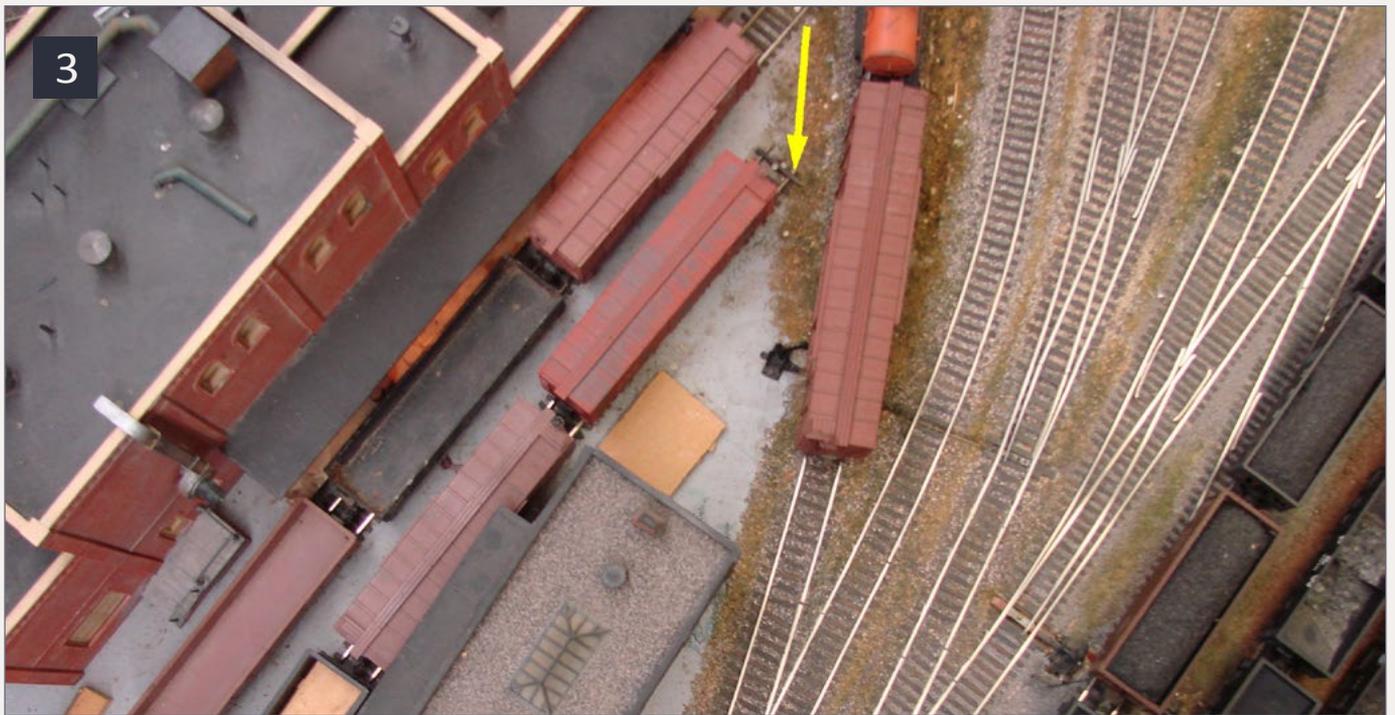
To measure current, current must be flowing. But a short circuit trips the DCC booster's protective circuit, shutting off the current. I needed a way to keep current flowing through a short circuit without tripping the booster. The solution was to wire a #1156 automotive taillight lamp in series with each booster bus wire. Allan Gartner discusses this in his Wiring For DCC Web pages. Caution! See [rr-cirkits.com/Notebook/short.html](http://rr-cirkits.com/Notebook/short.html) before using taillights for short circuit protection.

I wired a DPDT (Double Pole Double Throw) switch such that in one position, the booster's output is connected directly to the DCC bus wires for normal railroad operation position. In the other position, each booster output terminal is wired in series with a #1156 automotive taillight lamp.

Sure enough, when I reconnected the section of my layout we had isolated during the round-robin short circuit, both lamps lit up. This indicated to me that the short circuit was between the two bus wires, and not from one wire to ground, or to another booster district.



**2: A typical inexpensive clamp-on ammeter. This one is available from Harbor Freight. We will use a meter similar to this to see if we can detect the DCC current flowing in our layout wiring.**



**3: The yellow arrow in this image points to a nearly invisible feeder wire connection that caused this entire section of the layout to short-out during open houses. The portion of this feeder under the layout had been covered with a lamp fixture, making it impossible to see this extraneous feeder from below.**

If only one lamp lights, that indicates that the current is flowing from that booster terminal through the short circuit, and is returning via the system ground wire, not through the other DCC bus wire.

## **Initial test**

Now we can allow a safe current to flow through our short circuit long enough to use the clamp-on ammeter to check the current.

Will it read DCC?

It did! I immediately got a reading of 0.95A when clamping the meter around either bus connection at the booster. Now I was



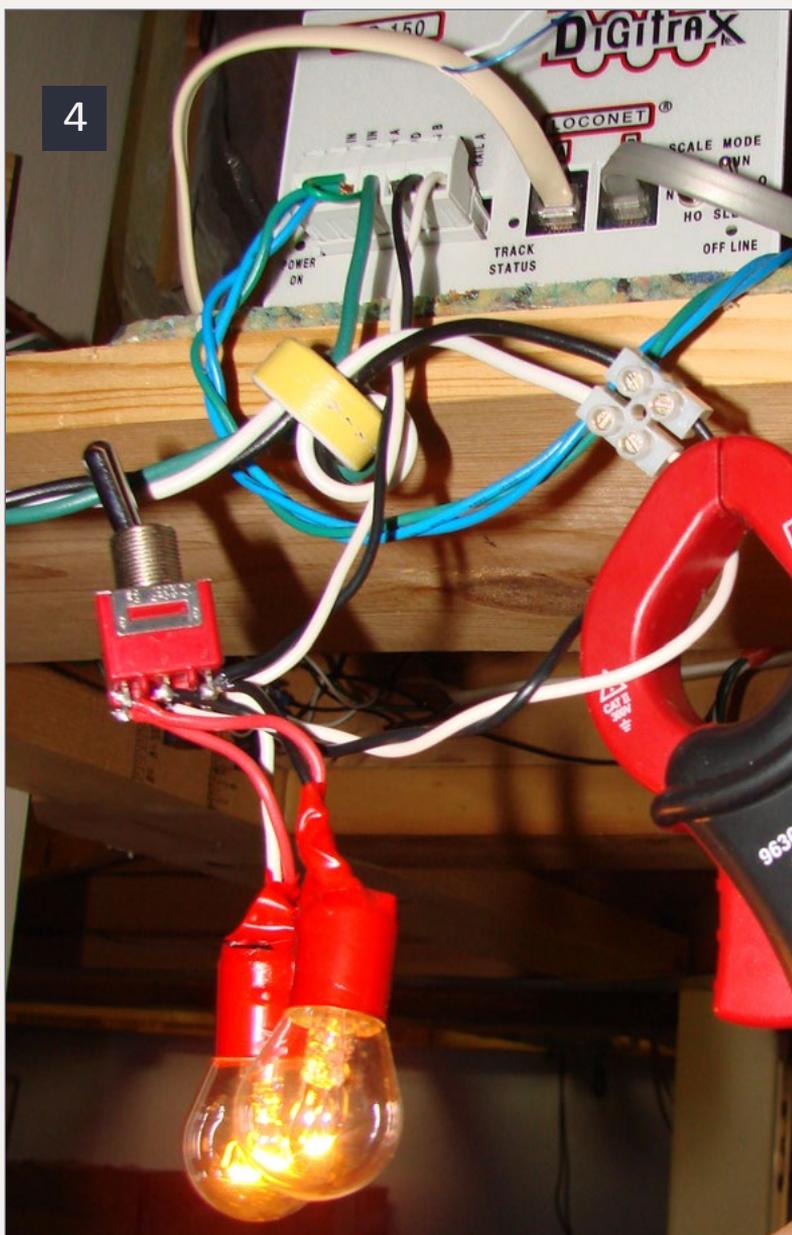
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hot on the trail with an electronic bloodhound at my service. Sure enough, a quick check at the terminal strip where we made our final disconnection during the club meeting showed that the current was flowing in the direction of the feeder that we had disconnected. Clamping around the DCC bus wire past that point showed zero current flowing in that direction.

The elegance of this method is that it does not require any wires to be cut or disconnected, and each test takes only a few seconds.

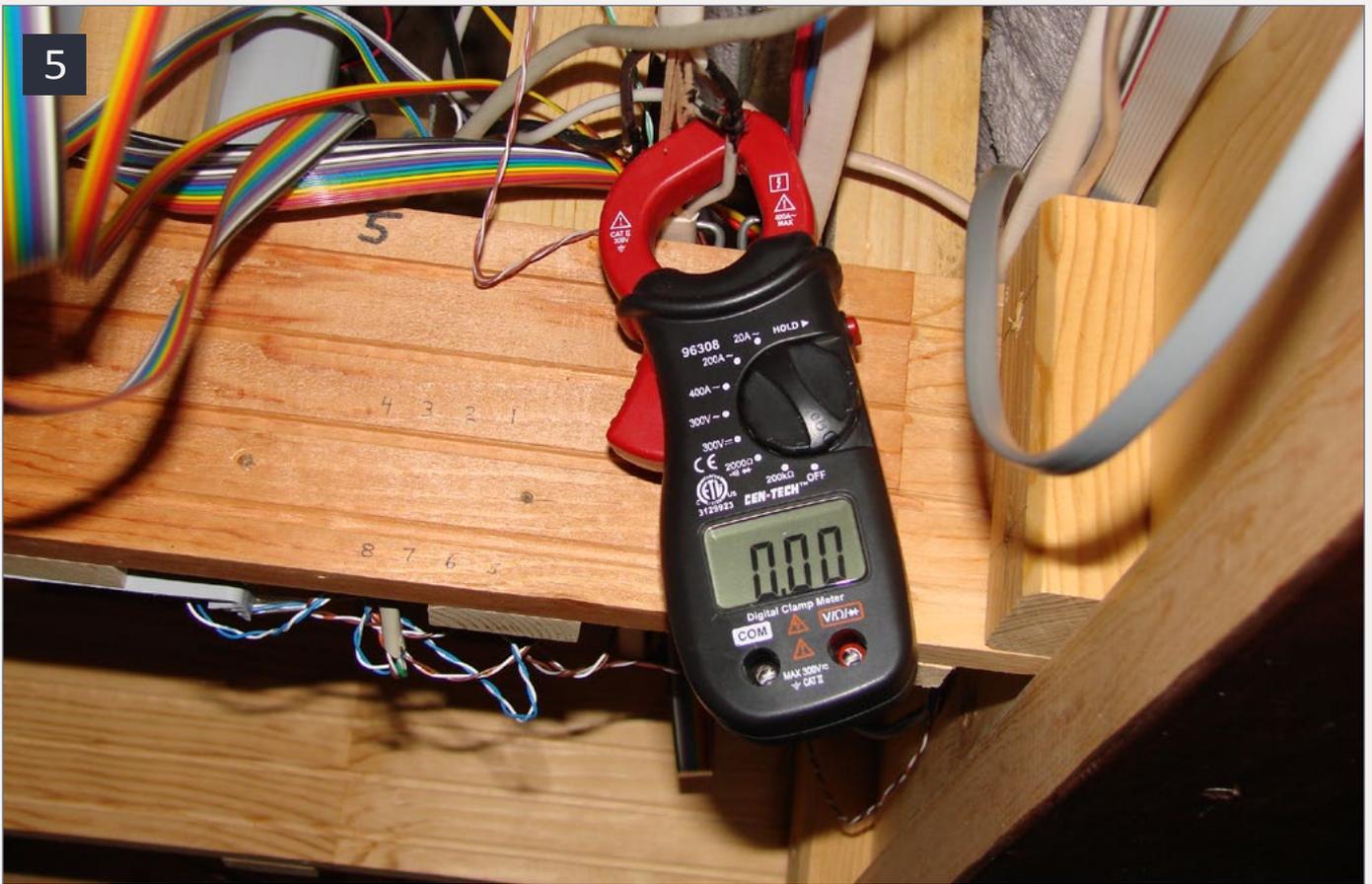


**4: Current limited by lamps being measured at booster.**

## Second success

The next test of this system came when we tackled an on-again, off-again short that had plagued operations on Jack Parker's P&W Railroad ([pandw.org](http://pandw.org)), especially during open houses. Using the clamp-on ammeter, we found a track feeder that disappeared behind an under-layout fluorescent light fixture used to illuminate the lower level town of Misty.

Further investigation indicated that at some time in the days of DC and power routing, this



**5: We see that the current in the main bus is zero past this point. This means we have passed the branch circuit with the short.**

feeder was apparently added to the very end of an industrial siding rail, far from the other feeders in that section of the layout. It was hidden from view beneath by the lamp, and virtually invisible from above. (see the yellow arrow in fig 3.) Amazingly, it took us less time to locate this longtime gremlin with the clamp-on current meter than it has taken me to write about it.

The clamp-on ammeter I purchased also includes volt and ohm functions, but the ranges are very limited, and of little use for testing DCC. I doubt that the actual amp reading is accurate due to the differences between the normal AC waveform and that of DCC. However, for our troubleshooting purposes, precise values are unimportant. We just need to see which way that ornery short-circuit current goes at each junction between wires.



## Summary

Wire a #1156 lamp in series with each booster output wire to limit current and prevent the booster from tripping while testing a short circuit. Wire a DPDT switch to switch from normal operation to the #1156 lamps for testing when a short circuit occurs. Use a clamp-on ammeter to detect current flowing in one track bus or feeder wire to isolate a short circuit.



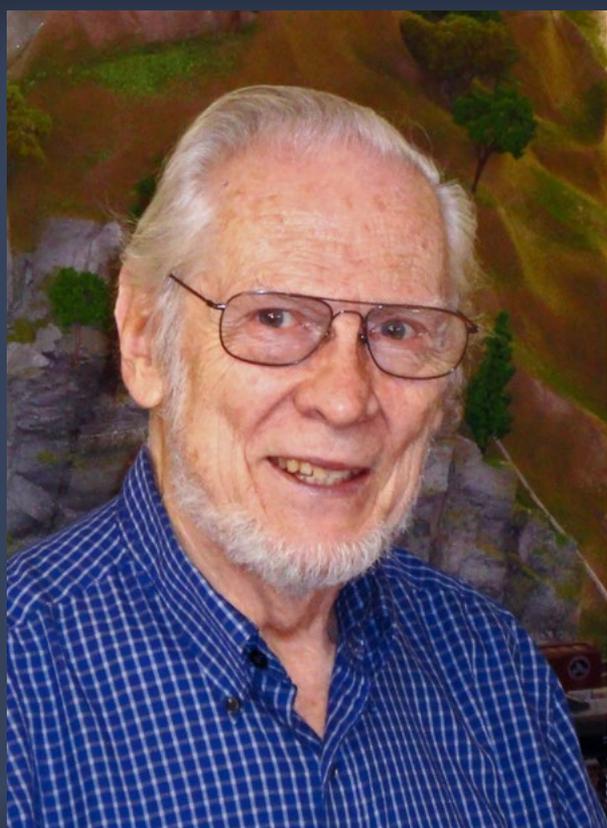
**6: At this point we discover that the short circuit current is flowing in the branch feeder. Even in cramped spaces, it is easy to follow the short circuit current without disconnecting any wiring.**



It is much easier to track down elusive short circuits now that we can 'see' the current flowing in a wire using the magic of a clamp-on ammeter. Be sure to get a meter that has a 0.01A or less minimum current reading so that you can read small variations in current as you track down your gremlins. 

### Items required for this project:

- Digital Clamp Meter. Harbor Freight Item 96308 or similar.
- DPDT switch with a current rating sufficient to carry your booster's current.
- 2 each #1156 or #1157 automotive tail lamps. Solder one wire to the brass lamp housing and the other wire to the tip. Be careful to not stress the tip connection.
- I suggest using short (4"-6") lengths of fine stranded #18 wire for minimum strain and best results. You might want to make some sort of mounting bracket by drilling 1" holes for the lamps, and a smaller hole to fit your switch. Mount the lamps in the holes using silicon caulk to hold them in place. ■



Dick Bronson has been modeling in HO since the 1950's. His first layout was three pieces of fiber tie flex track and two cars on a leftover piece of plywood. Dick is a life member of the NMRA and has presented clinics (Signaling with JMRI) at several national conventions as well as other venues.

Work on his current layout, the Little Mountain & Possum Hollow RR slowed considerably when he and his wife Karen moved their company RR-CirKits, Inc. [rr-cirkits.com](http://rr-cirkits.com) from part-time to full-time status.



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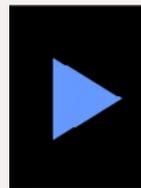


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# Installing Electric Switch Machines on Foamboard

– **Chris Palomarez**  
Photos by Harry Wong

**A simple technique for reliable installation ...**



**Reader Feedback**  
(click here)



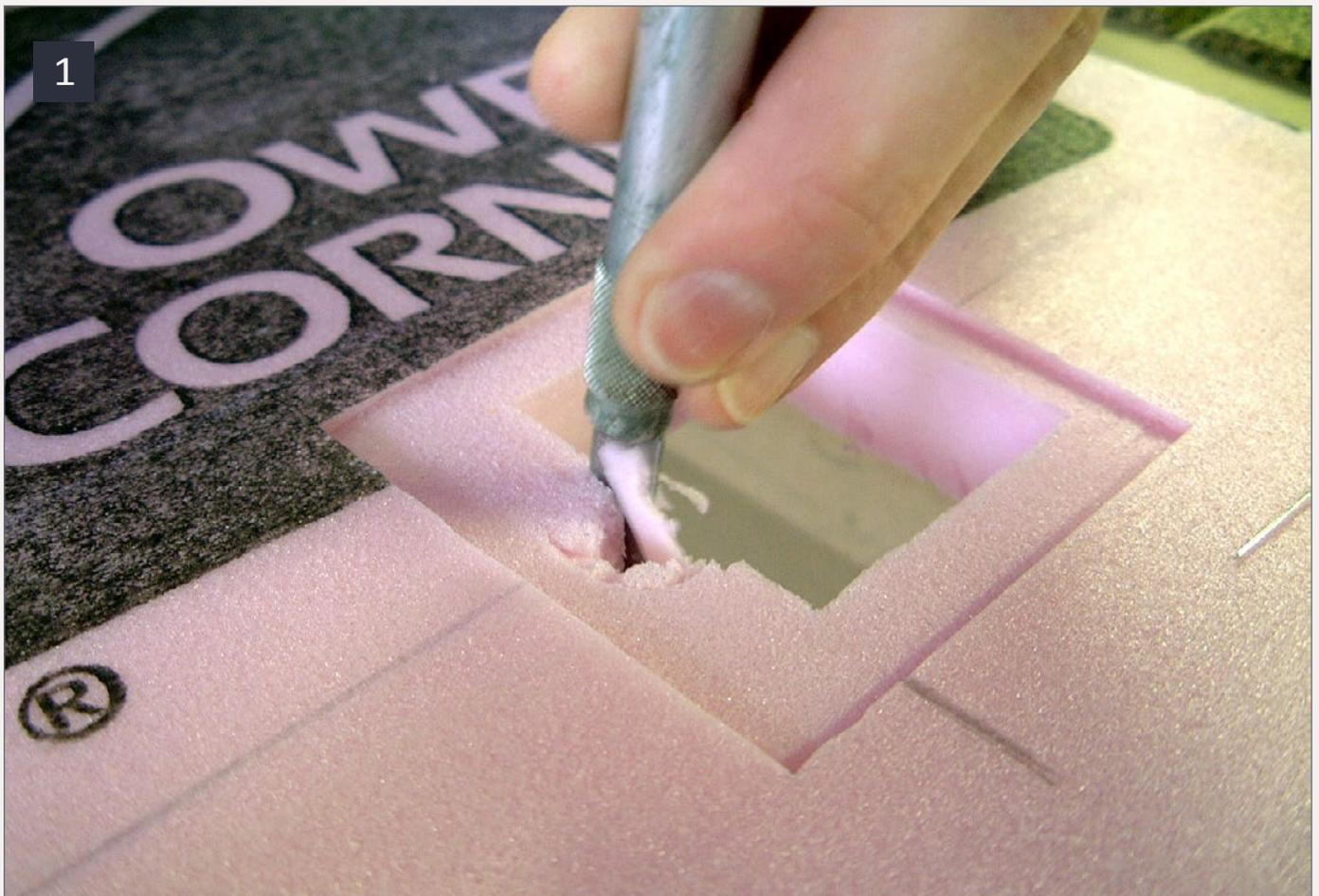
**T**he introduction of using two-inch extruded foam as the main foundation for track has certainly helped lighten many a module, and also allowed the modeler to more easily sculpt scenic contours below the track grade. Foam has made things easier, but presented a new problem: mounting electric switch machines.

The obvious and simple solution is to use small blocks of Masonite and glue them to the underside of the foam. This solution presents several pitfalls. First, when building modules, it's best to keep the switch machines recessed inside for fold up legs, as well to minimize potential damage when being moved. Second, depending on the adhesive, the likelihood of



the bond failing increases the more the module is transported and encounters heat/humidity fluctuations. Third, and a personal pet peeve, are excessively long actuator wires.

A different approach was required to account for these potential pitfalls. In Free-mo, there was a lot of interest in keeping the modules light and quick to setup. This meant switch machine installations needed to be installed from the "top down" rather than from the "bottom up" with plywood. In early 2000, Brian Kreimendahl, and I developed this solution for a module set he was constructing. His modules were substantially larger than 24", with a 42" total module width. Foam module tops were a necessity to keep the weight of each section manageable. We used initially single-sided copper clad circuit board, but then graduated to using perfed/



**1: After turnout and the throwbar is located. A square hole and recess is cut in the foam.**



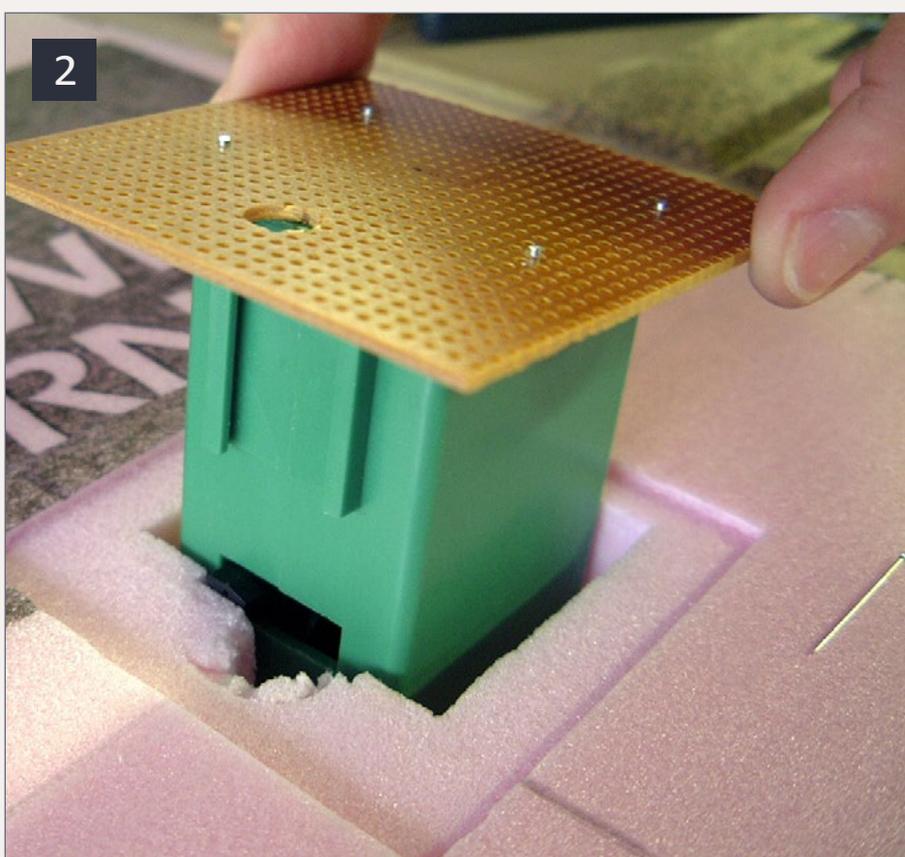
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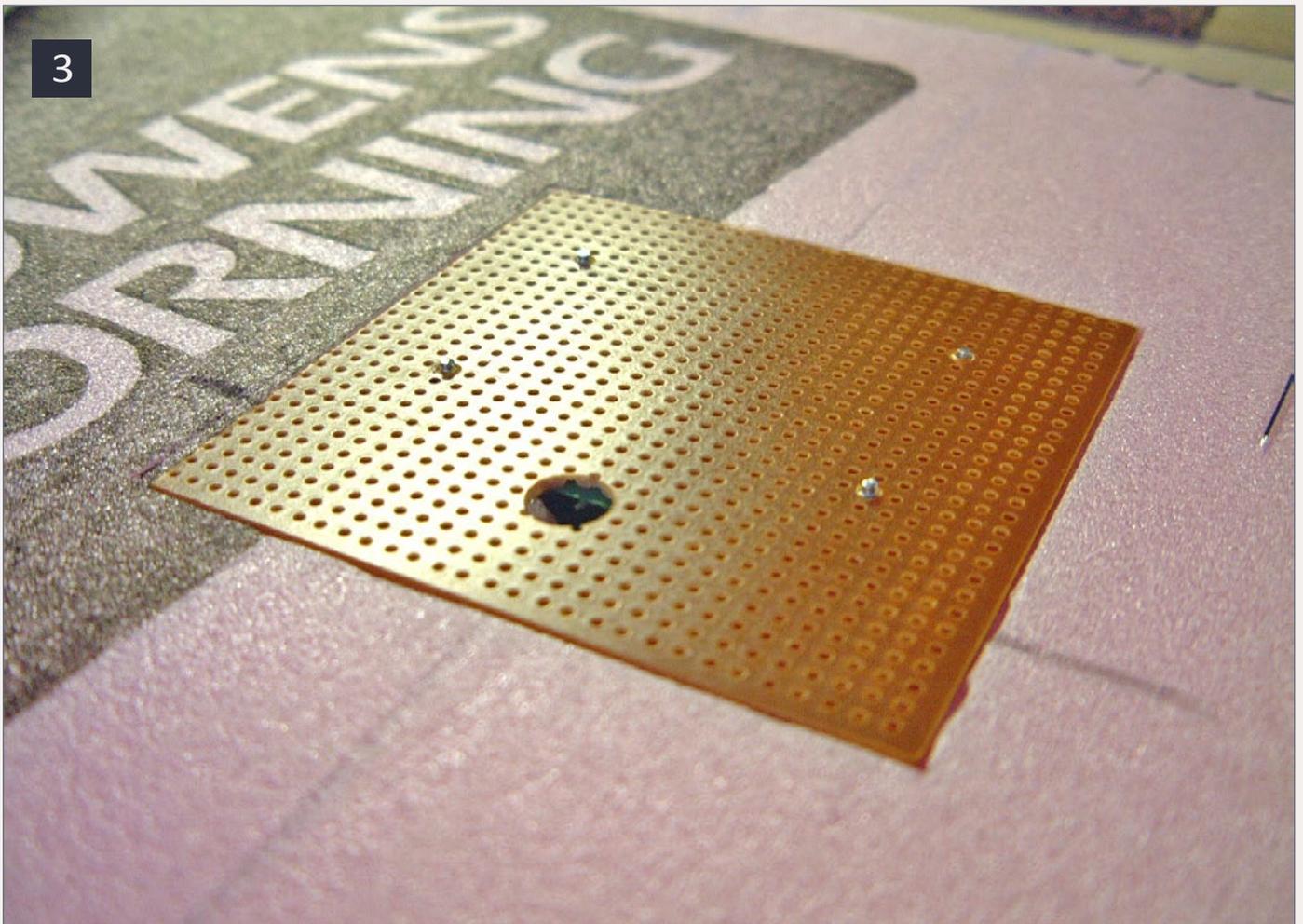
nonperfed and unclad prototype board. The prototype board was a little stiffer than other materials, withstood heat (good when cutting the excess thread from the Tortoise mounting screws flush), and held the screw thread a bit better than styrene or wood. Installing the Tortoise "top down" had a very nice low profile, with very little of it exposed to damage while module transported.

