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May 2011



HAVING FUN WITH TRAINS



Weathering with colored pencils

Overcoming beginner's paralysis
Building a log truck

Buying model trains on eBay
Jack Tingstad's The Cloud City & Western
and lots more, inside ...



Front Cover: Bill Beverly demonstrates how to weather rolling stock like this D&RGW narrow gauge stock car using water-soluble colored pencils and chalks. In this issue, Bill also shows you on video how it's done!

ISSN 2152-7423

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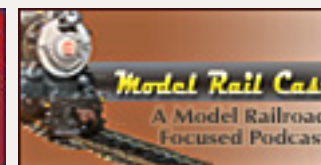
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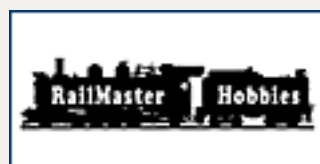
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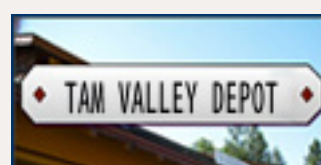
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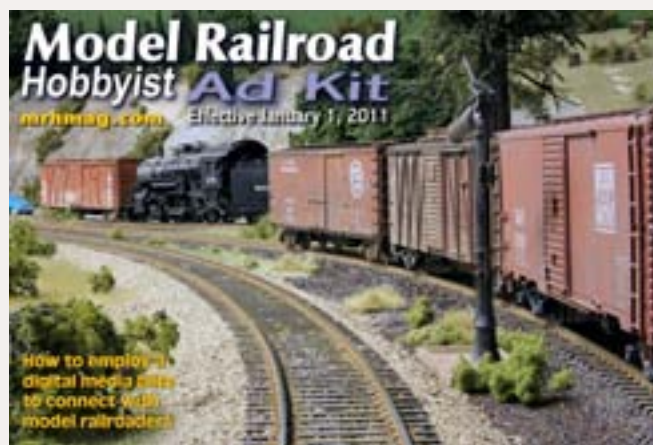
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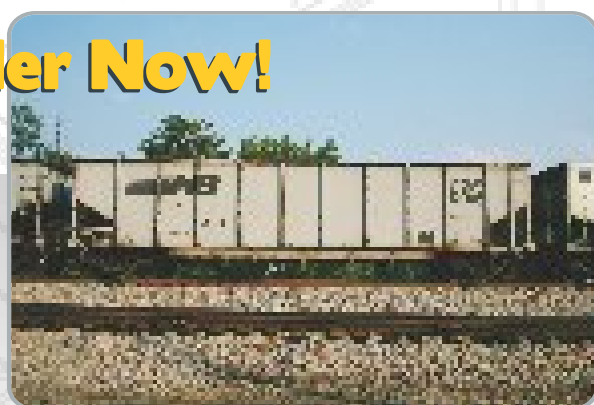


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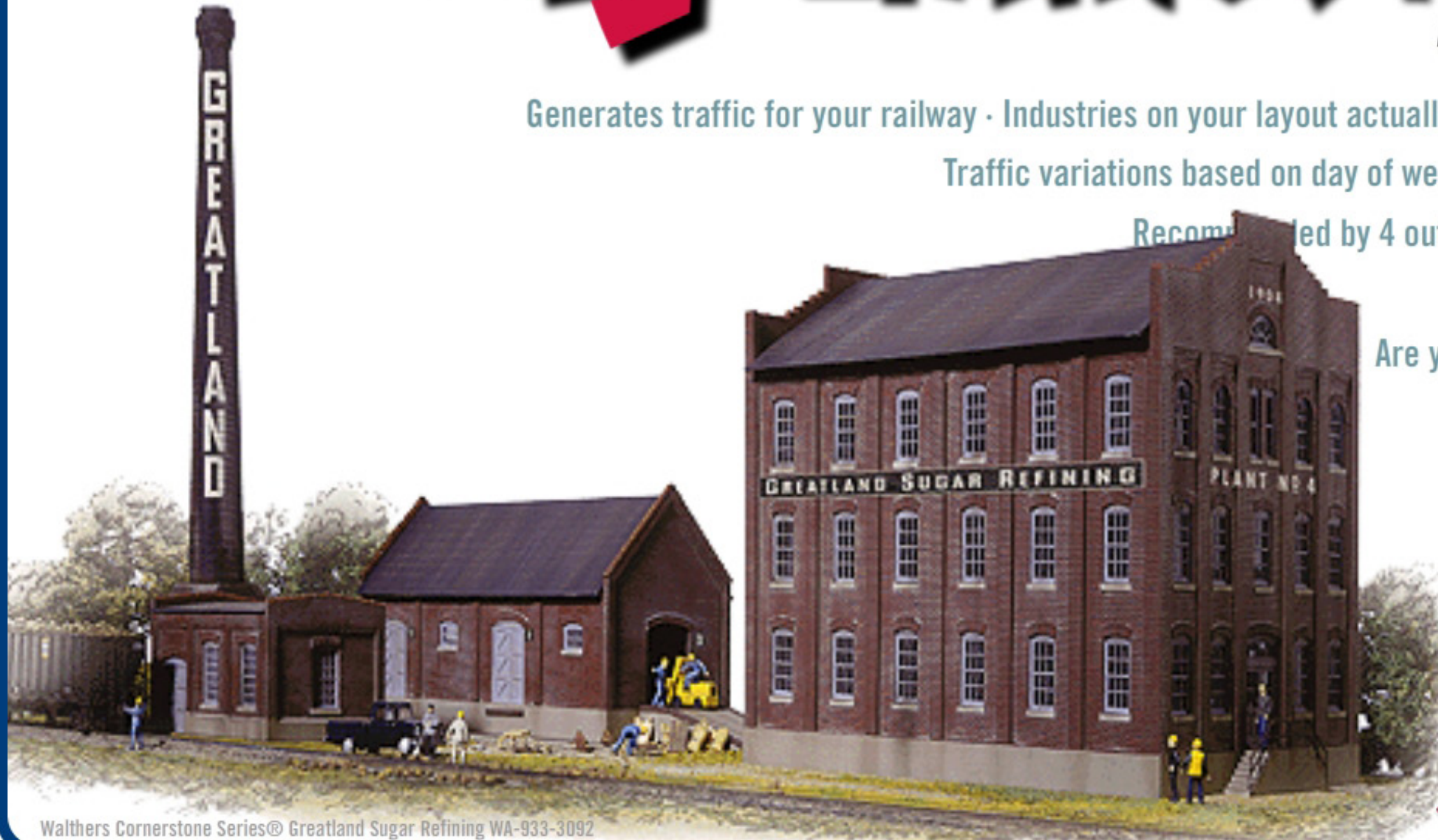
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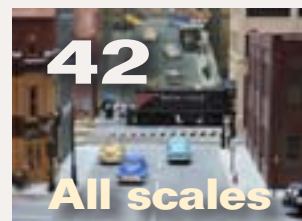
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About the Editor



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: Creative Personalities

Being different, like everybody else ...



Tired of look-alike layouts?

Life is made up of opposites: love vs hate, light vs dark, tastes-great vs less-filling. Most people want to belong somewhere, but not be a conformist – “Just like everyone else I want to be different!” Modelers may want to be different too. Let me ask, is a unique layout important?

Unique Layouts

In my opinion (for what that's worth!) a unique layout is one with a strong personality.

Personality comes when the builder/designer has a strong vision of what they're creating. They see the railroad before it exists and know what is needed to bring their dream to life. Whether their layout will model a car float operation, a granger line, a bridge

line through mountains, or a fantasy, the builder makes choices based on a vision of what the layout will be like when finished. If the pieces of the layout mesh well with each other, they give it an identity.

Avoiding cliches helps uniqueness. For example, every peninsula doesn't need a spindly wood trestle on the turnback curve. A layout populated with popular structure kits nicely assembled and weathered according to directions will lose uniqueness points compared with a kitbashed or especially a scratchbuilt structure. Since you've seen them 12,498 times before they're a bit ho-hum.

Don't Copy Other Layouts

Copying another model railroad may be the sincerest form of flattery, but it generally doesn't produce a layout with a unique personality. Such a layout often appears to be a second-hand vision. There are of course exceptions.

I mentioned cohesiveness before. Modeling from the prototype helps this aspect of a layout. Freelancing gives the builder much more latitude when selecting elements to include, but is more difficult in this respect – the builder needs to not only create the benchwork, lay track, and build scenery; they need make sure the elements on the layout are plausible when taken together. Contrary to the opinions of some, freelance is not an F-word.

Little Things

Little details make a difference. The detail level is part of a layout's personality.

A range of paint schemes on locos gives a sense of history. A consistent color scheme on company buildings is good.

Avoid absolutely flat scenery – even parking lots aren't completely flat. Experiment with different ways of modeling weeds and bushes and don't forget to show what season you're modeling!

Use different degrees of weathering to match the age of a model and how well it's owners maintained it. A well-maintained older building will have fresh paint while a poorly maintained building's paint may be peeling, even if the building is new.

Trucks and autos should have license plates that are mostly from the same state (or area).

If you overhear visitors saying, “I tell you, this layout's got great personality!” that's a good thing! It means your layout is your own!

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Notes from the

MRH STAFF

New article policy, our new web site is here, bonus downloads, and more ...



New article acceptance policy

Now that the dust is starting to settle from our move to monthly, we've taken a look at our article acceptance

policy and how to better align it with our monthly ad income.

Each month we get a budget we can spend on articles, and when the budget is spent, we have to wait until the next month.

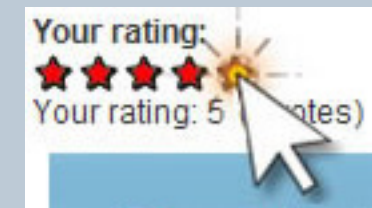
As things have evolved, we're finding we might be interested in an article but not sure if we will be able to use it. However, once we schedule an article to appear in an upcoming issue, we have no doubt we will use it.

So the staff has decided we should issue a tentative acceptance for articles we are interested in, but issue the official acceptance and payment once the article has been scheduled for publication.

This actually works better for us since it aligns better with our monthly spending budget. If we happen to get a large influx of articles on any given month, we generally don't have the budget to accept them all.

We hate to keep authors on the string about whether or not their article will be accepted. This policy change fits better with what our actual practice has been.

Now if you submit an article to us and we're interested in it, we'll issue a tentative acceptance, pending it getting scheduled for publication. Once we schedule it for publication, we'll issue the official acceptance notice and send out payment!



April 2011 Issue ratings

The top 5 articles the April issue were:

- 4.6 Detailing the backs of buildings, pt 1
- 4.5 Dave Adams' Durlin Branch
- 4.4 Installing a wood trestle, pt 2
- 4.3 MRH Questions, Answers, Tips
- 4.3 April News
- Issue overall: 4.7

Please remember to rate our articles (both the ones you like and the ones you don't), and influence the kind of articles we present!

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Our new web site is here

Finally, as of April 9th, our new web site move took place. We're now on our new faster, more beefy servers.

Reception has been good, and the new servers are rock-solid, not having gone down or hiccuped at all since April 9.

The new servers are also much faster than the old ones. Here's a few comments posted by some of you after we made the move:

"New Servers are Fast ... SUPER FAST!"
— *kleaverjr*

"This has WAY better performance ... Awesome!" — *skiloff*

"Nice transition. Other forums ... have not been near as quick." — *lexon*

"It looks fantastic ..." — *Hobo Al*

"Wowser, the new servers are super fast. Good move." — *LKandO*

So if you haven't dropped by the web site lately, you should come check it out using our new shorter URL: mrhmag.com.

Speaking of the web site

We regularly get emails from subscribers who need to change their email address asking us to edit their account for them.

We're a big fan of self-service, so we work to make it super easy for you to

edit your own email address. In fact, we also allow you to change your user name too, if you want.

Just go to our web site (mrhmag.com) and log in. If you've forgotten your user name, you can also use your email address to log in with.

If you've forgotten your password, click the **Reset Password** button. If reset password isn't working for you, you may need to adjust your browser settings [as described in our website help here](#).

Once you have logged in, click **My account** on the right menu to bring up your account profile. Then click the Edit tab to bring up your profile for editing.

If you scroll through your account profile information when in edit mode, you will see you can change your user name or email however you like. You can also change your password.

Once you're done making changes to your profile, click the **Save** button.

It's just that easy!

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Yes, MRH is free, so there's no need to subscribe, per se. But [subscribing is free](#), so we wonder why more people don't subscribe?

First, subscribing gives you many benefits you may not be aware of. For instance, we will automatically email you a reminder when each new issue hits our web site.

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Topic	Get it done! new	rtw3rd	10 10 new	13 hours 39 min ago
Blog	Womack Wire & Cable: the crane has been built! updated	Benny	40 38 new	15 hours 19 min ago
Topic	Friday Video Fun 4-22-11	Driline	12	22 hours 38 min ago
eZine	Detailing the Backs of Buildings - part 1	MRH	18	1 day 1 hour ago

Figure 1: Being a subscriber really helps when you visit the MRH web site as shown here. Once you log in, the site clearly indicates what posts are new or updated. To jump immediately to the new posts, just click the new posts link on the right of any item. For instance, if I click the 7 new on the first item, I will jump immediately to the top of the new posts for that topic thread.

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Standard Edition (zoom 200%)

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Figure 2: This illustrates the image quality of the Embedded edition versus the Standard edition. Both images have been zoomed to 200%. Notice the Embedded edition image quality holds up much better.

Standard or Embedded?

New readers often ask us what's the difference between the Standard and the Embedded editions besides file size? We tried to name them so the

difference was obvious, but it's worth explaining again.

The Embedded edition is just what its name implies: we embed all the media inside the PDF so the media will just

play right on the page. You don't need an internet connection.

However, videos and animations like our 3D click-n-spin aren't small – often they're several megabytes each. If we

embed a few videos and animations inside the PDF, that often adds 50 or 60 megabytes to the file size right there.

A less obvious difference between the Standard and Embedded editions is the still image quality. The Standard edition uses 72 DPI for images, while the Embedded edition uses 150 DPI.

Also, as of the April issue, the Embedded edition now works on Macs, Linux, and iPads. If the Embedded content won't play, then the Embedded edition gracefully drops back to playing the Standard edition media over the internet.

So even if the media won't play inside the PDF, it will still play over the internet for Macs, Linux, and on iPads. Regardless the higher quality of the Embedded edition is now available on those other platforms.

Shows we're doing in 2011

We're doing the following shows in 2011:

NMRA National Train Show

(Sacramento, CA) - Jul 7-10, 2011

National Narrow Gauge Convention

(Hickory, NC) - Sep 6-11, 2011

Fine Scale MR Expo

(Peabody, MA) - Oct 12-16, 2011

RPM-Conference


(Lisle, IL) - Oct 12-16, 2011

Craftsman Structure Convention

(Mansfield, MA) - Nov 2-6, 2011

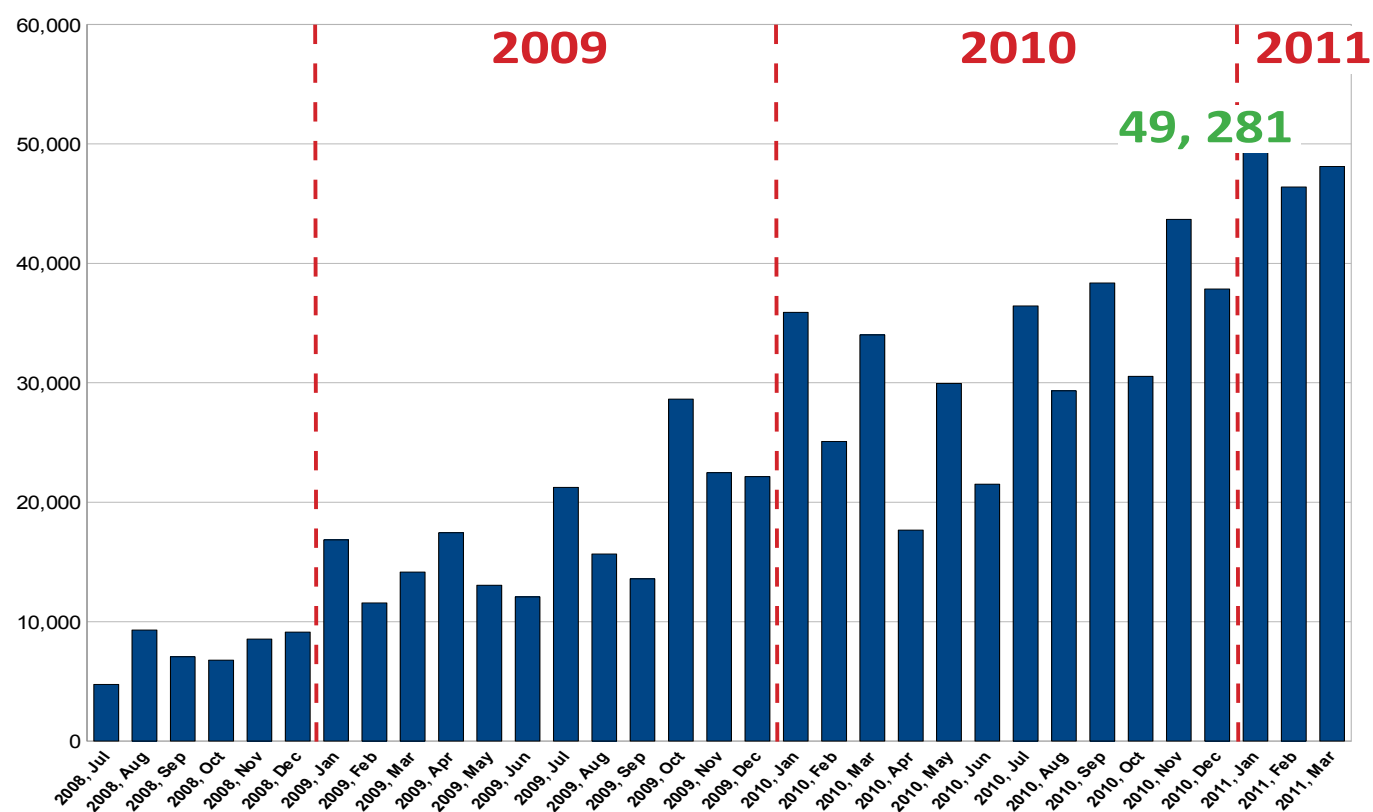
Trainfest

(Milwaukee, WI) - Nov 11-14, 2011

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Questions, Answers and Tips



QUESTIONS AND ANSWERS

Q: Just got my new soldering iron. What type of solder and flux do I need? Also, how do I clean the tip?

A: There are two basic kinds of soldering you may need to do in the hobby:

1. Electrical/electronic soldering
2. Metal model construction soldering

Let's take the electrical soldering first. For this a small "pencil" iron rated at around 35 watts works well and is a good size for general electronic soldering, such as DCC decoder wiring and locomotive lamps or LEDs, and for soldering feeder wires to rails.

For electrical soldering, use a rosin-core solder such as Radio Shack #64-002.

The rosin in the core of the solder acts like a flux to clean oxide from the metal and help the solder flow.

Avoid using an acid flux – acid corrodes the metal over time. And *never* use an acid flux for electronic soldering.

The first thing you should do with your new soldering iron is "tin" the tip with solder.

To tin the tip, heat the iron to operating temperature, then wipe the hot tip with a damp paper towel to remove any manufacturing oil or other impurities. Immediately touch the end of a length of solder to the tip. When it melts, continue to feed solder all over the tip, rotating the iron to reach all sides.

Excess solder will drip off, so do this over a trash can, not over your legs. Once the tip is coated, use the damp paper towel to wipe off the excess solder, leaving a thin shiny coat behind. The iron is now ready for use.

There are many Web sites that offer tutorials on soldering. Search for "how to solder" and check out what comes up.

There are two basic rules to electrical soldering:

1. The pieces to be soldered must be clean.
2. Heat the pieces, then touch solder to the hot joint, not to the soldering iron.

The joint should be hot enough to melt the solder so that it flows smoothly. If it balls up, either the pieces are not clean or the joint is not hot enough.

As you solder, the tip will become dirty with burned rosin core flux, and needs to be cleaned. The simplest way to clean a hot tip is to rub it on a damp sponge. You can buy a soldering iron stand that includes a small tray with a cleaning sponge. Here's an example:

<http://www.hobbytron.com/Soldering-Iron-Stand.html>

Often the sponge that comes with the stand contains slits, so one swipe cleans all sides of the tip.

Moisten the sponge when you begin soldering, and wipe the tip just before



Figure 1: A soldering iron stand safely holds a hot iron and generally includes a sponge for easy tip cleaning as you work.

making each connection. Eventually the sponge will wear out, but it's easy to cut a new one from a thin household sponge, and cut slits with a hobby knife or single-edge razor blade.

Remember the rule: The pieces to be soldered must be clean. If you strip insulation from a wire, that wire is clean and ready to solder. But if you're soldering it to a length of rail, almost certainly the rail needs cleaning.

Pre-weathered or painted rail requires the most work. Use a wire brush in a rotary motor tool or a microfile to remove the weathering or paint from the rail web and base, or the bottom of the base, depending on where you like to solder your feeder wires. Then wipe the shiny area with a cloth

moistened with a solvent like naphtha or acetone to remove oil and debris.

Even unweathered rail needs cleaning, but generally all that's needed is a quick wipe with a solvent-dampened cloth to remove manufacturing oils.

Next, let's take metal model construction soldering – here we're talking about etched brass models or soldering to things like PC ties with turnout jigs.

When working with metal models, you want to avoid passing heat around the model so other previously soldered areas don't come apart or affect nearby plastic parts.

For this kind of soldering you want to use lots of flux and the smallest iron

possible. With the method below and some practice, you can use a 15 W pencil iron to solder just about anything. You don't necessarily need a resistance soldering tool or a bigger iron.

The trick is to make sure you use flux. Get yourself a non-acid flux so you don't get corrosion problems. Put the flux any place you want a joint and use it liberally.

The flux will boil off as you solder, cleaning the metal and making a solid joint. Once you have a good joint, you can clean the flux residue with a soapy toothbrush, baking soda solution or even alcohol.

Some metals, like stainless steel,

require a special acid flux. Stainless steel etched kits when soldered turn out very strong. But that is a more advanced topic beyond the scope of this QAT column.

With small metal model assembly, you don't want to heat the parts and then apply the solder. That approach

works for plumbing pipes and soldering track feeders.

But when doing small model railroad parts it is much easier to melt a small amount of excess solder to the tip of the iron. Then press the iron against the work that has been liberally fluxed. As the flux boils away the solder gets

Helpful soldering links:

Kester rosin core solder 0.020" diameter - 1 lb. spool (huge)

<http://www.amazon.com/Kester-Rosin-Core-Solder-Spool/dp/B00068IJWC>

Carrs solder (various temperature-point solders)

<http://www.interhobmodels.com/id17.html>

Non-acid flux (gallon - lifetime supply for a modeler)

<http://www.amazon.com/Kester-Flux-VOC-Free-Soldering-Gallon/dp/B00023EDNU>

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sucked onto the joint. In two seconds or so pull the iron away and you'll have a solid joint. This technique doesn't over-heat the parts, melt adjoining plastic or loosen other joints.

We also recommend Iain Rice's book, *Building Etched Kits*. He covers more advanced topics like how to solder white metal and different melting temperature solders.

Bernie Kempinski has a nice handout on his web site that covers some of this material. The link is:

<http://alkemscalemodels.net/AlkemScaleModelsImages/AssemblingBrassKitsWeb.pps>

Bernie says, "It has been a bit of a personal crusade of mine to show people how easy it is to solder and do metal model construction. That's why I have

Figure 2: Putting a ScatMat (scatmat.com) at the entrance to the layout room will help keep your kitty out of the train room and off the layout.

been doing my soldering clinic for the past 8 years or so. Many model railroaders seem afraid to solder metal model kits because they had a bad experiences using rosin core solder and a big iron.

I really think the hobby needs to be educated on the subject of how to do metal model construction soldering, using these techniques of a small iron and liberal use of flux.

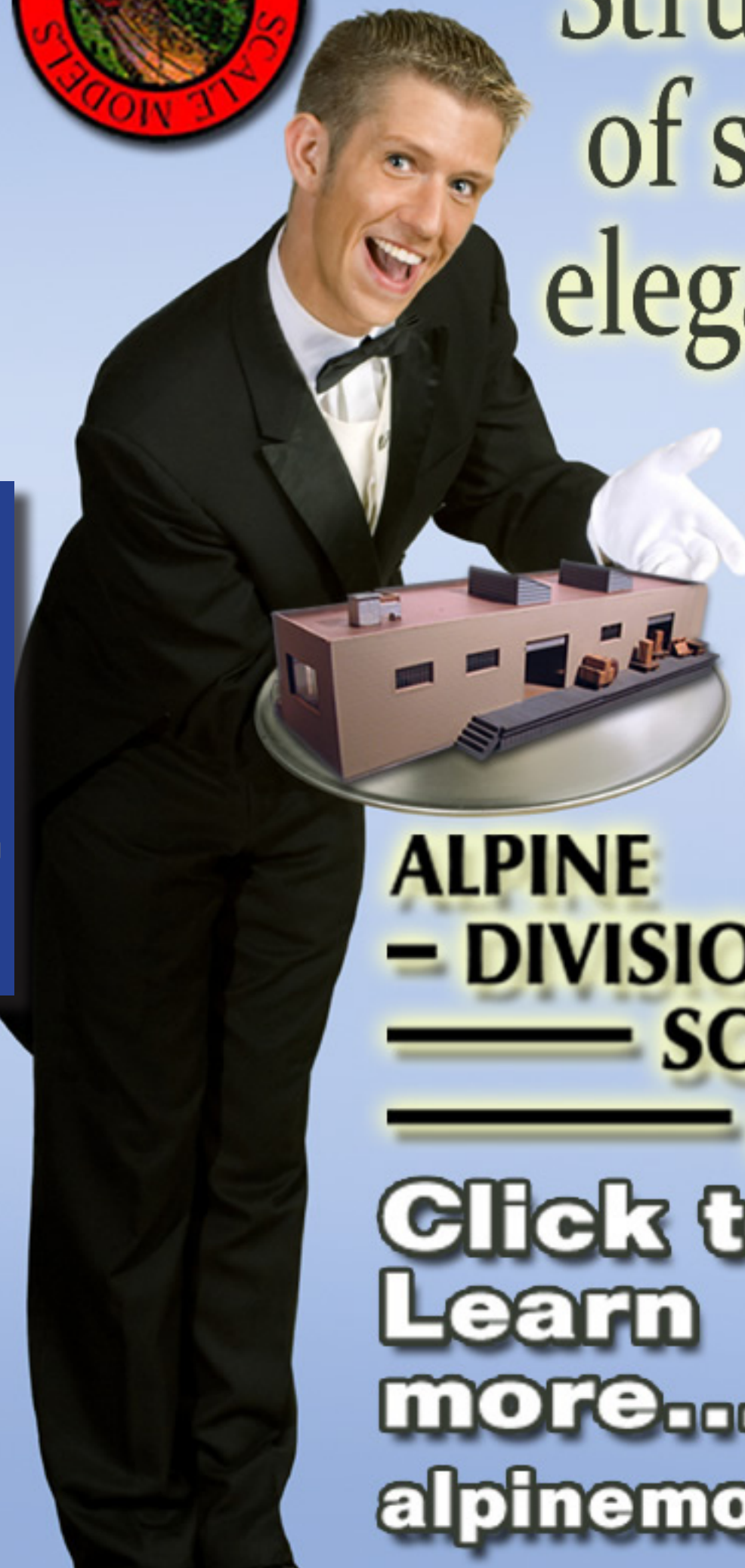
My students say, "It works like magic!"
— *Mike Dodd and Bernard Kempinski*

Q: Do you have a practical idea on how to keep a cat off a layout? I love my cat, but my layout doesn't!

A: Beyond the obvious approach of keeping the door closed, you have a number of options, both manual and



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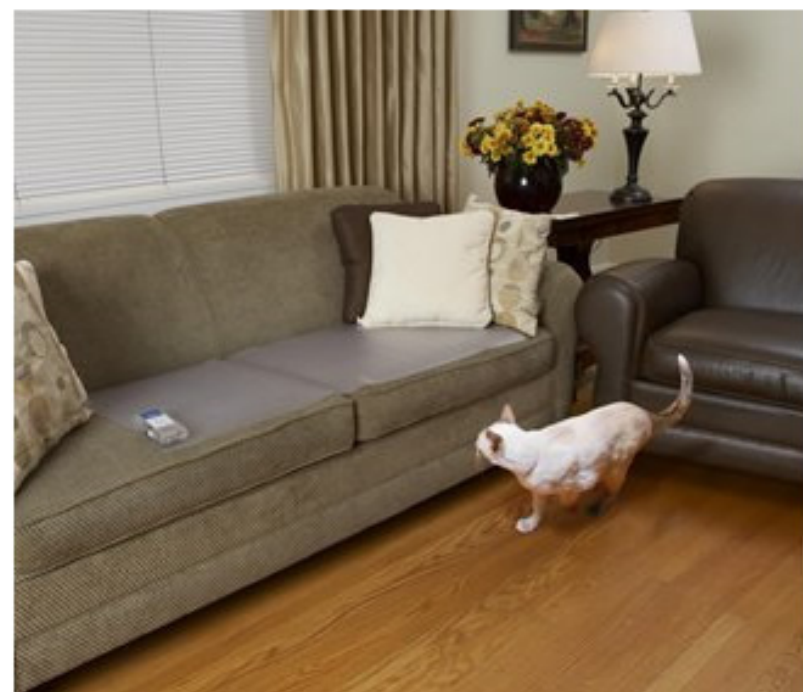
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“automatic” for keeping Tabby out of the layout room.

One simple technique I’ve done to teach the cat to stay off uses a simple plant mister. When the cat pokes his head into the layout room, I give him a good squirt of water. They typically do a fast 180 and don’t come back for a while. A few times of that and they get the idea the area’s off limits.

For more automated approaches, try:

ScatMat: Put the mat inside the entrance to the layout room. Just Google *ScatMat*.

Feliway spray: Spray the entrance and layout edges with this spray and Kitty will keep away. Google *Feliway Spray*.

CatScram: Get this battery-operated ultrasonic cat deterrent device and put it near the entrance to the layout room.

We have a CatScram at the end of the hallway leading to the layout room and when our cat saunters into the hall, the CatScram detects the motion and sends an ultrasonic sound that humans can’t hear but cats find very annoying.

Our cat quickly rears back on his haunches and then jets off in the opposite direction when triggering the CatScram.

You can find these and other gentle cat repellent ideas here on this web site:

<http://www.cat-repellant.info>

For a more humorous take on cats and model railroads, see “Cat Grass” here:

<http://www.scale-modelers-handbook.com/cat-grass.html>

You have lots of options for keeping kitty at bay, although we don’t seriously recommend the cat grass revenge approach!

— Joe Fugate

Q: I’m trying to do my first track plan, but I’m stuck. I’m not sure where to start. I’m afraid I’ll design something boring and want to tear it out and start over. What do you recommend?

A: The absolute *best* source of all things layout design is the NMRA’S Layout Design Special Interest Group. You do not have to be a member to participate.

They have a special email group hosted on Yahoo where you can engage others in your design and thinking process. There are also many folks there who will be happy to look over your plan and provide feedback and guidance!

The Layout Design Journal is the quarterly publication of the organization. In it you will find a wealth of information on design, examples of good design, and find it to be a source of inspiration.

Membership in the LDSIG includes a subscription to this excellent reference!

See the layout design links (next page) for more about the Model Railroad Layout Design Special Interest Group.

— Jim Duncan

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Helpful layout design links:

Yahoo email layout design group (open to all)
<http://groups.yahoo.com/group/ldsig/>

Layout Design SIG web site
<http://ldsig.org>

Layout Design SIG Wiki site
http://macrodyn.com/ldsig/wiki/index.php?title=Main_Page

Q: I'd like to build a compact yard and I'm struggling with whether or not I should use #4 or #6 switches. Am I likely to have problems if I use #4 turn-outs with my steam locos and trains?

A: That depends on what steam locomotives you are planning on using – while they are certainly more at home with larger switches, many steam engine models, even some of the larger articulated ones, are designed to handle both #4 switches and 18" curves. They just might not look very good doing it.

As for a compact yard, this is probably not as much of a problem as you might think – your yard switcher is going to be a fairly small locomotive that won't mind those switches at all.

If you are planning on larger locomotives, you can compromise by having the yard switcher assemble the trains on the Arrival/Departure tracks and have #6 switches between the Engine track and the A/D tracks.

Since you are planning on modeling a pre-modern era, your passenger cars can be shorter and won't mind the #4 switches at all.

I'd keep the Santa Fe's and the Challengers out of the yard ladder though.

— Jeff Shultz

Q: As I understand it, banking track curves is more prototypical and allows tighter turns. How this is actually done? If one side of the track is higher will this cause problems on the model? I am a beginner and am afraid banking curves is beyond my abilities.

A: On a railroad, curved track that is 'banked' is called super-elevated. The prototype does this to counteract the centrifugal forces acting on cars as they go around a curve at speed.

Our models typically have very light-weight cars when compared to the prototype so we don't need to super-elevate our track for functional purposes (unless you like to run trains at unrealistically high rates of speed).

In fact, tilting rolling stock toward the center of the curve increases the chances of a train stringlining on our model railroads. This happens because the slope across the tracks causes the cars to 'tip' inward and moves their center of gravity toward the inner rail.

Some modelers elect to include super-elevation as a cosmetic consideration to make their curved track look more prototypical. Here are some considerations:

- Keep the superelevation reasonable, no more than 4 or 5 scale inches of elevation change from the inner to outer rail
- Don't use super elevation where another track crosses the curved tracks
- Only super elevate main tracks. Yard tracks or industrial spurs are not super elevated.
- Don't super elevate multi track mainlines where there are cross-

overs between the individual main lines. If you must have a crossover, remember both tracks must be in the same plane; you'll need to raise both sides of the outer track to have a smooth transition between tracks.

It's easiest to super elevate track before installation. Assuming you're using flex track, draw the track centerline on the subroadbed. Then mark the outside edge of the ties.

Glue down a series of 7" tall wood ties along the outer edge of the flex track. Make this a scale 80 to 100 feet longer than the curve you'll be super elevating.

When the glue (I use yellow glue) dries

make a sanding block by wrapping a piece of 60 grit sand paper around a 3" x 18" piece of plywood or particle board. The extra length of the board will make it work like a block plane and prevent dips and/or sags in the height of the ties.

Sand the ties smooth along the entire length of the ties. Use the sanding block to create a smooth transition in and out of the super elevated area.

Place flex track over the center line you drew previously and temporarily spike it in place. Do the same for any other pieces of flex track in the curve and connect them together with rail joiners -- preferably soldering the rail joiners.

Now pick out a loco motive with 'stiff' trucks (trucks don't have much side to side vertical swivel room). Connect up power to the track and run a test run over the track looking for rough spots.

After testing and correcting any rough spots, I glue the flex track down with latex caulk, pressing it down into the caulk. I weight down the track with a bunch of small vegetable cans -- canned corn is cheap, is about the right size and weight (for HO) and I can eat my weights when I've finished my track work.

It sounds much harder than it really is.

— *Charlie Comstock*

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TIPS



Getting more realistic track

I'm a fan of MicroEngineering ties and use them almost exclusively on my layout. These photos show only the base layer of ballast used when the track is first laid – additional ballast and weathering will be added when the scenes are finished.

I stain the dark ties with a mix of 50% Floquil Poly S Grimy black and 50% water with a drop of wet water added (one teaspoon of liquid detergent to 16 oz. of water). The lighter ties are stained with a mix of 50% Floquil Poly S Primer and 50% water with drop of wet water.

Once the light gray stain is applied I go back with the dark stain and brush random ties to darken the color a bit. I tried a variety of stains over the years

but found that they either were the wrong color (too brown) or too dark. My mixes let just enough of the grain of the wood show and look to me like creosoted ties. The rails that you see in the photo are ME code 83 and 70 nickel silver weathered rails with no additional paint and/or weathering.

I use Highball ballast and what you see is limestone on the main and cinders with some grey added on the yard tracks and sidings. I glue the ties to homosote roadbed and then stain them. Once the stain has dried I apply the ballast and once it's dry I lay the rails. Some folks apply the ballast after the rails are down, but doing the ballast first has always been easier for me.

