Model Railroad Hobbyist magazine™

HAVING FUN WITH TRAINS

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STANDARD
Edition

October 2011

5 cars for $35: The $35 challenge!

N-scale OWN&R Layout
Logging Trackplan
New DCC Column
Modeling Water

... and much more, inside!

Model Railroad Hobbyist magazine™

Front Cover: Matt Snell took on the challenge of adding five freight cars to his fleet for the cost of a single high-end, RTR model. Accordingly he headed off to a local swap meet with only $35 in his pocket. See if he made it, on budget. Cover photo by Matt Snell

ISSN 2152-7423

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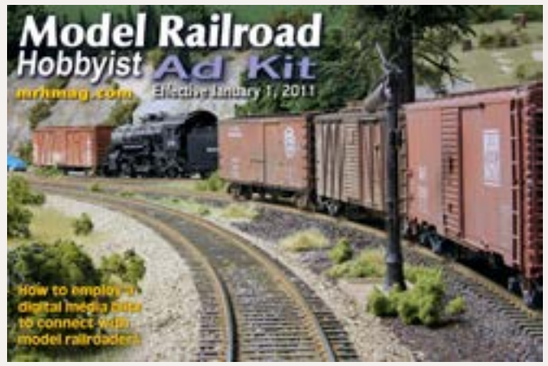

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There's also our Hobby Marketplace!

see page 61 ...

For more model railroading products, including hard-to-find items, also see our Hobby Marketplace on page 61.

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DCC Products Galore!

Check out our web site ...
We have lots that's new!

About the Editor

Charlie Comstock has been a regular columnist, author, and editor of ***Model Railroad Hobbyist Magazine*** since its inception.

To learn more about Charlie, click here.

EDITOR'S SOAPBOX: Are you a MRH Magellan - part 2?

Where the heck are we?

Reader Feedback *(click here)*

I've heard it said that we never stop learning. Case in point, it was only last week that I figured out a significant feature of the Back Issues page mrhmag.com/magazine/back-issues. Did you know where clicking on the thumbnail of a back issue cover takes you? I didn't. In fact I was composing an e-mail to Joe asking for a website enhancement when I realized that clicking on a thumbnail takes you to the main web page for that issue. Luckily it occurred to me that I should try clicking the thumbnail before I clicked send.

Why is that useful? Well, the main web page for each issue includes a list of ALL the articles in that issue and links to their reader feedback pages, making it an article index page. Previously when I tried to browse a back issue's contents I'd go through contortions to get to that page – now it was only a couple of clicks away.

I wanted to check something in the Al Frasch interview in the July issue. From mrhmag.com I clicked the Back Issues item in the Magazine menu to get to the back issues page (figure 1). Then I clicked the July 2011

FIgure 1: The back issues page. Clicking the July 2011 thumbnail takes you to the main web page for that issue.

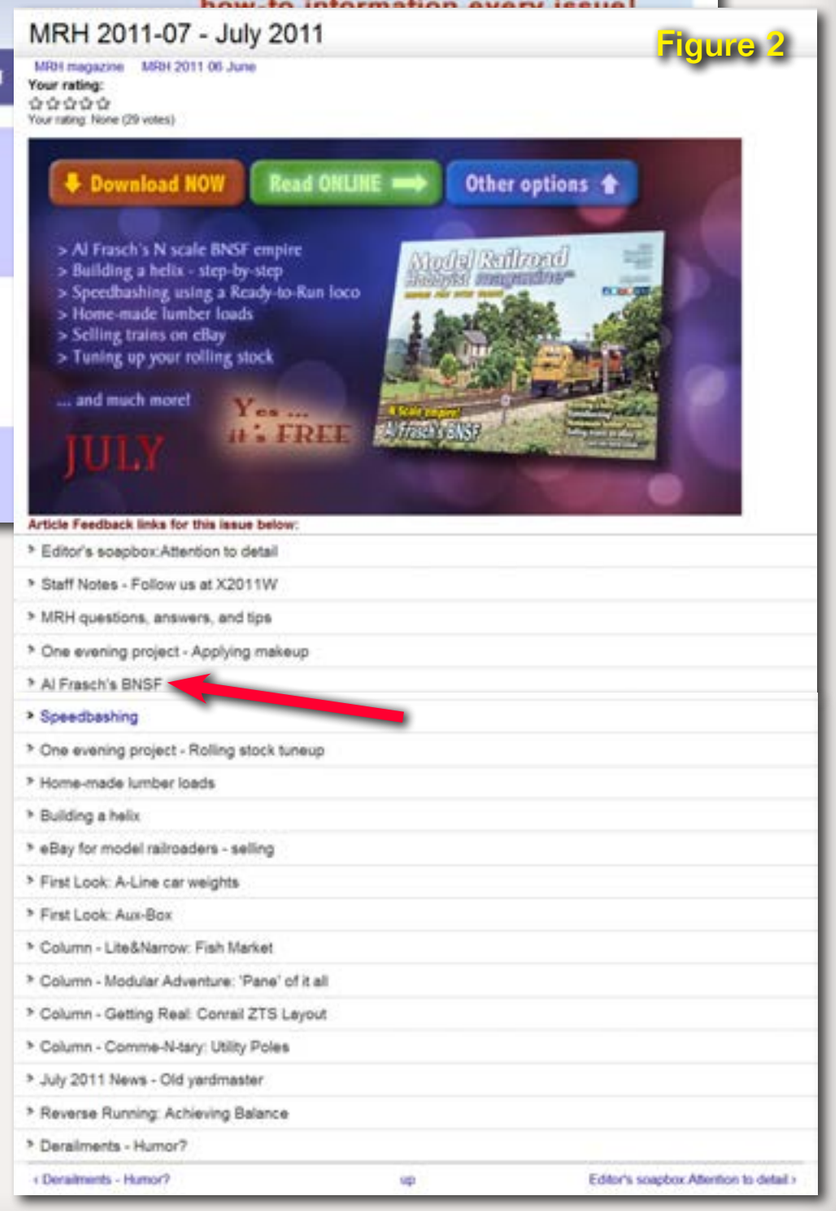

Figure 2: The main web page for the July 2011 issue of MRH. All the article links serve as an online index to the issue. Clicking an article name takes you to the feedback page for that article.

thumbnail, which took me to the main page for the July 2011 issue (figure 2). Then I clicked the link to "Al Frasch's BNSF" which took me to the reader-feedback page (figure 3).

From the reader-feedback page I have the choice of

- download a PDF of this issue into my computer
- read the online edition of this issue
- go directly to the Al Frasch article in the online edition

I clicked on the photo of the BNSF article (where it says "Want to read this article? CLICK HERE"), the online magazine appears, and I'm jumped directly to this article. It only took a few clicks to get there.

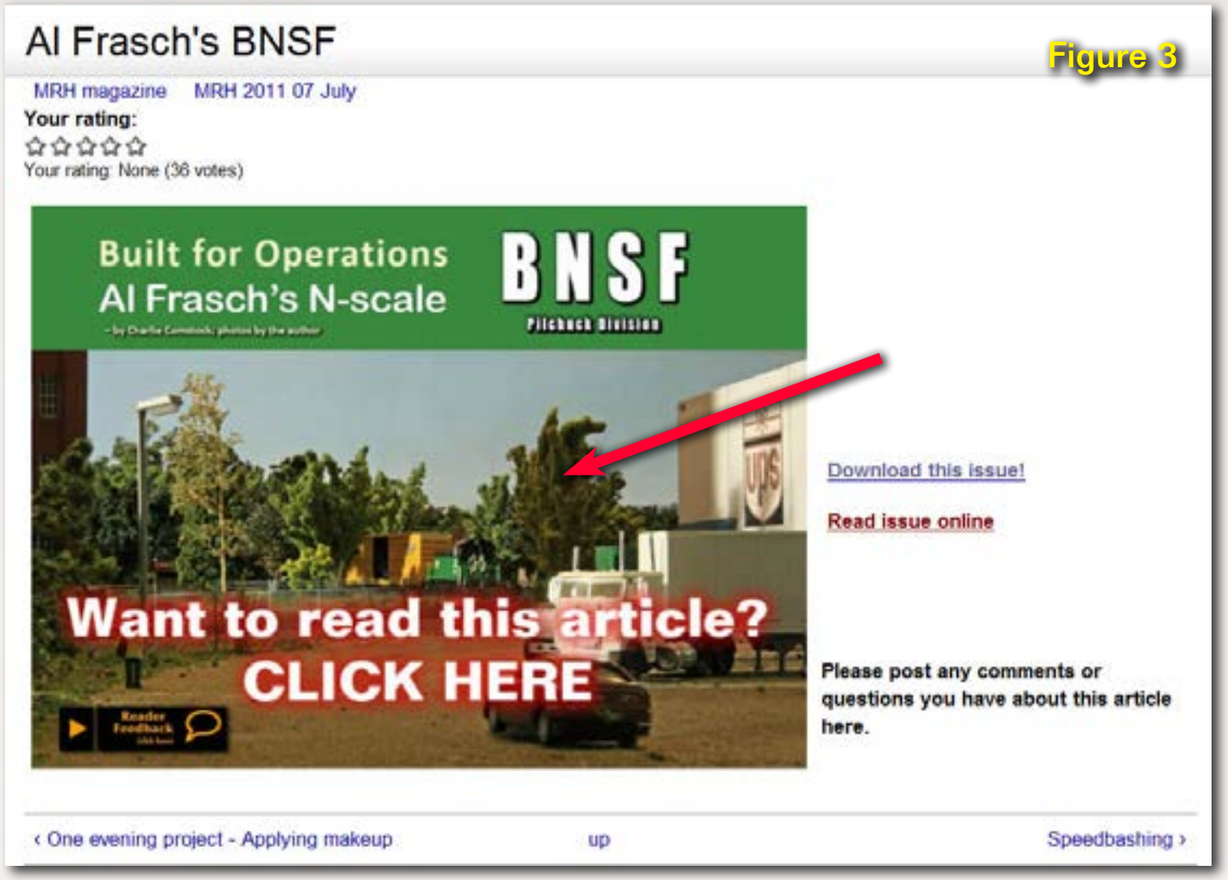

Figure 3: Click here to read this article in the online edition of the July 2011 MRH.

Reader Feedback

From the email I receive, it appears there are a few readers who don't know about the MRH reader feedback pages.

In addition to being a great way to jump directly to a particular article, these pages let logged-in MRH readers leave comments about an article in an issue of MRH. They also allow anyone to see comments others have left for the articles (you don't need to be logged in to read the comments others have posted).

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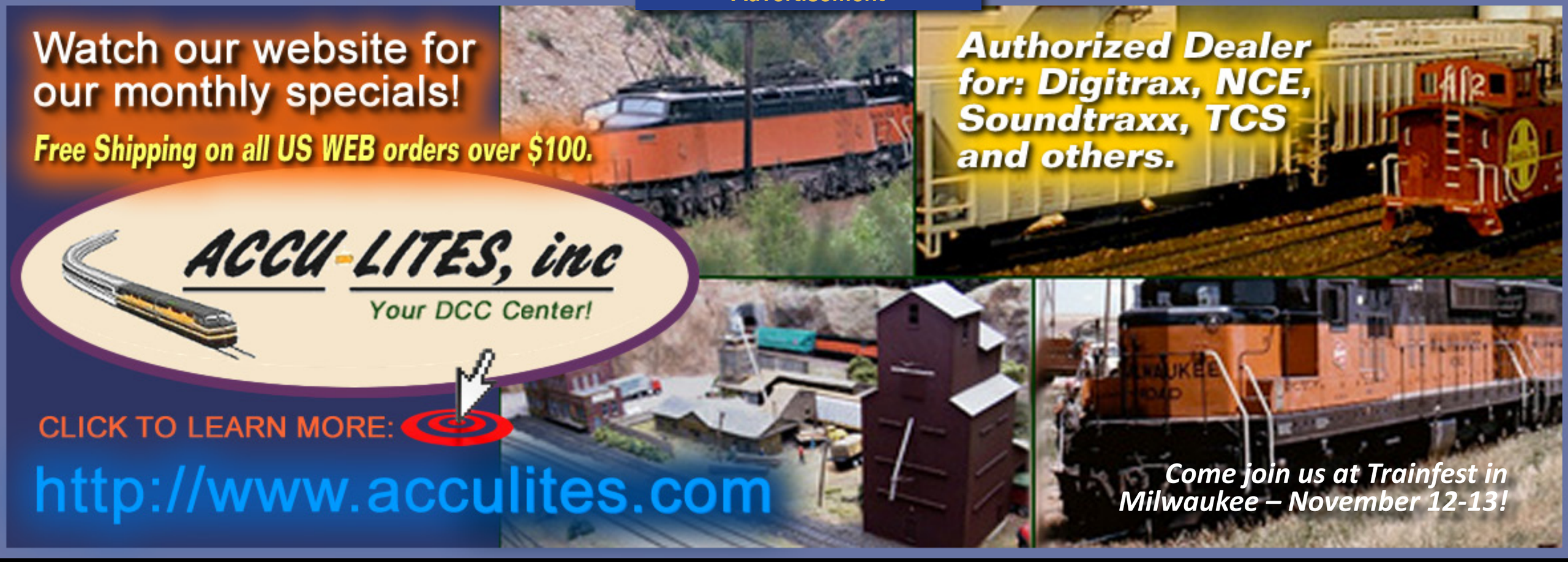

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Reader Feedback *(click here)*

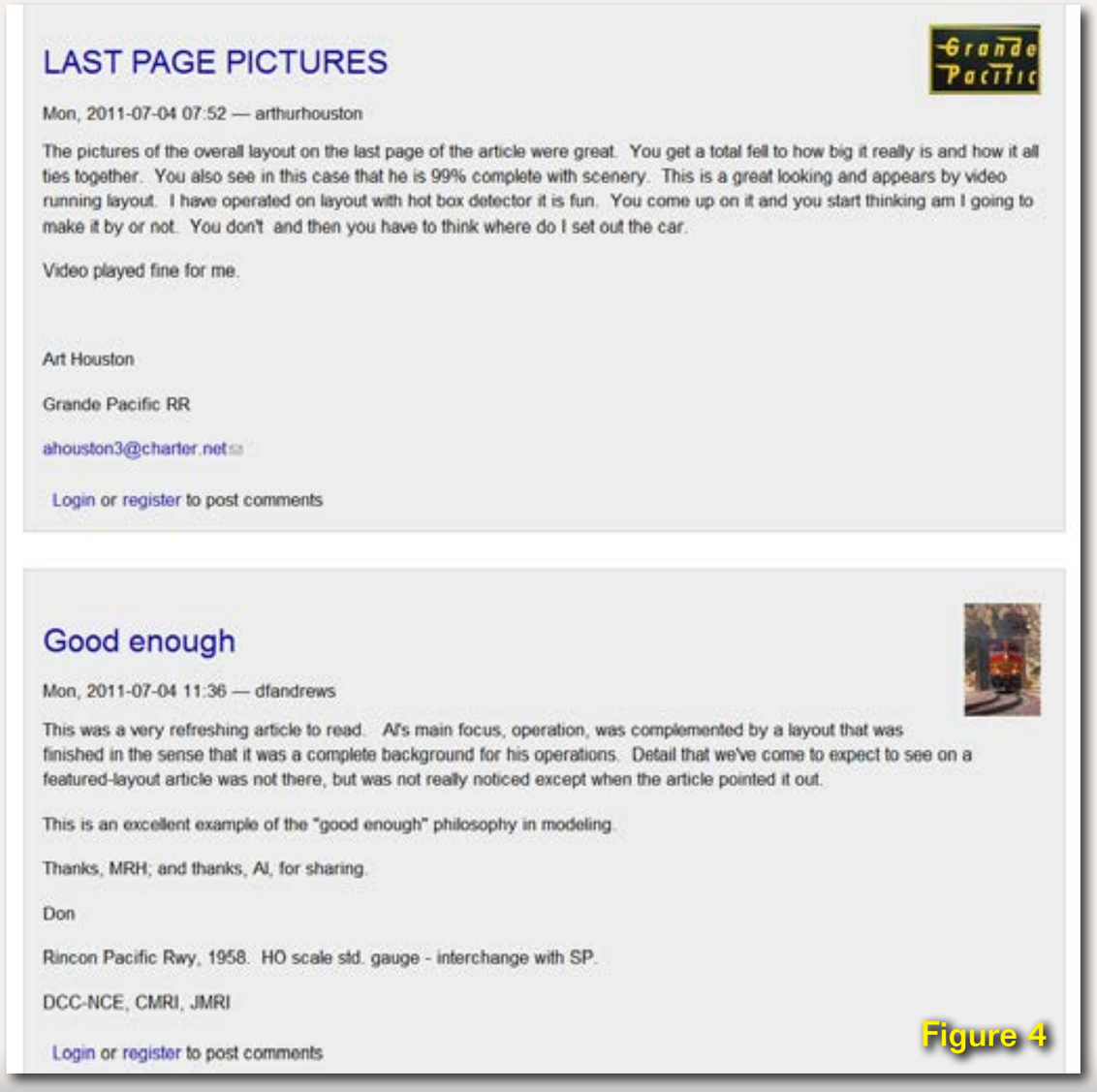
Click this icon (or any other like it) to read or leave feedback about the article.

It appears readers don't realize the Reader Feedback buttons we place in every article are hyper-links directing readers to the apprpriate article feedback page.

If you see something that looks like the icon above this column, you can click it and you'll be taken to the reader feedback web page for that article. Simple, huh! Once you're on the feedback page, scroll down to check out what other readers said about this article, or perhaps post a comment of your own (if you're logged on) (figure 4).

Search the forum

Last month I wrote about using Rod Goodwin's Railroad Index to search MRH articles for content. While this works well for searching our articles,



LAST PAGE PICTURES

Grande Pacific

Mon, 2011-07-04 07:52 — arthurhouston

The pictures of the overall layout on the last page of the article were great. You get a total fell to how big it really is and how it all ties together. You also see in this case that he is 99% complete with scenery. This is a great looking and appears by video running layout. I have operated on layout with hot box detector it is fun. You come up on it and you start thinking am I going to make it by or not. You don't and then you have to think where do I set out the car.

Video played fine for me.

Art Houston

Grande Pacific RR

ahouston3@charter.net

Login or register to post comments

Good enough

Mon, 2011-07-04 11:36 — dfandrews

This was a very refreshing article to read. Al's main focus, operation, was complemented by a layout that was finished in the sense that it was a complete background for his operations. Detail that we've come to expect to see on a featured-layout article was not there, but was not really noticed except when the article pointed it out.

This is an excellent example of the "good enough" philosophy in modeling.

Thanks, MRH; and thanks, Al, for sharing.

Don

Rincon Pacific Rwy, 1958. HO scale std. gauge - interchange with SP.

DCC-NCE, CMRI, JMRI

Login or register to post comments

Figure 4

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it doesn't have the capability to search the posts on the MRH forum.

To search posts in the forum, use the search feature in the upper right hand corner of each MRH forum page.

A reader contacted us saying he was getting no hits in the Rod Goodwin Train Index searching for

mrh stationary decoder

This occurred because so far we've published no articles covering this topic and the keyword 'stationary' is not in the Train Index.

Using the MRH forum search feature (figure 5) however results in a number of hits for "stationary" in the posts on the MRH forum (figure 6). These aren't found by a Train Index search because it doesn't index MRH forum posts.

Yes, needing two different search methods is confusing. We're working on making this easier. But for now that's how it works.

Next month I'll get back to some serious editorial content – if I don't get lost, again... ☑

Charlie

Figure 5

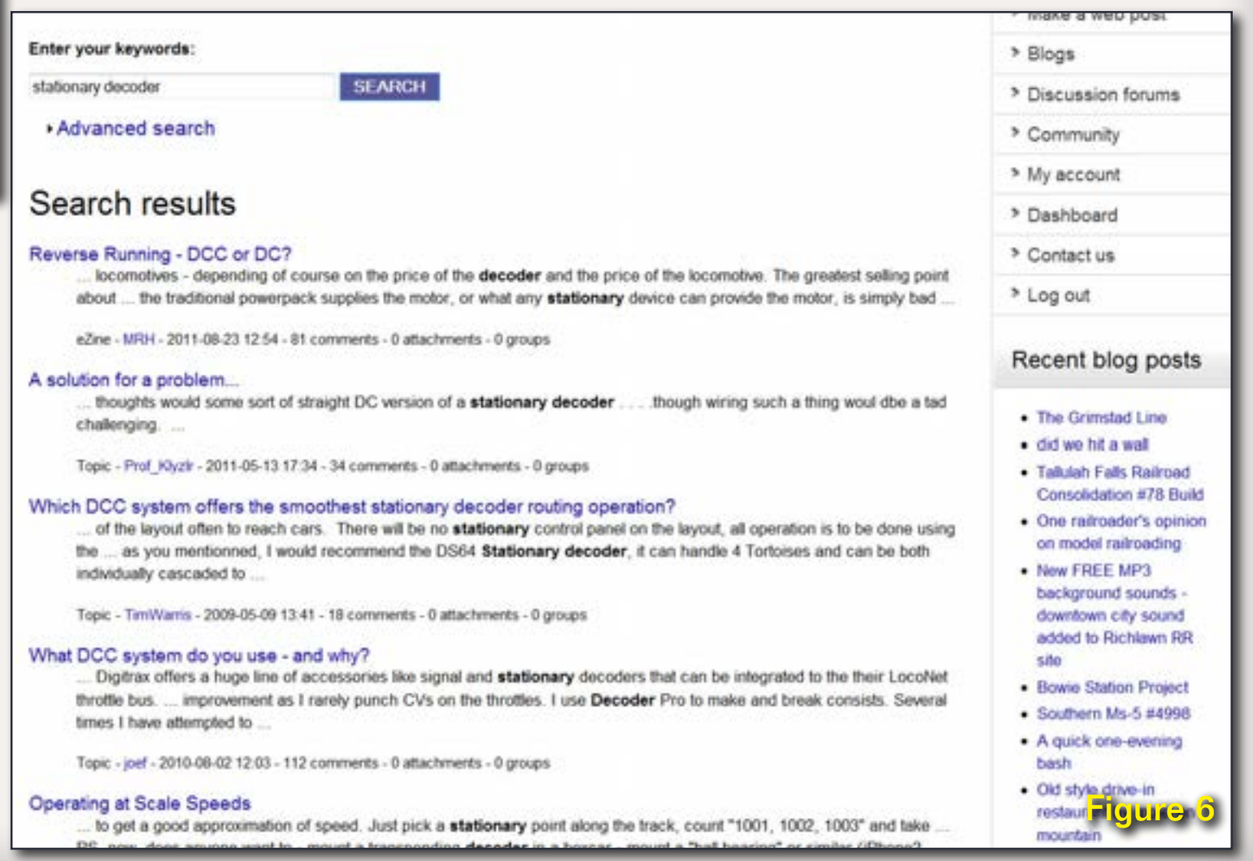

Figure 6

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#58 kit with #232 Gearbox

Kadee® Made in the U.S.A.

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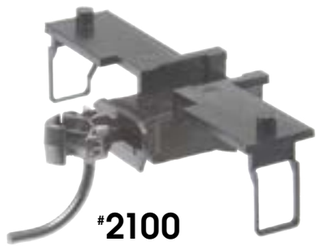

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WHISKER® COUPLERS

#156 kit with #242 Gearbox

#158 kit with #242 Gearbox

#153 kit with #242 Gearbox

Patent Numbers 5,662,229 & 5,785,192

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- Precision balanced for optimum performance. Partially assembled underframe.
- Made in the U.S.A.

HO-Scale, Log Car Kits

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Highly detailed logging equipment with die-cast center beam, metal trucks, ribbed back wheels, log bunks and falling stakes. Comes with three unpainted plastic logs and couplers. Made in the U.S.A.

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#4110	50' PS-1, 15' Double Door	$25.95
#4115	50' PS-1 Cushion, 10' Door	$26.95
#4120	50' PS-1 Cushion, 9' Door	$26.95

Log Car Kits

#101	Disconnect Log Car	$24.50
#102	Skeleton Log Car	$30.15
#103	Truss Log Car	$36.65
#104	Logging Caboose	$22.60
#107	Disconnect Log Car w/o Logs	$20.45
#LL	Log Load Kit	$4.60

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Notes from the MRH Staff

New DCC column, the $35 challenge, MRH Wallpaper, and more ...

Reader Feedback *(click here)*

DCC Impulses

We have a new column aimed at all of you out there who are intimidated by DCC (and those who are interested

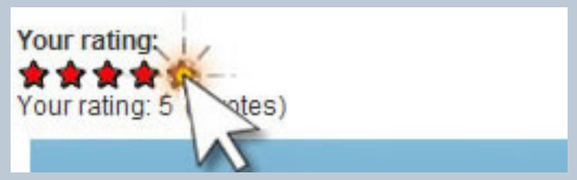
Bruce Petrarca – our DCC columnist

in learning a new trick or two). Bruce Petrarca, founder of Litchfield Station and the brains behind DCC University, starts off with DCC basics. We're excited to have someone so knowledgeable writing regularly on a topic that is so mystifying to many.

September's ratings

The five top-rated articles in the September 2011 issue of MRH are:

- **4.7** The Tehachapi Loop gets scenery
- **4.5** Clamps by the dozen
- **4.4** Liz Allen's scratchbuilt SDP45
- **4.4** Poor mans jig built turnouts
- **4.3** Are you an MRH Magellan
- Issue overall: **4.7**



Please continue to rate the articles – the more people who take a few moments to do so, the better we are able to judge what you, our readers, would like to see. This is your shot at letting us know what kinds of articles float your boat (or train)!

In this issue

You may notice this issue feels a little different. We have a LOT of columns. It wasn't a conscious decision but just sort of happened that all our columnists had something for October.

Not only are there a lot of columns, but we decided to move the columns up front. Let us know what you think of the columns-first organization!

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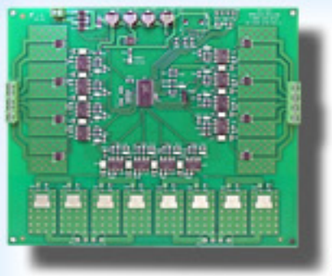

Everyone who has their AUX-BOX, raise their hand!

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The Department of Corrections

Yes, sometimes goofs do slip through ...

Issue: September 2011

Static Grass Applicator Update

Kevin Rowbotham, author of the Static Grass Applicator Update article, posted the following to the MRH web site:

"Sorry, there are a couple of errors in this piece [Ed: the mistakes were MRH's, not Kevin's].

"Regarding the difference in the Oatley modules. This piece was originally submitted back in December with the idea it would be published sometime in the New Year, I think March was tossed around at one time.

"Well ... it didn't end up happening at that time. Now it's August and there is an issue with one of the items slated for the September issue and the staff needed something on short notice, so they ran this piece without going through the usual author proof steps. Unfortunately, unbeknownst to MRH staff, during the lag time between writing and publishing, Oatley Electronics changed the module, again!

"So, as it stands now, Oatley supplies a 12 volt DC module that can be powered with as little as 4.5 volts.

From the Oatley Site:

6KV from a 4.5V/10mA supply, around 12KVKV from a 9V/20mA supply, around 15KV from a 12V/25mA supply,

"One other error I noted. The update mentions the 120 volt module I used in the article, coming from Oatley as well. That was not the case. I sourced that module from The Electronic Goldmine. That being said, there is no reason to build the 120 volt applicator. The 12 volt module offered now is more powerful and far safer to work with than the one powered with 120 volt AC. So be safe, build the DC version!"

Thanks, Kevin, for pointing out our mistakes. Due to a last-minute change in the issue article mix (we pulled a column because it needed more edits), we hastily substituted Kevin's Static Grass Applicator update. Because this was literally a substitution within hours of the issue's final staff review, we didn't have time for the usual author review. We apologize to any to our readers (and to Kevin) for any confusion caused by these mistakes on our part.

Here are some October highlights...

Son of Magellan: Editor Charlie continues showing how to navigate your favorite model trains eZine and the website like a Magellan. Pick up some more tips.

The $35 Challenge: Our cover story in October is from Matt Snell, a name that should be familiar to our regular readers. Matt is kicking off a three-part article where he undertakes to build five freight cars for the cost of a single RTR car!

Getting Real: After a long hiatus brought on by demands of his day job, Marty McGuirk is back for October as the Getting Real guest editor. Marty talks about how he came up with a prototype scene of a bridge across a creek.

Up the Creek: Another columnist who's been on 'break' is Charlie Comstock. He's back in October with the first part of how he upgraded his Upper Bear Creek bridge-crossing scene.

Logs and Stripwood: What do they have in common? Byron Henderson provides another trackplan, this time featuring logging and lots of bridges as a showcase for his client's craftsman structures.

New MRH Products

The staff at MRH has been working on some exciting new products. By the time you read this, we hope to have introduced MRH Wallpaper and later on, a set of eBooks.

You may be asking, "What in God's green earth is wallpaper and why should I give a hoot about it?"

Wallpaper, at least the MRH product, is a set of high-quality images

An example of a wallpaper image – Tom Miller's incredible Fn3 "Little Colorado" layout from issue #1 - January 2009.

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garnered from an issue of your favorite online model train magazine, MRH.

The initial wallpaper release will be a 'Best of January 2009' collection with 12 different pictures suitable for use as background or desktop images on your computer, iPad, smart phone, or other display device. Each image is available in various sizes for different displays:

- 1920 x 1200
- 1920 x 1080 (1080p)
- 1024 x 768
- 640 x 960

Our eBooks and wallpaper are part of a new premium product line that's not funded by ads but is micro-priced and instantly available for download. A set of 12 images (with 4 resolutions of each image) will cost $1.99 and include absolutely no advertising.

That's less than under 4 cents per file and less than 17 cents per image.

Click here for additional information.

Show Attendance

One consequence of the work we've been doing to gear up to launch eBooks and Wallpaper images is we are rather shorthanded when it comes to extra time.

When we returned from the National Convention in Sacramento, it was apparent that like many young enterprises, there aren't enough bodies to assign to all the tasks that need doing. The schedule at a show is hectic and not much work gets done on the upcoming issues of MRH.

Something had to give and we've reluctantly decided to cut back our show attendance for the near future.

The MRH show attendance plans now include:

- ***Amherst Show*** - (Springfield, MA) Jan 28-29, 2012
- ***NMRA National Convention*** (Grand Rapids, MI) Jul 29 - Aug 4, 2012

If you're in attendance, drop by the booth and say hello!

Please mention MRH

From the department of broken records (how many of you know what a broken record is?)...

Please, *when you shop at one of our advertisers, especially if you make a purchase*, be sure to mention that you saw their ad in Model Railroad Hobbyist. That little extra bit of effort on your part helps them know that the money they spend advertising with us is money well-spent!

The MRH website

Have you spent time browsing the MRH forum lately? There have been some interesting posts and discussions there lately. For example:

- Decoder Pro issues, any thoughts?
- Need ideas for tie cutting jig for Fast-Track made turnouts
- Tallulah Falls Railroad Consolidation #78 Build
- Building my shelf layout
- Let there be light... or not
- Major Progress - I Am a Happy Camper
- NO, Mr. Gorbachev

The list goes on and on. You may find some interesting stuff there.

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Questions, Answers and Tips

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QUESTIONS AND ANSWERS

Q: I have noticed in some videos that trains seem to be running too fast, especially in the yards. Is this normal in an op session?

A: Every modeler makes their own rules for their own situation.

Model railroads dedicated to prototype operations, like the La Mesa club's Tehachapi layout, or Charlie Comstock's Bear Creek – both mountain railroads with stiff grades and lots of curves – run trains at slow scale speeds.

Someone choosing to model a high-speed mainline, the Nickel Plate for example, might want to run trains faster to be realistic. Others just like to railfan while the locos and cars they've collected run orbits. Scale speed may or may not be a concern for them.

If you want to run at scale speeds, keep reading. Here's a useful and flexible scale speed calculator: www.mcr5.org/NMRA/articals/speed.htm.

MRH publisher Joe Fugate uses a simple formula for estimating speeds on his Siskiyou Lines: "If you have a more modern layout like my 1980s Siskiyou Line, you can use the 3-second rule with 50-foot cars to get a good approximation of speed. Pick a stationary point along the track, count '1001, 1002, 1003' and note how many 50-foot cars pass that point. Each car passing represents roughly 10 mph."

"This is only approximate, but it's close enough. If you have three cars pass, then you're going about 30 mph, for example. On my Siskiyou Line the standard speed limit is 25 mph, so you want two-and-a-half 50-footers to go by in those three seconds."

Tony, of Bendigo, from Australia, commented in a recent MRH thread: "I reckon scale speeds are mandatory unless you want your trains to look like toys. I model a rural branch line in N scale, and although some of the locos that ran these lines were capable of 100 kph (62 mph), the trackwork limited them to much lower speeds."

"Watching a train trundle slowly through the countryside is deeply satisfying, especially if the scenery is done to a fairly high standard and the train looks as though it's meant to be there."

"Also, due to severe compression on model layouts, you want trains to be moving for as long as possible between stations."

"In the yards, nothing looks better than the yard pilot pushing a rake of grain wagons over the points and into a siding beside the silos at walking pace."

There is a tendency for get-it-done motivated switch crews to run much faster than the prototype would. Joe Fugate programs his DCC equipped yard switches to limit their top speed to keep over-eager yard crews from running as though they were driving a slot-car. Others have regeared locomotives to top out at around 25-30 mph.

If you don't like counting or arithmetic, commercial train speedometers are available. Some mount in a car. Others are trackside devices. For information about commercial speedometers check tonystrains.com/technews/trainspeed-hints.htm

or

tonystrains.com/technews/archive/toth.htm.

— Joe Brugger

Q: I plan to do some scratchbuilding using wood. I'd like to paint it with acrylic paint. What is the best way to get a smooth finish?

A: You must seal the wood pores with a non-water based paint. The purpose of the sealer is to fill the pores in the wood grain and keep wood fibers from rising up like a fuzzy carpet. Brush or spray on the sealer, let dry completely, then sand it. Repeat this process until the surface is smooth without ridges from the wood grain.

When you sand after sealing, the fibers are cut off neatly because they are rigid from the sealer and don't just bend over. Sanding sealed wood is more like a gentle wipe than a vigorous scrubbing action. Use fresh sandpaper.

Always sand the sealer to smooth it out. The final coat of sealer should be finish sanded with fine sandpaper (around 400 grit) to avoid scratches that might show through the final paint.

I have successfully used the following as sealers: shellac, clear acrylic gloss/matte medium, appliance paint, auto primer, Rustoleum metal primer, Dullcote, adhesion promoter, Kilz spray primer, polyurethane varnish, bar top varnish, and even extra hold hairspray.

Since the sealer must be dry before sanding, shellac, Kilz, and Krylon sprays are good because they dry very fast.

Be careful not to fill in the details of your wood shapes with the sealer.

Once sealed, airbrush with the paint of your choice. The result will be a perfectly smooth surface with no trace of wood grain remaining.

— Lew Matt

Q: What is the best way to apply small amounts of CA glue?

A: For me this is a two-step process, involving both the right glue and the right applicator. CA glue comes in different viscosities and I've found that medium and thick are much easier to apply precisely than the thin product. They also seem to set up faster as well.

When it comes to applicators, one of the best, and most disposable, is the simple toothpick. Squeeze out a little CA on a disposable (or otherwise sacrificial) surface and dip the tip of the toothpick into it, then apply it to the spot being glued. I've also had success using a Microbrush – especially if I need it along a seam. An issue with microbrushes is you'll need to be work quickly before the CA on the brush sets.

Just make sure you keep the CA cap on the bottle or it won't be liquid the next time you need it.

— Jeff Shultz

Q: What is the best way to handle track wiring when I'm using foam for roadbed? How do I mount switch motors such as a Tortoise on the foam?

A: I use everything from $^3/_4$" to double-stacked 2" foam on my layout, all of which is backed by $^3/_8$" plywood. I've found the easiest way for me to run feeders through foam is drill a $^1/_8$" diameter hole through the foam and plywood. Then I line the hole with a hollow plastic coffee stirrer, the kind that looks like a slender drinking straw. The stirrer extends out the top of the hole and through the plywood.