It is imperative that you know the exact location of each turnout and throwbar actuator hole. Take your time and lay out your track exactly where it is to be located, and make all adjustments to angles and track centers ahead of time. It is MUCH more difficult to adjust this once the foamboard is cut and switch machine is installed.



**2: A Tortoise switch machine is attached to a piece of perfboard with 2-56 screws and dropped into place.**

Maintenance is a consideration. Simply cut the area around the Tortoise a little bit larger than necessary to give room for a screwdriver to reach the fulcrum and mounting screws. If the Tortoise needs to be replaced, unscrew the four 2-56 mounting screws and the Tortoise drops from the board.



### 3: Screw excess trimmed with a cutoff disc in a motor tool.

Why single sided copper clad PCB initially?

Initially we planned to use the bottom of the PCB (copper exposed surface down-top of Tortoise) as a way to help reduce the number of feeder wires one would have to run to a turnout. We were using BK Enterprise turnouts with PCB ties. Instead of six separate feeder wires for the two points/closure rails and two stock rails, and two more for the Tortoise SPDT contacts to flip frog polarity. We were to isolate the copper clad into two halves down the middle of the board, drill holes where the rail was to run (through the PCB ties) and run short feeders, soldering the bottom of the feeder to the copper clad and then thread the feeder up through the PCB tie right next to





**4: Glue is applied and switch machine installed. A slot is cut into the cork roadbed for the actuator wire.**

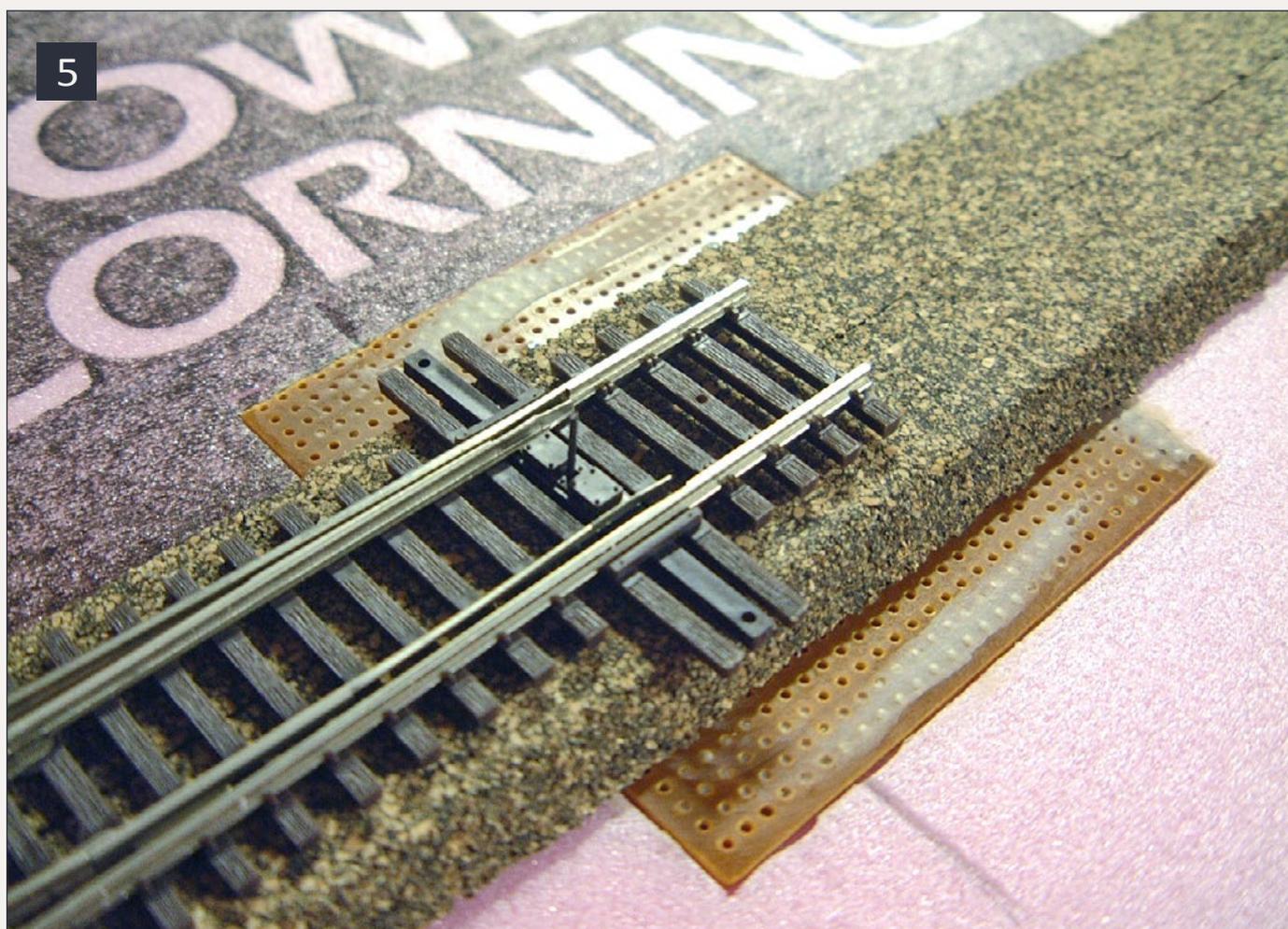
the foot of the rail. This was going to really simplify and speed up turnout installation.

The entire turnout/PCB/Tortoise assembly could be done on the bench ahead of time, making fine adjustment easier by not having to work upside down. Mainline turnouts require a bit more work. Prior to soldering the PCB ties to the feeders, install the switch machine as depicted. Lay down and align the cork next to the feeders and mark their locations. Drill them out and glue down and trim your cork roadbed. After all is installed and the glue cured, thread the feeders through the PCB ties and install the turnout, finally soldering the feeders as the last step. This method takes a lot of time. For someone with just a few turnouts, this might not be unreasonable.

Flattening the tops of the feeders will make them look like spikes, thus hiding them among the rest of the trackwork.

As we continued building with CVT turnouts and Proto:87 Stores solderable heel-blocks, which had no PCB ties, we graduated from using copper clad in favor of using perf and non-perf board as depicted. The perf board worked really well with Liquid Nails adhesive. The holes allowed the adhesive to really grab the board and hold it into place. It took another step to hide the holes, but the preference to having a solid bond between foam and PCB was worth the extra step.

Using this method yields another nice benefit. The stock actuator wire included with the Tortoise is sufficient to adequately



**5: Turnout is located, the actuator wired trimmed, and ready to add track.**



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throw the points and place enough tension on the throwbar to keep it in position.

Moving to different materials requires adjusting building practices. This approach to installing switch machines can be applied to more than modules, and ease construction by being able to build the mechanism on the bench. This reduces working on the layout upside down or other unnatural positions. With a little extra planning and adjusting ahead of time, you too can enjoy the benefits of extruded foamboard as a top surface for your module or layout.

## Materials:

### Digi-Key Part Links:

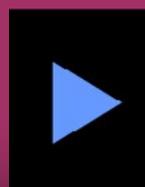
[digikey.com/product-detail/en/PC36/PC36-ND/284712](http://digikey.com/product-detail/en/PC36/PC36-ND/284712)

[digikey.com/product-detail/en/64P44WE/V1042-ND/38933](http://digikey.com/product-detail/en/64P44WE/V1042-ND/38933)



Chris Palomarez began his fascination with trains at a young age on the Central Coast of California, and became a junior member of a modular club in San Luis Obispo in the 1990s. His interest expanded, becoming more directed to prototype modeling. Chris' current interests revolve around prototype modeling, modular layouts using the Free-mo modular system, and replicating the Southern Pacific Railroad circa 1985.

Chris is a visual communications professional. He has actively developed many decal sets for Microscale and for several other manufacturers.



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# Modeling a DT&I 50-foot Hydroframe-60 box car



– **By Bob Rivard**  
Model Photos by the author





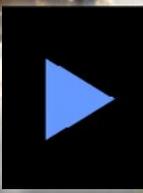
**FRAME-60**  
**FROM SHOCK**

*"We have the*



*CONNECTIONS"*

**SOO LINE**



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# Making your rolling stock look like the real thing

**N**ot long ago fellow freight car modeler, Frank Jordan, sent me a shot from the RR-Fallen Flags site of a DT&I 50-foot box car. The shot was taken only a year after my 1977 modeling era. Frank knew this was important to me because I could duplicate the wonderful weathering patterns reflected in the photo. The cushion underframe 50-foot car would be a breeze to model because Kadee produces this exact car. The car is perfect and the Kadee factory lettering is dead-on accurate.

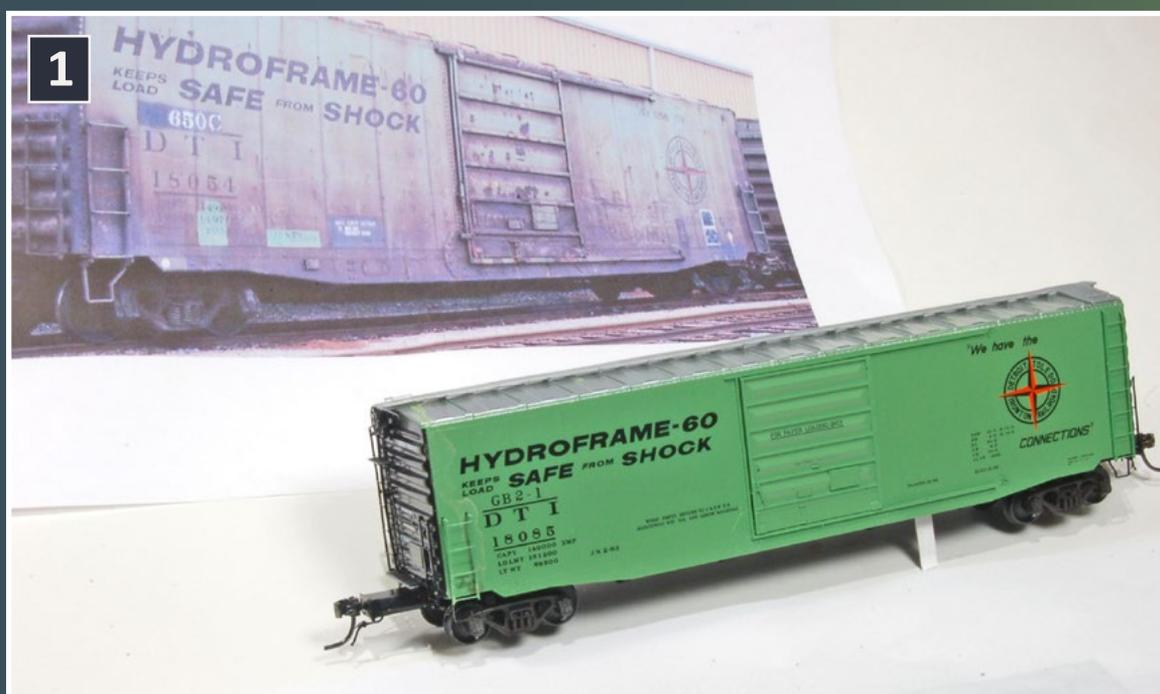
The only issue I would have to address would be the color of the paint. These cars came out in the mid 60s, and the Kadee car is painted in the correct Lime Green. However, over the years this green faded into a pale PC shade of green. The only solution I could come up with was to repaint the car. Although I knew this would destroy the wonderful factory lettering, I discovered Highball Graphics makes a correct decal set for this exact car. In fact, Highball Graphics even points out how badly the DT&I green faded on these cars.

As I researched prototype photos on various web sites, I noticed that many of these cars were lettered in a simplified paint scheme wearing only reporting marks and the big DT&I logo. I decided to model a second car so I could represent one of the cars in that neat HYDROFRAME-60 scheme.

My favorite part of this project was weathering the car. This really brings the car to life. I have found that in order to obtain a believable prototypical look, it is important to weather my cars using a combination of three techniques. Artist oil paint is very useful for modeling bleeding rust patches. I then use my airbrush to add areas of dust and grime. Finally I finish using weathering powders. The powders add a certain dimension, and complement

the airbrush effect. I also came up with a fast way to weather the welded seams. As I observed photos of these cars, I noticed the welded seams were very weathered. I needed to weather these thin welds. In the past I would run masking tape strips on each side of the seams and then use my airbrush to apply Grimy black. However this process was not only tedious and time consuming, but there was always the risk of some portion of the decal coming off when I removed the masking tape! I decided to simply draw my welded seams on clear decal paper. Then I could use my XActo knife to cut the seams from the decal paper. I could then apply each strip onto the seams using standard decaling practices. Follow along as I show how I repaint and decal the car using the very complete and accurate Highball Graphics decal set.

## STEP 1: Removing the factory lettering



**1: Why on earth would I want to remove the beautiful and extremely accurate lettering on this Kadee box car? Follow along as I describe how I paint and weather this car to match the prototype.**



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## STEP 1: Removing the factory lettering *Continued ...*



2: The first step is to remove the Kadee factory lettering. I apply Solvaset to a piece of tissue in order to soften the factory lettering for around 5 min.



3: It is now easy to remove the factory lettering. I wet-sand the lettering off using 400-grit wet-dry sandpaper. Before I re-paint the car I first mask off the ends and roof.

## STEP 1: Removing the factory lettering *Continued ...*



4: The prototype DT&I cars were built in the mid sixties. Most prototype photos of these cars indicate the paint weathered into a faded PC Jade Green. I mix SC II White, CR Blue and a bit of BN Green and airbrush the car.

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## STEP 2: Decaling

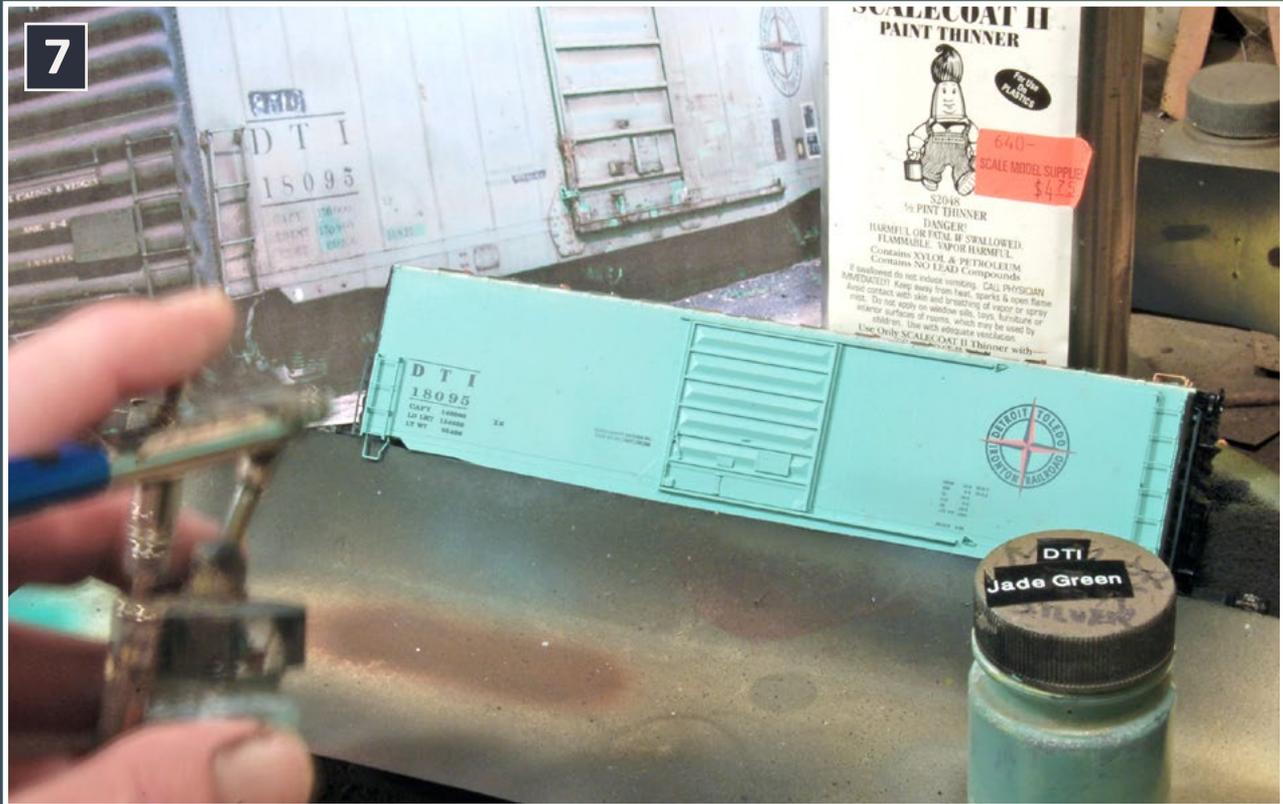


5: I next decal my car using Highball Graphics set F-243.



6: Next I want to duplicate the prototype by fading the lettering. In order to achieve this look I return to my PC Jade Green paint. I add about 70% SCII thinner to the paint.

## STEP 2: Decaling *Continued* ...



7: I now airbrush my very thinned Jade Green onto the lettering.

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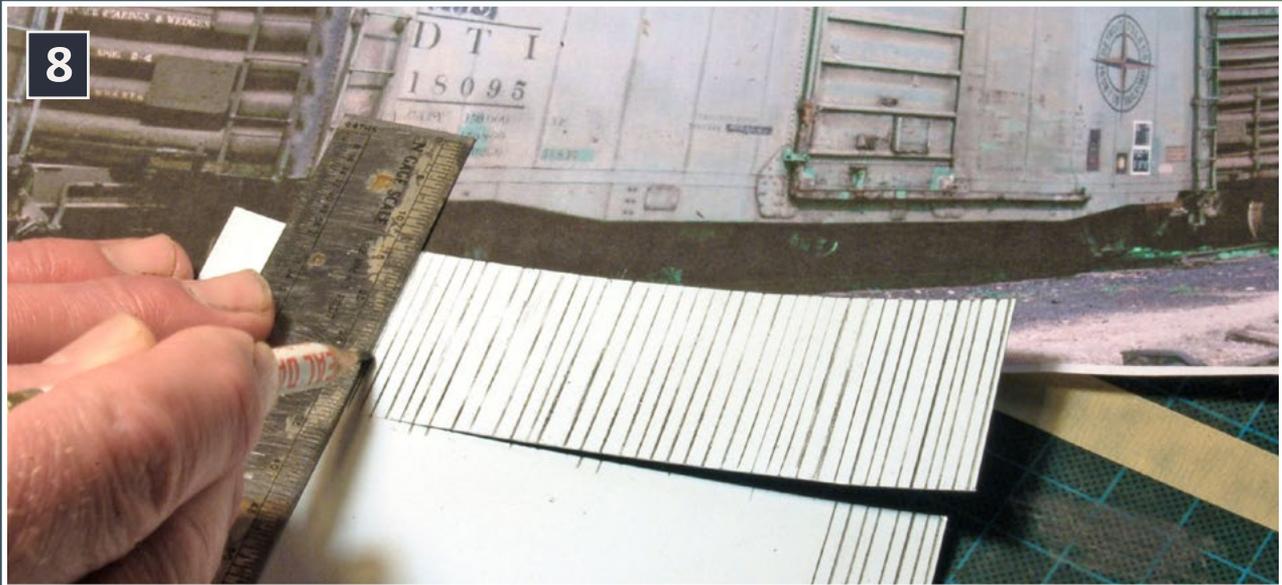


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## STEP 3: Weathering



8: I noticed a common weathering theme on prototype photos of these cars. I decided to model this important detail by simply using a no.2 pencil and draw the weathering onto the seams.



9: I first draw my seams on clear decal paper. Now I can simply cut them out and apply them onto each welded seam using standard decaling techniques.

## STEP 3: Weathering *Continued* ...



10: I start the weathering process by applying a heavy amount of Burnt Umber artists' oil paint to the roof.



11: I found an great roof shot photo taken by John Hill on the Rail Pictures Archives site. John took the shot in 1978, just one year after my 1977 modeling era. The galvanized roof has taken on an almost all-black look.



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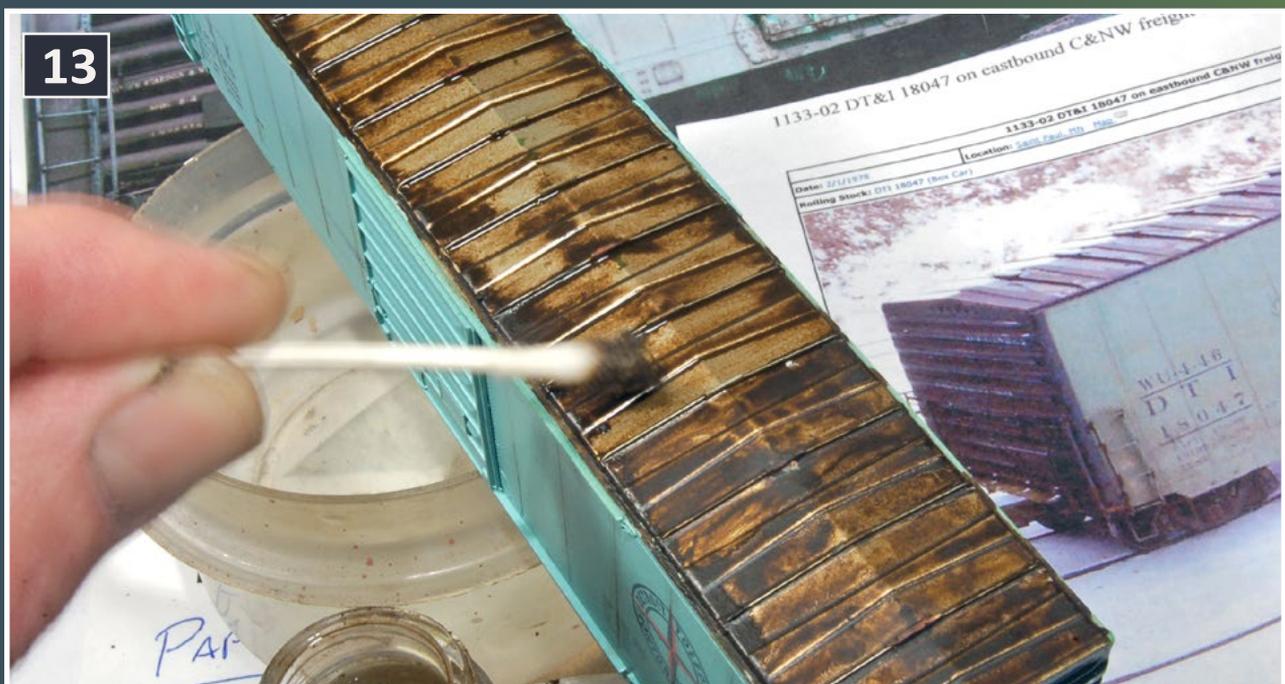
## STEP 3: Weathering *Continued* ...

12



12: I have completely covered the entire roof with the Burnt Umber paint.

13



13: Next, using a cotton swab, I apply turpentine thinner. For this I use a product called Turpenoid. The combination of the thinner and paint creates a very believable prototypical effect.

## STEP 3: Weathering *Continued* ...



14: I observe the prototype photo and add small rust patches. I use a small brush and dab small dots of Burnt Umber oil paint onto the appropriate locations.



15: I use a fan brush and light vertical strokes on the patches. I also lightly apply a few horizontal strokes. This simulates the effect of the door scraping against the car sides.



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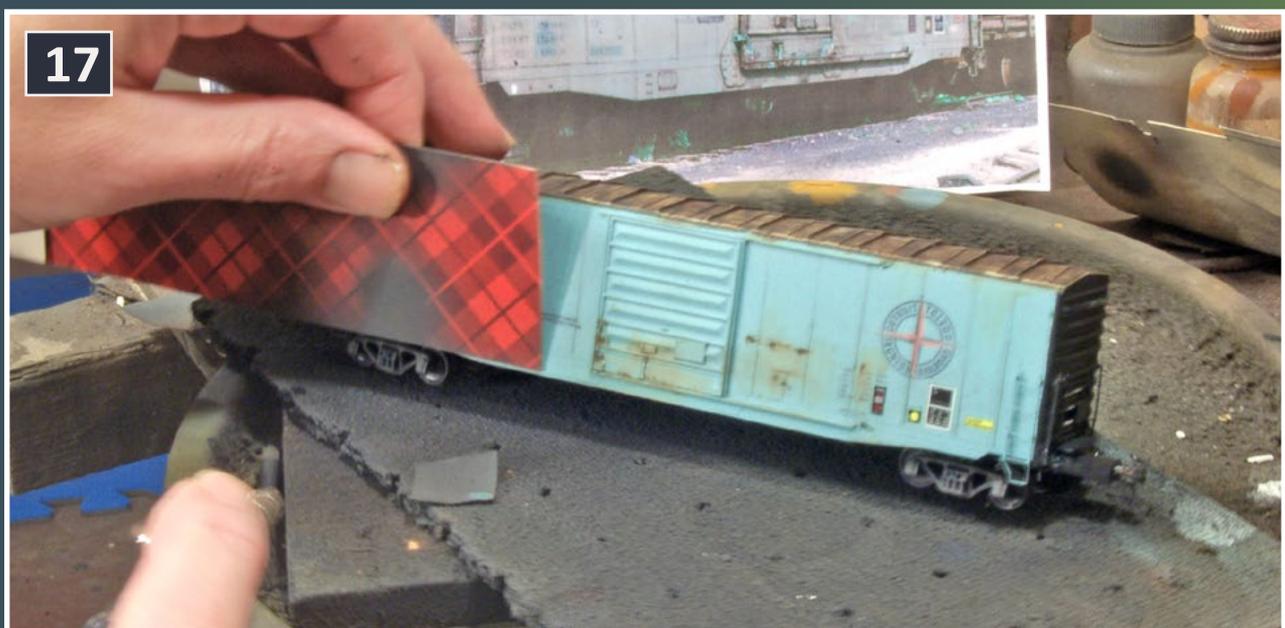


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## STEP 3: Weathering *Continued* ...



16: I return to the paint booth and apply a coat of Testors Dullcote. This gives the model a perfect deat-flat finish.



17: Next I use my airbrush and apply Floquil Grimy Black to the trucks and underframe. In order to cover all of the wheel sides, I roll the car as I airbrush the Grimy Black.

## STEP 3: Weathering *Continued* ...



18: I now apply some Grimy Black to the roof. This really enhances the weathering effect.



19: I simulate the effect of rust dust by airbrushing light amounts of Floquil SP Light Orange onto the couplers, ends and roof.



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## STEP 3: Weathering *Continued* ...