— Tom Patterson (from the MRH website)



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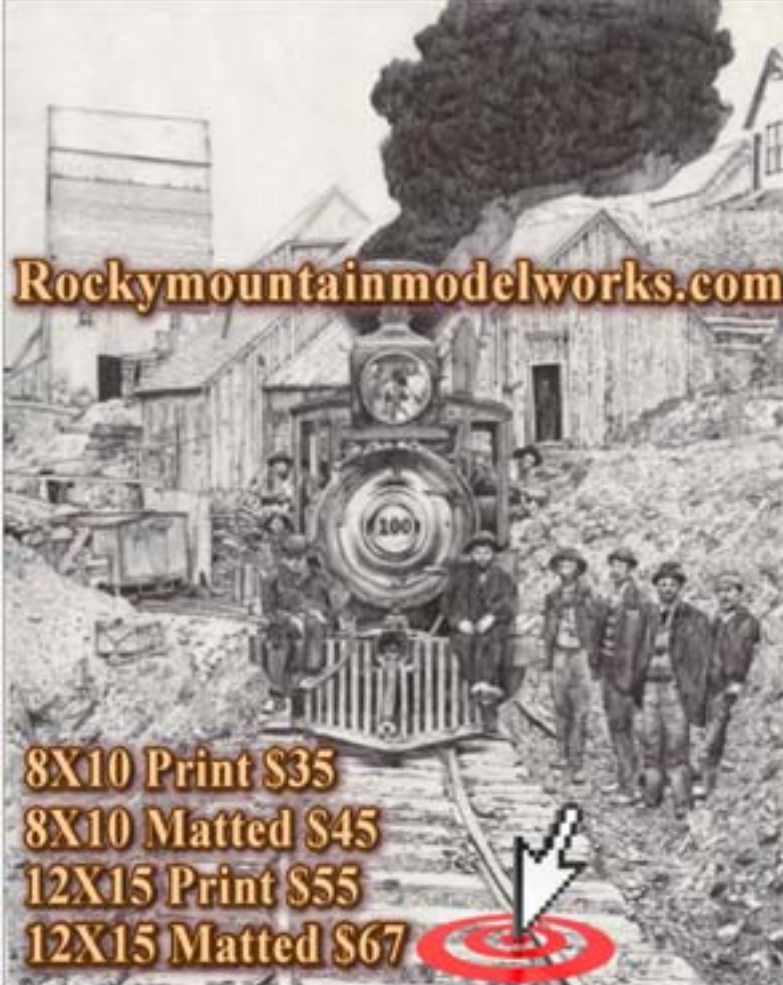
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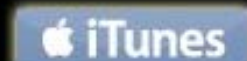
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Bamboo Skewer and furnace filter conifer trees ...

– by Charlie Comstock



Bamboo skewers (shish-kabobs anyone?) are a great source of inexpensive trunks (Figure 2).

I found Cut-N-Fit furnace filter material at my local big box store. This filter is an unnatural blue color – we'll be painting it though (Figure 3). One side of it has a rectangular mesh to support it (Figure 4). Figure 5 shows the 'working' side of the filter. All those little, random, fibers that do a good job of pulling dust out of the air are also good at mimicking branch structure.

Figure 6 shows the end grain of the filter – roughly 3/4" thick and comprised of many layers of fibers. Note the fibers

don't dive through the material, instead staying at a nearly constant depth.

Start a new tree by cutting a skewer about 1" longer than the height of the new tree. Tear the rectangular mesh from the side of the filter batt (Figure 7), trees don't have rectangular branches! I cut the filter batt into small pieces, for a 5" tree they'll range from 1 1/2" down to 1/2". I tear each piece into multiple foliage layers. You can usually get about three layers of foliage from each piece (Figures 8 and 9).

Stick the skewer trunk in a piece of pink foam, then use a toothpick to daub the trunk with yellow-glue before sliding



Figure 3

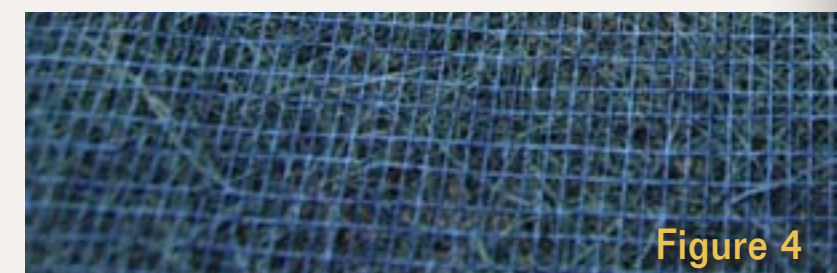


Figure 4

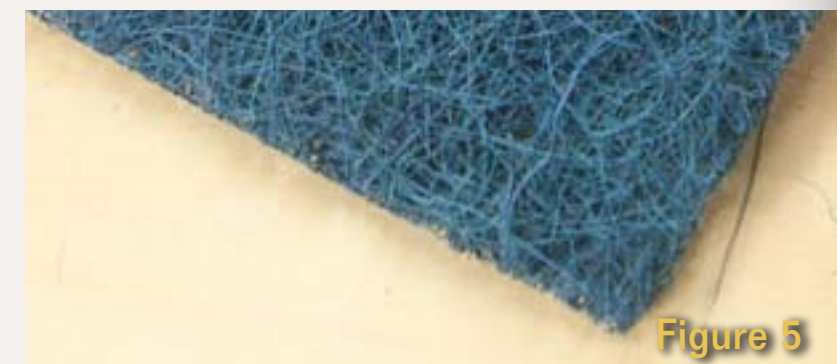


Figure 5

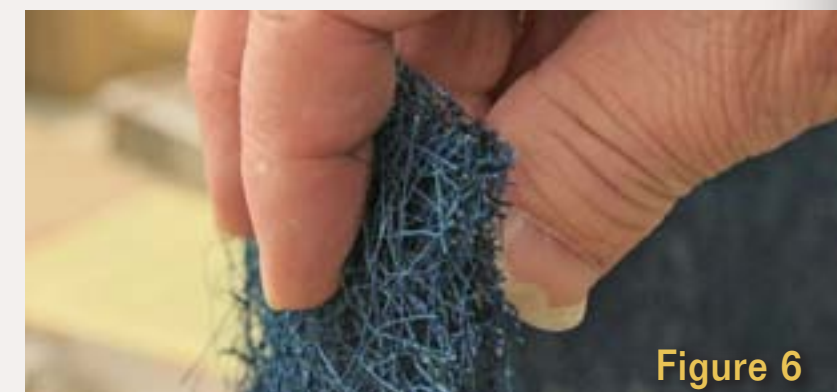


Figure 6



Figure 7



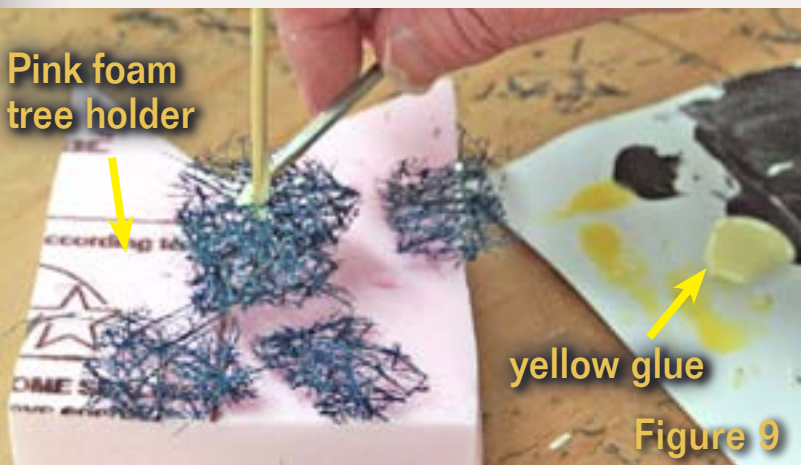
Figure 1



Figure 2



Figure 8



yellow glue

Figure 9



Figure 10



Figure 11

the pieces of filter in place (Figure 9). Don't line the foliage layers up, a random tree outline is good. Don't over glue or you'll stick the tree to the foam! Keep daubing glue and adding pieces of filter, larger pieces at the bottom and smaller ones at the top creating a taper (Figure 10), until the trunk is covered by blue foliage. Wait until the glue sets, then remove the tree from the foam (Figure 11). I sprayed my tree with a can of cheap flat-black paint (Figure 12) then drizzled Conifer Green ground foam on it (Figure 13). Spray the tree with unscented, extra-hold hair spray and add a second layer of ground foam. Finish with a drizzle of light green foam. Voila! A brand new tree!



An alligator clip soldered to a piece of wire makes a good tree handle.

Figure 12



Figure 13



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Weathering with Colored Pencils

— by Bill Beverly
photos by the author





Figure 1. Example of weathering with watercolor pencils.

Using artists' water-soluble pencils, you get a model-weathering paintbrush that has the control of a pencil ...



I've added a new tool to my weathering toolbox: water-soluble pencils. These are not ordinary colored pencils, but a pencil that can be used wet to create a "watercolor paintbrush."

To use a watercolor pencil, I soak the pencil tip in window cleaner like Windex or 409 for about 30 seconds to soften it. Once softened, I have a watercolor paintbrush with the control of a pencil.

This makes a great evening project. I can select the next car to weather and sit down at the dining room table with my pencil box and let my creative energy flow. See figure 1 for an example of what can be done in an evening.

I normally keep a small airbrush jar filled with window cleaner on my workbench. This becomes handy to keep the pencil point wet. You will

notice that the softened pencil will almost melt into the area that you are coloring. However you will get only about 3 or 4 strokes of the pencil before you need to dip it again. But once softened, it will only take a few seconds of soaking to re-wet the tip.

You can also use the pencils dry and then come back with a small paintbrush dipped in window cleaner to smooth things out. But I find that I do not have as much control with the dry method.

One advantage to using watercolor pencils is that if you don't like how the weathering is turning out, simply dip a Q-tip in window cleaner and erase your work. Later on, a light coat of Dullcote will lock everything in.

Watercolor pencils will not fade like powdered chalks have a tendency to do when sprayed with Dullcoted.

Learning About Colors

Before we get into the process of weathering, we need to review a few artists' notes on color. We want to stick with colors that look good together. The general rule of thumb is, keep cool colors paired up with cool colors and warm colors paired with warm colors. Weathered black can be considered as a universal color that can cross from warm to cool.

Warm colors would be: brown, tan, yellow, red, orange, and off-whites.

Cool colors would be: black, pure white, green, gray, blue, and silver.

For color contrasting effects we can use a color that is darker or lighter than the model's base color. For atmospheric effects we can use earth tones that would include colors like browns, raw umber, raw sienna, tans, beiges, burnt umber, burnt sienna, grays, and black.

Consider the type of lighting on your layout when choosing colors. Incandescent lighting produces more of a warm yellowish light; fluorescent lighting produces more of a cool bluish-green light. Use the same type of lighting on your workbench when weathering your models.

Studying the Prototype

I had an opportunity this past summer to visit Chama, New Mexico and the home of the Cumbres and Toltec Scenic Railroad (C&TS). This section of the railroad was constructed in 1880 as part of the Rio Grande's San Juan Extension. The railroad served the silver mining district of the San Juan Mountains in southwestern Colorado and was built to a gauge of 3 feet between the rails, instead of the more common 4 feet, 8-1/2 inches.

C&TS is now a living museum with a yard full of vintage weathered freight cars. I spent several hours walking the yard taking hundreds of pictures from every angle and observing the effects of natural weathering.

I noticed how the sun faded, peeled, and oxidized the paint. Rain and

snow added rust where water would accumulate in flat areas, corners and wheels. But the most important weathering effect is how water moves dirt and soot around and causes streaks down the sides of the cars. The cars were not a single monotone color, but a blending of colors in realistic patterns.

One interesting effect I noticed on wooden boxcars is that different boards age differently. Even boards right next to each other had a slightly different color and texture. On closer examination I noticed that the grain of the wood affected the condition of the boards. The boards with a tight grain pattern seemed to hold paint better than boards with a loose grain or ones with knots and twists. This seemed to explain the variance in color and texture from one board to another. See Figure 3 next page for an example of a prototype-weathered boxcar.

Another thing I noticed is that the top of a freight car weathers differently than the bottom. When a car is part of a train, smoke and soot from the steam engine would rain down on the roof and upper leading edges. Road grime and gravel are kicked up and mud is splattered from below. This produces a color variation with grays on top and earth tones on the bottom. Gravity also plays a role here by pulling colors downward. Streaks are lighter on the top and intensify as they accumulate on the bottom.

The process of moving cars around in the yard, along with loading



Figure 2

Tools Used for Weathering

1 - 4: Star brand paints, available from www.P-B-L.com. These are self-leveling lacquer based paints that dry to the touch in a few minutes. They are matched to railroad colors. They dry fast and are great for weathering.

5-6: Floquil paints, available from local hobby shops and www.testors.com. Applied with an airbrush, diluted 80% thinner and 20% paint, this wash is used to fade and dull the base coat

7: Airbrush jar of window cleaner, used to soften water color pencil tips, allowing the pencil color to flow like paint.

8 – 12: Bragdon weathering powders available from www.bragdonent.com/weather.htm. The powders come in several different colors and have a pressure sensitive adhesive that helps powders stay where you put them.

13: Artists Blending Tortillons, available from art supply stores and are used to blend charcoal drawings.

14: Stencil brushes, available at craft stores like Michaels. These brushes are great for applying the Bragdon powders. They are also useful for scrubbing the surface of a model to prep them for weathering.

15: Derwent Watercolour pencils are available at craft stores in the artists chalk and pencil section. They are also available at art supply stores, individually or in sets. Make sure you get the water-soluble pencils that say watercolour on the pencil. They can also be ordered from www.dickblick.com/products/derwent-watercolor-pencils. ■

and unloading resulted in collisions, scratches, dents, and spills. Maintenance workers would hose-out a boxcar and the residue would accumulate around the door.

The Number Three

One of the tricks I learned from painting backdrops is the number three, as in three colors. The addition of a third color seems to add more depth to the surface. When painting a rock or a tree on a backdrop, the addition of a third color makes the object appear more three-dimensional.

I also extend the number three to include three different weathering methods. Combining the use of

an airbrush, powdered chalks, and watercolor pencils will bring more depth and interest to our models.

Choice of Paints

I model in Sn3, which is S 1:64 scale, 3-foot narrow gauge. The primary supplier of Sn3 products is PBL in Ukiah, California www.P-B-L.com. For the past few years I have been using PBL's house brand paint called Star Brand. PBL has engineered colors designed for the models that I build. These paints can be tricky to use at first, but the advantage is that they dry to the touch in a few minutes. They are solvent-based paints, so proper care and ventilation is mandatory.



Figure 3. Example of a prototype-weathered wooden boxcar.



Figure 4. Weathered boxcar detailed with watercolor pencils.

Weathering a Boxcar

The first example of a weathered boxcar is number 3044 (See Figure 4). This model started as a PBL Sn3 boxcar kit. The kit was assembled and painted with PBL's Star Brand D&RGW Faded Box Car Red Paint. After the decals were applied it was time for weathering.

The first weathering method I used was an airbrush. I wanted to add a layer of soot over the entire model. I mixed up a wash of 20% Floquil Weathered Black and 80% thinner. This was applied in very light even strokes on the sides, roof, and underbody. This helped cut the shine and tone down the white on the lettering. It also seems to highlight the vertical seams between the boards on the sidings.

The second airbrush coat was intended to add dust, dirt and mud that are kicked up from the ground, as the train is moving along. I mixed up a wash of Floquil Aged Concrete, Mud and a touch of Railroad Tie Brown in a ratio of 30% paint and 70% thinner. The wash should be thin enough to almost see through.

I tilted the model away from me and airbrushed the bottom edge, trying to get half of the paint on the sides of the car and half on the underbody. The object is to highlight the bottom portions of the boards and leave middle and upper portions of the boards a little darker.

To weather the roof, I added a little more Aged Concrete to slightly lighten it. The object here was to add a layer of dust to simulate fading. I shot directly down on the roof, trying

to minimize overspray on the sides. I normally set the car aside and allow it to completely dry for a week or so.

Detailing with Watercolor Pencils

I build my cars from kits. This gives me an advantage when choosing a base coat to paint a car, but the factory finish on a ready-to-run car can be weathered equally well with watercolor pencils.

One trick to using watercolor pencils on a factory-painted car is to first add a layer of flat clear acrylic. This will give the surface a little tooth for the watercolor pencils to adhere to. I use Model Master Flat Clear Acrylic because window cleaner can sometimes react with Testors Dullcote to produce a cloudy appearance.

Once the boxcar was weathered with an airbrush and completely dried, it was time to add extra color and texture with the watercolor pencils. I try to choose colors that are complementary to the color of the car that I am weathering.

The object here is to highlight and color individual boards. This will simulate the different degree of weathering and fading from one board to another that I saw when I was walking the yard at Chama. Try to stay between the lines, be neat and use a soft touch. Start the pencil stroke at the bottom of the car and work

your way up. Use a little heavier pressure on the bottom and a little lighter stroke as you get to the top. If you get too much color on, take a small paintbrush, dip it in some window cleaner and smooth out the area.

Use a slightly different color on the next board, skip occasional boards, and randomly apply different colors here and there. I normally try to color every second or third board.

I use what artists call Blending Tortillons, which is a tightly rolled paper in the shape of a pencil with a point. These are used to blend charcoals and pastels. I use them to smooth-out and draw-down the colors.

To simulate how the pigment in the white letter leaches out, use a little

French Gray underneath the lettering and use a Tortillon to draw and blend the color downward. I also use some French Gray under the doors to simulate where a worker hosed-out the boxcar, with the wet residue staining the boards. See Figure 4b for an example of fading lettering.

Don't forget the ends of the car, as they are just as important. On the roof I use browns on the catwalk to simulate worn paint with wood color showing through.

To simulate a horizontal line of rusty nails, place a ruler on the side of the car and use a sharp rusty colored pencil to tap along the ruler edge. The object is to get a dot of color on each or every other board. I roll the pencil

point on a piece of sandpaper to keep the pencil sharp and keep soaking the point in window cleaner to keep it soft. Remove the ruler and use the Tortillon to draw the color down. You now have a line of rusty nail holes.

To simulate where boards are not lining up correctly next to each other, take a very sharp black watercolor pencil, dip in window cleaner and draw a line between the boards. This will accent the separation. Don't do this too much; it can quickly get out of hand.

Don't forget the underside of the car. Soak rusty and mud colored pencils in window cleaner and use them to color up and around all the details, brake lines and turnbuckles.

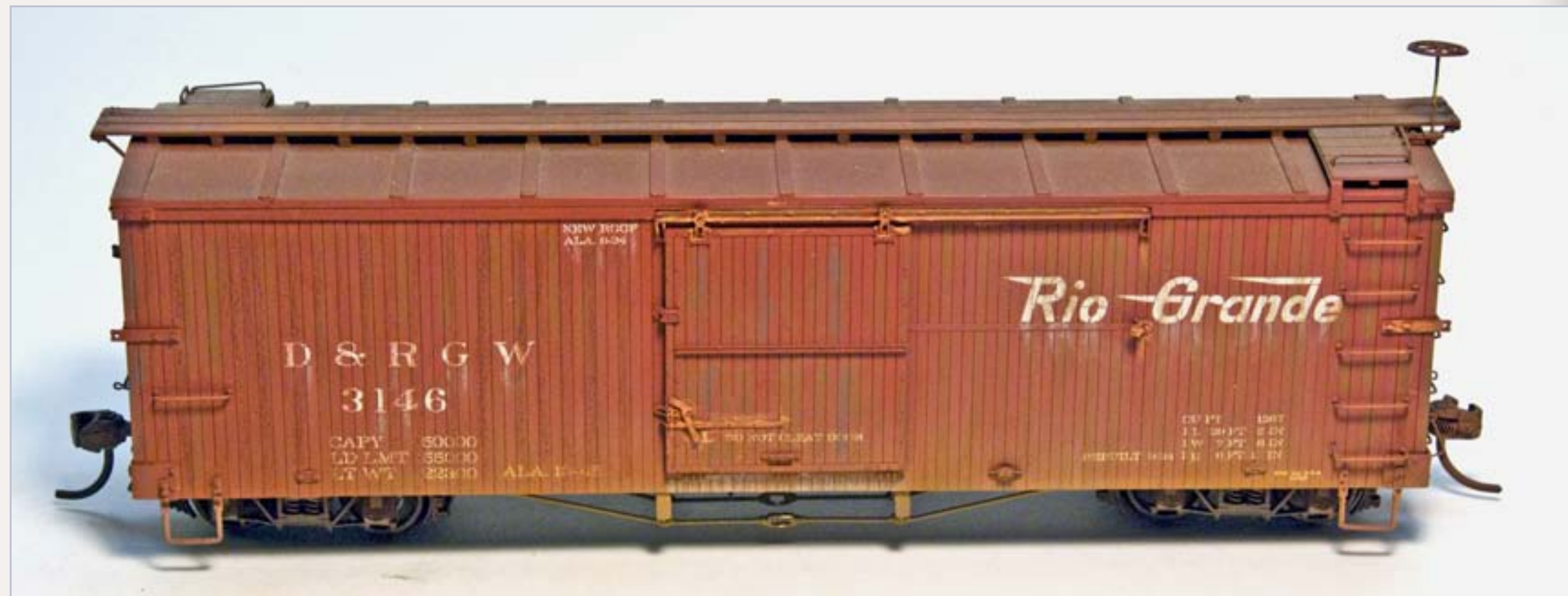


Figure 4b. Watercolor pencils are used to weather lettering and add rust color.

This is where a lot of mud and rust accumulates.

Weathering with Powdered Chalks

The third method I use for weathering is powdered chalks. You can buy sets of multi-colored chalks that come in little square boxes and contain a pressure sensitive adhesive that help keep everything in place. You can make your own but I find the sets in hobby stores are convenient and come in the colors that I like to use. The colors that I use are complementary to the color of the car that I am trying to weather such as browns, reds, rusts, and grays.

I use stencil brushes to apply the powders because the bristles are short, stubby and flat. It is easier to scrub and press to activate the adhesive because the bristles are firm. I bought a bunch of them at Walmart in the wallpaper department where they have wall decoration supplies. I reserve a stencil brush for each of the powder colors that I use.

If you are having problems with powders sticking, use a very small drop of Future Floor Wax (also known as Pledge with Future Shine) and mix in the chalks with a toothpick until it is like a paste. Apply the paste with a toothpick or small brush. This works well to simulate a rusty gash; use a toothpick to draw a line with the paste that you just created. You can

also create rusty streaks by drawing the line downward with a wide fan style paintbrush.

Apply the chalks around metal parts, such as grab irons, corner irons, door handles and couplers (make sure you don't clog up the coupler.) This process can also be done by painting an area with Future Floor Wax and sprinkling on chalks, let dry, and brush away the excess.

The final step will be to protect your work with a light coat of Model Master Flat Clear Acrylic. This will blend all of the colors and mute some, but most will show through. I never use the spray can, I always use an airbrush for this step. Sometimes I will decant a spray can into an airbrush jar and then use my airbrush to apply an even light coat.

Example of Weathering a Gondola

The second example is gondola 1551 (see Figure 5). This model was assembled from a PBL Sn3 gondola kit. The sides were airbrushed with PBL Star Brand D&RGW Mineral Red and the interior and underside were airbrushed with PBL Star Brand Weathered Gray Wood.

I used a sharpened Ivory Black watercolor pencil softened with window cleaner to highlight the separation between the boards. The trick here is to have some sandpaper handy. Roll the pencil on the sandpaper to keep the point sharp. After you roll the point, soak it in window cleaner again to soften.

I used colors like Ivory Black and French Gray to scribble inside the gondola. Then I used Q-tips soaked with a little window cleaner to smooth out and soften the colors. The object here was to add a layer of soot and dirt from years of transporting coal in the gondola.

The outside received similar treatment by lightly applying colors and smoothing them out. A motor tool was used to distress the upper boards to simulate years of use and abuse.

Example of a Weathered Stockcar

The third example is stockcar 5839 (see Figure 6.) This model was assembled from a PBL Sn3 stock car kit. Before the kit was assembled, I



Figure 5. Watercolor pencils are used to highlight separation of boards and add coal dust.

airbrushed the inside and outside of the stock car with Testors Acrylic Aged Concrete. I was trying to get a color of raw wood as an undercoat.

I laid the pieces on a flat surface and airbrushed the entire exterior with a mixture of Grimy Black with a little Rail Brown. I tried not to get the black on the interior areas. The D&RGW would not paint the inside of the stock cars because sheep would chew on the wood.

Looking at photos of the old stock cars I could see where there was a lot of rubbing of the paint. These cars would be pulled up closely beside the wooden ramps and cattle or sheep would bump and rub as they were loaded. The stockyards were also very dusty, so a lot of dirt and mud would be kicked up on the sides.

To simulate the rubbing of paint I used watercolor pencil colors like Burnt Sienna, Raw Sienna, Vandyke Brown, and Cooper Beech. I used the tip and sides of the pencils to get in and around the edges of the boards. I kept smoothing the colors with a very small paintbrush and window cleaner. This was done in several layers.

On the roof I used more grays and browns and scribbled with the grain of the wood. This was followed by a light wash of window cleaner, almost making mud. I was trying to eliminate all signs of pencil lines. This was allowed to dry into a faded hazy coating to simulate a well-worn roof.

Next I made a paste by mixing Future Floor Wax and rusty red powder together and applying this mixture to the door rails, door chain, couplers, turnbuckle and rods.

After everything dried I followed up with a coat of Model Master Flat Clear Acrylic.

Example of a Weathered Structure

These techniques also work well on structures. An example of a weathered structure is a Crystal River wooden kit assembled to represent a Rio Grande Southern (RGS) water tank (see Figure 7 next page).

Water tanks are great candidates for weathering. The tanks held water

well, but there was a lot of seepage and leaking. During the winter, ice formed at the bottom of the tank and peeled away the paint. Minerals leached from the water and accumulated on the side of tank. Huge icicles formed at the bottom of the tank and deposited more minerals.

When weathering a structure, I try to follow my principle of using three colors. I also try to use at least three different weathering techniques to give the model texture and variance.

The tank roof took hours of careful placement of shingle material, trying to keep everything lined up in a circular pattern. The shingles were then stained with a mixture of alcohol and black and brown ink. Powdered chalks

were then used to give it a dusty faded appearance.

The barrel of the tank was first stained with a mixture of alcohol and ink to produce a weathered-wood base. The bottom of the tank was then masked in a ragged-tooth pattern and the tank was painted D&RGW Freight Car Red.

Softened Derwent French Gray and White pencils were used to add the mineral deposits between the paint and the stained wood in a ragged pattern. Window cleaner was applied with a small paintbrush to flow and soften the colors.

The base supports were stained with a mixture of alcohol and black and brown ink. I then scribbled all around



Figure 6. Watercolor pencils are used to simulate worn wood.



Figure 7. Using watercolor pencils to weather a structure, in this case a water tower.

the base with French Gray and White pencils. Several layers of window cleaner wash were applied until all signs of pencil marks were gone.

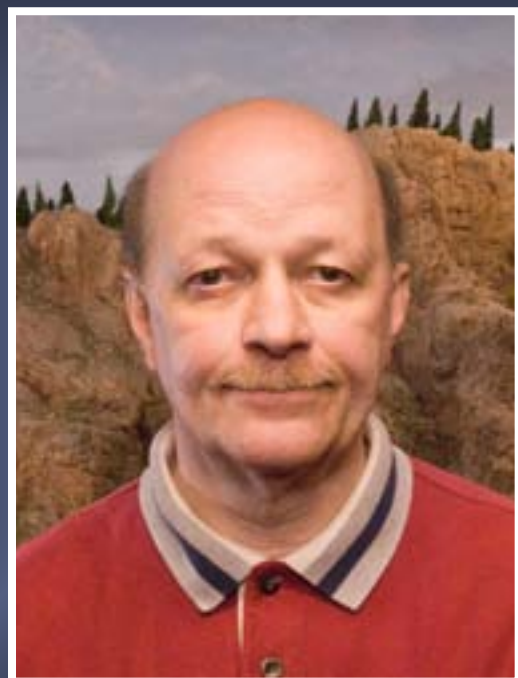
In Conclusion

I have found that watercolor pencils are a good addition to my weathering toolbox. They are easy to control and the color does not disappear when a dull coat is applied. They come in a good variety of colors and are relatively cheap, compared to purchasing bottles of paint. They can be used on top of airbrushing or used by themselves. I hope you will give these techniques a try!



Video won't play? Click [here](#) to play it on YouTube.

Bonus content: Also [see this issue's bonus downloads](#) for several high quality 3D click-n-spins of cars Bill Beverly has weathered using the methods he describes in this article.



Bill Beverly

Bill Beverly is a software engineer who works for a large aerospace company and lives in Sierra Madre, California a small town next to Pasadena. He models primarily in Sn3 and tinkers in HO and HO_{N3}. He is a member of the Slim Gauge Guild Model Railroad club (SGG). The SGG has two layouts in a 2000 square foot basement located in the basement of the China Factory Mall at the southeast corner of Raymond and Del Mar in old town Pasadena, California. The HO/HO_{N3} layout is based on the

Denver and Rio Grande Railroad and the Rio Grande Southern. The S/Sn3 layout is more of a freelance layout based on Colorado railroads for the mainline and the Westside Lumber Company for the highline.

The website is : <http://www.slimgaugeguild.com/>

The SGG just celebrated our 25 year anniversary in our current location. We have an open house twice a year, in June and November. The club is open on Tuesday nights for members, and guests are welcome. If you are in the area drop by and see us.

Contact information:

Bill Beverly - traintalk@aol.com



Superintendent's Office

Car Card Boxes Easy to make and changeable labels ...

– by Charlie Comstock



I like to operate my model railroad. I model car movements using 4-cycle car cards and waybills. For a long time I thought the movements created by them wouldn't feel realistic. Finally I gave them a try. Once they were set up, they worked great at directing cars to industries. I won't go into the details of setting them up – that's more than a one evening project!

I use a 'traditional' type of car card that includes a pocket to hold a waybill. The waybills have four destinations, two on each side. The one that's visible gives the next destination for that car.

But what to do with the car cards for the cars spotted at an industry? The answer is to set up boxes (some call them pockets) to hold the cards. I use a box for each industry or group of industries

so the number of boxes for each town varies depending on the number of industry tracks.

I had a bit of .060" sheet styrene on hand so I scratchbuilt my car card boxes. They turned out to be relatively easy to make and looked great. I added a slot on them to let me slide a label strip in and out for easy changes should that become necessary.

The first thing to do is decide how many slots are needed for each car card box. I needed three slots in the box I made for Oakhill (there are three industries there).

My car cards are 2" x 4" so I made each slot 2 1/4" wide to make it easy to drop in car cards. The pockets for the cards are 2 1/4" tall – enough to hold the cards but low enough so the waybill's destination is visible.



Figure 1

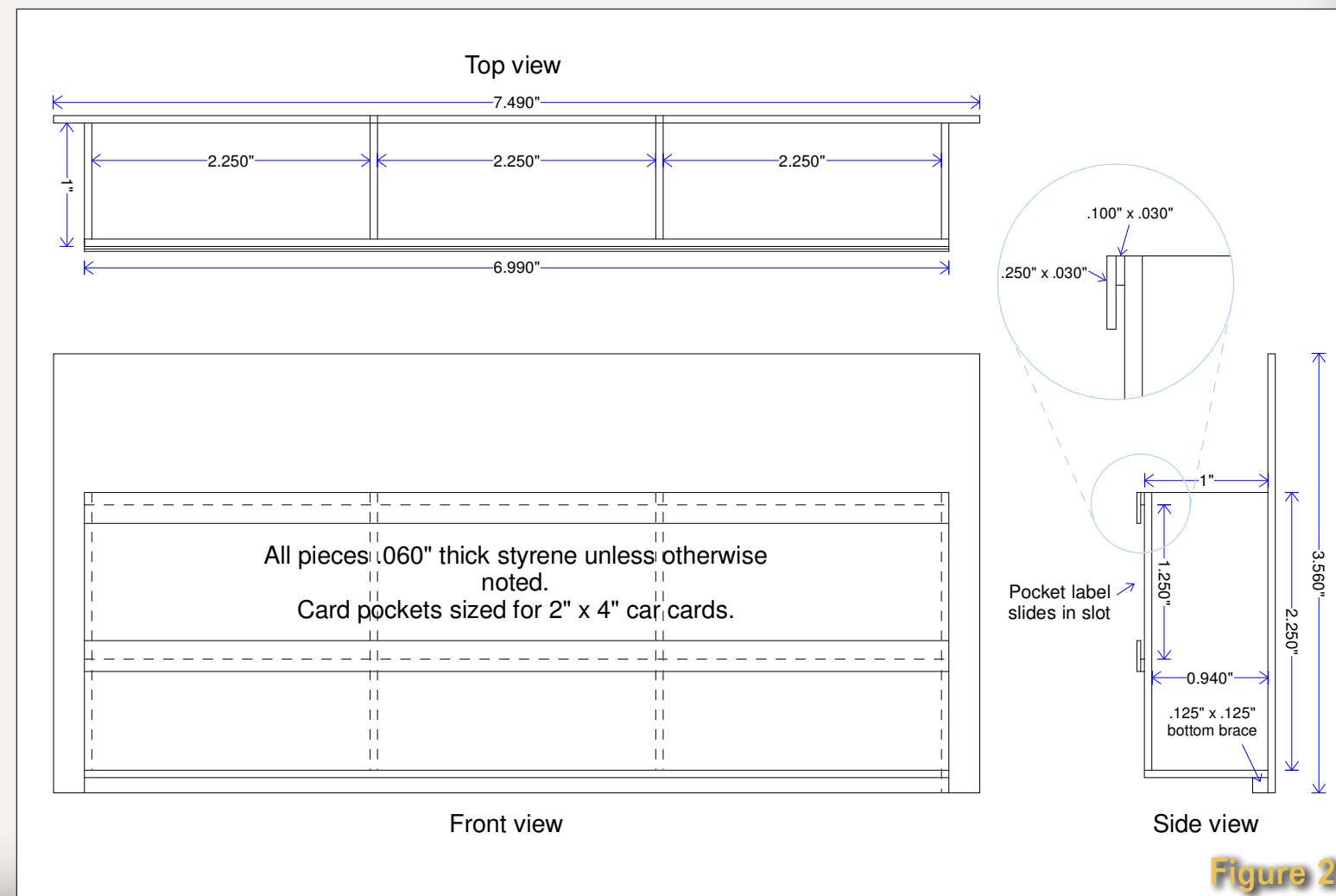


Figure 2



Figure 3

Figure 2 gives the basic dimensions. All parts except the label guides are cut from .060" styrene. I glued the pieces together using liquid plastic cement and spray painted it black. Don't forget the 1/8" x 1/8" brace under the bottom to strengthen it (Figure 5).

I used my favorite graphics editing program to make the label. The label is 1 3/16" high so it slides easily in the guides which are spaced 1 1/4" apart (Figure 4).



Figure 4



Figure 5

RS Laser Kits

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Curing Beginners' Analysis-Paralysis

How one modeler stopped worrying and started building an urban layout ...

— **by Mark Rindflesh**
photos by the author

After more than a decade of model railroad paralysis, I found a cure. Finally, I was able to stop thinking and planning and begin building. In this article I'll review my symptoms and what worked for me. It is, I hope, what I needed to see 15 years ago.

This article is for beginners like me, trapped by high aspirations and excess

Figure 1. A bird's eye view of the intersection of Commercial Street and Van Buren with B&M 1160 switching a reefer behind the boxcar at Portland Cold Storage Company.

doubt, who plan and debate and reconsider and plan over and over and over and never lay track, assemble and paint a structure, build a meadow or mountain or road or forest or farm or town, and never experience the pleasure of watching a locomotive pulling a train, no matter how small, through a scene you created.

My father in law retired in the late 80's and hoped to spend more time building his model railroad. While visiting him in 1993, I looked through his Railroad Model Craftsman magazines and came across a series of articles on building a car float scene. That single set of articles reignited my interest in model railroading, dormant since I was in junior high school.

I began to read all the model railroading magazines and thought about what I might build when a basement bedroom became available after my daughters graduated from college. I read about layouts large and small that were so skillfully built the magazines wanted to present them to us,

 **Reader Feedback**
(click here) 

the model railroading public. I was finally able to begin my layout.

Finally, in the fall of 1995, a 9 x 14 foot room became available in our basement. This was the same year Bob Van Gelder released his Brick Roundhouse from South River Modelworks. Opportunity and inspiration served, I thought, to get me started building a model railroad. I bought the roundhouse and was ready to plan a layout around it.

The kit arrived. I'd admired the photographs of it and a host of other skillfully built structures. These had established my expectations. But

when I opened those two large, red boxes I began to doubt I could live up to my self-imposed standards.

Still, I pushed ahead and generated various track plans to include both an engine terminal and car float operations in my limited space. I read more articles, watched more videos and considered multiple options.

I could not get started, so I told myself I needed to plan more, think more. Maybe a CAD program will help, I thought one day. I bought CadRail 8 and eventually came up with a plan filling the room. Then, looking at "The Final Plan," I was totally locked up by doubt.

My energy drained to nothing and those two big red boxes containing the roundhouse sat on the shelf mocking me. I finally gave up on all my plans and, a few years later, sold the roundhouse having built absolutely nothing.

In retrospect, I now understand what I needed: Smaller aspirations, and a smaller track plan. At the time, though, the model railroading press only occasionally featured small layouts and they never showed the work of a beginner.

Over the next few years, my desire to build a layout did not quite die. The

internet had matured and in 2007 I was occasionally browsing model railroad sites and forums. Eventually, fighting my doubts and grudgingly tempering my imagination, I decided if I was going to build anything it had to be a small switching layout similar to some of the British track plans I'd found on the internet.