I run my wires through the lined hole. The lining keeps them from getting snagged the foam or the plywood. Once the wire is in place pull the stirrer out of the hole and re-use it for the next one. Solder the feeder wires to the track and use suitcase connectors (or your preferred method) to connect the other end to your track-power bus wires.

Since I have $^3/_8$" plywood supporting everything, I attach switch motors

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or manual throws like Fast Track's BullFrog directly to that. I use a spade bit in my drill to excavate a 1/4" wide hole for the throw wire through the plywood and foam. The extra-long throw wire must be stiffer than the one included with a Tortoise. I find .040" piano wire (a local hobby shop should have this) works. Larger throw wires may require you to enlarge the hole in your throwbar.

Hint: it's much easier to install a long throw wire from the top and to clip it off after installation, than to try and hit the tiny hole in the throwbar from underneath with a long wire.

If you don't back your foam with plywood, you can still use switch machines or manual throws. Glue a 4" square of 1/8" or 1/4" thick plywood or Masonite to the underside of the foam, and mount the switch controller on it. This offers good lateral stability and material to hold mounting screws. A Tortoise isn't a high-torque device, so plywood thicker than 1/4" is overkill.

— Jeff Shultz

Figure 1: Hobby dealers offer several "model glues." Some are thin, some are thick, some work very rapidly, and some give the modeler a long time to reposition items.

Q: What glue do I use to assemble a plastic freight car model?

A: Look for a solvent-type formulated for styrene. Several are available from hobby retailers, offering choices in viscosity (thick or thin) and curing time (instant bond, or something slower).

NOTE: Use ventilation with any solvent. I open a window on one side of my workbench and run an externally-vented exhaust fan on the other. Some solvents can give you a terrific headache, and possibly worse .

Tube glues have the advantage of staying where you put them. You can squeeze a bead onto a piece of aluminum foil and pick up a tiny amount with a wire or a toothpick. Dab a bit

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on one part, push it into place, and hold the pieces together until the glue sets up.

Most modelers find the liquids more convenient. Apply liquids with a fine paintbrush, a Microbrush, or a needle-point applicator like the ones from A-West.

Put the two parts together, touch the applicator to the joint, and the solvent will flow in by capillary action. While liquids flow easily into joints, they also can flow all over the model and ruin the finish if care isn't taken.

Read the label. Package labels tell you what plastics the glues are designed for, and also give estimated setting times. Testors and Plastruct offer several solvents for styrene and ABS plastic. If someone in your home is sensitive to odors, both sell non-toxic varieties.

Some brands are "hotter" than others. Testors Liquid Cement for Plastic Models sets up in a few minutes, giving time to adjust parts. Tenax sets almost instantly. Choose the one that suits your building style. Aggressive solvents – or too much of any solvent – can deform plastic parts.

MEK (methyl ethyl ketone), sold in paint stores and home improvement stores, has a loyal following. It's cheap and works very quickly. It also requires a fair amount of ventilation.

If you are attaching clear plastic parts, like windows and lenses, don't use

Figure 2: Labels on commercial solvents tell you how to use the solvent and how long joints will take to harden.

solvents. Solvents will damage clear parts. Instead, use a canopy glue like Testors Clear Parts Cement.

There are several other brands, labeled as "clear parts cement" or "canopy glue".

Some new kits include a mix of materials – styrene for major body parts and slippery engineering plastics for stirrups, ladders and other details that might be damaged by handling. Microscale this year released a set of

Figure 3: Solvent applicators – using the right tool is critical with solvents. Aluminum foil on a plastic container lid makes a good palette. Fine paint brushes or Microbrushes can apply small amounts of cement. So can bits of wire, straightened paperclips and plastic bottles with needle-fine applicators. Thin Delrin tips can control the liquids' flow.

adhesives designed to join various kinds of plastics.

Solvents won't work for fastening weights in place. Walthers Hob-E-Tac will fasten metal to plastic. So will DAP Household Adhesive Sealant, sold in hardware store. Lead shot can be secured with generous applications of Elmers Glue or carpenter's glue.

There's more discussion about glues for plastic at model-railroad-hobbyist.com/node/5073?page=2.

— Joe Brugger

TIPS

Inexpensive Foam Shakers

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area coverage. I adjust the screen size based on the material and effect I want. Screen material ranges from nylon window screen for fine coverage to tulle, to onion bags for coarse foam. I store various materials/colors in the containers so that they are ready to go.

— Daniel Kleine

Reader Feedback
(click here)

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Figures 4 and 5: Inexpensive shakers for applying scenic materials made from plastic screeing and containers that originally held gum.

About our Modular columnist

Les Halmos has been a model railroader since 1979. He's been involved with setting modular standards for the NMRA since 1981. In 2001, he founded the Free-Modu-Rail Group and has been active in promoting Free-mo module standards.

Click here to learn more about Les.

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MY MODULAR ADVENTURE: Having fun a module at a time

The ongoing story - Erecting the walls!

Reader Feedback *(click here)*

The construction crew just finished erecting five stalls and the machine shop ...

Introduction

In the last column I mentioned that I was looking for a way to hide the wiring in the stalls. Well, sure enough, during one of my sleepless nights the "lights" came on and I found the perfect solution. You might wonder why it was so important to hide wires? It's simple. The roundhouse roofs will be removable and I wanted to avoid the messy look of exposed wiring in a finished interior.

Finally I am ready to start installing the five stalls and the machine shop. The first step is to thread the clerestory lamp wiring through the trusses. This is where I begin the eagerly awaited assembly.

I anticipated the fact that my biggest hurdle would be hiding the wires inside the stalls. As far as the machine shop was concerned it was a breeze but in this case some heavy thinking was in order.

Figure 1: Finally, five stalls erected and ready for use! The construction crew will return after vacation to finish the roof and the 10 other stalls. Wow, they sure left a clean construction site.

As I mentioned before, I want removable roofs, which was my motivation to finish the inside of the roundhouse. Once I add the interior details it would be a shame to see a whole bunch of unsightly wires in an otherwise clean looking interior. Of course, by clean I mean pleasing to the eye and not pristine because there will be some very noticeable weathering inside.

The solution to hiding the wires was quite simple, as most of these problems are, as you will see in this column, detailed in my usual step by step explanation.

STEP 1: Prepare the trusses for the wiring

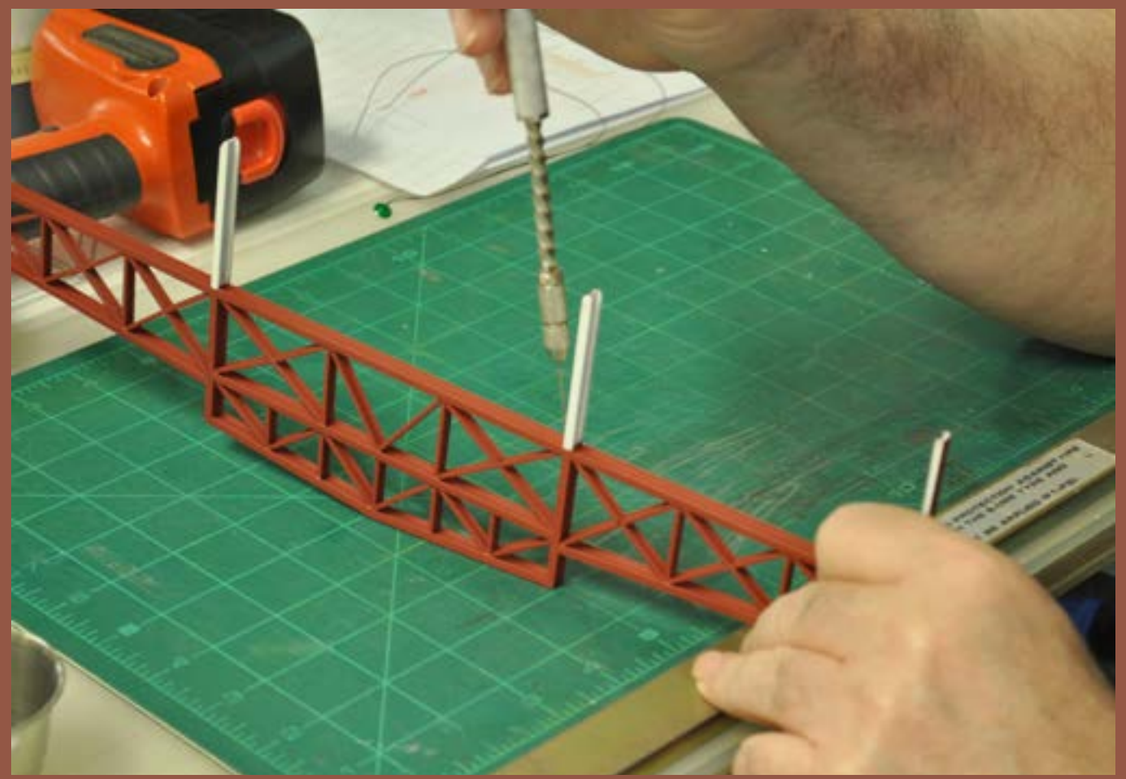


Figure 2: I drilled holes for the wiring from underneath each truss using a push drill. I'll thread the wires through them and along the I-beam.

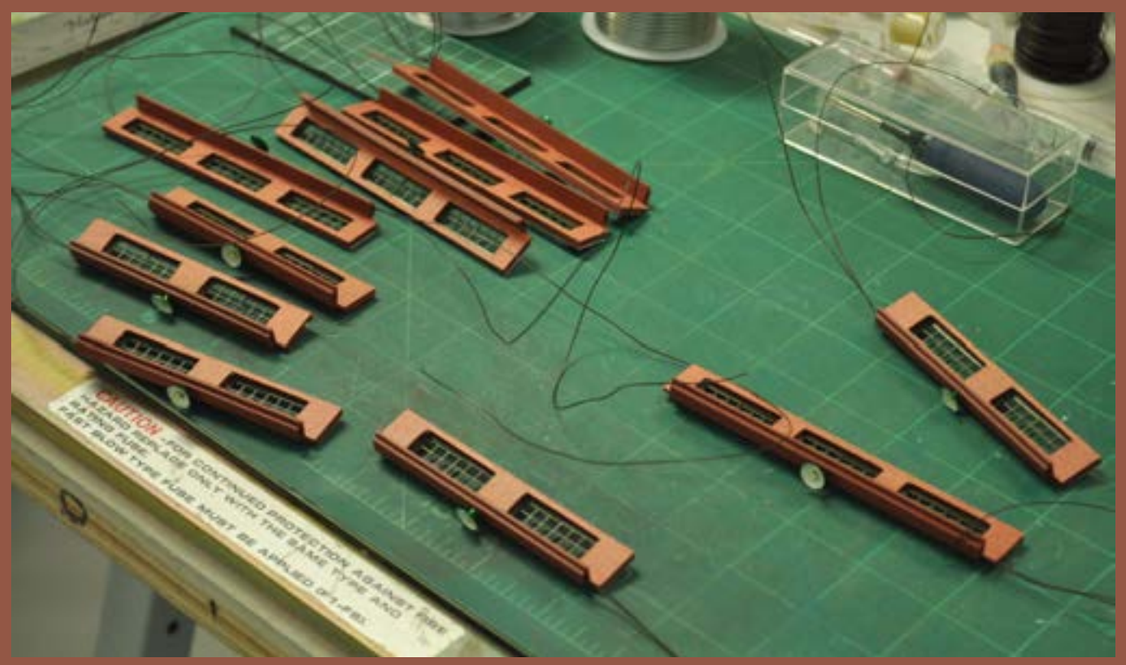


Figure 3: The 10 clerestory windows are ready to install. I left the leads long enough so that I would not have any problems hooking them up from the bottom of the module, but that's another story.

STEP 2: Threading the wires

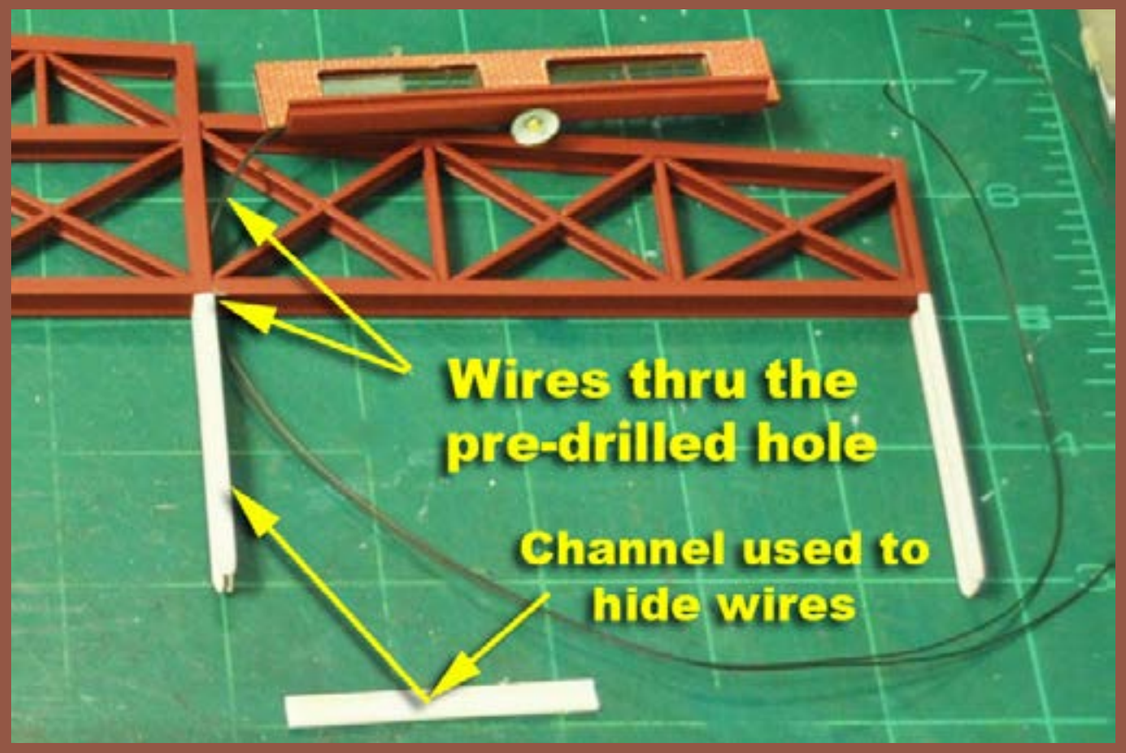


Figure 4: The most time-consuming part of construction was threading the wires through the trusses.

Figure 5: I drilled holes in the footings in the roundhouse floor where the I beams will be inserted.

STEP 2: Threading the wires *Continued ...*

Figure 6: I routed the wires as shown – they are only visible at the top. When I paint them to match the trusses they will become almost invisible.

Figure 7: Stall number one is complete. The wires are hidden well enough that you really have to look closely to see them.

STEP 3: Final gluing and installation

My preferred method for gluing the walls to the roundhouse floor and each other might appear a little unorthodox but it works well for me. Ordinarily when I'm joining styrene to styrene I would use pure MEK, but in this case there are several reasons why that would not work.

- The walls are covered with Micro-Mark brick paper
- The trusses are painted
- The edges of the roundhouse floor are unpainted styrene

If I were to use straight MEK on these different surfaces it would not result in a solid bond, if any at all. If you've ever glued two painted surfaces together, you know what I mean!

I apply a coat of Barge/MEK solution – the same stuff I use to glue rail onto Central Valley tie strips – to each surface. Once dry, I join the two pieces. I get an instant bond, but can still make little adjustments.

Once I'm happy with the fit, I apply pure MEK to the edges to reactivate the Barge and bonds the two surfaces making a strong joint.

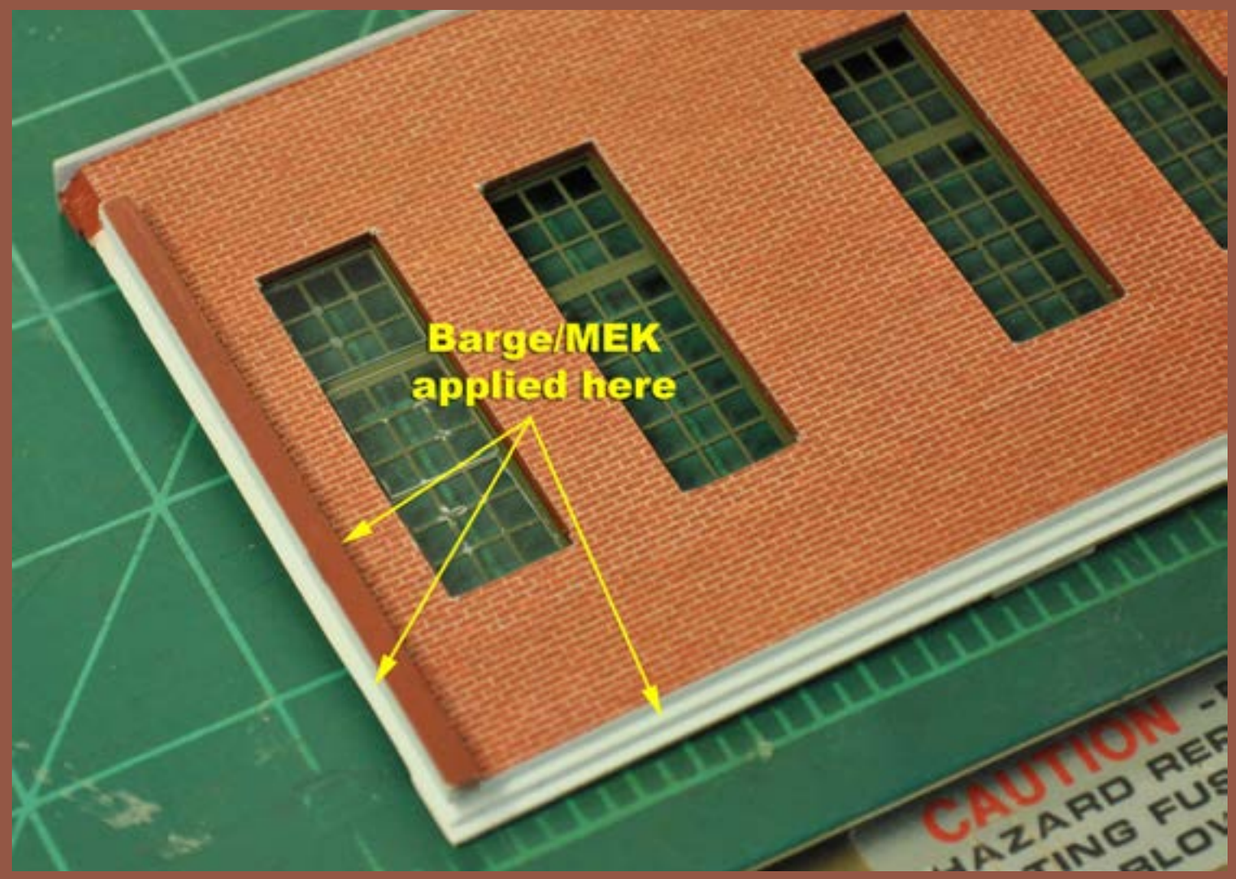
For critical joints where I need an extra-strong bond, I use Microscale ACC adhesive; it comes in three thicknesses, light, medium and thick. I apply a small drop with a small wire to the pieces I want joined.

I have used this method on several occasions and it has worked well for me. Another advantage is I don't need a third or fourth hand to hold the pieces while I glue them.

The Barge/MEK method is good when laminating large pieces of Plastruct or Holgate & Reynolds vinyl brick to styrene. It's very hard to coat large surfaces evenly with pure MEK before it evaporates. Also, vinyl and styrene don't like each other. I use a large brush to coat the surfaces, let them dry, then laminate them together making sure there are no air pockets resulting in delaminated vinyl. Ask me how I know this!

Figure 8: I used MEK, Barge/MEK solution and Microscale ACC to secure the walls.

Figure 9: Apply the Barge/MEK solution to the edges where the walls will be joined to each other and the roundhouse floor.



STEP 3: Final gluing and installation *Continued ...*

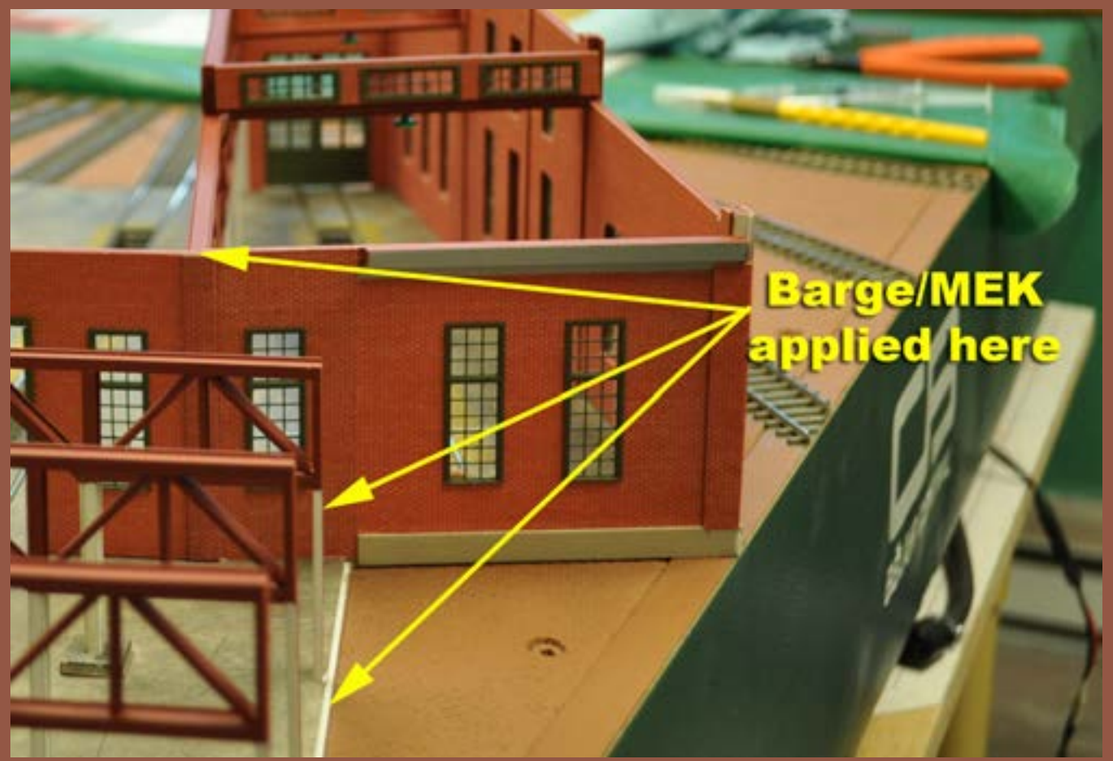


Figure 10: Repeat the application process for the edges of the roundhouse floor and ends of the trusses.

Figure 11: The Barge/MEK solution holds the walls in place prior to the final application of MEK. Look Ma, no hands!

STEP 3: Final gluing and installation *Continued ...*

Figure 12: Finally! The first five stalls and the machine shop are erected. Still a lot of work to do. Vacation should be over soon. I'm expecting to have the construction crew back any day now to complete the job...

Conclusion...

The first five stalls and machine shop are installed and fully operational. The next step will be to build and add the roofs. The styrene pieces for the roofs were previously cut out and ready to install, but small changes to the design of the walls along the way made it necessary to modify them to get a proper fit!

I will be adding details including smoke stacks to the roofs. Stay tuned for my next column which will cover building and installing removable roofs and adding some preliminary scenery to the module.

Thank you for reading so far. Please click on the feedback button; your comments are most welcome. ☑

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Lew Matt is a published writer, photographer, and illustrator whose work has appeared in many model railroad hobby magazines.

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THE LITE *AND* NARROW:
Converting an AHM HO Heisler Locomotive To an On30 Heisler

Ramblings on Narrow Gauge and Branchline Modeling

Figure 1: This O scale Heisler started life as an HO AHM Rivarossi Heisler. After scratch-bashing and the addition of details and electronics, it is transformed into a fine running On30 locomotive. This article will show you how easy the conversion is, even with DCC and sound added.

Converting the AHM HO Heisler locomotive to On30 involves rebuilding the superstructure, adding DCC and sound, detailing, painting and weathering. The Wiseman kit (www.locopainter.com) can speed up the process of changing the superstructure and can supply you with many O scale details. I have a total investment of about $150.00 and 4 hours time in this HO-to-O scale 30" gauge changeover, with many added details and DCC sound, and, I am having a lot of fun with the conversion. The HO locomotive can also be converted to Sn42", Sn3', Sn2', On3', On2' and of course, it is On30." Full instructions for changing the gauge from standard HO are included with the Wiseman kit (figure 2).

I got my used HO AHM Heisler at Howard Zane's Train Show at Timonium Maryland for $50.00, it ran well but had some superficial detail damage. The Wiseman cast resin and pewter conversion kit was another $50.00, and the DCC sound decoder was $30.00. The HO locomotive should be well broken-in before changing the scale or adding DCC; older HO locos you convert should be thoroughly cleaned and relubricated before extended use on your layout. The original HO Rivarossi 12V DC can motor has a low current draw and can

Figure 2: Three Heislers lined up; from the left, the unmodified HO loco, an On30 Heisler being detailed for mining operations and an On30 Heisler locomotive, detailed as a logging locomotive.

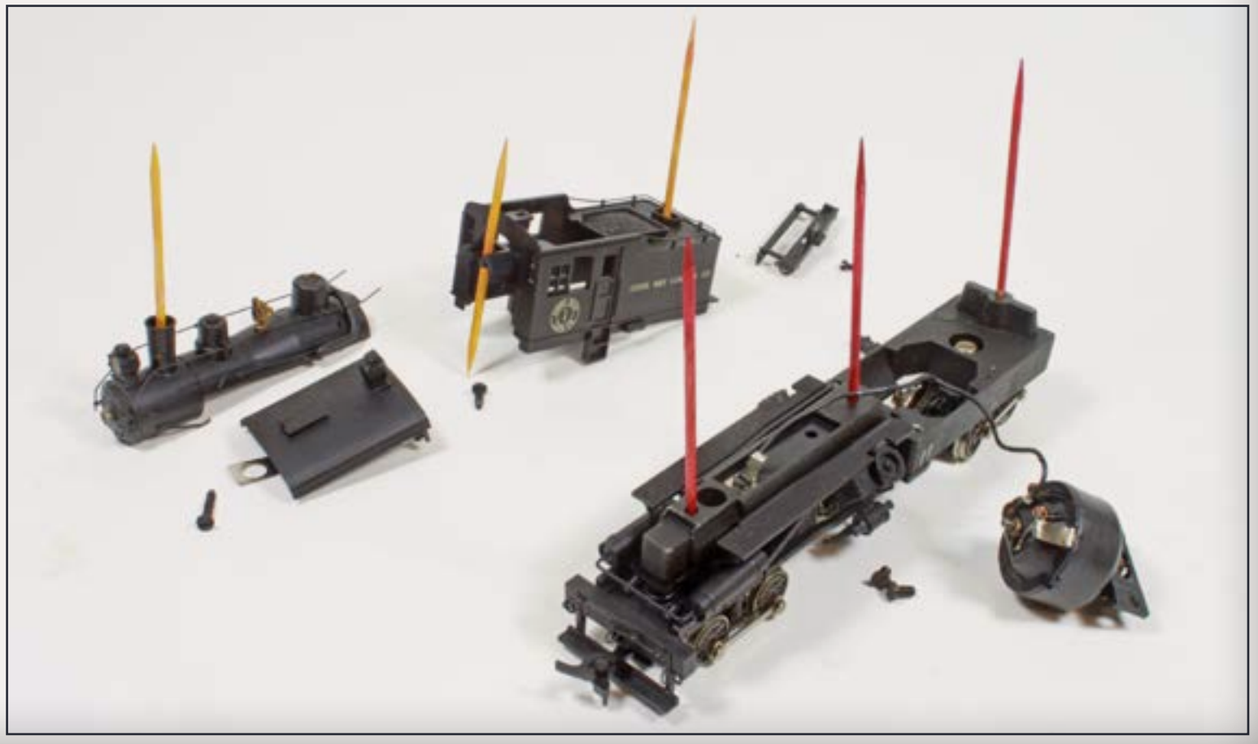
be easily isolated from the chassis by snipping one small metal ear connecting the motor to the chassis, making it easy to convert to DCC (figure 4).

The hardest part of the conversion is finding the screws that hold the superstructure together. There are three screws that must be removed to free the boiler and cab. One is under the smokestack, one under the water tank filler hatch behind the fuel load, and one at the front of the cab just under the back of the boiler. There are two easy-to-reach screws holding the DC motor in the chassis, but watch out for the thin washers underneath.

There are literally hundreds of DCC decoders that can be used in this conversion. I don't recommend any particular brand or style. You will need to determine what is available to you in a size that will fit inside this loco, and fit your budget. The older AHM HO Heislers, like the one I am using in this project, must be hard wired from the motor directly to the decoder. The new production run of AHM HO Heislers have the NMRA 8-pin plug and are DCC-ready (figures 4 and 5).

Remove the motor from the upper side of the chassis. Note that the engineer-side (right rail) pickup is attached to the chassis by a screw

Figure 3: An exploded view of the HO Heisler before modification. Finding the screws to disassemble the loco can be the most difficult part of the project. The yellow dowels show where the three screws are located on the body that must be removed for disassembly. The red dowels show the corresponding holes in the chassis where the body parts are attached.



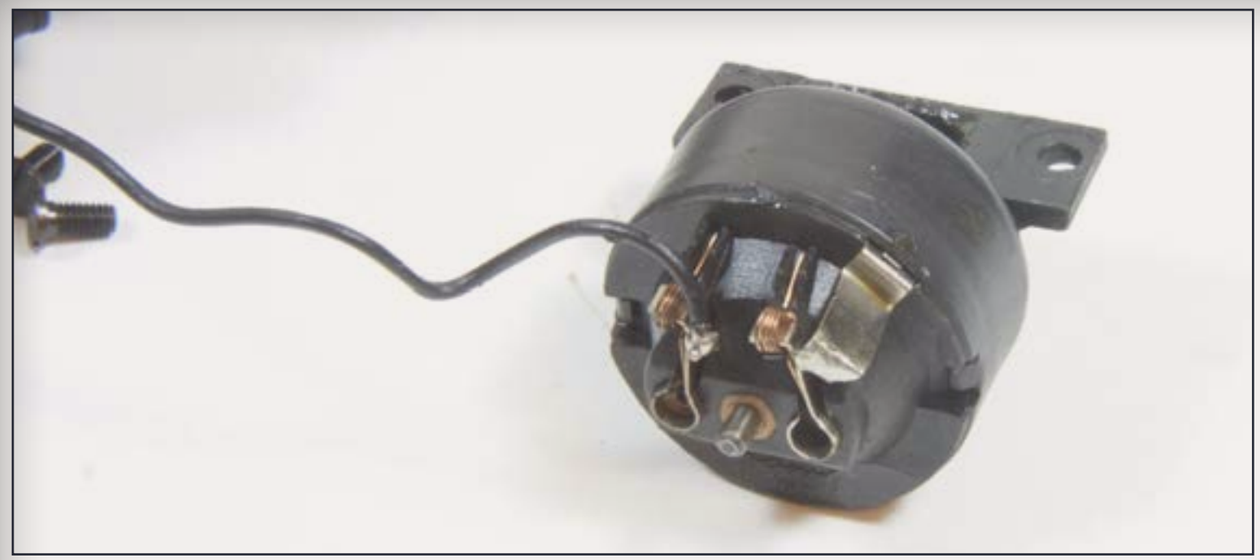
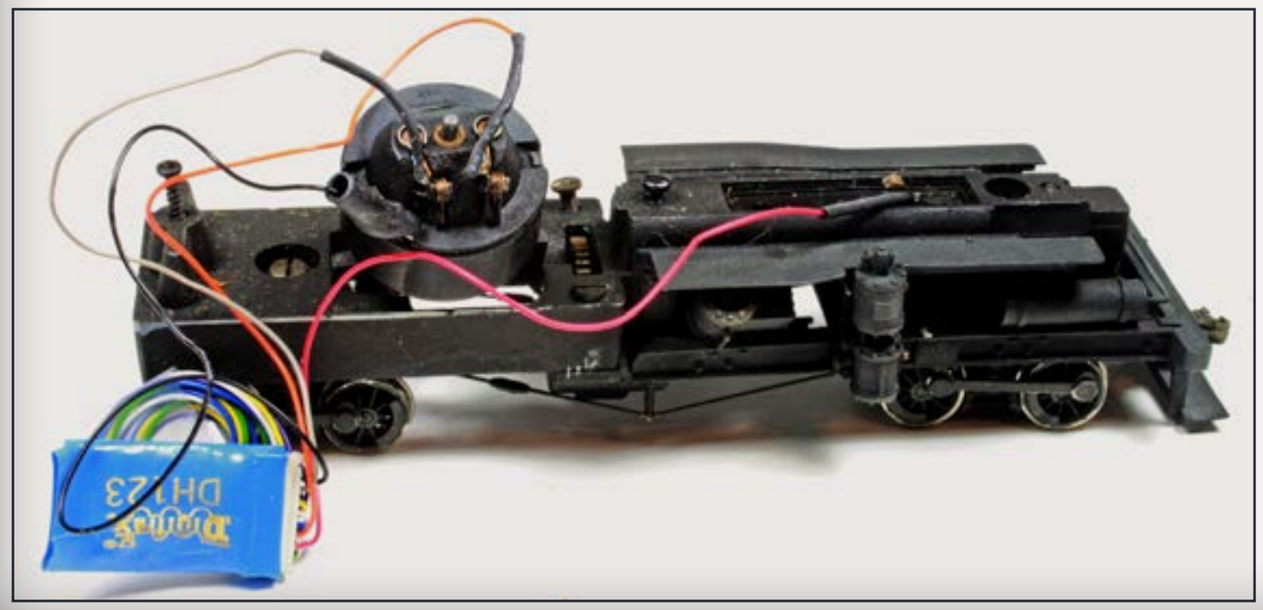


Figure 4: This is what the Heisler motor looks like out of the HO model. The wire on the left is the connection to the right rail and the silver tab is the jumper from the left rail, grounded from the chassis to the motor. When the tab is cut, the motor will be isolated from the chassis. Always use a meter to confirm that the motor is electrically isolated from the body and chassis.

Figure 5: This is how the Digitrax decoder is wired without the sound system add-on, for plain DCC control. The cut silver tab that connects to the chassis is at the left side and it has been soldered to the decoder's black wire. (This connection could be made anywhere on the chassis). The gray wire is soldered to the brush holder where the silver tab was connected. The other brush holder is soldered to the decoder's orange wire and the original wire connecting the screw over the front truck to the motor was replaced by the red wire from the decoder.



above the front truck. The fireman-side pickup is the nickel silver strip on the side of the motor that takes its power from the chassis where the motor rests in the chassis. I snipped the strip close to the motor brush with a Xuron rail cutter, bent it away from the brush, and soldered the black wire from the DCC decoder with an insulating shrink tube over it. (If you prefer, the black wire can be attached to anyplace on the chassis and the motor completely insulated from the chassis. Regardless, use a meter to make sure the motor is isolated from track power.) The motor brush, which was connected to the strip, is soldered to the DCC decoder gray wire. The engineer-side pickup on the chassis is soldered to the red wire, and the orange DCC decoder wire is soldered to the remaining motor brush (figures 6 and 7).

This is the basic DCC wiring for operation. Use the directions that came with your preferred DCC decoder for wiring the lighting and sound system. I started this project with a basic HO Digitrax DCC decoder DH123 and an MRC add-on steam sound with a large speaker, and then revised my design to use an N scale Dgitrax steam decoder SDN144PS with a miniature speaker so I could have more room in the cab for details.

The sound can come out the open windows or you can drill small holes in the fuel deck and have the sound come from under a loosely fastened coal or wood load, or tools.

Paint the loco a dark gray rather than black so you can see all the details under typical room lighting. Add the pre-painted details to the loco with CA glue to make painting and masking easier. I chemically blacken all the brass parts and handrails with Blacken-It solution before painting. The chemical gives the brass grab irons an etched surface that holds paint better and if the paint does get rubbed off, it's black, not shiny brass underneath. I use Birchwood Casey gun blue for steel and iron details. Sometimes, the Blacken-It will work with certain pewter details.