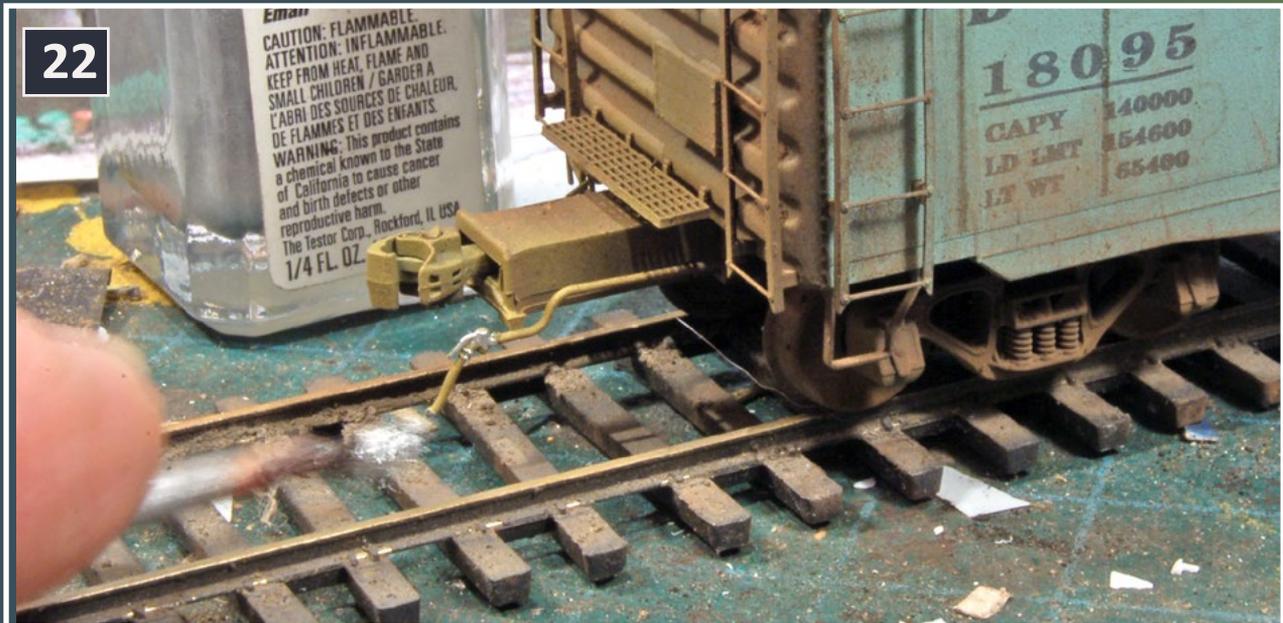


20: This step is like frosting on the cake. I add a bit of rust-colored weathering powder to the car ends.



21: I also brush some earth weathering powder onto the roof.

## STEP 3: Weathering *Continued* ...



22

22: It's the little things. Finally I highlight the air hose detail using silver paint.



23

23: The final model.



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# Let's build a laser kit

– By Mike Tylick, MMR  
Model Photos by the author



# - part 3



**Reader  
Feedback**  
(click here)



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# Building Miss Marshfield Diner ...

**W**ith all of the interior detailing completed, it is time to begin detailing the exterior. Obviously, more attention is paid to the exterior detail since it can be clearly viewed, unlike the interior. I will briefly cover how I built the roof, but if you want more information, go to [mrh-pub.com/2013-07-jul/land/#72](http://mrh-pub.com/2013-07-jul/land/#72). There I go over the roofing in greater detail.

Since I do not have a home for the diner, I built a small diorama to display the kit. I also will share some of the scenery techniques I used.

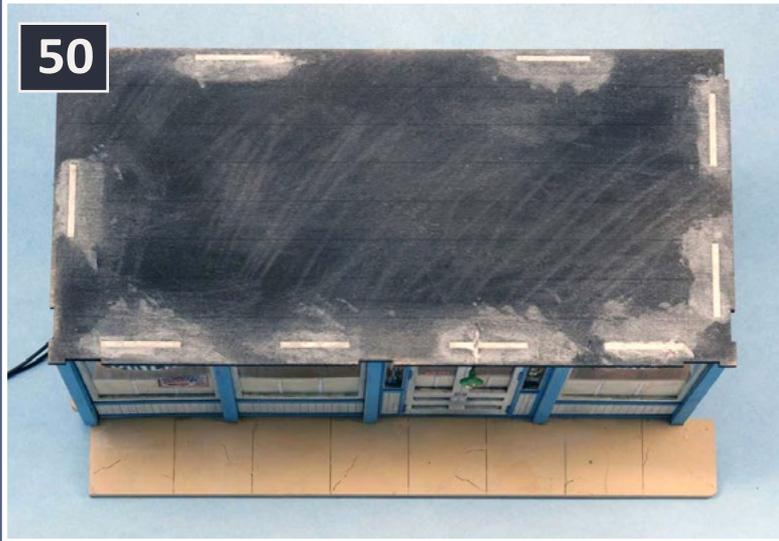
## STEP 8: Exterior details

49: Rolled roofing is supplied with the kit. The roof has guide lines that make it easy to keep the strips even. As in real life, be sure to start from the lower edge of the roof and work upwards. Overlap each strip slightly with the previous. An old building book suggested diagonal cuts for the seam, since these will shed water better than a straight seam. I painted the rolled roofing with red oxide primer, then sprayed-on mists of white, black, and gray to add a *faux* speckled texture to the roofing. By selecting strips randomly from the carrier sheet, I got an uneven, weathered appearance. Oversize strips were applied and trimmed with scissors.



## STEP 8: Exterior details *Continued ...*

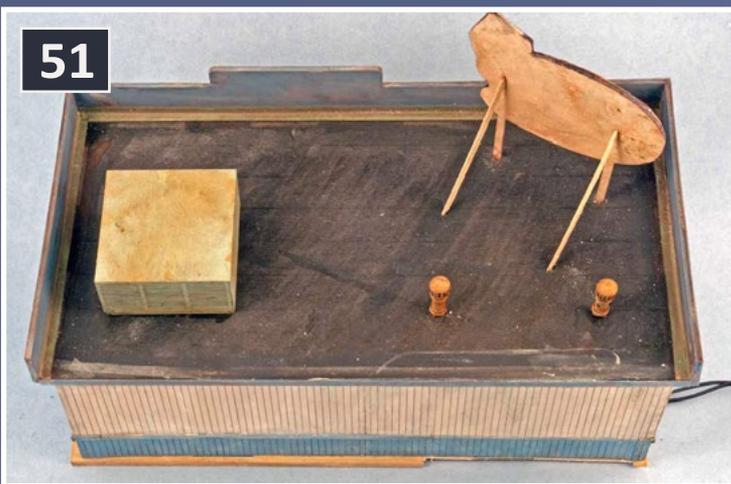
50



50: The roof is glued on, and the alignment tabs are spackled and sanded for a smooth finish. Black primer is used to hide any holidays in the gravel roof that

is yet to be installed. Kit slots had to be altered and filled to accommodate the door in its new position, a fair amount of really unnecessary work.

51



51: I repainted the roof and added the sign boards. Paper strips painted with Apple Barrel Sea Green have been installed in the corners replicating copper flashing.

The paper also provides an additional bond for the signboard. I chose to model a gravel roof instead of the tar paper that comes with the kit. The sign, swamp cooler and roof vents are installed next. All of these are included with the kit. Notice the notch in the rear foundation is for the kitchen. This wall will not be seen on the layout and the gap is easily covered with foliage or a junk pile.



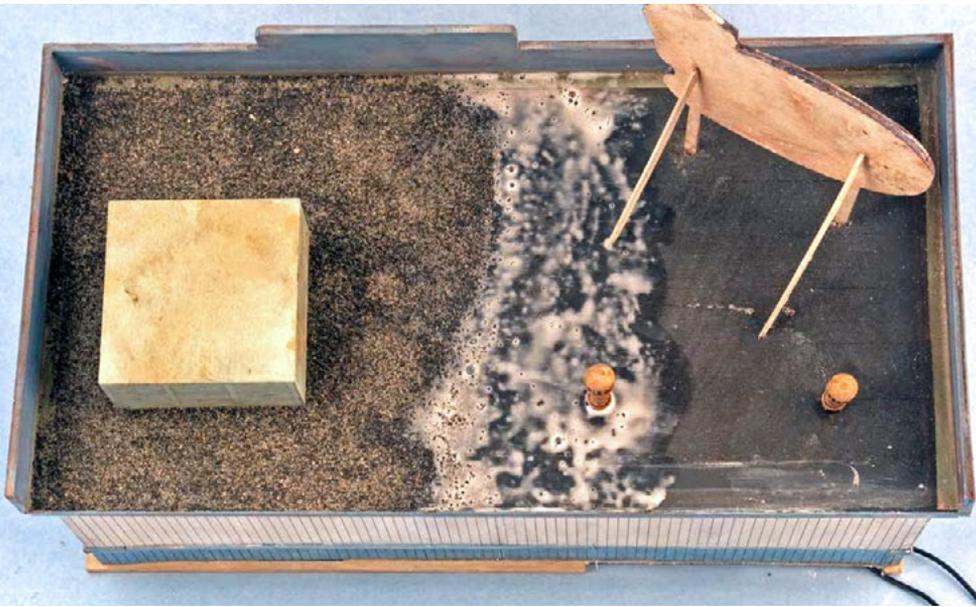
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## STEP 8: Exterior details *Continued ...*

52



52: Graveling the roof. Slightly thinned white glue is brushed liberally onto the roof and the gravel is sprinkled on. Excess is reclaimed by shaking it off onto a newspaper, and is then poured back into the container. The roof gravel is a mixture of sifted local beach sand and Woodland Scenics fine cinders.

### ***Did you catch this video in MRH?***



**MRH: Photos and videos of superb modeling**

## STEP 8: Exterior details *Continued* ...

53



54



53-54: Overall views of completed structure.

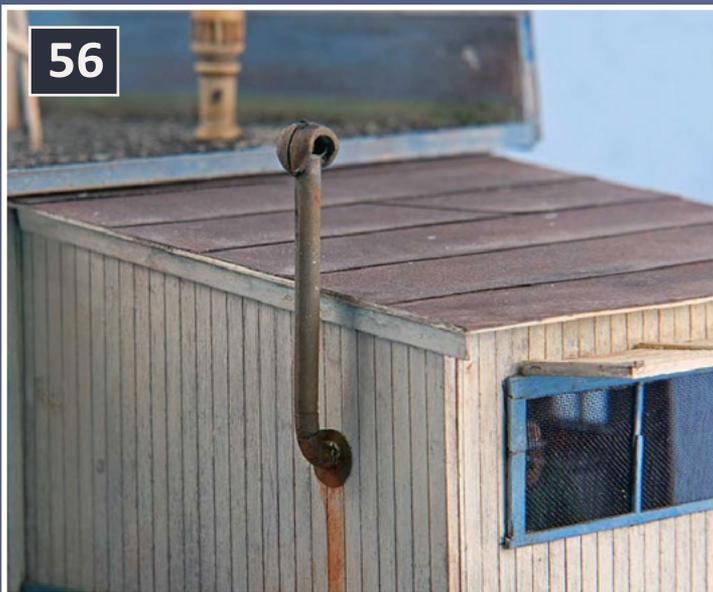
## STEP 8: Exterior details *Continued ...*

55



55: From the rear you can see the sway bracing behind the roof sign. Additional details might include drawing board lines on the wood. The laser-cut part makes this odd shape a snap.

56



56: A hole is drilled into the kitchen wall and a stovepipe is inserted through. A paper-punch ring simulates the metal stovepipe collar.

## STEP 9: Building the diorama

57



57: Dental pick scribing tools used for the road and sidewalk. Ask your dentist for used dental picks. They are quite sharp enough for model work after becoming too dull for dental work.

58



58: I made a simple diorama base to display the structure and take photographs. Using 3/16" Gatorboard, the base is quite strong

and rigid without any additional bracing. After a primer coat of latex paint, the structure was glued in place. Concrete road lines and cracks were scribed using the dental picks. Gesso is gingerly applied with a stiff brush to texture the concrete. The asphalt road at right was painted more carefully with gesso. In both cases a stippled (jabbed) brush stroke is used. A little fine sand is sprinkled on top of the wet asphalt gesso, giving a different texture.



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## STEP 9: Building the diorama *Continued ...*

59



59: Fine dirt from Scenic Express covers the parking lot. I build this up in several coats running automobile wheels through the

wet dirt to create a few ruts. Later a little fine grass will be added in a few spots. The concrete road has been painted with Americana Antique White and weathered with water color washes.

60



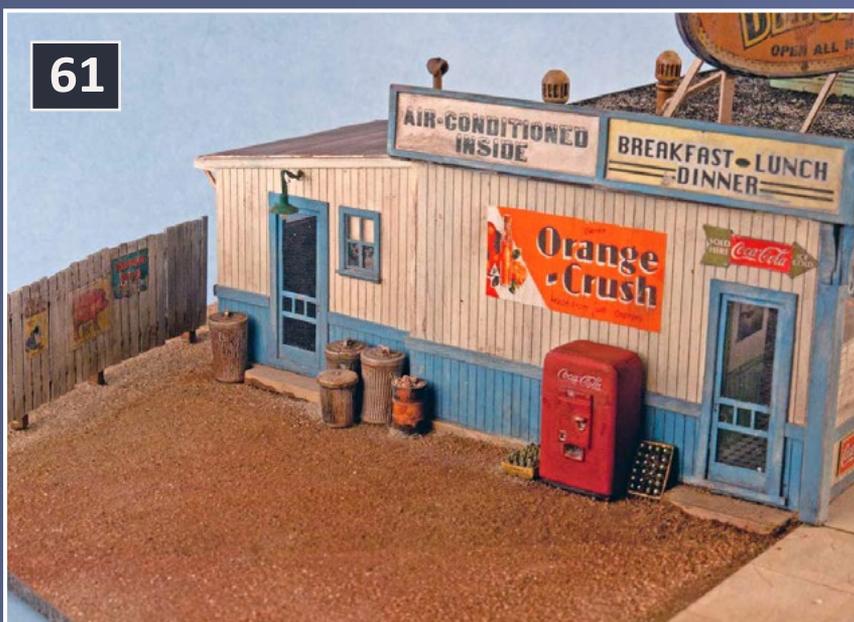
60: The asphalt road at right is painted with a warm gray. Many modelers paint asphalt black or dark gray which is too dark. No weathering has been applied as yet.

## STEP 9: Building the diorama *Continued ...*



61: I have weathered the roads and sidewalk with washes of white, burnt umber, and black watercolor paints. Do not use acrylics;

water color paints can be reworked and wiped off almost indefinitely. The watermarks still visible in the photo can be easily removed with a wet paint brush. I tend to apply weathering in many layers over a period of a few days. The sand texture on the asphalt road shows up now.



61: Details supplied with the kit are glued in place before final landscaping. The back fence is a Bar Mills Insta Fence. Soda signs and some

fence signs are from my personal collection and are available online at [trainweb.org/tylick/signintro.htm](http://trainweb.org/tylick/signintro.htm).



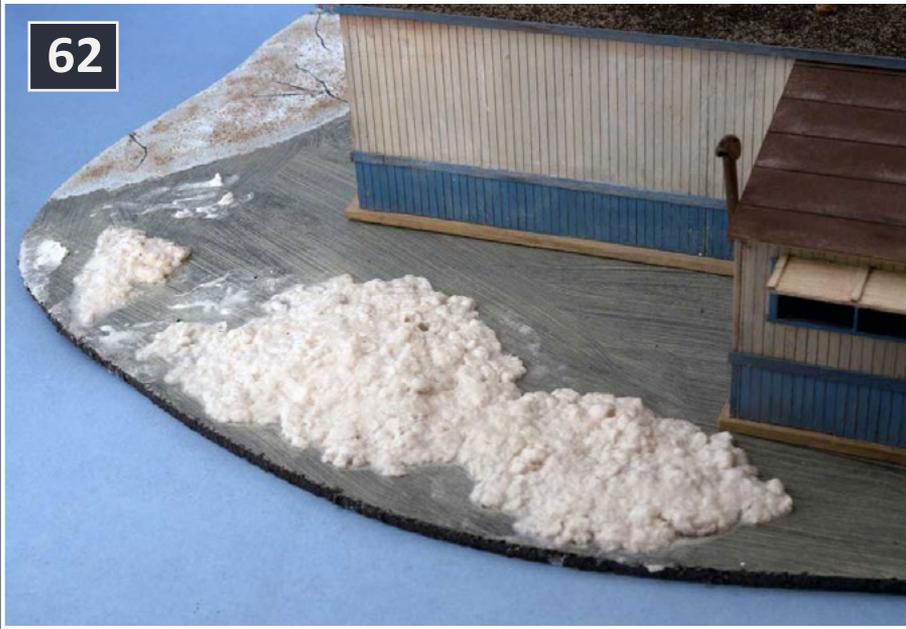
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## STEP 9: Building the diorama *Continued ...*

62



62: While it is not possible to go below grade level on the thin Gatorboard, I can roughen up the backyard terrain

with a few globs of Sculptamold.

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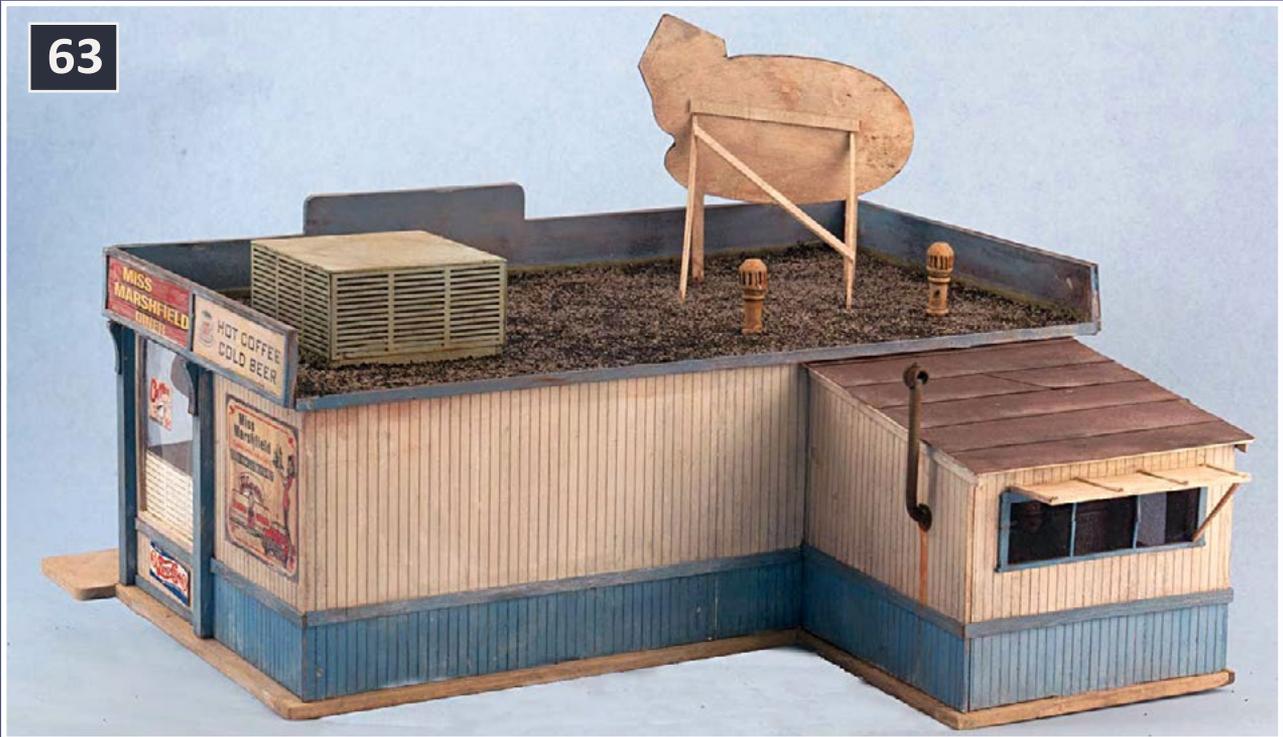
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## STEP 9: Building the diorama *Continued ...*

63



64



63-64. I used natural weeds to make a scrub-tree back lot. Taller trees would have been nice, but I was limited to understory growth. Only shallow holes could be drilled into the base. Vacant lots often become filled with small, scruffy trees after a period of neglect.

## STEP 9: Building the diorama *Continued ...*



65: Another view of the trees and kitchen. The fence support is more than a fine detail, since the fence also has very shallow mounting holes. Notice the stake to which the diagonal brace is nailed. This is a very common practice that is often overlooked in modeling.



66: An overall view of the rear lot. Weeds have been added, enhancing the neglected look of the rear lot.

# What if you could detail your layout ...

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## STEP 9: Building the diorama *Continued ...*



67: Weeds have been added along the fence and adjacent to the building. Small amounts of grass are growing up in the cracks of the concrete and between the building and the sidewalk.



## STEP 9: Building the diorama *Continued ...*

68

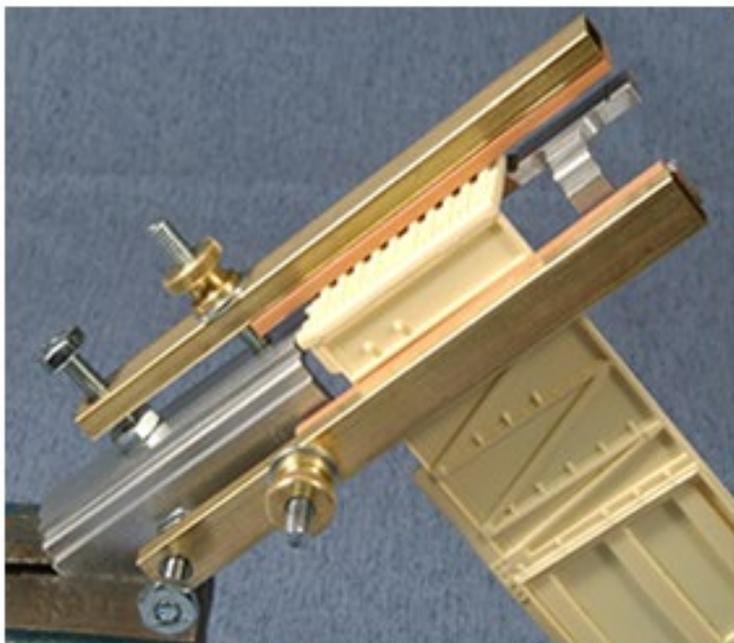


69

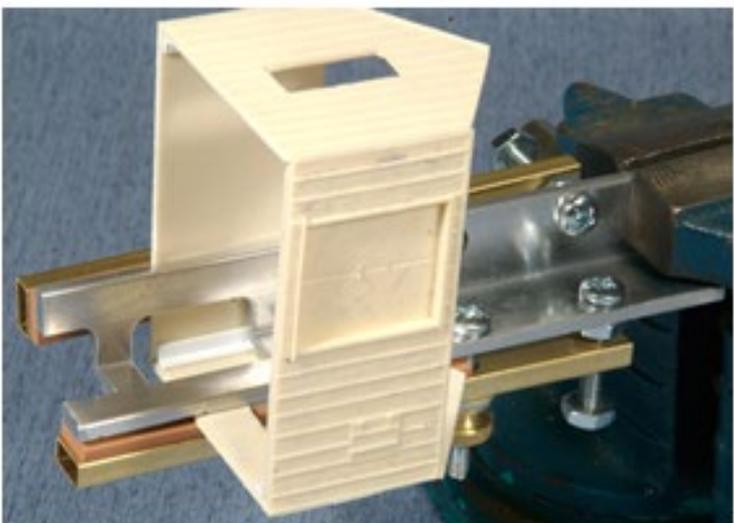


68-69: Small amounts of grass are growing up in the cracks of the concrete and between the building and the sidewalk.

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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 RailDesign Services, for design and graphic aspects of model railroading.

Mike was recently designated a Master Model railroader (MMR) by the NMRA.



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## STEP 9: Building the diorama *Continued ...*

70



71



70-71:  
Detail is added to the front. The bench is an old Builders in Scale product, and the figures are from Preiser and Model Power. Newspapers on the bench and blowing in the street are from Bar Mills and Fine

Sale Miniature. The kit's roof sign was scanned into Corel Draw, and the original name was erased and replaced. Diners were (and still are in many circles) considered dirty greasy spoons inhabited by low-life men. Many New England diners were named "Miss (Name of city) Diner" in an effort to attract female patronage. We can see the "Miss Marshfield Diner" has a least a few women and children inside, but this is a small respectable coastal town. The autos are diecast models that I occasionally find at bargain prices during toy store closeouts.

## STEP 9: Building the diorama *Continued ...*

72



72: This is one of my favorite views of the diner. Although maybe more appropriate to a somewhat later era, I particularly like the dishwasher, a “freak” taking a “smoke” break outside between meal rushes. The kitchen can be easily moved from this location if necessary when diner is installed on my layout. The expendable base will be discarded, but detail parts will certainly be saved.



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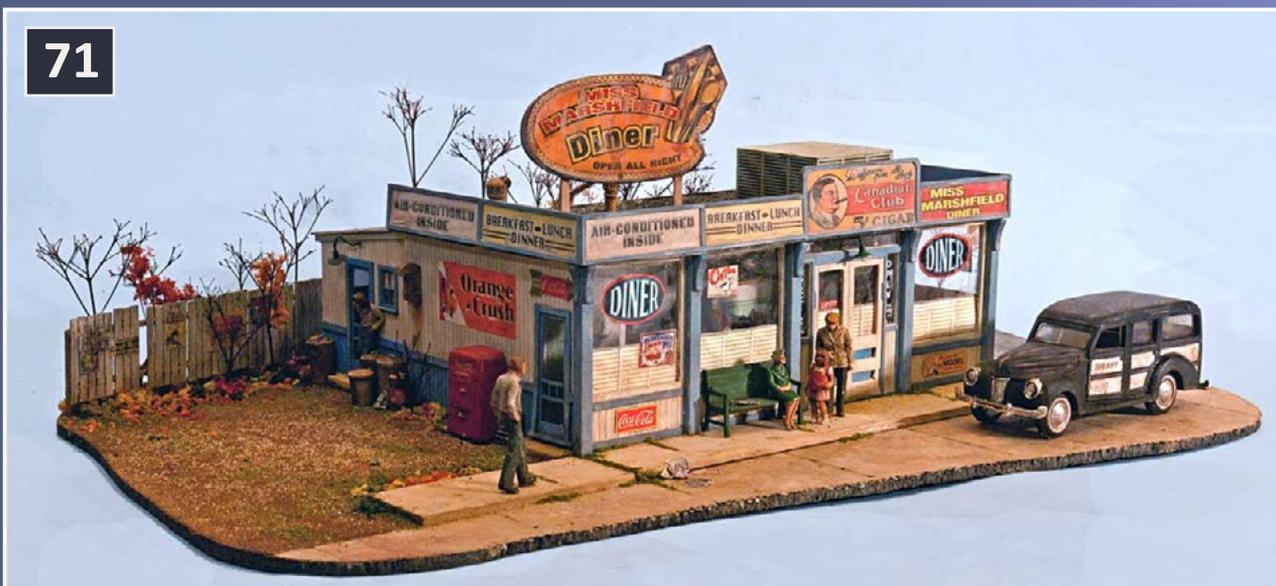
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## STEP 9: Building the diorama *Continued ...*

70



71



70-71: Here are some different views of the finished diorama. Just setting automobiles on the diorama allows me to change the scene by their placement and which ones I use.

## Conclusion

I have found that building a laser kit such as this can be simple, yet challenging. Adding interior detail and lighting makes for more work than leaving it empty, but I think it adds a lot to the scene for very little time spent. If you haven't built a laser kit, I hope that these articles will inspire you to take the step.