Next, I had to accept using inexpensive plastic kits instead of craftsman kits so that when I made my inevitable mistakes, the losses would be minimized. As soon as I came to terms with having a smaller track plan as well as lesser aspiration,

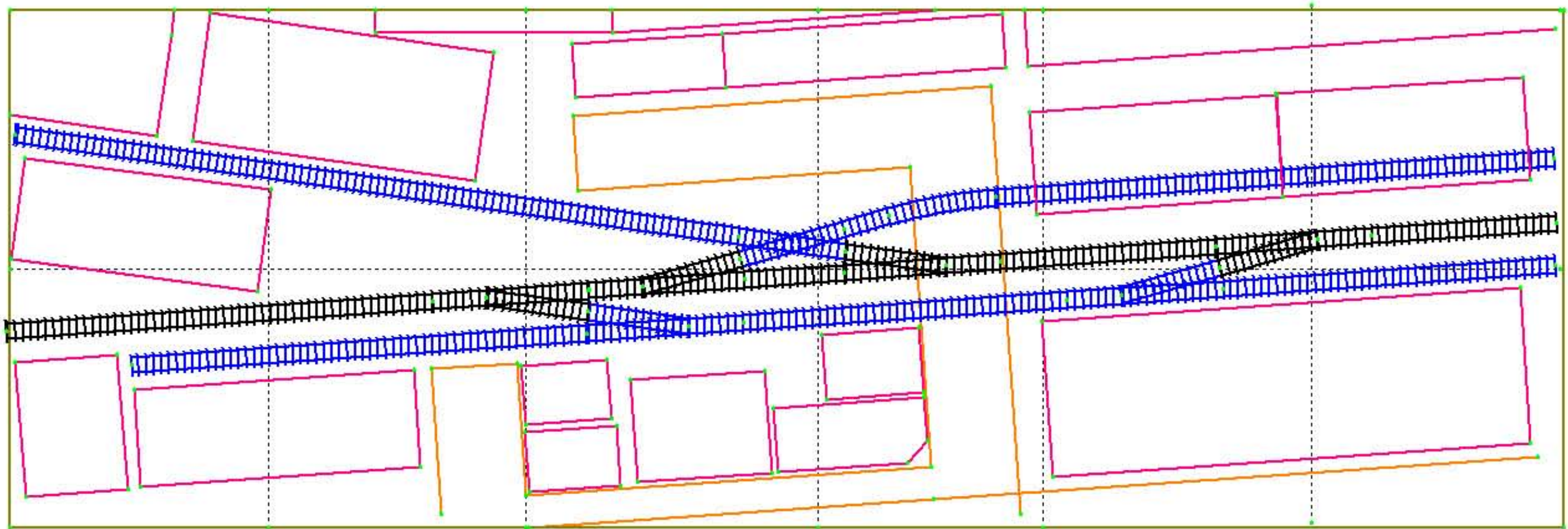


Figure 2. This is my final trackplan. Buildings are in pink. Streets in orange.

my paralysis fell away. I was able to start my layout.

Track Plan

In the spring of 2007, I dug out my copy of CadRail, reviewed how to use it, and began planning. Somehow, I decided I could build a 6x2 foot layout (Figure 2 previous page).

I found inspiration for the plan in John Pryke's book, "Building City Scenery for Your Model Railroad," and in my long standing interest in the New England railroads. When I came across a Portland Terminal Alco S3 switcher and discovered Portland, Maine had the street running I had seen in John's book, my location was loosely set.

Obviously, a layout only 6 x 2 feet imposed severe space limitations. I found an article in Model Railroad Planning 2003, "Timesaver +," and came up with a variation. As I developed this plan, I studied the buildings I might squeeze in. Most were basic Walthers and DPM styrene kits.

I wanted to use larger structures wherever I could to make my trains look smaller and the layout larger. Using CadRail, I used the footprints of various structures in different locations to see what might fit. I also drew in streets in varying ways until I was satisfied with the final arrangement.

I didn't want any track running parallel to the front of the layout so all the track, roads and buildings sit at various

angles to create a greater sense of depth. The "mainline" runs down the middle with a runaround in the front and four spurs to serve industries. As you can see, I gave up my desire to have street running to have sufficient operating possibilities with an additional siding or two.

About 3 months after I started construction, I decided to add some staging tracks. I had four feet available at each end of the layout, so I decided to simply add three tracks, using an off-scene three-way turnout at each end of the "mainline." It wasn't much but it did allow a train to enter and depart the layout or pass through and require the switcher to clear the main.

Benchwork and Track

By September 2007 I was ready to begin my benchwork. Because I had little access to power tools, and the size of the layout was small, I decided to try premade benchwork. After assembling the precut and predrilled lumber, I had ¾" plywood cut into 4-inch-wide boards to use to make an open grid. With a 2 x 6 foot piece of the same plywood attached on top the grid, I added ½" pink foam for the subroadbed and was ready to lay track.

However, from the beginning of my planning, I decided to control the view of my layout by using a valance, fascia, and a backdrop wrapping from one front side around the back to the

other front side. Fortunately, by this time, I found one of my friends had a table saw.

With his help, I built a large shadow box enclosure that would fit over and around the whole layout. This box was much bigger and more complicated to build than the grid but it went together with only a few missteps over two rainy fall weekends. Then I set it aside for over a year while I built the layout.

I decided to use Peco turnouts because I wanted to throw them manually and they have springs installed that hold the points tightly against the stock rails. John Pryke demonstrated how to build track for street running. I really wanted to do that but, in the end, with so little space, I had to once again come to terms with smaller aspirations.

Wiring

From the beginning of construction, I had planned to use a DCC system. But, I had acquired several locomotives without decoders. I wanted to be able to test them to see if they ran well enough to justify installing a decoder, so I needed to switch between DC and DCC easily.

The wiring was very basic. I ran the bus lengthwise down the middle of the layout using insulated, solid 12 gauge wire. I attached the ends of the bus to small eye hooks, leaving

extra at each end. I stripped the ends of the two wires at one end and soldered them to the back of a Radio Shack speaker plug box. Later, I attached the speaker plugs to the end of the wires coming from my new DCC unit and from my used power pack. Then I could plug one or the other set into the speaker plug box and switch from DCC to DC and back with minimal effort.

I used 22 gauge feeders from the tracks and connected them to the bus with 3M suitcase connectors. I'd never used them before but found sufficient support for them from a variety of modelers to convince me to try them. Using them was simple and they worked perfectly (Figure 3 next page).

When I added the turnouts for staging at each end of the layout, I needed some way to handle the polarity of the frogs. Initially, I thought I would use a rotary switch at each end. Later, I decided to use the Hex Frog Juicer designed by Duncan McRee.

One juicer switched the polarity for each of the three frogs in the two turnouts. Installation was extremely easy. I simply soldered the wire from each frog to a longer wire, taped the joints and connected each one to the Juicer. Whenever a short at the frog is detected by the Juicer, it switches the polarity so rapidly there is no effect at all on the movement or sound of a locomotive passing through.

Buildings, Scenery, Streets and Signs

Before I built any of the various structures I considered during my initial planning, I decided to build mockups. I kept worrying things weren't going to fit and wanted to find problems as early as possible. A friend showed me a simple way to use common cardboard to build my models.

Over a week or so I made the mockups and then was able to experiment with them until I was able to find an arrangement I liked. Later, as I built the structures, I would switch out the cardboard mockup for the real thing.

I drew windows and doors to make them a little more interesting.

It's useful to make them look like something more than plain cardboard if they are going to be in place for an extended period of time.

These mockups let me try out different arrangements of the buildings in my limited space. Placing taller buildings in the back of the layout and shorter ones in front provided a visually attractive arrangement. It also allowed easier access to the track behind the buildings.

I placed taller buildings at each end of the layout, which seems to lead the viewer's eye towards the center of the layout. That's what I wanted



Figure 4. With cardboard mockups it was easy to check for size and fit and plan needed adjustments. They also serve as placeholders on the layout while the buildings are constructed.

because my most detailed structures were front and center.

Buildings are the scenery on my layout. I used seven structures for the commercial section in the center and five structures for the industrial sections. I enjoy detail and from the beginning planned a city street setting somewhere. It turned out to be right in the middle. The first five buildings were all DPM structures put together as directed.

Eventually I added roof, window and interior details as well as custom signs. The building in the center, added after initial planning, is the City Classics East Ohio Street Building. Later I modified another DPM kit to make the Hotel Van to fill the space next to it.

Of my five industrial buildings, only the REA warehouse from Walthers was built without modification. Tkaczyk Machinery was built from parts of another Walthers kit with the office section lowered to street level, leaving the rear of the building at dock level. I thought building part of it at street level wouldn't be difficult but it turned out to be more complicated than I anticipated.

However, when I finished and started the Westinghouse Warehouse directly behind it, I had a lot more confidence. Originally, I combined two Walthers Heritage Furniture Buildings end to end to make this warehouse. Later, I decided to fill the space in between it and the backdrop with another addition. This made the building more



Figure 3. A simple bus under the "mainline" was all that was needed to run both DC and DCC locomotives.

visually interesting because the roof is on two levels.

This warehouse is a large structure and with its larger windows, I decided to use foam core board for bracing based on a technique demonstrated at Ken Spranza's website (www.horailroad.com/indexken.html).

This all worked well, so I followed the same approach on my last two larger structures. I combined two Walthers Front Street Warehouses to make one large warehouse that has doors for four boxcars. I cut off the back left corner to fit it against the backdrop but no one seems to notice this.

My last building was my first attempt at scratchbuilding. It was inspired by Jerry Strangarity's Reading RR in Philadelphia highlighted in Great Model Railroads 2003. I used his cold storage building as the source of my plan. It doesn't have too many windows and I thought it would minimize my chances to make mistakes. I was wrong!

I almost had to start over after building the entire structure. Here's what I had done: I built the cold storage using foam core board for the inner layer. Once I had completed this layer, I used Strathmore board for the exterior walls, which I painted first with



Figure 6. The Yankee Flyer slowly passes Portland Cold Storage on its way to the Portland Union Station after being diverted from the mainline due to a derailment.



Figure 5. On another day, B&M 1160 is switching at the Westinghouse Warehouse across the tracks from Tkaczyk Machinery..

a layer of gray to simulate painted concrete. I added a second trim layer with white for contrast.

My mistake was to not consider the thickness of these two layers when I built the foam core interior. Once all the layers were applied, it barely fit the site! I couldn't move it sideways because it sat between two tracks and I couldn't move it back because it was right against the end wall! It did fit, but clearances have been compromised by 1/8th of an inch. I decided to live with the mistake – everything runs very slowly in this part of town, anyway.

For me, signs make up a critical part of an urban scene. Since I used standard kits for many of my buildings, I apply my own signs to make them

look original. I wanted both storefront signs, and signs in and on the windows.

The internet provides a vast number of options for signs. When I found a sign I liked, I downloaded it and then used the free photo/image editing program Paint.net to resize, clean up or modify the sign.

For example, see my Quimby's Rexall and the Ted Williams signs (see Figure 11). I had to correct the perspective on Quimby's and I changed the red background to yellow on the Moxie sign. The music store sign originally read, "Fox Records." Using Paint.net, I changed Records to Music Store while retaining the microphone logo.

I used Microsoft Word for the signs on windows themselves. I created one or

two cell tables with the cell size just slightly larger than the window openings. I then typed whatever I wanted on the particular window into the cell, added color and formatting and printed them on overhead projector transparencies.

On the windows over doors, I printed the street numbers. For the Seaman's Savings and Loan front door and windows, I listed various services and the bank hours using a 2 point font. If I wanted a sign on the window I just glued the resized version to the inside of the "glass" with a small amount of canopy glue.

I used a free vector drawing program, Inkscape, to make the sign for the Tip Top Café after my search of the internet did not produce an image I liked.

If you are only going to make one sign, it's probably not worth learning these programs. The time to get used to these editing programs soaked up a lot of time, but I did have fun learning and the skills might be useful another day if I need to create more original signs or decals.

I also add interiors to my buildings to make them less generic. They are large enough to be recognizable when



Figure 7. It's October, 1949, and the fashionable women of Portland admire Dior's New Look at Giselle's Beau Monde.



Figure 8. It's late afternoon in this block of Commercial Street, the home of Fox Music Store and Quimby's Rexall. Mr. Quimby, also owns the Stardust Ballroom upstairs. The sign on the door says "The Kenny Albert Orchestra will be playing tonight with the HiTones".

viewed through the windows. My favorite interior is Fox Music. I stocked the record shelves with images of real LP's from the late 1940's and reduced them to scale 12" squares. The record covers can't really be read, but they're quite recognizable – including Howdy Doody, Bob Hope and Groucho Marx. On the walls, I applied posters of Frank Sinatra, the Andrews Sisters, Les Paul and Mary Ford and other stars of the day. They are large enough to recognize when viewing them through the windows.

I used Strathmore board for my roads. I wanted to represent concrete so I gouged the surface here and there

to create potholes or broken areas. I then softened the gouges with spackle before painting them a concrete color.

I scribed expansion joints and added the broken white lane lines using white spray paint and a stencil I cut from a manila folder. Lastly, I used gray and black chalk to weather the surface and provide color variation (Figure 8 previous page).

I looked at a variety of ready-to-use sidewalks and just wasn't happy with them. Part of the problem for me was space. By the time I put in roads and sidewalks, I found a half-inch

here and a half-inch there became ever more critical.

So I decided to make my own sidewalks. I used 0.06 styrene cut to width and length and scribed the expansion joints at scale 7 foot intervals. I scribed the curb edge 6 scale inches from the gutter. I then rounded the top edge of the curb with sandpaper and, using a piece of 0.01 styrene, made the bottom of the gutter and carefully scribed the expansion cracks on it.

I painted my sidewalks with Rust-oleum Texture spray paint to give them a slight texture. I liked this look better

than the completely smooth surface of the styrene. Finally I brush painted them with diluted gray latex paint (Figure 9).

Backdrop

With the shadow box effect I planned, a backdrop was essential. Even though I had minimal space in the back corners for a curved backdrop, I wanted the curve.

I decided to use vinyl linoleum and glued the front surface to the ends and back of the shadow box with half-inch dowel spacers in the corners to make the curves in the two corners even.



Figure 9. Down the street from Giselle's and Quimby's, the freighthouse crew loads a truck.



Figure 10. The backdrop begins just beyond the tall building next to the Hotel Van on Van Buren Boulevard.

Then I painted the top of the box and the backside of the linoleum blue.

I tried to fade from darker blue at the top to lighter blue at the bottom of the backdrop, but I found this more difficult than anticipated. Latex paint just dries too fast! To keep the lighting simple, I used a 4-foot-long, two-tube fluorescent fixture in the top of the box.

My biggest problem with the backdrop was how to handle the street that runs directly into the back wall. I had read about various ways to deal with this issue including cutting out buildings from commercially made backdrops and arranging them so it

appears the street goes down a hill or around a corner and out of sight.

I looked at a few of the commercial city backdrops and just didn't like them. Eventually, I came across King Mill (www.kingmill.com/shop/index.php). They have photographic reproductions of just the type of buildings I wanted.

At first I just planned to use the King Mill photo backdrops as building fronts behind the structures on the layout to provide depth. Then I realized I could make a street scene, photograph it and, hopefully, line everything up with the street on the layout. This turned out to be a bigger project than I anticipated.



Figure 11. This is the view presented to visitors at the first and only open house of the Boston & Maine's Portland Terminal Railroad behind Commercial Street.

The scene I finally photographed was 30 inches deep and 12 inches wide. I built my road down the middle first, then added the sidewalks. Next, I built the crossing road and the near corners of the intersection on the actual layout to match the opposite corners on the backdrop.

Finally, I added my structures. These are simply foam core board with various King Mill images laminated to them. I added roofs, details, signs, figures and cars and photographed it.

A friend tweaked these images with Photoshop and then printed 11x14 inch images for me. I attached them to the backdrop after trimming around all the rooflines. See Figure 10 on the previous page.

Completion and Afterthoughts

By December 2009 I decided I was close enough to "finishing" that I could have an open house and declare the layout done. I set a date

in February 2010 that forced me to focus on adding lots of final details.

I placed figures, added vehicles and a few more signs, plus fire hydrants, a mailbox, some streetlights, and trash and weeds around the industrial buildings. The open house went very well and when it was over, I said I was finished (Figure 11).

By spring I had removed a wall between my layout room and the small bedroom next to it and dismantled

the layout in preparation for my next effort, a variation on the Boston & Maine in Portsmouth, New Hampshire in a 14 x 18 foot space.

In the end, I'm generally satisfied with my first effort. My decision to begin a small layout with more realistic and achievable goals allowed me to begin a project that had been stalled for years. I enjoyed the whole process more than I'd imagined when I first began.

I had to battle my perfectionism and my hatred of mistakes and doing

things over. I made lots of mistakes large and small. Besides the 1/8 inch track clearance along Portland Cold Storage, one problem that plagued me over and over was going too fast and not writing things down as I worked. I'd tell myself I'd remember how I did this or that. Of course, when the time came to remember, I couldn't.

Other problems included my back-drop linoleum coming unglued from the plywood, a perpetual electrical problem with the crossing, less than ideal color matching on my photo backdrop, no street running, no road-bed, and a number of unaligned joints on my structures.

I never liked the track switch in the middle of the road by the Westinghouse Warehouse but never figured out a way to avoid it. Then there was the problem of the outside ladder on the cold storage building that never lined up correctly between each level, etc. The list goes on and on.

I now have the track plan for my next layout almost finalized and have been building the benchwork. I have considerably more confidence as I begin this project than I did when I began the Portland Terminal.

However, the only way I reached this point was to scale back my aspirations, create a small, then smaller, finally the smallest track plan I could, and accept my limitations and lack of experience. It was difficult to super-downsize like this at the time, but it worked for me. ☑



Figure 12. The beginning of the end.



Mark Rindflesh



Mark Rindflesh “messed around” with an HO layout in junior high school. Forty five years later he finally returned to the hobby.

A graduate of Carleton College and the University of Utah School of Medicine, he still lives in Salt Lake City with his wife of 42 years. He has two grown daughters with a first grandchild expected in the fall.

Having run over 40,000 miles in his 32 years of competitive running, he ran numerous marathons including Boston and New York City. His other interests include photography and the Asian strategy game Go.

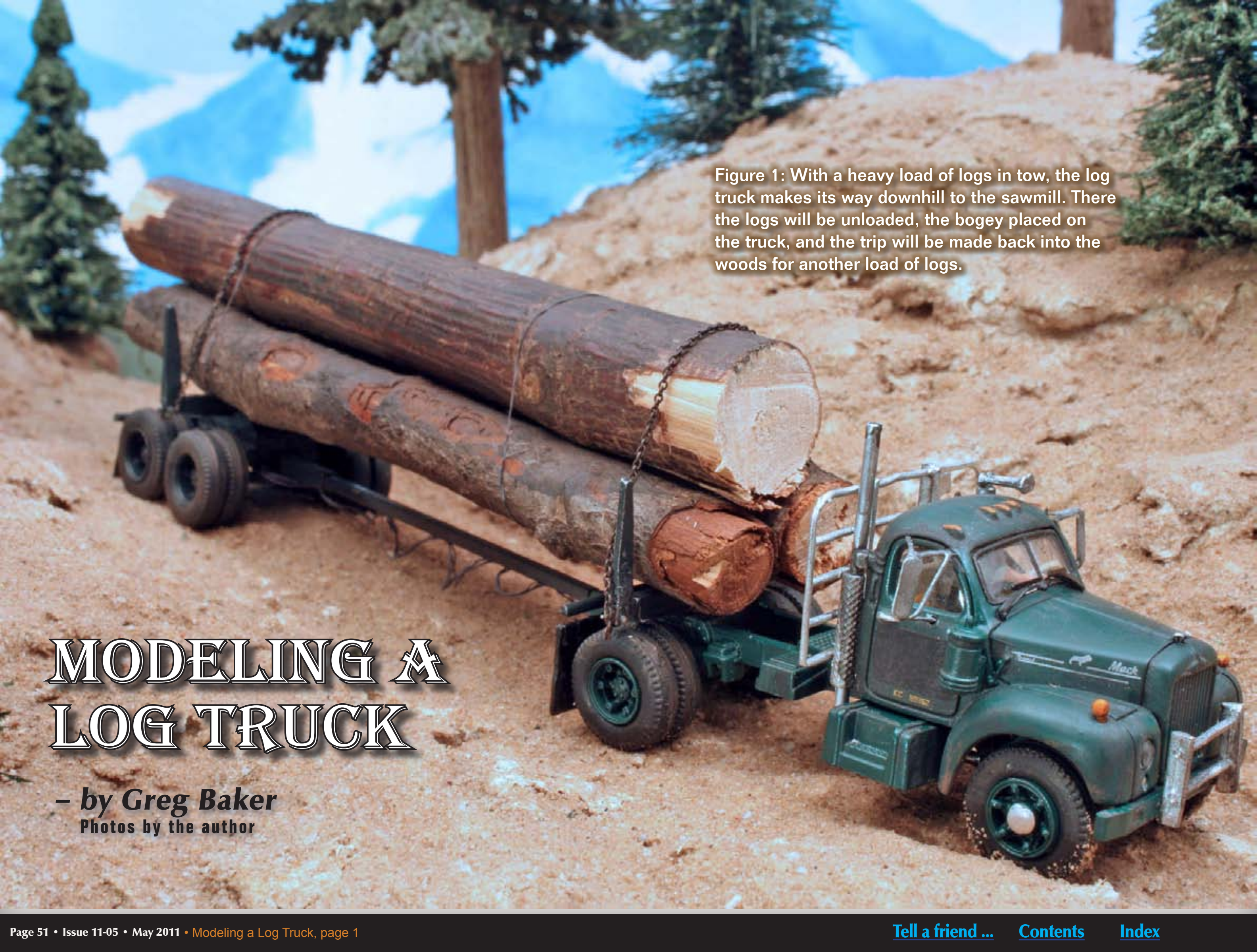


Figure 1: With a heavy load of logs in tow, the log truck makes its way downhill to the sawmill. There the logs will be unloaded, the bogey placed on the truck, and the trip will be made back into the woods for another load of logs.

MODELING A LOG TRUCK

– by *Greg Baker*
Photos by the author



**Reader
Feedback**
(click here)



Build a steam-to-diesel transition era log truck for your layout ...

When I was planning my shelf layout I wanted to include some different aspects of the timber industry. I felt that one thing I would have to include is a log truck, so I began to look for a suitable model of a 1950-1960 era log truck that would be correct for eastern Oregon.

In my search I discovered that there was really no good model for what I was trying to achieve, so I decided to make my own.

I was able to find a log truck chassis from Alloy Forms which included the bunks, chassis, and axles, but it was for a type of truck I had never seen. I also found that they sold a headache rack (extra barrier wall that mounts behind the cab) and other details, so I decided to order these parts and see what I could do to make a more accurate Pacific Northwest logging truck.

With my detail parts in hand, it was time to find a suitable tractor. Athearn had their Mack B on the market, and as I scanned the internet, I found a few log truck photos with Mack B's. So I grabbed some brass square tubing from which to build my trailer beam and was ready to go.

STEP 1: Gather the Materials

Figure 2: With all the parts gathered, I am ready to start my log truck.



BILL OF MATERIALS

Alloy Forms

AF7091 30' Tubular Logging Trailer
AF3053 Mack Decals
AF3075 Headache rack
AF3066 Etched Mirrors
AF1000 Chain

K&S

1/8" Brass tubing
5/32" Brass tubing

Athearn

Mack B

Evergreen Scale Models

.025 Sheet
.040 Rod

Detail Associates

.010 Stainless steel wire

Microscale

Black trim film

STEP 2: Build the Tractor/Cab

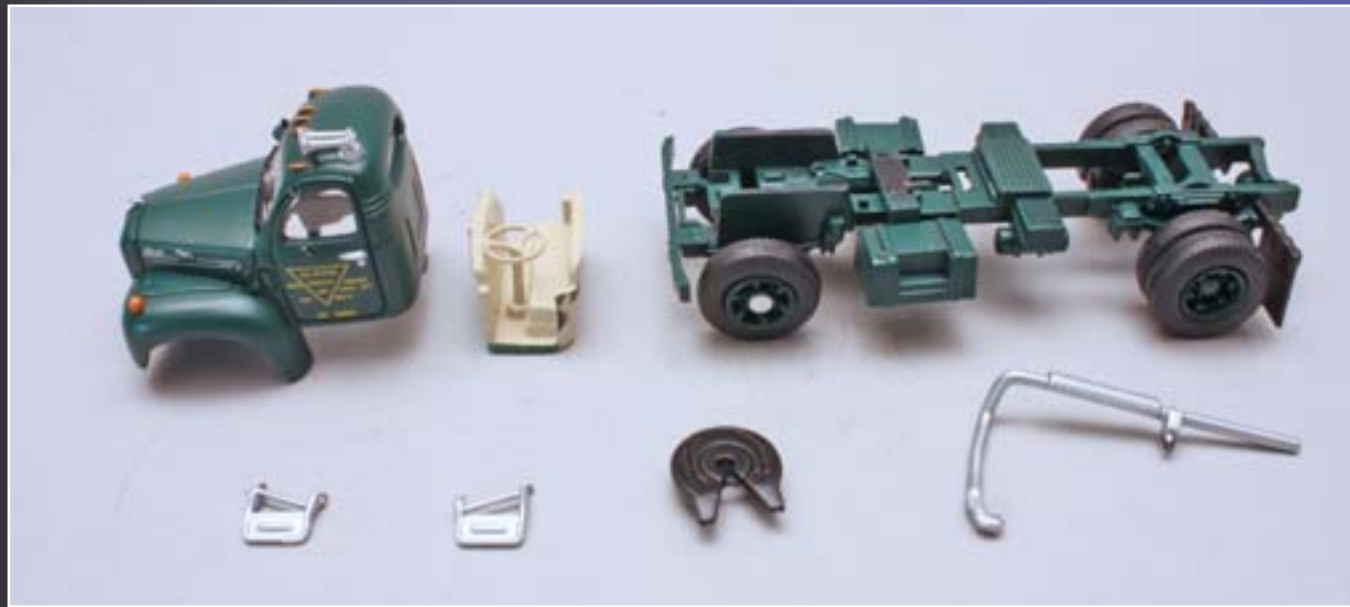


Figure 3: I tackled the tractor first. I began carefully disassembling the cab, removing the exhaust, mirrors, and trailer hitch. The cab is held on by two small tabs, one behind the bumper and one at the edge of the cab.



Figure 4: With the cab apart, I focused on the cab interior. I added a figure, moved the steering wheel to be on the dash, and added some small details such as a coat, lunch pail and thermos.



Figure 5: I then prepped the headache rack to be placed on the frame. The headache rack was too modern for the type of truck I was trying to model, so I made a few cuts and achieved a back-dated rack. Since these are cast metal parts, they will take a little time to clean up, I use a sharp knife and a set of small jeweler's files.

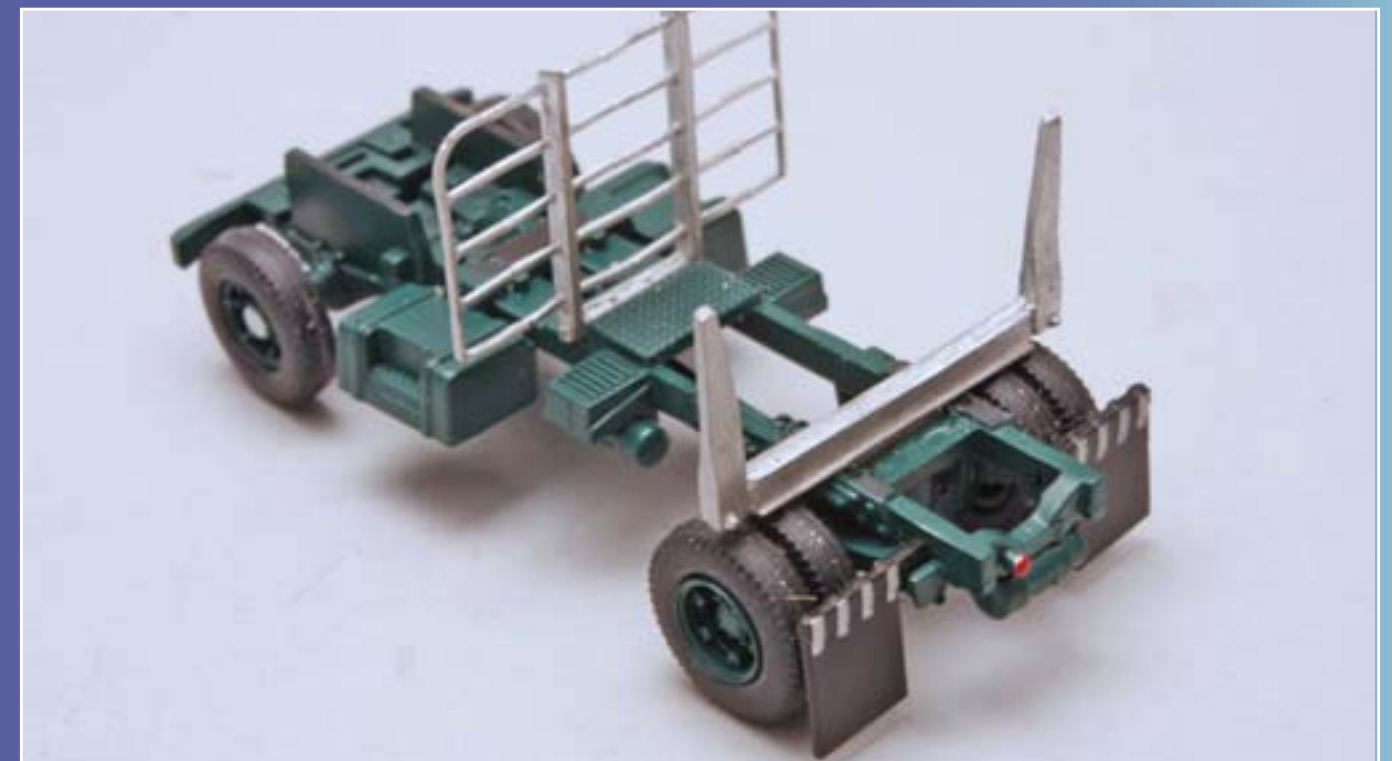


Figure 6: I attached my modified rack to the frame and using a chisel blade, removed the trailer hitch supports. I then used a file to make sure the surface was smooth, and attached the log bunks with CA. I placed the cab back into place and moved on to the next step.

STEP 2: Build the Tractor/Cab *Continued ...*



Figure 7: I added a wheel rest on the rear of the tractor so when the bogey is riding the tractor it is more secure. This was made from .010" styrene rod. I painted it and the bunks black. I made one more modification, which was the addition of a hitch to the rear of the tractor. This was fabricated from the sprue from the tow truck. I used the hook to fashion the hitch, and glued it on with CA.



Figure 8: I added etched metal mirrors from Alloy Forms and painted them a light gray. I also decided that I needed a brush guard. This was fashioned from another headache rack I had broken, but it could easily be made from strip and rod styrene.

STEP 3: Modeling the Bogey



Figure 9: With the cab ready for decaling, I moved my focus to the bogey. I started with the chassis casting, and removed the piece that was designed for the tube-type beam.



Figure 10: Next I cut away on the inside to allow for a new beam to be placed. I then affixed the log bunks to the chassis and painted this black.



Figure 11: I cut a piece of 5/32" square brass tubing to 10' scale feet which would be used on the bogey. I then affixed the larger diameter piece to the underside of the bogey using CA.



Figure 12: I cut a piece of 1/8" square brass tubing 20 scale feet long. To make a hitch, I took one of the levers from the tow truck sprue and placed it inside of the tube. I used some .010" stainless steel wire to make a loop. I secured this together with CA and placed it inside the other piece of brass to complete the beam.

STEP 3: Modeling the Bogey *Continued ...*

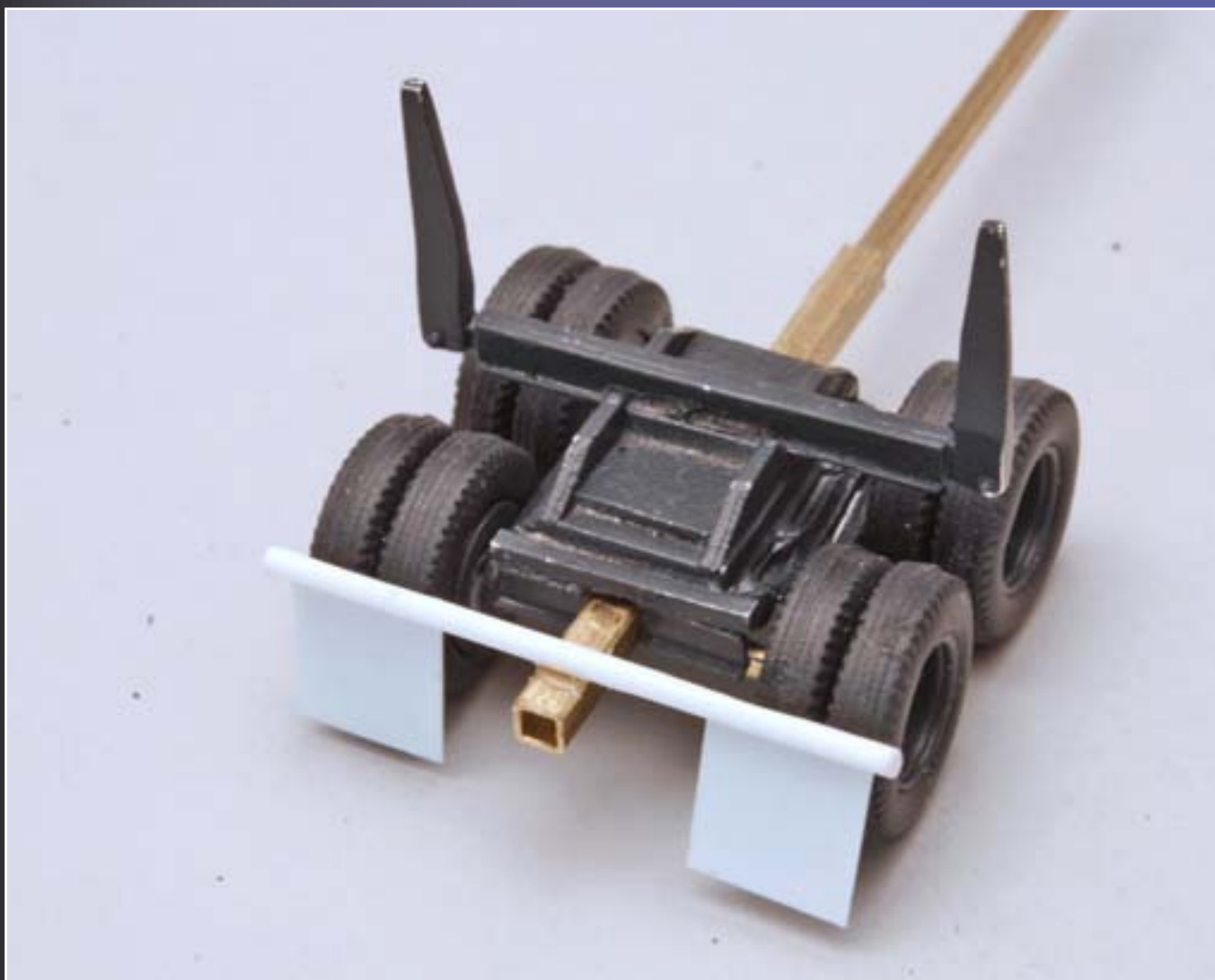


Figure 13: On the other end of the bogey, I added a set of mud flaps. I used a piece of .040" styrene rod as a base, using CA to attach to the bogey. I then cut out mud flaps from .025" styrene, using the flaps on the tractor as a master. I glued the flaps to the rod with plastic weld, which will keep them from falling off.



Figure 14: With the bogey completed, I painted it all engine black and set it aside for decaling. Here is a view of the hitch end of the trailer.



Figure 15: Here is the rear view of the bogey. You can see, I also added a piece of styrene on the rear of the bogey as a stop for the sliding beam.

STEP 4: Adding the Final Details



Figure 16: The next step was to add the details to the log bunks. I again used the .010" stainless wire and created small hooks to attach the chain. I used chain from A-Line, affixing one end to the hook with CA.



Figure 17: I added decals from Alloy Forms to the rear of the mud flaps. I also used a piece of black trim film from Microscale to blank out the information on the door and make the truck look more generic.



Figure 18: I added the brake lines and some other small details, such as license plate and lights, to the trailer.

STEP 5: Modeling the Log Load



Figure 19: The next step was to make the logs. I was able to cut three pieces of wood from some branches found in the back yard. I used EZ Line to represent the chokers that are wrapped around the logs. With the logs ready to go, I turned my focus to the last few finishing steps.

STEP 6: Putting it All Together



Figure 20: With everything ready for weathering I used some light washes and weathering powders to give the truck a used, but well-maintained look. This is where having prototype pictures can really help to show how much, and where to put your weathering.

STEP 6: Putting it All Together *Continued ...*



Figure 21: With the truck weathered, I glued the logs to the bogey only, and then put the tie down chains in place. I added a few details onto the headache rack, some more chokers and an axe.



Figure 22: With the truck complete, I pressed the truck into service, bringing logs in from the woods to take to my sawmill.



Greg Baker

Greg Baker has been “seriously” model railroading for the past 10 years, but as long as he can remember he has always been fascinated by trains. His main interests are the railroads of Central Oregon with the focus of the SP&S along the Oregon Trunk and the City of Prineville Railway.

He currently resides in Kansas with his wife and son as he continues his career in railroading. An active member of the area Free-Mo group, he also helps out with the annual Mid-Continent Prototype Modelers meet held in Wichita.





Figure 23: Click-n-Spin of the finished Logging Truck.

eBay® for Model Railroaders

Part 1

— by Joe Fugate

Ebay, the planet's largest continuous flea market, lists over a quarter-million model railroad-related items. MRH publisher Joe Fugate shares his insights on how to buy model railroading items on eBay without getting ripped off!

E Bay has become the planet's largest full-time online flea market, and it's among the top 30 sites on the entire internet. Millions of people visit the site every day to buy and sell everything from pipe cleaners to European castles.

On eBay you'll find a quarter-million model railroading items covering everything from junk to some hard-to-find and even a rare item or two.

For modelers who don't know the ropes of online auctions, the entire process can seem daunting and fraught with risk. There are some expert tricks you can employ with eBay to get the best price for the items that get listed.