There are numerous added details: wire grab irons, handrails, uncoupling levers, extra piping and tanks and other small details, including wipe-down rags hanging on the rail to dry. The loco is equipped with Kadee couplers, and detailed as a logging locomotives with lots of chains and logging tools. The fuel load was made from hand-split pine wood for the logging loco. Use photos of your favorite logging or mining railroad to get detailing ideas (figure 8).

Airbrush or brush-paint gloss over the area that will receive your decals. After the decals have been solvent-set and snuggled down, coat with another gloss coat. When this dries, coat the whole loco with a flat spray. This double coat of gloss hides the edge of the decal perfectly. I found

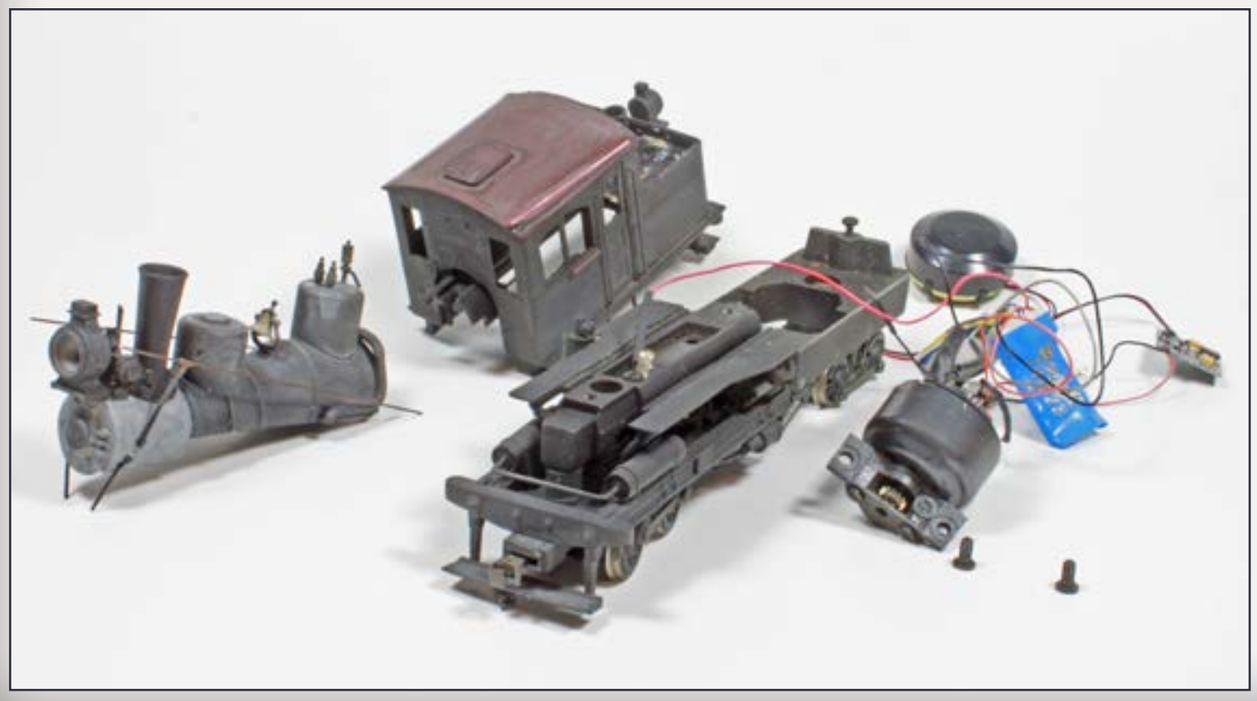
the automotive clear flat adhesion primer, in the spray paint can, to be excellent as a flat paint with some "tooth" to accept weathering chalks, paints and pencils, and the flat finish is one of the fastest drying and most durable available anywhere.

For weathering, I prefer washes and powders of various dirty colors, applied from the top down, especially for coal-hauling locos. Render calcium deposits from steam leaks with dry brushed "concrete" color paint. Dust from a mining operation will cover everything and get glued to the metal by rain and dew, so it is usually seen as streaks. Put mine "dust" on top of the loco and the ground or dirt dust underneath, on the running gear. Put the dust colors over the rust, as it is usually the newest and freshest grime at the scene. A light coat of adhesion primer will hold all the colors in place.

This is a fast, easy, and cheap conversion project from HO equipment to suitable On30 equipment, and results in an unusual locomotive, the Heisler. Give scratch-bashing a try; you may enjoy it and have a useful locomotive when you finish. After all, that's what being a Railroad Model Hobbyist is all about! ☑

Reader Feedback (click here)

Figure 6: This is an exploded view of the Heisler loco detailed as a mining loco with DCC and sound. The decoder and speaker are rather large and take up a lot of space inside the cab and fuel bunker. The sound device is an MRC add-on decoder, and it has its own sound decoder board in addition to the separate Digitrax DCC decoder.



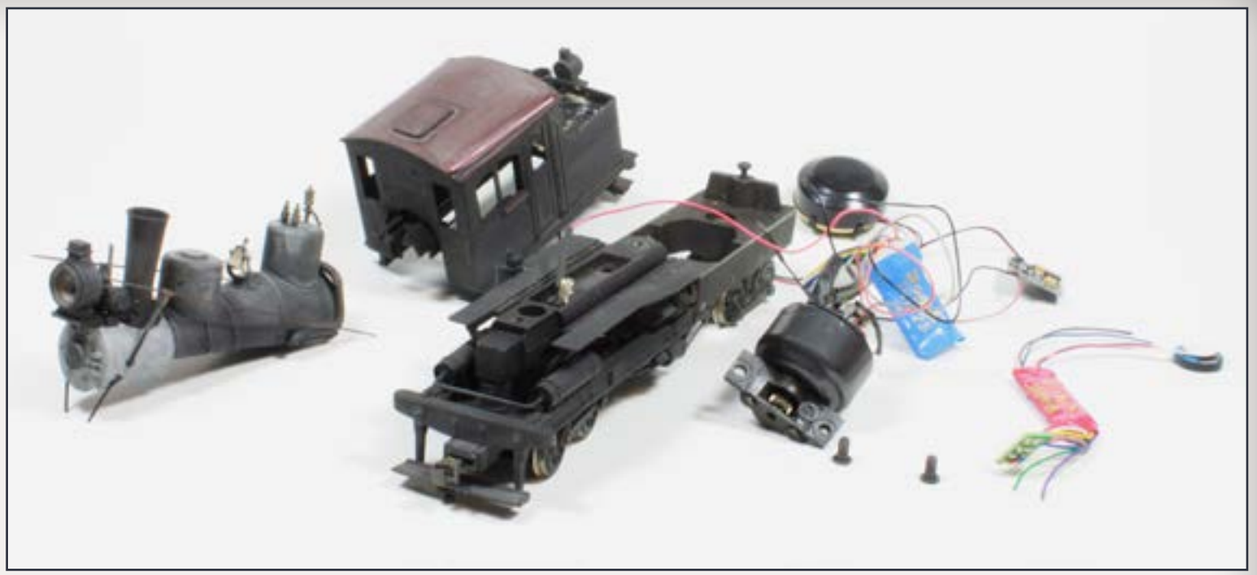


Figure 7: The new N scale decoder with sound is on the right. The speaker is only 1/3 the size of the other speaker, and the decoder is much smaller also. This small size decoder allows extra room inside the cab for details and an engineer. Note that even though the decoder has the sound board incorporated into its circuitry, it is still much smaller than the other decoder, has fewer wires to connect and even costs a few dollars less.

Figure 8: A view of the Wiseman resin and white metal kit for converting the AHM Rivarossi HO Heisler to On30. Note that the O scale narrow gauge kit is also adaptable to S scale use as a standard or narrow gauge locomotive. Lots of detail parts are supplied with the Wiseman kit, you can add even more to increase eye appeal.

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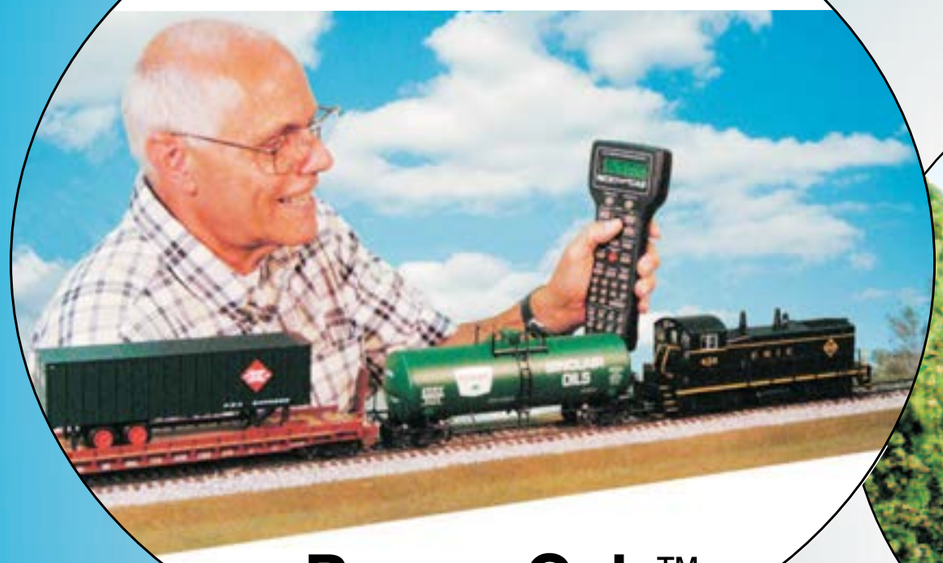

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About our layouts columnist

Charlie Comstock became the MRH editor in the March 2011 issue.

Click here to learn more about Charlie.

Charlie Comstock is ...

UP THE CREEK: Upper Bear Creek gets water!

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

Part 1 - Using paver sand to upgrade a creek bed for Envirotex-Lite® water ...

Figure 1: Contours and multiple scenery textures complement the Envirotex-Lite® water in the finished Upper Bear Creek bridge scene.

Figure 1

Reader Feedback *(click here)*

It's so long ago I have trouble remembering when I planned the bridge crossing of Upper Bear Creek. I knew the area would be in the mountains and I wanted a creek bed salted with rocks meandering between hills and spanned by a bridge. Over time the shape and path of the creek, and the type of bridge (two 30' deck girders plus a 72' through girder span) solidified.

Before

I built the benchwork, added the roadbed, built the bridges, roughed in the scenery, and then added a semi-finished layer using paint for the creek. The area remained in that state for several years (figures 2 and 3).

Figure 2

Figure 3

In my mind's eye I wanted the creek bed to be rocky. The creek has for years eroded the mountains and carried rock downstream eventually depositing it on the creek bed where it eroded further into smaller pieces. I also wanted some large rocks poking up through the water with a lot of vegetation next the creek.

Painting the creek bed

I decided to use Envirotex-Lite® for the water in creek. I chose this over Magic Water or Woodland Scenics Easy-Water because I'd used it before with good results. Because the water would be transparent and have some depth, the first step in creek bed preparation was to repaint it. The original colors didn't look good to me (figure 3) – I wanted the center (deeper areas) of the creek to be darker and the overall color to be more brown instead of green. I used Liquitex Artists Acrylic tube paints: burnt umber, mars black, emerald green, and titanium white (figure 4). A Styrofoam grocery store tray made a good palette for mixing colors (figure 5).

Figure 4

Figure 5

Stones

I had some plaster rock outcroppings I'd cast, using a Woodland Scenics mold. I sanded their bases to make them thinner, and leave their bottoms flat

Figure 2: Upper Bear Creek in its semi-finished state. It existed this way for several years before I got the energy to finish it.

Figure 3: An aerial view of the creek with the bridge removed. I ALWAYS make my bridges removable to allow cleaning and enhancements around them.

Figure 4: Creek bed paints, palette, brush, and water supply.

Figure 5. The palette with some creek bottom green mixed up.

Figure 6. The creek bottom after repainting. I'll cover the banks with decomposed granite.

Figure 7: Glueing the cast plaster rock outcrops in place.

Figure 8: Blending the edges of the rocks into the water.

Figure 6

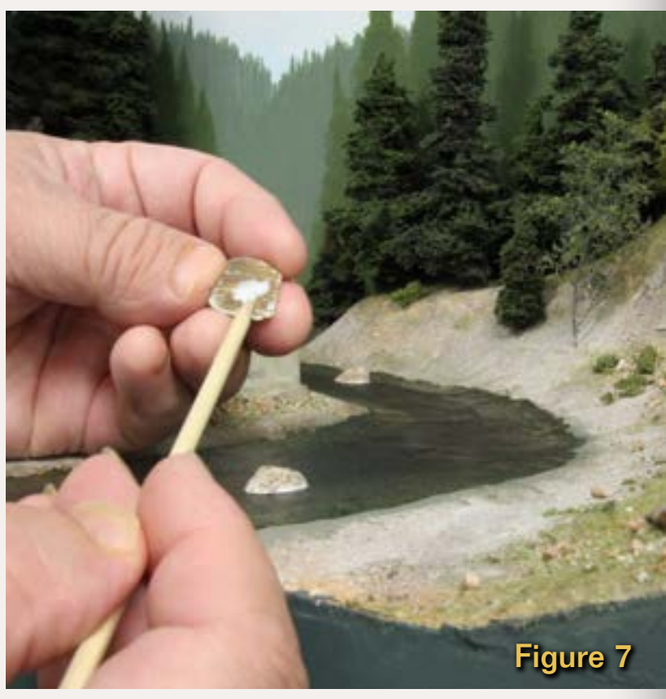
Figure 7

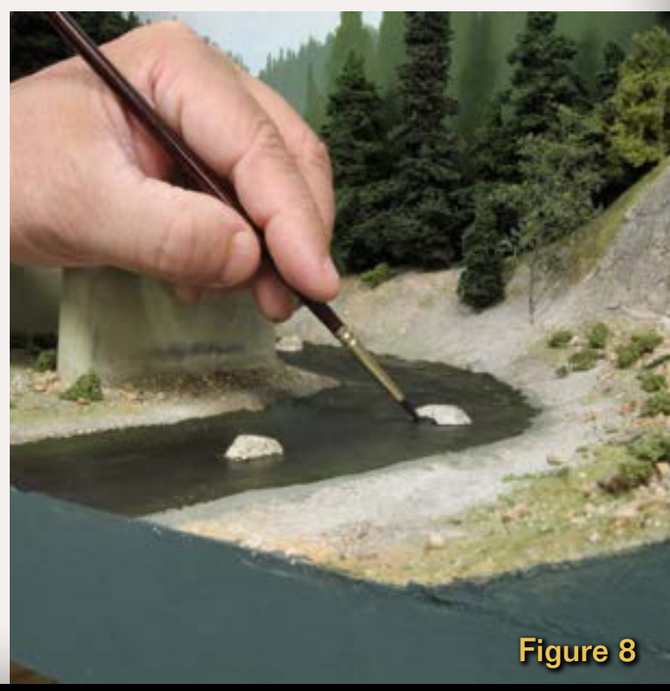
Figure 8

Figure 9

Figure 10

Figure 11

Figure 9: A $5 bag of paver sand.

Figure 10: Using a spoon to build up the creek bed with paver sand.

Figure 11: Note the buildup of very fine-grained sand on the downstream side of the rocks.

before I stained them (see One evening project – Small Rock Outcroppings in the Feb 2011 MRH for more information about casting and staining rocks). I experimented with placement in the creek bed until they looked good, then dabbed them with full-strength white glue and stuck them in place (figure 7).

Once the rocks are glued down, use a small brush to paint around their base with a creek bed color to blend them with the bottom of the creek.

Paver Sand

I attended Paul Scoles' clinic at the 2010 PNR NMRA regional meet in which he demonstrated using paver sand to create scenic contours. Paver sand is decomposed granite, but instead of driving to the mountains to get it, you can find it close to your home at the local Home Depot. A large plastic sack costs about $5 (figure 9).

Paver sand comes with a variety of sizes all in one bag. I sifted some of it into different 'grades' using mesh strainers (not the ones from the kitchen!). A final straining through a piece of old stocking yielded a very fine grade of 'sand'. Many model railroad scenes are spoiled by using over-size materials – I wanted to

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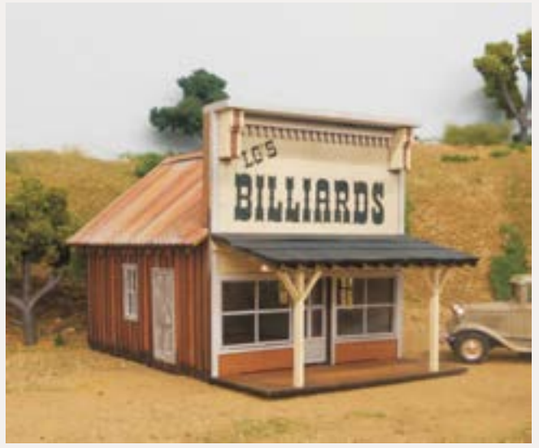

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Figure 12

Figure 12: Wetting the paver sand with isopropyl alcohol prior to applying glue. I use a small syringe with some plastic tubing on the tip to direct precise amounts of alcohol where needed.

keep careful control of the sizes of the rocks I used.

A teaspoon is good for spreading paver sand. I sprinkled unsifted sand along the creek bed, trying to build up some thickness (figure 10). Then I went back using different grades of sand to smooth things out a bit. I made sure to leave some 'tailings' of fine grit sand downstream from the rocks. In a real creek, rapid flowing water swirls around losing velocity and drops some of the silt and rock it's carried down from higher elevations, building up something a bit like a small sandbar.

I figured the depth of the 'water' in the creek should be about $^1/_8$". I wanted the rocky creek bottom visible in the 'shallow' areas, so I scattered appropriately sized rocks here and there on the creek bottom area to simulate shallow water rapids (figure 11).

Once everything was in place I used a small syringe (available from the local drugstore) with a piece of plastic tubing attached, to dribble isopropyl alcohol on the paver sand until it was saturated (figure 12).

Now it was time to liberally dribble 50/50 white glue and water over the wet paver sand to glue it in place. If you think there's too much glue, add alcohol to dilute it a bit more.

Oops, once I'd dribbled on the glue I remembered that I wanted some old

Reader Feedback (click here)

Figure 13: Broken twigs as logs with weathered ends.

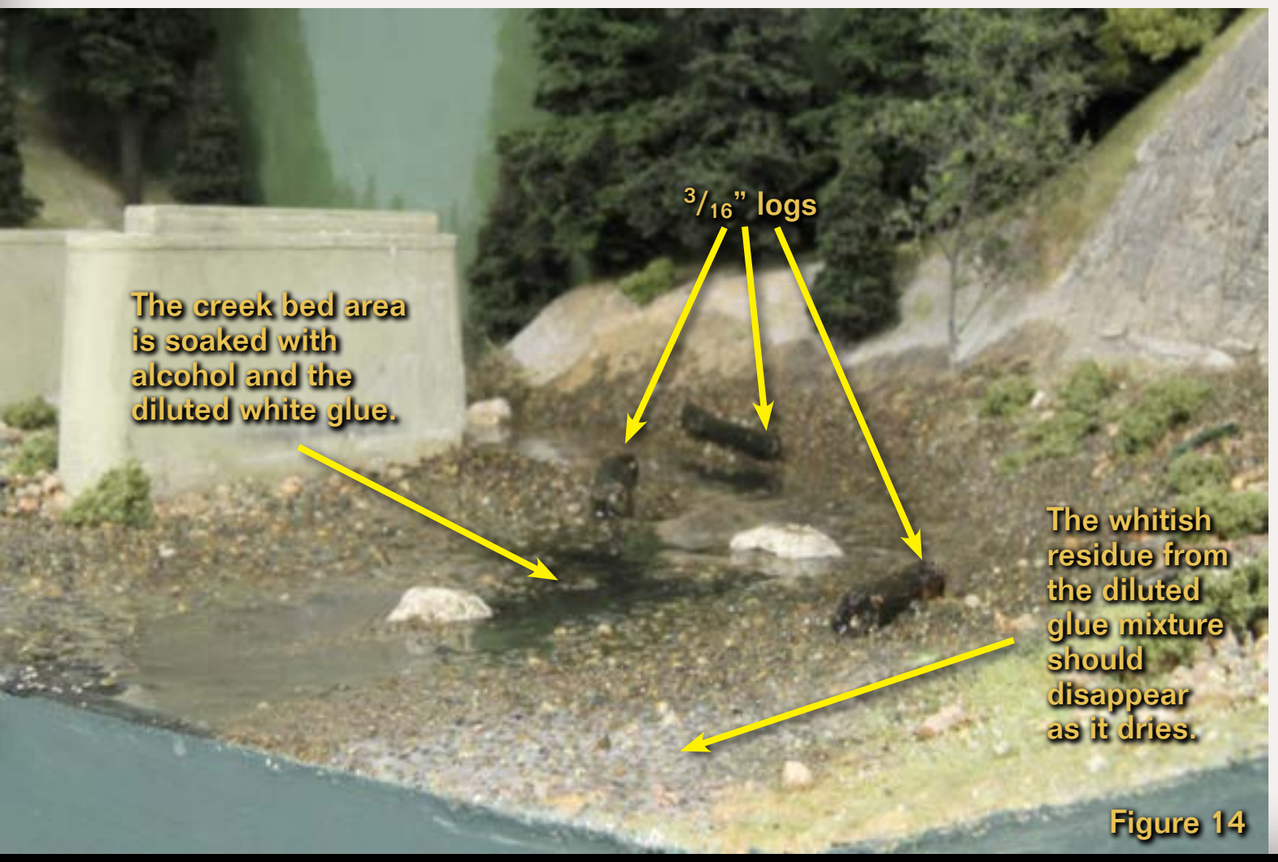
Figure 14: The logs bedded down into the creek bed sand.

logs embedded in the creek bed. I had some $^{3}/_{16}$" diameter twigs that I use for log loads, so I broke one of those into several pieces (figure 13), weathered the ends with an india ink and alcohol mix, then bedded them down into the still-wet-with-glue paver sand (figure 14).

I dribbled more alcohol and diluted white glue to set the logs in place, then set up a window fan to circulate air over the area to speed the drying. WIth help from the fan, drying goes from overnight to a couple of hours.

What's next

In the next installment of the Upper Bear Creek saga, I'll be pouring the Envirotex-Lite water into the creek.



A clipping from the

South Jackson Gazette

Drought Ends!

The locals of Oakhill and surrounding areas, have been pretty happy lately. It seems the drought which has long plagued the area has finally broken and there's water in Bear Creek again.

Said Horace Fithers, unofficial spokesman, "This drought has been going on so long it's hard to remember jest when it actually started. There's even some folks 'roundbouts who say that Bear Creek 'tain't never had any water in it. Kind funny then, that the trees are still green, normally it takes a bunch of liquid water to keep the foliage in good shape."

Local meteorologists are reported puzzled by the end of the drought. Said Sonny Rainey, the lead prognosticator in the local weather service office "Frankly I'm considerably flummoxed that all of a sudden there's water in Bear Creek when there ain't been any measurable rain in the last year! Isn't entirely natural you know."

Local gossip was running wild at the Bear Creek Grill where the usual suspects were gathered to wet their whistle, gulp down Gaston Arydelyte's grub, and discuss the new water in the creek. Gaston, as usual, believed martians had brought the water in a space ship which was parked up in the mountains, so no rain was required.

Other less vocal local yokels were talking quietly about a missing railroad bridge . Said one, who preferred to remain unnamed, "I was walking the tracks over by Bear Creek the other night. It was dark, real dark, no moonglow, or stars or nuttin'. 'cept there were some funny lights down by the creek. When I come to the bridge, I could barely see it wasn't there! That shook me pretty good. Sure glad there weren't any trains running that night. Anyway, I heard this funny sound, so I went

The railroad bridge across the newly wet upper Bear Creek.

down by the creek but I couldn't hardly see nothing and next thing I know my feet are wet. Then I saw 'em. Bunch of giants working the night shift. They'd pulled the bridge out and were working on some kind of recirculation pump and piping system! By morning the bridge was back and water was flowing."

Horace summed up the local response, "Let's go swimming!"

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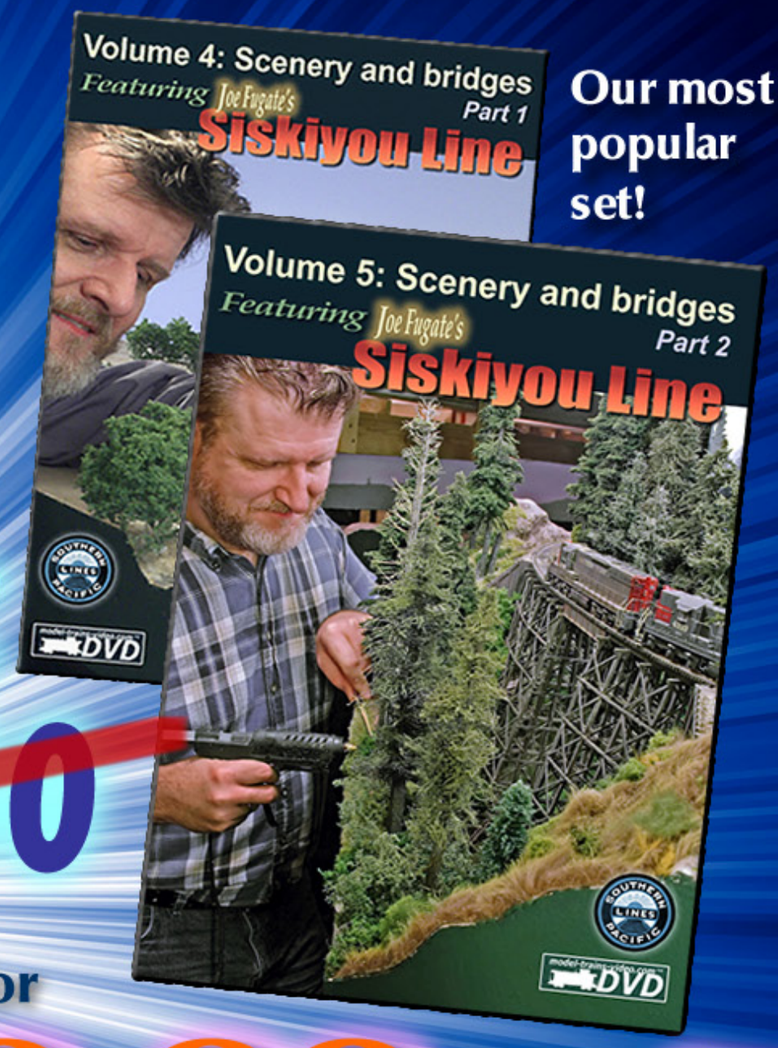

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About our prototype modeling columnist

Marty McGuirk is an avid transition-era freight car modeler and Central Vermont fan. He founded the CV Historical Society in 1989, and currently models the railroad's northern division mainline in HO scale as it looked in the 1950s.

Click here to learn more about Marty.

Photos and illustrations by the author unless otherwise credited.

GETTING REAL: Modeling Bridge Abutments and Piers

Adventures in Prototype Modeling

Reader Feedback *(click here)*

Painting stone and concrete to look realistic ...

Over the years, prototype modeling has gained a reputation as a bastion of rolling stock modeling. Proof of this can be seen at any prototype modeling meet where you'll be treated to numerous examples of outstanding train models. You can see how closely the models duplicate the real thing from the prototype photos that often accompany such a model.

The game changes when we model scenery. More often than not we don't have the space to model a scene to scale as we can when modeling grab

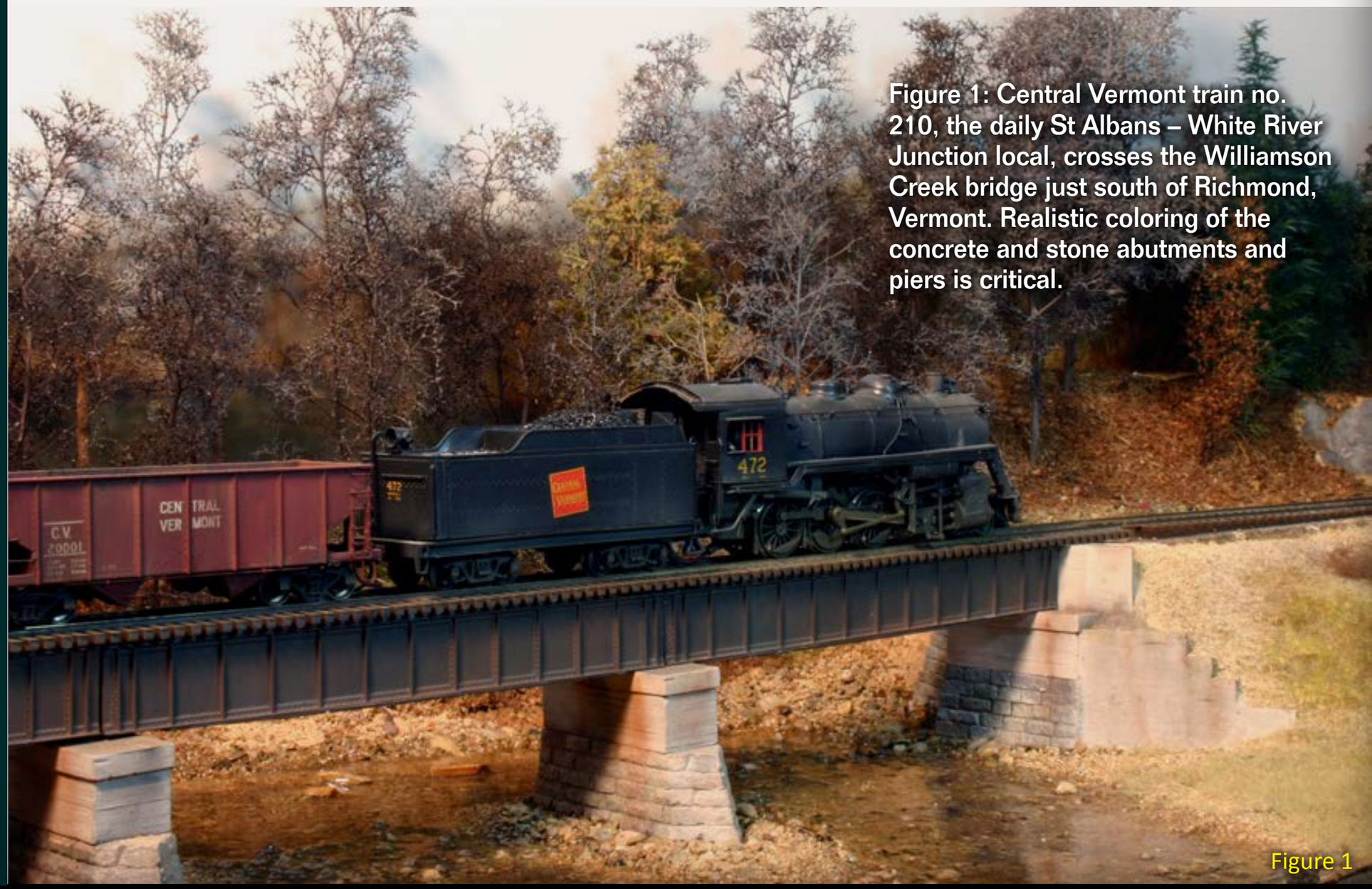

Figure 1: Central Vermont train no. 210, the daily St Albans – White River Junction local, crosses the Williamson Creek bridge just south of Richmond, Vermont. Realistic coloring of the concrete and stone abutments and piers is critical.

Figure 1

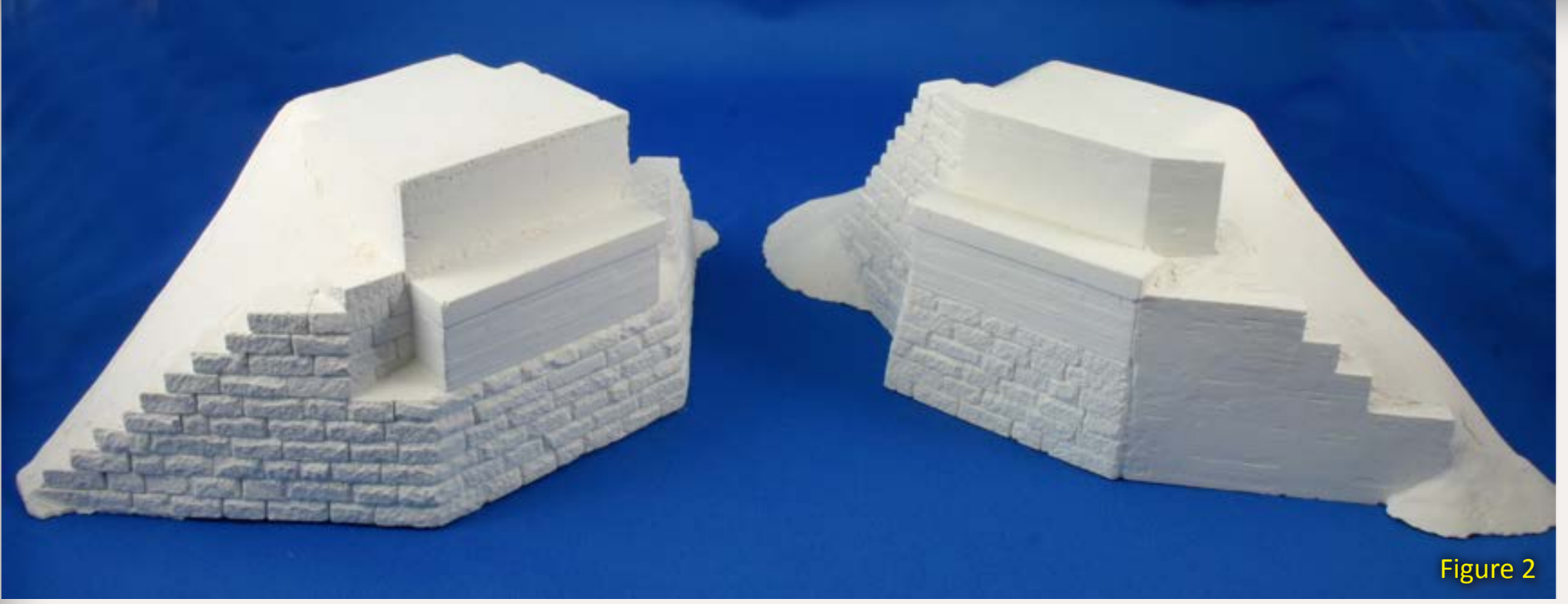
Figure 2

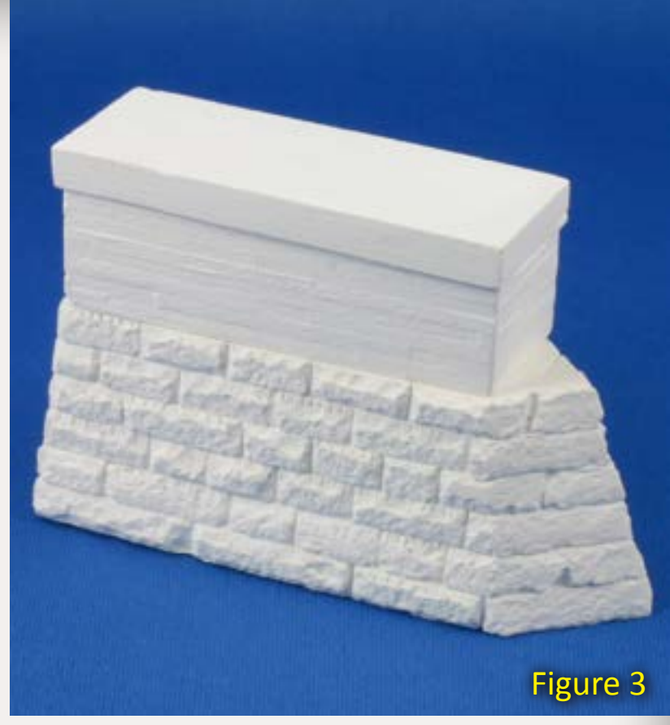
Figure 3

Figure 2: The super-detailed Hydrocal® castings were just about perfect – ready for coloring and weathering straight out of the box.