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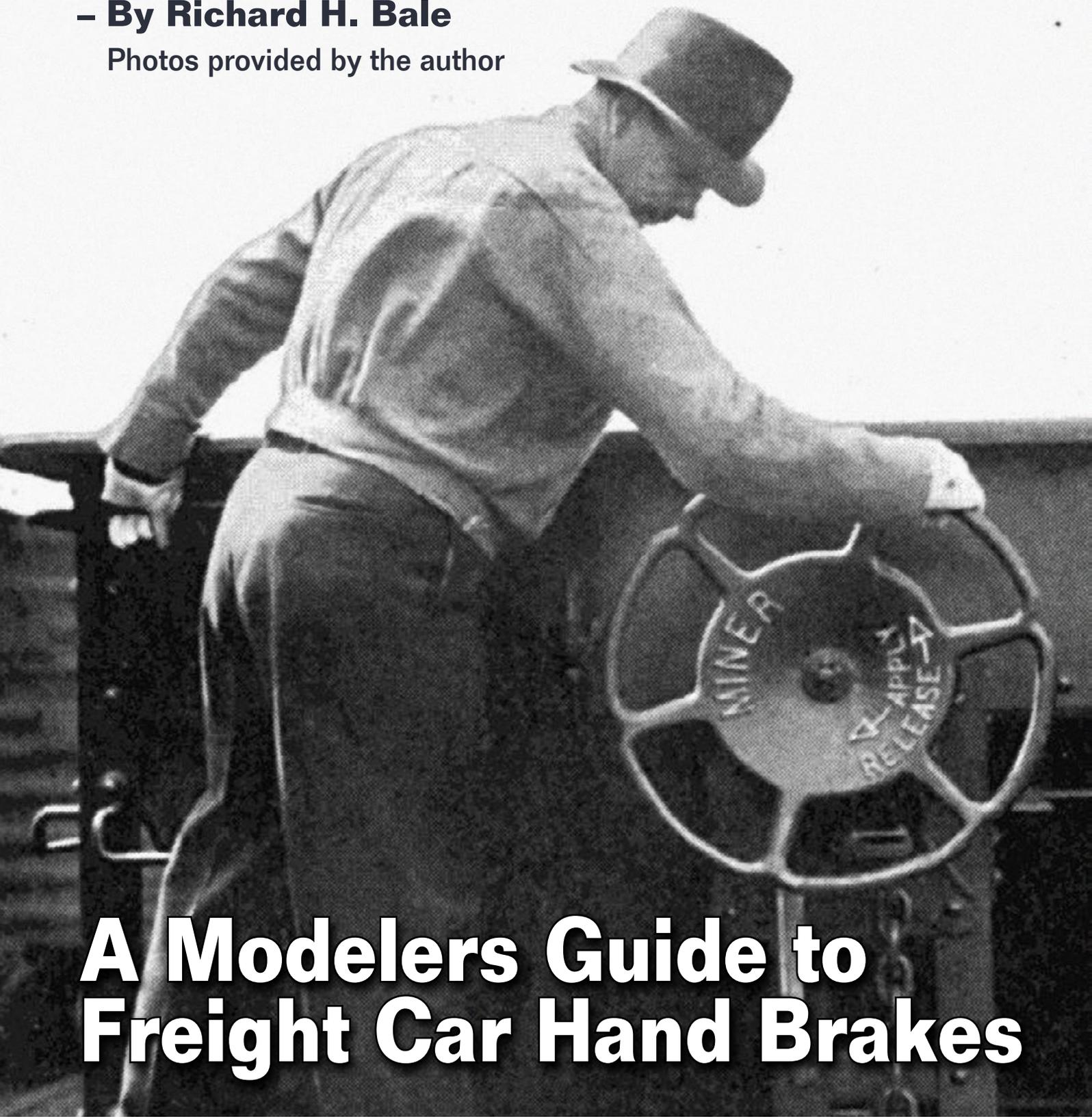
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– By **Richard H. Bale**  
Photos provided by the author



# A Modelers Guide to Freight Car Hand Brakes

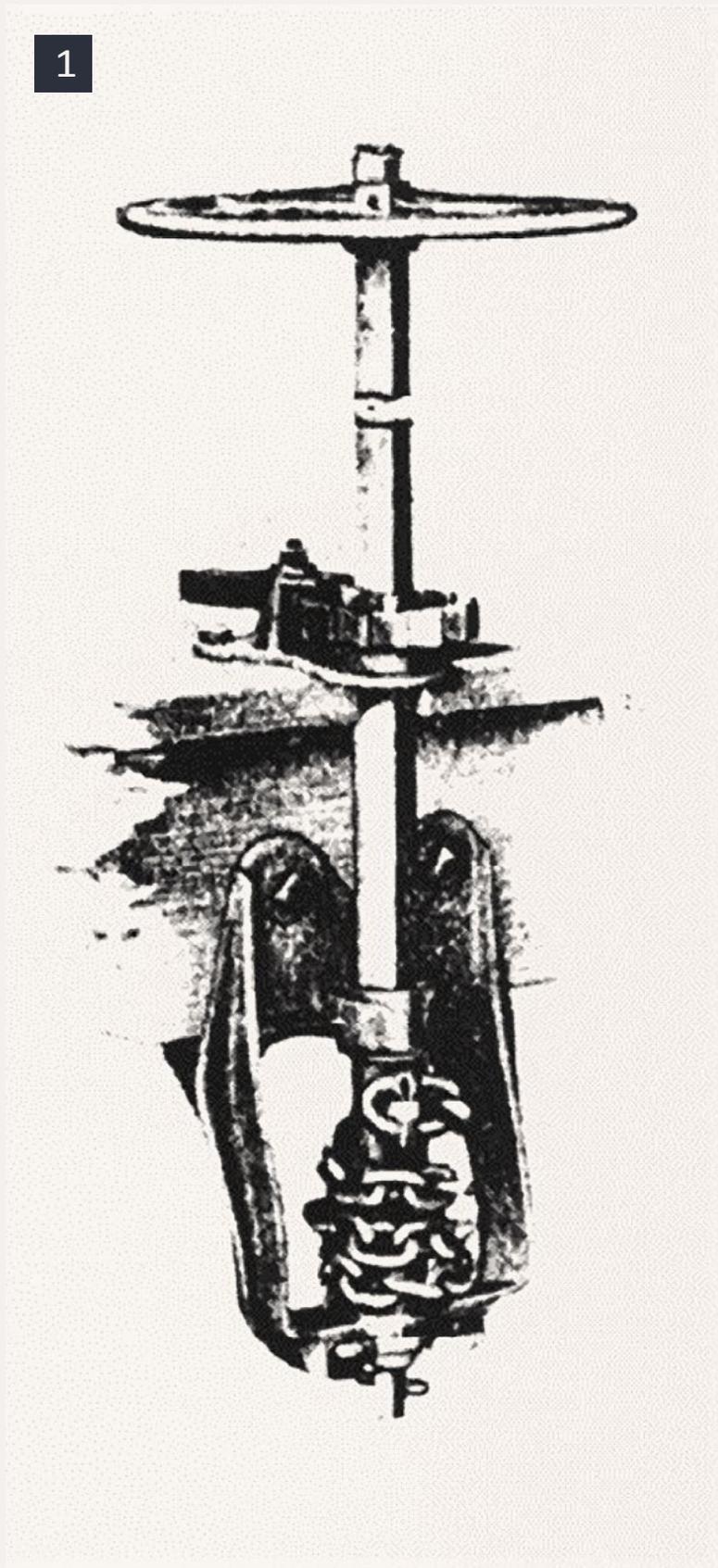
A comprehensive catalog of hand brakes ...

**T**he earliest form of hand brakes on freight cars consisted of a wheel mounted at the

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top of a vertical shaft that extended below the car's end sill. A chain attached to the bottom of the shaft was connected to the brake mechanism under the car. As the trainman turned the roof-top wheel, the chain wrapped around the lower portion of the shaft and pulled the brake levers (1).

1



A ratchet and pawl on a small brake platform (2) allowed the trainmen to set the tension as desired. To release the brake, the trainman released the pawl with his foot, which sometimes caused the wheel to spin as it unwound. The system was crude and dangerous, and only marginally effective. The system gained the nickname “stem-winder.”

Brake wheels intended for horizontal mounting on a vertical brake shaft were generally 18 inches in diameter. Several manufacturers offered replacement wheels, including the National Brake Co.,

1. Chain wrapped around a “stem-winder” vertical brake shaft.



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whose catalog listed malleable iron wheels in a variety of patterns with a choice of either five or six spiral spokes (3). Advertisements for Dayton Manufacturing Company's "Perfect" wheel claimed the stepped rim provided a better grip for trainman (4). It could also rip his hands if the wheel suddenly began to spin when released.

## Geared hand-brakes

After the introduction of air brakes, trainmen no longer had to stop or slow a train by jumping from car to car tightening the brakes. However, in yards or setouts on sidings, brakes still needed to be set (or released) on individual cars. The develop-

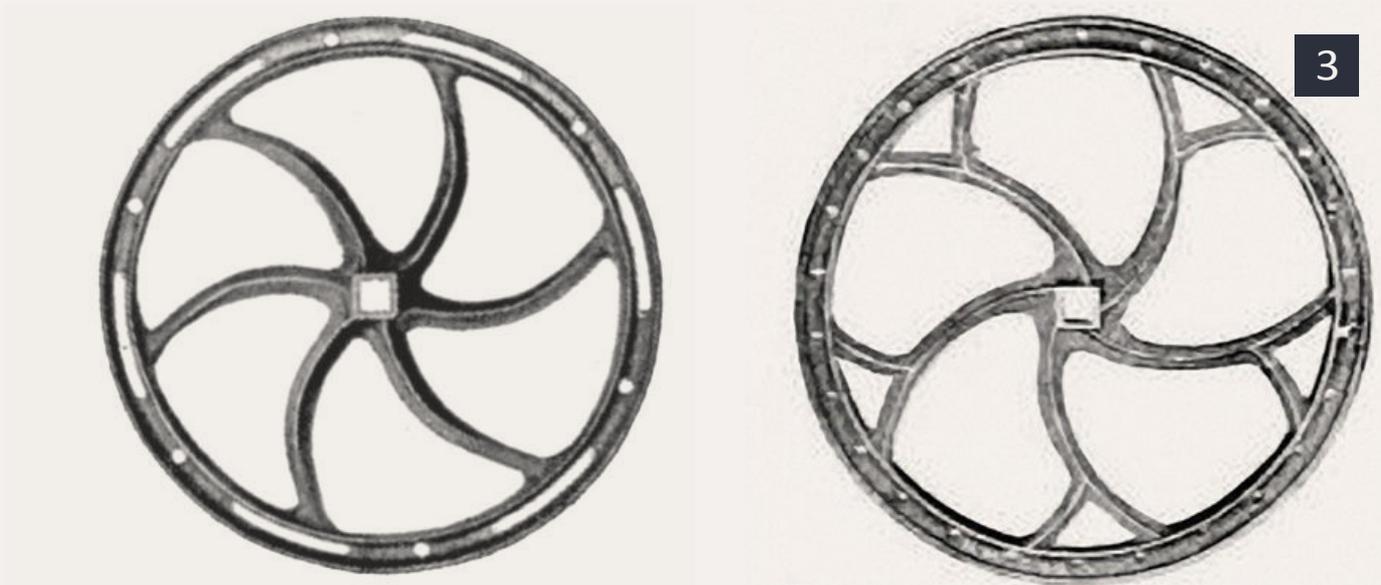
ment of geared hand-brake mechanisms in the early 1920s, and the mechanical advantage they offered, greatly improved the function of hand brakes and provided improved safety for trainmen.

The geared mechanism was contained in a housing riveted to the car end and incorporated a vertically mounted wheel, usually 22 inches in diameter. Until standardization was initiated in the mid-1950s, a wide range

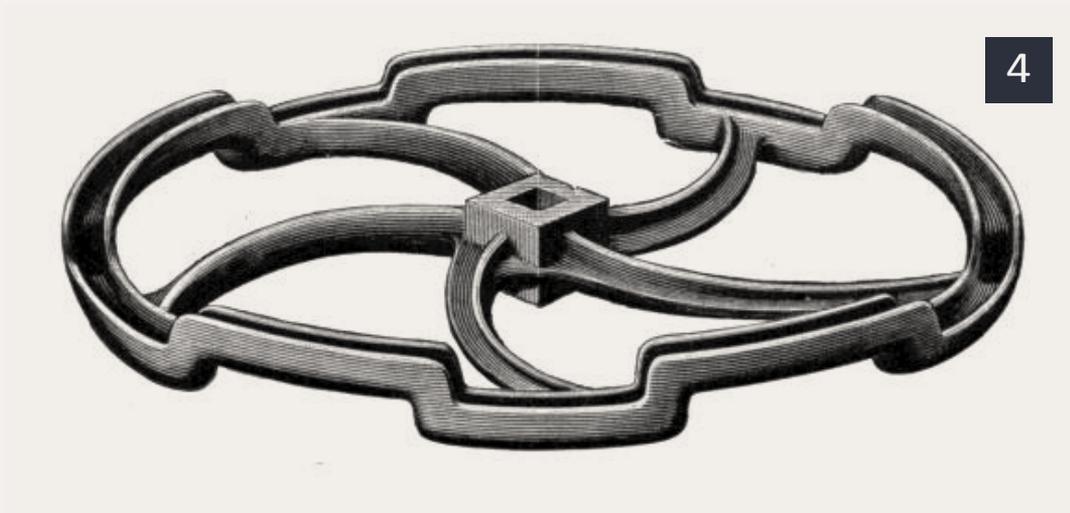


2

**2. Vertical "stem-winder" hand brake from 1869.**



### 3. National 18-inch hand brake wheels.



### 4. Dayton's "Perfect" brake wheel circa early teens.

of intricate brake wheel designs were offered by brake wheel makers. Since welding a damaged brake wheel was prohibited, shop foremen sometimes recycled undamaged wheels from cars headed for the salvage yard. As a result, it was not uncommon to see an odd brake wheel on a string of otherwise similar cars. Unless it was damaged, a brake wheels tended to remain on a car through the end of the car's useful life. The following information will help modelers identify specific brake wheels.



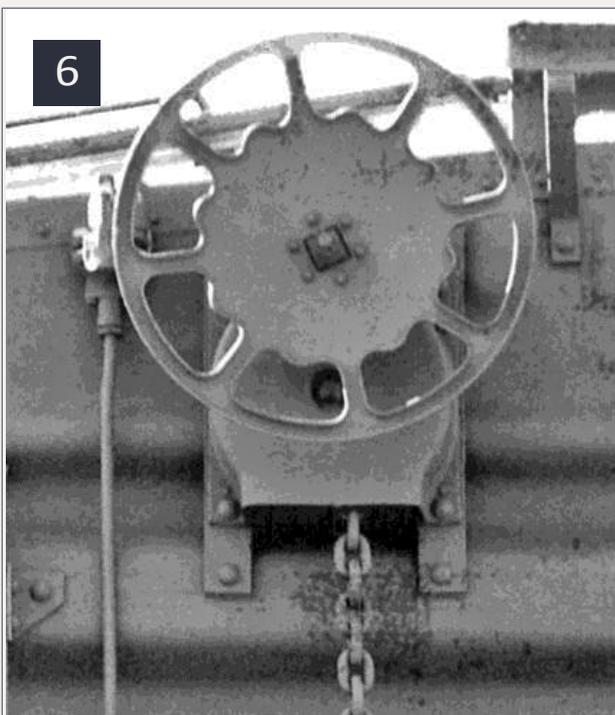
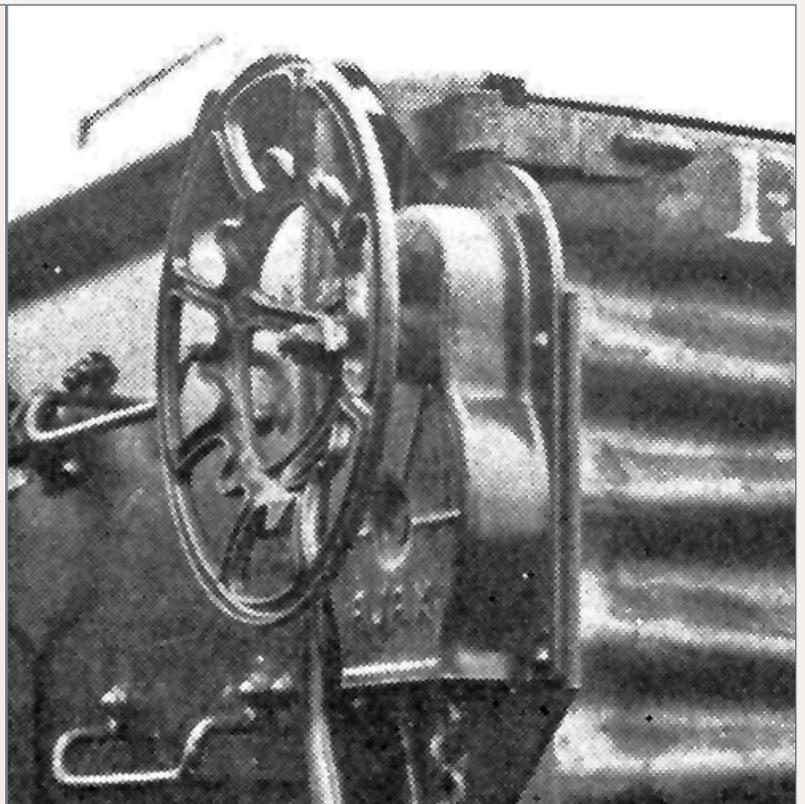
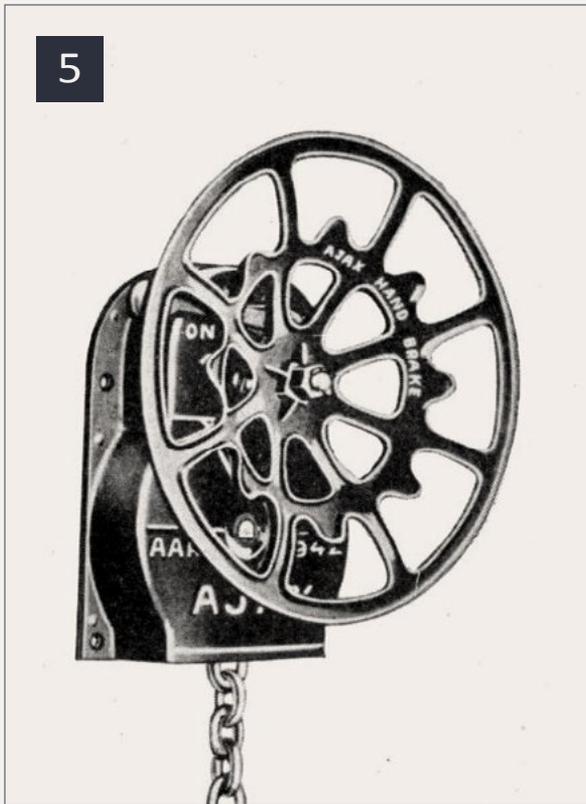
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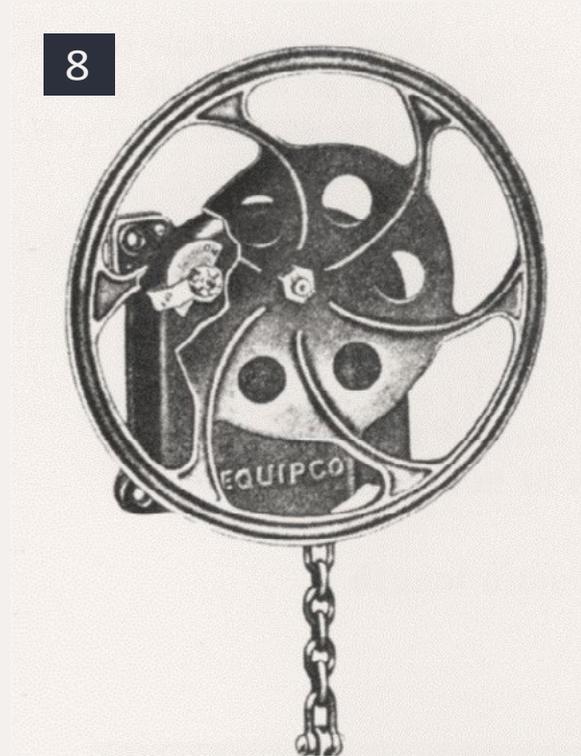
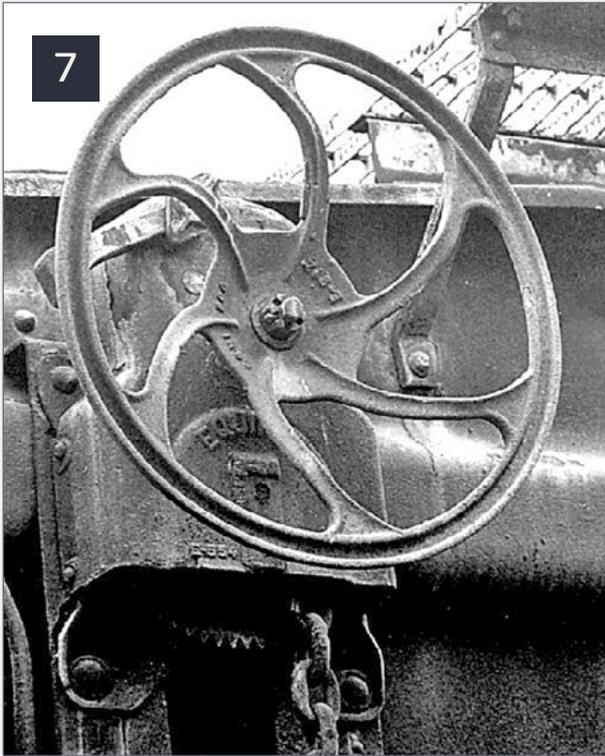
## Ajax Hand Brake Co.

One of the most widely utilized vertical brake wheels was the Ajax 3059 (5) introduced in 1929. With only minor changes, the model 3059 wheel was applied to new cars until the early 1950s, when Ajax replaced the cast malleable iron wheel with a pressed steel wheel with eight spokes and a large scalloped hub (6).



**5. Ajax model 3059 – 1929 to early 1950s. The 3059 wheel and gear mechanism at right is applied to a drop-end gondola built in 1931.**

**6. Ajax pressed steel wheel – early 1950s to about 1960.**



## Equipco – Equipment Specialties Division of Union Asbestos & Rubber Co.

During the first half of the 1930s, Equipco supplied car builders with a 22-inch cast malleable iron wheel with six spiral spokes (7). The design was modified in 1935 with an enlarged hub with six round holes in each segment (8). In the late 1930s Equipco modified the hub again by changing the round holes to triangular sections and adding a dozen small rectangular holes in the rim (9).



**7. Equipco – early 1930s to mid 1930s.**

**8. Equipco – from mid-1930s to 1939.**

**9. Equipco – 1939 to mid '50s.**



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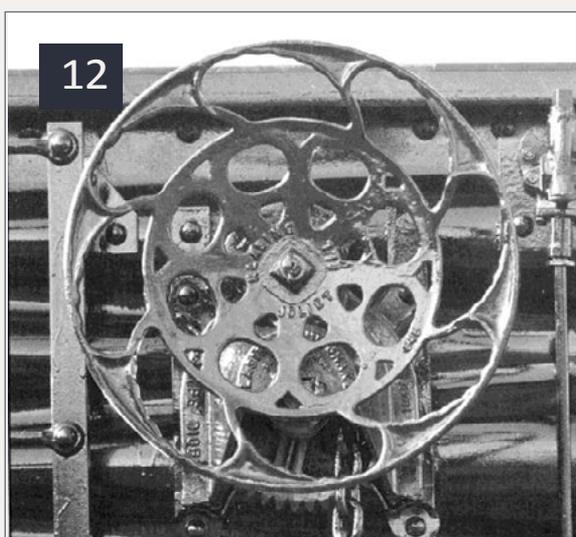
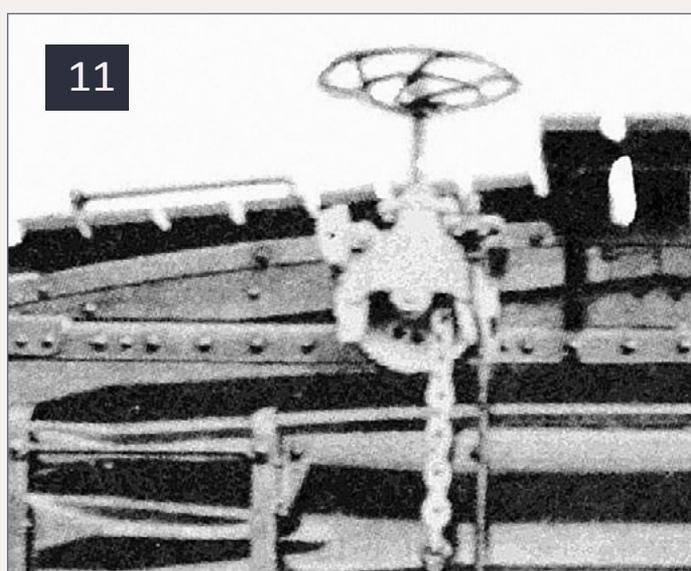
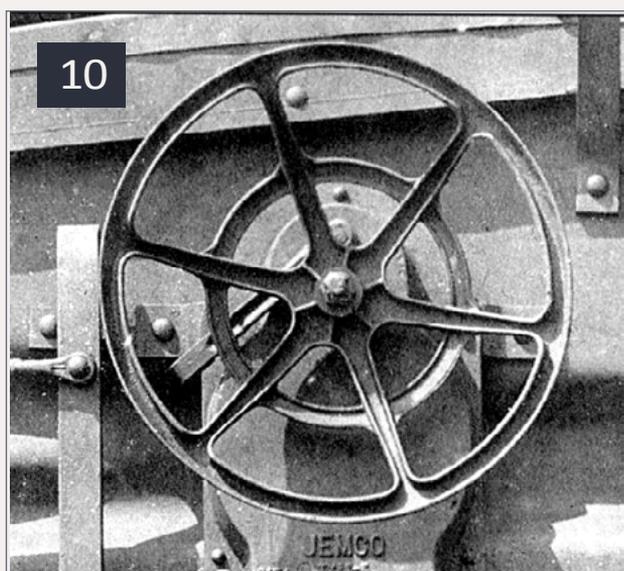
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## Jemco Products Company

Jemco introduced a geared power hand brake in the late 1920s (10) that remained unchanged until the 1950s. The basic design of the Jemco wheel would be repeated by Universal with their model M2049 (23) some 20 years later.