I'll show you how to become a savvy eBay buyer so you don't pay more than you should for an item and how to



The screenshot shows the eBay homepage with a search bar containing 'Model RR, Trains'. Below the search bar, it displays '256,703 results found' and a 'Save search' link. On the left, there is a 'Categories' menu for 'Model RR, Trains' with the following items and counts: DCC Systems & Accessories (1,660), Z Scale (3,255), N Scale (44,334), HO Scale (114,620), OO Scale (1,651), S Scale (4,688), O Scale (59,942), On30 (523), Standard Scale (1,268), and G Scale (10,051). The main content area shows two search results: 'ho scale spirit of 76 locomotive' with an image and an 'Enlarge' link, and 'Busch 1957 Chevy Bel Air Coupe Red 45003 HO Scale' with an image and a 'Top-rate seller' badge. Navigation options include 'All items', 'Auctions only', 'Buy It Now', and 'Products & reviews BETA'. There are also 'View as' icons and a 'Sort by' dropdown.

Figure 1: As of this writing, eBay listed 256,703 items in the *Model RR, Trains* category. Looking at the category menu down the left, HO scale has 114,620 items! Clearly, you need to use eBay's search box to narrow down this list into something short enough to be manageable.

avoid being sucked in by any less-than-legitimate listings.

In this article, my focus is buying items on eBay using “Buy It Now.” In part 2, I will cover how to bid and buy auction items.

EBay search tricks

You first want to master finding only the model railroading items of interest. With a quarter-million model railroad items listed for sale, there’s no way you will be able to scroll through them all.

Let’s assume I want to search for HO items, so I click on the categories menu (you can see it on the left in figure 1) and drill down through:

Toys & Hobbies

↳ Model RR, Trains

↳ HO Scale.

I want to search for Southern Pacific items. I type: **southern pacific** in the search box and click the search button. That gives me almost 700 items, which is still nearly 30 pages of items to scroll through!

Since I model the Southern Pacific, searching on **southern pacific** is obvious, but if you know the SP prototype, it’s also common to see **Cotton Belt** locos and rolling stock on the SP bearing the identical paint scheme, except with *Cotton Belt* in place of *Southern Pacific*.

Cotton Belt is the official nickname for the Saint Louis and Southwestern

The screenshot shows the eBay search results for "southern pacific" in the HO Scale category. The search bar contains "southern pacific" and the search button is highlighted. The results page shows 685 results found for "southern pacific". The left sidebar lists categories such as "Other (170)", "Athem (124)", "Bachmann (43)", "Roundhouse (38)", "Brass Imports (18)", "Decals (33)", "Atlas (29)", "Walthers (23)", "IHC (25)", "Model Power (25)", "Life-Like (22)", "AHM/Rivarossi (22)", "Intermountain (11)", "Kato (9)", "Kadee (11)", "Buildings, Structures (8)", "Concor (7)", "Branchline (7)", "Broadway Limited (6)", "Lionel (6)", "Mantua (6)", "Tyco (5)", "Varney (4)", "Detail Parts (3)", "Bowser (3)", "Accurail (3)", and "Roco (3)". The main content area shows a list of items with images, titles, prices, and shipping information. A dropdown menu is open over the "HO Scale" category, showing sub-categories like "Model RR, Trains", "Toys & Hobbies", and "All Categories".

Item Title	Price	Shipping	Time Left
T&NO SP 304	\$0.99	+\$2.50 shipping	4d 17h 30m
Microscale Decals	Buy It Now \$3.95	Free shipping	13d 9h 2m
Southern Pacific Box HO dt609 Woodland Scenics Decals	Buy It Now \$3.95	Free shipping	16d 1h 54m
HO Athearn parts Southern Pacific EMD GP 35 shell body	\$0.99	+\$3.00 shipping	5d 19h 15m
HO Scale gauge Southern Pacific hopper car	\$0.99	+\$3.25 shipping	2d 14h 56m

Figure 1a: Even narrowing down the items of interest to just southern pacific in the search box, I still get 685 items, which is 28 pages to look through! Clearly, I need to get more clever with my search phrases if I want to home in on just a few pages of items.

(SSW) and I'm interested in those items as well. I should not need to use the full term **cotton belt** in my search – the word **cotton** should be enough.

However, typing: **southern pacific cotton** in the search box won't give me any results. Why not?

EBay's search looks for items with all the search terms by default, which means only items that have both **southern pacific** and **cotton** in their title will appear – which is none.

What I want is items labeled either southern pacific *or* cotton belt to be returned. To do an "either / or" search on eBay, I enclose the items in parenthesis and separate them with commas, like this:

(southern pacific, cotton)

Now that we know that a search returns items with all the terms listed in their title, there's one thing we need to consider when I use the search term southern pacific – it's best to enclose search phrases with more than one word in quotes, like this:

("southern pacific", cotton)

Putting the multiple words in quotes tells eBay to give me an *exact match on both words together* rather than giving me items in the list that only have the word "southern" in them.

I don't want items for the Southern Railway in my return results, for instance. I also use the common

The screenshot shows the eBay search interface. At the top, the eBay logo is on the left, and a search bar with a 'Go' button and 'My eBay' link is on the right. Below the logo, it says 'Welcome! Sign in or register.' A navigation bar contains 'CATEGORIES', 'FASHION', 'MOTORS', 'DEALS', and 'CLASSIFIEDS'. The search bar contains the query: **("southern pacific", sp, cotton,ssw) caboose**. To the right of the search bar, there is a dropdown menu for 'HO Scale', a green 'Search' button, and a link to 'Advanced' search. Below the search bar, there is a checkbox for 'Include description' and a link for 'Related Searches: browse this category'. The results section shows '79 results found for ("southern pacific", sp, cotton,ssw) caboose' with a 'Save search' link. On the left, there is a 'Categories' sidebar listing various brands and scales like 'Athearn (25)', 'Other (13)', 'Atlas (8)', 'Walthers (6)', 'IHC (5)', 'Roundhouse (4)', 'Decals (4)', 'Life-Like (4)', 'Bachmann (3)', 'Brass Imports (2)', 'Marklin (1)', 'Intermountain (1)', 'Buildings, Structures (1)', and 'AHM/Rivarossi (1)'. The main content area shows three product listings, each with a thumbnail image, a title, and a 'Top-rated seller' badge. The first listing is 'HO Athearn Special Edition SP Police Caboose Kit 2 cars'. The second is 'ATHEARN 5363 COTTON BELT WV CABOOSE NIB HO' with 'Expedited shipping available'. The third is 'HO Athearn SP Bicentennial Bay Window Caboose #1776'. At the top right of the results area, there are filters for 'All items', 'Auctions only', 'Buy It Now', and 'Products & reviews BETA', along with 'View as' options and a 'Sort by: Best Match' dropdown.

Figure 2: Using some search phrase tricks I find exactly what want: Southern Pacific or Cotton Belt cabooses, which narrows the list of 114,620 HO items to just 79 items – much more manageable.

abbreviations of sp and ssw in my search string, and get the follow items back:

Athearn GP9 diesel Southern Pacific SP SP&S Steam generator car by Rapido

You see the problem?

I also got an SP&S item in my results.

That's not exactly what I want.

To eliminate items I don't want, I can put an additional search phrase in using a minus sign, like this:

("southern pacific", cotton, sp, ssw) -sp&s

Now the SP&S items drop out of the list, dropping the list from 1819 to 1770.

While scrolling through 40 pages of items is not impossible, that's a lot. If possible, I need to narrow my search still further.

I'm actually interested in finding cabooses, so I alter my search string to be (I remove the -sp&s for now):

("southern pacific", cotton, sp, ssw) caboose

That gives me just 79 items, or 2 pages of items (figure 2). As a further refinement, I select **Price + Shipping: lowest first** from the Sort by drop down (figure 3). Now I can view the items in increasing total price order from the least to the most expensive.

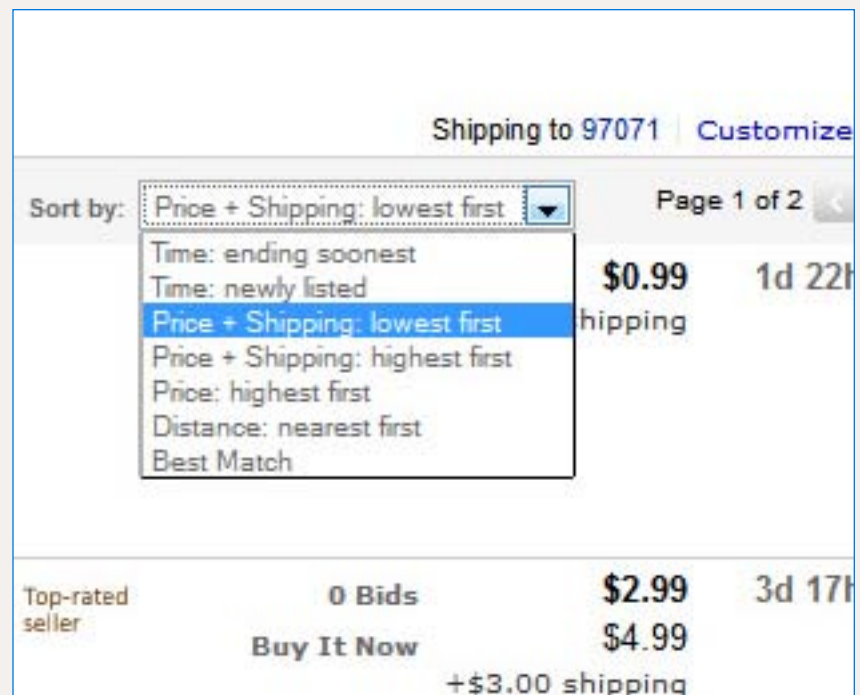


Figure 3: Using the sort by selection, I sort the items by Price + Shipping: lowest first.

Figure 4: This Atlas Extended Vision Cotton Belt caboose catches my eye. While the price is \$18.95, I take note of the shipping of \$7.15, which makes the total price \$26.10. I also wonder how true to the prototype this caboose model is, so I do some quick research online to determine the answer.

Atlas HO #1902-1 Ext. Vision Caboose Cotton Belt #40

Item condition: **New**

Quantity: 2 available

Price: **US \$18.95** [Buy It Now](#)

[Add to Watch list](#)

Bucks Join **eBay Bucks** and earn 2% back on this item. [See conditions](#)

Shipping: **\$7.15** Expedited Shipping | [See all details](#)

Delivery: Estimated between **Fri. Apr. 22** and **Sat. Apr. 23** [?](#)

Returns: 7 day money back, buyer pays return shipping | [Read details](#)

eBay Buyer Protection
Covers your purchase price plus original shipping.
[Learn more](#)

Shopping for a caboose

As I browse the list, an Atlas Extended Vision Cotton Belt caboose catches my eye (figure 4).

It's important that you don't take a listing at face value unless you're already very familiar with the model being offered. In my case, I didn't know a lot about this particular HO caboose model offered by Atlas.

Right away, I'm wondering, "How prototypical is this model?" Fortunately, there's a great SP information web site (maintained by SP modeler Richard Percy) that I can check:

<http://espee.railfan.net/espee.html>

In a few moments, I've located prototype photos of the Cotton Belt C-40-9 series, which includes #40. I look at the photos to assess how close this model comes to the prototype (figure 5).

I can see the window arrangement on the coupola is different, and the windows in the car body are different as well. Finally, in my era (1980s), the roofwalks have been removed and cabooses are on their last legs.

The eBay listing only has a simple side view colored drawing of the caboose, so I go to the Atlas web site and find an actual photo of the model in

Figure 7: The prototype also used this red/magenta paint scheme for Cotton Belt cabooses in this class. Photo by Ken Perry.



Figure 5: Here's a prototype photo of the C-40-9 series caboose. Photo by Clyde King, from Richard Percy's fabulous SP web site: <http://espee.railfan.net/espee.html>.



Figure 6: By visiting the Atlas web site, I found this photo of the model. This helps me visualize the model better than the ebay listing's simple colored drawing.



More than building models

At *Model Railroad Hobbyist*, we want you to be the best, most satisfied model railroader you can be. The *Hobbyist* in our name means our highest priority is *you*, our reader. Sure we like the models too, but we're about much more than just the "stuff" of the hobby.

Applying this core philosophy to our content means we also do articles on how to be a better model railroader – not just on how to build better models.

Besides helping you learn how to use eBay better as this piece does, some other better-model-railroader-category topics examples include:

- Good sources for inexpensive freight cars
- Guide to shows and events
- Shopping for model railroad products online
- Visiting hobby shops while on the road
- Finding a good club
- Special Interest Groups (SIGs) – how they can help
- How to set a realistic layout scope and budget
- Picking the right scale
- Guide to model train videography
- Top 10 things to get started in the hobby right

Rather than just talk about building models and layouts, we believe it's vital to address common modeler issues around doing the hobby well.

Using "Hobbyist" in our name serves as a constant reminder the most important element of the hobby must be people having fun. The stuff of the hobby, that inanimate "it", by itself cannot have fun.

In short, we're about having fun doing all aspects of the hobby, which is way more than just building models! ■

the tuscan/orange paint scheme. This gives me a much better idea what this model actually looks like (figure 6).

I can see two different paint schemes were in use - an all red/magenta color and the more traditional tuscan with orange ends. The listing I'm looking at has the tuscan/orange scheme.

In short, this model is a reasonable facsimile, but for best accuracy, I would need to fill and re-arrange some windows. I'm willing to consider doing that, so I give serious consideration to buying this model.

But watch the price

One of the biggest mistakes I see buyers on eBay make, is getting caught up in the buying frenzy and paying more than they should for an item.

You need to do your homework before buying an item. To use the caboose example, I see the listing shows it priced at \$18.95 (refer back to figure 4).

When I look at the Atlas web site (figure 8), I see the list price for this caboose is \$19.95, so the \$18.95 price looks decent. However, I also need to consider the shipping, which this seller lists as \$7.15, expedited.

A total cost of \$26.10 (18.95 + 7.15) is more than I'd like to pay, so I keep looking. I sorted the eBay item list by total price (item price plus shipping),

ITEM#	ROAD NAME	ROAD NUMBER	MSRP
HO Standard Cupola Caboose - New Road Numbers!			
1300	Undecorated	-	\$18.95
1301-3	Great Northern (Red/White/Black)	X39	\$27.95
1301-4	Great Northern (Red/White/Black)	X74	\$27.95
HO Standard Cupola Caboose - New Paint Schemes!			
1309-2	Norfolk Southern (Research Car) (Grey/Black)	49	\$21.95
1309-3	Norfolk Southern (Research Car) (Grey/Black)	51	\$21.95
1309-4	Norfolk Southern (Horse Head Logo) (Red/White)	555074	\$21.95
1309-5	Norfolk Southern (Horse Head Logo) (Red/White)	555518	\$21.95
HO Extended Vision Caboose - New Road Numbers!			
1900	Undecorated-EV (w/o roofwalk)	-	\$18.95
1999	Undecorated-EV (w/roofwalk)	-	\$18.95
1901-3	Burlington Northern (Green/Yellow)	10531	\$19.95
1901-4	Burlington Northern (Green/Yellow)	10586	\$19.95
1902-1	Cotton Belt† (Brown/Orange)	40	\$19.95
1902-2	Cotton Belt† (Brown/Orange)	45	\$19.95
1907-1	Chessie System* (C&O) (Yellow/Vermillion)	0 2400	\$19.95

◀ Figure 8: I check the Atlas web site for this caboose and find the list price is \$19.95. I use this to judge if the ebay item price is reasonable. Do your homework to make sure you're not getting overcharged – and remember to include shipping!

Figure 9: After a bit more looking, I find this less expensive Cotton Belt caboose in the red/magenta paint scheme. The item price plus shipping comes out to \$19.59 –much better than the \$26.10 of the other caboose in figure 4. Now that's more like it!

NIB HO Atlas #1902 Ext Vision Caboose SSW #45

Item condition: --

Quantity: 3 available

Price: **US \$13.99** [Buy It Now](#)

[Add to Watch list](#)

Bucks Join [eBay Bucks](#) and earn 2% back on this item. [See conditions](#)

Shipping: **\$5.60** Expedited Shipping [See discounts](#) | [See all details](#)

Delivery: Estimated between **Thu. Apr. 21** and **Fri. Apr. 22** [?](#)

Returns: 7 day money back, buyer pays return shipping | [Read details](#)

eBay Buyer Protection
Covers your purchase price plus original shipping.
[Learn more](#)

so I can scroll back up the list looking for something that costs less.

And there is just such a listing – for Cotton Belt caboose #45 in the red/magenta paint scheme. Actually, I like the paint scheme better since it gives my cabooses some nice variety, so this item interests me.

It's priced at \$13.99, with \$5.60 expedited shipping, for a total of \$19.59. Much better!

As you can see, it pays to slow down and look before you leap on eBay. But that's true of any purchase you make online or otherwise.

With online buying, you generally have all the sources you need at your fingertips and in a few minutes of googling you should have the answers you need to judge what constitutes a fair price.

Saving your searches

To actually buy something off eBay, you need to register. Registering is free – it's the sellers who pay eBay a percentage for listing their item.

Once you are registered, a number of benefits are available, like being able to save your searches for easy reuse later.

To save my search, I just click Save Search to the right of the search results line at the top of the screen (figure 10). Ebay lets you give the search a name – I call my search “HO

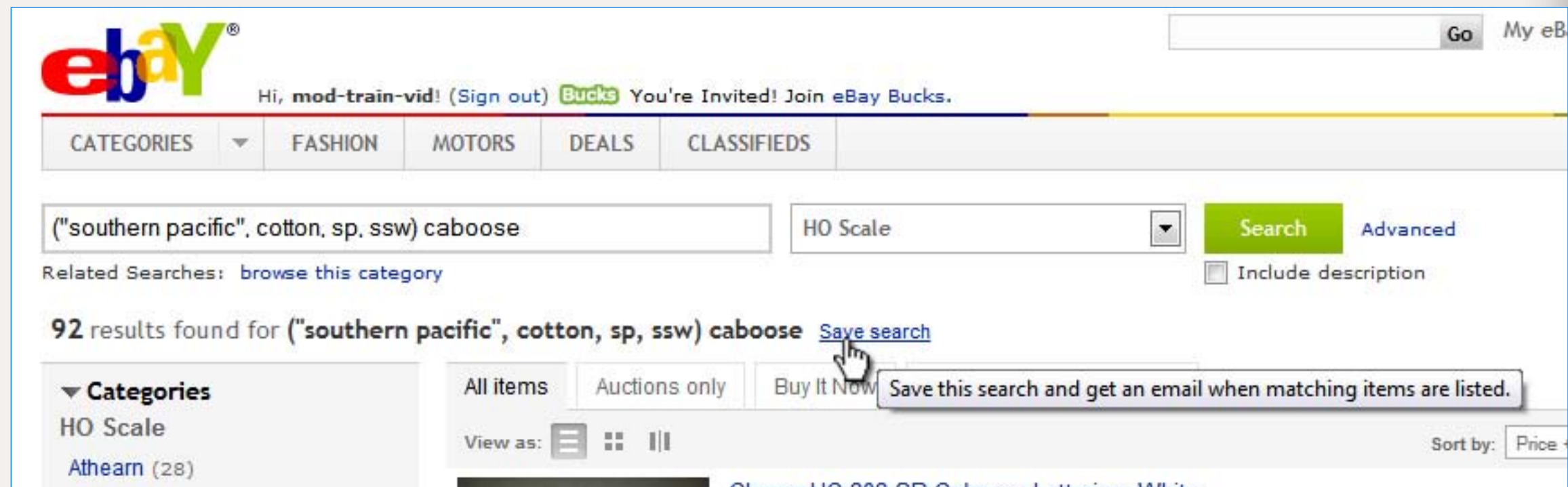
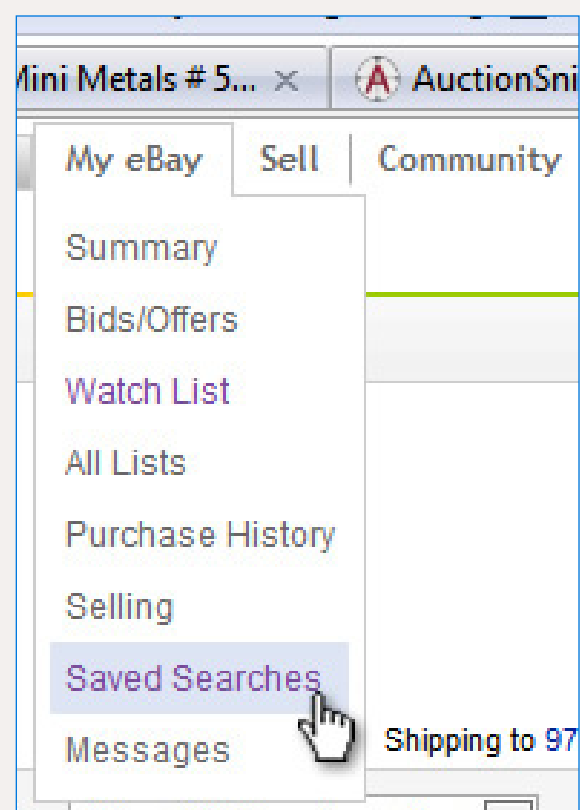


Figure 10: To save your search, click the **Save search** link at the end of the results found line on the top of the listing screen.



▲Figure 11: To access your saved searches, click **My eBay** on the upper right of your browser window and select **Save Searches**. You can also use the **My eBay** dropdown menu to look at the items on your **watch list**.



Video won't play? Click [here](#) to play it on YouTube.

SP and Cotton Belt cabooses”. I leave the “email me when newly listed items match my search” checked.

If I want to rerun my saved searches, I log in and click **My eBay** in the upper right of my screen (figure 11). eBay presents a list of all my saved searches.

To rerun a search, all I have to do is click it.

Using a watch list

Another benefit of being a registered eBay user is I can add items to a watch list.

To save something in a watch list, I click the “Add to Watch List” button on the listing. To see my watch list items, I log in, click My eBay in the upper right of my screen and select Watch List (figure 11).

eBay’s Watch list shows the item picture, title, seller rating, if the item has any bids, its price, the shipping cost, the time left before the listing expires, and the available actions on the item.

I find using the Watch list makes it easy to track the items I’m interested in, allowing me time to strategize on how to best use my hobby funds.

Buy it now or auction?

eBay started as an auction site, but over the years an increasing number of “buy it now” listings have








Items in your Watch list						Print Edit	
<input type="checkbox"/> All (16) Active (9) Ended (7)							
						Sort by <input type="text" value="Time left: ending soonest"/>	
<input type="checkbox"/> Add note Delete Compare Add to list							
			Bids	Price	Shipping	Time left	Actions
<input type="checkbox"/>		N&G brass dist Semaphore UP Union Southern Pacific CORP mid_century (1817 ★) 100.0%	--	\$99.90 <i>=Buy It Now</i>	\$3.50	5d 13h	Buy it now More actions
<input type="checkbox"/>		N&G brass Semaphore Union Pacific SP Southern Pacific mid_century (1817 ★) 100.0%	--	\$109.00 <i>=Buy It Now</i>	\$3.50	5d 14h	Buy it now More actions
<input type="checkbox"/>		N&G Brass SP Southern Union Pacific TRAIN ORDER Signal mid_century (1817 ★) 100.0%	--	\$139.00 <i>=Buy It Now</i>	\$3.50	7d 15h	Buy it now More actions
<input type="checkbox"/>		Custom Built AMB HO-Scale Southern Pacific Depot theinsidegateway (2354 ★) 100.0%	--	\$295.00 <i>=Buy It Now or Best Offer</i>	\$9.95	7d 19h	Buy it now More actions
<input type="checkbox"/>		HO ExactRail SP Southern Pacific Thrall Gondola # 1 zug-meister (12550 ★) 99.9%	--	\$27.50 <i>=Buy It Now</i>	\$5.95	13d 20h	Buy it now More actions
<input type="checkbox"/>		Custom Built HO-Scale Southern Pacific Structures theinsidegateway (2354 ★) 100.0%	--	\$275.00 <i>=Buy It Now</i>	\$9.95	16d 20h	Buy it now More actions
<input type="checkbox"/>		InterMountain HO 48301 Southern Pacific 5283 CF Boxcar eds.trains (2902 ★) 100.0%	--	\$24.95 <i>=Buy It Now</i>	\$7.95	23d 16h	Buy it now More actions

Figure 12: The Watch list shows the item, if it has any bids, its price, shipping cost, time left before the listing expires, and available actions on the item. This list makes it easy to track items of interest on eBay.

appeared. Many listings for model railroading items have become “buy it now” items, making eBay a feel a lot like an online perpetual swap meet.

However, items for auction do still appear, and there’s a whole strategy around how to do eBay-savvy bidding on auction items that we will discuss in part 2.

Paying for an item

Coming back to my caboose, I elect to purchase the less expensive red/magenta Cotton Belt caboose by clicking the “Buy It Now” button.

Ebay uses PayPal as its payment processor, so you will be routed to PayPal to make payment for the item you just bought.

I encounter people now and then who do not seem to like PayPal, but frankly, I don’t share their concern.

Let’s look at what can happen outside of shopping online in the “real world”.

A number of times, my credit card number has been stolen in various department stores. I’ve also had paper checks stolen out of a Postal-dropoff mailbox and fraudulent checks made up and used to buy goods against my bank account.

However, I have never had a problem with PayPal. I love PayPal because all I ever have to give an online merchant is my email address and nothing

more. There’s no credit or debit card number to steal.

If you really understand how PayPal works – all you give to a merchant is your email address and you use your password (which only you know) to trigger the payment to the merchant from PayPal’s site – then you can see why PayPal is about as safe as it gets when it comes to online shopping.

Who cares if someone “steals” your email address? As long as they don’t know your PayPal password, it’s useless.

If you still insist that PayPal’s not for you, then I recommend you get yourself a separate credit card and use it only for online shopping. If the number gets stolen (I should say “once it get stolen” since it’s generally just a matter of time), then it’s easy to cancel your special online-only credit card and get a new one.

The credit card companies will not hold you responsible for fraudulent transactions, which is why credit cards are better than debit cards for online shopping.

Don’t use your main bank account debit card to conduct business online! Once your debit card number gets stolen, your main bank account will be in a mess for weeks! Also, any money spent could just be gone, which is not good.

Ask me how I know!


In part 1 we looked at how to do “buy it now” purchasing on eBay. Next month we take a closer look at how to be a eBay-savvy bidder on auction items. 



Figure 13: I paid for my caboose using PayPal, my favorite way to pay for goods online. I’ve never had a problem with PayPal (I’ve had numerous fraud issues when I didn’t use PayPal, however). With PayPal all the merchant gets is an email, so there’s nothing to steal. You give the PayPal site (not the merchant) your password to authorize the transaction payment, which only you should know.

The screenshot shows an eBay order page with the following sections:

- Shipping details:** Joe Fugate, 123 Someplace Drive, Cowtown, OR 98765, United States, (800) 920-6020.
- Payment details:** PayPal logo and icons for MasterCard, VISA, American Express, Discover, and BANK.
- Order details:** A table with columns for Item title, Available actions, Shipping & handling (estimated delivery*), and Price.
- Item title:** NIB HO Atlas #1902 Ext Vision Caboose SSW #45, 6066720583 - Price: US \$13.99, Quantity: 1.
- Shipping & handling:** Expedited Shipping: US \$5.60, USPS Priority Mail®, Estimated delivery: April 20 - April 29.
- Price:** US \$13.99.
- Payment Instructions:** PayPal, VISA/MC, AMEX, Discover. US shipping via USPS Priority Mail, Intl shipping via USPS First Class International or Priority International Mail. The USPS offers NO tracking or insurance for First Class International Post. For tracking and insurance, you MUST pay the Priority International rate. We combine multiple purchases to minimize shipping costs. Credit card payments may be telephoned to 1-815-963-0200.
- Subtotal:** US \$13.99.

Jack Tingstad's Cloud City & Western

by Charlie Comstock
photos by the author

Jack Tingstad has created a very scenic freelanced Colorado layout in a modest space. He employs multiple levels (but not decks) to maximize the length of his main-line. Most of his locomotives are sound-equipped steamers in keeping with his early 1900s era.

I first saw Jack's layout when it was open during the 2010 PNR regional convention held in Lynnwood, Washington. How could I not return with a bag of cameras?



**Reader
Feedback**
(click here)



Charlie: I'm here in the Cloud City and Western railroad, an HO scale layout that Jack Tingstad has built. Jack, thank you for having MRH drop in.

Jack: Glad to have you!

Charlie: Your layout has a rather unusual name. Did you call it Cloud City because of the weather here on Whidbey Island?

Jack: I was really enamored with using [New London Industries](#) stencils to make clouds. My wife came down and said "That's a lot of clouds!" A week later I was reading a book on Leadville, Colorado, which is the area I'm modeling. I found out that Leadville was nicknamed Cloud City by the locals and that was all it took – my railroad became the Cloud City & Western.

Charlie: You've been working on this layout for how long?

Jack: About 11 or 12 years – I started in the mid '90s after I retired.

Charlie: This wasn't your first layout though, was it?

Jack: No, it's the second one in this room. I've been in the hobby 60 years or more. The earlier ones weren't much, but this one I like; this one is nice.

Charlie: What led you to mountain railroading?

Jack: Well, partly it was the mountain scenery. I'm modeling Mount Massive, Colorado, which goes all the way from

Figure 2: Mount Massive and the Crystal River Mine.



Figure 2

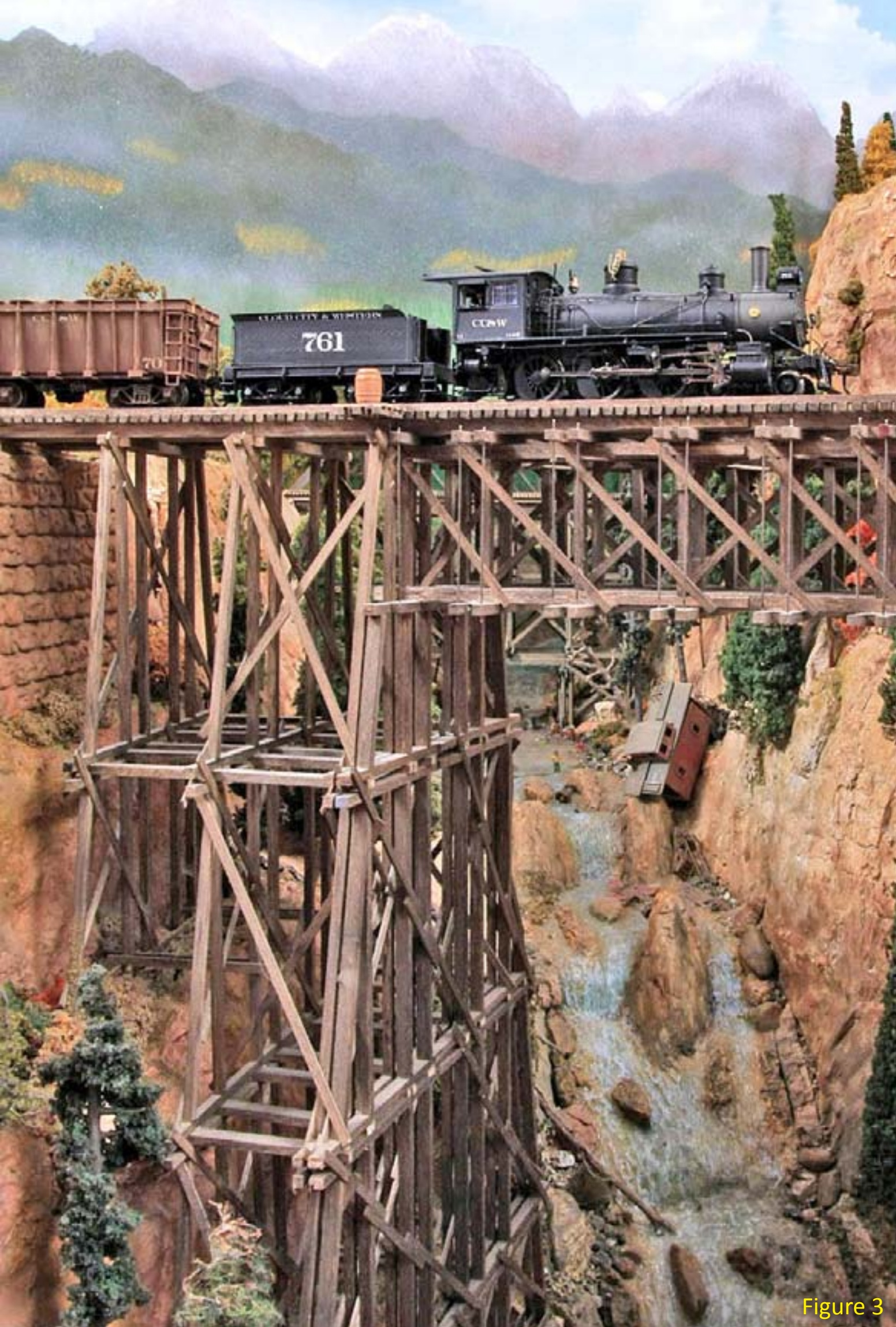


Figure 3

the ceiling (figure 2) to knee level at the bottom of the river next to it (Figure 3).

Charlie: There's a big mine on Mount Massive. Would you tell me about it?

Jack: This is one of my scratchbuilt structures (Figures 2 and 4). It took me pretty much all of a winter to do it. I had a different mine there for a long time, but it just wasn't big enough – it didn't look like it really fit. When I began the layout years ago, I decided to have a large structure here. Over the years I researched a number of mine structures from Colorado in books and videos. One of the videos ended with someone saying, "no matter what you do, it can look like some mine in Colorado." Mines there are extremely diverse so there are many different ways to do it.

So I finally got around to building the new mine. I went with twin ore chutes in the holding building so they can load two cars at a time. The tower is enclosed because of the heavy snows and winters in Colorado. Miners were always using what was on hand. They had an old 0-4-0T and that became the small loco to generate steam to operate the lifts and other power driven stuff.

Charlie: Oh, that's what that Docksider is doing over there...

Jack: Right. It's just sitting there permanently with a steam line coming out

Figure 3: The high trestle across the Crystal River. The river bottom, at knee height, is the lowest scenery on the layout.

of it and a water line going in. There's also a little tank car there for fuel.

I'm pretty pleased with the way the mine came out. The stairways are pretty detailed. It was built mostly on my workbench and then installed in this position because it's really very difficult to build a building. It's all scratchbuilt – mostly out of 2"x6" and 2"x10" scale lumber.

Charlie: So the whole mine is board by board construction? No scribed stripwood in there?

Jack: Right. There are two things I really like about model railroading. I love operations of course, but building structures and detailing scenery on the layout keeps me enthused about adding new features.

There are a couple of other prototype buildings on the layout that are also scratchbuilt, but this is the major feature as people walk into the room

Charlie: What about the other mine on Mount Massive?

Jack: I like building mines so I'm building them whenever I get a chance. The other mine is the 'original' mine in that location. But a new strike caused it to be replaced with the larger structure (Figure 4).

Charlie: Maybe you should join the UMW (United Mine Workers)?

Jack: (sigh)

Charlie: It looks like there are about a million tunnels on this layout. How many are there?



Figure 4

Figure 4: Another shot of the Crystal River Mine on Mount Massive. You can see some of the name-sake clouds on the backdrop and part of the older, now-abandoned original mine on the right.

Jack: I think there are 21 tunnels with probably four or five kinds of portals. Some are handbuilt, while others were cast. The cast ones are plaster but they look like wood. Some are actually stick-built, board by board, portals, too.

Charlie: Do you add linings in them?

Jack: Just in the visible part, you know where people would look in, so you wouldn't see Styrofoam or something. I cast my liners using a Woodland Scenics tunnel liner mold. The interiors look pretty real.

Charlie: How many trestles are there?

Jack: More than one or two! This one (Figure 3) is the biggest. When I started the layout I wanted scenery from the ceiling down to knee level and the river bottom under the trestle is it.

By the time I finished this, I fancied myself an amateur engineer. It's double tracked, with the tracks diverging and on a grade. I ran the tracks up to both ends of the bridge site and put a heavy piece of cardboard over it and traced where the track was going. I made holes where every bent would go and used a plumb bob to mark the bent locations on the ground below. Then I started actual construction building bents and the deck. Again it was almost a three-month-in-the-win-



Figure 5

Figure 5: The long trestle in front of Mount Massive.

Figure 6: A rock shed to keep falling boulders off the tracks in a particularly vulnerable location.