Figure 3: The piers have three parts – a granite base, a concrete extension and cap.

irons on the side of a freight car. But we can still use prototype photos to inspire our scenery modeling so the resulting scene "looks" right.

Finding Inspiration

One scene I wanted to include on my HO scale Central Vermont Winooski Subdivision layout was a river crossing (see sidebar on next page). Nothing spectacular, mind you, just a simple low deck girder bridge passing over a fairly shallow stream. I had a rough idea of what I wanted the scene to look like, and even located a place for it on my home layout in an "open country" running section of the layout. The relatively narrow benchwork and single track mainline seemed ideal for a bridge scene.

Abutments and Piers

I didn't know if anyone made abutments and piers like these. I've been impressed by New England Brownstone's HO scale stonework so I sent copies of the prototype photos to NEBS owner (and master stone cutter!) Russ Greene. My e-mail was short and to the point: "Do you make piers and abutments like these, know anyone who does, or do you sell components that can be used to create this style of abutment?"

The short answer from Russ to my questions was "no", but he indicated he had been getting requests for granite bridge piers and abutments extended with concrete. Just goes to show that asking can produce results! Furthermore, since Russ wanted to make a kit for this style of bridge, and I provided him with the necessary photographs, I benefited from the happy accident of having a commercial kit made that exactly matched my prototype! Russ designed the components to use the Micro-Engineering 50-foot deck girder bridge.

When the Hydrocal® castings arrived (Figure 2) I was nothing short of thrilled. The castings were completely free of voids, excess plaster "flash" or any other imperfections.

Russ developed two different abutments to capture the differences in the two shown in the prototype pictures. In addition, he included two piers (figure 3). He offers these components in several combinations on his website, nebrownstone.com/cv-st-abt.htm. I started with kit CV-ST-KT-02.

Painting the Stonework

The initial temptation will be to break out several bottles of different shades of gray, and paint a few stones with one before shifting to the next until all the granite blocks are painted. This approach often results in stonework that resembles a checkerboard. When coloring rockwork two things you really want to avoid are repetition and solid coloration.

Figure 7 shows the basic tools and materials I used to color the plaster castings.

With both concrete and granite surfaces on the casting, it's important to mask one when working on the other. I started by coloring the concrete portion of the abutments and pier, but first, I masked the granite portions of the two abutments with blue painter's tape (figure 8).

Text continues on page 46.

Inspiration From the Prototype

About three years ago as I browsed through binders of photos for sale at a prototype modeling meet I noticed several pictures of a Central Vermont freight crossing an otherwise nondescript three-span deck girder bridge.

The entire scene is appealing to a modeler. Notice how the old stone abutments and piers have concrete extensions – added when the original bridge was replaced with this steel one. Take note of how the telegraph pole lines cross the river. The stacked corn stalks indicate figures 5 and 6 were taken in the fall, after the harvest but before the leaves had fallen from the trees. Figure 4 is the same bridge but a colder season.

I don't know for sure, but it's likely, figures 5 and 6 are the same train, Extra (white flags on the lead locomotive) 471. This suggested the possibility of modeling this train. All the cars shown in the photos are available in plastic or as HO scale resin kits. They demonstrate how far prototype modeling has progressed in the last 20 years.

Here's a list of the cars:

- PRR GLa class twin hopper.
- Wabash 86000-86874, 40-foot 10'-6" AAR boxcar with 5/5 ends.
- Lehigh Valley LV 42000-42950. Although only partially visible, the LV diamond logo can be seen.
- Single-sheathed boxcar – can't readily identify it.
- L&N boxcar
- Illinois Central single-sheathed boxcar.
- CV N-5a 2-8-0 no. 474
- Pennsylvania RR X-29 boxcar with "patch panels" along the side.
- Canadian Pacific 1937 10'-0" AAR boxcar with 5/5 ends.
- CV single-sheathed boxcar. ☑

Figure 5

Figure 4

Figure 6

Figure 7

Figure 8

Figure 7: All you need to turn white plaster into realistic stonework – a sea sponge (available from home improvement center paint departments), assorted small brushes, and inexpensive craft store acrylic paints (along with some Vallejo colors for final weathering).

Figure 8: Masking an abutment casting with painters tape.

Figure 9: A chunk torn from the sea sponge makes a jagged applicator.

Figure 9

Text continued from page 44.

After masking, I tore a corner from the sea sponge making sure to tear the "rough" surface (figure 9). The goal is to create a fairly jagged surface to the sea sponge.

I spread some white, Putnam Gray, and cream-colored (I used Polly Scale Aged Concrete, since I had it on hand) paint onto a piece of wax paper. After getting the sea sponge damp (it doesn't absorb water like a typical kitchen sponge) I dabbed it in the white paint, then the cream and dabbed it on a paper towel to wipe off the excess paint. Then I dabbed it on the plaster casting, overlapping the application until the concrete was painted. The result (figure 10) was a light gray concrete color with a slightly yellow cast. I found one way to avoid a "rubber stamped" look is to rotate the casting slightly after each dab of paint.

Coloring Granite Blocks

Once the concrete paint dried completely, I masked off the concrete sections with blue painter's tape. Rather than using pre-mixed grays for the basic granite color I somewhat randomly mixed white and black to make my own. I squeezed some white and black paint onto a piece of waxed paper (it makes a cheap, disposable palette). keeping them separate at this point. Because I wanted a lighter gray I used about three times more white than black. Then I repeated the process I'd used with the concrete. Start by picking up some white and black paint with the sea sponge and blotting off the excess (figure 10).

Instead of "stamping" the paint, roll the sponge as you apply it. Don't forget to rotate the casting after each dab to avoid a repetitive appearance. You'll be amazed at how quickly this goes, and how the colored stone shows subtle variations in color (figure 11).

The finishing touch is to add some light washes of various brown, gray, and tan paint. I used Vallejo Acrylics (figure 12). This brand of paint can be highly thinned (approximately one drop of paint to 25 drops of water creates a wash that will leave just a subtle coloration). I used a small amount of green to give the faintest hint of moss

Figure 10

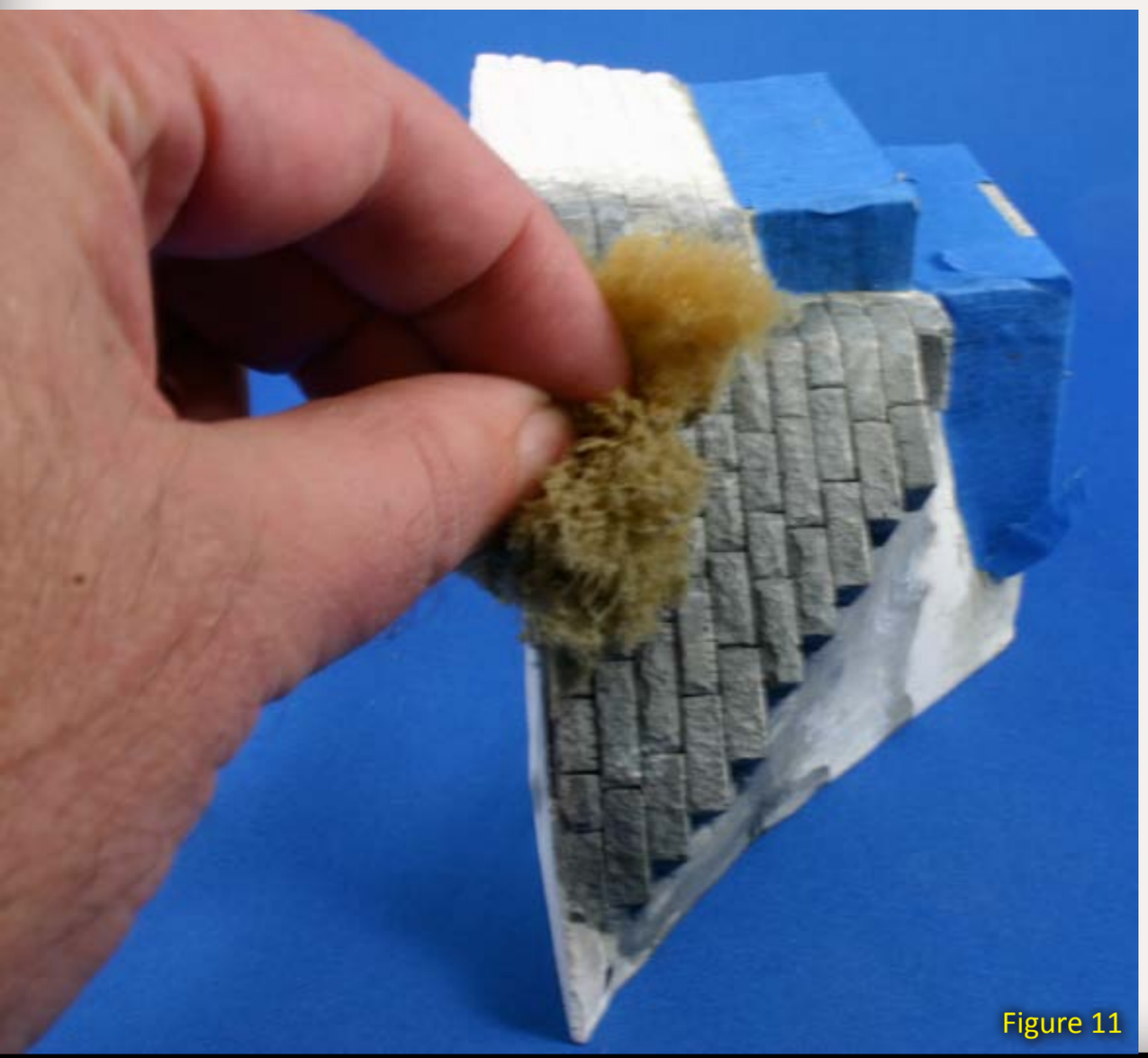
Figure 11

growing on the stones closest to the water.

I set aside the colored castings (figure 13) until it was time to install the bridge on my layout.

Installing the Bridge

I assembled the 50' Micro-Engineering plate girder bridges following the directions, painted them flat black, and weathered them with Bragdon weathering powders.

Once the bridges were complete, I placed the bridges, piers, and abutments in place on the 2" foam board layout surface, marked the ends of the abutments, and drew the river bed freehand (referring to the prototype pictures). I included the bend in the river as well as the hillside located behind the bridge and the sloped embankments shown in my photos.

Once everything was marked, I set the abutments aside and cut the river bed out of the foam board (figure 15).

Figure 10: Concrete has been painted and the tape removed. Once the paint has dried, tape off the painted concrete section.

Figure 11: Rolling and dabbing the paint onto the stonework.

Figure 12: Vallejo paints can be diluted to create a very thin wash and dry dead flat, making them perfect for adding some highlighting to the individual granite stones.

Figure 12

The total height of the abutments and piers is 3", so I added risers and installed the ¼" Masonite river surface to leave the top of the foam board flush with the top of the abutment. I had to shim the underside of one of the abutments to get it flush with the foam board and keep it level with the opposite bank (I didn't realize just how much the basement floor sloped at this point). I roughed in the landforms by stacking 1" and ¾" foam board to create the terrain contours.

After positioning the abutments and piers, I used a surform tool and an assortment of knives to carve the foam board to shape. This offered me the chance to see if the viewing angles and height of the riverbank looked correct before finishing the scenery. Once I was happy with the basic contours, I mixed up a batch of Ground Goop, a concoction popularized by Lou Sassi (search for "ground goop" on Google for recipes), to the consistency of peanut butter and spread it in place.

Conclusion

The resulting blank canvas (figure 15) was ready for the addition of the riverbed and water surface, ground covers, and trees. Some of these elements are visible in the lead photo. I hope you can see the basic elements of the prototype picture that inspired this modeling, and will be encouraged to choose to model one of your favorite prototype scenes as the ideal setting for all those super-detailed locomotives and freight cars you've been bringing to the RPM meets over the years. ☑

Reader Feedback (click here)

Figure 13

Figure 14

Figure 13: One of the colored abutments.

Figure 14: The basic riverbed has been cut from the foamboard layout surface and the Masonite "water" installed.

Figure 15: Wanting the river to look proportional to the length of the bridge, but having only a narrow shelf for the scene, meant the hillside along the backdrop had to be steeper than the prototype. The trees will hide the steep slope on the finished scene.

Figure 15

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About our DCC columnist

Bruce Petrarca is a well-known expert on all things DCC.

Click here to learn more about Bruce.

DCC Impulses: Back to Basics

Getting to know DCC!

Reader Feedback (click here)

Welcome to my new column - DCC Impulses!

Welcome to the first DCC Impulses column in Model Railroad Hobbyist. We hope this will be a long and fun adventure! Some of you may know me from my association with Litchfield Station.

I was talking with the SoundTraxx folks at the NMRA convention in Sacramento. They said they are seeing a need to remind folks of the basics of DCC – decoder operation and programming. While this isn't the sexiest aspect of modeling, it is helpful to understand as you move along with DCC. Perhaps you will come back to this column when you are puzzled.

Think of this as a refresher if you've been around for a while, and maybe the source of an "AHA!" moment for newer folks.

As DCC matured, some new features became available. But what I'll discuss here will relate to currently available decoders and systems. Older units may or may not have all these features.

NMRA and DCC

There have been many model train command control systems over the years, for example, Keller "On-Board". These systems died from lack of support when the manufacturer ceased to exist.

Bernd Lenz patented the DCC system in the early 1990s. To create a broad-based market, he assigned his basic patents, which they adopted as a standard, to the NMRA. The success of DCC can be linked directly to this standardization which encouraged multiple vendors to build conforming systems.

The NMRA created a set of Standards and Recommended Practices for DCC. Standards describe the track interface: voltages, pulses, data and waveforms. Recommended Practices (RP) related to CV (configuration variable) values, communication, Manufacturer ID, etc.

To be NMRA DCC compliant, a decoder or system must conform to the Standards, but the Recommended Practices are only that – recommendations. However most vendors follow the recommendations – good news for decoder / system compatibility!

If you'd like to learn more, the NMRA documentation is online at www.nmra.org/standards/DCC/index.html

DCC track signal

A DCC track signal is computer data sent in packets. Don't get all hung up by this, just think of a packet as a single message sent to a specific recipient.

It works a lot like a text message sent to a cell phone number. The message goes only to the phone at a specific number. Other phones on the same carrier won't respond to the message, but the target phone receives and displays it.

Similarly, a DCC system sends a packet down the rails. Because each packet has an "address", only the decoder with that address (phone number) will respond to it.

In the modern DCC world, these packets of data can do many things: activate functions, adjust loco speed, and change parameters in the decoder.

CVs – what are they?

CV stands for Configuration Variable. Just think of CVs as little pigeon holes a decoder uses to keep track of the personality traits you want it to have.

NMRA RPs cover some CV values but leave many to the discretion of the designer. Things like Start Speed (CV2) are recommended, while volume controls for a sound decoder vary between manufacturers.

CVs are programmed two ways:

- On a programming track
- Programming on the main.

Figure 1

Figure 2

Figure 1: Using the programming track with an NCE Power Cab.

Figure 2: Programming on the main. In this mode you can't easily read back CV values without special equipment.

Programming Track

A programming track (for service mode programming) is used to program ONE loco at a time. The programming track (and loco being programmed) must be totally isolated from the rest of your layout. Any connection between the programming track and the DCC track signal (even a metal wheel bridging a gap) may destroy the programmer. A programmer can write or read-back CV values from a loco on a programming track.

To write, a packet is sent to the decoder telling a value and which CV to write. The decoder acknowledges the write completed by drawing a pulse of current. This pulse of current must go somewhere. Frequently the motor will move a bit or the lights will flash or both during the acknowledgement pulse.

Reading is more laborious. Think of trying to communicate with a person who can only blink his eyes. You need to ask a bunch of yes/no questions to know what they are thinking. The decoder can only "blink" by creating an acknowledgement pulse, as described above.

To read a value, the DCC system asks the decoder a series of questions:

Is CV 2 = 0?
Is CV 2 = 1?
Is CV 2 = 2?

The decoder then sends an acknowledgement pulse.

The programmer now knows that CV 2 has a value of 2.

Since a CV can have values from 0 to 255, a programmer may need to ask a lot of questions before getting to 200 or more! After each question it needs to wait to see if there is an acknowledgement pulse. Reading CVs can be slow.

A major benefit of the programming track is its current limiting feature. That is, it cannot put a lot of current through anything connected to it. Prudent folks take a new DCC installation to the programming track first to test it. If the programmer doesn't detect a short circuit, and can read and write to the decoder, it's highly likely the installation was done properly, at least as far as motor isolation from the track, without decoder damage.

The programming track is the safest place to change loco addresses. So, when I finish an install, I put the loco on the programming track and read the short address, which should be 3 for a new decoder. Then I set the desired address. Just to be sure, I read back the new address. That way, I know that I probably don't have a short and can read and write to the decoder.

Programming on the Main

Once you have verified the installation on the programming track and set the decoder address, you can switch to programming on the main. POM is useful when fine-tuning motor operation or sounds. Let's look at how it works.

Suppose you wanted to program CV2 to a value of 10 in loco 1234. You tell this to your DCC system – each system has a different user interface.

The system sends out a packet of data addressed to loco 1234. The packet is similar to one that tells a loco to move at a certain speed. But this packet contains different data. It will say:

"Loco 1234, set CV 2 =10".

The decoder in loco 1234 will receive this packet. Just like a "set speed and direction packet" is only recognized by one loco, the decoder with the correct address will be the only one to act upon the programming packet.

Programming on the main does not provide a mechanism for a decoder to communicate back to the DCC system, so there is no way in the DCC standards to read back a CV value. Digitrax Transponding and NMRA RailCom are methods that allow bi-directional communication but they only work with decoders that implement that feature.

Be sure you have the correct loco address selected before doing any programming on the main ...

In general, programming on the main is write-only. No reads are possible.

JMRI – DecoderPro

JMRI, the Java Model Railroad Interface package, includes a program called DecoderPro. You are likely reading this column on a computer, so do yourself a favor and go download JMRI DecoderPro from:

jmri.sourceforge.net

Your computer plus DecoderPro plus, perhaps, an interface between your computer and your DCC system will allow you to forget CV numbers forever. Simply tell DecoderPro your desires through a graphic interface and it sets all the necessary CVs for you. Once you are done programming a specific loco, you save the CV settings in a file on your computer. If anything happens to that loco, such as the decoder 'forgets,' it's simple to reprogram the decoder with the CV values in the saved file.

The screen shot (figure 3) shows the DecoderPro page for setting the volume levels of a SoundTraxx Tsunami decoder. Just move the sliders, then click "write changes on sheet" and it's done. Much easier than remembering a zillion CV addresses and the magic numbers that go in them. And if you are programming on the main, you can hear the changes as you make them!

Blast Mode

Some vendors offer Blast Mode Programming. This is a modification of Service Mode programming that does not rely on hearing the acknowledgement back from the decoder. It is used to program decoders that the system will not otherwise recognize.

It frequently uses the main track, but this is very dangerous as it will program ALL locos on the track being "blasted". Be sure to remove any locos that you don't want programmed before you start.

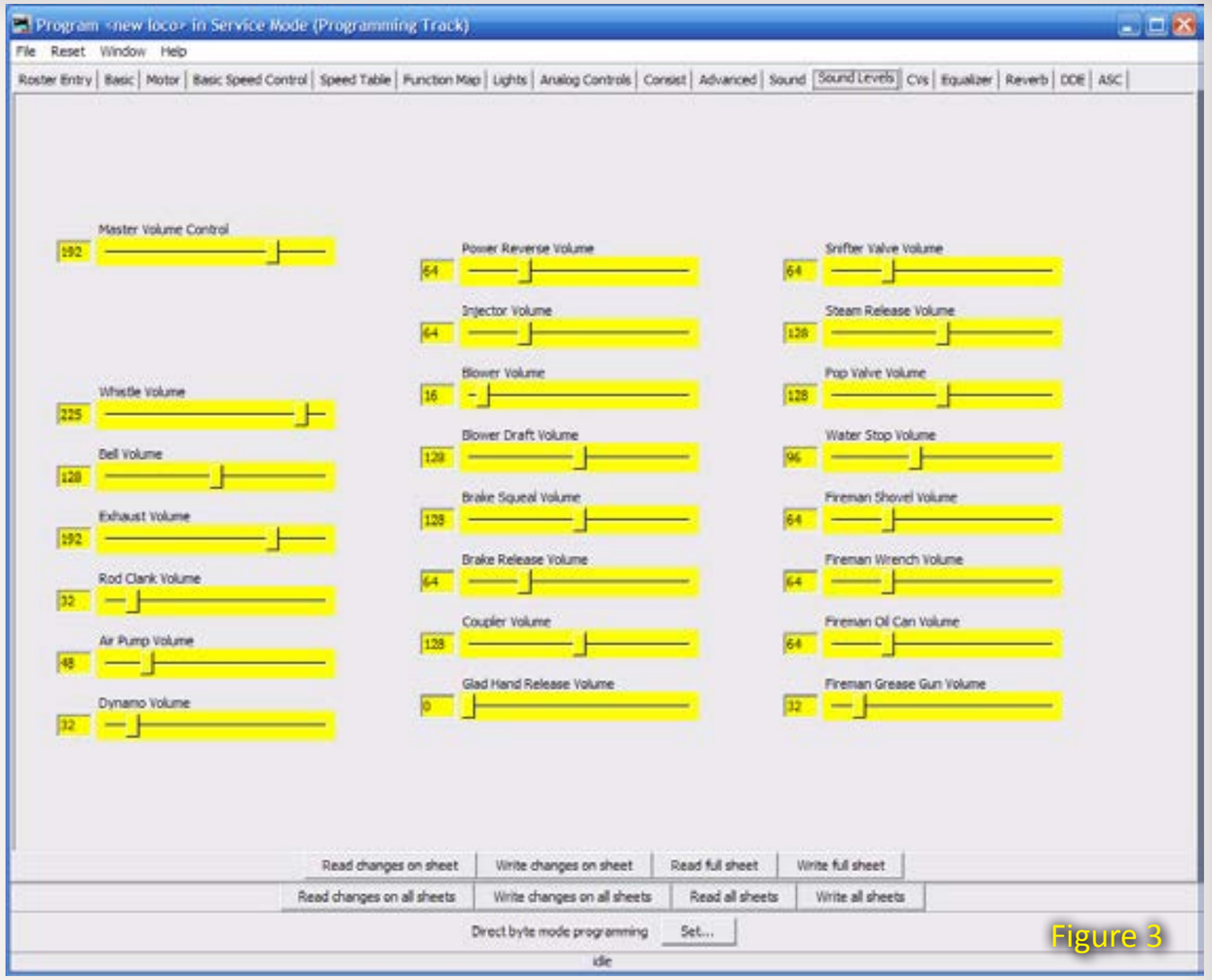

Figure 3

Figure 3: Decoder Pro makes child's play of complex CV programming chores. No more converting between binary and decimal. No more trying to remember which CV address to use for which function. What you see, is what you get! And it's FREE!

Programming Track Boosters

One of the most misunderstood and improperly named DCC devices is the Programming Track Booster.

The short story is that, if you are doing a lot of programming, you should get one and put it in line with your programming track. It won't hurt any decoders and will probably fix it so that you will be able to read all decoders, sound and non-sound.

For more information, see my website:

www.mrdccu.com/curriculum/ptb.htm

Programming Track Modes

I mentioned previously that a programmer uses Service Mode when programming a decoder on the programming track. Service mode has sub-modes, the most common of which are Direct and Page. It can be somewhat confusing!

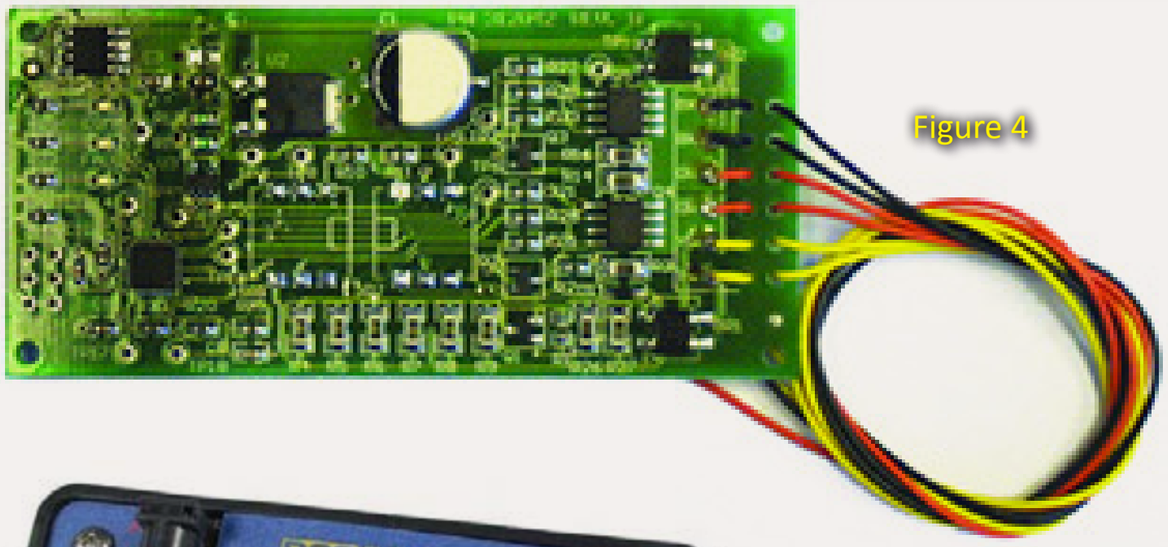

Figure 4

Figure 4: Programming track boosters from SoundTraxx (above) and DCC Specialties (below).

Different manufacturers' decoders prefer different service modes and your DCC system may ask you to choose one of these modes.

DecoderPro simplifies this a bit. Once it knows which decoder you are programming, it will choose the appropriate mode automatically.

- Digitrax decoders prefer Page mode.
- Most other vendors' decoders prefer Direct mode.

If you are using a program, such as DecoderPro, where you are writing or reading many CVs at once, Direct mode is faster.

Future columns

I'll be discussing lighting, decoder installation, DCC systems, sound (my special interest), decoder comparisons and lots more in future columns. If you'd like to suggest a topic you can contact me at: www.mrdccu.com/contact.

I hope this column interested you and perhaps has shown you something you didn't know. Thanks for reading! Until next month, happy modeling!

Reader Feedback (click here)

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About our N-scale columnist

John Drye is our N scale editor and columnist.

Click here to learn more about John.

COMME-N-TARY: Planning Operations

Developing an operating scheme for the PRR Horseshoe Curve Layout

Modeling in the hobby's most eNgaging scale

Reader Feedback *(click here)*

How to get 100 trains a day up and down Pennsy's 'mountain' ...

As progress continues on the layout in my basement, the time is coming when we'll actually be running trains up and over Horseshoe Curve and through the tunnels at the top of the Alleghenies. I'd spent some time considering just what trains to run during the layout design process and used that information to determine length of passing sidings and locations and types of on-layout industries. The plan is to operate an eight-hour 'trick' utilizing a representative sample of the trains that actually ran up the real mountain in 1956. This article explains how we did that.

The Prototype

The Pennsy still operated a considerable number of passenger trains in the mid-50s, along with priority freights that included west-coast perishables, livestock, and a growing less-than-carload

Figure 1: My Pennsylvania Railroad layout has a total of eight staging tracks for mainline trains, plus a single through track that allows trains to bypass trains waiting in staging.

(LCL) business. The PRR also hauled coal, iron ore and fabricated steel products across the state to support the steel industry.

The Altoona area that I model includes local industries on the Hollidaysburg branch, a large freight station complex supporting LCL operations, and a coal marshalling yard at Cresson handling the many mines just north of the Curve.

That's a lot to choose from. The PRR really did run 100 trains a day during busy times in the '50s. Even in N scale, that requires a lot of space in staging. The layout itself includes the physical plant necessary to support that high traffic volume; much of the four-track mainline is derived from prototype arrangements using the Layout Design Element (LDE) approach.

My key operations questions boiled down to:

- How many trains will fit into the space allocated for staging (there is never enough) and how are those trains arranged?
- How to select a representative and enjoyable sample from the 100 trains run by the real Pennsy?
- How can I schedule those trains for enjoyable and realistic operating sessions?

Staging

Although there is never enough staging, the layout does include a considerable amount of space for the eight staging tracks – two for each of the mainline's four tracks. Each staging track is 12-15 feet long, enough to hold two trains. As construction progressed, we found room enough for one more short track to hold the freight station job. It will also be possible to stage two trains on the main line passing sidings at Altoona and Cresson. This will look plausible since the prototype did essentially the same thing, while waiting for crew changes or helpers (called snappers on the PRR). That's a total of 19 trains (figure 1).

One Hundred Trains

Now that we know there will be room for 19 trains, it is time to selectively compress the 100 trains per day (33 per eight-hour 'trick') to that manageable number. We'll start with a general allocation:

- Passenger trains: PRR's Blue Ribbon Fleet (first-class trains), overnight trains, all-coach trains, and mail trains: 4-6 passenger / mail trains
- Scheduled service: LCL trains (increasingly including trailers), perishable traffic (reefers), stock trains (still running from Chicago eastward), priority freights between key points: including at least one trailer train, an eastbound reefer block and 4-6 priority trains for a total of 6-8 trains
- Extras and locals: mineral trains including coal and ore with service to Altoona and industries on the Hollidaysburg branch: 2 locals and up to 6 mineral extras for a total of 4-8 trains

Next is to track down the details of the actual trains that ran through Altoona in 1956. Fortunately there is a wealth of sources; both online and in print.

The book "Pennsylvania Railroad Passenger Train Consists and Cars 1952 Vol. 1: East-West Trains" by Harry Stegmaier is a superb source of information for Pennsy's still-significant passenger fleet. Similar volumes exist for other railroads as do railroad timetables from that era. These sources list schedules and at least some description of services provided (sleeper, diner, chair, baggage, mail) by the train. Some, including Mr. Stegmaier's, go so far as to identify the specific equipment assigned to each train.

Most railroads also published a list of freight service for their customers and freight agents. These can still be found at railroadiana shows and online. Jerry Britton's excellent site dedicated to the PRR, "Keystone Crossings," includes such a schedule for 1952 and has links to similar documents for other years.

Extras do not follow a set schedule, and locating information for locals can be a challenge. However, pictorial and video images still exist for most roads and eras and quite a bit of information can be gleaned from reviewing

"First step is to track down details on the actual trains that ran through Altoona in 1956. Fortunately there is a wealth of sources, both on-line and in print."

these. Locals can be the easiest to figure out for the layout, making them a good place to start.

Locals

The layout was designed to allow some local switching in addition to through trains. One job handles the industries on the Hollidaysburg Branch. It will be powered by a single GP7 and handle 6-8 cars, making it one of the shortest trains on the railroad. Another job switches the large Altoona freight station which includes separate inbound and outbound buildings.

The actual facility was massive, with more than a dozen tracks. The layout will include a selectively-compressed facility with three tracks but retaining two buildings. An EMD switcher will use the extra staging track added during construction, handle about a dozen LCL cars, and also help with passenger train work.

Cresson, PA on the prototype is a marshalling area for coal hauled in

from several branches in the region. The layout includes a small yard to handle the incoming coal but there wasn't room enough to include the mines and branches themselves. Also, the yard had to be rotated 90 degrees relative to the prototype due to space limitations of my basement.

However, the three-track yard holds two trains worth of loads that need to be hauled to Altoona during an operating session and replaced with empties to be hauled back to the mines.

Here's where the staging yardmaster managed to be a little clever. The first train will be handled by a pair of FMs that won't haul empties up the hill from Altoona. That job will run up the mountain light and return the loads to staging. We will have the locomotives and cabin share a single staging track with the Hollidaysburg local, fitting two consists into one spot. The second trip to Cresson, later in the operating session, will deliver empties and return the loads to Altoona itself, rather than to staging, tying down on one of the sidings there, ready to be re-staged after the session is over. All this creates another job to run.

Passenger Trains

We'll address passenger service next. As it turns out, the "Broadway Limited" and much of the Blue Ribbon Fleet passed through Altoona in the middle of the night on their way to and from Chicago, St. Louis and New York. At least to start, we're planning on daylight sessions, so the 'Broadway' will have to wait. Fortunately, plenty of trains passed through during daylight hours. The plan is to select a representative from each category of service in order to operate the variety of trains that the prototype did.

The 'St Louisan' operated from NY to its namesake city, passing through westbound in the late afternoon. It included head-end cars, a diner and a lounge car, through sleepers, and reclining-seat coaches from Harrisburg to Pittsburgh. No. 33 will represent the first-class trains.

Mostly because one is included on a Grif Teller calendar painting for the year 1956 (the year of the layout), the passenger train collection will include the AeroTrain. These busses on rails operated from New York to Pittsburgh for most of 1956. Just because they turned out to be an operational failure is no reason to not include this unusual train.

The Pennsy still hauled a considerable amount of mail and express through the 1950s. Westbound traffic was usually heavier than eastbound; much of that from New York City publishing companies headed west. Mail No. 11 operated from NYC to Chicago and often included more than 20 head-end cars including BM70 baggage-mail cars, B60b baggage cars, R50 express reefers, and X29 express boxcars. It comes through Altoona early in the day and is an impressive sight. Eastbound mail will be handled by No. 14, the Pittsburgh-NY Express, carrying mail and express plus a couple of coaches. Both will stop at Altoona to deliver and pick up mail.

The final passenger train included is No. 25, the combined Metropolitan / Afternoon Steeler. No. 25 passes through in the middle of the afternoon on the way to Pittsburgh. It is a slightly more elegant train than No. 14, including a parlor and tavern along with the coaches, and carries a considerable number of head-end cars. No. 25 serves to reinforce the notion of heavy westbound mail and express and illustrates the increasing amount of such traffic included in lower class passenger consists.

"The Pennsy still hauled a considerable amount of mail and express through the 1950s. Westbound traffic was usually heavier than eastbound."

The summary in figure 2 shows the passenger trains included in our operational scheme. The set represents the variety of the prototype, and arrivals are spread throughout the day, helping make the job of the station switcher manageable.

Westbound	Time	Eastbound	Time
Mail #11	8am	Pittsburgh/NY Express	9am
Metropolitan	2pm	AeroTrain	5pm
St Louisian	4pm		

Figure 2: Summary of Passenger trains.

Scheduled Freight Traffic

The other train illustrated in the 1956 PRR Calendar painting is an early rendition of Pennsy's TrucTrain service. Unlike the Aero Train, intermodal traffic turned out to be a considerable.

By the summer of 1956, this service was well underway. Originally implemented as an expansion of the LCL Merchandise Service program, the PRR was now hauling complete trains of trailers on flatcars between Chicago and New York. The railroad had contracted with Bethlehem Steel to build 75' flatcars to carry two of the then-standard 35' trailers. These cars supplemented the earlier 50' modified flatcars that handled one trailer each.

This service is a distinguishing element of the PRR in the 50s, so one train each way is included. Westbound service is represented by LCL-7, providing service from Philadelphia to Pittsburgh. This train still includes a mixture of Merchandise Express boxcars and trailers on flats. Eastbound service is provided by TT-2, consisting entirely of trailers on flats. It is one of the hottest trains on the railroad and usually is assigned a brace of the brand-new GP9s.

Another signature element of the PRR is reefer blocks heading to the east coast. Train CG-2, 'The Reliable', departs Chicago at 9:30 am and arrives in Altoona 24 hours later. This train carried blocks of perishables picked up from west coast roads, and dressed meat from Chicago.

The Pennsy also operated a fleet of trains between principal locations all on a tight, interconnecting schedule. There is room for 4-6 of these in the operating session, and they will all look a little different depending on their origin and destination. For example, CSB-1 operated from Boston to Pittsburgh. The consist will include cars from New England and Canadian roads along with PRR's X-29 boxcars. According to Pennsy's documentation, this train also carried empty reefers and tank cars west. Figure 3 (previous pages) summarizes the scheduled freight service we expect to provide for our 1/160 customers.

Westbound	Time	Eastbound	Time
LCL-7: Philly to Pitt (trailers & express)	8am	GRE-2: Chicago to Enola Yd.	8am
CSB-1: Boston to Pittsburgh	1pm	CG-2: Chicago to NY (reefers)	9am
WC-1: NY to Chicago	4pm	FW-8:Chicago to NY (livestock)	2pm
		TT-2: Chi to NY (trailers)	4pm

Figure 3: Scheduled Freight Operations.