## Klasing Car Brake Co.

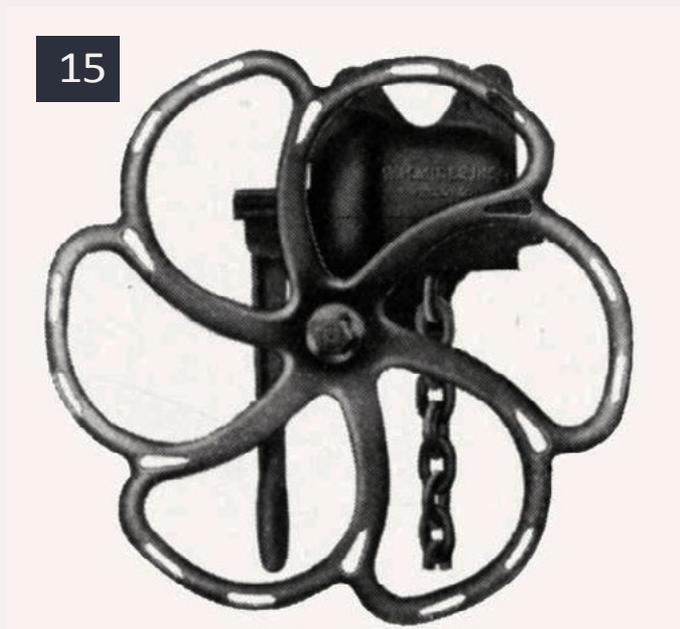
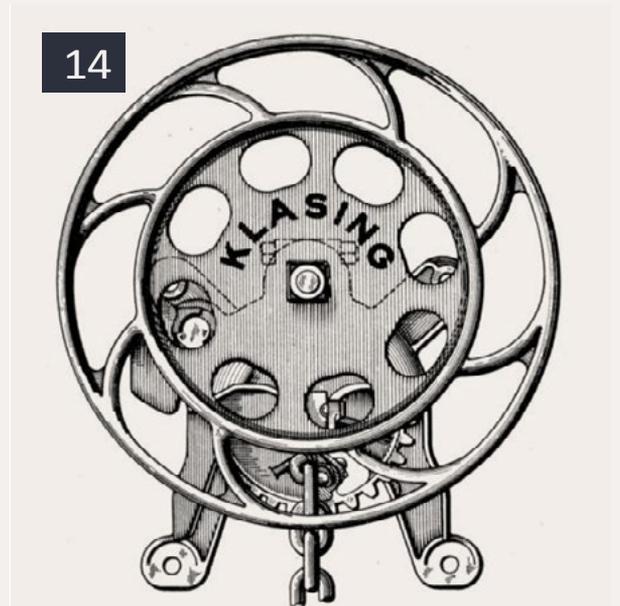
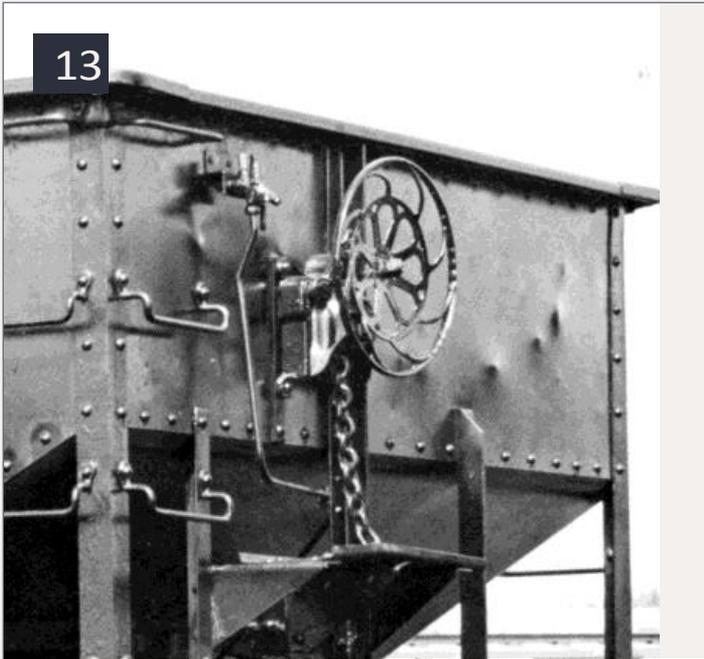
In the mid-1930s, Klasing briefly offered a geared brake mechanism with a horizontally mounted roof top wheel (11). The advantage over the general practice of a vertically mounted wheel on the end of the car is unclear. In 1936 Klasing introduced a more conventional geared brake with an intricately patterned brake wheel it designated model 646 (12). Similar wheels with slight variations in the lacy pattern appeared throughout



**10. Jemco wheel from the early 1930s.**

**11. Klasing geared brake with horizontal roof-top wheel from the mid-1930s.**

**12. Klasing model 646 wheel.**



**13. Evolving pattern of Klasing model 646, circa mid-1940s.**

**14. Klasing model D1051, mid-1940s through late 1960s.**

**15. Miner 24-inch model S3202 – from the early 1930s.**

the following decade (13). After World War II Klasing launched its Power-Matic D1051 geared hand-brake with a fully redesigned wheel (14). Despite the movement toward standardization in the late 1950s, Klasing's model D1051 continued to be applied to new equipment through the 1960s.

### **Miner – W. H. Miner Co.**

Although most vertical brake wheels were 22 inches in diameter, Miner gained some success with its 24-inch model D3202 wheel launched in the early 1930s (15). The cast malleable iron wheel



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featured a scalloped pattern with six spiral spokes and 18 small openings in the rim. For customers preferring a 22-inch wheel, Miner offered model D3279 in 1936 (16). The design of the D3279 looked much like the standardized wheels that would not appear for another 20 years.

### **Peacock and Champion – National Brake Co., purchased the Champion brand in the early 1950s.**

Peacock's model 320 malleable iron wheel first appeared in the early 1930s (17). It was similar to Jemco's (10) except the spokes were in a spiral pattern. Beginning in the late 1930s and continuing through the end of the 1940s, Peacock offered a 22-inch wheel with five straight, slender spokes and distinctive anti-slip finger grips on the inside edge of the rim (18).



16



17

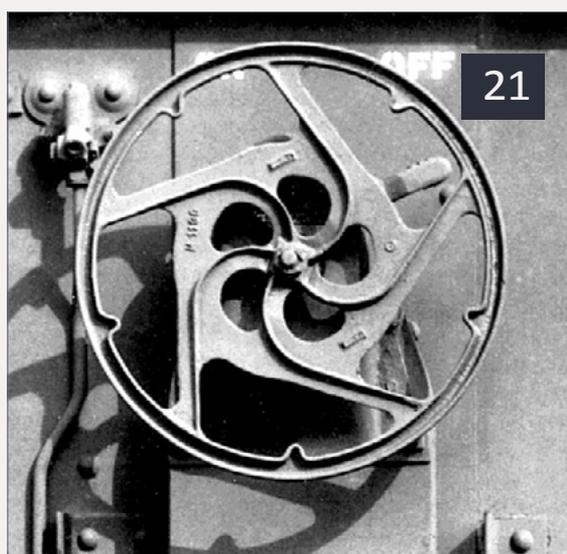


18

**16. Miner 22-inch model D3279 – from 1936 to the '50s.**

**17. Peacock model 320 – throughout the 1930s**

**18. Peacock – late 1930s to early '50s.**



**19. Champion-Peacock model 285 – from the early 1950s.**

**20. Superior model V53 – 1940s and '50s.**

**21. Universal model M1138 – from the late 1920s.**

In the early 1950s National Brake Co. acquired Champion and merged it with its Peacock brand of brake equipment. This resulted in the 1953 introduction of the Champion-Peacock model 285 brake wheel (19).

### **Superior Hand Brake Co.**

Superior's model V53 cast malleable iron brake wheel (20) was introduced in the very early 1930s. The highly-stylized 22-inch wheel incorporated five spiral spokes with a scalloped rim that had 15 small rectangular holes. A smaller inner ring midway to the hub repeated the scallops of the outer rim. Subsequent versions of the V53 manufactured after the mid-'40s did not have the small holes in the rim.



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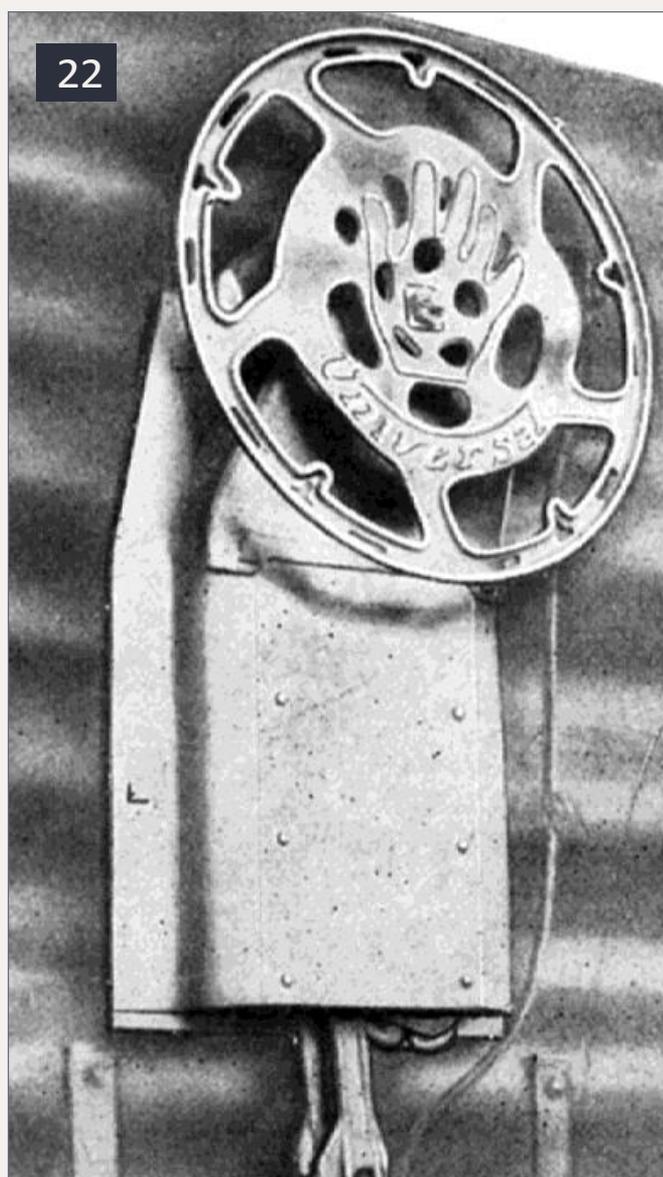


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## Universal Railway Devices Co.

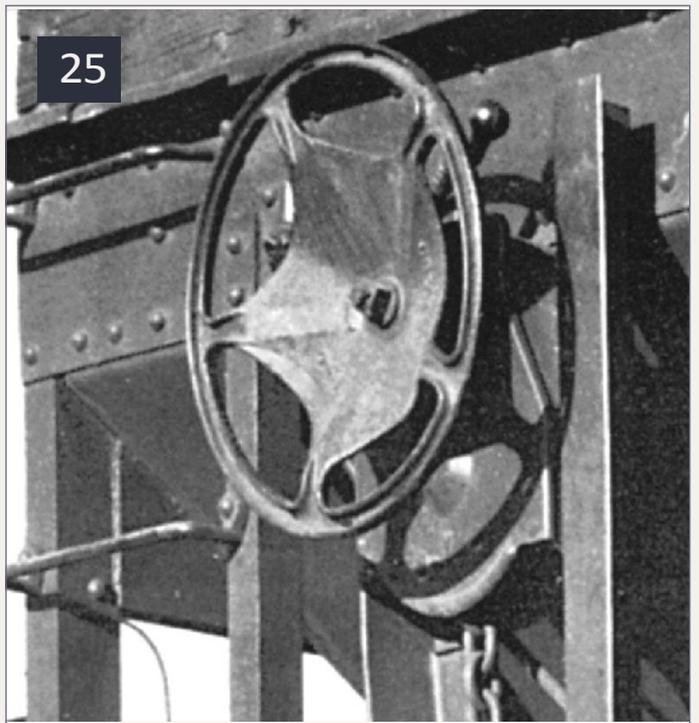
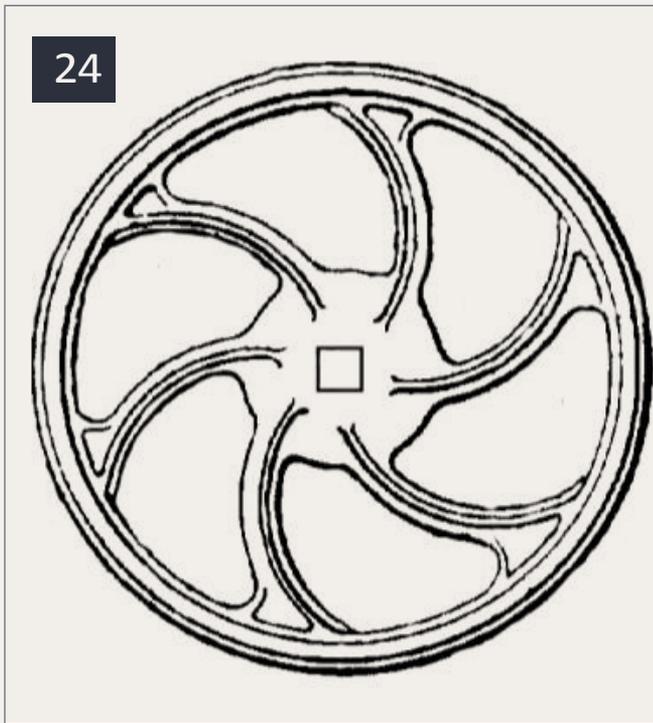
The five angled spokes on Universal's model M1138 brake wheel make it easy to identify (21).

Introduced in the late 1920s, the M1138 was replaced in the early 1930s by Universal's "One-Hand" brake that had five short spokes and the outline of a human hand cast into center hub (22). The long gear case extending below the wheel also helps identify Universal hand brakes. The company's principal brake wheel during the 1940s was the model M2049 (23). Note the similarity to the Jemco (10 prior pages) and Ureco (26) wheels.



**22. Universal "One-Hand" brake wheel marketed throughout the 1930s.**

**23. Universal model M2049 – throughout the 1940s. Note how high it is mounted on the car end.**



**24. Ureco – from the late 1920s.**

**25. Ureco – mid 1930s through WWII.**

**26. Ureco model U528 – mid '40s to mid '50s.**

## **Ureco - Union Railway Equipment Co.**

Ureco's initial vertical brake wheel introduced in the late 1920s, was a basic 22-inch cast malleable iron wheel with six spokes emanating in a spiral from a medium-sized hub (24). A more distinctive design came in 1936 with the introduction of the model U498 brake wheel (25) that resembled a flying squirrel. After World War II, Ureco began selling brake wheel model U528 (26) that had five straight spokes, a plain rim, and an equally plain inner ring midway to the hub.



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## Standardization of Vertical Brake Wheels

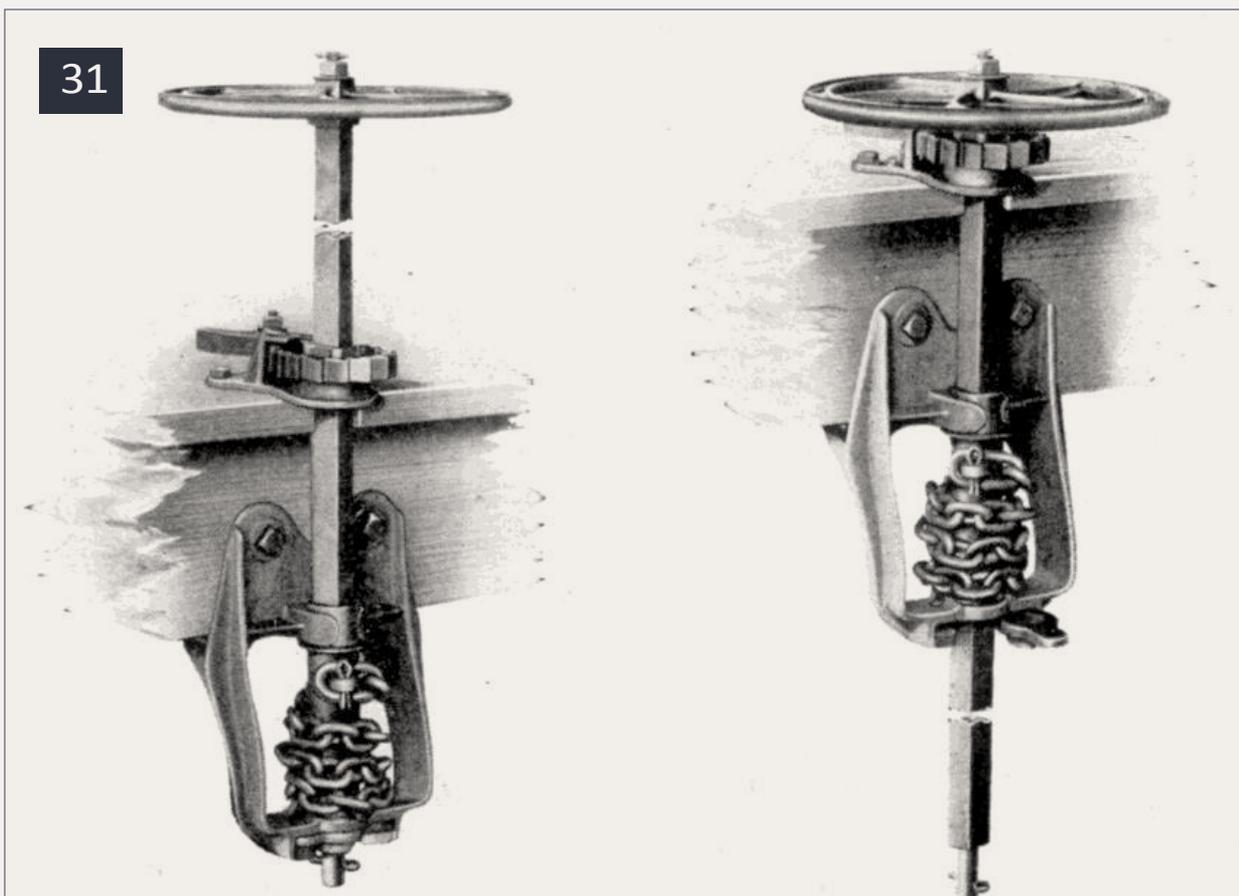
Industry discussions favoring a standardized brake wheel began in the early 1950s. The movement was prompted by pressure to improve the safety of trainmen through the elimination of design variables, as well as a desire to reduce the variety of replacement parts repair facilities needed to keep on hand. After nearly a decade of talk, a standard design for a pressed steel wheel emerged in 1959. Despite the general agreement, implementation of the new standard wheel on newly built equipment was not immediately mandatory. As a result, wheels of pre-standard design continued to be applied on some new cars well into the 1960s.

Attempting to identify different brands of standardized prototype wheels produced after 1960 is difficult. Identifying the maker of a standardized wheel in HO scale is 87 times harder. The most significant difference in various post-1960 hand brakes are the housings for the gear mechanism and the position of the release or trip lever. Modern hand brake wheels manufactured by Ajax (27), Equipco (28), Miner (29), and Peacock (30) are representative of all standardized wheels currently available.



**27. Ajax model IP80 with release lever at the lower left.**

**28. Equipco model 4000 with release lever at the center left.**



**29. Miner model 6600 with a long release lever at the bottom.**

**30. Peacock model 1600 with release lever at upper left.**

**31. "Stem-winder" drop-shaft hand brake manufactured by National early in the 20th century.**

*Continued on the following page ...*



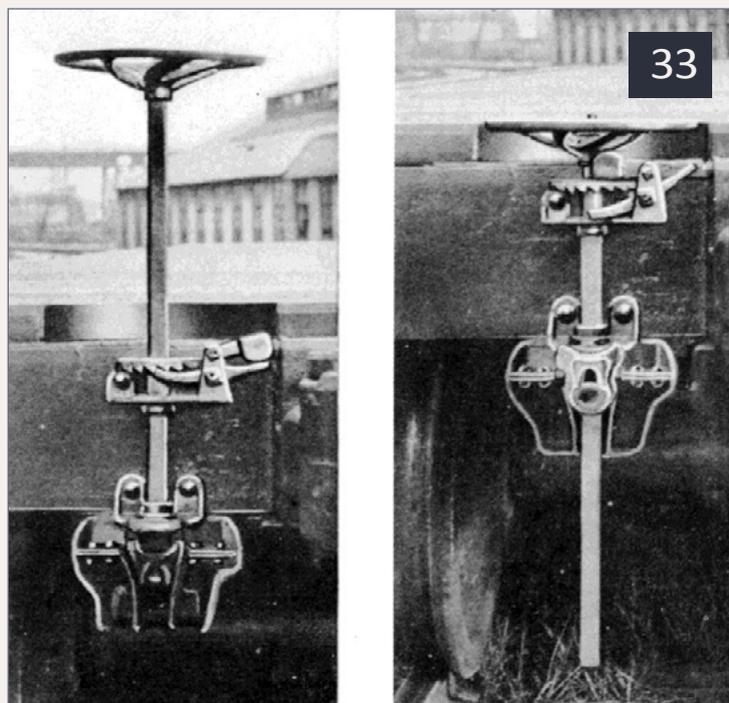
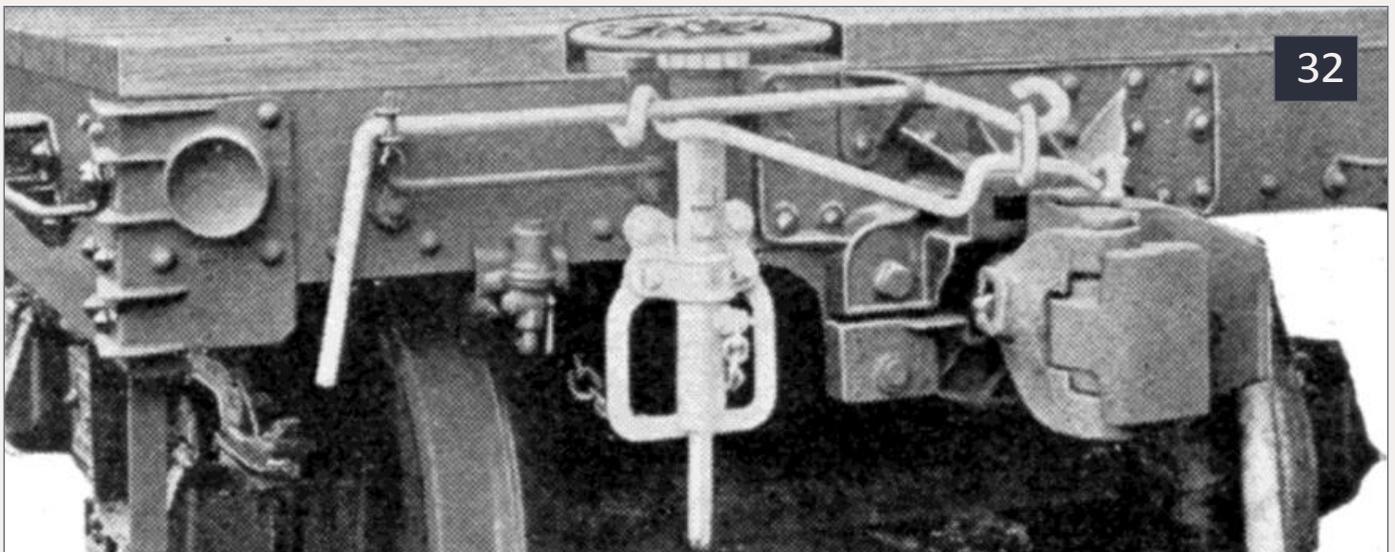
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## Drop-shaft Hand Brakes

From the earliest use of hand brakes, the need to protect the brake wheel on gondolas and flat cars was apparent. Both tilting-handle and drop-shaft types were developed, with the latter quickly emerging as the most practical and economical. Drop-shaft hand brakes continue in use today. In the early versions the chain was wrapped around a square sleeve through which the brake shaft was able to slide vertically (31 and 32). Modern drop-shaft hand brakes incorporate a geared mechanism such as those manufactured by Superior (33) and Superior (34).



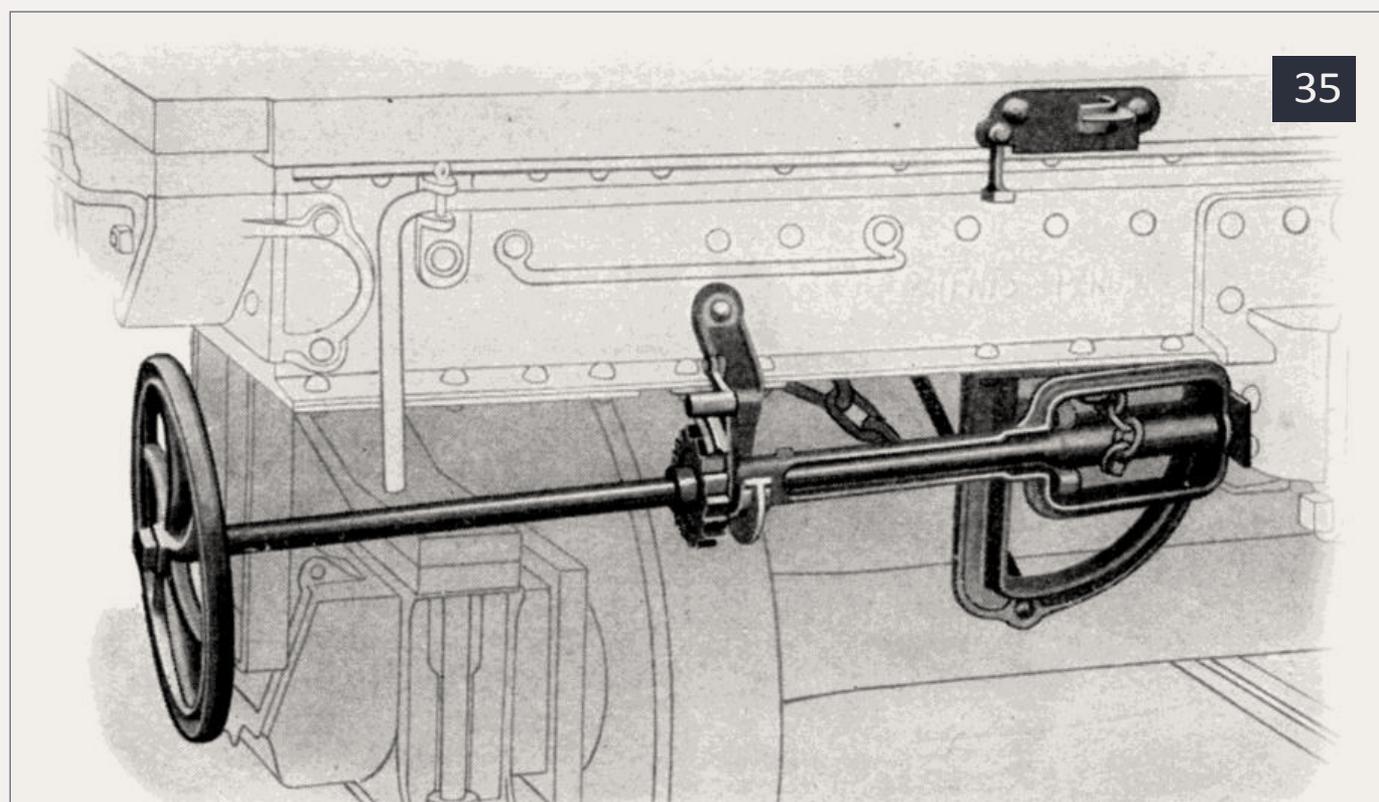
**32. A Ureco “stem-winder” drop-brake shaft on a USRA flat car from the late teens.**

**33. Superior drop-shaft hand brakes from the 1940s.**



34. Universal geared drop-shaft hand brakes in use since the 1970s.

35. Barber tilting hand brake staff.



## Tilting Hand Brakes

Gondola cars with drop ends presented a special challenge to manufacturers of hand brakes. Both the Barber type manufactured by Standard Car Truck Co. (35) and the Feasible Flexible model manufactured by U.S. Metal Co. (36) were promoted prior to 1920, but may have survived on specialty equipment for decades. The tilting hand brake illustrated in figure 37 was