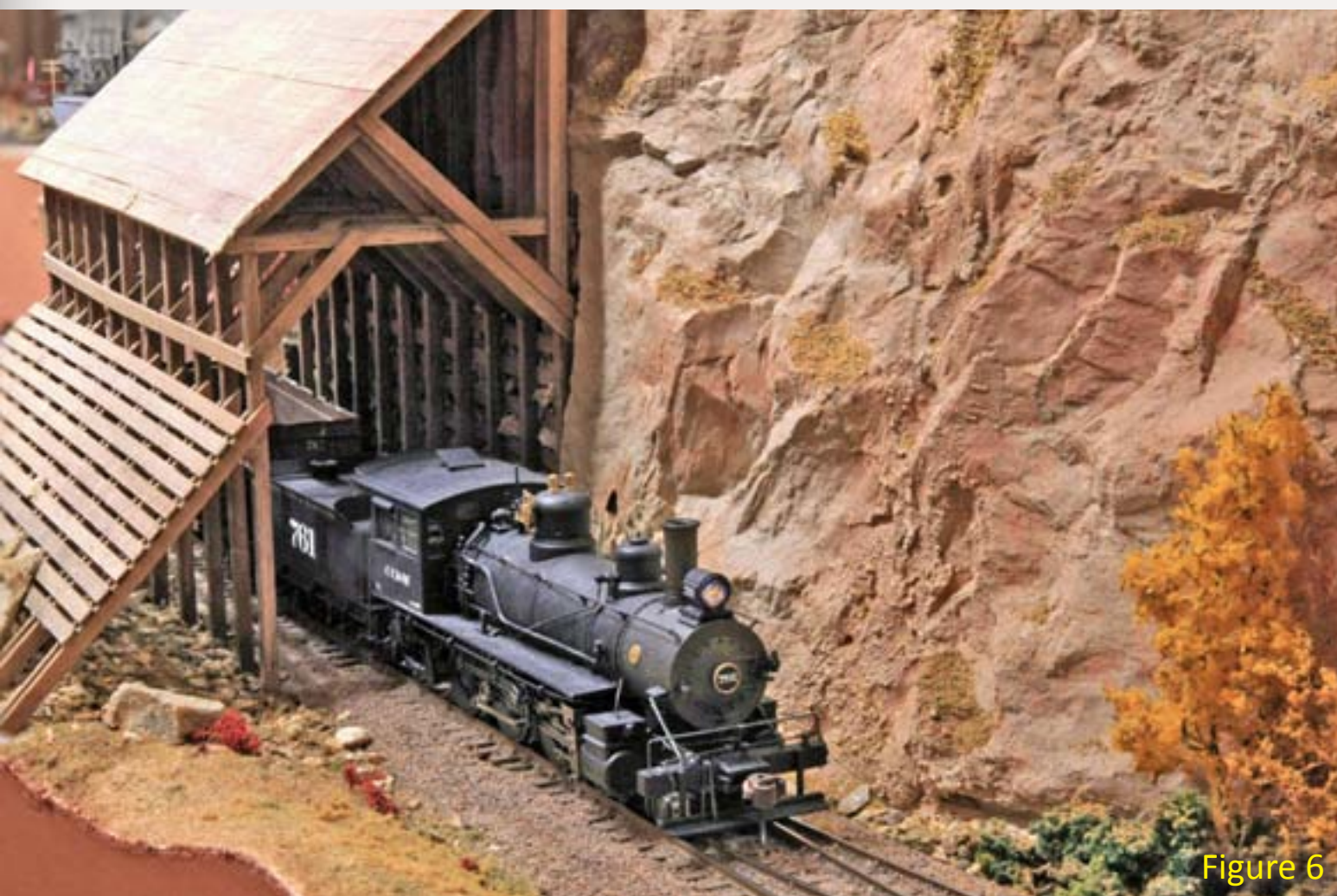


Figure 6

ter project, but I'm fairly pleased with the way it turned out.

Charlie: Where did you get your information on bridge building?

Jack: There are a lot of magazines with articles about bridge building, but this is not a copy of any particular bridge anyplace, though I imagine if you looked hard enough you could find one that's close.

Charlie: Is the middle a Howe truss?

Jack: You're right. I added some refugees with firefighting water barrels on them. It wasn't a very large quantity of water but they hoped if sparks from a steam engine set it on fire they could put it out right away.

Charlie: What about the snow shed, or is it a rock slide shed?

Jack: It's mostly for rocks, there's a lot of cliff areas as you can see around the layout. Again, it's a feature that I planned when I first designed the layout. I wanted lots of little view blocks or structures that give you the idea that you're in different areas of the railroad – this kind of breaks up the scenery into sub-views on either side.

I tried to weather the shed up nicely so it looks like it's been there a long time.

Charlie: You've got a lot of wildlife, I see deer and bears (that are scaring some poor cowboy).

Jack: I like to populate my layouts with people and critters. In fact I've had visitors say you've really inspired me to add more figures to my layout.

Charlie: Animalistic model railroaders...

Jack: Hah! There's always more to add.

I don't hand paint much. I've got one scene where I hand painted the figures and all but most of them are purchased ready-made, ready-painted.

Charlie: What's the name of the main yard (Figure 7)?

Jack: That's the classification yard at Cloud City. This area represents Leadville, Colorado, which is over 10,000 above sea level. There are a turntable and roundhouse here.

Charlie: I see an ice house. Do you ice reefers during your op sessions?

Text continues on page 76

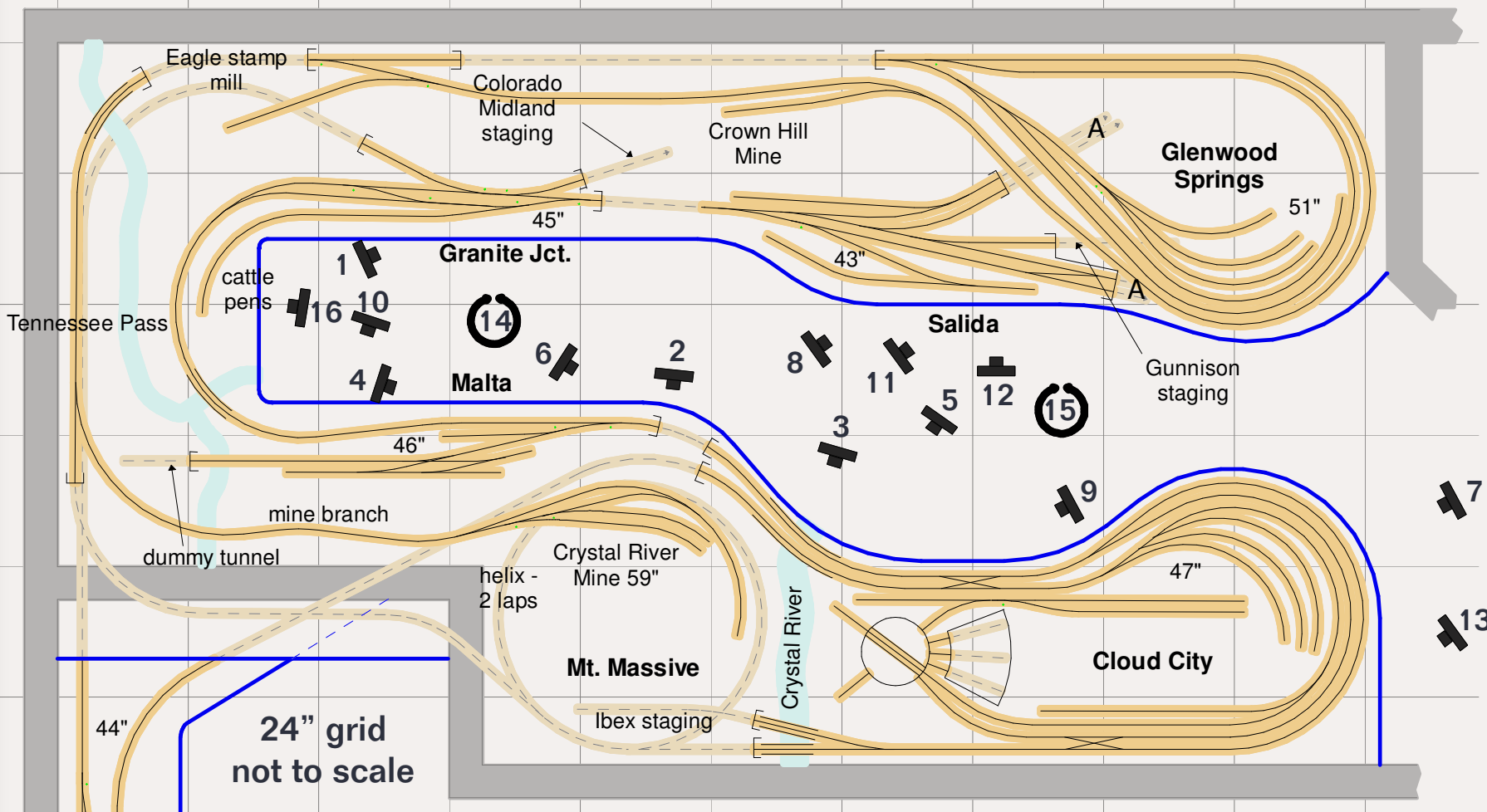
Jack Tingstad's Cloud City & Western

Jack Tingstad is a retired educator who enjoys the relaxed pace of life on Whidbey Island northwest of Seattle, Washington with his wife of 57 years.



Jack has been modeling for more than 60 years and this is his fourth layout. He finds operation, scenery building, and creating "mini" scenes the most rewarding parts of the hobby.

Jack has opened the doors of his layout for the local train lovers the weekend after Thanksgiving. For the past ten years, close to 300 local folks have attended each year. He is known in the community as the "train guy" and is always glad to have folks come over to see his layout.



Layout Statistics

Era: Early 1900s
 Locale: Colorado between Salida and Glenwood Springs
 Style: Freelanced
 Configuration: Single deck, multiple level
 Scale: HO
 Trackplan: Loop to loops with stub staging in the crew lounge.
 Size: 22' x 11' (not including staging in the crew lounge)
 Minimum radius: 24" mainline, 18" spurs

Track: Micro Engineering flex-track
 Mainline length: Over 200'
 Turnouts: Mostly #6
 Control: Digitrax radio
 Elevations: 43" to 59"
 Scenery: Knee height to ceiling, built with plaster over screen with many lift-out sections to access hidden track.
 Staging: Reverse loops at Salida and Glenwood Springs plus stub ended staging at Breckenridge.

An op session Scenario Card for the Cloud City & Western

<p>CLOUD CITY & WESTERN</p> <p>SERVING THE HEART OF THE ROCKIES</p> <p>J.P. TINGSTAD GENERAL MANAGER</p> <p>SUNRISE</p> <p>EDITION NUMBER 9</p> <p>EFFECTIVE JANUARY 1, 1927</p>	<p>SUNRISE NUMBER 2</p> <p>ENGINE # 37 TYPE 4-6-0</p> <p>STAGED AT GLENWOOD SPRINGS STATION HEADING EAST.</p> <p>WORK:</p> <p>PROCEED TO AND STOP AT CROWN HILL MINE, AND EAGLE STAMP MILL FOR PASSENGERS.</p> <p>PROCEED TO AND STOP AT TENNESSEE FOR PASSENGERS AND WATER. USE WATER FILL SOUND IF AVAILABLE OR HOLD FOR ONE MINUTE.</p> <p>PROCEED TO CLOUD CITY AND HOLD THE MAIN. WAIT FOR MEET WITH MORNING STAR # 1 HEADING WEST.</p> <p>P/U COMBINE #5 FROM CLOUD CITY YARD.</p>	<p>PROCEED TO AND STOP AT MALTA FOR PASSENGERS AND WATER. USE WATER FILL SOUND IF AVAILABLE OR HOLD FOR ONE MINUTE.</p> <p>PROCEED TO AND STOP AT SALIDA, TAKING CROSSOVER TO PUEBLO (PASSING SIDING STAGING). USE WATER FILL SOUND IF AVAILABLE OR HOLD FOR ONE MINUTE.</p> <p>BEFORE PROCEEDING SET OUT COMBINE #5 ON MAIN IN FRONT OF STATION. PROCEED TO PUEBLO STAGING AND HOLD.</p> <p>USE SWITCHER TO MOVE COMBINE #5 BEHIND SALIDA STATION ON SLEEPER SPOT. LEAVE SWITCHER ON INTERMOUNTAIN MEAT LEAD.</p>
--	--	--

Continued from page 74

Jack: Yes. Central Colorado had a lot of farming going on; produce and apples and so on in the area. So I added that ice platform. I wish I could have made it face the aisle – it's in the back and you can't see much of the detail there, but I couldn't figure out how to do that. The guys do move the cars – three ice reefers at a time to the ice house during the op sessions.

Charlie: What kind of turntable is that?

Jack: That's your basic Walthers turntable. I use an old Troller Power Pack to rotate it.

Charlie: A Troller?

Jack: Yeah, that's from the '70s, they're no longer in business. It works by running the motor under the pit just like a DC locomotive.

Figure 7: Cloud City in the foreground with Mount Massive rising up behind. Mount Massive is hollow and contains the two-lap helix between the upper and lower levels.

Figure 8: Glenwood Springs is the upper terminus of the railroad. It's built inside and next to a double-track turn-back loop. No. 37 is arriving at the station with a number of passengers.

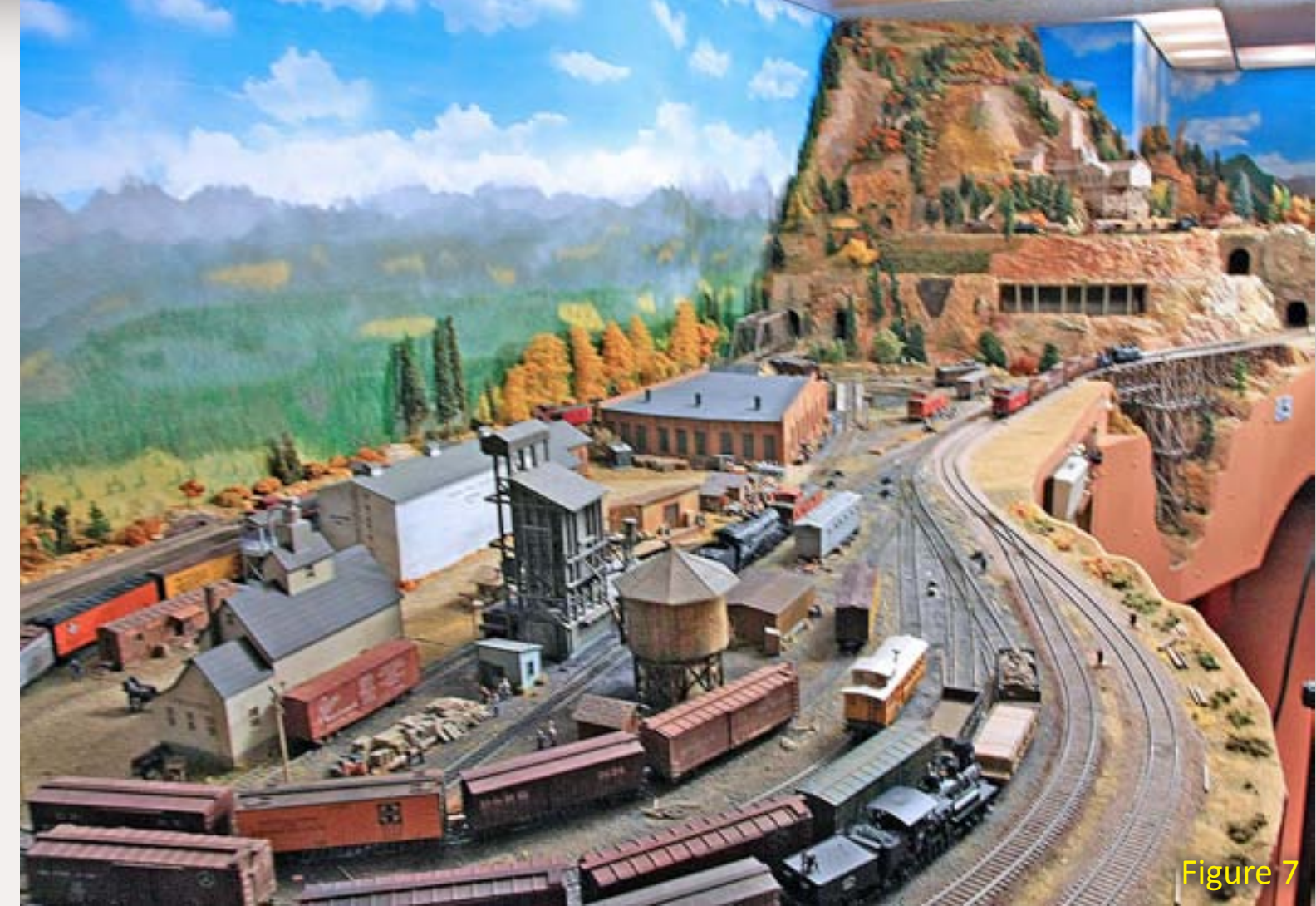


Figure 7

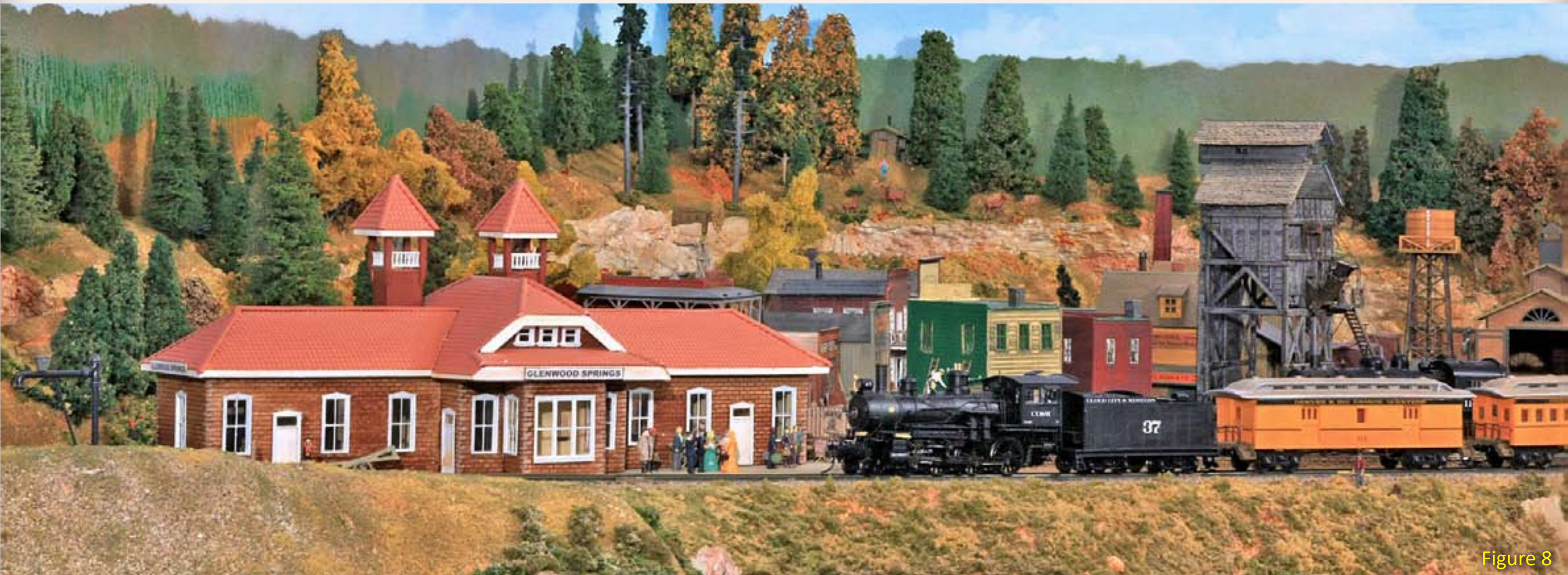


Figure 8



Figure 9

Figure 9: A crew of car repairmen work on a caboose at the service track in Cloud City Yard.

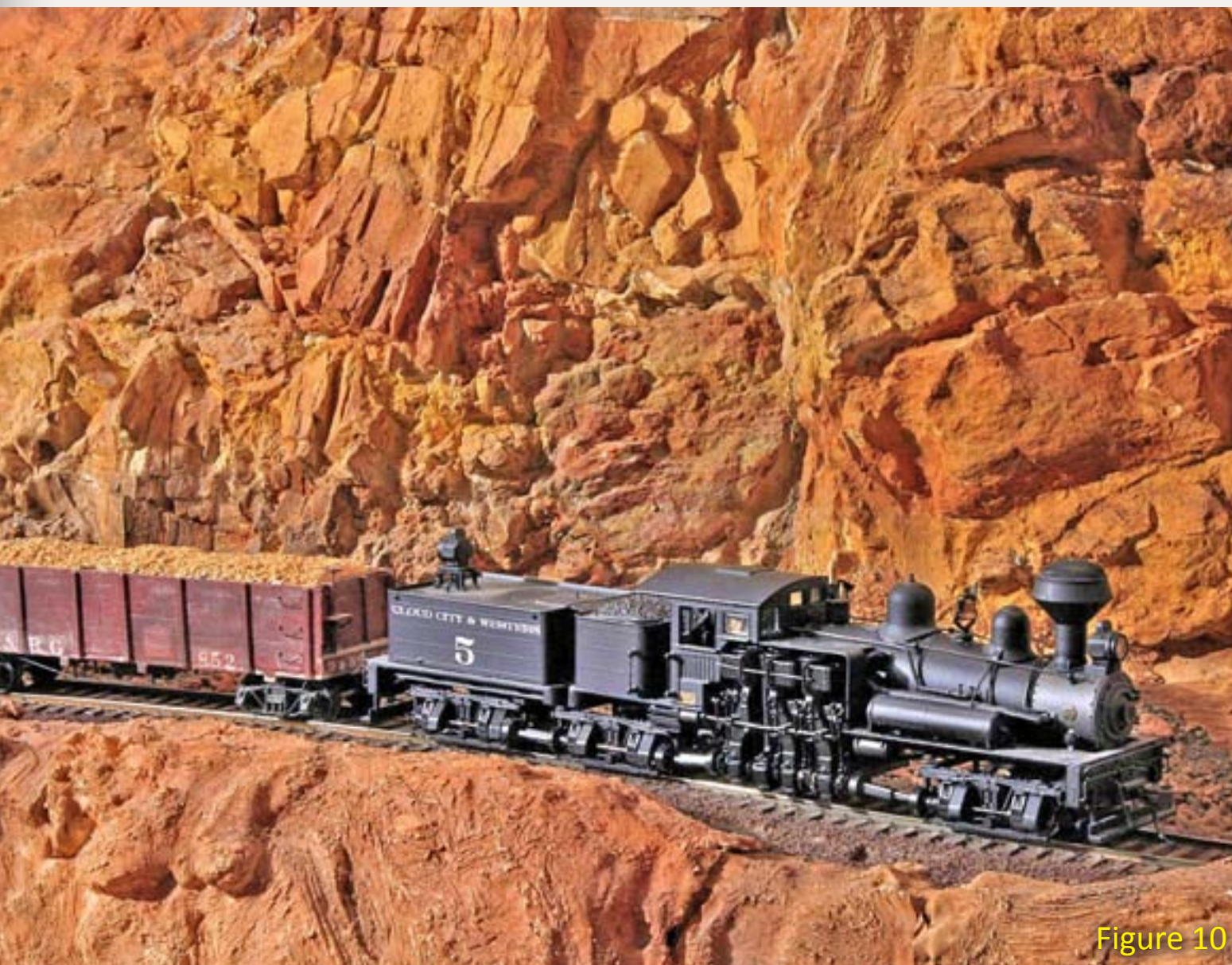


Figure 10

Figure 10: Shay #5 leads some ore cars downgrade past some of Jack's great rock work.

Charlie: There's a worm gear below it?

Jack: Yeah, it's a kit and there's the motor and worm gear. You use the power pack's reverse toggle to make the turntable go either direction.

Charlie: Do you use the snow fighting equipment I see around the turntable?

Jack: We do use the wedge plow sometimes. Once in while during an operating session we get a blizzard on the pass.

Charlie: A blizzard?

Jack: Yeah, a blizzard. I found a Dairy Queen blizzard toy in a parking lot one day and I thought I could use that on the railroad! The 'blizzard' gets put on a track up in the pass. Then an engine in Cloud City rides the turntable to pick up the wedge plow, and goes up the helix inside the mountain until it gets to the 'snow'. Then we'll take the 'blizzard' off to simulate clearing the track.

Charlie: I'm glad you don't use baking soda for blizzards!

Jack: No, no... It's kind of a fun thing. The yard operator, at his discretion, will decide to pull out the 'blizzard' and put it up there if things are getting a little slow.

Charlie: What do you use for track?

Jack: Well, it's all Micro Engineering flex track and turnouts with a couple of exceptions. There's no handlaid track. I use code 83 on the main line. Passing tracks are code 70, as are the yard turnouts. Beyond that, it's code 55 everywhere else.

Charlie: You've got different ballast colors, is that deliberate?

Charlie: ... and then you've got cinders or something like that in the yard. That makes it easier to tell which tracks are which I guess?

Jack: I spent a lot of time deciding on colors for the ballast. I've seen photographs that are really stark and I didn't want that. I've read some articles that recommended mixing different colors. Instead of just using limestone ballast from a company, mix your colors and get a subtle blend.



Figure 11

Figure 9: Salida at train time. Note the damaged timber retaining walls! The tunnels lead to the Salida return loop staging tracks.

another town). Like empty cattle cars come to Cloud City, are taken off their train, get added to another, and head off to their destination on the layout.

Charlie: How do you power your trains?

Jack: When I started to build the layout in the '90s I was really enamored with Bruce Chubb's original Sunset Valley layout and the rotary switches he used to select cabs for each block. I like to solder and I like to pull wire, so I set up a DC system and a number of control panels so that I could operate with cab control.

Charlie: How many cabs did you have?

Jack: I had four different throttles that I labeled with colors: yellow, green, red, and blue.

Charlie: How many blocks?

Jack: There are 27 blocks here. I divided all the block controls between four different control panels. If you were running on the blue throttle, you'd need to change the next block to blue before you got to it.

Charlie: How do you control your turnouts?

Jack: I use different methods to operate turnouts. Caboose Industries ground throws, pull rods that go underneath to their turnouts. I also have a few Tortoises and solenoid switch

Charlie: Mix like salt-and-pepper effect or mix like have one area one color and another area a different color?

Jack: Well, I've done both. I've mixed buff with a little bit of gray for the mainline. Some places up the pass have a reddish ballast – higher iron content, and I used cinder-colored ballast in the Cloud City Yard tracks.

Charlie: Can we talk a bit about operations?

Jack: Right; I run a system that's different than any other I've seen. I do not use car cards. I have what I call scenarios, where each train has a descriptive presentation that I give to the engineer and conductor (if there is one). It gives the route they are to follow, tells them where their train originates, what work it does around the layout, and where it terminates.

I have about 35 or 40 of these scenarios – I don't run them all during one

operating session. A few of the trains, maybe four or five, get hand-written switch lists where I specify the numbers of cars to move from one area to another.

Charlie: Does the yardmaster perform classification in Cloud City Yard?

Jack: Yes, a lot of trains will come to the yard from one area, pick up a few cars, then drop off a few more cars (which will go into another train to

What is Cloud City?

Leadville, Colorado has an elevation of 10,152' making it one of the highest municipalities in the United States. It received its nickname Cloud City from its altitude and presumably from the weather.

machines on turnouts that are a long way from the aisle. But most turnouts aren't operated from my control panels.

Charlie: I like the way your panels are mounted on drawer slides so you can move them out of the way when they're not in use.

Are you still running DC, or have you switched?

Jack: After about two operating sessions with DC I realized there was a problem. I was happy with cab control, but I knew where the blocks were and which switches controlled which block. But when six guys were running six trains it was tearing-your-hair out time!

Charlie: Who's got my train?

Jack: Right!

Charlie: I guess it can get complicated trying to teach four block panels to someone who's never seen the railroad before.

Jack: Yeah. Since a number of the guys already had Digitrax, I decided to give it a try. That was about three or four years ago that I switched; it was easy to change. I went with a radio system to reduce the amount of wiring and to



Video won't play? Click [here](#) to play it on YouTube.

avoid throttle wires going everywhere during a session.

Charlie: How many trains do you run at a time?

Jack: Well, the limitation is aisle space – how many guys we can get in here? I recall a session where we had six running at once. That was a crowd!

Charlie: You couldn't do that with your cab control because you only had four cabs!

Figure 12: Looking past the Salida water tank (on the lower level) up the hill to Glenwood Springs (on the upper level).

Figure 13: (next page) The Cloud City depot where a number of folks are waiting for a train, but probably not the one led by #761.

Jack: Right, that was a limitation.

Charlie: Was that another reason for going DCC, flexibility? How about double-heading locos?

Jack: Yes, I sometimes double-head my trains. One of my scenarios has a double-heading situation and I was able to do it with the block controls. But it's much easier to do it using DCC with hand-held radio throttles.

Charlie: Tell me about the switchover.

Jack: The easiest part was assigning blocks to the boosters. I assigned a different booster output to each of the four cabs, then I assigned all the blocks in an area to the same color cab (and booster output).

Text continues on page 81



Figure 12

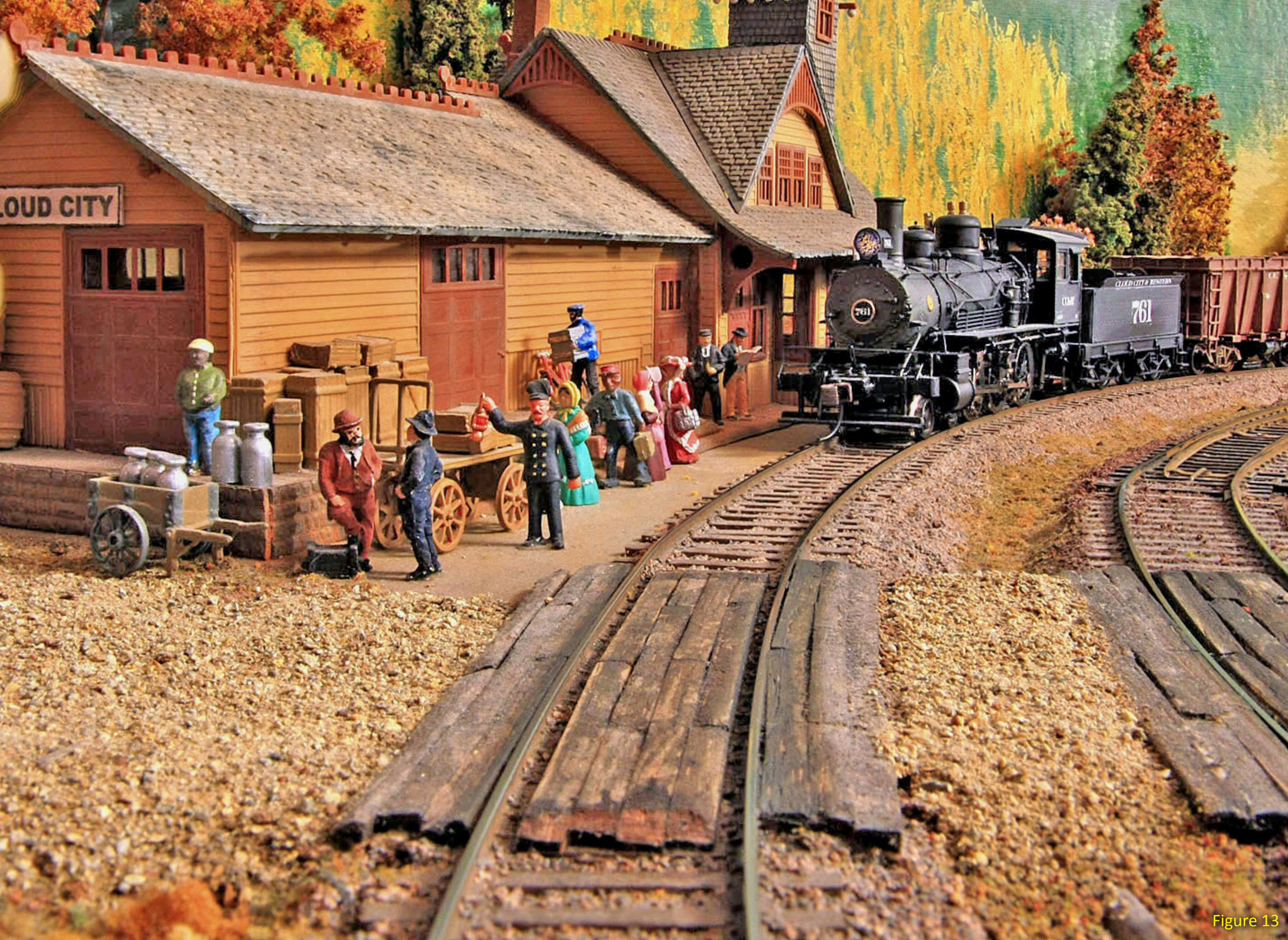


Figure 13



Continued from page 79

Charlie: Do you have a different booster for each cab color?

Jack: No, I just have a Zephyr base unit and one booster which is enough to run sound. I have about 20 engines; half of 'em are sound, and I've never had any problems with them with loss of power.

I do have the power districts protected by circuit breakers. I have a panel of four circuit breakers in a 'hidden' area. When I see a blinking light I know where to start looking for a short (or a locomotive that went through a turnout the wrong way).

Charlie: Well, Jack, thank you for talking with me!

Jack: You're welcome! Be sure to come back soon.



Figure 14: *PANORAMA* - from near the end of the aisle.

Figure 15: *PANORAMA* - from near the beginning of the aisle

Figure 16: Engine No.764 passing the cattle pens at Granite Junction.

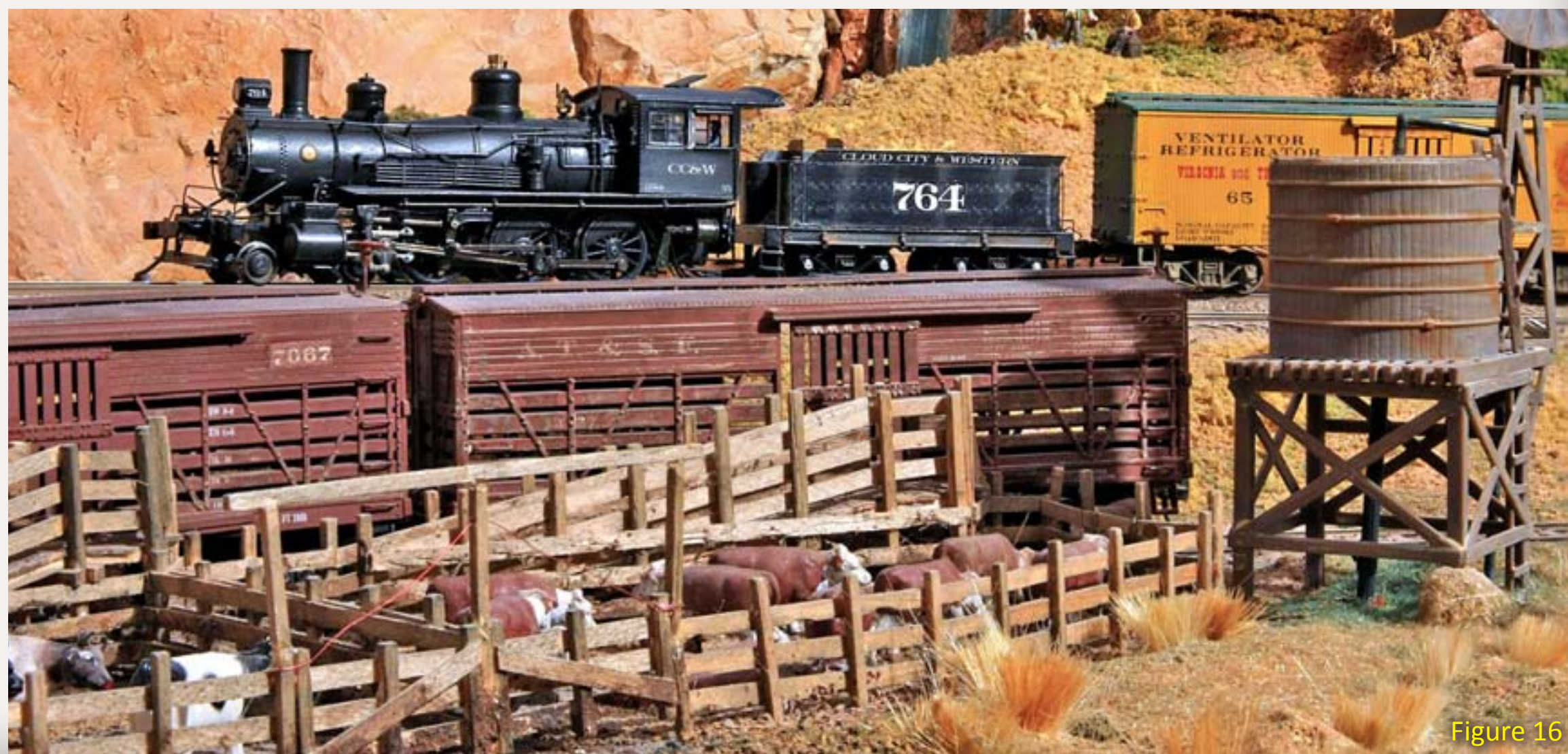
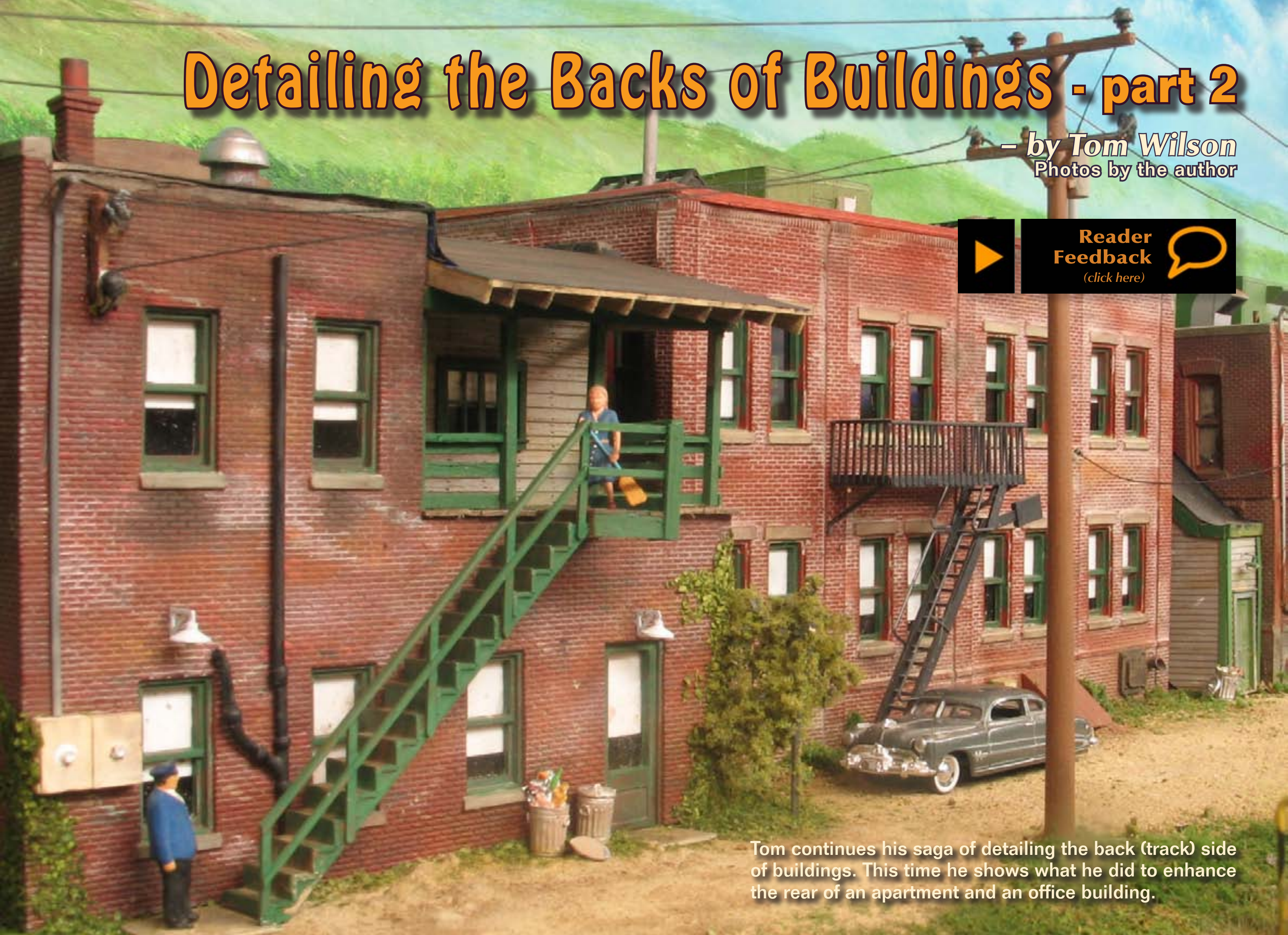


Figure 16

Detailing the Backs of Buildings - part 2

- by Tom Wilson
Photos by the author

 **Reader Feedback** 
(click here)



Tom continues his saga of detailing the back (track) side of buildings. This time he shows what he did to enhance the rear of an apartment and an office building.