Westbound (including locals)	Time	Eastbound	Time
HB-9 (local)	9am	GRE-2: Chi to Enola Yd.	8am
Cresson X1012 (light)	10am	#14 Pitt/NY xpress	9am
LCL-7: Philly to Pitt	8am	CG-2: Chi to NY	9am
Mail #11	8am	FW-8:Chi to NY (stock)	2pm
Extra 1200 (iron ore)	9am	TT-2: Chi to NY	4pm
CSB-1: Bos to Pitt	1pm	AeroTrain	4pm
Metropolitan	2pm	Extra 6800 (coal)	varies
Extra 2400	3pm		
St Louisian	4pm		
WC-1: NY to Chi	4pm		
Cresson X1016 (mts)	12noon		
Extra 4800 (mts)	varies		
Freight House switcher	8am&2pm		

Figure 4: List of Trains.

Ore Extras

Last, but certainly not least for the PRR, are ore trains. The Pennsy was thoroughly invested in the steel industry in its home state, dedicating more than half of its freight car fleet to hauling coal, iron ore, and steel. The operating scheme assigns the remaining slots to these trains. Most of the coal passing through Altoona was headed east to the steel mills of eastern Pennsylvania. Empties returned west and some of these westbounds carried iron ore loaded in Philadelphia to mills in western Pennsylvania and Ohio. These ore trains make an interesting modeling project since a full load consisted of one scoop of ore over each truck, far from filling the car to its cubic capacity. We'll dedicate one Extra to each of these classes of service: one carrying coal, one iron ore, one empty.

The final train in our collection might be the lowest one on the dispatcher's

list. On a regular basis, the PRR gathered up all the empty gondolas it could find in rail yards across the state and collected them into a single train heading back to Pittsburgh. Like the runt of a mongrel litter, this train (low-priority, under-powered, rusted and dirty) has an appeal only a modeler could love. Besides, I have quite a collection of gons (not all from the PRR) and enjoy applying dirt, grime, rust and dents. It's a great assignment to eke out the last few miles from a PRR 2-10-0 Hippo.

Here is a summary and schedule of the trains planned to run on the layout (figure 4 previous pages). Actual times have been adjusted in some cases to fit within the eight-hour trick and extras have been scheduled to fit in between scheduled trains. There are more trains in the westbound column because westbound includes the four locals to Altoona and Cresson (figure 4 previous page).

Fitting Into Staging

The staging tracks each hold two trains, front to back, so the next challenge is to figure out a scheme that will allow trains to depart staging in the proper order. We'll also have to figure out a way to make sure there is room for a train to re-enter staging at the completion of its run over the layout.

Departing Eastbound	Track 1	1st	2nd
		5th	6th
	Track 2	3rd	4th
		7th	8th

Figure 6: Eastbound departures.

Figure 5 shows the arrangement of staging. Each grey box will hold one consist (plus two more on the layout).

Figure 5: Staging track table.

Departing Eastbound	Track 1			Track 1	Arriving Eastbound
	Track 2			Track 2	
Arriving Westbound	Track 3			Track 3	**Departing Westbound**
	Track 4			Track 4	
				to Freight Station tracks	

At first, it appears that the first trains to depart ought to be lined up just like NASCAR, with the fastest (earliest) departures in front. However, after fiddling with the NASCAR scheme it quickly becomes apparent that approach will leave no place for the trains to return. Instead, the trains will depart as the consists in front clear the way.

Figure 6 illustrates the order of eastbound departing trains from staging. By the time Train 1 completes its journey around the railroad, Train 2 has departed, opening up a path for Train 1 to return to its original location, ready for the next operating session. The same applies to subsequent trains, departing in elephant fashion on their individual journeys around Horseshoe Curve.

Figure 7 (next page) illustrates how departing trains are lined up to follow one another out of a single staging track. One example is GRE-2 and #14, the two earliest eastbound departures. GRE-2 will stop in Altoona to attach snappers before

heading up the hill. #14 will depart one fast clock hour after GRE-2, will stop to do work in Altoona, and will be well out of the way when GRE-2 completes its journey and returns to its starting location.

"To make use of all the staging tracks, several westbound locals begin the session at the 'wrong' end of eastbound staging."

To make use of all the tracks, several local westbound trains begin the session in the 'wrong' end of eastbound staging. HB-9 is the Hollidaysburg local and departs early in the morning from the west end of eastbound staging (we'll have to write that one down very clearly). X1012 is the light move up to Cresson. They both should still be well out of the way when TT-2 returns to use the east end of the same staging track later in the session.

As it turned out, it was easy to decide which trains to stage on the main line. Both are extras; one with coal loads, one with empties. They will look just fine sitting on sidings waiting as necessary for higher-priority traffic or snappers. If the yardmaster is clever, he will swap power on these two trains after a run, and re-stage for a second trip during the operating session. After all, one string of hoppers looks pretty much like any other.

Running Trains

Operating the layout in a fashion representative of the prototype PRR is the objective. It remains to be seen whether this will all work out as planned. I'm betting on having to make a few adjustments once we start running trains. But at least for now, we have a pretty clear picture of how the railroad might operate.

Although this scheme was designed for a particular railroad at a specific place and time, similar information exists for most prototypes. Careful examination of how the prototype does it is a great place to start when designing an operating scheme for your own railroad.

Departing Eastbound	Track 1	GRE-2	#14	Track 1	Arriving Eastbound
		CG-2	FW-8		
	Track 2	TT-2	HB-9/X1010 [*]	Track 2	
		AeroTrain	X 1016 [*]		
Arriving Westbound	Track 3	Mail #11	LCL-7	Track 3	**Departing Westbound**
		CSB-1	X 1200 (iron ore)		
	Track 4	X 2400 (gons)	#25	Track 4	
		WC-1	#33		
On-Layout: Altoona Trk 3		X 4800	AL-3	to Freight Station tracks	
On-Layout: Cresson Trk 3		X 6800	(*) Depart WESTBOUND		

Figure 7: Initial staging locations.

Figure 8: Trains are lined up, ready to head east or west, waiting for the first operating session.

Reader Feedback (click here)

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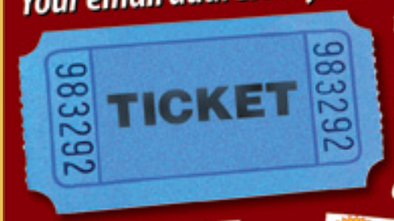

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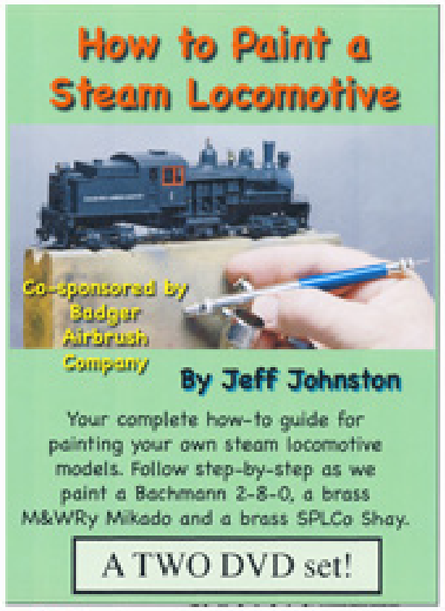

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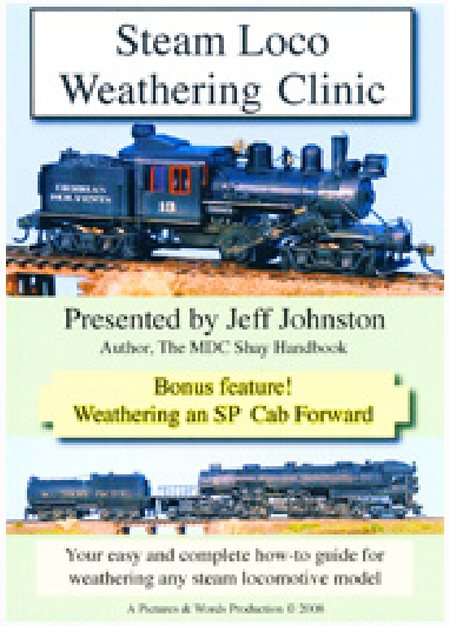

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HO Logs and Lots of Stripwood

A mid-sized freelanced track plan featuring craftsman structures

— by Byron Henderson, photos by Bill Obenauf (except as noted)

A guiding philosophy can help turn a variety of interesting elements into a cohesive track plan. The owner's long-standing dream for this layout was "Believable scenery with interesting operations."

Inspiration and constraints

This single-deck HO transition-era layout was to occupy a roughly 13'x20' basement space, leaving room for a workbench and avoiding a sump pump. Concealed staging was acceptable, but the visible scenes should leave some room for scenery and for the fabulous craftsman-style structure kits the owner was beginning to construct.

A continuous-running option was required, although it might not be used

Figure 1: With the first rays of an early morning sun illuminating a split smoke plume, a train of empty log cars pulls into Camp 14 on Rayonier's Hoquiam, Washington logging line in 1960, suggesting a scene at Ojibwa on the layout. Note the "camp cars" in the background, mounted on bogies and moved by rail as needed. Several of the camp cars have been saved and are at a museum in Tacoma, WA. Original photo and image editing by John West.

Reader Feedback (click here)

during operations. If possible, a helix was to be avoided because the large radius required for reliable operation would use up a lot of the floor space.

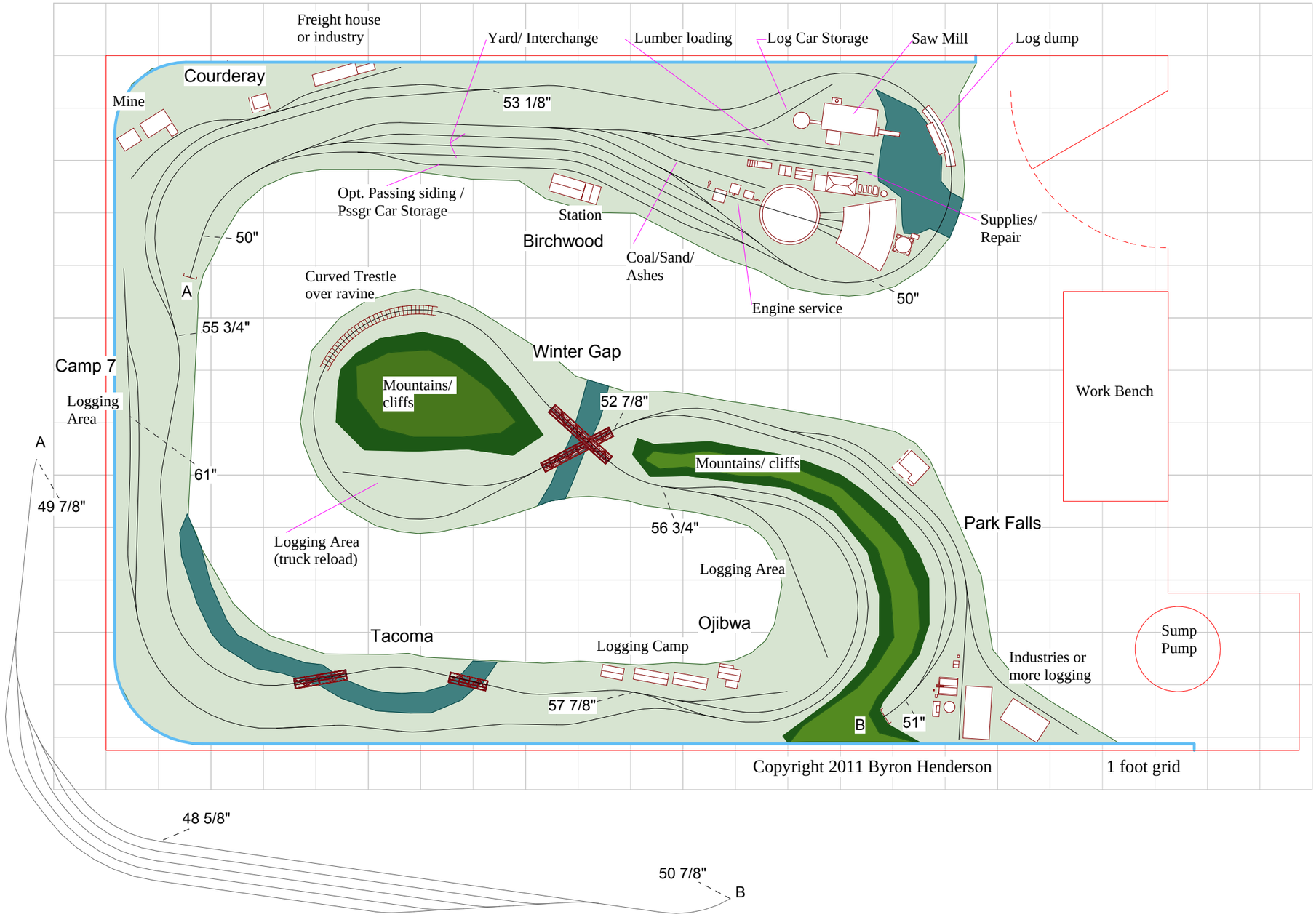
Scenic inspiration was to come from Colorado's famed "High Line" on the Durango and Silverton (former Denver & Rio Grande Western), but in standard gauge and with logging traffic. Other desired elements included areas of dense forest, some type of sawmill and lumber operation, a turntable and roundhouse, and numerous bridges. Besides the logging activity, some general merchandise service and a few passenger station stops were also desired.

Required scenes include a serpentine path above and along a river (a la Tacoma on the High Line) and a plausible location for two railroad bridges one above the other. In keeping with the scenic inspiration, tunnels, rock cuts, and grades will connect the higher timber-cutting areas with the sawmill below.

From a "U" to a "G"

The original thought for the benchwork was a U, open to the room entrance at one end. While this would certainly have been workable with a 24" HO minimum radius, I felt that there would be room for a longer run (and thus greater elevation change from highest point to lowest) with a spiral "G" arrangement (see track plan). This tightened the aisles a bit, but the old John Armstrong trick of

HO Logs and lots of Stripwood



Scale: HO
Size: 13' x 20' overall
Minimum mainline radius: 24"
PECO Code 83 Turnouts: (#6 main line, #5 most industries)
Maximum grade: 2.5% main line, 3% Camp 7 branch

Figure 2

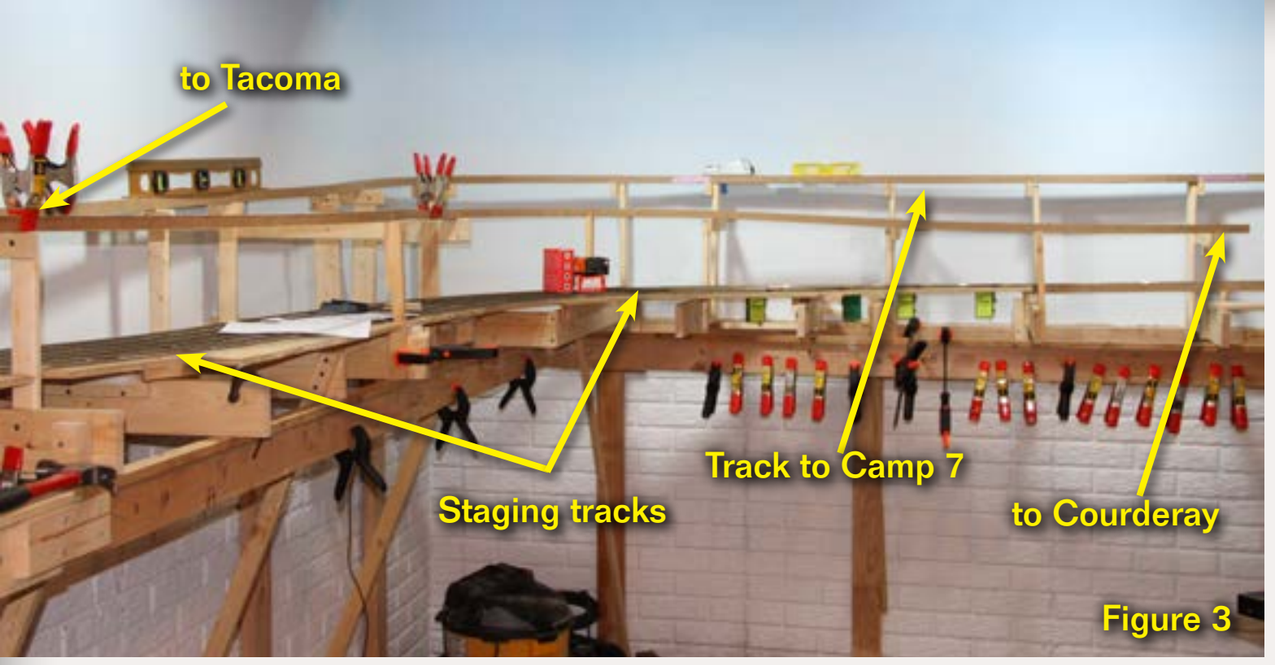


Figure 3: In an early view with L-girder benchwork in place, the staging tracks are already laid on the lowest level. The spline roadbed above staging leads Courderay (out of sight to the right) and Tacoma on the left. The highest spline leads to Camp 7. The combination of L-girder and spline requires a minimum of material to support the track, although one needs a lot of clamps (as can be seen!).

Figure 4: In a later view of roughly the same area, the backdrop has been partially finished and tracks are laid.

Figure 5: Spline roadbed is made by laminating individual vertical splines, in this case 1" strips of 1/4" Masonite. It lends itself to making graceful curves and is nearly indestructible once the glue cures.

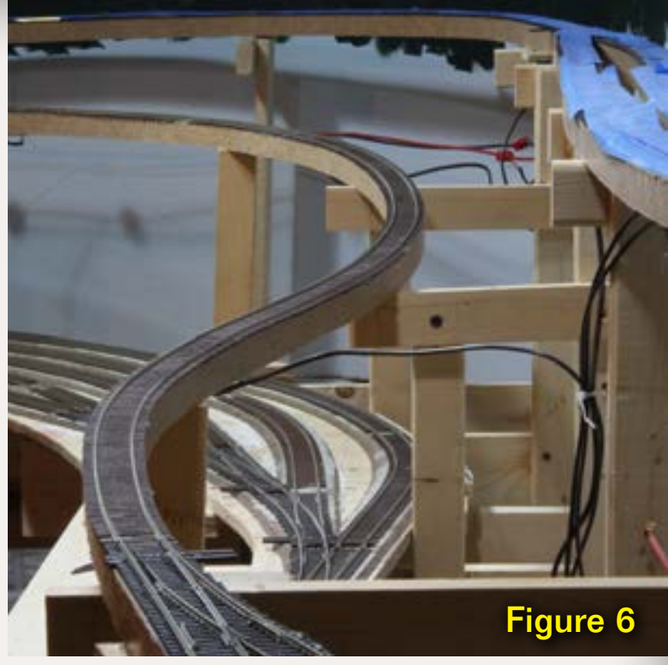


Figure 6: Track mounted on Masonite spline roadbed.

crossing over the track at the center turnback curve helped trim the benchwork in the center of the layout.

I often suggest a relatively thin double-sided backdrop for a benchwork arrangement like this, to separate the scenes from one another, but the builder preferred to use high forested ridges instead. While this takes a little more room (and a lot more trees), an added benefit was that the Winter Gap scene could appear to be a deep natural river canyon viewed from both aisles.

Ain't no mountain high enough

Staging below the visible deck completes the continuous run but limits how high the highest main line track may climb and still "get back down" to staging while keeping grades at 2.5% or less. The staging tracks beneath Tacoma also limit how far below the bridges the rivers may be. Clearing the staging tracks makes the bridge much lower than the prototype bridge heights, a compromise to fit this much layout in the space.

In order to provide a little more vertical range, a logging branch was added parallel to the mainline, but climbing higher along the wall to Camp 7. There is no track to get in the way below Winter Gap, site of the stacked bridges, so the river below can be much lower than the rest of the layout scenery and allow a bit more vertical separation of lowest to highest modeled points.

Setting the scenes

The overall layout footprint and conceptual design were coming together nicely, but obviously wouldn't resemble any portion of the Durango to Silverton High Line very well.

So except for the scene at Tacoma, place names were chosen from a former Chicago & Northwestern branch line area of Wisconsin that's a favorite rails-to-trails vacation destination of the builder. The towns on the layout don't accurately represent these Wisconsin locations, either, but they sound good!

Designing for operation (and craftsman kits)

With the "believable scenes" portion of the design mantra resolved, we turned to the operating locations and industries. The owner is a talented craftsman kit builder, so we were looking for industries that logically justified these rustic detailed structures. All the structure footprints on the track plan represent actual HO kit dimensions, but the builder may make substitutions as construction progresses.

Begin at Birchwood

Birchwood is the operating center of the layout. Staging enters here, representing main line connections to the rest of the unmodeled world. The yard here is primarily for interchange with the staged connections, but also serves to make up locals for serving the visible layout. At the builder's request, Birchwood Yard and engine service area were kept small so as not to overwhelm the rest of the layout.

The sawmill and engine service are the primary industries represented in Birchwood (see detailed view). We compromise a bit here by placing the log dump on the main line itself, but at least this maintains a pull-though operation (which was more common in real life because logging railroads tried to avoid shoving log cars).

Along the line to Ojibwa

After departing Birchwood and circling the log pond, the track is climbing to Courderay, where there is a passing siding, a small station, and a couple of industry tracks to a mine and another to a small industry or freight house.

The track continues climbing through Tacoma and on to Ojibwa, a major log-

Figure 7

Figure 8

Figure 7: Bill Obenauf's Sierra West Scale Models "Deer Creek Logging Camp Essentials" is already beautifully finished as a diorama and will be the highlight of Ojibwa on the layout. Bill's diorama took First Place, Off-Line Structures, at the Thousand Lakes NMRA Convention in Dubuque, Iowa in May 2011.

Figure 8: This handsome Sierra West Scale Models craftsman structure is destined to become the station at Birchwood.

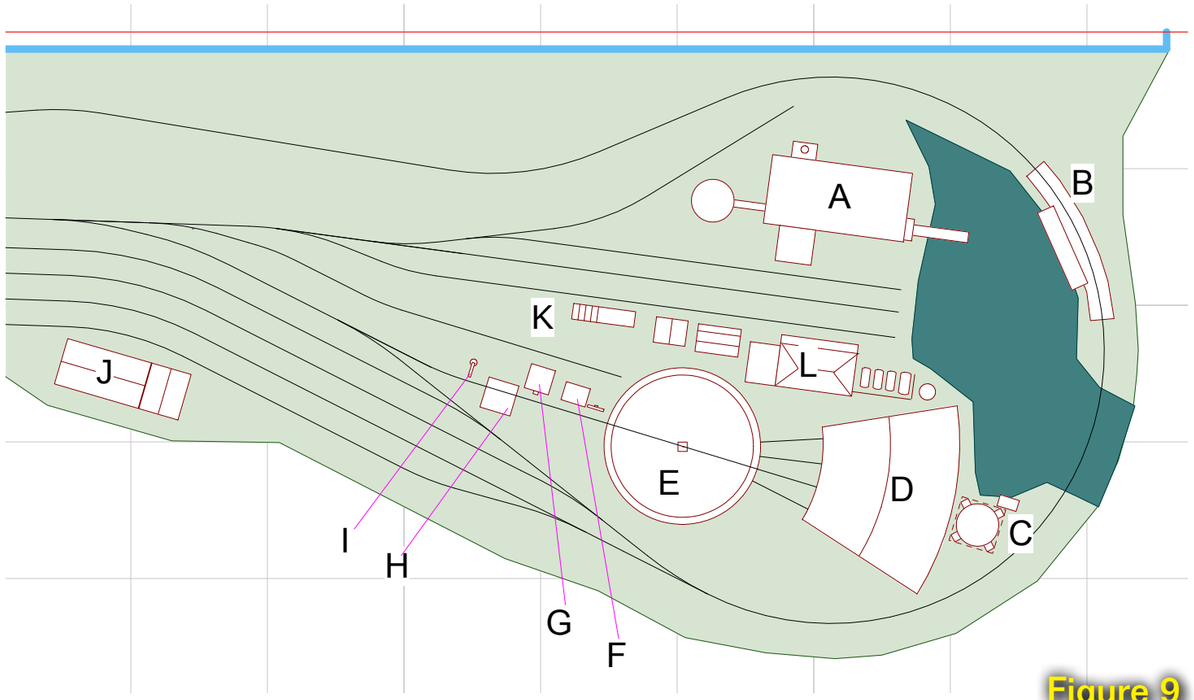


Figure 9

Birchwood details required precision

Sometimes layout designers draw a few undersized rectangles and label the area "engine service". But actual structures and facilities take space and must be carefully planned in tight quarters. The actual model footprints were used when designing the Birchwood areas. Although other models may be chosen during construction, this assures that something will fit.

Structure Key:

A - Sidetrack Laser Cougar Ridge Lumber Co. Saw Mill w/ green chain and wigwam burner
B - Scratchbuilt log dump similar to Sierra West
C - JL Innovative Design Red Rock Water Tower plus scratchbuilt pump house
D - LaserKit (AMB) 4-stall roundhouse
E - Walthers 90' Turntable
F - Sequoia Scale Models Sand House & Bucket Crane
G - JV Models Coaling Tower
H - Sequoia Scale Models Ash Pit
I - Durango Press Water Column
J - Sierra West Passenger Station
K - Blair Line Wood Loading Ramp
L - Sierra West Fuel Depot

Reader Feedback
(click here)

ging area. In addition to the logging spur (downgrade for easier backing of empty cars), there is another short spur for supplies, fuel for the machinery, etc. The logging equipment is not included in the plan, but certainly one or more spar trees, a skidder, steam donkeys, etc. (or more modern equivalents) would be appropriate.

Ojibwa was planned to leave room for the builder's award-winning logging camp structures (see photo). A small station or shelter might be added at Ojibwa to justify passenger "flag stops".

This is also the junction for the branch climbing to Camp 7. As drawn, it's a 3% grade up the hill, but it could be a bit steeper depending on the motive power. There's not much room for the logging scene itself at Camp 7, just the siding for the runaround to bring the power back down on the correct (downhill) end of the train to prevent runaways.

Bridging the (Winter) Gap

Beyond Ojibwa are the stacked bridges at Winter Gap and another small logging area, perhaps a truck reload. The river is aligned to suggest an extension of the river at Tacoma but could be significantly lower to make the bridge scene a bit more impressive.

The final location on the visible layout is Park Falls, where there is a siding, station and a small industrial area. If we imagine Park Falls to be a bit larger town just out of sight (perhaps in the aisle), some general industries such as a furniture manufacturer might fit well – or this could be another logging area.

From here, tracks return to staging below Tacoma. During operations, this could be used to represent unmodeled areas "up the line" or connections with another railroad. This is also the continuous-run connection for display and fun-running.

The Siren Song of the sawmill

As designed, the engine service area takes up quite a bit of room in the turnback "blob" at Birchwood. Accordingly, a smaller sawmill model was planned. But after the design was finished, construction began on the large "Twin Mills at Deer Creek Saw-Mill" kit by Sierra West.

The large footprint of this kit will probably require eliminating the turntable and roundhouse once construction reaches that point. If so, a steeply-graded return loop can be squeezed in from just above the log dump descending to the far end of Birchwood near the entrance to staging. This would allow turning steam power and some minimal engine service facilities along the loop track.

Whether built as-drawn or modified to suit, the resulting layout should certainly fulfill the original goal of "believable scenery with interesting operations". ☑

Hybrid Trees

Super Trees meet Woodland Scenics ...

Reader Feedback (click here)

– by Charlie Comstock

Grafting is regularly used by nurserymen to splice two varieties of tree together – one for the root stock, another for the upper part of the tree.

I decided to try a little prototype modeling of trees. I grafted detail branches from Scenic Express Super Trees (figure 2) onto Woodland Scenics plastic tree trunk armature root stock (figure 3). The results (figure 1) were pleasing.

Super Trees have some out-of-scale leaves (figure 2 inset). Pick these off using tweezers. Then start preparing the trunk armatures by twisting and bending them. It's a little tricky to get a round shape, but if you work carefully it's possible (figure 4).

Now it's time to do some pruning (figure 5). I use flush-cutting nippers to chop off the highly tapered branch ends. It should look like a heavily pruned fruit tree (figure 6).

Now comes the tricky part. I use a #75 drill in a pin vise and Dremel moto-tool to make zillions of little holes all over the trunk armature, including in the ends of the branches (figure 7).

With some practice, you'll be able to make the branch-end holes using the pin vise. Holes in the sides of the larger branches are simple and can be done using the moto tool – pausing frequently to clear melted plastic from the bit.

Grab a Super Tree armature and start snipping off branchlets (figure 8). The

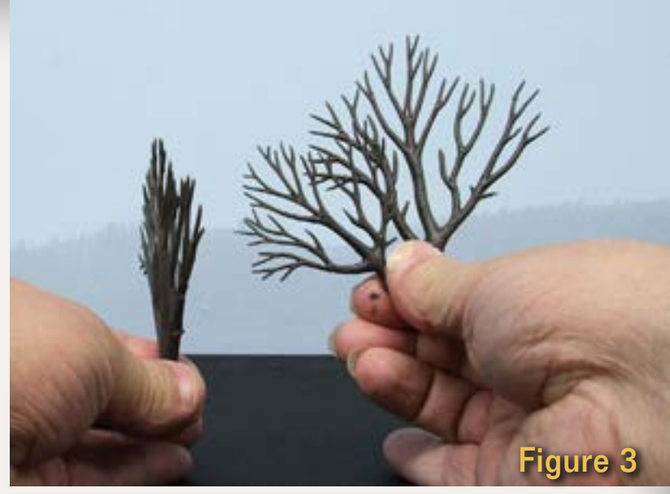


Figure 3

Figure 4

Figure 5

Figure 6

Figure 1

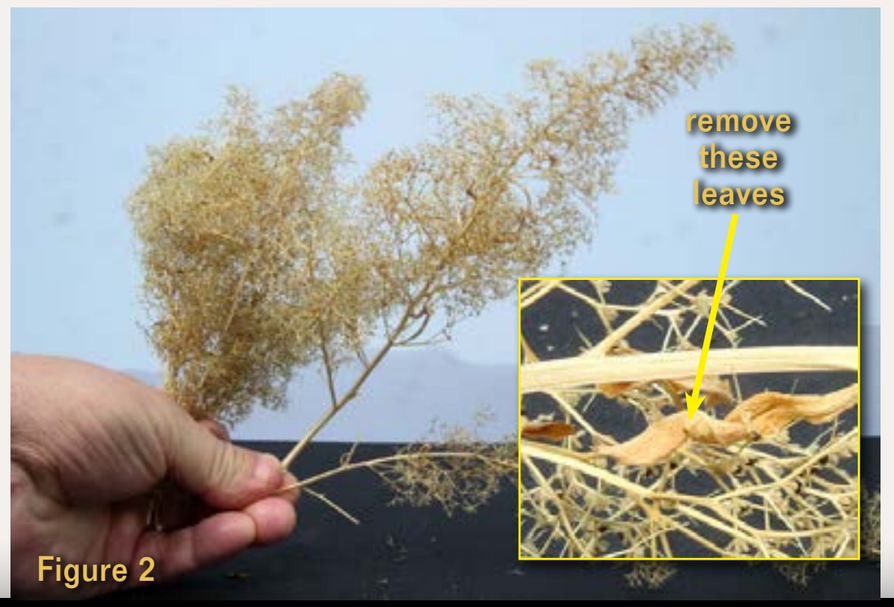


Figure 2

Figure 7

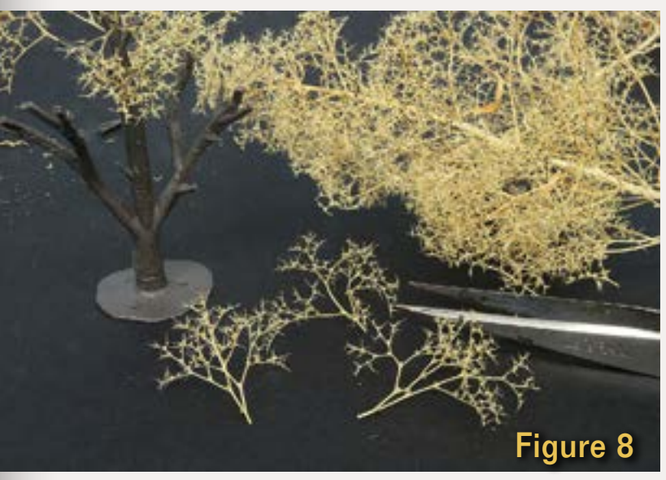


Figure 8

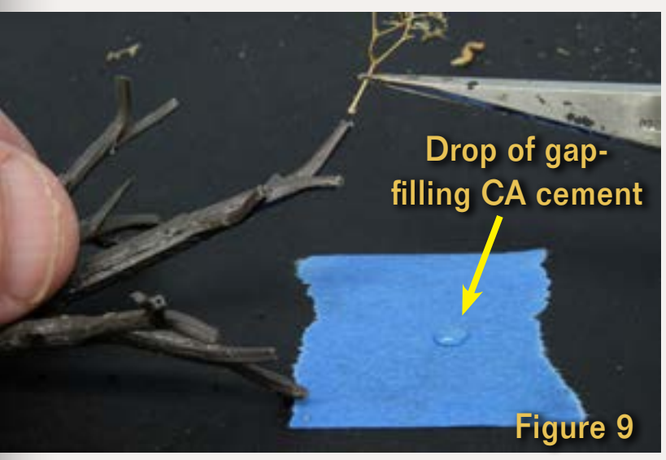


Figure 9

Figure 10

goal is to produce little branchlets with a base diameter slightly smaller than holes bored in the armature.

I stuck down a piece of blue tape and squeezed a single drop of CA cement on it. With tweezers, grab the branchlets, dip their end in the CA, then stick them in the holes in the armature. This is easier than it sounds (figure 9).

Figure 10 shows a newly 'branched' tree next to a finished tree. The bases are handy for holding them but are removed when planting.

Spray paint the tree black (figure 11). When the paint is DRY, spray the branch ends with extra-hold hair spray (Aqua Net) and sprinkle on ground foam (figure 12). For a little extra detail, use darker foam first, then repeat the hair spray application and add a second layer of lighter green foam. ☑

Figure 11

Figure 12

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35 Dollar Challenge – Part 1

— by Matt Snell
photos by the author

Swap-meet shopping and a little bit of weathering expands the freight car fleet ...

Reader Feedback *(click here)*

During a recent operating session the usual banter turned to a discussion of economics. Halfheartedly listening, I expected to hear opinions of the state of the country but soon realized the discussion was about micro economics – 1:87th scale to be exact. "Thirty-five bucks for a boxcar! Put together a 10 car train – that's 350 dollars! Soon I'll be priced right out of the hobby, let alone the guys who are just starting out!"

While it's undeniable that our hobby costs have risen was it truly becoming too expensive? While we could have endlessly debated rising costs this soon bore a challenge – what exactly could we do with the cost of one single high-end boxcar?

As consumers we often tend to narrow our mindsets, the result of exposure to years of advertising. As model railroaders we tighten our focus even more, gravitating not only to specific brands, but also specific roadnames, body or paint styles.

In some cases this is a necessity as modeling the XYZ in November of 1953 should limit one's roster to pieces suitable for that road, the modeled locale, and a chosen era. The converse is another group of prototype equipment often overlooked – secondhand equipment.

Once considered fodder for shortlines, secondhand equipment is becoming increasingly more common in rosters of all sizes, the result of changing business models, mergers, and long-term lease turnbacks. Often put into service with no changes other than new reporting marks, secondhand equipment can be found wearing well-worn liveries for years prior to repainting, sometimes even showing through in spite of repainting.

"When a locomotive or railcar is sold or donated, it often remains in its former owner's livery with only new reporting marks applied."

Keeping this in mind, what if we widened our focus, allowing us to use 'non-standard' equipment in our rosters? What about used vs. new? Better yet, what if we changed our way of thinking from that of a modeler to that of a railroad purchasing agent – yes I need a boxcar, however value is the most important consideration.