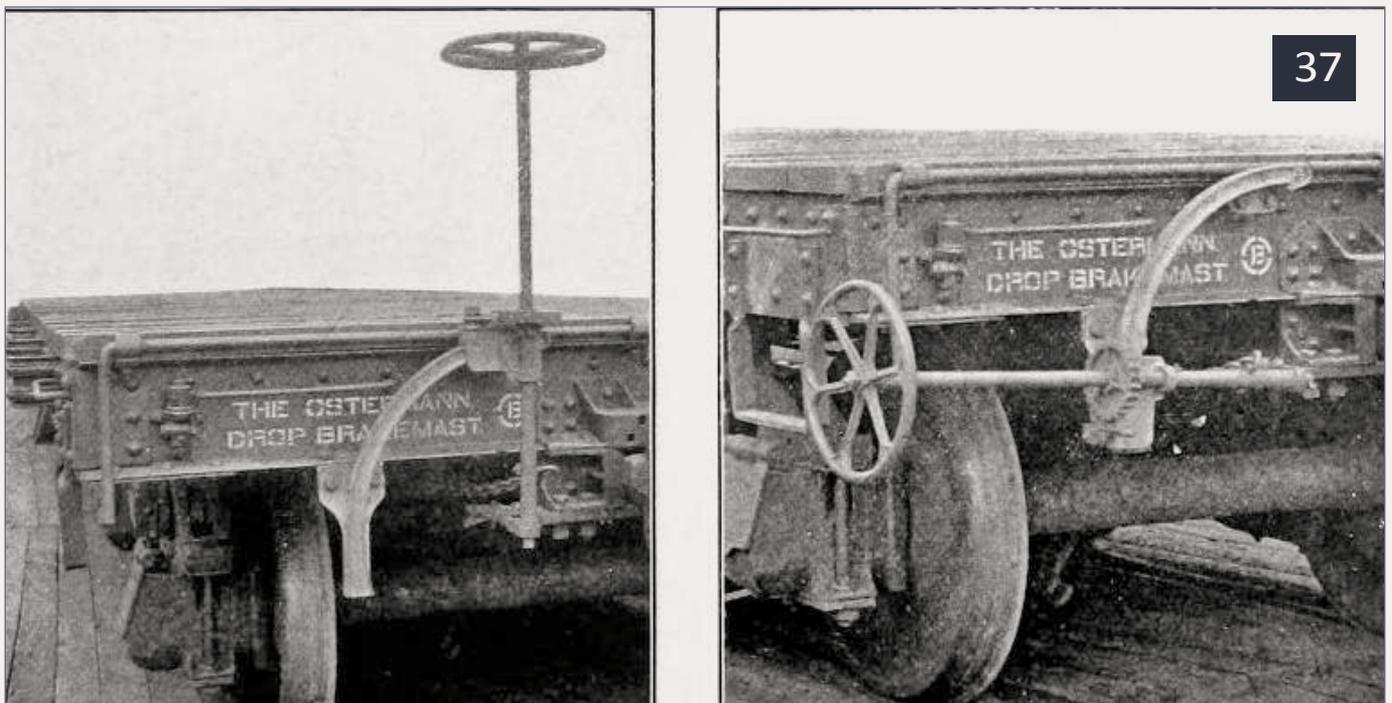
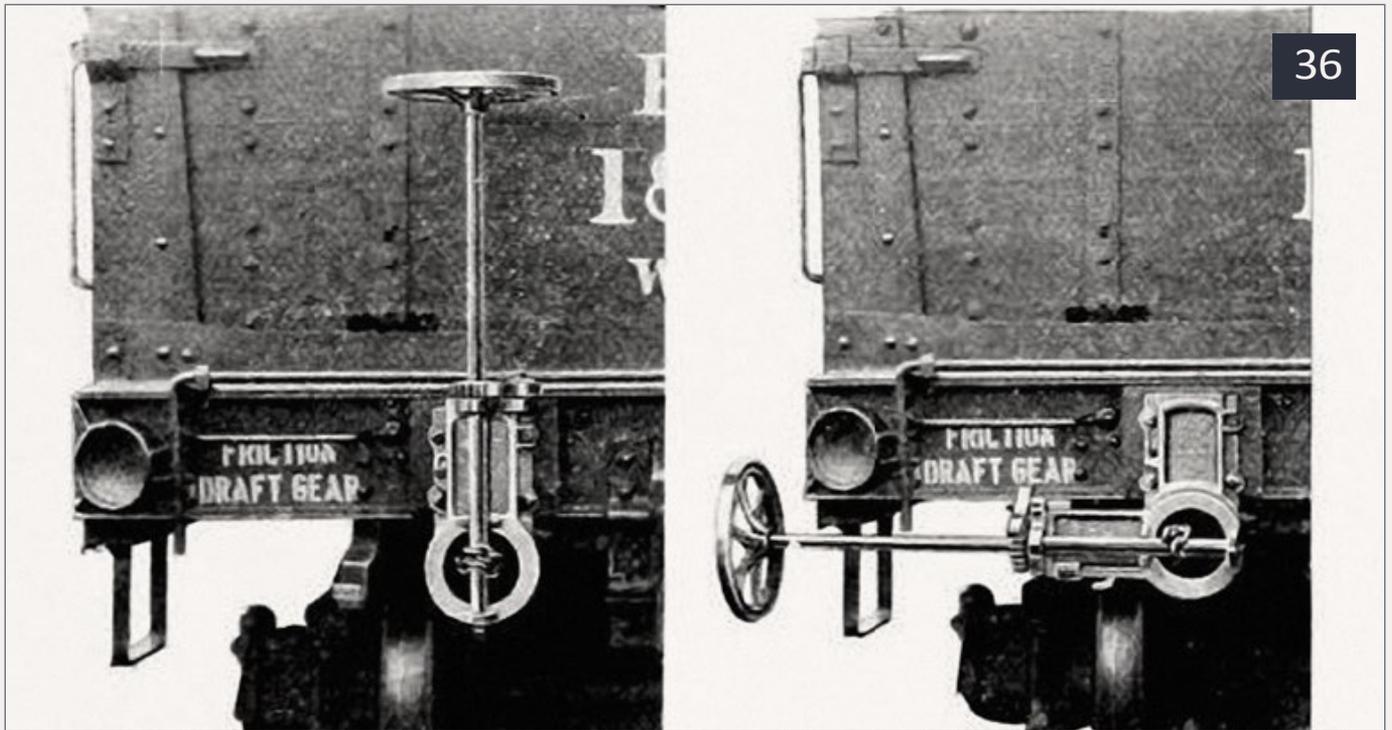


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introduced by Gregg Manufacturing in the early 1930s. The tilting brake wheel could function in both positions. When in the down position, it could impede a trainman attempting to board a moving train.



**36. Feasible tilting hand brake in vertical and horizontal positions.**

**37. Gregg tilting hand brake.**

## Credits

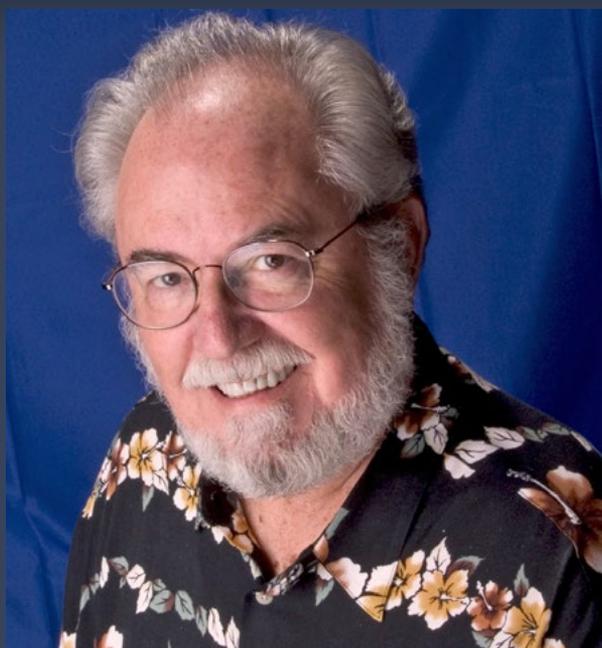
Figure 2 Oakland Museum. Figures 6, 7, 10, 12, 21, and 23 Railway Prototype Encyclopedia, Volume 10. Figures 11, 13, 22, 24, 25, 34, 35, and 37 Car Builders Encyclopedia various editions. All others from author's collection of manufacturers advertising and application material.

## Bibliography

American Railroad Freight Car, John H. White Jr.

"Brake Gear: Hand Brakes," various Car Builders Encyclopedia 1919 to 1984.

"Freight Car Hand Brakes 1920s to 1950s," Pat Wider, Railway Prototype Encyclopedia, Volume 10. 



Author Richard Bale writes our news column under the byline of The Old Yardmaster. He has been writing about the model railroad trade for various hobby publications since the 1960's.

He enjoys building models, particularly structures, some of which appeared in the June 2006 issue of *Model Railroader* magazine.



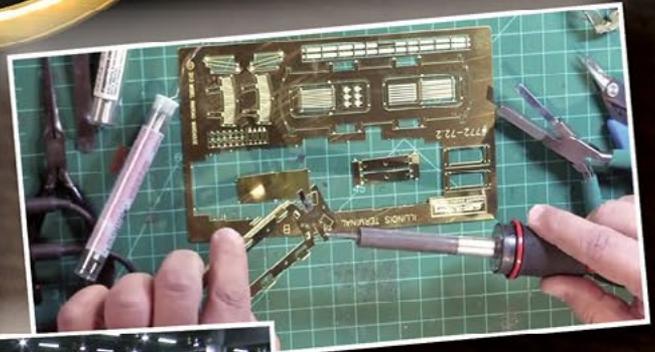
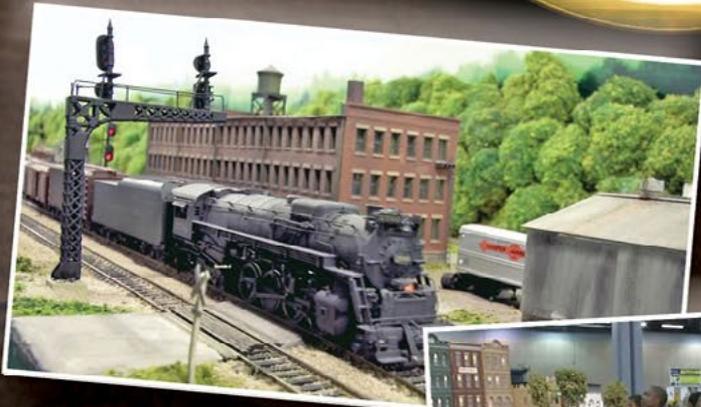
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# ExactRail 63' Center-beam flatcar in HO scale

by Jeff Shultz  
and Joe Brugger



## 1: BN 624185.

**E**xactRail recently started shipping a model of a 63' (60'-8" inside length) Thrall Center Beam flatcar. Eagerly awaited by HO scale modelers, an early hand-built prototype was shown at the 2012 National Train Show in Grand Rapids, Michigan.

Featuring an “opera window” style center-beam, the car is offered in six paint schemes – two different Milwaukee paint schemes, Burlington Northern, Union Pacific, Western Pacific, and BNSF. Multiple road names are offered in each paint scheme, and while some of them are still in stock at ExactRail, many are either sold out, or nearly so.

The car itself is described by ExactRail as a “hybrid” model, with the main structure using both etched brass and plastic in



its construction. The center-beam itself is a 0.010" etched brass piece and appears prototypically slim in profile. It is 8-11/16" long from the outsides of the bulkheads, and weighs 3.8 ounces, significantly less than the 5 to 5½ oz. recommended by the NMRA for a car of its length. With very little space to hide extra weight in its detailed underside, adding weight via a load would seem to be the most visually acceptable solution.

The car comes with factory-installed Kadee #58 couplers and the coupler box lids are screwed on, making it relatively simple for those who prefer a different size or type of coupler to trade them out. Care should be taken with the fragile coupler cut levers, which are attached to the lid, air hoses attached to the side of the coupler box, and the brake rigging in the same area on the "B" end of the car.

The printing on the model is crisp and clear, down to the tiniest print in the data panel and the "Thrall Car" logo and, on some models, the road numbers on the trucks.

## History and information on center-beam flatcars

"Center Beam" is a Thrall Car Co. trademark. The company built the first of the type in 1969 for bundled lumber traffic on the Burlington Northern, using a plan developed by Canadian



**2: WP 1401 (Joe Brugger photo).**



### 3: UP 217004.

National. Think of the beam as a very tall center sill, improving the ability of a low-decked flat car to carry heavy loads. It also ties the bulkheads, useful on cars hauling shifty loads like lumber, poles and pipe.

The type has have been built in several lengths – 66' between the bulkheads for BN, 83-footers for steel truss traffic on the Seaboard Coast Line, then these ExactRail 60' 8" cars in 1977 for Milwaukee, Union Pacific and Western Pacific. Later cars were built to 73' for less-dense kiln-dried lumber, and Walthers has offered these. The Front Range-McKean model car



### 4: Closeup of the B end.



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kit of years ago was a 60' opera window version. The company also offered a truss version. The spidery truss weighed less than the sheet-steel “opera window” beam and allowed loading longer cars to 100 tons.

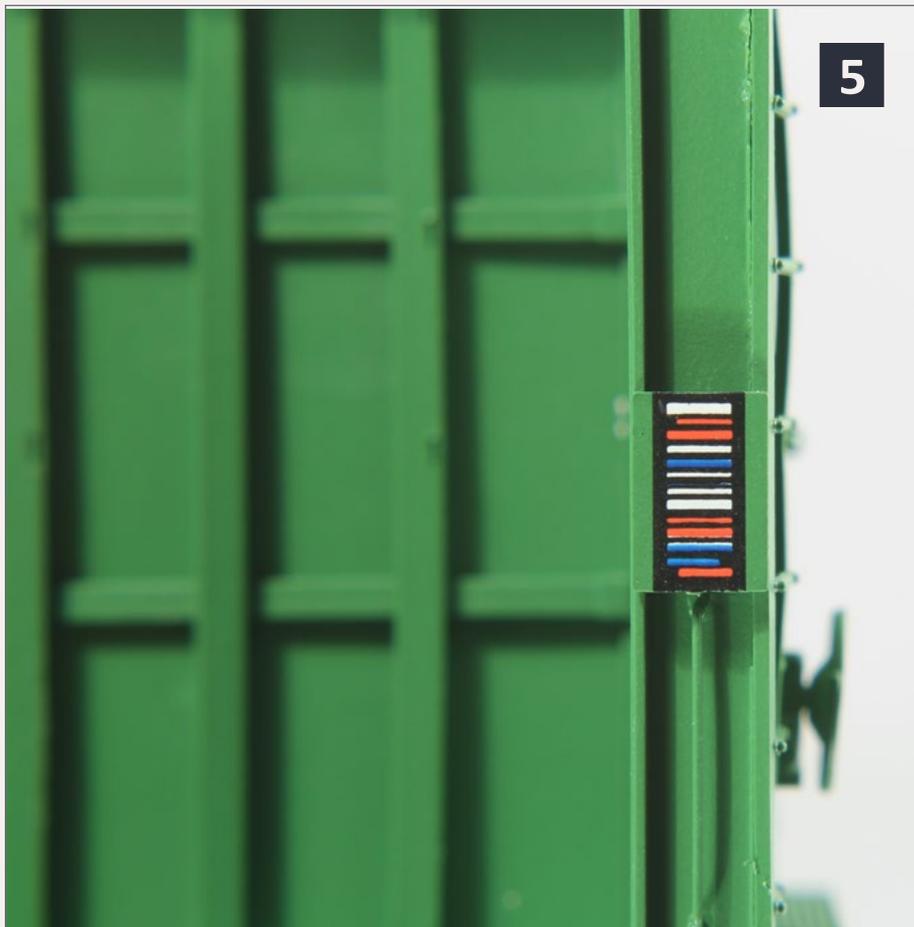
The car floors have risers that tilt slightly to the center to counteract the tendency of loads to vibrate over the car side. The riser lets the forks of lift trucks slip under the loads. Sophisticated cable and winch tie-downs secure loads, and allow them to be placed in units that can be handled by forklifts. Plain bulkhead cars and flats need to have their loads interleaved and strapped to become a single piece.

Loading and unloading areas for beam cars are usually graveled or hard-surfaced to the top of the rails so forklifts can access both sides. The cars have to be loaded and unloaded evenly;

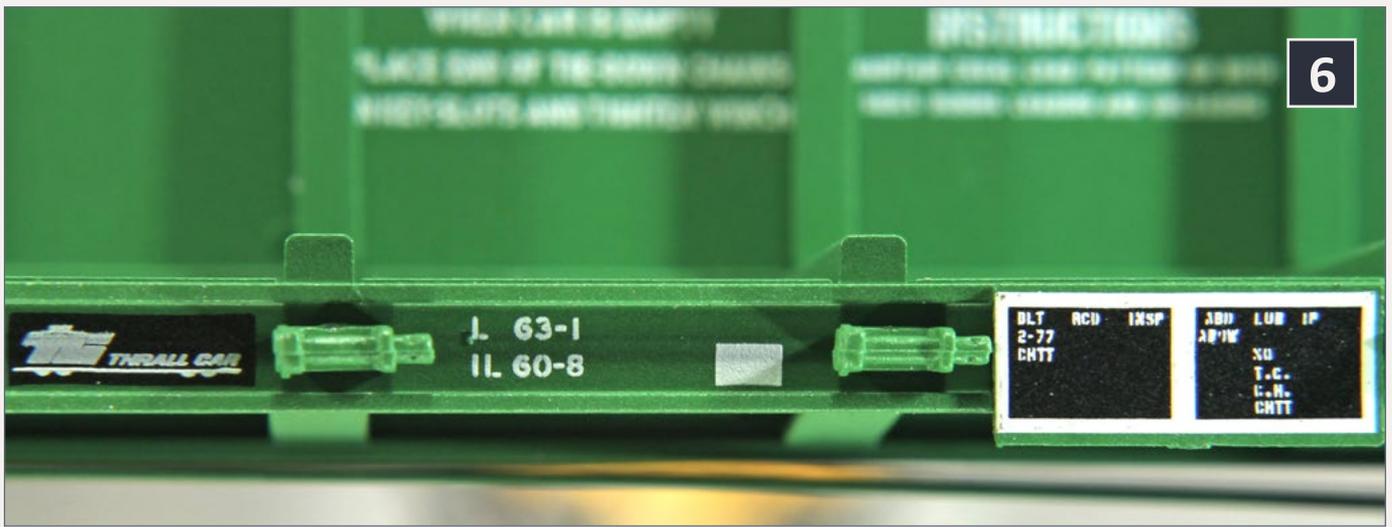
trying to load one side first and then the other will cause the car to tip over.

Gunderson built cars very similar to the original Thrall design. Trinity Railcar and National Steel Car have built truss-design beam cars.

An excellent article by D. Scott Chatfield on the

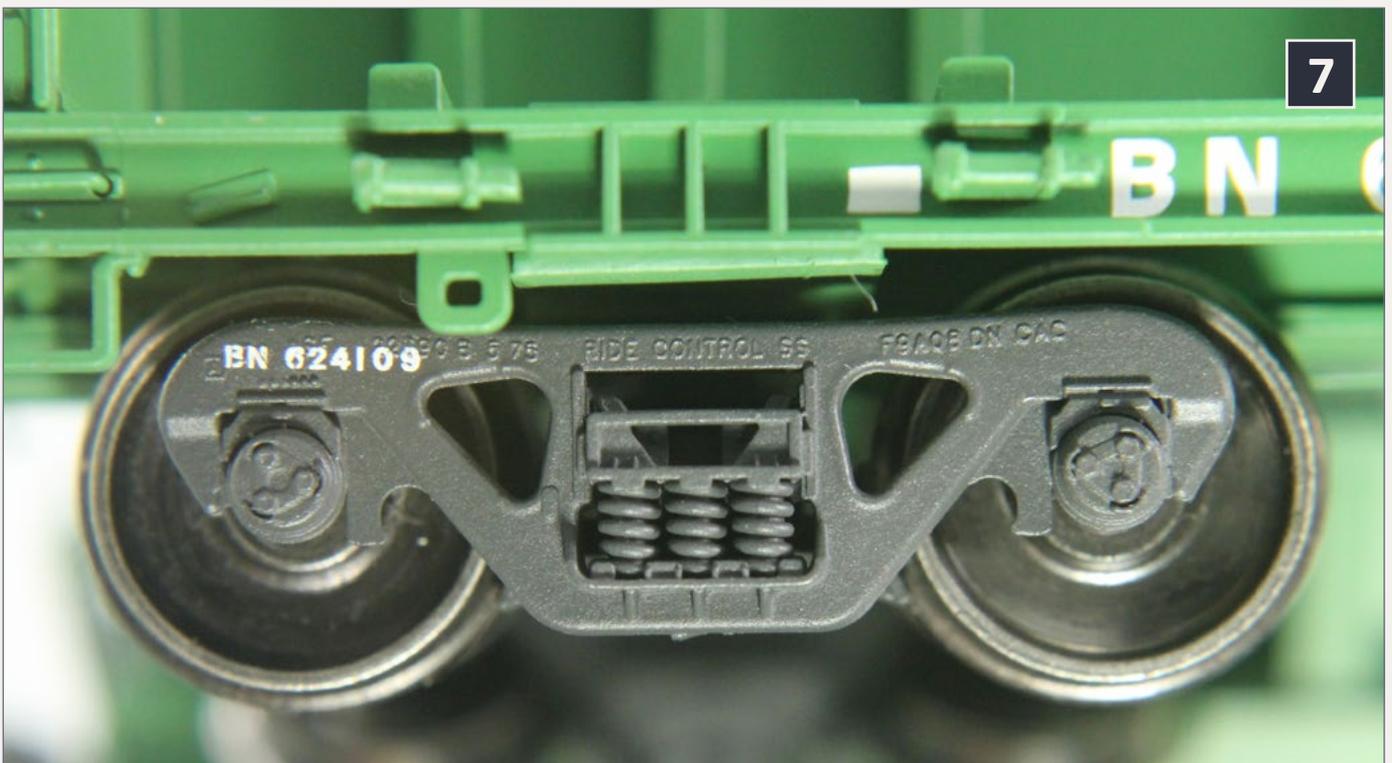


**5: Closeup of ACI barcode.**



6

6: Closeup of Thrall Car logo and data box printing.



7

7: Closeup of truck detail.

development of center-beam flat cars appeared in *Railmodel Journal* in January 1996.

BNSF car data:

[bnsf.com/customers/equipment/centerbeam-flatcar](https://www.bnsf.com/customers/equipment/centerbeam-flatcar).

*Pictures continued on following page ...*



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8: Closeup of center-beam profile.



9: The center-beams at Cascade Warehouse Reload on the Willamette & Pacific, Oregon Electric Branch.



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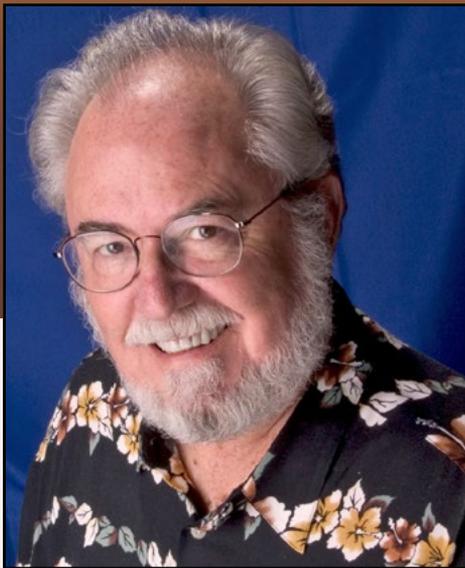
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**November 2013:**

**The latest model railroad products, news & events**

*by Richard Bale and Jeff Shultz*

## **Berkshire Valley Models**

Berkshire Valley Models line of specialty O scale products has been acquired by Rich Rands of St. Louis, Missouri. Berkshire Valley was founded in 1989 by the late Frank Czubryt of Adams, Mass. We'll have more details next month ...

## **QSI Solutions**

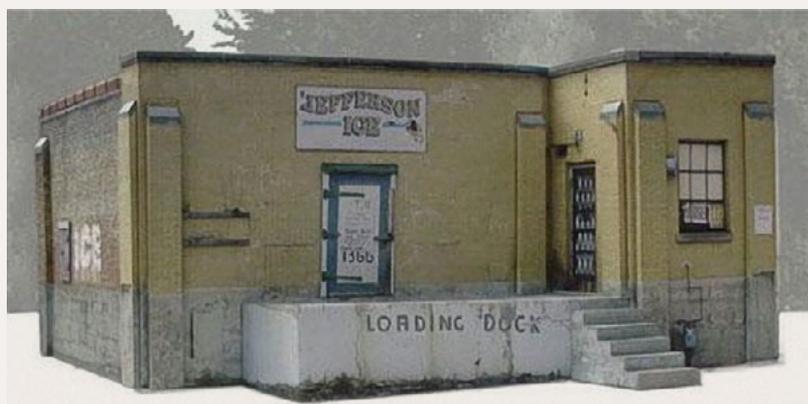
QSI Solutions, which has been operating as a subdivision of American Hobby Distributors, has been restructured into an independent, stand-alone company under the ownership of its long-time manager and product developer Joshua Shedaker. QSI Solutions will continue to function as the manufacturer, distributor, and product development arm of QS Industries of Beaverton, Oregon. According to American Hobby Distributor owner, Tony Parisi, AHD will continue to service its network of dealers and provide distribution for hobby products manufactured by NCE Corporation, Circuitron, Broadway Limited,



Model Power Products, and others. AHD is located in Essex Junction, Vermont ...

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## NEW PRODUCTS FOR ALL SCALES



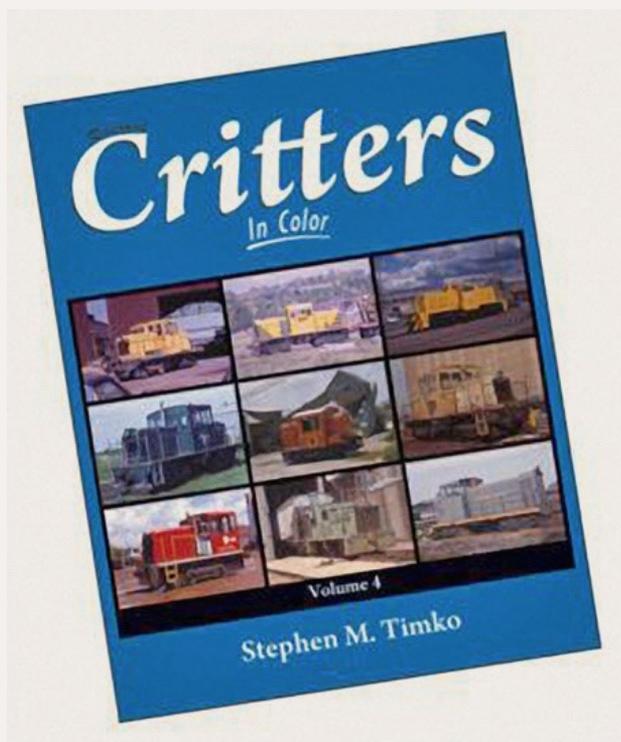
**Clever Models** ([clevermodels.net](http://clevermodels.net)) offers a large selection of N, HO, S, and O scale paper model kits that can be printed on cardstock, cut and folded

by the hobbyist and made into structures with realistic character. A typical kit is the Jefferson Ice Co. with prices ranging from \$5.95 for the N scale kit to \$11.95 for the O scale version shown here. Visit the above website for additional information.

---

“Work Extra: 15 Useful Tips for Model Railroaders,” is now available as an E-book from **RLN Publishing** ([1-64ModelingGuide.com](http://1-64ModelingGuide.com)). Written by noted S scale modeler Dick Karnes, the E- book consists principally of a collection of articles from 1:64 Modeling Guide magazine. The author’s New York, Westchester & Boston Railroad has appeared in several national publications including the NMRA Magazine and Railroad Model Craftsman. The 38-page book includes 13 illustrations and 37 photos. It is available from the above website as a printable PDF document at \$5.95.

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**Morning Sun Books** ([morning-sunbooks.com](http://morning-sunbooks.com)) has released three new titles. The first is "Railroad Critters In Color, Volume 4," by Stephen M. Timko, who continues his look at the industrial locomotives of minority builders such as Davenport, Plymouth, Porter, and Vulcan. GE's popular line of "tonners" is included.