Figure 26



Figure 27

There are two more buildings trackside at Rook Yard on my Pittsburg & West Virginia layout in addition to the cafe and grocery store I worked on in [Detailing the Backs of Buildings - part 1](#). I'll show the enhancements I made to an office building and apartment.

The Office Building

The office building started as a Design Preservation Models "Laube Linen Mill" kit #10600 (Figure 26). I began by painting the building PollyScale Special Red, the windows Coach Green, and the window sills Concrete. I applied PollyScale dust then wiped it off to bring out the mortar lines (Figure 27). A wash using an alcohol and shoe dye mixture was applied to the wall sections. I finished

Figure 26: Design preservation Models "Laube Linen Mill" with a base coat of PollyScale Special Red paint.

Figure 27: PollyScale Dust mortar paint applied.

Figure 28: The finished office building with fire escape, cellar storm doors, gas meter and coal chute door installed.

the windows with clear styrene for glazing and made the blinds from white copy paper glued to the clear styrene with Canopy Glue.

The exterior staircase is a Walthers Modular Fire Escape kit 933-3729. This was assembled per the instruction and painted flat black before gluing it to the building (Figure 28).

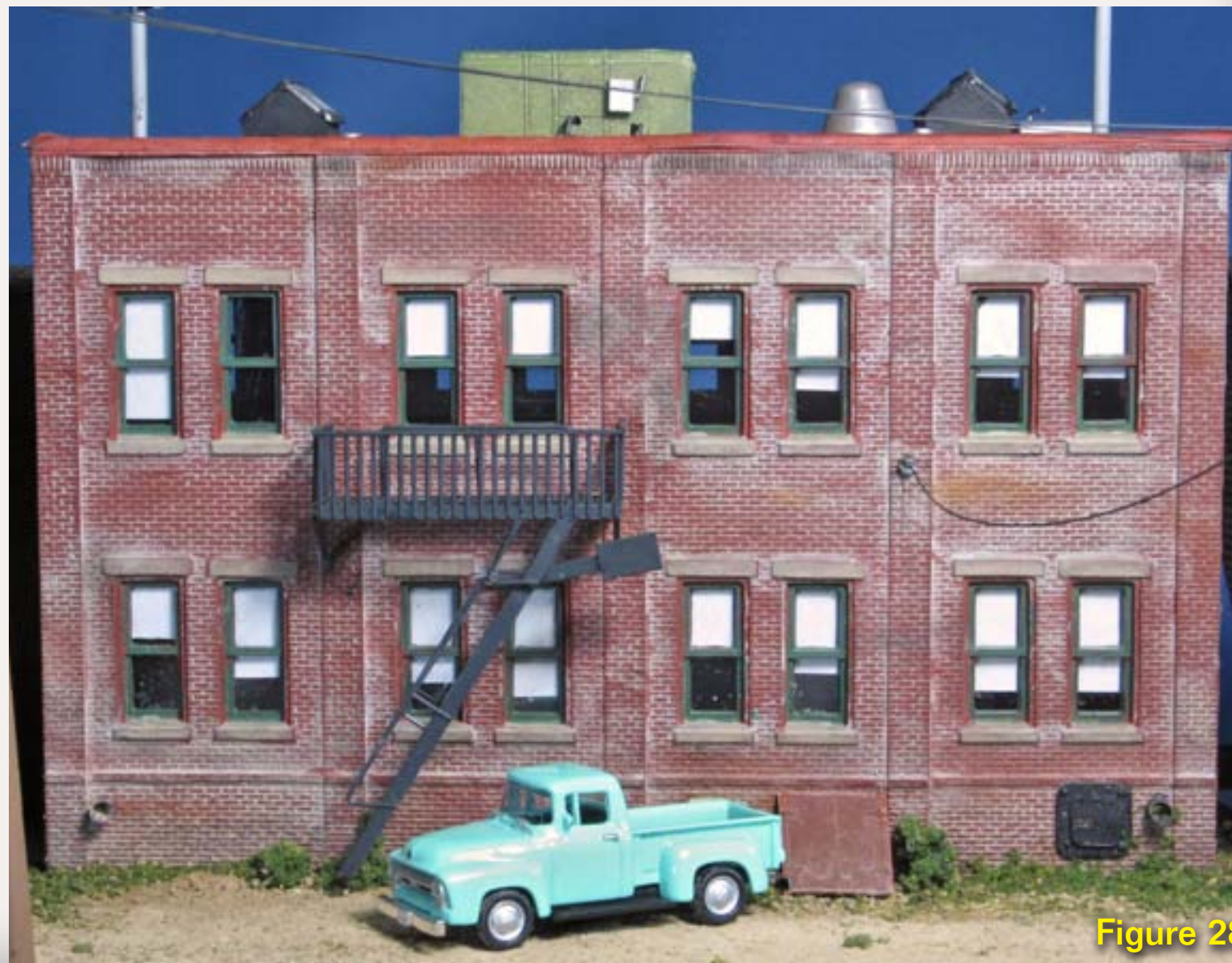


Figure 28



Figure 29



Figure 30



Figure 31

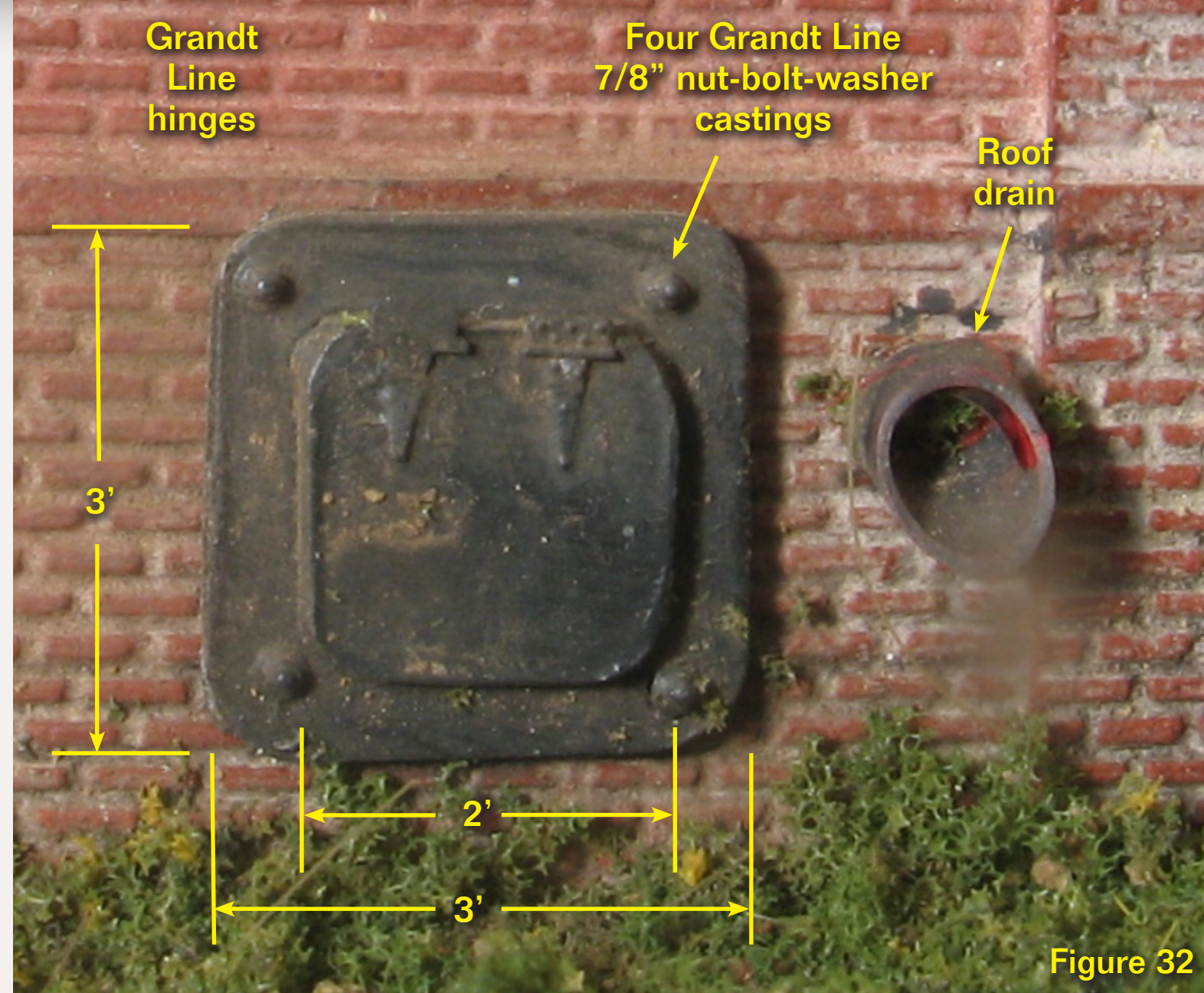


Figure 32

Figure 29: A fire escape serving multiple floors.

Figures 30: A fire escape serving the roof of a commercial building. Notice how the counterweight holds it in the up position. The weight of fleeing people causes the ladder to pivot down to the ground.

Figure 31: Prototype coal delivery door.

Figures 32 and 33: My modeled coal delivery door and roof drain.

I made a roof drain using a plastic drinking straw following the same method I used for the grocery store ([in part 1 of this article](#)); see figures 32 and 33.

I also added a coal delivery door (Figures 31 through 33). Scratchbuild this starting with .010" styrene. After cutting it to size, round the outside corners with a file and add the 'door',

made from .020" styrene. I used four Grandt Line 7/8" NBW (nut-bolt-washer) castings to 'bolt' the coal door to the wall. Two Grandt Line hinges make a nice finishing touch. I sprayed the door assembly with flat black paint bought from Lowes.

The gas meter was an interesting project. I made it from 7/32" styrene

tubing 1/8" long and a small piece of .080"x.156" styrene. Glue a piece of .010" styrene to the front end of the tube then sand it round after the glue dries. Then use a round file to 'carve' the piece of .080"x.156" styrene to match the curvature of the tubing and cut it off about 1/8" long. I found two pieces of piping in my scrap box and glued them on the



Figure 33

sides – the supply pipe going into the ground and the outlet into the wall of the building. If your scrap box is empty use a bit of 16 gauge wire for the pipes. Mask off a small patch on the upper part of the meter using the white styrene to represent the dial, then spray it Coach Green to finish it. See figures 34 and 35.

I also scratchbuilt a basement access door (Figures 36 and 37) from three pieces of .020 styrene. The cellar door sides are right-angle isosceles triangles so the door is at a 45 degree angle from the ground. Scribe the

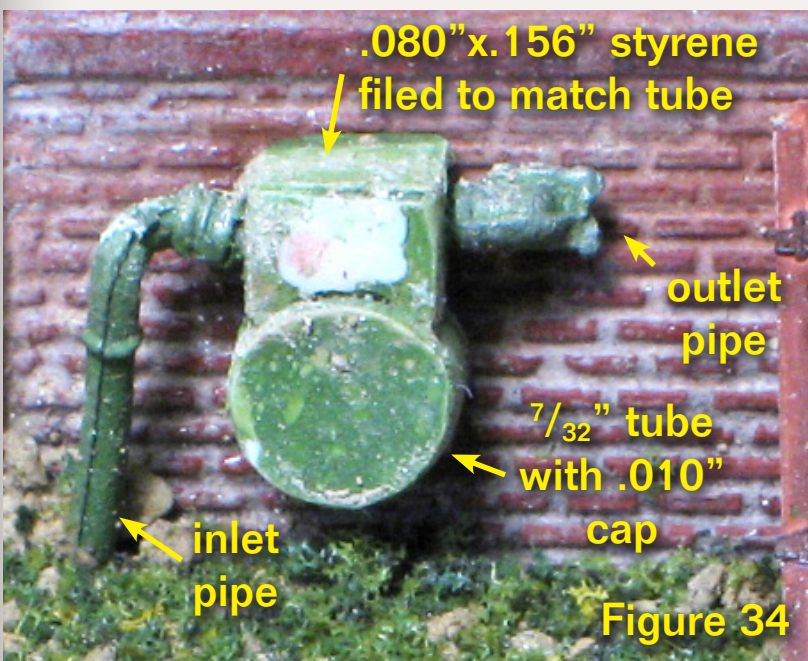


Figure 34

door in three places to simulate the individual door panels and add four Grandt Line hinges, spaced equally from the top and bottom of the door. Spray the door assembly primer red (I got mine from Lowes) and glue it to the back of the building.

The Upstairs Apartment

My apartment building was kitbashed from a Design Preservation Model "Kelly's Saloon" kit #10100.

I began by marking the back and side walls where they needed cutting



Figure 36

(Figure 38) to make room for the upper floor porch. I drilled small holes at the inside corners to prevent the saw from going too far, leaving a 'slot' in the walls.

The two new vertical edges created by cutting the walls (Figures 39 and 40) needed mortar lines scribed in them (Figure 40). Use an X-acto knife, pressing it into the styrene to create this detail.

You need to figure out where you are going to locate the rear stairs. I put mine in the middle of the porch. Cut two notches into the top of the rear wall to hold the porch's upper staircase landing joists. Mask the rear wall with blue painter's tape and draw guide lines before cutting the slots with a cutoff disk. The guide lines let me see how far I needed to cut so I

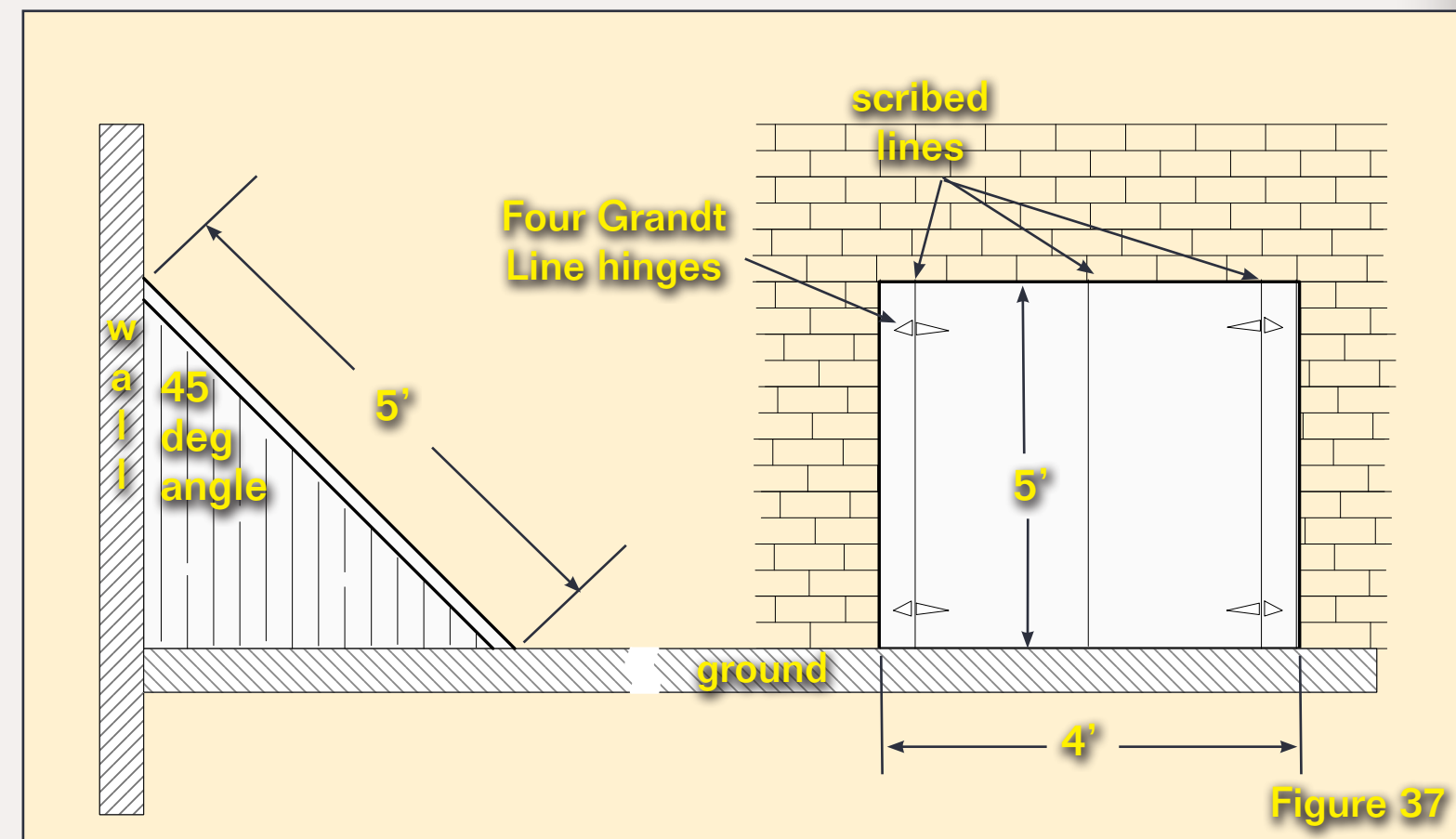


Figure 37



Figure 35

Figure 34: Model gas meter.

Figure 35: Prototype gas meter.

Figure 36: The cellar access door.

Figure 37: Cellar access door dimensions.

Figure 38: The walls marked for the porch cutout.

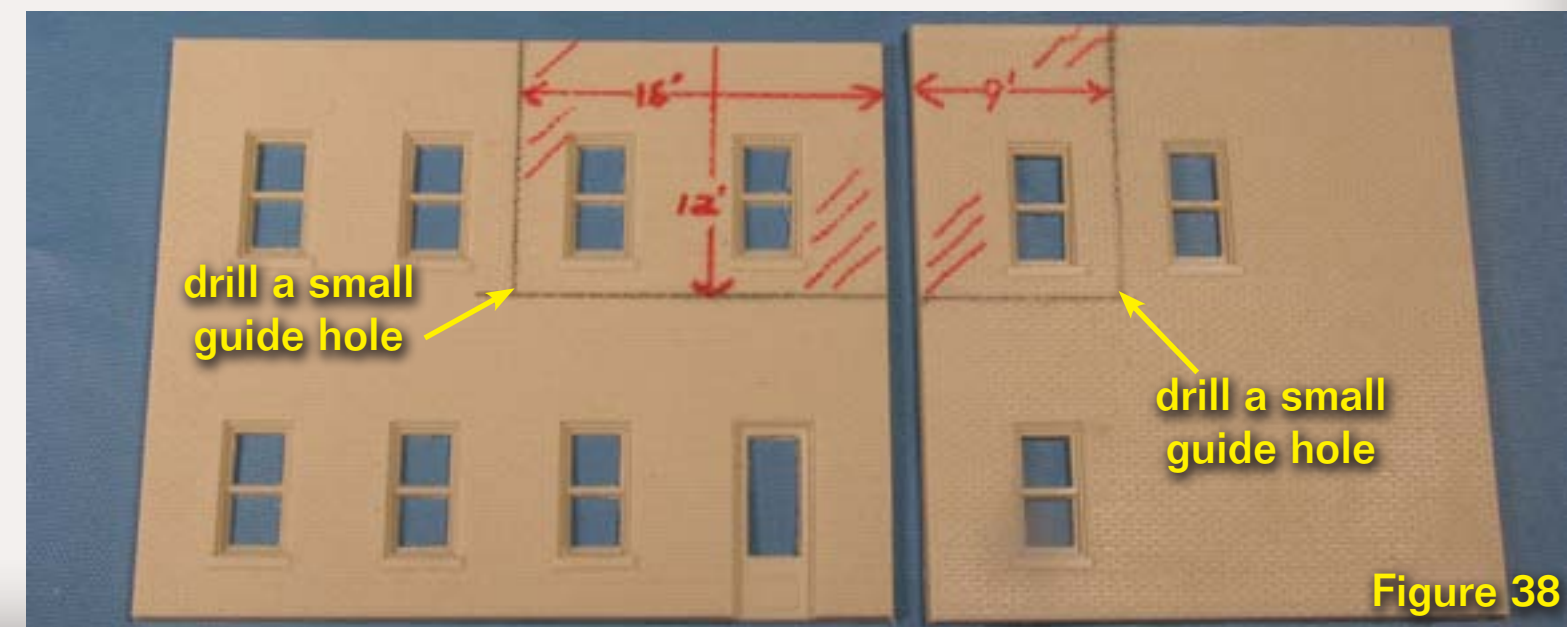


Figure 38

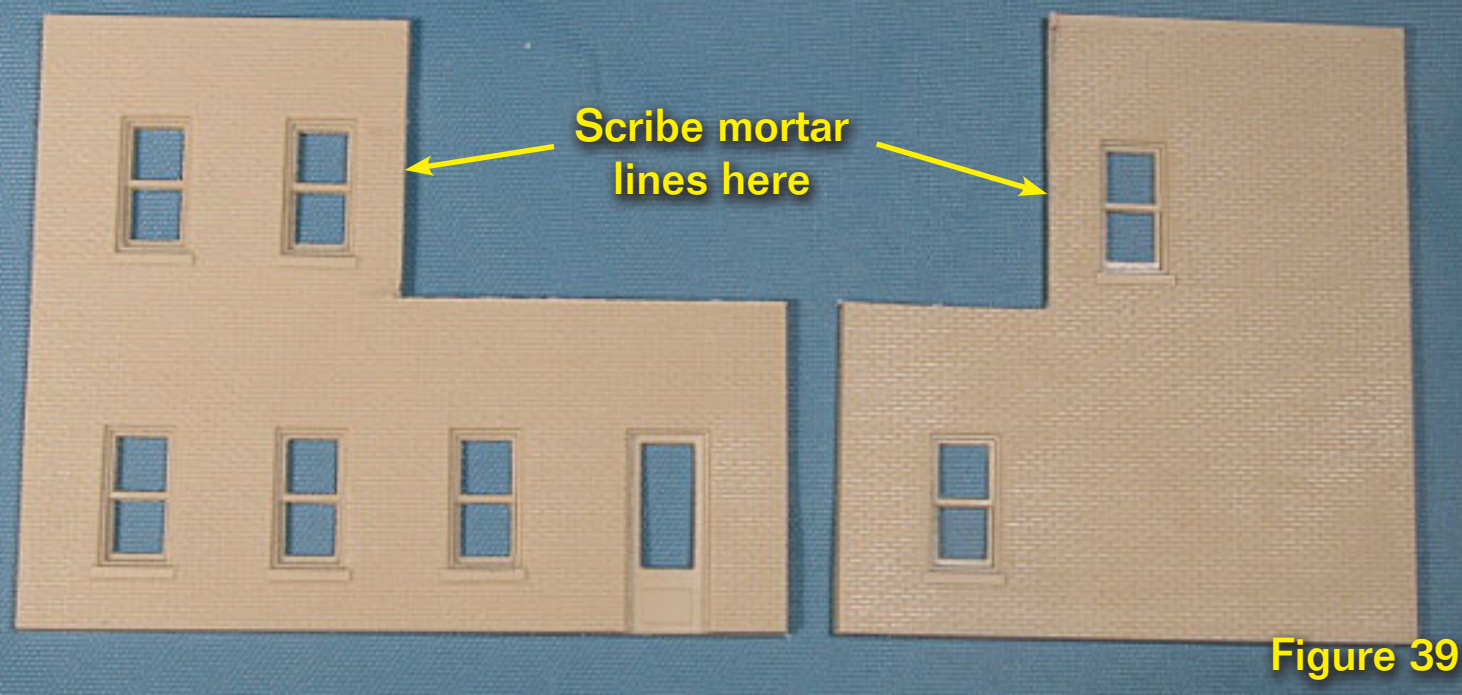


Figure 39

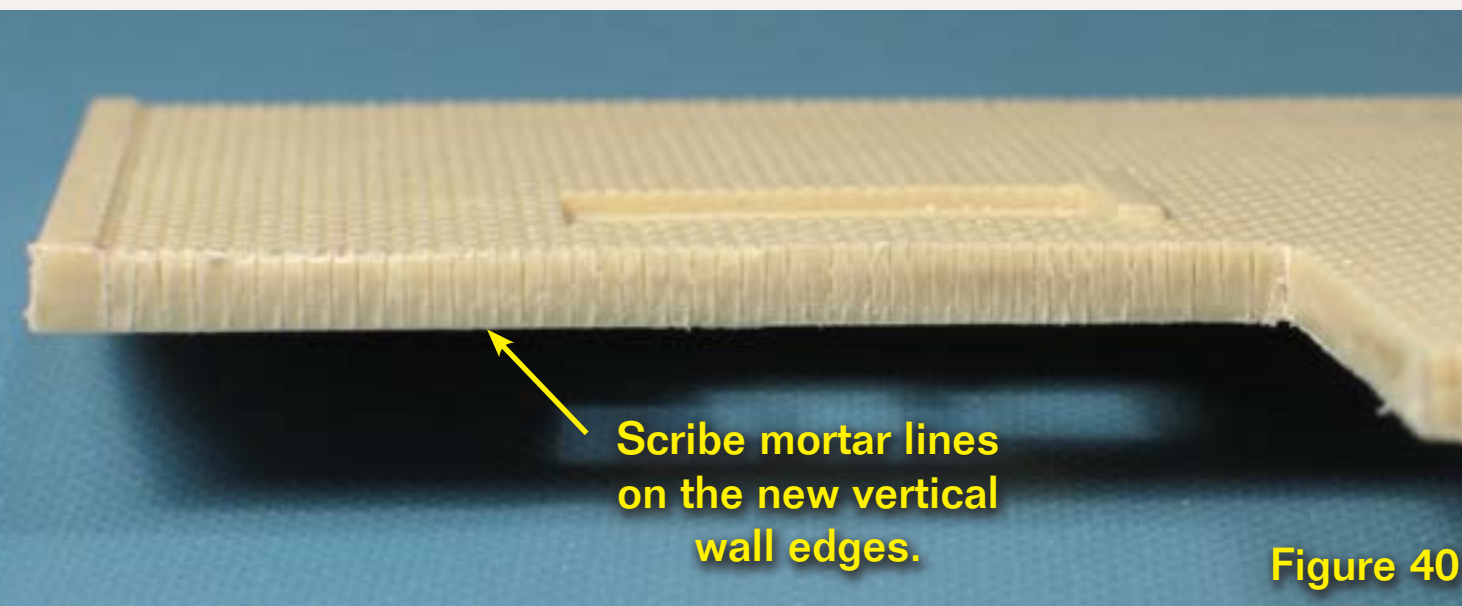


Figure 40

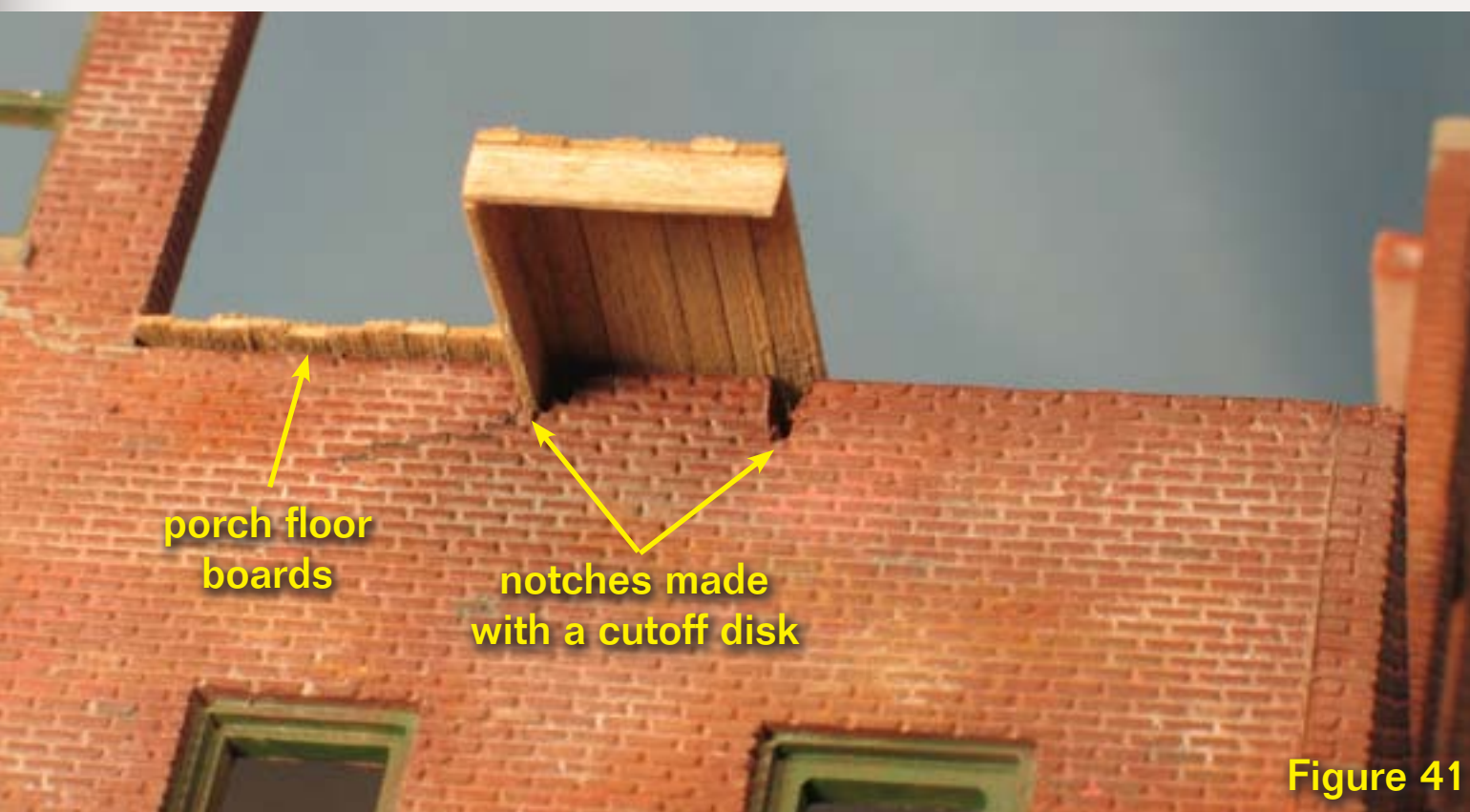


Figure 41

Figure 39: The rear and end walls of the apartment building after cutting.

Figure 40: The edge of the wall is scored to represent the end courses of the bricks.

Figure 41: Two notches support the upper landing of the rear staircase.

Figure 42: The apartment building after the walls are assembled and the subfloor of the porch is installed.

Figure 43: (looking at the underside of the building): The .040" styrene subfloor is glued to the 1/4" square styrene tube which supports it. Two small .030" styrene braces are glued to the walls to hold the tube in place.

didn't cut further than the scale 10" required (Figure 41).

After this assemble and glue the four kit walls together (Figure 42). Make the porch subfloor from .040" styrene. This will be the base for the porch floorboards and walls. Support the styrene subfloor with a square styrene tubing joist (Figure 43) making sure the floor of the porch is the same height as the rear wall.

I made the porch walls by cutting one piece of 1/16" wood clapboard siding 12' high and 17' long and another 8' long by 12' high.



Figure 42

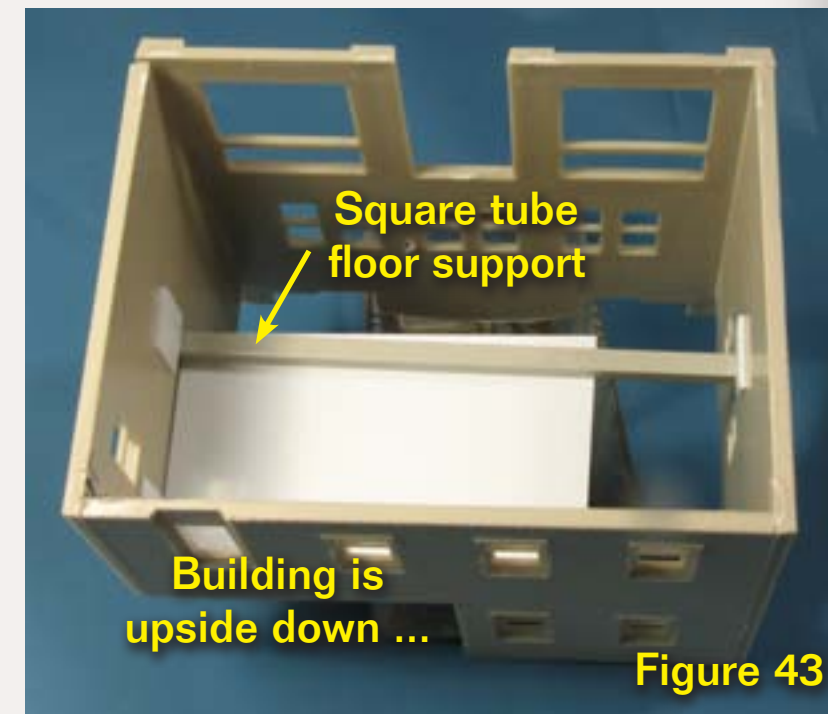


Figure 43

Lay out the windows and doors (Figure 44) on the clapboard siding, making sure the boards are facing down and there are no gaps around the openings. I located rows of nailheads on 24" centers and used a sharp dental pick to make the actual nailhead dimples (Figure 44). Finally, drill small holes in the corners of the window and door holes and cut them out with a sharp #11 X-acto blade, making multiple light passes.