With this mindset, I undertook the challenge, heading off to a local show with only 35 dollars and a list of car types that would be suitable for my friend's proto-freelanced modern era "Nebraska Gateway Railroad".

Train shows are an excellent place to find deals on equipment – sometimes. The prices found at train shows often correlate to what a dealer or individual is charged for table space. Thus getting the most bang for your buck means steering away from large GATS or Greenberg type train shows and instead focusing on smaller local shows, often presented by NMRA divisions or local train clubs. While the venue may be smaller these shows also tend to bring out actual modelers disposing of excess from their modeling pursuits. Unbuilt kits and used equipment line the tables and most can be purchased for only a small portion of their original price.

Keeping in mind the challenge, I proceeded to shop with the mindset of a purchasing agent. Paint schemes didn't matter as much as mechanics and soon I came away with five cars – two kits, one with missing trucks and three used Athearn cars in fairly good condition, one missing a coupler and cover plate – none of which are expensive or time-consuming repairs.

Were these the most up-to-date and attractive models? Not by any means. Could they be turned into good-looking, fine-running models for my friend's layout? Certainly. All five cars cost only $23, leaving money for 'repair and refurbishment'.

A GALLERY OF SECONDHAND EQUIPMENT RIDING THE RAILS IN 2010

Figure 1-2: This East Erie Commercial Railroad boxcar was once an "IPD" boxcar owned by the National Railway Utilization Corp. as evidenced by the NRUC logo panel that remains on the door.

Figure 4

Figure 4: To learn the heritage of this H&S boxcar one only has to look at the peeling CSX lettering on the upper right side.

Figure 5

Figure 6

Figure 7

Figure 5-6: Secondhand equipment often continues to wear its previous owner's livery with only a quick change of the reporting marks making it acceptable for interchange. These two hoppers, both in 'fallen-flag' liveries, illustrate examples of quick relettering, one more haphazard than the other.

Figure 7: Often secondhand equipment can be seen wearing outdated liveries, presenting us an opportunity to use a model that may be 'out of era' for the time frame we model. This ATGX covered hopper was seen in 2010 carrying 1980s-style lube stencils.

STEP 1: Refurbishment

Figure 9: My starting point – 5 cars for 23 dollars.

The first step in refurbishing my finds was to bring them up to the operational standards we have come to expect. One of the advantages of today's models is that they are equipped with metal wheels, once an option that has become standard. Given the age and price of my purchases it could be expected that they had older style plastic wheels, making step one to change the wheels to bring them up to par with the rest of the fleet. After buying Proto 2000 33" wheels and adding them to four cars I could focus on the fifth – the kit 'sans trucks'. A trip to the hobby store and $2 yielded a suitable set of trucks, in fact the exact trucks the kit required. So what about the 35 dollars I began with? Well now I was a little over budget, but I wasn't complaining. I had 5 cars that were well on their way to mechanically functional for only 40 dollars.

The next step in refurbishment was to replace the couplers. While we have come to regard knuckle couplers as standard equipment, older models used a coupler known as the X2F. Unofficially known as the horn-hook, many modelers quickly discarded the X2F, replacing it with the Kadee knuckle coupler. Changing from the older horn-hook to knuckle couplers took only several minutes using several surplus couplers, left over from other projects. After some minor coupler height adjustment my finds are now mechanically sound and compatible with today's rolling stock so it was time for some cosmetic changes.

Figure 10: When purchasing kits or used equipment don't skip over a piece simply because of a missing part that can be easily and inexpensively replaced.

Figure 11: The X2F style coupler (on the left) was packaged with most car kits.

Figure 12: Changing a coupler on an older Athearn model requires prying the metal coupler cover outwards, releasing it from the pressure tab, then lifting it off.

STEP 2: Painting

Several simple things can improve the look of an older model. The first is painting the brakewheel (and steps if applicable). Older kits often had these parts molded in black, and you'll find that painting them a color comparable with the carbody will improve appearance of the finished model. When painting components such as these it's not necessary to get an exact color match – a close match will blend almost perfectly once the car is weathered.

A second method to improve the look of an older model is to paint the roofs of boxcars, often factory decorated in a color matching the sides. Creating the silver galvanized steel look that we've grown accustomed to is easy and will create a dramatic change in the look of the car. Either brushing by hand or spraying the roof with an airbrush will create a two-color car, making it more visually appealing while leaving a surface conductive to the next step – weathering.

Figure 13: Painting the brakewheel to match the carbody makes the model look more finished.

Figure 14

Figure 15

Figure 14-15: Painting the roof of a boxcar with a wide brush takes only about 2 minutes and makes a dramatic improvement in the appearance of the car.

STEP 3: Weathering

The one area we tend to see the most of on our models is the roof, so why stop at only painting it silver? The roofs of older prototype cars are often heavily rusted. Since we're modeling secondhand equipment, give it an appropriate look – especially since it only takes another 2 minutes to create a realistic rusty effect.

My favorite method for creating a well-worn boxcar roof is to use a product known as ColorBox chalk ink pads. Marketed to the scrapbook and card making hobbies 'chalk ink' is a type of inked stamp pad available in multiple colors. Useful to railroad modelers are white, suitable for non-skid paint on flatcar decks, charcoal for diesel exhaust smudges, and burnt sienna, a color ideal for simulating rust.

Applying chalk ink to a model can be done in several ways including: paintbrushes, makeup applicators, cotton balls, and one method perfectly suited to boxcar roofs – turning the pad upside down and placing it directly onto the boxcar roof. Place the ink pad along one side of the roof, allowing it to ink the roof surface the length of the boxcar.

Then use a cotton ball to spread the ink across the roof, leaving a thin even coating across the entire roof surface. To add some texture while 'dirtying' the roof, sprinkle some black weathering chalk powder into the wet ink. Work it in using an old makeup brush. When you are finished, apply a light spray of Testor's Dullcote or Polly Scale clear flat finish to seal the ink and powder mixture. The finished roof has a dirty rusty color, complete with texture (see figures 19 through 24).

Figure 16: Secondhand equipment is often heavily weathered from the roof to the wheels. Creating a believable model requires recreating the well-worn look.

Figure 17: 'Rusting' a boxcar roof will immediately create the effect of a car that has seen years of service.

Figure 18: ColorBox chalk ink pads available at scrapbook and craft stores have many model railroad uses including weathering and non-skid deck paint for flatcars.

STEP 4: Creating a Rusty Boxcar Roof in 4 Easy Steps

Figure 21: Step B – Spread the ink across the roof with a cotton ball, leaving an even coating across the entire roof

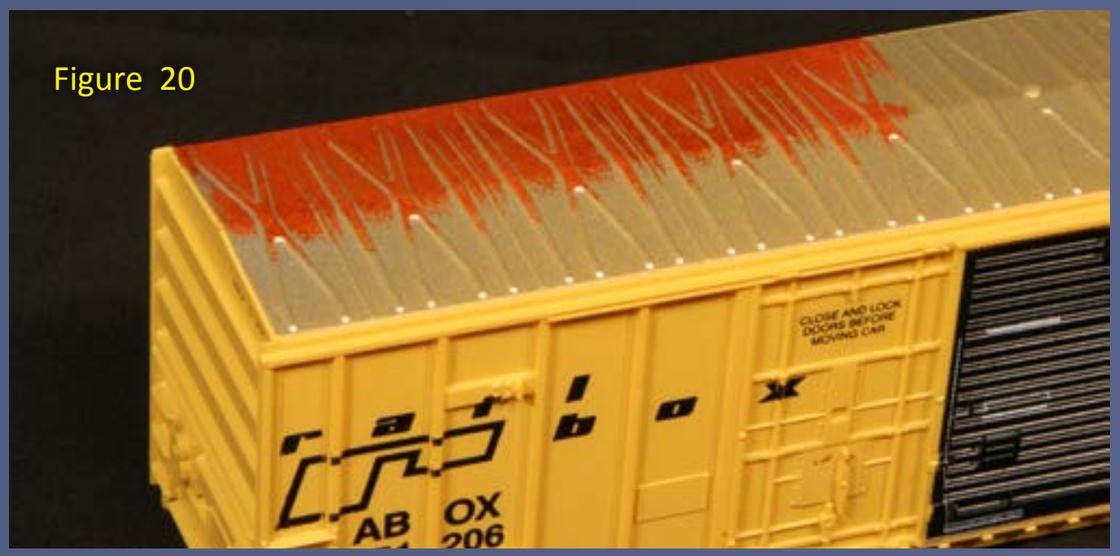

Figure 19-20: Step A – Apply chalk ink to one half of the roof using a makeup applicator, cotton ball, or by turning the pad upside down and 'stamping' it directly onto the roof.

STEP 4: Creating a Rusty Boxcar Roof in 4 Easy Steps *Continued ...*

Figure 22-23: Step C – Sprinkle some black weathering chalk powder onto the roof, working it into the ink with an old makeup brush.

Figure 24: Step D – Seal the roof with a spray of Testor's Dullcote.

STEP 5: Painting and Weathering Flatcar Decks

I found one additional improvement to make, this time to the bulkhead flatcar. Similar to older model boxcars roofs, the deck of almost every flatcar kit was painted to match the color of the carbody. While we could cut the deck off and replace it with a true wood deck – very time consuming at best – the deck could be made more realistic by distressing and painting it. Simply run a rasp file across the deck, dragging the sharp edge along the boards to create scratches and gouges. Then apply a thin layer of wood colored paint like a mix of yellow, tan and gray to the edges and surface of the deck. Once this has dried, a thin layer of weathering chalk applied across the deck will highlight the distressed areas, leaving the look of years of use.

So far we've purchased five inexpensive cars, improved their mechanics, then performed a few quick cosmetic changes, bringing them up to par with many of the lower-priced models presently available. Join me in our next installment as they are transformed into true secondhand cars, no longer serving fallen flag roads but soldiering on as the newest additions to the Nebraska Gateway System. ☑

Reader Feedback (click here)

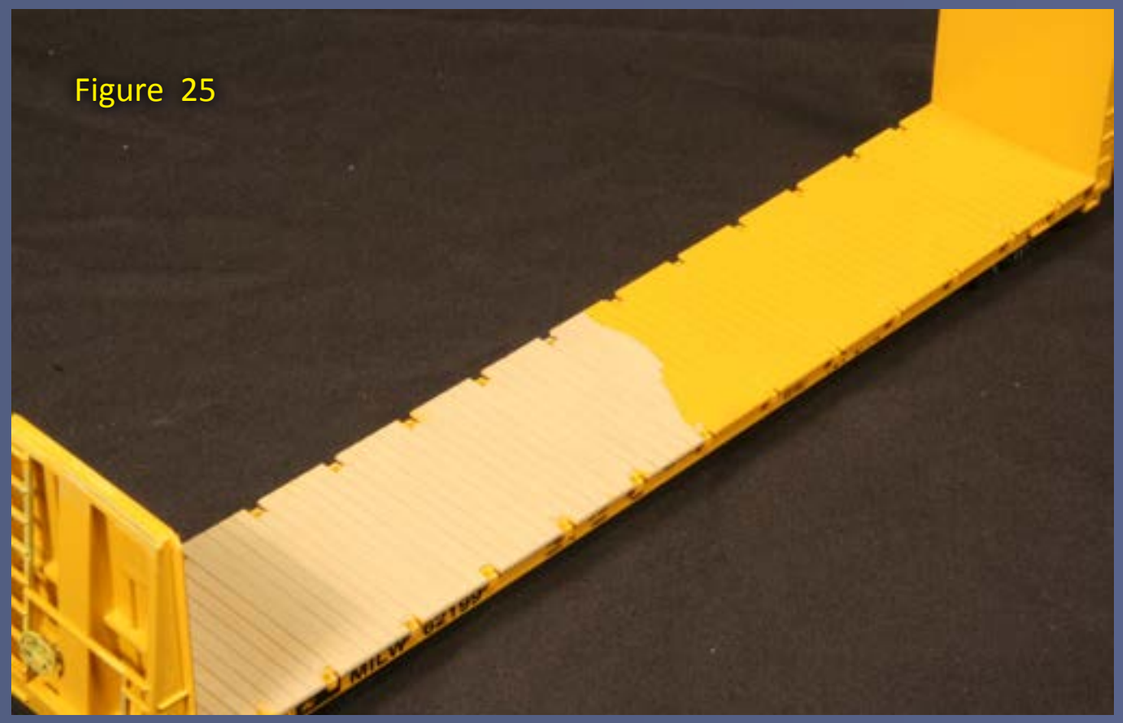

Figure 25-26: Distressing, painting and weathering the deck of a flatcar will improve the look of the model, removing the factory fresh and sometimes even toy-like look.

M.R. (Matt) Snell has been a model railroader and railfan for 30 years. His interest in railroading grew while growing up in New Jersey surrounded by freight and passenger rail lines.

Presently residing in Ohio, Matt and his wife Debie share the hobby, modeling the area he grew up in: north-central Jersey.

Their "Conrail New Jersey Division" layout has been featured in *Great Model Railroads, Rail Model Journal,* and in the Allen Keller *Great Model Railroads* DVD series. Matt has had articles in *Railroad Model Craftsman, RailModel Journal, Scale Rails* and *Model Railroader*, as well as online at railroad.net.

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Installing an Animated CAFE Sign

– by Tom Wilson
Photos by the author

Reader Feedback
(click here)

Figure 1: My CAFE sign installed next to the café parking lot.

Installing a Miller Engineering animated sign is a snap – once you figure out where it will go ...

I've had a Branchline Dubois Store structure kit for a while. Finally it was time to assemble and install it. I elected to divide the building into two stores. One side became a pharmacy named for my daughter. The other side would become a café. I decided to name it Mitz's Café in honor of my mother-in-law.

I also wanted to use animated signs with the structure so I purchased two from Miller Engineering (figure 2). The pharmacy sign would be on the front of the building while the café sign would be on the roof. The installation of the pharmacy sign went as planned but when I put the café sign on the roof it just did not look right.

There was another issue – I'd already installed interior details and lights and had glued down the roof. Oops! Back to the drawing board.

There is a small parking lot next to the café and I remembered how many signs I've inspected that were sitting on a sign base next to a parking lot entrance [Ed. In real life Tom is a building inspector...]. I held the sign in position at this location and liked it. It should be easily visible to the traffic on the street, too (figure 3).

The next step was to design the base. I made mine using styrene with a stone veneer. The animated sign part needs to extend through the styrene support, then plug into the sign controller's receptacle which I mounted flush with the top of the scenery

Figure 3

Figure 2: The Miller Engineering sign and standard battery pack. I purchased their transformer to power the sign instead of the batteries.

Figure 3: The future site of the animated sign.

Figure 4: The installation site after removing the plaster and marking the base where I'll be cutting the opening in the scenery base for the sign receptacle.

Figure 2

Figure 4

Figure 5

Figure 5: The first two holes I drilled to make the slot through which the base of the sign would extend and plug into the controller.

Figure 6: The bits of styrene I used to build the hollow sign support.

Figure 7: The sign support after I spray painted it black.

Figure 8: The sign support with very fine river rocks glued in place.

base. Refer to figure 9 for the sizes of styrene I used for this sign. Be sure to design the support to meet the dimensions of your particular sign! I ran a bead of super glue around the joint between the sign support and flat base. This increases strength and also made a slight fillet (rounding). The base was spray painted flat black and allowed to dry (figure 7).

I used very fine river gravel to create the stone veneer. I removed the larger rocks and glued individual stones to the front and two sides of the support using Pacer 560 Canopy Glue. You can't see the back of the sign, so I didn't bother to put any stone there. Installing the stones took about 10 minutes. I also put some stones on the top ledge but made sure the opening for the animated sign plug was clear. Then I let everything dry. Any type of stone available locally could be used – as long as they are small enough (figure 8).

I prepared the scenery surface for the sign by cutting a slot in the Masonite. First I had to remove some plaster and scrape the surface clean. I marked the plug location and the outline of the sign support on the scenery base.

Then I drilled a series of $^{11}/_{32}$" holes (figure 5) in the Masonite. I used a small saw to connect the holes making a slot and cleaned the slot's edges to be sure the sign controller receptacle fit through easily. I glued the sign

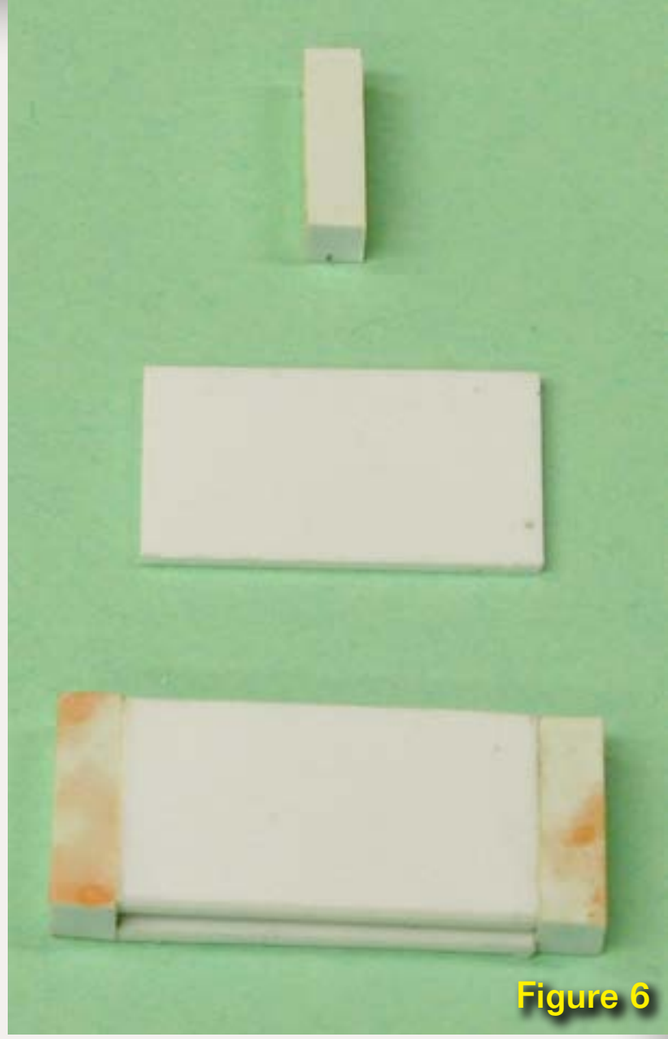


Figure 6

Figure 7

Figure 8

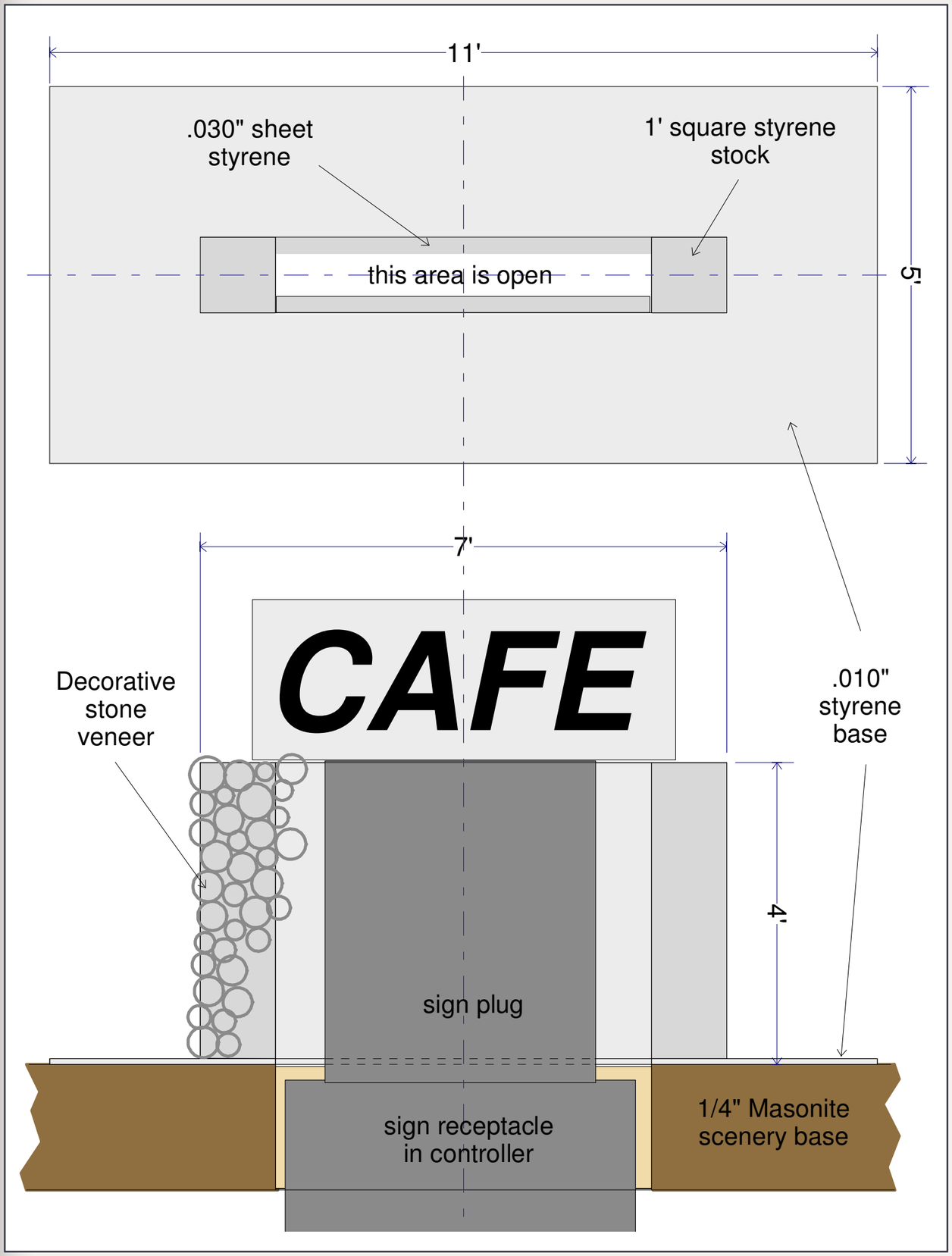


Figure 9: Assembly drawing of sign support on scenery base.

base assembly in place using silicone caulking for a waterproof joint. Having water from the scenery installation process leaking on to the controller would be bad news!

I inserted the sign's plug through the hollow support and plugged it into the controller receptacle, making sure it illuminated properly before seating the sign on its support. Then, with everything in place, I allowed the silicone caulk to cure.

I finished the sign installation by running scenery up and over the base then sat back to admire the sign beckoning patrons into Mitz's Café. ☑

Want more information regarding Miller Engineering electroluminescent signs and their installation? Check out "A Custom Animated Sign" in the April 2011 issue of MRH.

Reader Feedback *(click here)*

Tom Wilson has been a model railroader for 38 years, and now has a 4-level operating layout. He lives in Florida with his wife of 36 years, and works as a building inspector.

In addition, Tom has worked in steel mills, and done mechanical contracting. As a building inspector, he has worked for Disney and now for the City of Winter Park, Florida.

Tom's website is www.pwvrr.webs.com

Want to see more of Tom's work? Then check out his MRH articles "Up on the Roof - What you don't see" in the March 2010 issue and "Detailing the Backs of Buildings" part 1 in April 2011 and part 2 in May 2011.

Kent Williams' N-scale

Oregon Washington Navigation & Railway Co.

– *by Charlie Comstock*
Photos by the author

Reader Feedback
(click here)

Figure 1: An SP&S passenger train departs Portland Union Station

I met Kent Williams through the Internet. There were rumors of a superlative N-scale layout nearby, and I was searching the Web for it. I found some YouTube videos of it.

I contacted Kent through his YouTube account and it turned out he was coming to the Portland, Oregon area for an N-scale meet in a few weeks. That turned into an invite to Rob Carey's immaculate Tennessee Pass D&RGW and another to visit Kent's OWN&R layout outside of Nevada City, California during the 2011 NMRA convention at Sacramento.

The Monday after the convention, I made the trek (he lives way out in the countryside) to his train room.

Figure 2

MRH: Kent, tell me a bit about your layout.

Kent: The layout is based on Portland, Oregon where several class-1 railroads converged. The Southern Pacific came from the South. The Union Pacific came west along the south bank of the Columbia river. The SP&S (jointly owned by the Northern Pacific and the Great Northern) paralleled the UP but on the north bank, coming down from Spokane to Portland and Vancouver, Washington.

There were also pool trains with NP, GN, and UP power running out of Portland to Seattle.

There was a lot of interchange between these railroads in Portland. The SP&S interchanged with my own branch line, the Oregon Washington Navigation and Railway Co. in Pasco, Washington. The OWN&R ran from Pasco to Walla Walla and Yakima, Washington where I grew up.

MRH: You're living in the backyard of the Nevada County Narrow Gauge. Why didn't you model them?

Kent: I'm from the Pacific Northwest – that's where my roots lie. I just prefer to model that area. Plus I wanted class 1 railroads with passenger trains, the 'varnish' – the beautiful City of Portland, the Shasta Daylights, those sorts of trains. That wasn't the Nevada County Narrow Gauge.

MRH: What era are you targeting?

Kent: My railroad is set in the late '60s. Originally I was going to do the '50s but I switched to just before the Burlington Northern merger in March 1970. I'm not modeling a specific day of a specific year – I'm really proto-lancing trying to get a feel for the general flavor of the railroads at that time

MRH: So all your passenger trains are pre-Amtrak?

Kent: Yes. I researched the consists and timetables of the various passenger trains and that's what I'm trying to replicate. For instance, the North Coast Limited, a Northern Pacific train, headed west from Spokane down through Pasco. It set out Pullman and express cars, then headed on to Seattle through Yakima.

Figure 2: Some Portland railfans got together and built a little platform near downtown where they can go watch trains pass by.

The SP&S streamliner, Number 1, came down from Spokane, picked up those Pullman cars and headed to Portland, Oregon where it terminated. That's sort of the thing I like to model.

Operations oriented

MRH: It sounds like you're up on consists, routing, and how the trains

worked. Are you really into prototype operations?

Kent: I'm definitely into operations, how trains move and what they did. I especially like yards – that's why I have three big yards on my railroad. Portland is a division point where all the railroads converge. Seattle is a terminal point where trains cross the Canadian border, and also run to Portland and Spokane. Pasco is more of an interchange yard with the OWN&R branchline and a few industries. I like industrial switching a lot and have quite a bit on my railroad.

MRH: Many people don't associate N-scale with operations. Do you have any scale-related problems in that area?

Kent: Not at all. In the last 10 or 15 years, the manufacturers have really improved the quality of their engines – motors, mechanisms, and trucks. There are metal wheelsets out now that run very smoothly.

Even the commercial turnouts from some manufacturers are fabulous – I've had very few problems. I probably have 160 turnouts on my layout and only about five are scratchbuilt. I've only had three or four go bad on me over the years. If you lay your track carefully, N-scale trains are as smooth running as any you've seen.

MRH: What track do you prefer?

Kent: When I started this layout 9 years ago, Atlas had just released their code 55 track and switch system, so I went with that because it seemed a lot more realistic than the bigger rails. The smaller rails did require me to swap out all of my large-flange wheel sets, but it wasn't a big deal.

MRH: What wheels are you using?

Kent: I only use metal wheels. I find it keeps things a little cleaner, adds a little extra weight, and it lowers the car's center of gravity. I weight my cars according to NMRA standards and 99% of the time they run well.

Figure 3: Pasco yard is one of four yards on Kent's layout.

MRH: What do you use for couplers?

Kent: I use Micro-Trains couplers pretty much exclusively. I have a few cars from other manufacturers that have their knuckle couplers on them. I don't use any of the Rapido-type couplers. I'm able to couple and uncouple quite easily using coupler picks.

MRH: What did you do when you planned this layout to enhance operations?

Kent: I wanted a few things:

Figure 4: The east end of Portland yard sports the engine house, coach yard, and a few industries.

Figure 5: A mirror suspended over Portland makes it easier for height-challenged operators to see what's going on.

- Yards and industries – as many as I could manage
- Long mainlines between the yards
- Railfanning the trains running between the yards
- Continuous running for open houses

The upper deck of my layout is close to eye-level for the average person – you can stand in the middle of the room and watch the trains run.

MRH: What's on the lower deck?

Kent: Down there is kind of an add-on. I had a modular switching layout – while the modules looked nice, they didn't operate reliably. So I converted them into lower deck staging.

I also added a reverse loop and a small yard to this area. Occasionally we'll operate this area, but it's underneath Pasco yard (figure 3) which runs continuously during a session. To avoid operator crowding, we only operate down there during what I call a 'fun run' with a smaller crew. Otherwise the lower deck is run as staging.

MRH: How do you get between the decks?

Kent: A seven-lap helix. It's kind of long, but the grade is gentle and trains don't have problems in it.

Signal System

MRH: What about your signals?

Kent: I use Digitrax DCC. When I was considering how to give clearance and grant authority to trains on the mainline, Digitrax was just releasing their signal system. I was talking with a friend in Portland, and he said "Why don't you use the Digitrax system?"

I told him that if he'd do the programming to make it run like a USS (US Switch and Signal) CTC panel I'd do all the wiring. So he did! Now the layout has CTC with 72 signal heads on the UP and SP&S tracks. All the blocks have occupancy detection. The signals work according the logic programmed into the system.

I can run either with automatic block signals (ABS) like what we're doing now for 'fun-runs", or a dispatcher out in the other room controls them using a computerized CTC panel.

It turns out that I had one of the first layouts in the United States that implemented CTC signalling using a Digitrax system. We also were doing some remote dispatching back then – my dispatcher lived in the Vancouver, Washington area. We were hooked together through the internet and he had a virtual CTC panel up there and could control the layout from 700 miles away!

For informal "fun run" sessions I put push buttons on the fascia to allow local control of the switches. In that mode (ABS) the signals show the

position of the next turnouts and if there is a train ahead.

Industrial areas

MRH: What switching areas?

Kent: My favorite is the Portland Industrial District (figure 7). It's loosely based on an industrial area across the Willamette River from Portland Union Station. There are a lot of industries there, including the giant Port of Portland elevator. Trains going there from Portland need to cross the Willamette on the Steel Bridge (the prototype is a double deck lift bridge, cars and streetcars on top, trains underneath).

The Southern Pacific switched some of the industries here while the SP&S handled the others. We do the same thing – with an SP local in the morning and a SP&S one in the afternoon. The locals are small –a tiny switcher and seven or eight cars at a time.

The Port of Portland grain elevator is switched by the SP&S local. Grain comes to the elevator from the east on the SP&S. The elevator off-loaded into barges or ships with some of the grain going overseas.

MRH: What about the other buildings in the Portland Industrial District?

Kent: Most but not all are background buildings. A lot of them are Walthers Cornerstone buildings that we kit-bashed. Some are laser kits – for example the fishing pier. A friend built some for me.

MRH: It's good to have friends.

Kent: It's good to have friends. I'm pretty much the only one working on the layout on a regular basis, but I've got a couple of friends who are very good at building structures.

MRH: What's the history of your Portland industrial area?

Kent: When I conceived and built this layout, there was a Southern Pacific staging yard in Eugene, Oregon. It was stub-end. There was one grain elevator in addition to the staging tracks. About three years ago I thinking I really wanted a switching district with complicated industrial trackage. I managed to negotiate a few extra square feet of space in the other room, made a hole through the wall for a tunnel, and moved Eugene to a new home. There's more staging capacity and even a balloon track making it easier to turn trains for the next session. The space that was freed became the current Portland Industrial District.

MRH: How did the new staging and industrial area affect operations?

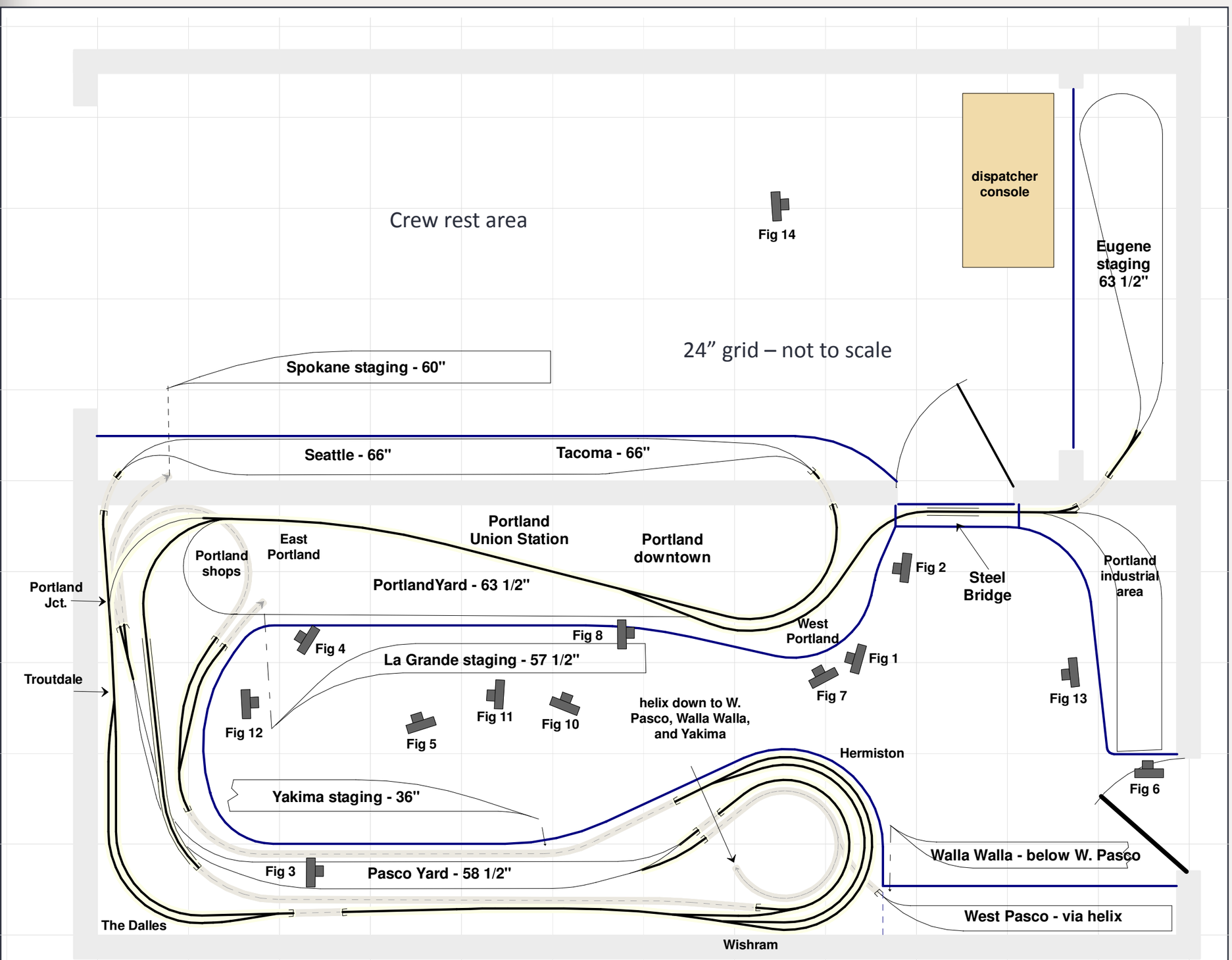
Kent: The new Eugene staging gave me additional space for trains and cars. The new industrial area has about 32 car spots in it including 15 for the grain elevator. That let me put

Text continues on page 90.

Figure 6: The Port of Portland grain elevator towers over the other buildings in the Portland Industrial District.

Figure 7: The west Portland industrial area.

Oregon Washington Navigation & Railway Co.



Layout Statistics

Name: OWN&R Co.
Size: 11'x23' plus 30"x9' staging area
Scale: N
Locale: Pacific Northwest
Era: Late 1960s
Style: Multiple-deck, connected by helix
Heights: 36" to 66"
Mainline run: approximately 200'
Track: Atlas code 55
Turnouts: #5, #7, and a few #10
Min. radius: 22"
Max. grade: 3% (in Hermiston area)
Grade in helix: 1.8%
Trains in an op session: 25
Signalling: ABS or CTC (with remote dispatching capability).
Control: Digitrax DCC

Figure 8

Figure 8: The west Portland industrial area in the foreground with the Port of Portland area in the background.