Also new is "West Florida Rails In Color Volume 1: The Emery

Gulash Color Photography of ACL & SAL 1957-1967," by Jerry A. Pinkepank. Accomplished photographer Emery Gulash explores the west side of the Sunshine State before the SCL merger.

The third new release from MSB is "Trackside Around the Lehigh River Valley with Randolph Kulp and Doug Peters." The book includes Lehigh River Valley photos from historian Randolph Kulp's treasure trove of LV, CNJ, RDG, L&NE, L&HR, and other roads in the Allentown-Easton-Bethlehem region. Visit the above website for pricing and ordering information.

---

The latest issue of **Railway Prototype Cyclopedia** ([rpcycpub.com](http://rpcycpub.com)) is devoted to the design and production of ACF's 1,958 cu. ft. 70-ton covered hopper car. Co-authored by Ed Hawkins and Pat Wider, the article includes a history of the early development of covered hoppers, details about the 70-ton demonstrator built by ACF in 1932, and the primary variations built by ACF from 1937 to 1957.



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A roster of all cars built by ACF is included along with more than 170 builder and in-service photographs and 29 diagrams. Volume 27 is available now through the above website at \$29.95.

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## O SCALE PRODUCT NEWS



Atlas O ([atlaso.com](http://atlaso.com)) will release new road names on its 50' PS-1 boxcar during the second quarter of

2014. In addition to the Pittsburgh & Lake Erie car shown here, decorating schemes will include Richmond, Fredericksburg & Potomac; Louisville & Nashville (Dixieline slogan); Santa Fe; Seaboard Air Line; and Soo Line. A 40' USRA composite gondola is also scheduled for release in the second quarter of next year. Road names will be Chicago & North Western, Minneapolis & St. Louis, Frisco Lines, Wheeling & Lake Erie, and Pennsylvania Railroad. Additional information including pricing on both 2-rail and 3-rail versions of these ready-to-run O scale models is available on the above website.

---



Boulder Valley Models ([boulder-valleymodels.com](http://boulder-valleymodels.com)) is selling a resin kit for an On30 scale 18' low-side wood gondola. Wood grain detail is

achieved on all body surfaces using “sandwiched” construction of interior and exterior cast resin panels. The kit includes separate ladders, a vertical brake shaft and wheel, queen posts, and underbody brake gear. Cost of the kit is \$32.00. Trucks and couplers are sold separately. Visit the above website for more information including additional photos of the model. In announcing the new car, owner Dallas Mallerich asked MRH to remind readers that Boulder Valley is a one-man operation and it may take a little time to complete all orders.

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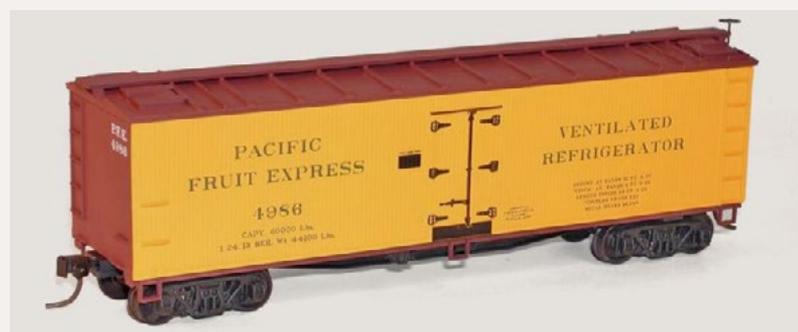


**Downtown Deco** ([downtown-deco.com](http://downtown-deco.com)) is offering a cast Hydrocal kit for a two-story brick structure named Metals Bank. The O scale kit features nicely detailed Hydrocal castings (from new patterns) for the walls and sidewalk. Additional components are the awning, signs, roofing material, and laser-cut wood and cardstock parts including an

optional “bullet hole” section of glass. Detailed assembly instructions are included along with suggestions for painting and aging the plaster exterior. The assembled structure has a footprint of 10" x 6". The kit sells for \$119.95. The vehicle, streetlights and figure are not included.

---

## HO SCALE PRODUCT NEWS



**Accurail** ([accurail.com](http://accurail.com)) has announced several new HO scale kits including a 40' Pacific Fruit Express



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refrigerator car with wood sides and ends and a steel fishbelly underframe.



Additional new releases from Accurail include a 40' wood stock car decorated for NC&StL. The same car is also available for Canadian

Pacific. A 50' Union Pacific insulated plug-door steel boxcar, a Boston & Maine 50' sliding-door steel boxcar with welded sides, an MKT triple-bay open-top hopper car with The Kay Line slogan displayed on the offset sides, and a 40' single-sheathed wood boxcar decorated for Central New Jersey are also available. All items mentioned are HO scale kits and include appropriate trucks and Accumate couplers. Visit the above website for additional details including pricing.

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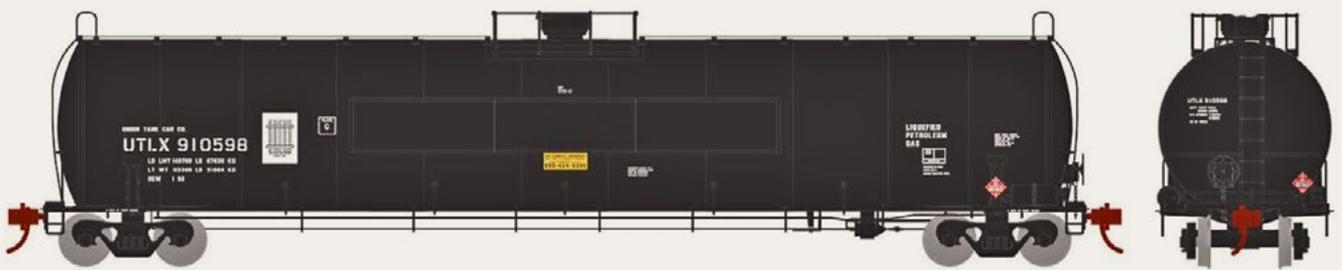
**Athearn ([athearn.com](http://athearn.com))** has scheduled another release of its HO scale version of General Electric's Evolution (GEVO) series ES44AC locomotive next March. Road names will be

BNSF, Canadian Pacific, and Union Pacific. Athearn's HO scale model replicates the early (2005-06) versions of the locomotive designed to meet strict diesel emission standards issued by Tier II EPA regulations.

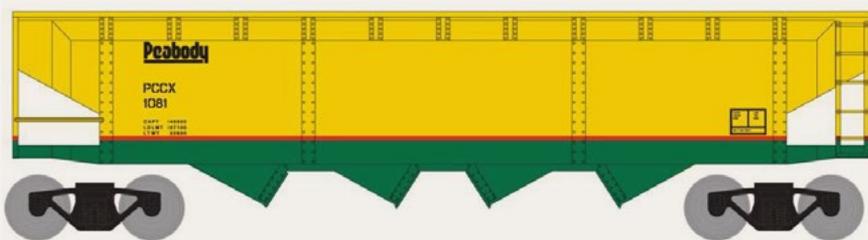


Athearn's model replicates specific details of the early versions, including the nose door on the left side, two closely spaced dynamic brake vents, X-panel on

the electrical hood, flush-mounted top radiator grilles, and unique radiator compartment doors. MSRP for the Genesis-series model will be \$199.98 without sound and \$299.98 with Tsunami sound and DCC decoder.



The March production schedule also includes UTC 33,900 gallon LPG tank cars decorated for UTLX (white), UTLX (black with 10th anniversary logo, above), UTLX (blue), Procor Limited (white), and Exxon-Mobile Corporation (black). The photo-etched walkways and end platforms, manway outlet, ladders, brake rigging, and tank saddles are all separately applied details. The models come with 100-ton roller bearing trucks with rotating caps. The MSRP of the Genesis series models is \$47.98.



Athearn's March 2014 schedule has several ready-to-roll models, including 40' quad-hoppers with offset sides and a removable coal load. Road names will be Western

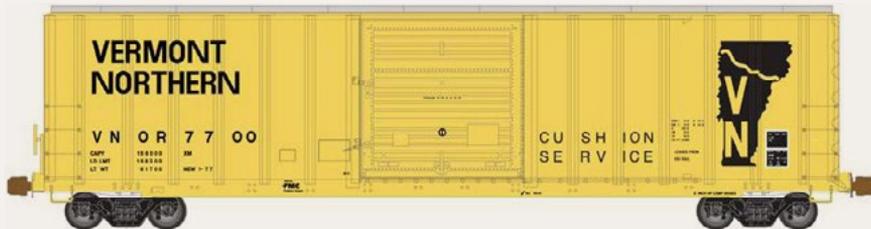


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Maryland, Illinois Central, Denver & Rio Grande Western, Chessie/C&O, Baltimore & Ohio, and the Peabody Coal-PCCX car shown here. The models will be available singly at \$19.98 each or in 4-packs at \$79.98. Nine numbers will be available for each decorating scheme.



Atlas's ([atlasrr.com](http://atlasrr.com)) second quarter release schedule for 2014 lists several HO scale ready-to-run

models including an Atlas Master® series FMC 5077 boxcar. In addition to the Vermont Northern version illustrated above, other road names will be Vermont Railway, Hartford & Slocomb, Sabine River & Northern, Railbox, and Providence & Worcester. The models will have an MSRP of \$36.95. An undecorated version will list at \$31.95.



Also due in the second quarter is an Atlas Master® series 40' high-cube refrigerated container.

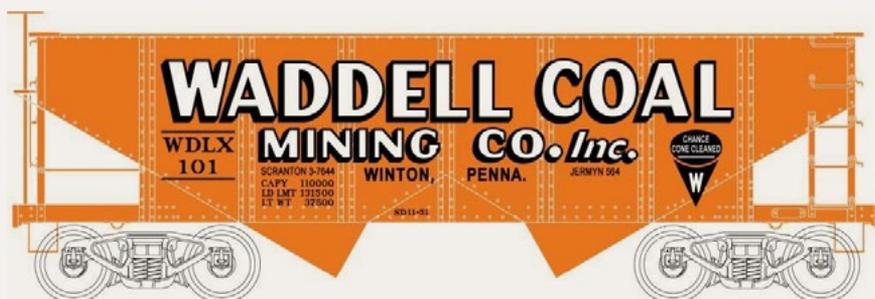
Carrier names will be Cosco, Maersk Sealand, Mediterranean Shipping Co., Safmarine, and P&O as shown here. The containers will be offered in 3-packs at \$56.85.



An economically priced Atlas Trainman® series twin-bay open-hopper car with offset sides and flat ends will be

available at \$19.95. Road names will be Nashville, Chattanooga & St. Louis Railway; Delaware & Hudson; Southern Railway; Chicago & Eastern Illinois; Great Northern; Lehigh & New England; Missouri Pacific (Route of the Eagles slogan); Santa Fe; U.S. Army; and C&O (above). An undecorated version will be available at \$15.95.

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**Bowser** ([bowser-trains.com](http://bowser-trains.com)) has scheduled new production runs for two popular cars, including class GLa twin-bay

open-top hoppers. Six numbers will be available for PRR (circle keystone herald), and PRR (shadow keystone herald). A WDLX-Waddell Coal Mining Co car will be available in four different numbers. Three numbers each will be produced for PMcK&Y (NYC Lines), BWCX-Berwind, and OW-New York Ontario & Western. The Executive series cars will be available in March at an MSRP of \$23.95 each.



Also due in March are 70-ton twin-bay covered hoppers with open sides decorated for Boston & Maine, Southern Pacific, Rock

Island, Vermont Railway, and CIL-Monon as shown here. An otherwise identical car with closed sides will be available for HWCX-Halliburton. All roads will be available in three numbers at an MSRP of \$24.95 each.

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**B.T.S. ([btsrr.com](http://btsrr.com))** has released a kit for an HO version of Howard Brothers Feed & Grain complex. The elevator, which has an overall height of 82', can be built with or without the horizontal bands. The craftsman-style kit con-

sists of laser-cut cardstock, basswood, and plywood with slots and tabs to ease alignment and speed construction. Adhesive-backed window sashes simplify window glazing.

Additional features include a removable roof and positionable doors and window sash. Brass and white metal detail castings, including workers, are included. Track and scenery items in the illustration are not included. Visit the above website for details on special introductory pricing.



**Fos Scale Models ([foslimited.com](http://foslimited.com))** has introduced a new craftsman-style kit called Execution Rocks. The HO scale kit is composed of two parts, the first being a block of four commercial structures that includes Bennett Nautical Traders,

McGloin's Groceries, Millat's Coffee Shop and Baroody Fresnel Glass. The second portion of the kit is for a multi-story structure. Called Peckham Sailmakers, the large building and pier are designed to rest on a rocky outcropping overlooking the sea.

The limited edition kit includes metal and plastic detail parts, color signage, and Tichy plastic windows and doors. The roof cards, shingles, sidewalks, and doors are all laser-cut. Building instructions, assembly templates, and weathering suggestions are all included in this limited edition kit. Visit the above website for additional information including an explanation of why the complex is called Execution Rocks.

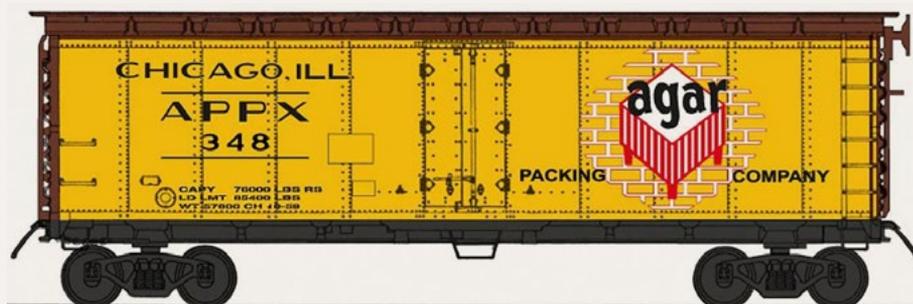
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**Great Lakes Models** ([greatlakesmodels.com](http://greatlakesmodels.com)) is selling HO scale versions of 4' V-Grove Block Concrete Barriers based on a prototype made by the World Block Company. The models are cast in lead-free white metal. They

are priced at \$6.56 for four barriers. Visit the above website for ordering information including price breaks on packages of eight and 16 barriers.

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**InterMountain Railway** ([intermountain-railway.com](http://intermountain-railway.com)) is scheduled to release a new run of R-40-23 refrigerator

cars in February. In addition to the APPX car shown here, decorating schemes will be PFE (color SP-UP double herald), PFE (black and white SP-UP double herald), PFE (Gothic), Armour, Libby's, Northern Pacific-Mainstreet, and MDT. The ready-to-run



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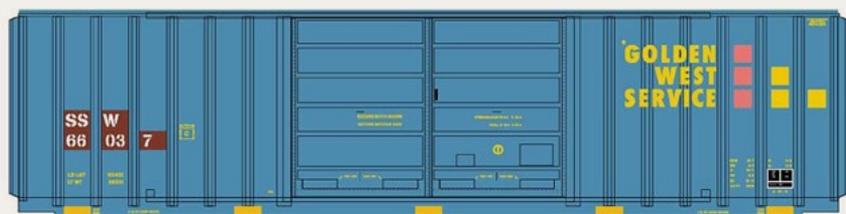
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HO scale models will have an MSRP of \$32.95 each. Due for release in March are PS-1 50' double-door boxcars, 1937 AAR 40' boxcars, 10' IH Post-War boxcars, 10'6" modified 1937 AAR boxcars, and ACF 2-bay covered hoppers.



InterMountain's spring delivery schedule includes a 4750 cu. ft. triple-bay covered hopper with an etched-

metal roof walk. Six numbers each will be available for Synsil-MWCX, Union Equity-PLCX, Pillsbury-PTLX, Atlantic & Western, Norfolk Southern, Central Soya-PTLXD, FMA-PTLX, and NFO Grain-PTLX as shown here. The HO scale ready-to-run model will have an MSRP of \$36.95.



Also due this spring is an FMC 5283 cu. ft. boxcar with double doors. In addition to the Golden West Service/SSW car

illustrated here, road names will be Southern Pacific (For Fragile Freight slogan), Burlington Northern (green body with red doors), Bangor & Aroostook, Southern Pacific, and BNSF. The MSRP on the HO scale ready-to-run model will be \$34.95.



A U.S. Navy boxcar is scheduled for release next month from **Kadee Quality Products** ([kadee.com](http://kadee.com)). Priced at \$32.95 each, the HO scale 40' PS-1 car has an

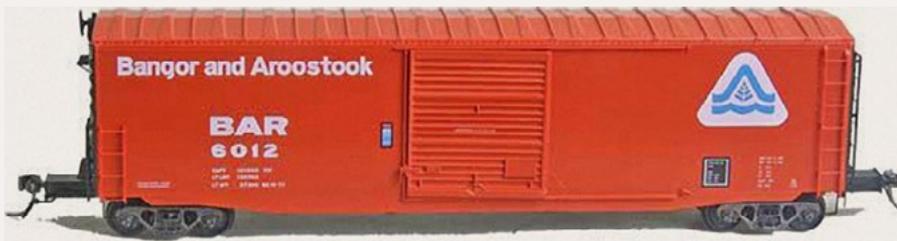
8' wide Superior five-panel door.



Also due in December is a 50' boxcar brightly decorated in the NH scheme of the New York, New Haven & Hartford Railroad. The PS-1 car is fitted with a pair of 8' Youngstown doors.



Kadee's January schedule includes the release of a 40' Santa Fe boxcar with "The Route of the Super Chief" slogan on the car. The HO scale ready-to-run model will have an MSRP of \$35.95.



The second new HO scale ready-to-run model coming from Kadee in January is a 50' PS-1 boxcar decorated for the Bangor & Aroostook Railroad. The MSRP will be \$36.95.



**Lake Junction Models ([lakejunctionmodels.com](http://lakejunctionmodels.com))** is selling an HO scale craftsman-style kit for Missouri Pacific series 700-909 wood cabooses. American Car & Foundry built the cars between 1924 and 1930. They



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became the standard MP caboose until the arrival of steel cabooses at the close of WWII. Designed from authentic prototype drawings, the kit consists of laser-cut wood body components with both photo-etched and cast urethane detail parts. The kit is priced at \$52.98. Couplers, decals, and trucks are not included. Some of the wood cars were modified with one window removed to accommodate radio equipment. Lake Junction is developing a separate kit for this variation.

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**Mokelumne River Models** ([mokrivemodels.com](http://mokrivemodels.com)) has introduced Maine Prairie School, an HO scale craftsman-style kit. The rural school house follows a prototype built in California in 1862 that survived into the late 1980s. The kit includes laser-cut basswood,

peel and stick trim, paper shingles, and Grandt Line windows, doors, and stovepipe. The kit comes with a 28-page manual with step-by-step instructions, plenty of photos, and suggestions for weathering the finished model. Visit the above website for ordering information and pricing.

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**Monroe Models** ([monroemodels.us](http://monroemodels.us)) has an HO scale kit for a Duluth Missabe & Iron Range standard wood caboose. In addition to laser-cut

body components, the kit comes with a cast metal smoke jack, latrine vent, and marker lights. The kit includes a simulated metal frame and modified sidewall with a generator access hatch for modelers who want to build a modernized version of the DM&IR caboose. The kit is available direct from Monroe at \$49.95. Decals, trucks, and couplers are not included.

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**Monster Models** ([monster-modelworks.com](http://monster-modelworks.com)) continues to expand its selection of laser-engraved components that realistically simulate natural textures such as wood, stone, concrete, and brick. The lat-

est release from Monster are 1/16" thick basswood sheets engraved with wood grain and knot holes in 6" horizontal siding. All popular scales are available in 12" x 4" sheets at \$14.99 and 12" x 6" sheets at \$19.99. Visit the above website for additional details including tips on staining, painting and weathering laser-engraved basswood.

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**Rapido Trains** ([rapidotrains.com](http://rapidotrains.com)) has announced plans to produce Budd prototype passenger cars featuring a special stainless steel finish called Superior Stainless. According to Rapido's



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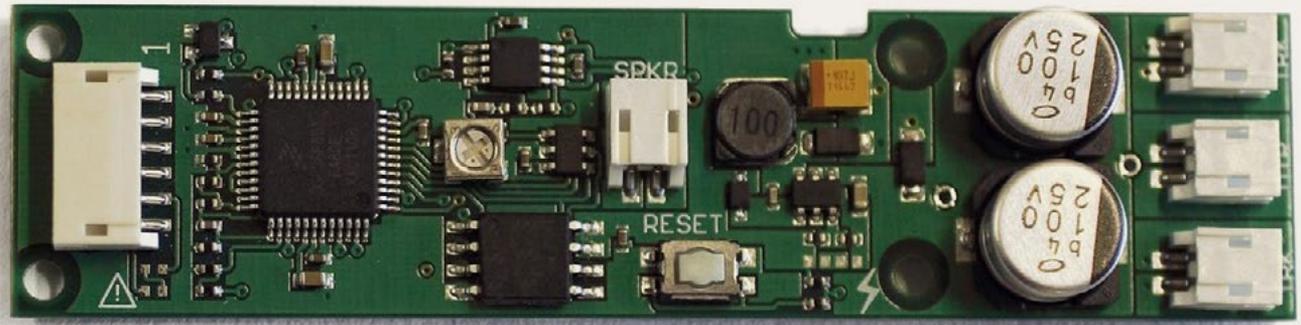
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Jason Shron, achieving the newly-developed Superior Stainless finish involves a “secret” multi-step process of spraying various specially formulated finishes in a tightly controlled temperature environment.



The initial Budd cars will be a Park series round-end dome observation car and a 60-seat coach. In addition to the new stainless finish, the cars feature complete underbody detail including all air, steam, and electrical conduits. The interior of the cars have such details as antimacassars on the seat backs, faucets in the bathroom, and simulated etched-glass divider panels between the smoking and nonsmoking sections.

Additional features include factory installed grab irons, window blinds at various heights, operating diaphragms with etched-metal end gates, and track-powered constant interior lighting. The coach will be available for Amtrak, Atlantic Coast Line, Chicago & Eastern Illinois, Metro North commuter railroad, New York Central, Penn Central, Pennsylvania Railroad (Congressional), Pennsylvania Railroad (Fleet of Modernism), Rock Island, Santa Fe, Seaboard Air Line, Seaboard Coast Line, and Southern Railway. The Park observation will be decorated for Canadian Pacific (maroon stripe), CP Rail (action red stripe), VIA Rail Canada, and VIA Rail Canada (HEP Canada scheme). Both cars will also be available unlettered in the Superior Stainless finish. Delivery is planned for spring or early summer 2014. Visit the above website for pricing and reservation information.



**Soundtraxx** ([soundtraxx.com](http://soundtraxx.com)) has introduced a 16-bit digital sound decoder specifically designed as a drop-in replacement for recent decoder-equipped HO scale diesels from InterMountain. Visit the above website for features and specifications on this upgrade system.

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**Tangent Scale Models** ([tangentscalemodels.com](http://tangentscalemodels.com)) used the occasion of the Naperville RPM meet to introduce

a new HO scale model of a 6000-gallon triple-dome tank car with a type-30 riveted underframe. General American built the prototype from 1928 to 1942 with many of the distinctive three-compartment cars remaining in service into the late 1970s.

Tangent will initially offer the car in three numbers each for four paint schemes. Black cars will be available with variations in brake hardware and lettering schemes following prototypes painted or re-painted in 1968 and 1958 (both GATX), and 1930 (STCX). The fourth decorated model in this release is a GATX Celanese car in green with red and green graphics.

A kit\* is also available along with an assembled ready-to-run model painted in gray primer but without any lettering. All versions come with Kadee couplers and Tangent's 50-ton ASF



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spring-plank trucks with metal wheelsets. Tangent allows mixing for multiple car discounts on quantity purchases in increments of 6, 12, 36 and 48. Visit the above website for pricing and ordering information.

\*For suitable decals see the Black Cat listing in the decal section.

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**Tichy** ([tichytraingroup.com](http://tichytraingroup.com)) has released several new HO scale items including milepost markers, both yellow and red street stop signs, and a large selection of double-hung windows. Tichy has also upgraded their HO and O scale PDF catalog pages making it easier to search for specific items. Visit the above website for full details.

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**Walthers'** ([walthers.com](http://walthers.com)) late December delivery schedule includes a Proto<sup>®</sup>

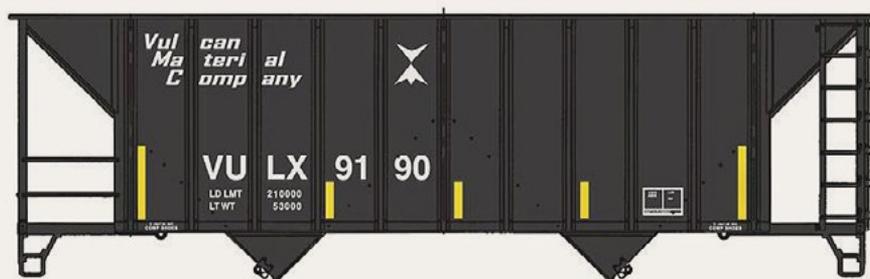
series International steel bay-window caboose decorated for CP Rail, Great Northern, Penn Central, and Milwaukee Road. The HO scale ready-to-run model has an MSRP of \$44.98 each.



Also scheduled for arrival in late December is a 40' 16,000-gallon Funnel-Flow tank car. Road names will

be ADMX-Archer-Daniels-Midland, UTLX-Cargill, JHMX-J. M. Huber Co., SHLX-Procor, and UTLX-Union Tank Car. The Proto<sup>®</sup> series HO scale model will have an MSRP of \$39.98.

Walthers Mainline® series cars coming in December include a 50' waffle-side boxcar at a list price of \$21.98. In addition to the CSX car shown here other road names will be Green Bay & Western, Illinois Central, and Rock Island.



Additional Mainline cars scheduled for arrival in late December will be a 34' 100-ton twin-bay

open-top hopper car decorated for Dolese Bros., Southern Pacific, WP (with a UP medallion), and the Vulcan Material car shown above. The list price will be \$24.98. Also priced at \$24.98 is a Walthers Mainline® 40' double-sheathed wood refrigerator car with a steel roof and Dreadnaught ends. Road names will be Armour, Burlington Express, Rath Packing, and Soo/URTX.



**Yarmouth Model Works** ([yarmouthmodelworks.com](http://yarmouthmodelworks.com)) introduced two new resin-cast car kits at the Naperville RPM meet late last month. They include a cast resin kit for an HO

scale Northern Pacific 39000 series boxcar. Like the prototype illustrated here, the model features a unique brake rigging arrangement that includes three brake levers, of which two are mounted on etched metal A-frames. Instructions are included for modifying a Kadee Andrews truck to more closely follow the unusual prototype truck. The kit is priced at \$55.00.



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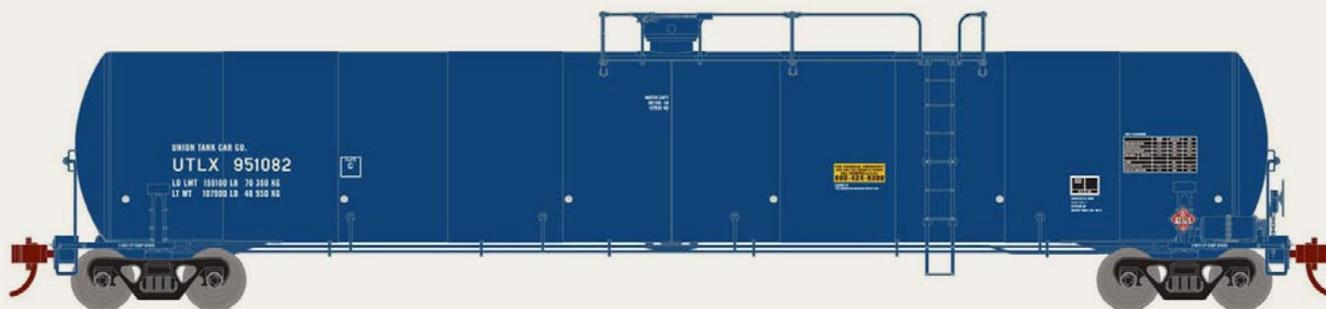


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Also new is a mini-kit to modify an InterMountain Railway model to accurately replicate AC&F covered hopper cars used by Missouri Pacific and other roads. The mini-kit is available for \$15.00 and includes cast and etched roof components.