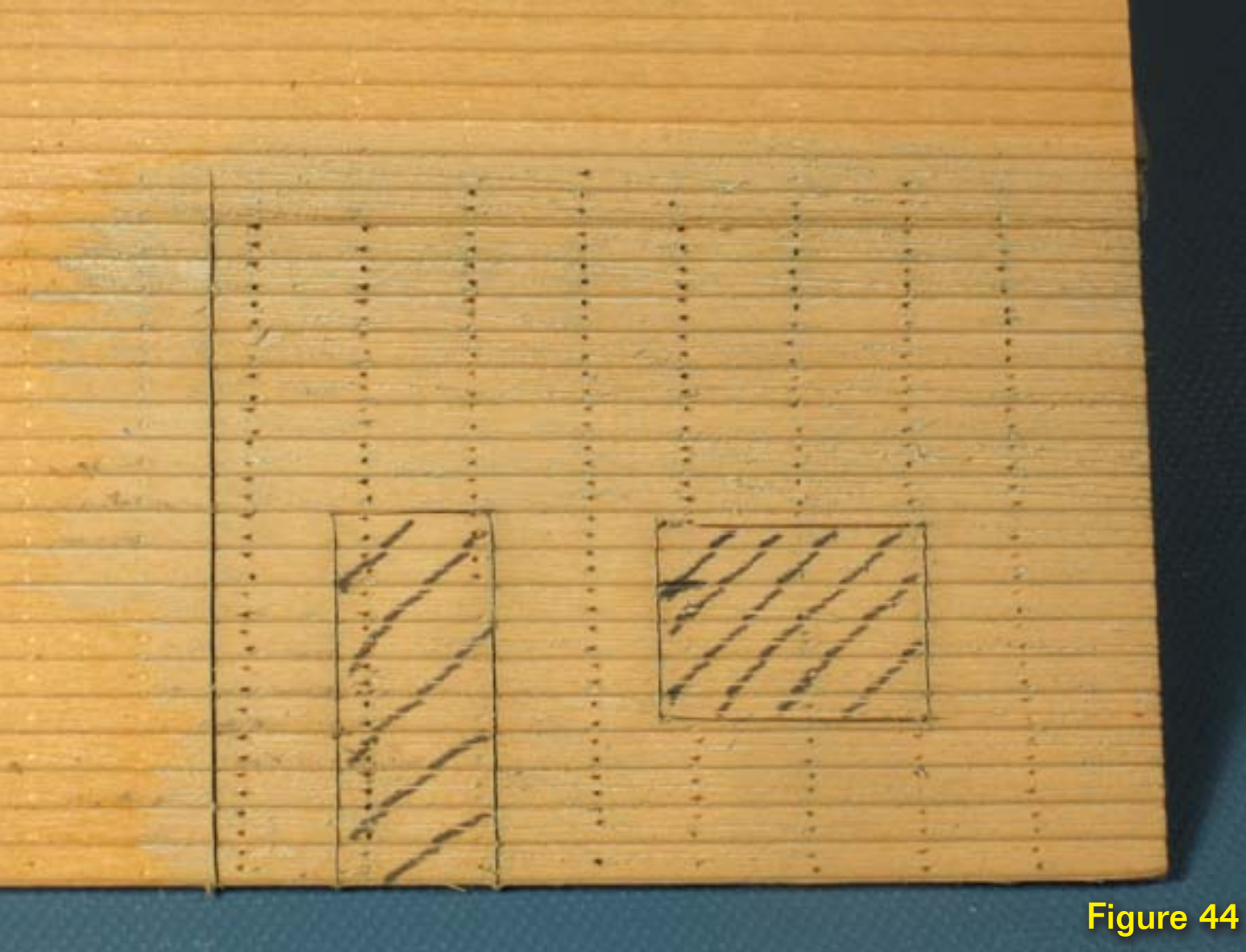


Figure 44



Figure 45

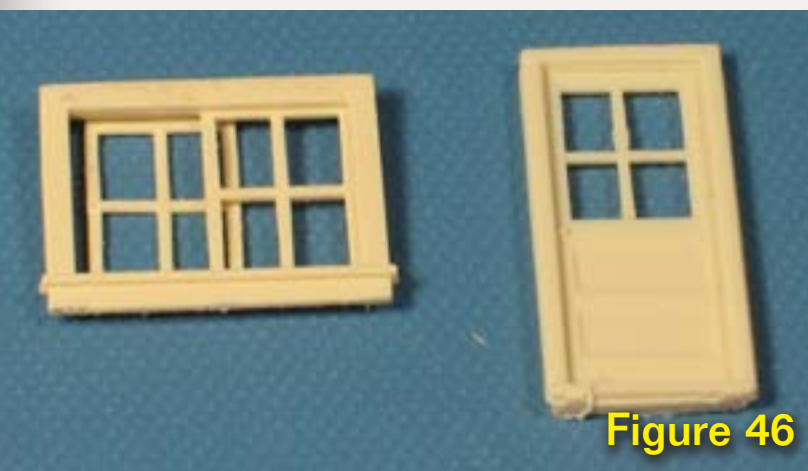


Figure 46

Figure 44: Mark the door and windows on the wood clapboard siding and locate the rows of 45 nail holes. I gave the wall a coat of Floquil Grime then made the nail holes with a sharp dental pick.

Figure 45: The apartments after I painted the bricks and window openings. The porch floor has been started.

Figure 46: I used Northeastern Scale Models windows (neb109) and doors (neb100) in the new walls for my porch.

Thin wooden walls must be braced at the tops and bottoms and between the doors and windows to prevent warping. Brace the walls with scale 10"x10" strip-wood using yellow (carpenter's) glue.

I painted the bricks with red primer from a spray can, then brush-painted PollyScale Boxcar Red over the primer

and painted lots of individual bricks with Grimy Black, Earth, Caboose Red, and Pacemaker Red (all PollyScale) to finish them. The window trim was painted with Coach Green and the sills Concrete.

I decided to try a different method for adding mortar lines to my apartment building. I misted it with water until

it started to glisten, then touched a small brush loaded with a mixture of 1 part PollyScale Concrete and 4 parts water, to the walls and let capillary action pull the paint into the mortar lines molded in the plastic (Figure 45).

See figure 47 for the next steps. Paint the wooden porch walls with Aged White, then dry-brush them with

Reefer White. Wash the wall sections with alcohol and shoe dye stain, repeating the wash until it looks good. When it dries, glue the wood clapboard wall sections together to create an "L" angle.

Using the wood walls as a template, mark the wall positions on the porch's subfloor. Prepare the porch floor boards by distressing 2"x6" strip wood with a wire brush and staining it with more alcohol wash. When the boards are dry, cut them to length and glue them in place on the porch subfloor making sure they extend further into the building than the previously marked wall locations – the walls will sit on the floorboards. The



Figure 47

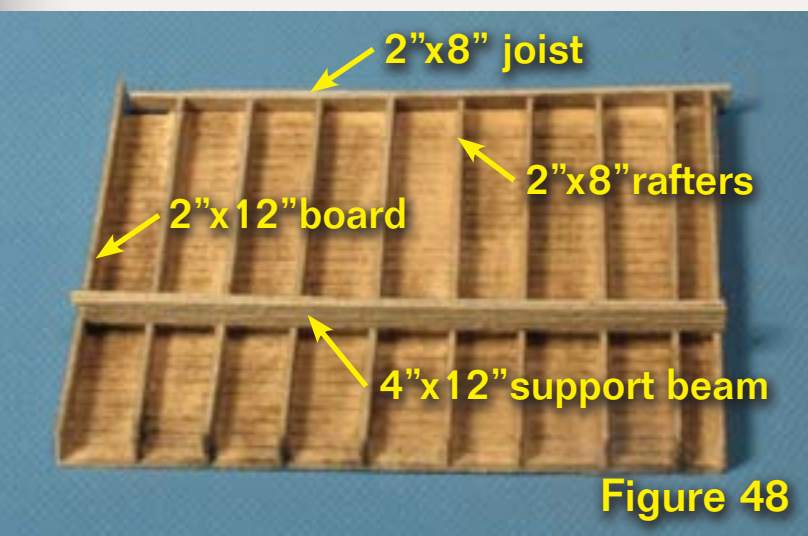


Figure 48



Figure 49



Figure 50

Figure 47: The porch floor, walls, and staircase landing in progress.

Figure 48: The underside of the porch roof showing joists and support beam.

Figure 49: The railings at the rear of the porch.

Figure 50: The railings at the side of the porch.

rear ends of the boards should hang over the back of the building a couple of scale inches.

When you install the boards for the upper landing of the staircase, be sure to make them project at least 3' past the rear of the building (Figures 41 and 47). Trim the over-length floorboards after installing the 2"x10" joists under the upper staircase landing in the slots previously cut in the top of the rear walls (Figure 41). I used Canopy Glue to attach all the floorboards and joists.

After the glue dries, weather the floor by working Bragdon Weathered Brown and Soot Black weathering powders into the wood with a stiff brush. I sealed the powders with my alcohol wash and dry brushed it with Reefer White after it dried.

Now it's time to install the door and window in their openings. Paint them Coach Green and use Canopy Glue to install the glazing and white copy paper shades before gluing them in place. Then glue the wall assembly in place on top of the floorboards.

The porch roof slopes down below the side walls so I was careful to keep 7' of clearance under the support beam so my tenants wouldn't knock their heads on it. Mark the underside of a 1/8" scribed siding roof piece, setting rafter locations every 24", then yellow-glue the 2"x8" wood roof rafters in place (Figure 48). Be sure the rafters run across the 'boards' in the

scribed siding, not parallel to them. Glue a 2"x12" board in place on the side away from the side wall and make the support beam by laminating a pair of 2"x12" boards (If you have a 4"x12" that would be even better). Tape the roof in place temporarily and carefully measure the location of the support beam – directly above the rear wall of the building. Then turn the roof panel over and glue the support beam in place. With the support beam and rear joist in position, the roof resists warping.

Paint the 6"x6" roof supports and 2"x6" porch railing Coach Green before cutting or assembly. I built the railing assembly at my workbench so I could lay it flat. Run the railing pieces the full width of the porch (cut them away for the stairway when the railing and roof are installed). Be sure the four support posts are properly placed – one at each end of the porch and two next to the upper staircase landing.

You will need to get your measurements from your model. Also be sure the support posts are vertical (plumb) before the glue sets. Add the side railing pieces after the rear railing/support beam assembly is glued in place. The railings are three pieces of 2"x6" plus another 2"x6" laid flat on top as a cap (Figure 54).

Use blue painter's tape to simulate tar paper roof covering, cutting it into 3" wide strips and sticking them to



Figure 52

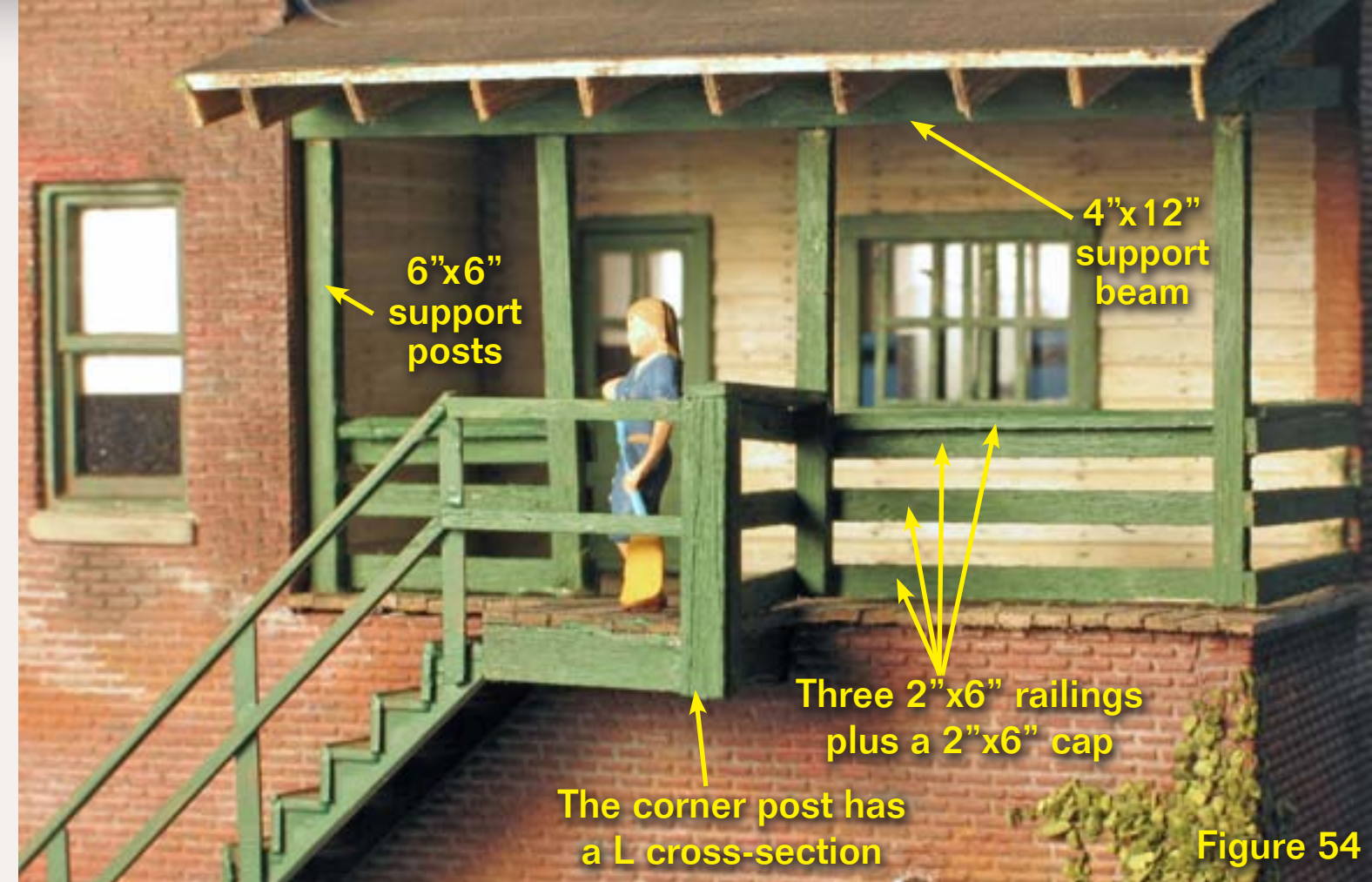


Figure 54



Figure 53

Figure 52: Blue masking (painter's) tape roofing.

Figure 53: The Grimy Black roof after being dusted it with weathering powders.

Figure 54: The porch railings.

the roof with a scale 6" overlap. Run the tape to the edge of the walls and cut it off square (Figures 52 and 53). Then paint the roof Grimy Black.

The stairs are from Central Valley (1602). Glue on the handrails and spray paint the assembly with Testors Earth. Let that dry, then brush-paint everything except the steps Coach Green. I was deliberately sloppy with this step to represent peeling paint (Figure 55). I made the corner post from two pieces of 2"x6" cut 3'11" long (to extend 3' above the floor

boards) and glued them together making an "L" cross-section (Figure 54). More Bragdon weathering powder makes the treads look worn and dirty.

The exterior sewer piping is Alloy Forms. Unfortunately this is no longer available (you might get lucky at a swap meet or on eBay) but Scale Structures Limited (SS2413) piping is similar. Spray paint the pipes black and glue them to the back side of the apartments (Figure 55).

I used Micro Engineering (80-164) electric meters but substituted a piece of styrene rod for the mast. Soak the end of the mast in styrene liquid glue for about 45 seconds, then use Kadee trip pin pliers to make a 90 degree bend at the top of the mast. Spray paint the mast and electric meters primer gray and



Figure 55

Figure 55: Back of building details showing electric meters and sewer pipes.

Figure 56: The finished rear of the building.

glue them to the back of the building (Figures 55 and 56). Be sure to locate the electric meter mast where it hides the joint between the side and rear walls of the building.

Tichy light shades (8170) look good. Paint them Reefer White and glue them over the ground floor doorways.

The vines growing up the corners of the rear wall are made by painting tiny amounts of white glue on the wall then sprinkling Noch Olive Leaves (7140) onto the glue. I added leaves on both the rear and side walls to hide the seam.

Make the concrete pads from pieces of .030" styrene, about 4'x4'. Paint and weather them to resemble old concrete (Figures 55 and 56) then glue them to the bottom of the rear wall and to the bottom of the exterior staircase. I used Bragdon weathering powders to age mine.

My roof has a ventilator from the [Walthers](#) Modular set (933-3733) and a Grandt Line chimney (5057). I painted the ventilator silver and the chimney Box Car Red. Adding a small piece from a drinking straw on top of the chimney makes it more interesting.

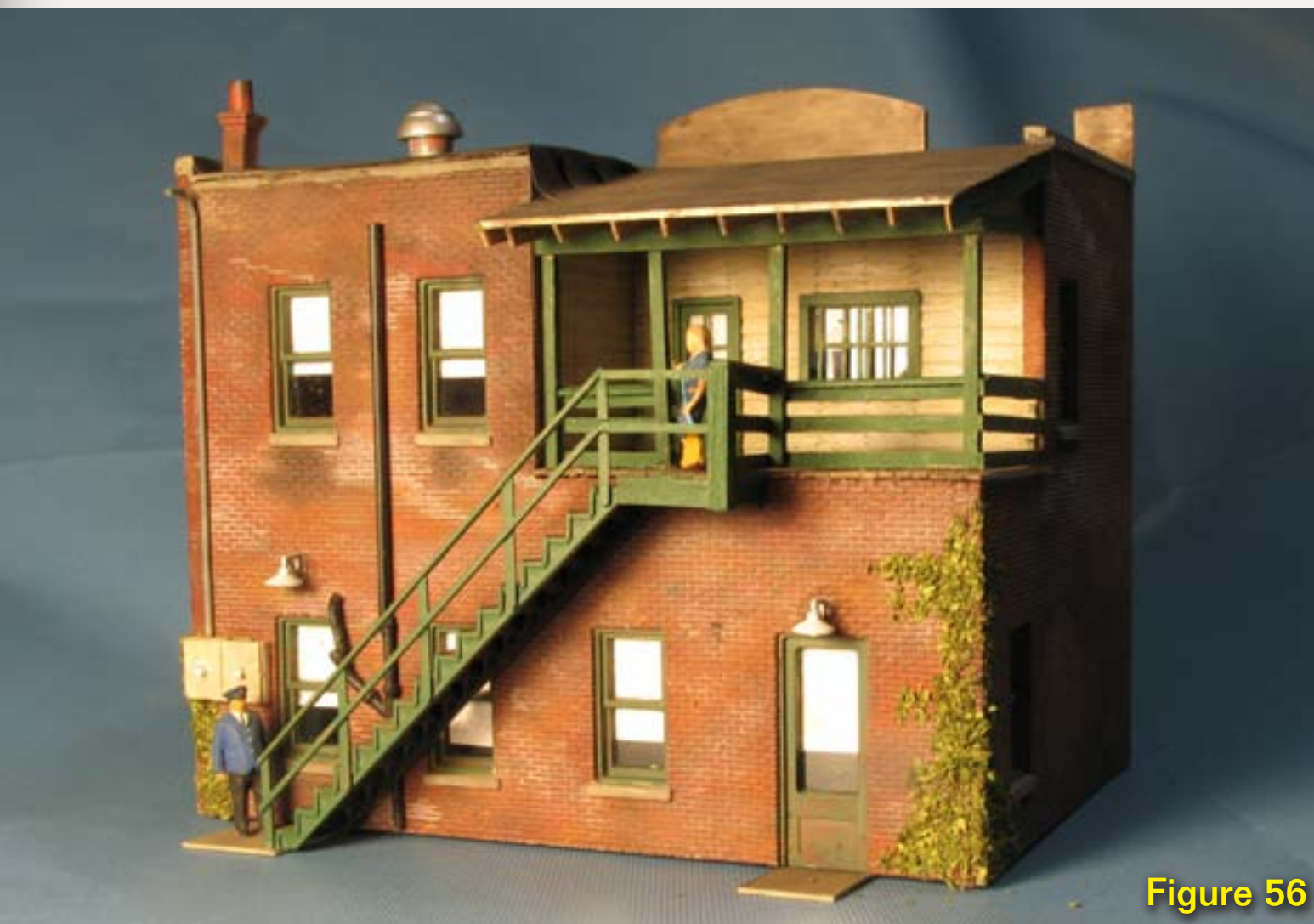


Figure 56

Power Poles and Wiring

The electric power poles are from a [Walthers](#) (933-3103) kit. Repaint the poles and stick them into the foam base. I pulled .010" brass wire through my thumb and forefinger before installing it on the poles – this gives it some droop. My buildings are far enough from the aisle that no one is likely to touch the power wires. If the buildings were closer to the edge of the layout or where they could be damaged, use elastic thread instead of the wire. Paint the wires Floquil Grimy Black then string and glue them between the insulators on adjacent poles.

I modeled the electric service drops from the pole to the buildings with nylon thread (lead photo). In real life these wires are not insulated; they must be separated to avoid short circuits and fireballs.

This wraps up modeling the buildings. I'm including some prototype photos on the next page to help get your imagination going.

▶

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: www.pwvrr.webs.com



Figure 57: This is the engine house at Rook Yard circa 1992. The tank system was used to process used oil from the locomotives. This would make a great little scene on the back side of an engine house.



Figure 57

Figure 58: Faded signs and overgrown vines are everywhere. Note the old loading dock door on the rear of the building.



Figure 58

Figure 59: A loading dock with stacks of pallets.

Figure 60: The adjacent loading dock with more pallets.



Figure 59



Figure 60

Before
Detailing the Backs of Buildings,
there was:



Check out the March 2010 Issue of MRH on the FREE [Back Issues](#) web page!

Rulers of the World Scale Rulers



– by Jeff Shultz

Probably the most common question that model railroaders ask each other on meeting is “What scale do you model?”

No matter what scale the answer is, Rulers of the World (<http://www.precisionproducts.ca>) probably has a ruler for it – from the 1:10,000 used in landscape and science fiction modeling to the 1:4 used in aircraft modeling, Rulers of the World currently has rulers for over 150 different scales – in either Metric or Imperial measurements. Each ruler includes both the scale measurements and a standard 6” or 15cm scale. The 1:87 HO Scale ruler I have is marked out to 45 scale feet, with markings for each foot and each 5 feet numbered.

The rulers themselves are 6-1/2” x 2” (165mm x 50mm) in size, made of thick white styrene, with the markings appearing to be a vinyl applique on the styrene. Being only 6 1/2” long, they fit comfortably in

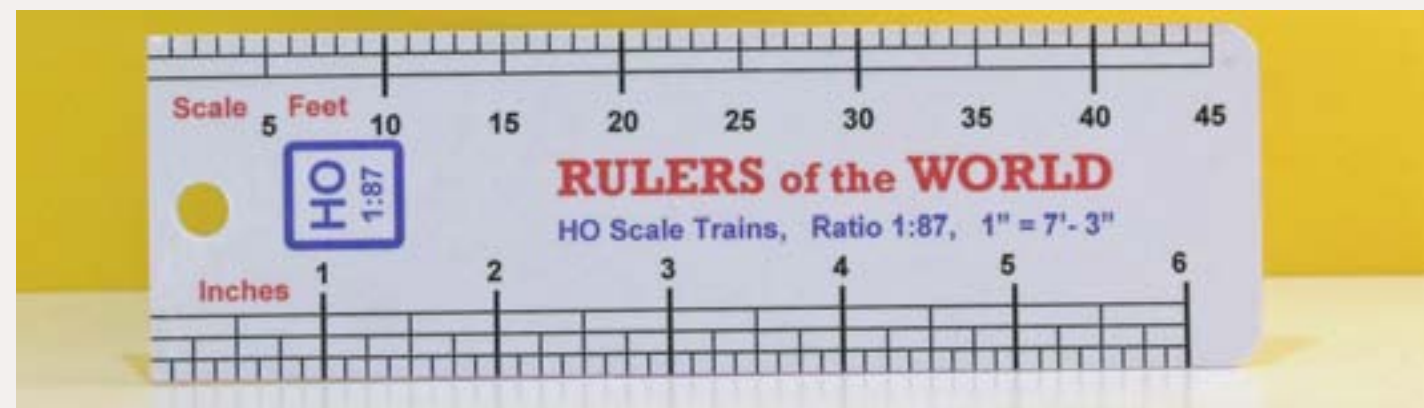


Figure 1: Rulers of the World I-0087-HO ruler.



most pockets and have a hole at one end for hanging on the wall or workbench. Rulers of the World will make custom rulers (measurements mentioned included cubits, spans, hands, paces, and pitches, as well as fictional alien units) with a minimum order of 5 rulers of each custom scale. They are also interested in selling to local hobby shops, with a free dealer display included with a minimum purchase of 50 rulers at \$2 each – the dealer can pick what scales they wish to stock.

If you can’t find them at your local hobby shop, Rulers of the World sells direct from their website at <http://www.precisionproducts.ca>, with a secure site at Paypal as their shopping cart service. Their suggested retail price is \$4 each, plus \$1 shipping and handling if you order direct.



Figure 2: Comparison of a Rulers of the World ruler and another plastic 1:87 scale ruler. Their measurements match up to 15 feet, but then begin to diverge slightly until they disagree by about 1/4 of a scale foot at 45 scale feet.

List of Rulers - Train Specific Only

(Note: insert Prefix I or M to SKU #, for Imperial or Metric).

SKU #s	Ratio	Hobby
I or M-0013.7	1:13.7	7/8” Scale Trains
I or M-0019-F	1:19	Fn3 & 16mm Trains
I or M-0020.3-G	1:20.3	G Scale Trains
I or M-0022.5-G	1:22.5	G Scale Trains
I or M-0024-G	1:24	G Scale Trains
I or M-0029-G	1:29	G Scale Trains
I or M-0032-1	1:32	1 Scale Trains
I or M-0043-O	1:43	O Scale Trains (UK)
I or M-0045-O	1:45	O Scale Trains (EUR)
I or M-0048-O	1:48	O Scale Trains (USA)
I or M-0064-S	1:64	S Scale Trains, Cars
I or M-00762-00	1:76.2	OO Scale Trains
I or M-0087-HO	1:87	HO Scale Trains
I or M-0120-TT	1:120	TT Scale Trains
I or M-0160-N	1:160	N Scale Trains
I or M-0220-Z	1:220	Z Scale Trains
I or M-0300-ZZ	1:300	ZZ Scale Trains
I or M-0450	1:450	T Scale Trains, Ships



MY MODULAR ADVENTURE: Having fun a module at a time

The ongoing story...



Learn to lay bricks, and light the interior with SMD LED's ...

In my last column, I covered bricklaying and interior lighting; I will now cover in detail how to install the Micro Mark brick paper and how to solder wires to the small SMD LED's. This time I will use two videos to demonstrate the procedure. Might as well take advantage of our EZine's capabilities!

As they say, if one picture is equal to a thousand words then one video is equal to a thousand pictures...

So, lights, camera, and..... ACTION!!!
Let the show begin!

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.

Photos and illustrations by the author unless otherwise credited.



Figure 1: Applying the brick paper takes the right tools, steady hands and a good cup of hot green tea!

STEP 1: Applying the Brick Paper to the Roundhouse Walls



Figure 2

Figure 2: Finished wall with windows.

Video #1 shows the steps that I took to install the brick paper to the walls and detail the materials and methods I used.

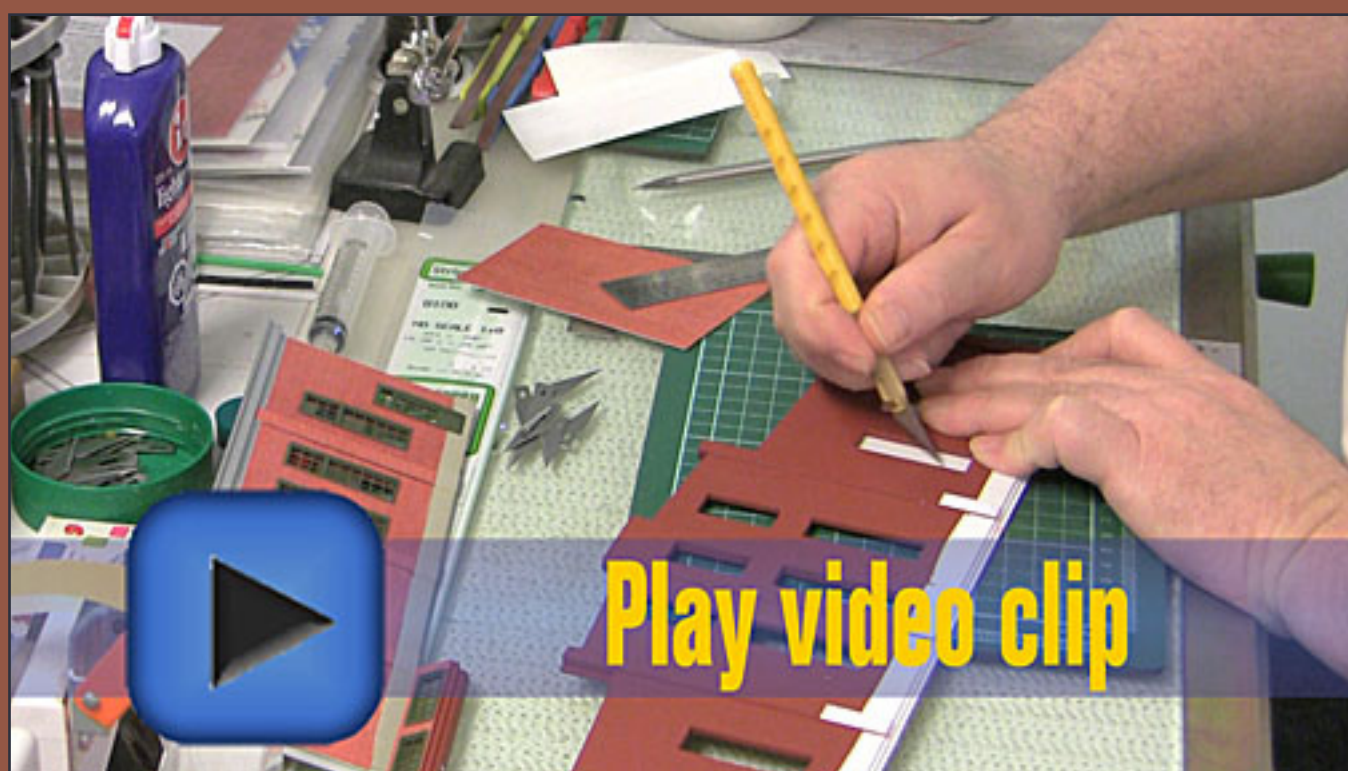


Figure 3

Figure 3: What you will need before starting.

List of materials - available from MicroMark:

- 1- Several sheets of Red Brick Paper - It# 84730
- 2- Exacto Knife - It# 14349
- 3- No. 11 blades (package of 100) - It# 14178
- 4- Cutting pad - It# 36133
- 5- Mini Steel Square -It# 82147
- 6- Steel Ruler - It# 10116



Play video clip

Video won't play? Click [here](#) to play it on YouTube.



About our narrow gauge and branchline columnist



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

[Click here](#) to learn more about Lew.

THE LITE AND NARROW: Maintenance Trailer for a Speeder

Ramblings on Narrow Gauge and Branchline Modeling



An easy to build MOW model you can't buy at any store ...

Several months ago I purchased the Woodland Scenics track maintenance figures in O scale. Included with the set was a static handcar for standard gauge in O scale, but I model On30. It was a case of discard the item, put it away forever in the parts box or do something with it.

Since I was planning to build a trailer for my maintenance speeder anyway,

I decided to use the handcar as the basis for the trailer project. It already had some railroad tools cast into the floor, so I was a few detail pieces ahead of the game. (For the speeder construction article, see the [Nov.-Dec. 2010 issue of Model Railroad Hobbyist](#), page 125.)

Standard gauge would never do, of course, and a static model just isn't my thing. After viewing a dozen speeder trailers on the internet, I was an energized bunny. I chopped off the plastic wheels and filed all the detail off the ends, bottom and sides. A frame of pre-stained 2" X 8" lumber went around the edge to increase the width and length slightly

and give the car some depth to clear the undercarriage wheels. A 2" X 4" piece of wood was glued from side to side, along the bottoms of both of the old bolsters to raise the trailer up a bit for wheel clearance.

When I made the speeder, I used the power truck from the Bachman HO San Francisco cable car. That left the unpowered truck available. Since the wheelbase of the unpowered truck was way too short, I cut the truck apart to separate the axles. I glued the axles to the 2" X 4" bolsters making sure to center and true them. At this stage I discovered that the opening for the wheels under the trailer was a tiny bit too narrow at one end only. A little



FIGURE 1: The completed maintenance speeder and trailer make an excellent couple and run very well, even on rough track.

shaving with the #11 blade allowed the wheels to roll freely. Some lead shot was added to the open space under the trailer using CA glue. The trailer will roll freely down a ¼% grade with no hesitation.

I picked several details from my parts box for the trailer to carry, including a piece of rail. The prototype uses a long drawbar link-and-pin connector so that rail and other lengthy objects can be balanced on the trailer and not collide with the speeder.

The drawbar was made from a round toothpick drilled out at either end for

a .015" fastener made from blackened brass rod. My eyes are not good enough for working link-and-pin coupling, so I made a drawbar with a lunette ring at one end to go over the pintle hook on the speeder, and a hook to fit into the coupling hole on the end of the trailer. A lunette ring is the round attachment on the end of the shaft of a trailer hitch that fits in the pintle hook fastened on the back of a truck. The lunette ring and pintle are trailer hitches for heavy duty commercial applications. I make mine in O scale by forming a piece of .015" wire into a small circle big enough

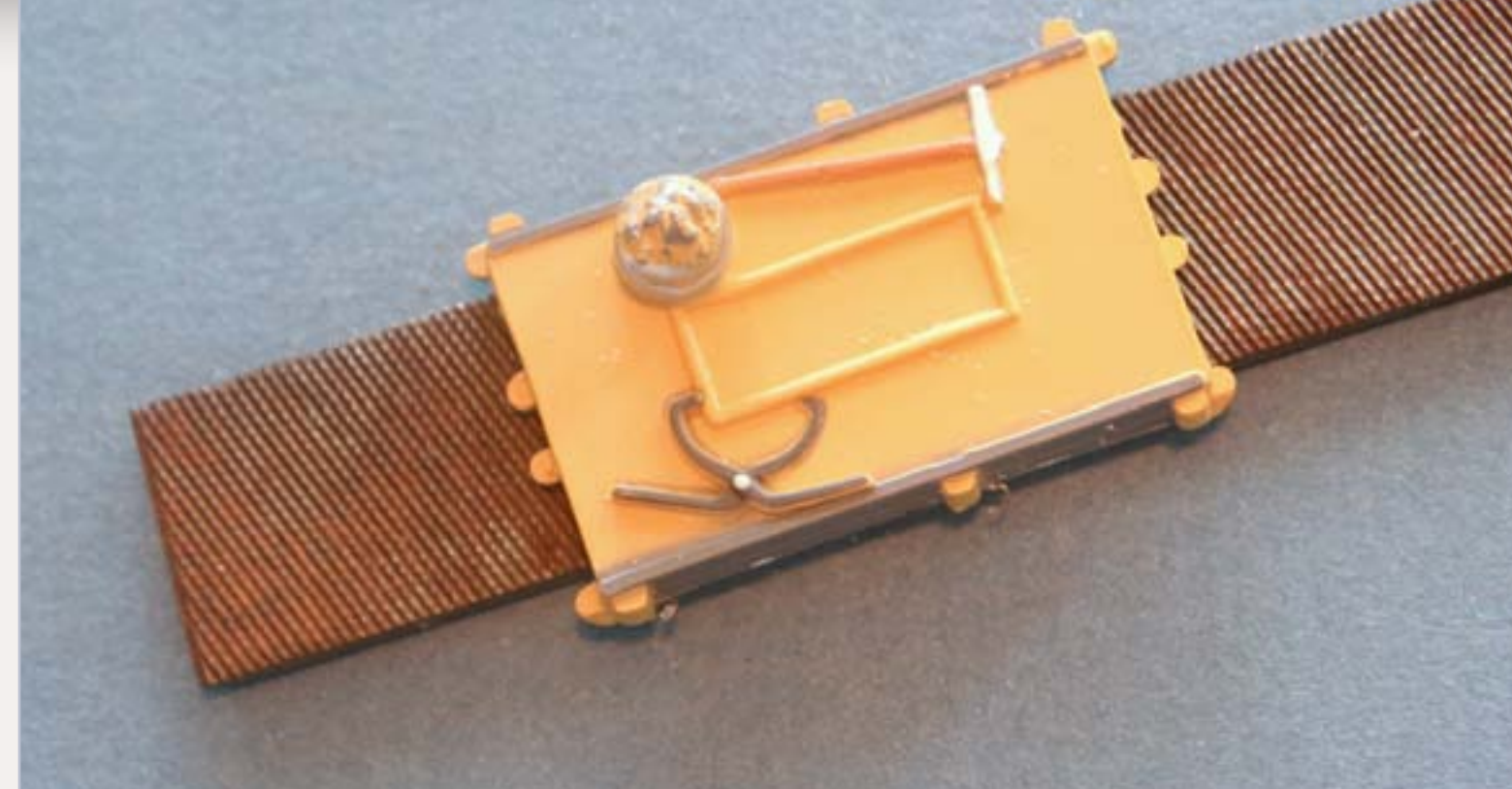


FIGURE 3a: File or sand the bottom of the car so that it is flush and flat.

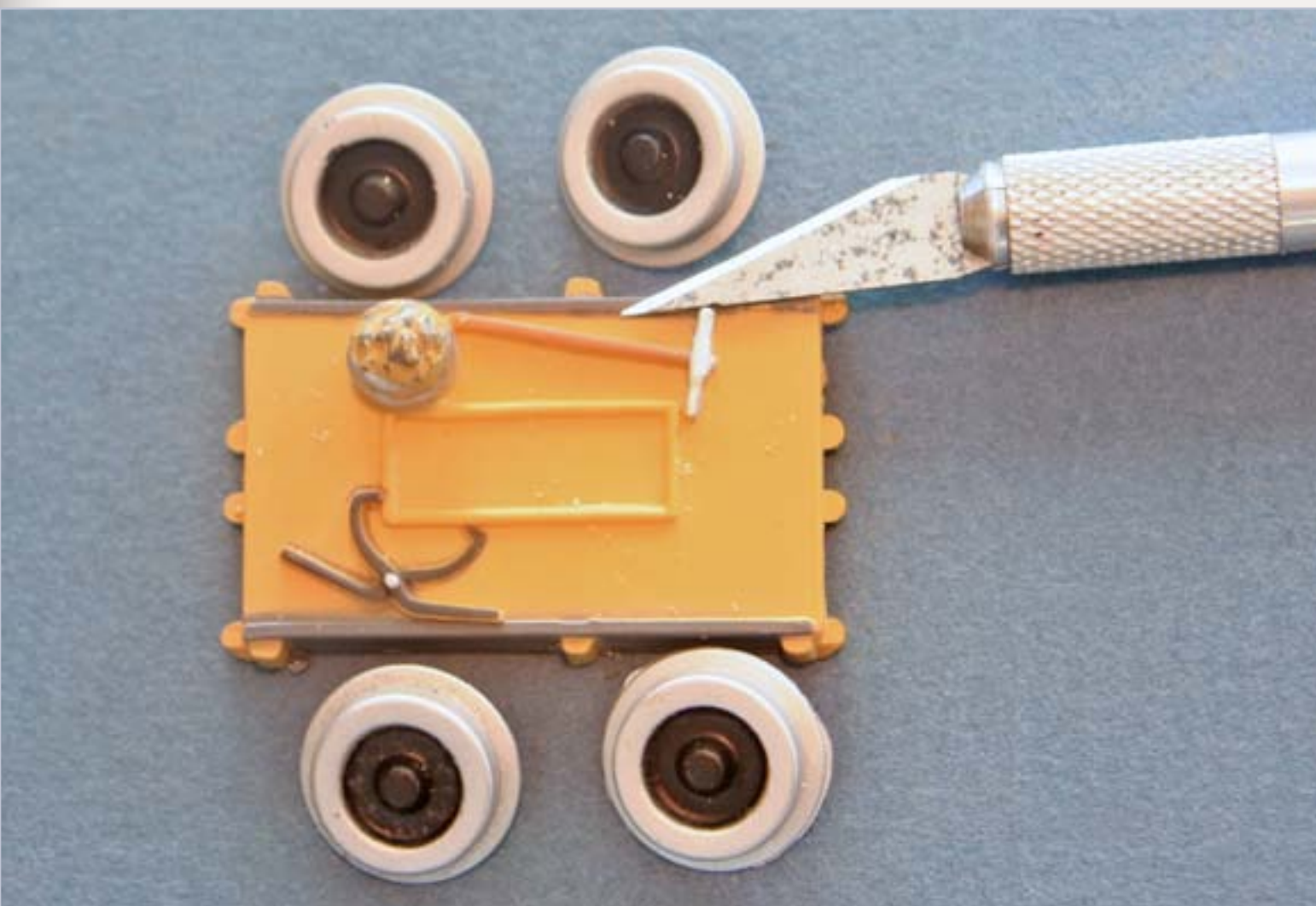


FIGURE 2: Start the kitbash by cutting the wheels off of the Woodland Scenics handcar chassis.