Text continued from page 88.

a lot more cars on the railroad as well as a new switching job.

As a bonus, crews working the Portland industrial switch job are out of everyone else's way. The local's crew picks up their train and paperwork in Portland, runs across the Steel Bridge, and doesn't come back until the switching is done.

MRH: How many other switching areas are there?

Kent: Let's see ... there are one, two, three, four, five other switching areas. Besides the Portland district, we have Walla Walla above (Walla Walla is the west Pasco industrial area served by the Ferry Turn, Valley Hauler, or the Pasco Local out of Pasco yard.

In Portland yard there are the East and West Portland areas with some industries handled by one of the two full-time switch crews in that yard.

Also, the yard switchers work to get trains classified and switch out passenger train head-end cars. The coach yard is in East Portland along with the oil tracks, the REA Express, and a food company (figure 4).

Seattle has a Tacoma industrial area with steel and paper companies, plus an oil distributor. West Seattle has a grain port, food company, team track, and two building supply companies. The building supply companies give us a lot of freight car variety.

The team track in West Seattle has a novel feature I picked up from another friend. It has both aprons and docks on it and different cars need to be spotted at different places.

People management

MRH: How many people do you put in the main train room during a session? How big is it?

Kent: The main layout room is in a stall of a 2-car garage. There is 14" on the other side of the wall for Seattle and Tacoma. I've got about 250 square feet in the main room itself plus the 16' Seattle yard.

We regularly have six operators in here on a regular basis, plus two more out in Seattle and a dispatcher. That's nine. Then there are three or four train crews operating on the high iron – they can be anywhere depending on the location of their train.

MRH: Do you find that you need to schedule people as much as trains?

Kent: It gets a bit congested, usually at the beginning of an operating session, but then it tapers down later on. Train crews sometimes have to stand at the end of Portland yard with the yard crews telling them when to go forward or backward. That keeps them out of the space in front of the yard. There's less crowding in Pasco, so crews can stand over there.

It gets a little friendly in here once in a while, but the aisles are wide – about 4' or 5' wide even though the main area is only a $9\,^1/_2$' wide room.

Color-coded waybills

MRH: You're using Car Cards and Waybills to route cars, but your waybills are very colorful. Are you using color coding to indicate destinations?

Kent: We are using color coding for what we call 'vias'. A 'via' is a place, on or off the railroad, where the cars are going.

For instance, my Spokane staging yard handles all trains headed to the upper mid-west. Those waybills are

Kent Williams lives several miles outside Nevada City, California along with Sraddha, his wife of 15 years and his OWN&R Co. layout. He's been modeling actively for 25 years.

His preferred prototypes are NP, GN, UP, SP, SP&S, and the OWN&R in the Pacific Northwest where he was raised.

His other hobbies include photography and bicycling, and hiking and world travel.

His layout was open for the recent X2011 NMRA convetion in Sacramento.

color-coded green. Seattle is black. A magenta color indicates cars going to Walla Walla, Washington.

When a train arrives, this really helps the yard masters. They can glance at the colors and start moving cars.

Once a car arrives at its color coded destination area, the crews have to do some reading – the industry and town names. The waybills also include where each car is coming from, who shipped it, and its lading.

MRH: Do your crews pay attention to the extra data, or do they only care where a car is headed?

Kent: Most of the time they're too busy moving cars to have time to read all the data. If they're switching an industrial area, they might need to know the lading to determine the proper car spot at the destination industry.

Urban modeling

MRH: What motivated you when designing the Portland city area?

Kent: I wanted an urban scene and I picked Portland, Oregon. It's a large city, and I wanted to populate it with a lot of large, tall buildings. I got them from various sources. Lunde Studios, was offering high-rise office buildings, so I bought some of those. Bachmann offered a bunch of pre-built buildings. Others are DPM (Design Preservation Miniatures) and some are scratchbuilt.

MRH: How did you determine building placement?

Kent: I put some tall ones in front – it simulates the tall buildings close to the prototype Union Station.

The Blitz-Weinhard brewery had buildings there. I'm planning to model those behind the front row – they'll be mostly hidden from view, but you'll be able to see all the pipes running between buildings above the streets. That will help make the area feel more like Portland.

MRH: What are you using to model your N-scale streets and sidewalks?

Kent: Well, I had a novel approach. All of Portland is mounted on $^{1}/_{8}$" cork sheet. I put it on top of plywood to keep it flat, then painted it gray for the streets! Nothing fancy there.

Figure 9: Color-coded waybills.

For the sidewalks and curbs, my friend Jim Younkins marked and cut straight pieces of Evergreen sheet styrene and put a curb around them using strip styrene. Painted and detailed, they look pretty decent (figure 10).

MRH: Any plans for lighting the city?

Kent: I'd like street lights, but haven't found a good source for them – I

might have to make my own. I'd like to light some of the buildings and have working stop lights – that's one of my next phases now that the railroad is fully built and operational.

MRH: Where did the Portland Union Station building come from?

Kent: It's a semi-replica of the station. Another N-scale friend decided to try building it. He did the main building and the tower, then another friend and I built the platforms and a few other bits.

There's a lot of passenger traffic here. The SP&S streamliner from Spokane terminates here. It's taken to the coach yard and turned to go back to Spokane later on.

MRH: There are actually four yards in Portland but you only have one.

Kent: Even in N-scale there wasn't enough space to do all four! I went for one yard that represents a large division point yard which handles a lot of trains. It takes a yardmaster and two switch crews to work it. Around 25 trains get handled here during an operating session.

MRH: Any special trains?

Kent: My research showed some hot-shot produce trains came from

Figure 10: Tall buildings, cork streets, and styrene sidewalks in downtown Portland.

Figure 10

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Figure 11a

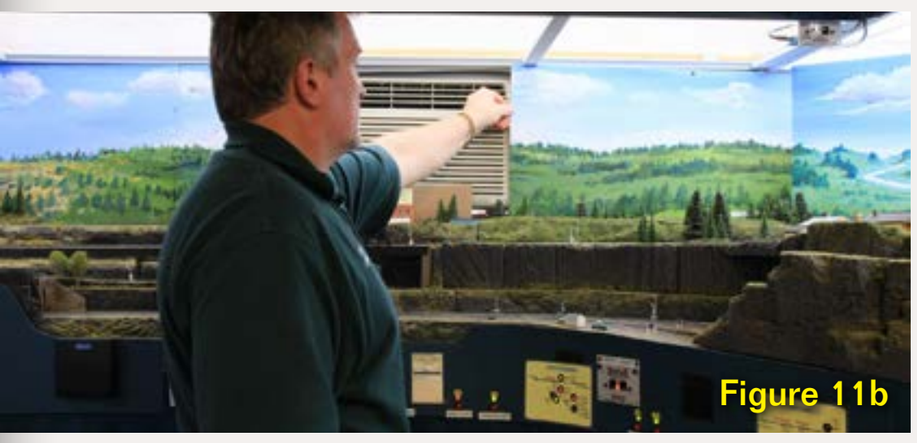


Figure 11b

Figure 11c

Figures 11a to 11b: Summers in Nevada City get hot. To protect his equipment (and crew), Kent thoughtfully installed an AC unit. Unfortunately it ended up in the middle of the sky!

Not a problem! Kent came up with sliding backdrop panels to camouflage it when cool air isn't necessary.

What a guy!.

Figure 12

Figure 13

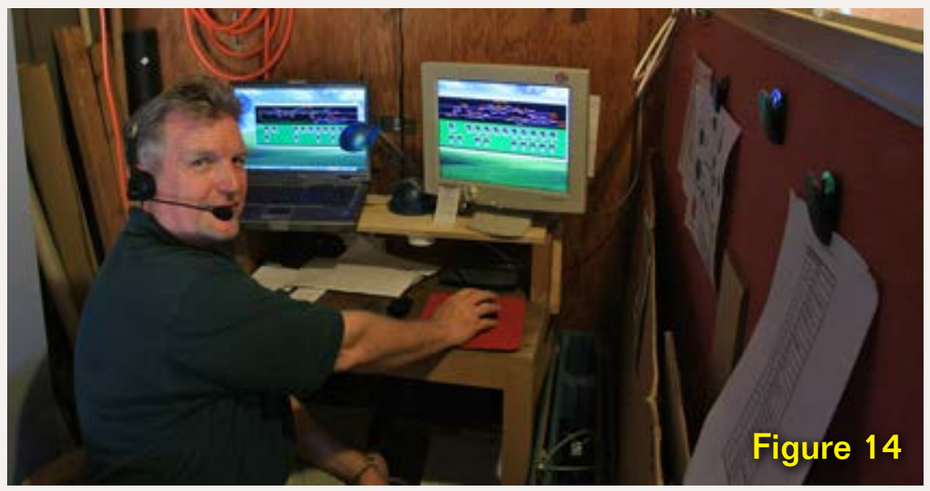


Figure 14

Figures 12 and 13: Overall views of the main layout room.

Figure 14: Kent at his virtual CTC panel in the dispatcher's cubby hole.

California on the SP. They'd interchange with the NP or SP&S and head out to the northern midwest. I wanted to model those trains and re-icing them before they depart eastward. Also, the SP motive power and caboose have to be replaced with NP or SP&S equipment.

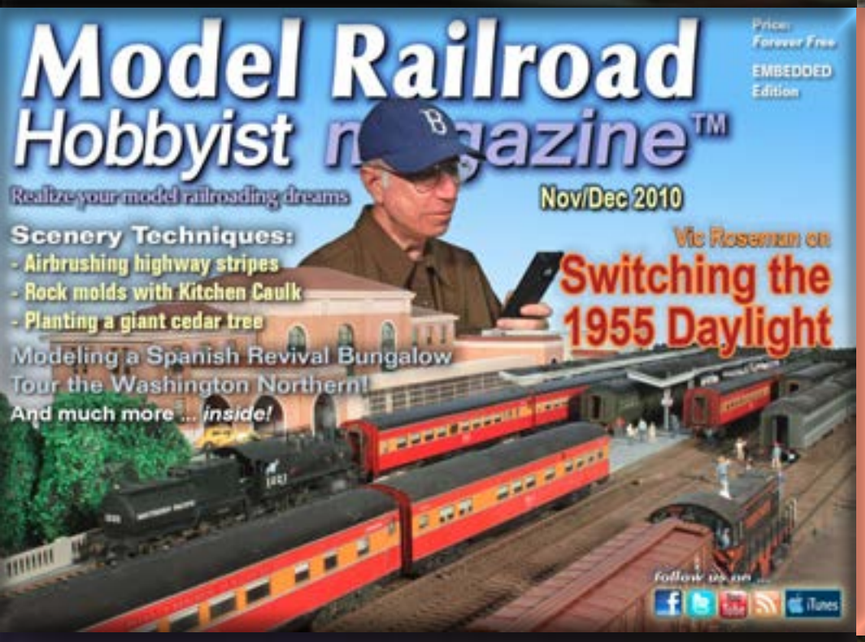
Grain trains also come into Portland. Those cars get sent to the Port of Portland elevator.

MRH: Well, Kent, thank you very much for letting MRH come in and interview you.

Kent: You're welcome. ☑

Reader Feedback (click here)

"I managed to negotiate a few extra square feet of space in the other room, made a hole through the wall for a tunnel, and moved Eugene to a new home. There's more staging capacity and even a balloon track making it easier to turn trains for the next session."



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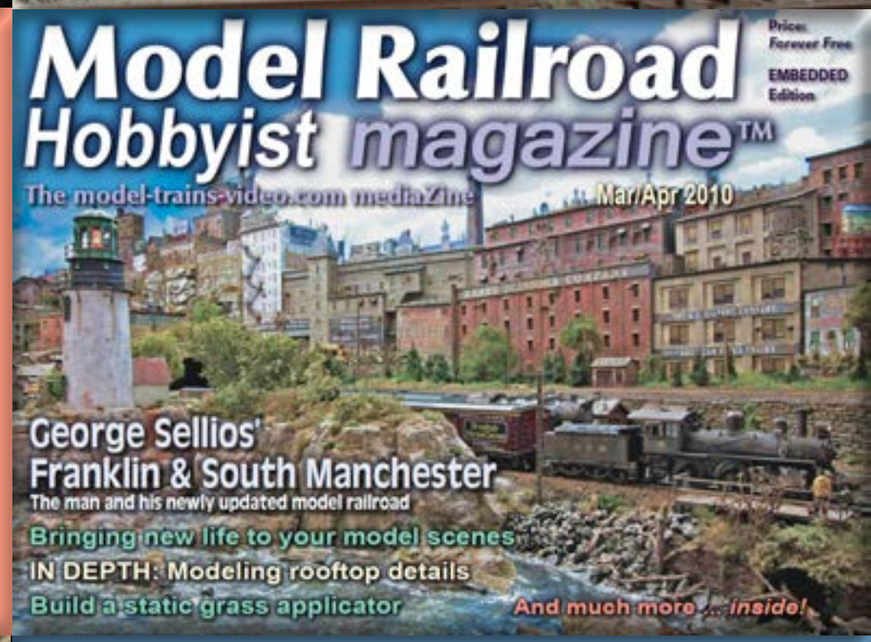
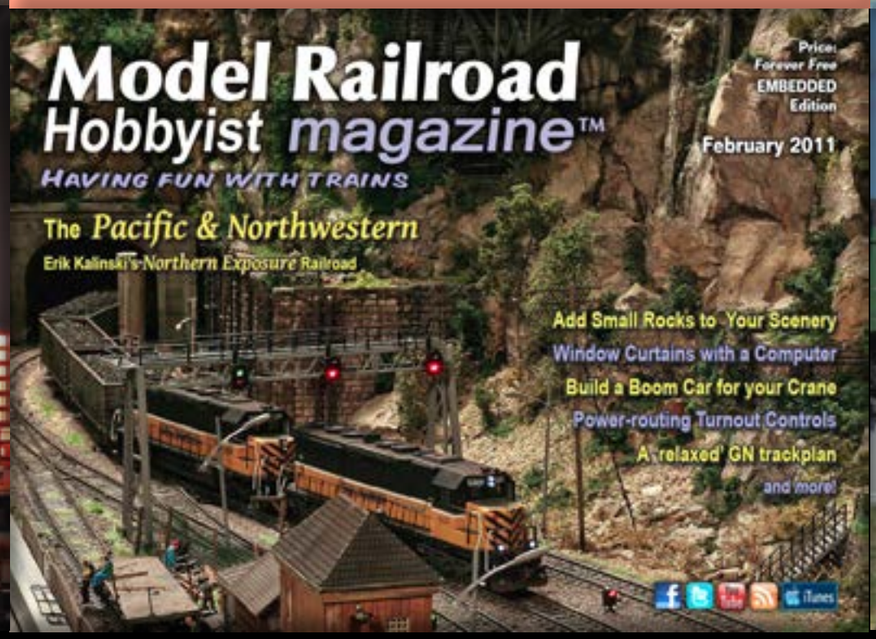




Model Railroad Hobbyist news™

Reader Feedback (click here)

October 2011

The Old Yardmaster

The latest model railroad news, products, and events

Kato USA has an exceptional offer that expires October 10, 2011. That doesn't allow much time to think about the offer, but if you are an N scale passenger car modeler this may be too good to pass up. Here's the deal: Kato's Parts Department is offering unassembled, unpainted parts for six N scale Superliner passenger cars for $85. The package includes parts for one of each Superliner car body and one material handling car (total of six cars). Appropriate trucks are included. The deal must be ordered direct from the Parts Department at www.katousa.com/Zcart/index.php?main_page=index&cPath=148...

Walthers will soon begin distributing products manufactured by ExactRail, the well-known maker of prototypically accurate HO and N scale rolling stock. ExactRail has previously functioned as its own distributor, selling its products direct to dealers and consumers. The availability of products, delivery schedules of new models, and pricing are expected to be announced soon...

Atlas Model Railroad Company is now selling Branchline freight and passenger car replacement parts including ends, roofs, doors, underframes, and more. Visit atlasrr.com/hoparts.htm for further details...

Two well-known traveling layouts are retiring to Florida. The 20' x 50' Sundance Central Modular Railroad that portrays Appalachian logging in 1:20.3 scale, and the spectacular On30 Muskrat Ramble layout that characterizes life in a Louisiana swamp in the late 1920s, are both being prepared for permanent display at the Suncoast Center for Fine Scale Modeling in Odessa, a coastal community near Tampa. Other creative models already on display at the museum include Dolly Varden layout, Steve Petit's amazing sawmill diorama, and Jon Addison's Silverton Central...

Harry Brunk's HOn3 Union Central & Northern is also heading for a permanent new home. Brunk's UC&N gained a following through his Up Clear Creek series that appeared over an extended period of time in *Narrow Gauge & Short Line Gazette* magazine. Rick Steele, of Labelle Models, recently acquired the UC&N and has generously donated it to the Depot Museum in Cheyenne, Wyoming...

Under the direction of Steve Gugel, the design team at Aristo-Craft is developing a 1:29 scale SW-1 diesel locomotive based on an existing prototype preserved in the Baltimore area. The 45mm gauge locomotive will use a slightly modified version of the successful gearbox Aristo-Craft developed for its large scale PCC trolley. The SW-1 is expected to be available by mid-2012...

RSlaser Kits has acquired all of the designs, molds, and rights to produce and market the structure and conversion kits formerly owned by Stevens Creek Models. The purchase was finalized the last week in September. Details are pending but RSLaserKits expects to begin manufacturing kits originally designed by Stevens Creek within the next 30 to 45 days. Stevens Creek will continue to sell its sea gulls and extensive line of HO, S and O scale window glazing for Grandt Line and Tichy windows and doors. More info at rslaserkits.com.

Turner Models continues to make steady progress on developing a kit for an On3 version of the oil dock at Chama, New Mexico. Masters for all of the detail parts have been delivered to Wiseman Model Services where the casting molds will be prepared....

Rusty Stumps will introduce an O scale kit called the Hoosegow at the Craftsman Convention to be held next month in Mansfield, Massachusetts. The model will show brick facing on both the interior and exterior of the two-room jail. The kit will include appropriate bars on the doors and windows...

Contrary to rumors being discussed in some traction circles, Bowser has no plans to end production of its Jewett trolley car. Non-powered trailer versions have been discontinued, but powered models of the HO scale metal-bodied trolleys continue to be available…

Terry J. Wegmann passed away September 5, 2011, in Westminster, California. He was 67 years old. Terry had been under intensive care for liver and kidney failure for the past four months. Terry earned his living as a tool and die maker, and was a master craftsman in metal, plastic and resin. His passions included prototype railroading, model railroading, and tool making. He was a perfectionist and loved to tinker and develop new ways of perfecting miniature mechanisms. Terry created masters and tooling for many model railroad manufacturers including Kemtron, Cal Scale, A. W. Modelcraft, N&G Signal, and Details West. He also designed and cut the tooling for the highly-regarded HO scale PFE R-30-18 refrigerator car marketed by InterMountain Railway Company. Terry was an avid railfan and photographer, and was an active member of the Los Angeles Slide Exchange. He was born and raised in San Diego, and was a long-time member of the La Mesa Model Railroad Club which he joined shortly after its formation. Terry Wegmann served his country in the Vietnam War. He is survived by his brother Bruce Wegmann of San Diego…

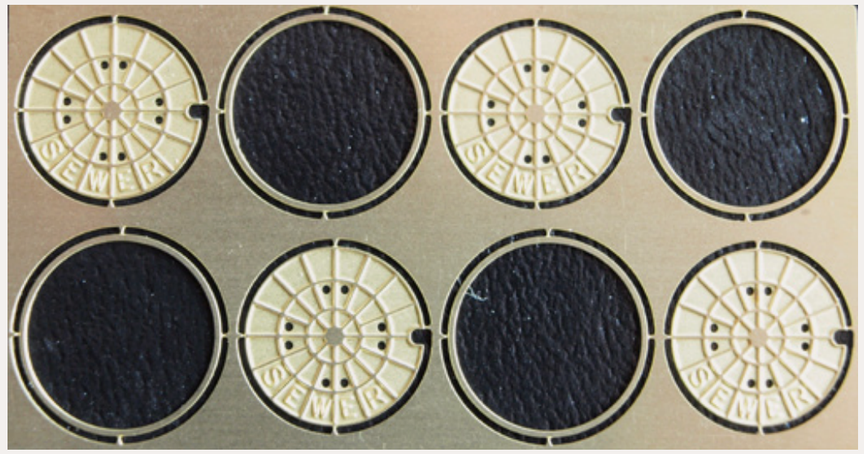
ALL NEW PRODUCTS FOR MULTIPLE SCALES

Prototype Railroad Images (rrimages.net) sells CDs of railroad subjects useful to model railroaders as reference material for various modeling projects. The collection of high-quality photos includes diesels, cabooses, MOW equipment, and all types of freight cars from a range of prototype railroads including Western Pacific, Sacramento Northern, Tidewater Southern, Southern Pacific, Cotton Belt, Pacific Electric, Northwestern Pacific, San Diego & Arizona Eastern, and Burlington Northern. Visit the above website for a sample and other details on CDs currently available. Coming soon is a CD of Burlington Northern Alco locomotives.

O SCALE PRODUCT NEWS

Bachmann Trains (bachmanntrains.com) has retooled its popular On30 scale 0-4-0 steam locomotive to include an NMRA-compliant decoder and SoundTraxx® Tsunami® digital sound technology. Based on an 8-ton prototype built by the Porter Locomotive Company, the upgraded Spectrum® series model features a

constant LED headlight , operating cab windows, die-cast boiler and frame, hidden drive train with ball bearings on the axles, die-cast drivers, metal valve guides, a detailed cab interior with coal bunker, and a choice of three exhaust stacks. The ready-to-run model is available with either a vertical or horizontal cab side-panel. Units with basic DCC (no sound) have an MSRP of $150.00 each. DCC sound-equipped versions are priced at $275.00 each.



Great Lakes Models (greatlakesmodels.com) has added O scale manhole covers to its assortment of authentic street details. (see page 111 of August 2011 MRH for the HO version). The etched-brass models are an effective way to add detail to a layout or diorama scene. Although modeled from prototype covers located in Milwaukee, Wisconsin, the new etched-brass manhole covers and rings are typical of municipal fixtures found in towns and cities throughout North America. A set of four covers and rings is available at $3.95. In addition to the obvious application of installing a ring and manhole cover in a roadway, the cover can be moved aside in a street maintenance scene, with the upper portion of a worker emerging. They can also be placed in the back of a municipal truck or stacked in a maintenance yard.

Stanley Storage Company is the latest O scale structure from **Mt. Albert Scale Models** (mtalbert.com). The O scale craftsman-style kit was introduced last month at the National Narrow Gauge Convention in Hickory, NC. The limited-edition kit is composed of laser-cut sheet wood and plywood, clapboard siding,

bass strip wood, a variety of detail parts from Tichy, a die-cast truck, and assembly instructions. A CD-ROM with color photographs of the construction process is also included. Some of the detail parts in the kit were created by Roger Malinowski of Stoney Creek Designs, who was also responsible for designing the model. The finished structure has a footprint of 8” x 11”. This limited edition kit is priced at $200.00 plus shipping. The kit is named for Stanley Windrim, a popular modeler from the Toronto area who died last year.

Rusty Stumps (rustystumps.com) will soon announce the availability of a new production run of shake shingles made from real cedar. The shingles come in 6.5” x 12” sheets and will be available in both O and HO scale. Rusty suggests staining or painting the shingles before installation to get a more random, aged look. Although we have not yet seen (or smelled) a sample, we understand the material is non-aromatic. Pricing is pending.

Late this year, **San Juan Car Company** (sanjuancarco.com) expects to begin delivering an all-new ready-to-run On3/On30 scale D&RGW drop-bottom gondola. The model will feature SJCCs Evolution™ couplers, and 3’ 7” arch bar trucks with On3 wheelsets. On30 wheelsets will be included with the factory-assembled model. The initial production release will include cars with four side-boards (700 series – see above), and five side-boards (800 series). The models will be available with either Flying Rio Grande or Moffat Tunnel herald at $94.95

each. The photo shows an assembled Grandt Line model and illustrates the general appearance of the forthcoming SJCC product.

Archer Fine Transfers (archertransfers.com) has expanded its line of 3D resin detail decals to include four new groups of closely-spaced rivets. The new rivet patterns are commonly found on streetcars and interurbans, but are well-suited to other modeling applications. Each sheet includes rivet heads in single rows, double rows, closely-spaced double rows, and staggered double rows. Separate sheets are available for either 5/8” or 7/8” rivet heads. O scale sheets are $17.95 each. HO sheets are $8.95 each. A picture of the actual rivet patterns is available on the above website. An extensive article on the application of 3D rivet decals appeared in the August 2011 edition of *Model Railroad Hobbyist* magazine.

Wiseman Model Services (wisemanmodelservices.com) has a kit to rebuild a Bachmann On30 Shay with an extended wagontop boiler. The kit consists of resin and white metal castings with wood, wire, and brass parts, plus a laser-cut wood floor. Instructions, drawings, and photos of a finished model are included. The kit sells for $119.95.

S SCALE PRODUCT NEWS

Lake Junction Models has introduced an S scale kit for this Baltimore & Ohio class I-1 wood caboose. The craftsman-style kit (item 4050) is for the narrow-platform version of the B&O caboose with coach-type steps. The kit is composed of over 250 laser-cut, photo-etched, and cast-resin parts, including

both styles of windows found on the prototype. Additional details include B&O style smoke jack and striker castings, etched-brass steps, ladders, platform railing, brake wheel, and window visors. The coupler box has been designed to accommodate Kadee® S scale couplers. Decals, trucks, couplers, and brake parts are not included in the kit. A PDF file of the instructions is available at lakejunctionmodels.com/Kit-4050.pdf. The kit is available exclusively from The Supply Car (thesupplycar@yahoo.com) at $69.95, which also offers the additional parts needed such as decals, Kadee® couplers, Grandt Line AB brake parts, and trucks. Other versions of the caboose scheduled for release in the near future include a wide-platform car with vertical steps, and a transfer caboose sans cupola.

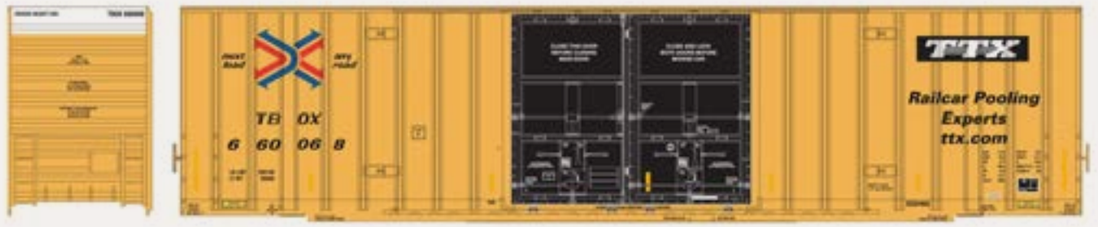
HO SCALE PRODUCT NEWS

Accurail Models' (www.accurail.com) October release includes HO scale kits for a Reading 41' steel gondola car at $14.98 each or $42.98 for a 3-pack, a 40' steel refrigerator car decorated for either Northern Pacific or SFRD at $15.98 each, an aluminum USRA hopper car decorated for Southern Railway at $13.98 each or $39.98 for a 3-pack, a CSX triple-bay covered hopper at $15.98, a Denver & Rio Grande Western 40' single-sheathed boxcar at $14.98, a Great Northern double-sheathed boxcar at $14.98, a Spokane Portland & Seattle 50' double-door boxcar at $14.98, and a 3-pack of Baltimore & Ohio 55-ton USRA twin-hopper cars at $37.98.

In February 2012, **Athearn Trains** (athearn.com) will release an undecorated model for a GP35 diesel locomotive. The body shell is from tooling originally developed by Rail Power, and represents a Phase 1a locomotive with multiple latches on the compartment doors, 36" radiator fans, thick side sill, three groups of louvers on the battery box cover, low-profile fuel tanks, flat inertial air filter hatch, photo-etched sunshades, cast metal air horn, and footboards or a snow plow pilot. The unpainted model will be fully-assembled and ready for operation on standard DC. A DCC Quick-Plug™ is included. Also included is an assortment of add-on detail parts such as fans, number boards, and handrails. The MSRP will be $129.98.

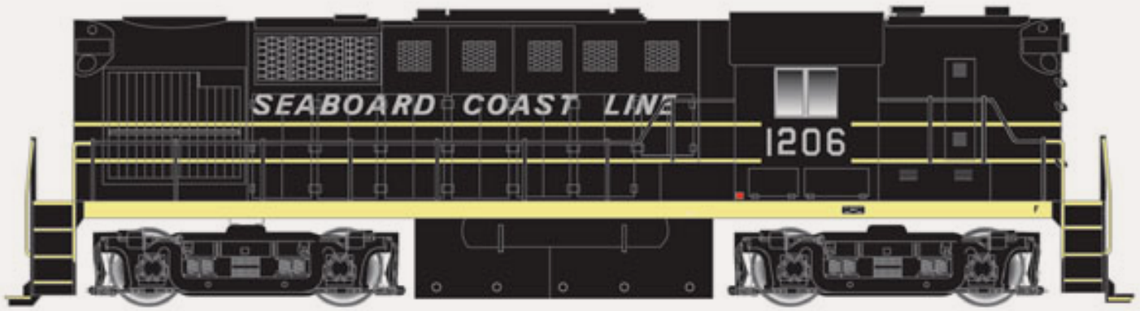
Athearn has scheduled several variations of two road names for its Genesis series GP9 locomotive for delivery next April. B&M locomotives 1706 and 1724 will have solid (friction) bearing trucks, while road numbers 1745 and 1749 will be equipped with roller bearing trucks. Also in the April GP9 release are three variations of an NKP locomotive including an early Phase II with four 36" fans, a Phase III unit with two 48" fans, and a passenger unit with a large fuel tank, steam generator, and torpedo tube tanks on the roof. Features on both versions will include Celcon handrails, walkway tread detail, separate air tanks, wire grab irons, etched radiator fan and intake grilles, window glazing, and operating microbulb headlights. Prototype details specific to phase and road numbers include grilles, fuel tanks, fans, dynamic brakes, battery access door, electrical cabinets, sunshades, uncoupling levers, MU stands, air filter box, air horn, headlight position, bell, truck sideframes, pilot details, and antennas.

Also due from Athearn in April is an HO scale F59 PHI diesel locomotive decorated for Amtrak California, Amtrak California (Stay Off The Tracks – I Pack A Punch), Amtrak California (Repowering the Rails to Spare The Air), and Seattle Sounder. The ready-to-run DC model will have an MSRP of $129.98.



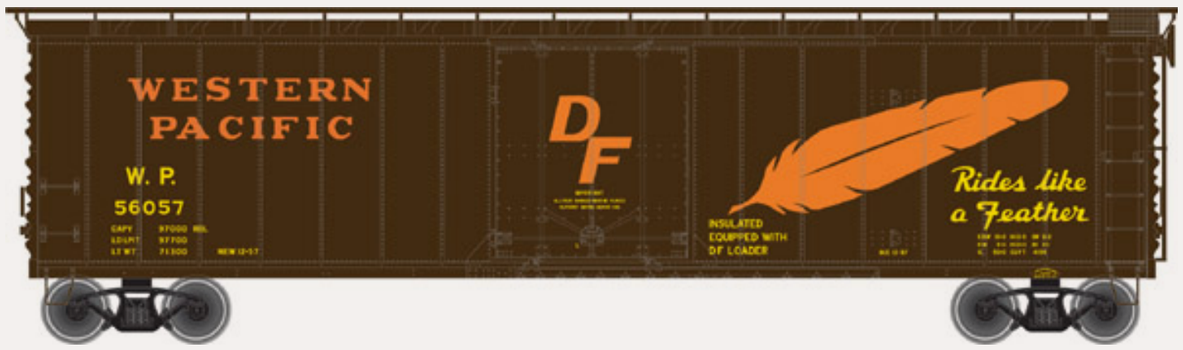
Additional products scheduled from Athearn in April include a 60' Gunderson DD Hi Cube boxcar decorated for Canadian National/DWC, CP Rail, TBOX, and TBOX (Forward Thinking slogan). The ready-to-run HO scale model features wire grab irons and metal wheelsets. The MSRP will be $39.98.

Atlas Model Railroad Company (atlasrr.com) plans to release its HO scale Alco RS-11 diesel locomotive with new paint schemes and road numbers during the first quarter of 2012. New road names will include Central Vermont, Duluth Winnipeg & Pacific, National Railway of Mexico, Northern Pacific, and Pennsylvania Railroad.



New road numbers will be released for Nickel Plate Road and Seaboard Coast Line (above). Atlas' Master Line ready-to-run model will have an MSRP of $129.95.

Also due from Atlas early next year is an HO scale kit for a 1937 AAR 40' box-car with Dreadnaught ends and a straight panel roof. Interior dimension of the prototype are 10' high by 40' 6" in length. Decorated versions of the kit will be priced at $13.95, with undecorated versions at $10.95. Detail is molded-on. Road names will include Canadian Pacific, Florida East Coast, Maine Central, Santa Fe, and as shown above, Northern Pacific and Union Pacific. The moderately-priced kit is from the previous Branchline Yardmaster series.

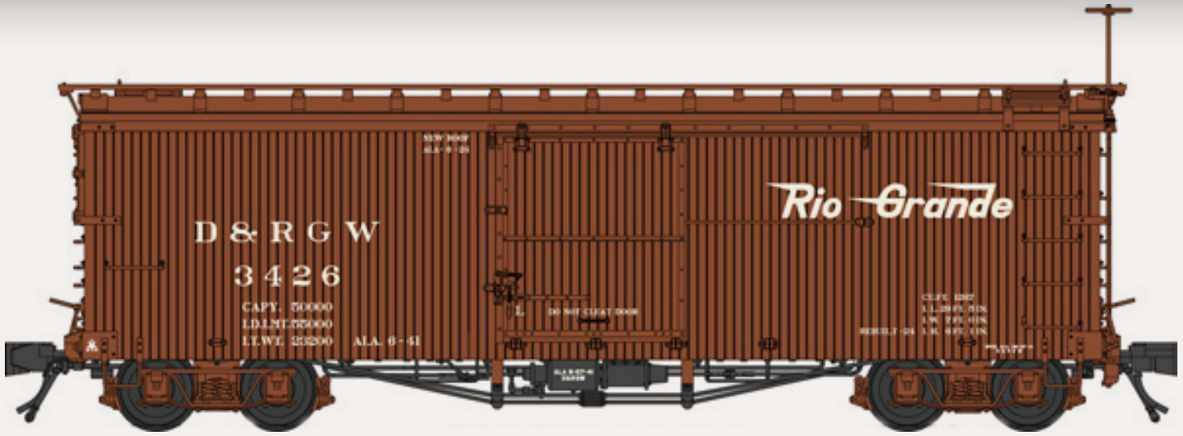


Atlas will also have a 50' plug-door class RB/RBL bunkerless refrigerator/box-car ready for delivery early next year. Decorated versions of the HO scale model will be priced at $28.95, with undecorated models priced at $24.95. Features of the ready-to-run model include overhanging diagonal-panel roof (either with or without a running board as per the prototype road), improved Dreadnaught ends, straight side-sill, and riveted 8/8 panel sides, as well as separately applied ladders, grab irons, and door latch-bars. Three numbers each will be available for Burlington-RBBX, Fruit Growers Express, Minneapolis & St Louis, Penn Central, Union Pacific, and Western Pacific (see above).

Atlas will release new paint schemes and road numbers for its AC&F Coalveyor gondola during the first quarter of 2012. Road names will include AIG Rail Services, First Union Rail, David J. Joseph, Sullivan Scrap Metal, Midwest Railcar, Transload America, Kansas City Power & Light, Utility Fuels (above), Wheelabrator Coal Services, and Wisconsin Public Service. Features of the HO scale ready-to-run Master Line models include a removable coal load and Accumate magnetic knuckle couplers. The cars will have an MSRP of $27.95 each.

Bachmann Trains (bachmanntrains.com) is selling bulk packages of trees in its SceneScapes™ line in both HO and N scale. Available now are conifer, spruce, and cedar trees, plus pine trees with traces of snow. N scale trees come 36 to a bag and range in size from 2" to 4." HO scale trees are 4" to 6" tall and come in packages of 24. The MSRP is $36.00 per bag.