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## N SCALE PRODUCT NEWS



Athearn's ([athearn.com](http://athearn.com)) March 2014 production schedule includes an N scale UTC 33,900 gallon LPG tank cars decorated for UTLX (white), UTLX (black with 10th anniversary logo), above), UTLX (blue, above). Procor Limited (white), and Exxon-Mobile Corporation (black). The model is based on the late version of the prototype with offset walkway and side-mounted ladders. The photo-etched walkways and numerous other details are separately applied. The N scale ready-to-run model will have an MSRP of \$26.98.

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New N scale models coming from **Atlas** ([atlasrr.com](http://atlasrr.com)) during the second quarter of 2014 include a USRA 40' dou-

ble-sheathed wood boxcar. New road names will be Toronto, Hamilton & Buffalo; Pere Marquette; Lackawanna; Northwester

Pacific; Savannah & Atlantic; and Atlantic Coast Line. The popular Santa Fe version (above) will be rerun with new numbers. The N scale ready-to-run models will have an MSRP of \$21.95. Undecorated models, with a choice of either 5-5-5 or 7-8 steel ends, will list at \$15.95.

Also scheduled to arrive in the second quarter are N scale 40' Airslide hopper cars decorated for Duluth, South Shore & Atlantic; American Maize; Chesapeake & Ohio; Dixie Crystals; New York Central; and Southern Pacific. Two different road numbers will be available at \$15.95 each.



**InterMountain Railway ([intermountain-railway.com](http://intermountain-railway.com))** has scheduled the release of a 4750 cu.

ft. triple-bay covered hopper in April-May. Six numbers each will be available for Synsil-MWCX, Union Equity-PLCX, Pillsbury-PTLX. Atlantic & Western, Norfolk Southern, FMA-PTLX, NFO Grain-PTLX, and Central Soya-PTLXD as shown here. The N scale ready-to-run model will have an MSRP of \$24.95.



**Micro-Trains Line ([micro-trains.com](http://micro-trains.com))** is selling a 50' Santa Fe class Fe22 auto boxcar with double side doors

and an end loading door. The ready-to-run N scale model has an MSRP of \$24.95.



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Also new from Micro-Trains is an 89' COFC flat car decorated for

the Department of Defense. The lettering indicates the car was assigned to the United States Marine Corps.



M-T has released a 39' single-dome tank car decorated for Kanotex Refining Company. Additional new N scale models from

Micro-Trains are a 36' truss-rod double-sheathed wood reefer for Sudbury Brewing Company, a Cotton Belt 40' steel boxcar with plug-doors, a Norfolk & Western 60' waffle-side boxcar with double plug doors, and a Canadian Pacific depressed-center flat car with a load. Visit the above website for additional details including pricing.

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## Z SCALE PRODUCTS NEWS



Full Throttle ([wdw-fulthrottle.com](http://wdw-fulthrottle.com))

is selling Z scale 51' ACF cylindrical covered hoppers decorated for

Missouri-Kansas-Texas. Produced by Bowser, the car features roller bearing trucks with blackened wheels sets. The ready-to-run models are sold as a two-pack in a clear plastic display box at \$54.00.

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# NEW DECALS, SIGNS AND FINISHING PRODUCTS

**Black Cat Publishing** ([greatdecals.com/BlackCat.htm](http://greatdecals.com/BlackCat.htm)) offers a wide assortment of HO scale decals including GATX Tank Car set #GAT20717 suitable for decorating Tangent's recently announced triple-dome tank car.

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**Custom Traxx** ([customtraxx.com](http://customtraxx.com)) has produced a limited re-run of HO scale decorating decals for 1932 Brill cars

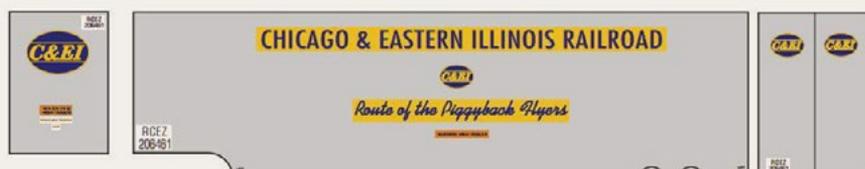
and 1949 to 1968 St. Louis cars operated by the Philadelphia Suburban Transportation Co. Decal set CN-077 is designed for the 1932 Brill "Master Units" series 77-86 imported by MTS, and the GHB International models of the 1949 St. Louis Quasi-PCC cars, series 11-24. Custom Traxx decal set CN-077 is priced at \$19.95. Visit the above website for specific details on this and other traction decal sets.

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**Mask Island Decals** ([maskislanddecals.com](http://maskislanddecals.com)) has released several decals for HO scale models includ-

ing Rock Island EMD diesels (87-217, above), GE U-Boat locomotives (87-218), and an Elgin, Joliet & Eastern caboose (87-214).



Mask Island has also released new decals for C&EI including Dorsey drop-frame



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piggyback trailer (87-221, above) and a 50' PS-1 double-door boxcar (87-215).

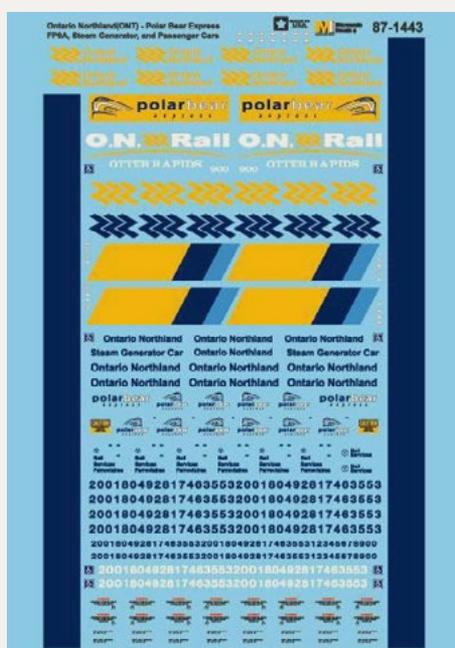


Decals for an Atlantic Coast Line 40' PS-1 boxcar (87-222, above), a Missouri Pacific 50' PS-1 plug door boxcar (87-219), and a M&StP twin-bay hopper car are also available now.

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**Model Railroad Works** ([modelrailroadworks.de](http://modelrailroadworks.de)) of Germany, has N and HO scale decals for Amtrak's North East Regional cars. Each set has enough material, including logos, to decorate two cars. Visit the above website for pricing and ordering details.

---



**Microscale Industries** ([microscale.com](http://microscale.com)) has released HO and N scale wet decals for Ontario Northland, and Polar Bear Express FP9A units, steam generator, and passenger cars. Also new are lettering sets for Polar Northern Railroad (PNR), and North Pole Express locomotive, passenger cars, and cabooses. Additional new lettering sets are FMC boxcar data, Arkansas Oklahoma (AOK) and CSX AutoMax articulated auto rack cars.

Currently under development are new lettering sets for hazmat placard holders, Western Pacific steam locomotives and wood cabooses, New Haven freight cars, and Gothic PFE lettering for 1960s-era ice reefers.

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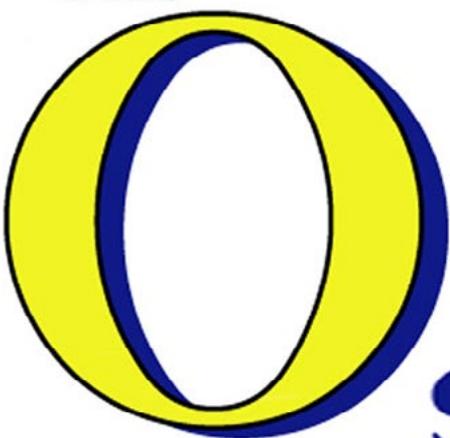
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## Briefly noted at press time...

### ... Jim FitzGerald 1923-2013

Jim FitzGerald, also known as Mr. Ntrak, died October 26, 2013, in Paso Robles, California. He was a lifelong model railroad hobbyist and tireless promoter of N scale. Jim was the founder of the Ntrak Newsletter which he published for more than 40 years. He served in the U. S. Army during World War II. Jim was retired from the Ames Research Laboratory where he designed and built specialized instruments for gathering wind tunnel data. He had been in poor health in recent months and was at a rehab facility when he passed away. Jim was 90 years of age.

### ... Arthur Schmidt 1917-2013

A.L. Schmidt, staff photographer for Model Railroader magazine for more than 40 years (1951-1993) has died in Milwaukee, Wisconsin, at the age of 96. Although Art spent much of his professional life photographing items of interest to model railroaders, his own lifelong hobby was building and flying radio control model airplanes.

... **Athearn** has announced plans to produce Genesis series GP9 diesels decorated for Boston & Maine, Florida East Coast, Santa Fe (zebra stripes), and Wabash. The GP9s are scheduled for release in April along with GP50s decorated for UP (We Will Deliver), MP, NS, BNSF (wedge scheme), and BN in both orange and white tiger stripes, and orange and black tiger stripes. Both locomotives will be available for standard DC operation or with a DCC decoder and SoundTraxx Tsunami sound.

Athearn ready-to-roll models coming in April include SD45 diesels decorated for SP, N&W, MPI, and Erie Lackawanna. Also SW1500 switchers decorated for Union Railroad, UP, UPY, SP, Frisco, KCS, and Chicago Short Line. Both HO and N scale versions of Athearn's 65' mill gondolas and articulated Auto-Max auto carriers are also on the April schedule. For more information visit [athearn.com](http://athearn.com).



. . . **Classic Metal Works** is preparing tooling for a 1955 Ford sedan. Several versions, including a Fairlane Town Sedan, should be ready for introduction next spring. MRH will have more information next month including illustrations of the HO scale models.

. . . **ExactRail** has released another run of its HO scale 60' PC&F insulated beer car. The Platinum series model is available decorated for BN, BNSF (small circle cross herald), RBCS, ATSF (large circle cross herald), ATSF (Gothic reprint), and GVSR-Golden West Services. Additional details are available at [exactrail.com](http://exactrail.com). ■



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## Selected Events



### November 2013

**AUSTRALIA, NORTH EAST VICTORIA,** November 30-December 1, Beechworth Railway Weekend, at Beechworth Memorial Hall with operating layouts of various scales, retail traders, and walking tours of the old Beechworth Railway Station area and yards. Info from John Harvey at [beechworthmemorialhall@gmail.com](mailto:beechworthmemorialhall@gmail.com), or: [morsecodians.com.au/railway%20weekend.html](http://morsecodians.com.au/railway%20weekend.html).

**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](http://bctrains.org).

**CANADA, QUEBEC, LAVAL,** November 9-10, 2013, Laval Expo Train Modélisme 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](http://expo-train.com) or contact [didier.piette@videotron.ca](mailto:didier.piette@videotron.ca).

**ARIZONA, TUCSON,** November 8-9, Toy Train Show, at Tucson EXPO Center, 3750 E. Irvington Road. Presented by the Gadsden Pacific Toy Train Operating Museum. Info at: [gpdToyTrainMuseum.com](http://gpdToyTrainMuseum.com).

**CALIFORNIA, LOS ANGELES,** November 9,10,12,16,17 (times vary), 2013 Fall Train Show at the Pasadena Model Railroad Club, featuring up to 25 HO scale trains operating on 30,000 feet of hand-laid steel rail. Club is located at 5458 Alhambra Avenue. Info at [pmrrc.org](http://pmrrc.org).

**CALIFORNIA, PLEASANTON**, November 23-24, The Great Train Expo, at Alameda County Fairgrounds. Info at [greattrainexpo.com](http://greattrainexpo.com).

**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](http://cid.railfan.net). Vendors contact John Pancini at [jpancini@indy.rr.com](mailto:jpancini@indy.rr.com).

**INDIANA, HOBART**, November 30, 24th Annual Swap & Sell Meet at St. Bridget Parish Center, 102 Center Street. Info from Ron Jackson at [hiawatha1995@yahoo.com](mailto:hiawatha1995@yahoo.com).

**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](http://modelrailroadexpo.com).

**NEW JERSEY, NORTH HALEDON**, Nov 29 - Dec 1, Dec 7 - 8, Dec 14 - 15, Jan 4 – 5, 2014, 56th Annual Model Railroad Show, at Garden State Model Railroad Club, 575 High Mountain Road. Info at [GSMRRClub.org](http://GSMRRClub.org).

**NORTH CAROLINA, RALEIGH**, November 9-10, 29th Annual Model Train & Railroadiana Show & Sale featuring 40,000 sq. ft. of model railroading in six scales plus full-size Thomas The Tank Engine, sponsored by Neuse River Valley Model Railroad Club, at Exposition Center, State Fairgrounds at Blue Ridge Road and Hillsborough Street. Info at [nrvclub.net](http://nrvclub.net).

**OREGON, MEDFORD**, November 30-December 1, Rogue Valley Railroad Show, at Medford Armory, 1701 S. Pacific Highway. Info at [rvmrc.net](http://rvmrc.net).



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**PENNSYLVANIA, MONACA**, November 24, Fall Model Train Show sponsored by Beaver County Model Railroad & Historical Society, at Center Stage, 1495 Old Brodhead Road. Info at: [bcmrr.railfan.net](http://bcmrr.railfan.net).

**PENNSYLVANIA, EPHRATA**, November 30, Annual Holiday Open House at Short Line Model Railroad Club, 11 S. State Street, (behind the State Street Family Practice). Info at [slmrc.com](http://slmrc.com).

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

## December 2013

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

**CALIFORNIA, SANTA CLARA**, February 6-8, 2014 O Scale West and S Scale West, at Hyatt Regency Santa Clara, 5101 Great America Parkway. Complete details for attendees and exhibitors at [oscalewest.com](http://oscalewest.com).

**COLORADO, LONGMONT**, December 14-15, Annual Train Show, sponsored by Boulder Model Railroad Club, at Boulder County Fairgrounds. Info at [bouldermodelrailroadclub.org](http://bouldermodelrailroadclub.org).

**FLORIDA, LARGO**, December 14-15, Train Show, sponsored by Suncoast Model Railroad Club, at Minnreg Hall, 6340 126th Avenue North. Also open house at SCMR Club location, 12355 62nd Street North. Info at [suncoastmrrc.com](http://suncoastmrrc.com).

**FLORIDA, PALM BAY**, December 21, Display of HO Scale Modules at Franklin T. Degroot Memorial Library, 6475 Minton Road, sponsored by Palm Bay Model Railroad Club.

**FLORIDA, THE VILLAGES**, December 19-22, Christmas Train Show with operating layouts in all scales, at Colony Cottage



Regional Recreation Center, 570 Colony Blvd. Info at: [villagerailclubs.blogspot.com](http://villagerailclubs.blogspot.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](http://hubdiv.org).

**MICHIGAN, EAST LANSING**, January 12, Train Show & Sale, sponsored by the Lansing Model Railroad Club, at Michigan State University Pavilion. Info at [lmrc.org](http://lmrc.org).

**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](mailto:emark@sbcglobal.net).

**MICHIGAN, SALINE**, December 1, Southeast Michigan Modular Model Railroad Show & Flea Market, sponsored by Rails on Wheels Modular Railroad Club, at Washtenaw Farm Council Grounds, 5055 Ann Arbor Saline Road. Info at: [railsonwheels.com](http://railsonwheels.com).

## **Future 2014 and Beyond (By location)**

**AUSTRALIA, NSW, ALBURY**, May 24-25, Annual Train Show sponsored by the Murray Railway Modellers Inc., at Mirambeena Community Centre, 19 Martha Mews, Lavington. Info at [murrayrailwaymodellers.com](http://murrayrailwaymodellers.com).



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**FLORIDA, COCOA BEACH**, January 9-11, Prototype Rails 2014 hosted by Mike Brock, at Cocoa Beach Hilton Oceanfront, 1550 N. Atlantic Ave. (Highway A1A). Premier RPM event featuring more than 80 clinics presented by a blue ribbon cast of speakers. Info at [prototyperrails.com](http://prototyperrails.com).

**GEORGIA, SAVANNAH**, January 18-19, 25th Annual Model Railroad and Train Show, sponsored by Coastal Rail Buffs Inc. Info at [coastalrailbuffs.org](http://coastalrailbuffs.org).

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

**INDIANA, INDIANAPOLIS**, July 3-10, 2016, NMRA National Convention and National Train Show. Info at [nmra2016.org](http://nmra2016.org).

**MAINE, AUGUSTA**, Sept. 7-10, 2016, 36th National Narrow Gauge Convention. Info at [nngc2016.org](http://nngc2016.org).

**MASSACHUSETTS, WEST SPRINGFIELD**, January 25-26, 2014 Railroad Hobby Show, sponsored by Amherst Railway Society, at Eastern States Exposition Fairgrounds. Info at [amherstrail.org](http://amherstrail.org).

**KANSAS, OVERLAND PARK (Metro Kansas City, MO)**, September 3-6, 2014, 34th National Narrow Gauge Convention. Info at [kansascity2014.com](http://kansascity2014.com).

**MISSOURI, ST. CHARLES**, January 18, Train Fair 2014, at Heart of St. Charles Banquet Center, 1410 S. Fifth Street. Info at [stcharlesrailroadclub.com](http://stcharlesrailroadclub.com).

**NORTH CAROLINA, SPENCER**, May 29-June 1, 2014, Streamliners at Spencer, a gathering of prototype locomotives 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 diesel locomotives are expected to join the museum's own Atlantic Coast Line E3 and the Southern Railway's E8 and FP7. Arrangement for routing and

transporting 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).

**OHIO, CLEVELAND**, July 13-19, 2014, NMRA National Convention and National Train Show. Info at [2014cleveland.org](http://2014cleveland.org).

**OREGON, PORTLAND**, August 23-30, 2015, NMRA National Convention and National Train Show. Info at [nmra2015.org](http://nmra2015.org).

**PENNSYLVANIA, MALVERN**, March 28-30, 2014, 6th Railroad Prototype Modelers Valley Forge Meet, at Desmond Great Valley Hotel. Info at [phillynmra.org/rpmmeet.html](http://phillynmra.org/rpmmeet.html).

**SOUTH CAROLINA, EASLEY**, February 1-2, Annual Train Show with HO layouts, G scale live steam, motor cars, kids activities, and 200 plus vendors. Sponsored by Central Railway Model & Historical Association, at Larry Bagwell Gymnasium, 111 Walkers Way. Info at [CRMHA.org](http://CRMHA.org).

**TEXAS, IRVING (Dallas area)**, February 26-March 1, 2014, 29th Annual Sn3 Symposium, at Sheraton DFW, Irving. Info at: [Sn3-2014.com](http://Sn3-2014.com).

**TEXAS, HOUSTON**, February 15, 2014, Greater Houston Train Show featuring 20,000 sf of operating layouts, instructive classes, photo and model contests, and vendor displays at Stafford Centre, 10505 Cash Road. Presented by the San Jacinto Model Railroad Club. Info at [sanjac.leoslair.com](http://sanjac.leoslair.com).

**TEXAS, HOUSTON**, 2015, September 2 - 5, 2015. 35th National Narrow Gauge Convention. Info at [nngc-2015.com](http://nngc-2015.com). ■



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MRH's second annual

# Start the hobby for \$500 contest



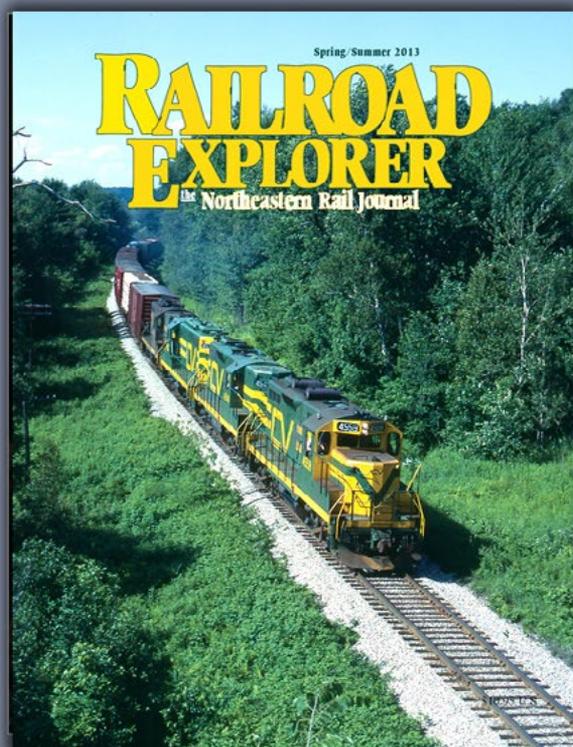
- You have a \$500 total budget.
- Assume basic tools: hammer, saw, drill, screwdriver, scissors, single-edged razor blades, soldering iron.
- Assume advanced tools like a table saw, router, or lathe are NOT available.
- Must design an operating layout or module (continuous running optional).
- Include 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.

**DEADLINE: November 30, 2013**

*Winners get get paid for their article when published plus they get a special bonus!*

**Submit entry**  
(select Contest)

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# What cultural context are you modeling?

## Reverse Running: Stepping outside the box with a contrary view

by *Kenneth Frink*

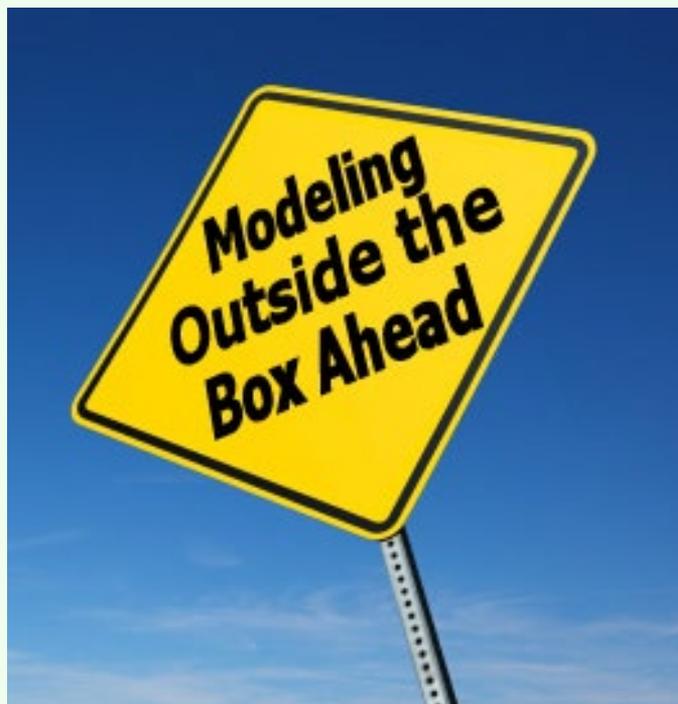
**F**irst of all, I thank you for MRH. I look forward to it each month. I do wonder though if we are addressing many of the same issues that have been discussed for years in the hobby press. Where's the advancement in the discussion diversity on these topics?

While layouts focus on the general structures required for railroad operation they often don't take into consideration the geographical, cultural and historical

context they are supposed to be set in. Some do better at this than others.

The specific areas I am talking about are architecture, ethno-bias, and the diversity of structures frequently determined by the skills of the immigrants working in new country on that section of a major railroad. Each different immigrant population had different skill sets, depending on their country of origin. Seems we also gloss over reflecting the native population that came before us.

In the model railroad world, do we get so focused on operations that we miss the immediate non-Anglo influences around these



great railroads? Even the railroads recognized the architecture and building practices of the native people. Examples would be the Santa Fe depot in Albuquerque, NM, in its pueblo mission style, and the depot in Los Angeles.

These two depots not only give a visual reference to non-Anglo people who came before us, but were built by many of the same methods. These reflected locally available materials, with their efficiency in both hot and in cold climates. The Union Pacific depot in Boise, ID reflects this as well, even though it's not in the Southwest. We learned these methods from the native people.

When you look at some of the stations in the northwestern United States, they reflect the local materials available and display less of a Native American contribution in building techniques.

Should we as modelers be inclusive in our representations of history, or do we perpetuate a myth? Are we more concerned about an exact replica of rolling stock, and the details on a loco, than we are in the accuracy of our layout setting?

I have yet to see a model railroad from the southwestern part of the United States display a pueblo with a kiva oven, an outdoor oven for baking bread. I have yet to see a layout showing Navajo members standing on station platforms selling rugs, pottery and jewelry. I have yet to see a model railroad showing a Native American woman with her children, washing clothes on stones in a creek or river.

Should model railroading be in a state of perpetual nostalgia while also being in a state of historical denial? If modeling the setting more realistically doesn't fit with our perspective, then maybe we need to look at ourselves a little more.



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# Derailments

humor (allegedly)



“And the big bad wolf huffed and he puffed, and he blew the train over.”

Seriously, this amazing footage shows some super-powered wind blowing a full-sized train off the tracks. Just when you thought it couldn't get any worse, watch helplessly as the derailed rear of the train, throwing sparks, keeps coming onward toward the loco ...

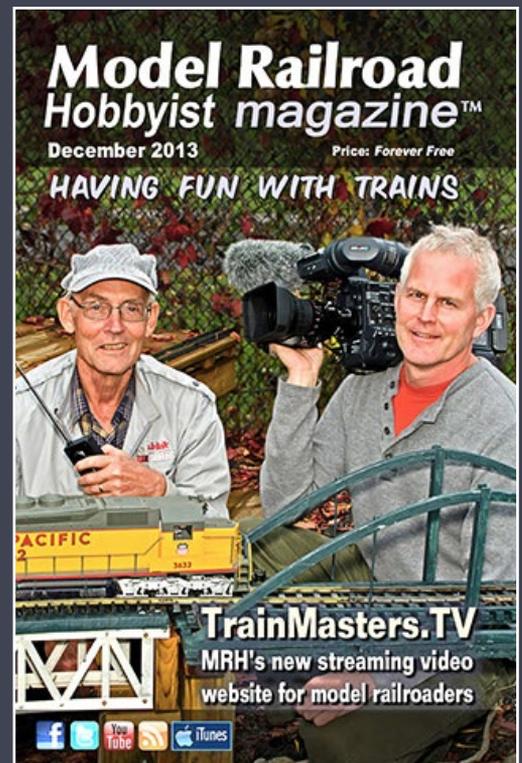
If you're the first to [submit a bit of good humor](#) and we use it, it's worth \$25!



# For the love of model trains

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- Weathering wall signs
- Installing a sound decoder in a HO brass loco
- Hauling limestone on the Southeastern
- A better bendable sky
- ... and much much more.



## *More Derailments humor ...*

A Texan was bragging to an Englishman while on a train journey through England. “In Texas”, he drawls, “you can get on a train, ride all day long, and still be in Texas by nightfall”.

The Englishman nods his head in understanding, “Yeah, we have slow trains here too”.

---

A passenger train is creeping along, painfully slow. Finally, it comes to a complete halt. A passenger sees the guard walking by outside. “What’s going on?” she yells out the window. “Cow on the track!” replies the guard. Ten minutes later, the train resumes its slow pace. Within five minutes however, it stops again.

The woman sees the same guard walking by again. She leans out the window and yells, “What happened? Did we catch up with the cow again?”

Coming next issue



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