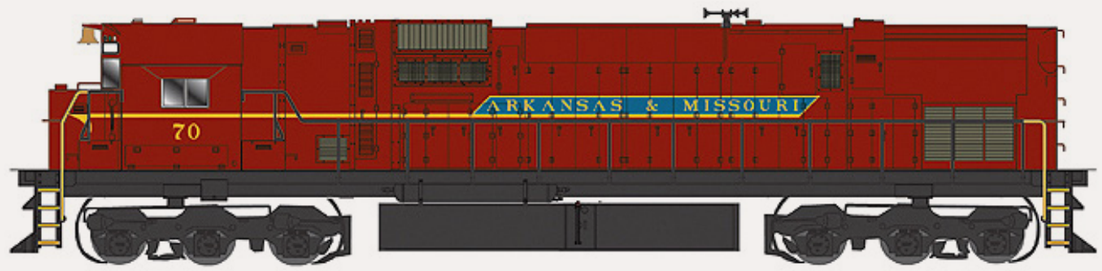
Blackstone Models (blackstonemodels.com) is taking reservations for the third release of its HOn3 version of Denver & Rio Grande Western 3000 series box-cars. As with previous releases, the injection-molded plastic ready-to-run models feature individual wire grab irons, Camel door hardware, underbody details



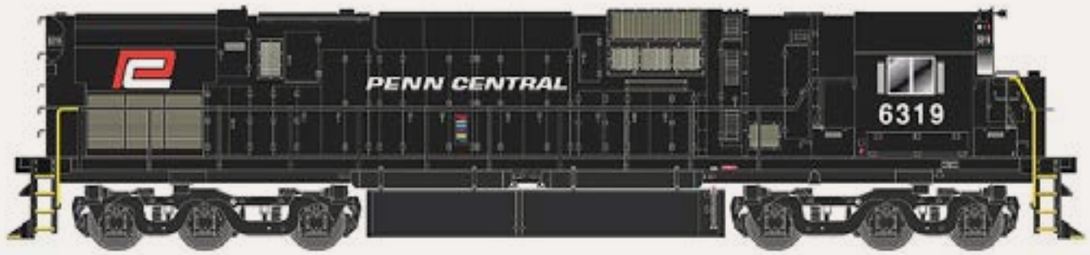
including brake rigging, arch bar trucks, and Kadee® 714 couplers. Six versions of the model will be available in the 2012 release. In addition to the Flying Grande herald scheme shown here (available in four different road numbers), the run will include car #3303 in the 1924-era scheme without a herald, and car #3146 with a Moffat Tunnel herald. The ready-to-run models are offered in a freshly-shopped finish at $74.95 each, or weathered at $84.95 each.

Blair Line has released several new scenic items including three new sets of vintage tin and porcelain signs. The replicas of authentic signs are printed in full color on thin styrene stock. The release includes two sets of general signs, plus a set of feed & seed signs commonly found in rural areas. Each kit includes two sheets with more than two dozen signs on each sheet. They are available in both HO and N scale at $5.00 per sheet. Additional new scenic items from Blair Line are stacks of laser-cut HO scale wood ties. These are an appropriate scenic effect for any right-of-way and are available both treated (creosoted) and untreated. Blair Line has expanded its selection of graffiti with two new sets of decals. All of the new items can be reviewed at blairline.com.

Bowser Manufacturing (bowser-trains.com) has released new road names on five of its popular HO scale kits including this PRR "turtle roof" boxcar decorated with a circle keystone herald as built in 1936. Also available is a PRR class F-30a flat car decorated in the 1950-era lettering scheme, and a Cumberland & Pennsylvania class GLa twin-bay open-top hopper decorated in the rebuilt scheme of 1942, a 55-ton fish-belly twin-bay hopper car decorated for Norfolk & Western (with peaked end), and a similar car with flat ends that is decorated for the Reading Railroad, including a colorful Anthracite herald. All of the kits feature one-piece plastic molded bodies, AAR 70-ton trucks with 33" wheels, car weights, and knuckle couplers. The kits are $14.95 each.



This month, Bowser will begin shipping its HO scale version of the Century C-630M as built by the Montreal Locomotive Works. The early October shipment will include models decorated for Canadian National (both zebra stripes and wet noodle), Cape Breton & Central Nova Scotia, Western New York & Pennsylvania, and Arkansas & Missouri as seen here. C-630M locomotives decorated for Canadian Pacific, and Pacific Great Eastern are scheduled to arrive in late October. The production run will be completed in November with the arrival of BC Rail schemes, and the balance of Canadian Pacific locomotives in traditional maroon-and-gray livery. Models in this run are priced at $169.95 for standard DC locomotives with an 8-pin DCC plug, or $269.95 for units with SoundTraxx™ DCC digital sound/decoder. We understand that many of the above items are already sold out at the factory, but some dealers may have stock available.



Hobbyists who missed out on the MLW version of the C-630M may want to consider reserving an ALCo-built C-630 which is expected to be available in May 2012. The run will reflect increased prices being imposed by the Chinese factories. The DC model will be $189.95, with the SoundTraxx Tsunami DCC digital decoder version priced at $299.95. Features of the Executive series C-630 include brass MU and air hoses, etched windshield wipers, steel grab irons, steel

uncoupling lever, operating headlight, window glass, can motor with flywheels, nickel silver wheels, and knuckle couplers. Unless noted otherwise, the ready-to-run models will come with Tri Mount trucks. Road names will include Penn Central (choice of big, small or red PC logo – see illustration), Reading including Rocket II version, Southern Pacific (choice of three nose logo styles: thin, bold or none), Conrail Patch (ex PRR), Conrail (Conrail patch over Reading or CR patch over Reading with Hi Ad trucks – see illustration), and Reading Bee Line Service (yellow and green) with Hi Ad trucks.

Centralia Car Shops has set a first quarter delivery date for new HO scale Union Pacific class CA-3 and CA-4 cabooses. The release will include six yellow paint schemes with various slogans plus one caboose in boxcar red. A PLE car will also be included in the run. Centralia Car Shops models are marketed by InterMountain Railway (intermountain-railway.com).

ExactRail (exactrail.com) is selling an HO scale version of a wheeled irrigation line. The unique watering system is seen in farming regions all across America. The delicate HO model is crafted from brass and comes in three sections that total 16.5” inches in length. The limited edition model is priced at $59.95.

Photo by Dave Hussey

ExactRail also showed a preview sample of its Evans-USRE 5277 boxcar (lower-left column) at the Western Prototype Modelers meet held in San Bernardino, Calif., in late September. A spokesperson for ExactRail said the models shown at WPM are preproduction samples and do not reflect the final version of the model, which, for example, will have the same drop-style grab irons found on the prototype. The production version of the HO scale ready-to-run model is expected to be released later this year decorated for BN-Burlington Northern, LOAM-Louisiana Midland Railway (above), Railbox, ROCK, and LEF-Lake Erie Franklin & Clarion. An undecorated kit will also be in the mix. The Evolution series models will have some prototype specific details such as the ex-NRUC plates on the door sides of the Railbox and BN cars. Pricing and availability are pending.

Photo by Dave Hussey

Also seen at the San Bernardino WPM was this early sample of an ExactRail BAR Pullman-Standard 50’ 5344 cf boxcar. Details on pricing and availability are pending.

InterMountain Railway (intermountain-railway.com) will release a full assortment of ATSF Caswell gondola cars in late March or early April. In addition to the class Ga-2 car shown here as rebuilt with a solid floor, the selection of Santa Fe cars will include Ga-X, Ga-4 (as built), Ga-9 (as built), Ga-10 (1930), Ga-11 (as built), Ga-11 (late ATSF lettering), and WA-5 (gray MOW). The HO scale ready-to-run models will have an MSRP of $29.95.

InterMountain expects to deliver an HO scale AAR 40' boxcar modified with 8-rung ladders and improved Dreadnaught 4/4 ends in March or early April. Cars in the production run will include a Canadian Pacific (1947-era Spans the World herald), CP (grain service), CPR, Canadian National (wet noodle), Canadian National (green maple leaf), Burlington Northern, and TH&B as seen here.

New releases from **Kadee Quality Products** (kadee.com) for October include this 50-ton standard AAR hopper car with offset sides decorated for C&I. The HO scale ready-to-run model comes with a removable load and has an MSRP of $42.95. Kadee's annual Christmas car also will be available this month. The 2011 edition is based on a 50' PS-1 boxcar, and is priced at $38.95.

Kadee's November release includes this B&O PS-2 two-bay covered hopper with notched hatch covers. It will be priced at $43.95. Also coming next month is a 50' PS-1 EL boxcar with a 9' door at $33.95, and a Central of Georgia 50-ton standard AAR hopper with offset sides at $42.95.

Railroad Kits (railroadkits.com) is selling an HO scale kit for Impervious Package Company, a 1900-era brick mill building. As shown here, the three-story structure has a footprint of 6" x 15". However, the modular design of the kit allows it to be built in several smaller configurations. The kit consists of Hydrocal®, resin, metal, wood and paper components. It is priced at $119.99.

Cranberry Church is one of the latest HO scale structure kits from **Ragg's to Riches**. The model is based on a prototype structure in Cranberry, North Carolina. The nicely-detailed model features a plywood core covered in peel-and-stick clapboard siding. Windows and doors are laser-cut wood. Six sheets of peel-and-stick shingles are provided with one specially cut to match the shingles used on the front wall of the church. The tapered front posts, bell, bell tower posts, and railings are injection molded plastic. The kit is priced at $125.00 and includes a 49-page instruction manual with 60 assembly photos. For additional photos and ordering information visit raggstoriches.biz.

Rapido Trains (rapidotrains.com) is developing an HO scale Pullman-Standard 6-4-6 sleeper based on plan 4183A delivered to CN in 1954. The plan is virtually identical to plan 4183 and 4197 delivered to several other roads between 1953 and 1955. The Rapido model features all-new tooling including a new underbody arrangement with separate brake, electrical, and steam lines. Additional features include etched-metal end gates, individual marker lamps, factory-applied individual grab irons, and trucks molded on all four sides. A battery-powered lighting system shows the interior details to advantage, including individually-molded seats and tables. Road names include Amtrak (Phase 1), Canadian National (3 schemes), Chicago & Eastern Illinois, Erie, Great Northern, Louisville & Nashville, Milwaukee Road, Missouri Pacific (Jenks blue), Nashville Chattanooga & St Louis, NYC, Northern Pacific, VIA Rail Canada, Wabash, and undecorated.

Red Caboose will have HO scale 1937 AAR boxcars with double doors ready for delivery in March/April. In addition to the Union Pacific model shown here, available road names will include MKT, Southern Pacific (sans serif lettering), Southern Railway, Wabash, and Illinois Central. Each road name will be available in six different car numbers. The MSRP will be $34.95. Red Caboose brand ready-to-run models are marketed by InterMountain Railway (intermountain-railway.com) .

Walthers (walthers.com) has scheduled a production run of its Proto™ SD45 locomotive for arrival next April. Road names will be D&RGW, EL, Montana Rail Link, and Seaboard System. Variable road-specific details on the EMD model include the type and location of the headlight, short or long ducting at the blower sill, pilots with either footboards or snow plows, different types of air horns, and various antennas. The positioning of the brake cylinders on the Flexicoil trucks will also vary depending on the practice of the prototype road. General specifications of the HO scale ready-to-run diesel include 14:1 helical gears, can motor, LED constant and directional headlights, and metal knuckle couplers. Direct current models will have an MSRP of $199.98. Models with DCC digital Soundtraxx Tsunami sound system will be priced at $299.98.

Walthers is preparing new schemes for its Proto™ 85’ Pullman-Standard 10-5 sleeper. In addition to the two-tone Santa Fe car shown above, the sleepers will also be available for Rock Island, and two schemes for the Pennsylvania Railroad (SLSF run-through scheme, and MP Eagle run-through scheme). The cars feature factory-installed grab irons, operating diaphragms, and 36” turned metal wheelsets. The HO scale ready-to-run models will be available in April at an MSRP of $64.98 each.

Walthers is devloping four versions of a Southern Pacific class C-30-1 steel caboose for release next April. SP decorating schemes will include caboose #701 (Roman lettering with bars), #706 (Roman lettering without bars), #850 (modern Gothic lettering), and #859 (reporting marks only). These numbers will be retired after this run. The C-30-1 (C for caboose, 30 for the weight in tons, and the dash number to indicate the design series number) was introduced in 1917. Although similar to earlier CA series cars, the new design offered important improvements such as a riveted steel underframe that improved crew safety in pusher service. By the late 1920s, SP had built over 600 class C-30-1 cabooses with the bulk of them remaining in service into the 1960s. Walthers Proto™ series HO scale

ready-to-run model features factory-installed grab irons, flush windows, 33" turned-metal wheelsets, and metal knuckle couplers. The MSRP will be $39.98.

Walthers' arrival schedule for April 2012 includes a new release for its Trinity Industries 14K molten sulphur tank car. Features will include individual grab irons, see-through etched-metal walkways and end platforms, extensive underbody details including steam inlet and outlet piping, brake pipe and rods, and 36" turned-metal wheelsets. Decorating schemes will include CGTX, GATX, ITDX, TGOX, TILX, and undecorated. The HO scale ready-to-run model will have an MSRP of $37.98.

Also coming in April are new schemes for a Proto™ 67' Trinity 6351 cf quad-bay covered hopper. Road names will include Greenbrier Management Services–BNBX, Badger State Ethanol–BSEX, CIT Group/Capital Finance–CITX, First Union Rail–FURX, Green Plains Renewable Energy–TILX, and GE Rail Services–NAHX. Features of the HO scale ready-to-run model include factory-installed grab irons, see-through etched-metal walkways and end platforms, and 36" turned-metal wheelsets.

N SCALE PRODUCT NEWS

Athearn (athearn.com) will deliver an N scale bay-window caboose next April, decorated for Santa Fe, Erie (radio slogan), Milwaukee Road, and Rock Island. Of special note are newly tooled trucks with axle mounted generator. Other features include end-walk detail, window glazing, and interior seats. Additional details per prototype practice include radio antenna, smoke jack, and roof vent. The ready-to-run caboose has an MSRP of $29.98.

Atlas Model Railroad (atlasrr.com) will release new road numbers and decorating schemes for an N scale Coalveyor Bathtub gondola as built by ACF in the 1980s. The ready-to-run N scale models will be available in the first quarter of 2012. They will have an MSRP of $22.95 and will feature 100-ton roller-bearing trucks and removable coal loads. New road names and decorating schemes will be offered for AIG Rail Service-AIGX, First Union Rail-NDYX, David J. Joseph-DJJX, Sullivan Scrap Metal-EAMX, Midwest Railcar-MWCX, and Transload America-TLAX. Previously issued models will be available with new road numbers including Wheelabrator Coal Service-RTPX, Utility Fuels-UFIX, Wisconsin Public Service-WPSX, and Kansas City Power & Light-KCLX. An undecorated model will be available at $15.95.

Also coming from Atlas is a 40' plug-door boxcar decorated for Detroit Toledo & Ironton, BC Rail, Penn Central, Seatrain, ThermIce Corporation, and Fruit Growers Express. The ready-to-run Trainman series N scale models have an MSRP of $11.95.

BLMA Models (blmamodels.com) is selling ready-to-run N scale models of Trinity five-unit spine cars with TTAX (Trailer Train) reporting marks in four different numbers. Features include detailed hitches, etched-metal components, metal wheelsets, and body-mounted Micro-Trains™ magnetic knuckle couplers. The five-unit model has an MSRP of $124.95.

Centralia Car Shops has set a first-quarter delivery date for a new N scale Union Pacific class CA-3 and CA-4 cabooses. The release will include six yellow paint schemes with various slogans, plus one caboose in boxcar red. A PLE car will also be included in the run. Centralia Car Shops brand models are marketed by InterMountain Railway (intermountain-railway.com).

Centralia has N scale ready-to-run models of a Pullman-Standard smooth-side 48-seat diner that features wire grab irons, detailed interior with lights, and Micro-Trains trucks and couplers. In addition to the New York Central 20th Century Limited version shown here, the car is also available decorated

as New York Central (postwar scheme), Pennsylvania Railroad (Fleet of Modernism), Pennsylvania Railroad (Tuscan three-stripe scheme), Baltimore & Ohio, Burlington Northern, Illinois Central, Norfolk & Western, Union Pacific, and Amtrak (Phase 1 scheme).

The diner is also available decorated for western railroads including Southern Pacific (four schemes: Overland, City of San Francisco, Golden State, and Sunset), Burlington Northern, Canadian National, Great Northern (Empire Builder and big sky blue schemes), and the Northern Pacific scheme shown above. The models have an MSRP of $49.95 each. As noted above, products manufactured by Centralia Car Shops are marketed by InterMountain Railway (intermountain-railway.com).

Eastern Seaboard Models Corporation (esmc.com) has ready-to-run N scale models of a Magor-Pacific Car & Foundry 40' XIH boxcar decorated for Okee Inc., and Canadian Pacific (with charcoal heater). The ready-to-run model features etched-metal running boards and brake wheel platform, Micro-Trains™ trucks, and body-mounted couplers.

InterMountain Railway Company (intermountain-railway.com) has set a March/April delivery date for an N scale AAR 40' boxcars modified with 8-rung ladders and Improved Dreadnaught 4/4 ends. The production run will include this Canadian Pacific (1947-era Spans the World herald, (HO version shown), CP (grain service), CPR, Canadian National (wet noodle), Canadian National (green maple leaf), TH&B, and Burlington Northern.

Here is an early look at pre-production samples of **Kato USA's** (katousa.com) upcoming Chicago Metra MP36PH and bi-level gallery cars. The N scale Metra commuter train will be offered as a four-car starter set consisting of Metra MP36PH locomotive #427, two-gallery bi-level coaches, and one-gallery bi-level cab-coach. Although pricing was not firm at press time, Kato says the starter set will be in the $180.00 to $190.00 range. Individual locomotives will be available at $110.00 to $120.00, along with separate coaches targeted at $25.00 to $30.00 each.

Kato will deliver an N scale version of GE's P42 Phase 1, 40th Anniversary Amtrak #156 in January. This is a logical follow-up to locomotive #145, which currently is available at Kato dealers. Familiarly known as General Electric's Genesis locomotive, Amtrak bought the contemporary P42 to replace EMD's F40PH on most of its routes. Scheduled for arrival in January, Kato's N scale P42 features body mounted Kato magnetic-knuckle couplers, illuminated number boards, and LED headlights. Tentatively priced at $120.00 each, the standard DC locomotive is ready for after-market DCC decoders such as Digitrax DN163KOA. In conjunction with the availability of the anniversary P42 locomotive, Kato will issue a rerun of the previously sold-out Amfleet II coach in Phase IV colors with new car numbers, along with a new four-car set of Phase IVb Superliners.

Also due in January from Kato is a series of N scale well cars with two sets, each decorated

for BNSF, Pacer Stacktrain, and TTX. Each set of triple-articulated cars comes with six 53' magnetic containers. Pricing is still pending but is expected to be in the $95.00 to $100.00 range. This January release replaces the originally announced run of Maxi-IV TTX cars with EMP green containers, and while they will still have the same road numbers as the previously announced run, tooling modification required a change in the factory item numbers. If you have already placed a reservation with a dealer, it would be a good idea to make sure that your original order has been updated to the new product item number.

Micro-Trains Line (micro-trains.com) has announced several N scale ready-to-run cars including a CP Rail P-S 4427 cf triple-bay covered hopper at $23.75, a BNSF 50' exterior-post boxcar with a load at $24.65, and a Western Maryland depressed-center flat car at $24.95.

Train Worx (train-worx.com) is selling its Pullman-Standard 85' fishbelly flat car decorated in the brown Trailer Train scheme. Pat Sanders of Train Worx reports that this has been the most requested paint scheme since the N scale body style was announced. Companion trailers will include corrugated units decorated for Texas and Pacific (MoPac), Milwaukee Road, and Atlantic Coast Line. Drop-frame trailers will be available for Texas and Pacific (MoPac), Illinois Central Gulf, and Milwaukee Road.

NEW DECALS, SIGNS AND FINISHING PRODUCTS

Bluff Creek Trains (Box 35, Pilot Mound, Iowa 50223) has decals for FDDM&S-Fort Dodge, Des Moines and Southern Railroad. Each set has two decal sheets with color inserts. The N, HO and O scale decal sets are $10.00, $12.00, and $18.50 respectively, plus $1.25 per order for shipping up to four sets.

John Harker, Box 703, Ames, Iowa 50010, is selling decal sets for the Minneapolis & St Louis red diesel locomotive. The decals are an upgraded M&StL set no longer available from Microscale. The new decals were revised by John Harker and Gary Groat to include road numbers and number board sets in appropriate sizes for F units, GPs, RS-1s and SD-7s. The HO scale sets are $7.00 plus $1.25 shipping. Dealer inquiries are welcome. John is ready to answer questions at 515-520-7400.

Coming soon from **Microscale** (microscale.com) are new HO and N scale decals for SCL woodchip hoppers and gondolas, SPFE/UPFE orange boxcars, and O-scale freight car data.

Meanwhile, Microscale has released a large number of new and revised decal sets in various scales. The list includes Union Pacific diesel hood and cab units, Milwaukee Road E and F diesels, Chessie System cabooses, Nacionales de Mexico (NdeM) dark green and red diesel scheme, Montana Rail Link hood diesels from 1988 forward, Pacific Fruit Express ice reefers including UP "Overland Shield" circa 1936 – 1942, Louisville & Nashville caboose, Rutland diesels, General Electric diesel numberboards, Northern Pacific caboose, Canadian Pacific cab diesels (maroon and grey scheme), Norfolk & Western early style lettering for hood diesels, BC Rail 50' boxcars, New Haven U25B, and C-425 McGinnis & Alpert diesel schemes. Also new are decal sets for CSX blue, grey and yellow diesel scheme; CSX covered hoppers including Trinity 2980 and P-S 4785 and 2600 c-hops; Union Pacific diesel renumber patch for ex-CNW, SP, and DRGW; and diesel hood sets for Buffalo & Pittsburgh, Genesee & Wyoming, and Rochester & Southern. ☑

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Our website and free magazine reach continues to grow, so get on board with this new media train that's hard to stop!

About our news and events editor

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 1960s.

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

Reader Feedback *(click here)*

Selected Events

October 2011

CALIFORNIA, SAN LUIS OBISPO, October 6-10, Central Coast Railroad Festival, highlight includes 17 self-guided layout tours in San Luis Obispo and northern Santa Barbara counties. Details at ccrrf.com.

CALIFORNIA, SAN PEDRO, October 15-16, 2011, Belmont Shore Lines (N scale), and Angels Gate Hi-Railers (O scale) combined open houses, 3601 S. Gaffey Street. Details from Bill Costley 310-831-1140.

CANADA, ONTARIO, October 2, 7th Annual Muskoka Model Railroad Layout Tour. Visit 20 home layouts from N to G scale in Alliston, Beeton, Stroud, Orillia, Severn Bridge, Gravenhurst, Bracebridge, and Huntsville. Tour maps available September 1. For info contact roger.berkeley@primus.ca or Al Crisp at beez_al@bell.net.

CANADA, ONTARIO, OTTAWA, October 15-16, 2011, RAILFAIR OTTAWA, Algonquin College Woodroffe Avenue south of Baseline Road. Info at railfair.ca.

CONNECTICUT, ORANGE, October 9, New Haven & Derby Model Railroad Club's 19th Annual Model Train Show featuring operating layouts in HO, N, T, S and O gauges, clinics, vendors. Free parking and wheelchair accessible. High Plains Community Center, 525 Orange Center Road. Info at newhaven-derby-modelrailroadclub.org.

ILLINOIS, LISLE, October 20-22, RPM-Conference (formerly Naperville RPM meet) hosted by Joe D'Elia. Blue-ribbon list of speakers includes Jack Burgess, Richard Hendrickson, Tony Koester, Martin Lofton, Brian Marsh, Scotty Mason, Mike Rose, Bill Schaumburg, Andy Sperandeo, Mont Switzer, Tony Thompson, Bill Welch, and others. Friends of the Freight Car dinner Thursday hosted by Richard Hendrickson and Tony Thompson. Vendor displays. Single day registration available Saturday at door. Hickory Ridge Marriott (630-971-5000). Info at ppw-aline.com.

MARYLAND, TIMONIUM, October 29-30, Great Scale Model Train Show & Railroad Marketplace at Maryland State Fairgrounds. Produced by Howard Zane and Ken Young.

MASSACHUSETTS, PEABODY, October 13-15, Fine Scale Model Railroader Expo. New event includes extended paid clinics from experts including Lou Sassi, Dave Frary, Bob Hayden, and Bob Mitchell. Peabody Holiday Inn. For clinic fees and additional details visit modelrailroadexpo.com.

NEW JERSEY, BRIDGEWATER, October 1, Northeastern Fallen Flags, Prototype Modelers Meet at Ted Blum 4-H Center, 310 Milltown Road. Model displays, vendors, auction and camaraderie. Clinicians include Craig Bisgeier, Jim Dalberg, Modeling Hopper Cars of the Anthracite Roads, Ralph DeBlasi, Ron Giordani, Mike Gossman, Jim Harr, Mike McCann, Dave Messer, and Henry Freeman. Info at http://groups.yahoo.com/group/neffrpm/.

NORTH CAROLINA, CARY, October 27-30, NMRA Mid-East Regional Convention at Embassy Suites Hotel, Raleigh-Durham-Research Triangle East, 201 Harrison Oaks Blvd. Info at mer.nmra.org.

OHIO, WEST CHESTER, October 29-30, NMRA Cincinnati Division 7th Annual Model Train Show. Lakota West High School, 8940 Union Centre Blvd. Info at cincy-div7.org.

OREGON, SALEM, October 22, NMRA PNR Division 2 Fall Meet. Morning clinics, afternoon layout tours. Court St. Christian Church, 1699 Court St. (at 17th), Salem OR 97301. More info at 2dpnr.org/?q=node/5

SOUTH CAROLINA, MYRTLE BEACH, October 15-16, Grand Strand Model Railroader's 2nd Annual Train Show & Sale, Lakewood Conference Center, 5873 South Kings Highway. Info from Fred Jackson at fjack12134@aol.com.

TEXAS, HOUSTON, October 8-9, Big Texas Train Show. Operating layouts, museum and club displays, model railroad and railroadiana vendors, manufacturers displays. George R. Brown Convention Center, sponsored by Houston Railroad Museum and the Gulf Coast Chapter, National Railway Historical Society. Info at bigtexastrainshow.com.

November 2011

CALIFORNIA, LOS ANGELES, November 5-6 and 12-13. Pasadena Model Railroad Club Sierra Pacific Lines Fall Show. One of the world's largest layouts with over 1,700 feet of mainline track, 42 inch minimum radius, controlled by 10 mainline cabs. 5458 Alhambra Avenue. Info at pmrrc.org.

KANSAS, BENTON (Wichita area), November 5-6, Railroad Prototype Modelers Meet, Benton Lions Community Center, 150 S. Main Street. Info at midcontinentprototypemodelers.org.

MASSACHUSETTS, MANSFIELD, November 2-5, Craftsman Structure Convention, Holiday Inn. Info at csc11.net.

MICHIGAN, LANSING, November 3-6, NMRA North Central Region, Lansing Legacies Convention. More than 25 clinics including make-and-take clinics, operating sessions, prototype tour, visits to 25 home layouts including narrow gauge and traction. HQ at Ramada Inn, 7501 W. Saginaw Hwy. Info at lansinglegacies2011.webs.com or send email to lansinglegacies2011@yahoo.com.

Selected Events *Continued ...*

MICHIGAN, LIVONIA, November 27, Model Railroad Show & Workshop, Civic Park Senior Center, Farmington and Five Mile Roads. Info from Mark Ellis at 734-421-2673 or emark@sbcglobal.net.

NEW YORK, ALBANY, December 4, NMRA Berkshire Division and Train Associates present Great Train Extravaganza. Free seminars, operating layouts in most scales, 200 sales tables. Empire State Convention Center. Information gtealbany.com or call (518) 668-9892.

NEW YORK, HICKSVILLE, November 25-27, December 2-3, and 9-11, West Island Model Railroad Club Annual Open House, 485 So. Broadway, Unit 22A.

PENNSYLVANIA, MONACA, November 20, Beaver County Fall Model Train Show, Center Stage, 1495 Old Broadhead Road. Info from Walt Steiner 724-843-3783 or bcmrr.railfan.net.

WASHINGTON, KENT, November 12, 32nd Annual Model Railroad and Railroadiana Swap Meet, 9:30am to 4pm. Sponsored by the Boeing Employees Model Railroad Club. Kent Commons Rec. Center, 525 Fourth Ave. N, Kent, WA 98032. More info at www.bemrrc.com.

Future 2011

CALIFORNIA, DEL MAR, December 3-4, The Great Train Expo, Del Mar Fairgrounds. Info at greattrainexpo.com.

INDIANA, INDIANAPOLIS, December 17-18, The Great Train Expo, Indiana State Fairgrounds. Info at greattrainexpo.com.

Future 2012

CALIFORNIA, SANTA CLARA, February 9-11, 2012, 22nd Annual O Scale West 2012 (includes 6th Annual S West meet), model displays, vendor displays, movies, swap meet, and layout visits. Hyatt Regency Santa Clara. Details from Rod Miller at rod@rodmiller.com or visit www.oscalewest.com.

CANADA, ONTARIO, OTTAWA, May 5-6, 2012, Ottawa Train Expo, featuring layouts, models, displays, clinics, demonstrations, and tours. Billed as the largest train show in Eastern Canada. Carleton University Fieldhouse, off Bronson Ave.

FLORIDA, COCOA BEACH, Jan 5-7, 2012, Prototype Rails 2012, RPM meet hosted by Mike Brock. Hilton Hotel, 1550 N. Atlantic Ave. Call 800-526-2609 or 321-799-0003 for reservations.

MICHIGAN, GRAND RAPIDS, July 29-Aug 4, 2012, NMRA National Convention and National Train Show.

NEW MEXICO, ALBUQUERQUE, February 16-18, 2012, 27th Annual Sn3 Symposium. Details at Sn3-2012.com.

NORTH CAROLINA, BREVARD, October 12, 13, 2012, Narrow Trak 12.

OHIO, HILLIARD, May 18-20, 2012, 4th Ohio N-scale Weekend, Franklin County Fairgrounds, hosted by Central Ohio N-trak. Info at www.centralohiontrak.org.

OHIO, MARION, April 12-14, 2012, Central Ohio RPM, Marion Union Station. Details at hansmanns.org/meet.

OREGON, MEDFORD, May 2-5, 2012, Siskiyou SUmmit 2012 Joint Convention – PCR and PCR regions. Details at www.pcrnmra.org/conv2012.

PENNSYLVANIA, MALVERN, March 23-25, 2012, RPM-Valley Forge Meet. Info at phillynmra.org/RPMMeet.html.

WASHINGTON, BELLEVUE, September 12-15, 2012, National Narrow Gauge Convention.

Future 2013

CALIFORNIA, PASADENA, August 28-31, 2013, National Narrow Gauge Convention.

MINNESOTA, BLOOMINGTON, April 25-28, 2013, 28th Annual Sn3 Symposium. Details at sn3-2013.com.

NEW MEXICO, ALBUQUERQUE, June 6-9, 2013, Rails Along the Rio Grande 2013, NMRA. Rio Grande Division 6, Rocky Mountain Region Convention with clinics, layout tours, train show, OpSig sessions, UPRR and BNSF modelers showcase night, and banquet. Marriott Pyramid North. Info from Al Hobey at alhovey@comcast.net. ■

Reader Feedback (click here)

REVERSE RUNNING: Running backward toward fewer derailments

Stepping outside the box with a contrary view

Reader Feedback (click here)

— by Charlie Comstock

Can you back a train around your layout, at speed, without derailments? Derailments are all too common on most model railroads, and doing whatever you can to eliminate them is time well spent. For instance, running backward to test your track – hey, don't laugh!

Running backward is a much more stringent test of running qualities than going forward. Running backward at speed is the ultimate test of track, couplers, and wheels. Don't expect this to work with truck-mounted couplers which are a disaster in reverse. If your trains run well the wrong way, just think of how well they'll run going forward!

Here are two tips to minimize mystery derailments, the bane of every model railroader's existence:

- Dress the inside edges of each rail joint with a file. Any burrs can grab a flange and put things on the ties.
- Does the track tip side-to-side, even a bit? Test it with a known flat-surfaced object: does the flat object touch the railheads on all four corners – or does it wobble?

If it wobbles even a tiny bit, your equipment will rock side-to-side. If this happens enough, a car or loco with a stiff truck can lift a flange high enough to clear its rail, and on to the ties it goes – especially on a curve.

Track can sometimes become tipsy after it's installed and tested:

I laid some flex track on my first layout using Atlas track nails to hold it onto cork roadbed. I got overly exuberant driving the nails through the center of the ties. This put a lot of stress on the spike heads of that tie. Which eventually released their grip on the rail, and resulted in the rail sitting on top of the spike heads, lifting the rail on either side and creating a little lump in the track. Compounding the problem, this happened on a curve.

When trains passed through this area the cars and locos developed a serious rocking motion and certain equipment would derail. Did I mention this

"Running backward at speed will really help you locate problem areas with your track and rolling stock!"

happened inside a tunnel? I sure was glad I'd allowed access to that tunnel from the side! I think there are a couple of morals here: don't over-drive track nails or spikes, and allow access to the inside of your tunnels!

Sometimes a piece of rock can work its way under flex track ties during the ballasting process. Oops! Now you have tipsy track when it used to be flat!

If you do find a bad area in your track, often tweaking it will take longer and produce less satisfactory results than just replacing that track. This is especially true with turnouts or crossings.

When "mystery derailments" occur, here are some things to check:

- Look for ballast sitting on the railbase where wheel flanges can hit it.
- Inspect the full circumference of all wheels on the derailing car(s) for grunge buildup or chips in the flanges.
- All wheels and track MUST be correctly gauged. Get an NMRA gauge and use it. Close isn't good enough.
- Are wheel pairs centered on their axles? If they aren't, the trucks will run ever-so-slightly diagonally down the track with their flanges scrubbing the inside edges of the rails, looking for the slightest track imperfection so they can derail. This is a big problem for plastic wheels on steel axles.
- Look for debris on the ties between the rails. Dropped couplers, draft gear box covers, and truck bolster pins are common offenders and can be struck by wheels or coupler danglers. Couplers should be screwed into their draft gear boxes.
- Have you checked the height of your couplers? A low dangling glad hand can snag a closure rail and derail a car at a crossing or turnout
- Sometimes equipment derails at a spot far away from where you notice the derailment. Are you looking in the right place?

Finally, do you have a neighbor kid with a small-caliber Nerf Gun and derailments only occur when your back is turned? Running backward toward the kid might reduce those derailments too! ☑

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Coming in the Nov 2011 issue

- Beefing up a Central Valley truss bridge
- Rochester coal deliveries
- Canvas loco curtains from teabags!
- $35 challenge - part 2
- Pouring Envirotex water for a creek

... and lots more!

For the love of model trains

Derailments, humor, and Dashboard on next page ▶

Derailments

humor (allegedly)

"That'll do!"

Your Two Cents Worth ...

After the blizzard of '88 the US went through a massive rebuild and economic investment period. Labor was scarce so the 3' gauge Lancaster, Oxford and Southern RR (in Lancaster Country, PA) hired some local farmers as brakemen at 2 cents a mile.

While traveling south on the 1.5% downgrade from the yard in north Lancaster, the light 4-4-0 engine didn't have enough braking power and the train's speed climbed dangerously fast. The conductor was an old hand and both he and rear brakie began working as fast as they could with their oak staffs setting handbrakes on the car. But the farmer turned-brakeman at the smoky end, just stood on the roof of the first car leaning into the wind.

When the conductor finally got to the front end of the train he started cussin' at the brakeman trainee for not setting the brakes!

The farmer just yelled back, "Brakes? Why? I never made so much money so fast in my life!"

If you're the first to submit a good bit of humor and we use it, it's worth $10!

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When talking to hobby vendors, please remember to mention MRH.

Reader Feedback *(click here)*