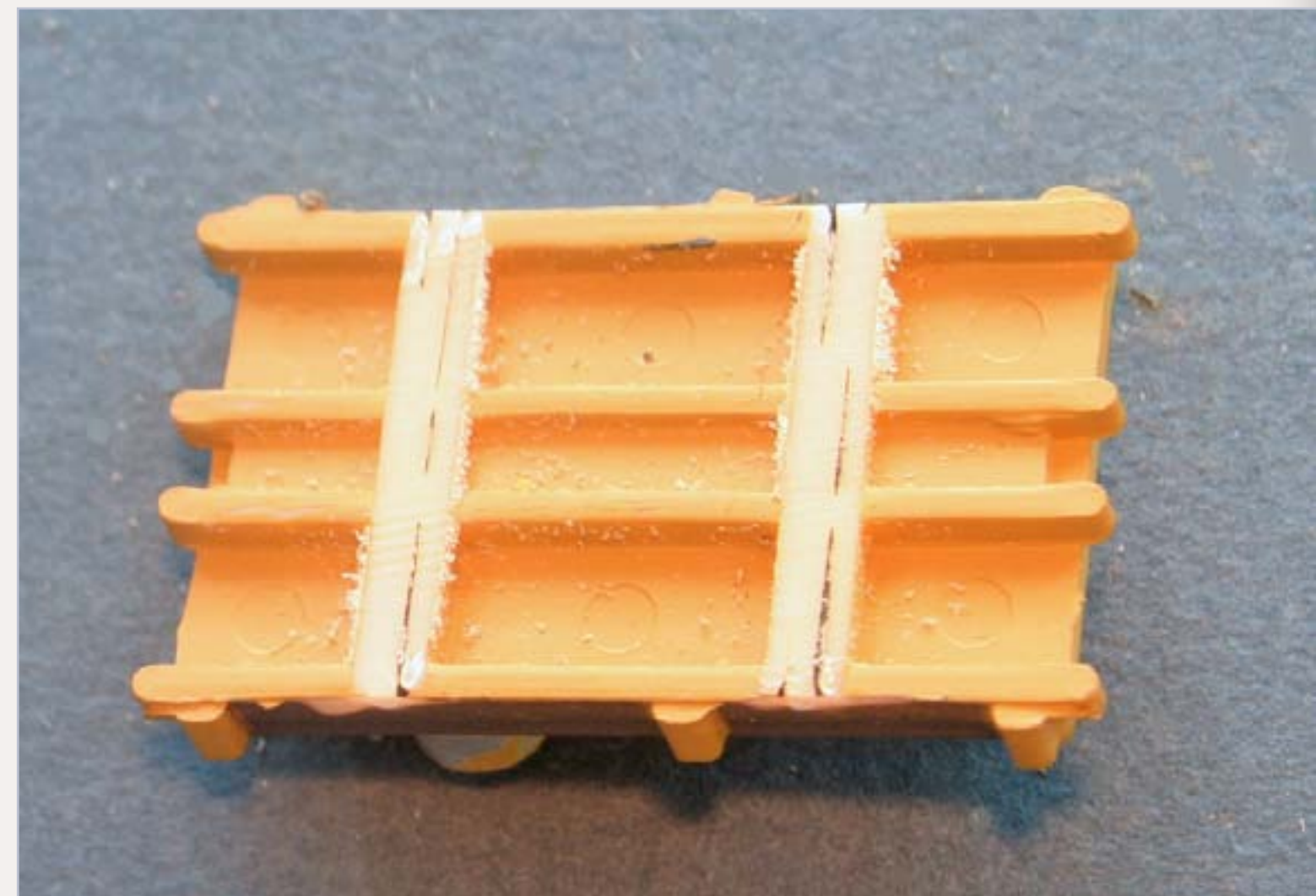


FIGURE 3b: This view shows the location of the bolster which will have to be built up for wheel clearance.

to fit over the hook (but not too big or it will come off). This is strictly a scratchbuilt item that takes less than 30 seconds to make.

The coupling device on the trailer is made from the roofwalk overhang from a discarded HO freight car, sliced off at the body and mounted upside down on the trailer ends. A .015" hole was drilled in each piece and then the coupler was attached to the trailer.

NBW (nut-bolt-washer) castings always look good on a model, so I added a pair over each axle and a pair at each end to represent threaded rod reinforcement of the trailer body. Badger acrylic paint in

Erie Lackawanna Yellow was thinly brushed over the stained wood with no attempt to cover it completely. A nice aged paint effect was the result.

When the paint dried, a load was added and the trailer weathered with dark gray stain in alcohol, dusted with powders and then lightly oversprayed with a clear, flat lacquer to protect everything. Some additional weathering was added to make the job look bold.

This is the first of several special-function maintenance trailers I have planned to add to the speeder. This speeder runs like a charm through frogs, diamonds and rough track with the trailer merrily following at the rear. When I add DCC to the speeder, I think I will get power from the trailer wheels through wheel wipers so there is 8-wheel electrical pickup.

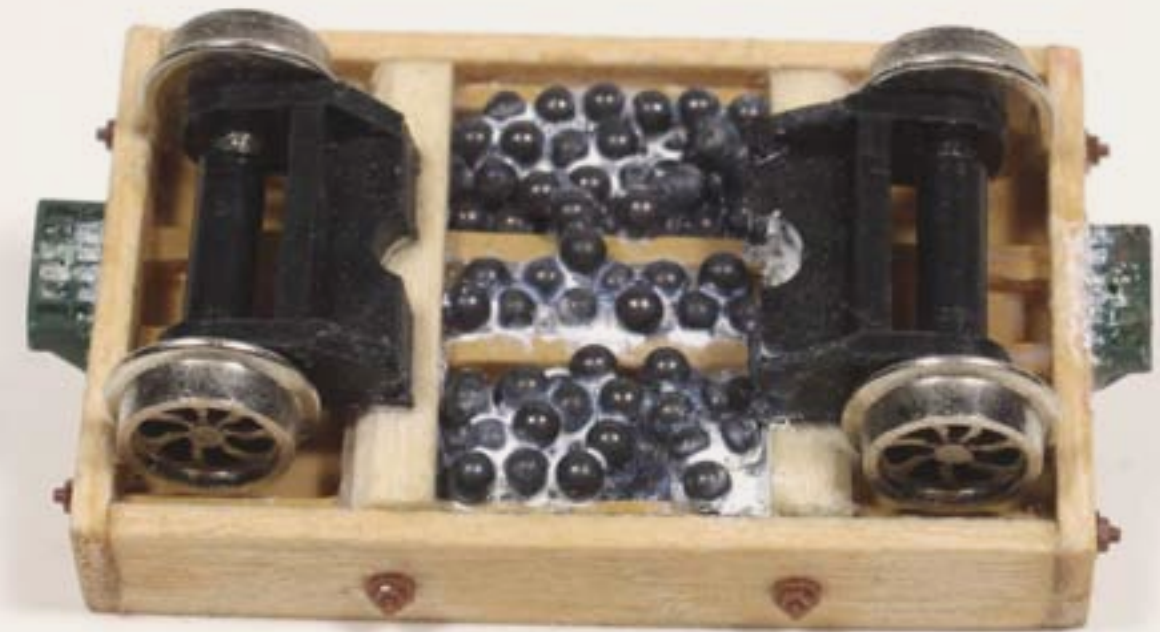


FIGURE 5: The bottom of the trailer with new bolsters and the axles attached. Make sure that the axles are square to the trailer. You can see how the truck was cut in half and fastened to the bolster. The weights are #9 lead bird shot salvaged from a shotgun shell. Note that the wheel space under the chassis, on the right side, is narrower than the left side and clearance may be a problem.



FIGURE 6: The drawbar is long enough to allow a piece of rail to balance on the trailer and not hit the speeder. The hook on the right end of the drawbar has a slight curve to keep it from popping up while being pulled.

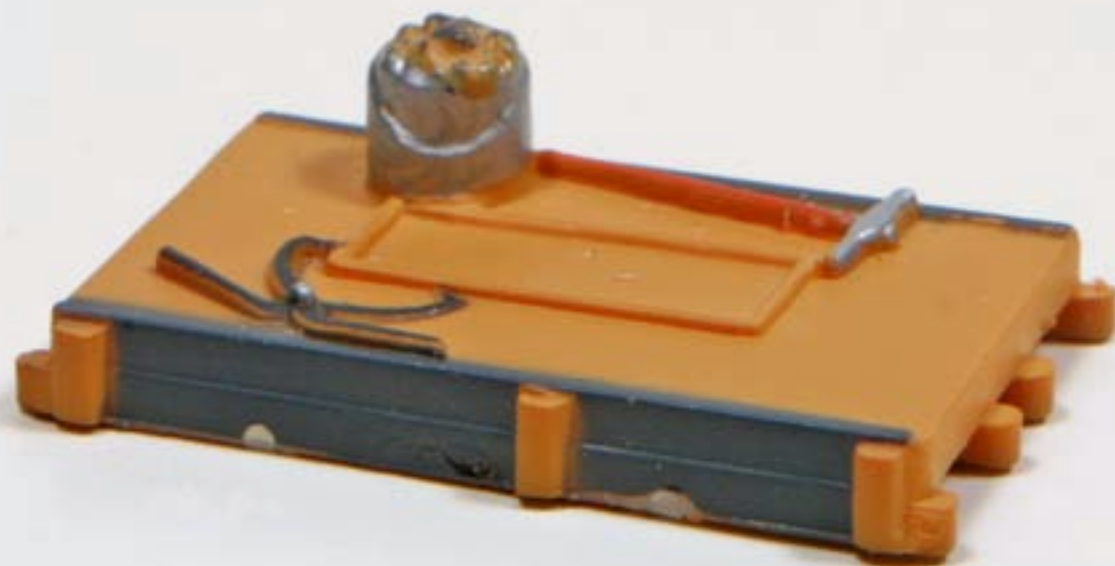


FIGURE 4: The stock top of the handcar has cast-in tools which we will keep.

This build took all of 4 hours from start to finish, including the time for the paint to dry. Set aside two easy evenings of light work to make this

kitbash and have a speeder - or hand-car - trailer for your Woodland Scenics track maintenance crew. ☑



Figure 7



Figure 8

FIGURE 7: The completed trailer as viewed from the fireman's side. The load in this picture has not been weathered yet.

FIGURE 8: The completed trailer as viewed from the engineer's side. The trailer can be loaded with almost any railroad maintenance materials, or even run empty. The lead bird shot is heavy enough to allow the trailer to track very well even without a load.

MODELING BY DAVE FRARY & HAL REYNOLDS
PHOTO BY HAL REYNOLDS

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INDUSTRY NEWS AND VIEWS

No one I know wants to increase the cost of participating in our hobby, but with international oil prices and labor costs in Asia both on the rise, price increases seem inevitable. Bowser, for example, has announced an across the board increase on all Cal Scale items effective May 1, 2011. Walthers says it has no choice but to increase the price on many of its proprietary items including those with the following prefix numbers: 433- Scenemaster, 669-Shinohara, 920-Proto series, 931-Trainline, 932-Walthers brand, 933-Cornerstone, 947-tools and threaded products, and 948-Walthers accessories...

Kato is promoting its N scale GE 4400-series locomotives (C44-9W, AC 4400CW and ES44AC GEVO) with a free wall poster that can be downloaded at www.katousa.com/PDF/44-Series-Poster.pdf. The colorful poster provides information of interest to diesel fans of all scales...

Jerry Kitts, the brains and sweat behind Foothill Model Works, has a well-deserved reputation for creating some beautifully detailed wheels and wheelsets for the narrow gauge crowd. He is currently considering tooling a 26-inch wheel in On3, but is uncertain of the sales potential for such a niche item. If you are a potential consumer of 1/4" scale 26" wheelsets, please leave a note of encouragement for Jerry at foothillmodelworks.com. By the way, the web site has been upgraded and now includes new information and several references to the justly-famous Nevada County Railway...

Members of the West Texas HOn3 Modular Group meet on an internet "Skype" hookup at 7:30 p.m. CST on the first Friday of each month. The discussion explores all aspects of narrow gauge modeling. Newcomers can get started by signing up at the WestTexasHOn3Modular yahoo group ...

In response to requests from prototype modelers, Kadee has decided to package its code 88 semi-scale wheelsets. Both ribbed and plain backs will be available for 33-inch wheels, while 36-inch wheels will be offered in plain back only. The packaged wheels should begin to show up at dealers before the end of May...

After completing volume 67 in his series of Great Model Railroads, videographer Allen Keller has called it a wrap. Keller has had a fascinating career documenting many of the hobby's finest model railroad layouts - initially for *Model Railroader Magazine* and Hopewell Productions, and finally his own Allen Keller Productions. The body of Keller's work will stand as a legacy to many of the great layouts and layout builders in the hobby. Some memorable layouts have already been torn down or undergone drastic changes, but the originals still live in Keller's videos which will continue to be available through www.allenkeller.com...

ExactRail will soon announce that trucks on its Platinum and Signature series HO scale rolling stock will be fitted with metal axles. It will take some time to work through current inventory before the changeover can be fully implemented. To get started, ExactRail has already introduced a 100-pack of code 88 (.088") wheelsets with metal axles....

Westerfield Models is for sale. Anyone seriously interested in acquiring the business can contact Al Westerfield through the company web site at www.westerfield.biz...

InterMountain has increased its presence in the field of Z scale by taking on the exclusive North American distribution of Rokuhan, a Japanese manufacturer of Z scale track. Rokuhan track products can be viewed at intermountain-railway.com...

The weather can be rough in Canada and the long winter can do strange things to the brain. This was clearly brought to mind April 1st when Toronto-based Rapido announced plans to introduce a new line of 2:1 scale trains. Prompted by a growing number of tiny model railroad detail parts that aging eyes find harder and harder to see, Rapido said that hobbyist modeling in 2:1 scale will have no concern about losing detail parts that are twice the size of the prototype. For example, the chance of losing a grab iron is nil since 2:1 grab irons will weigh close to a quarter of a ton. Rapido's first 2:1 release is a TurboTrain made from injection-molded ABS plastic and die-cast uranium. Rapido claims the tentative MSRP of \$209.5 million will be a steal, considering the high cost of building a 30-foot tall injection molding machine. Early reservations are suggested since sales of this product will be on a first-come, first-served basis. A pre-production photo of the 2:1 TurboTrain has been posted at www.rapidotrains.com/Rapido-2-1-scale.jpg....

Harry Wesley Coover, Jr., inventor of Super Glue and an unnamed hero of model builders everywhere, died in late March at his home in Kingsport, Tennessee. He was 94. The Delaware native was working as a chemist for Eastman Kodak when he first began working with cyanoacrylate in 1942, but it was not until 1958 that the formulation was marketed as Super Glue. Coover held 460 patents with Super Glue being just one of his many discoveries...

Peach Creek Shops of Laurel, Maryland, will close its doors for good on June 1, 2011. But the story is not all sad. John Glaab established Peach Creek in 1982, and built it into the most successful hobby store serving the region surrounding the nation's capitol. Through a tenaciously-followed policy of well-stocked shelves, coupled with an undying dedication to customer service, Peach Creek built a solid customer base that eventually reached across the nation, and beyond. Along the way John had fun. He became a student of imported brass models, wrote articles about acquiring and caring for brass, penned a regular magazine column on the subject, and even found time to publish an updated version of "The Brown Book on Brass." Glaab also became a rallying figure for modelers fascinated by steel mills, a niche field which, after shuttering Peach Creek, he will continue to support via the Internet as well as through the annual Steel Mill Modelers Meet he produces in nearby Ellicott City (see Selected Events on page 110). Between rising prices, increasingly restrictive manufacturers policies, reduced margins, and the approaching expiration date on his store lease -- plus the reality of his own age -- John came to the realization that the fun had gone out of his enterprise. While we're sad for Peach Creek customers, we're happy for John who has enjoyed a fun-filled thirty-year ride...

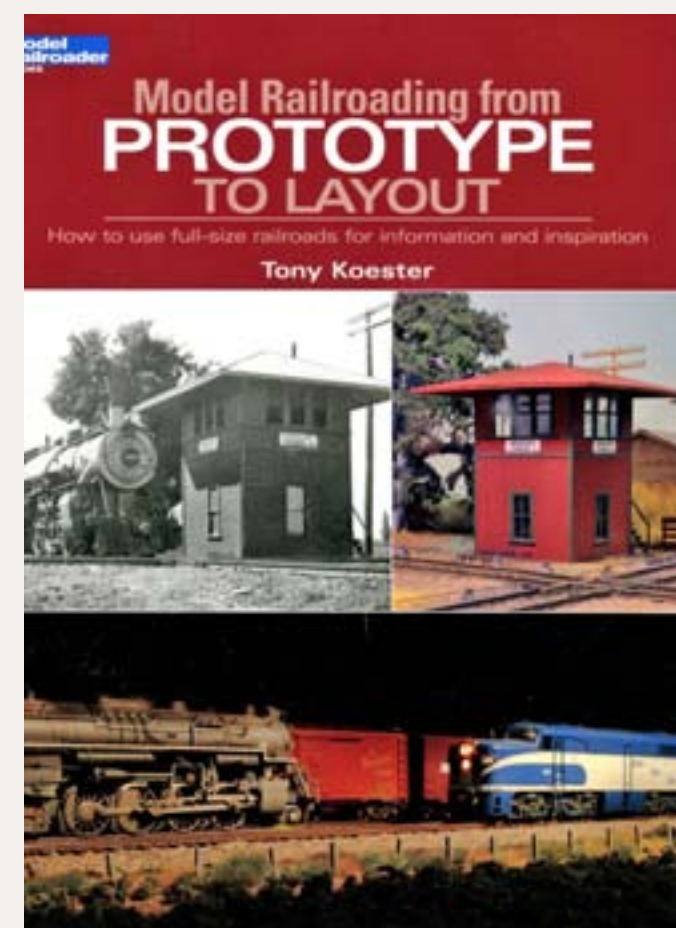
Athearn Trains has relocated its offices to 1600 Forbes Way, Suite 120, Long Beach CA 90801. The phone number remains 310-763-7140 and toll free at

877-422-9316. The move does not involve the Southern California warehouse and distribution center in Rancho Cucamonga.

Now let's see what's new...

NEW PRODUCTS FOR MULTIPLE SCALES

Friends of the East Broad Top Company Store (c/o Dick Ullery, P.O. Box 145, Leetsdale, PA 15056) is selling a new book titled "The Shops of the East Broad Top Railroad at Rockhill Furnace, PA," by Tom Diehl. The text is based on Tom's popular machine shop tour, starting with the basics of daily operations in the vintage facility plus tours of the foundry and blacksmith shop, followed by an explanation of the woodworking machines in the car shop. Modelers interested in structures at Rockhill Furnace, especially interiors, will find this book of considerable value. The 63-page book is published in 8 x 10-inch paperback format with 43 photos, 13 vintage catalog engravings, floor plans, and more. It is priced at \$12 plus \$4 shipping. PA residents please add 6% tax. FEBT members receive a 15% discount off the list price.



In "Model Railroad from Prototype to Layout," author Tony Koester presents modelers with a strong case for finding and sticking to a particular prototype. Tony begins with a cogent explanation of what prototype modeling is, and then leads readers through the process of choosing a suitable prototype, settling on a time period, planning and acquiring a roster of motive power and rolling stock, and considerations in selecting appropriate prototype structures to model. The book's final chapters deal with layout design and operation. The book is mandatory for newcomers to prototype modeling and will serve as an excellent refresher course for long-time RPM adherents. The 96 page softcover book includes 225 photos in an

8.25 x 10.75 format. Priced at \$21.95, the publication is available at book stores, hobby dealers, or direct from www.kalmbachstore.com.

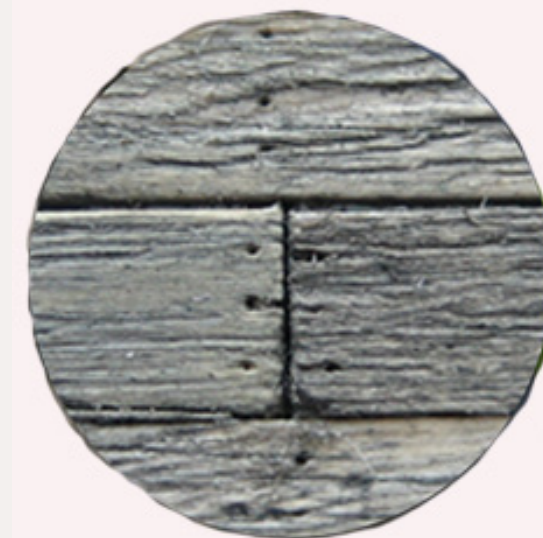
Kalmbach Publishing has released *“Amtrak: An American Story”*, a timely new book that chronicles the 40-year history of Amtrak. Archival photographs tell the story of the employees, trains, and technology of America’s passenger rail service since 1971. An historical summary, a detailed timeline, and personal narratives add flesh to the story. Priced at \$19.95, the book is published in 8.5 x 11 softcover format with 150 black and white photos, 265 color photos, and 30 other illustrations. It is available from book stores, hobby dealers, or direct from www.kalmbachstore.com.

Professional layout builder **Lance Mindheim** has authored a detailed guide-book titled *“How To Design A Small Switching Layout.”* The book provides clear guidelines to creating a versatile layout that will retain operational interest over time. Mindheim covers several subjects often overlooked in the initial planning stage such as establishing design priorities, guidance on selecting a bench work shape, designing secondary track, establishing scenery zones, and choosing suitable industries. Two suggested track plans are included. Although the title subject is small switching layouts, the sensible guidelines offered by Mindheim can be applied to layouts of all sizes. The paperback book has a list price of \$21.95 and is available through Amazon.com -- usually at attractive discounts.



Micro Mark (www.micromark.com) has a nifty high-resolution digital thickness gauge that provides accurate measurements in three readings on an LCD display window. A selection button changes the reading to decimal inches, fractional inches or millimeters in increments of .001 inch, 1/64 inch, or 0.01 mm. The maximum thickness is 1 inch. The gauge includes an on/off switch and a hold button to retain the last reading. The gauge is priced at \$26.95 and is supplied with a battery and a foam-lined case.

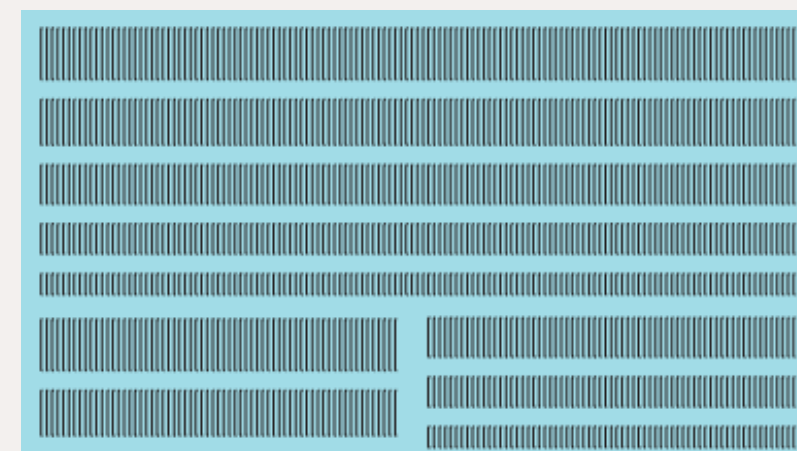
Monster Model Works (monstermodelworks.com) has introduced Monster Nailer, an ingenious new tool to create the appearance of nails in wood siding and other materials. The slender pencil-like device has a pair of needles positioned at one end that makes it simple for the user to space the nail holes. Sized for HO scale, the tool creates surprisingly realistic nail heads and nail holes. The twin-head design makes it easy for the user to space the holes. A cap is provided to



protect the working head when the tool is not being used. The opposite end is fitted with a long needle for creating individual nail holes, knots or knot holes. It can also be used as a glue applicator. I have used the Monster Nailer and can attest that it is a significant improvement over pounce wheels. Monster Nailer is the brain-child of Jimmy Simmons, a professional model builder and partner in the 2011 Craftsman Structure Convention. The Monster Nailer is priced at \$9.99, and can be ordered direct from the above web site.

NEW DECAL PRODUCT NEWS

5th Avenue Car Shops, P.O. Box 423, LaGrange, IL 60525, has HO scale decals for the Detroit Toledo & Ironton gondola and NADX-Hormel reefer projects presented at the Cocoa Beach Shake-N-Take clinics. To order the decals send a check for \$12 to the above postal address. This is a one-time project and when sold out, the decals will not be rerun.



As a follow up to their resin rivet decals, **Archer Fine Transfers** has introduced resin louvers commonly found on diesels, railcars, and metal cabinetry. Each sheet has louvers of five different widths. The sheets are priced at \$8.95 each, and come with instructions. Visit archertransfers.com for specific dimensional

information on the louvers currently available.

Jerry Glow (home.comcast.net/~jerryglow/decals.html) has recently announced three new decals including an HO scale set for a Georgia Railroad

single-sheathed USRA boxcar rebuilt with steel sides. The decals are available in white lettering for a car painted freight-car red, or with black letters for a silver car. Also new is a special decal set for a C&NW riveted-side double-door PS-1 box car. Creating the decals was prompted by a Lloyd Keyser construction article in the April 1994 issue of Mainline Modeler. Completing the trio is a new decal sheet for lettering an EMD FT demo locomotive. It is available in N, HO, S and O scale.

Microscale Industries (microscale.com) has new decals in N and HO scale for both early and later editions of Chicago Great Western cabooses, and for a Western Pacific steel caboose. Also N, HO and O scale decals for Milwaukee Road 4,000 cu. ft. covered hoppers, and Burlington Northern 2-bay covered hoppers built by AC&F and Pullman-Standard. New items currently under development by Microscale include decals for TTX (early brown scheme), Pacific Electric traction, and New York Central silver passenger cars.

Oddballs Decals (oddballsdecals.org) has new sets for 3-bay covered hopper cars for Garvey Grain, Rock Island, Great Lakes Carbon, Monfort Feed Lots, Cargill, Bartlett & Company, and four Milwaukee Road versions. Also new are Missouri Pacific decals for 40' and 80' boxcars, and two versions of Milwaukee Road and Southern Railway 50' boxcars. Oddballs Decals are priced at \$5 for N and HO scale and \$8.25 for S and O scale. Visit the above web site for ordering details.

LARGE SCALE PRODUCT NEWS



Bachmann (www.bachmanntrains.com) has reissued its 1:20:3 scale Baldwin industrial 2-6-0 Mogul with new features including an improved lead truck and a polarity switch to select either standard large-scale electrical operation practice or to NMRA standards. Other features include smoke and speed-synchronized sound (requires a 9 volt battery not included), operating front and rear LED lights, metal handrails and grab iron, metal smoke box supports, all-wheel tender pickup, and a detailed cab interior with working firebox door. The ready-to-run model has an

MSRP of \$295 and is available decorated for Midwest Quarry & Mining Co. #3, Colorado Mining Co. #2, Yellow Pine Lumber Co. #19, and painted (unlettered) black with white pinstripes.

O SCALE PRODUCT NEWS



Aristo-Craft RMT (readymadetoys.com) is offering an O scale depressed-center flat car produced from reworked tooling originally developed by Marx in the 1950s. The new RMT incarnation will be available lettered for Atomic Energy Commission, Alaska Railroad, Con Edison, Bethlehem Steel, Conrail, Long Island Railroad, Milwaukee Road, New York Central, and Pennsylvania Power, plus several military and whimsical schemes. The military versions come with a missile load with all others having the tank load shown here. The car has an MSRP of \$99.95 and is compatible with all O/O-27 3-rail systems.

N.J. International, Inc. (njinternational.com) plans to deliver this O scale model of a two-track signal bridge in August. The hand-crafted brass model replicates the I-beam construction of the prototype. The ready-to-install bridge is priced at \$199.99 and will be offered with either D-Type heads or SA-Type target heads.



Later this month **Bar Mills** (bar-millsmodels.com) is expected to begin shipping its long-awaited O scale version of Betty's Diner. Affectionately known as Sweaty Betty's, the limited run of 50 kits in 1/4 inch scale was prompted by the



popularity of the previously released HO version. The craftsman kit comes with all the necessary components to build an attention-getting model including numerous resin and white-metal detail castings, and all of the graphics and signage shown. The finished model has a foot print of approximately 5.5" x 12". Sweaty Betty's is priced at \$119.95 plus \$5 shipping to US addresses. It is also available from selected Bar Mills dealers.

HO SCALE PRODUCT NEWS

New HO scale kits coming from **Accurail** (accurail.com) this month include a Union Pacific 41' steel gondola, Texas & Pacific 50-ton offset twin-bay hopper, Western Pacific 50' welded-side plug-door boxcar, 55-ton USRA twin hoppers decorated for Norfolk & Western and Boston & Maine, and a Burlington/CB&Q 40' combo-door boxcar. Also new is a twin-pack of Santa Fe 40' steel boxcars. One car has a single door, the other a plug door. Both display a large herald and "Santa Fe all the way" slogan.

Alpine Models (www.alpinemodels.com) is selling kits for a 40' single-sheathed wood boxcar decorated for Pacific Electric. The HO scale model is based on an Accurail kit and is available in two different road numbers. The price is \$21.81 each.

Athearn (athearn.com) will offer its Genesis F3A and F3B locomotives decorated in both passenger and freight (above) paint schemes



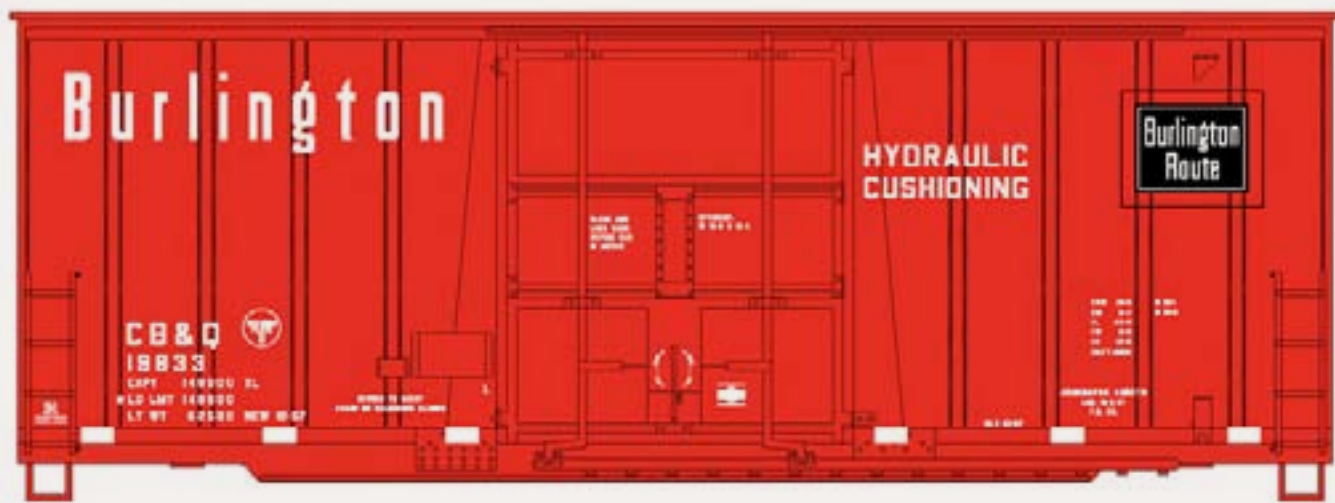
for the Monon, aka Chicago, Indianapolis & Louisville Railway. Road-specific details on the HO scale diesel will include eyebrow grab irons, sunshades, nose side-ladder grabs, and ladder-rest grabs. The units will be available for standard DC as well as with Tsunami sound and DCC decoders in both A and A-B pairs. Freight paint schemes will be available on A and B units with the familiar red and gray passenger scheme available on A units only. Delivery is planned for January 2012.



Athearn previewed this decorating sample of its 10th Anniversary Amtrak/Surfliner F59PHI diesel in late April. If all goes well, production quantities of the HO scale DCC-ready model will begin arriving at your favorite hobby dealer toward the end of June. Northstar locomotives #501 and #502 will also be in the June release. The next release is set for November and will include Amtrak, Metrolink (LA), CalRail, and Utah-UTA Front Runner locomotives. Athearn's F59PHI models have an MSRP of \$109.98.

Also due from Athearn in November is a ready-to-run HO scale 40' Hi-Cube boxcar decorated for Burlington (next page), Union Pacific, Santa Fe, and Denver & Rio Grande Western. The list price is \$21.98.

Carnation Milk is one of four decorating schemes Athearn will apply to its 40' steel refrigerator car. Other names include Canadian National (maple leaf), Railway Express Agency, and Pacific Freight Express with dual SP-UP heralds. The ready-to-run model is due to arrive in November with a list price of \$21.98 (see next page).



Additional items due from Athearn in November include a new Genesis 50' GATC 20,000 gallon type-40 acid tank car painted and lettered for GATX (white), GATX (white with spread sheet), GATX (white with black band), and RCRX at \$39.98 each; also a DCC-ready SD40-2 from upgraded tooling featuring road-specific details for Burlington Northern, Missouri Pacific, Oneida & Western and Union Pacific at \$119.98 each and lastly, a ready-to-run 30,000 gallon Ethanol tank car at \$32.98 decorated for GATX-Soy Power, Procor (see illustration in Athearn N scale product report), and TILX Global. The tank cars come with AAR upper/lower shelf knuckle couplers per prototype practice.



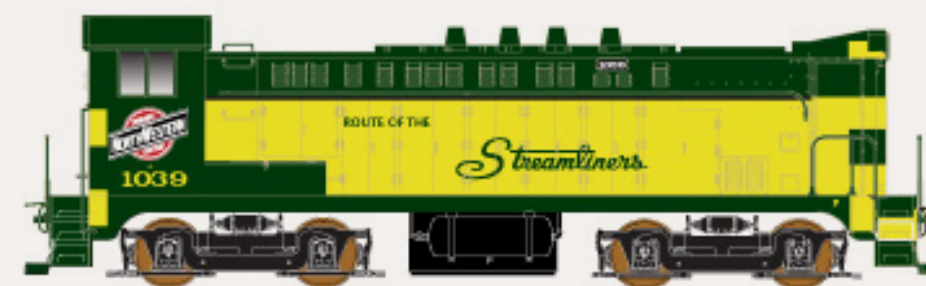
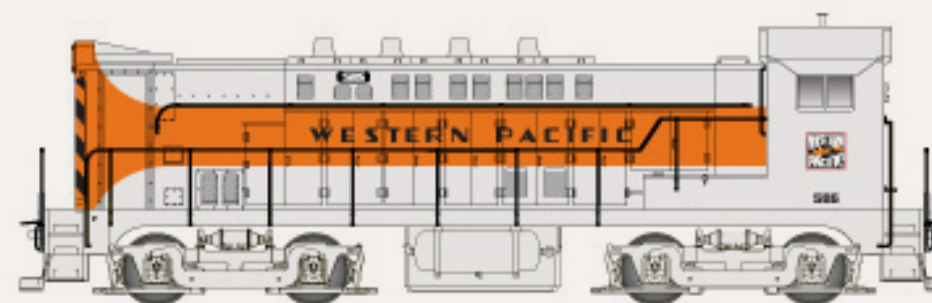
Athearn plans to rerun its popular Mack "B" tractor with several familiar decorating schemes including six-wheel versions decorated for Southern Pacific and Santa Fe (left). A dual rear-axle ten-wheel model will come decorated for CBQ, Roadway, and Union Pacific. Features include crisp lettering, clear windows, and

rubber tires. The trucks will have a list price of \$24.98 and are scheduled to arrive in November.

Atlas Model Railroad Company (www.atlasrr.com) is now accepting orders from dealers for immediate delivery of many of the HO scale freight cars it acquired this past January from Branchline. Atlas had the good sense to retain the old Branchline kit numbering system and, despite expectation of a price increase, the old prices have been maintained. The initial release covers 10 categories of Blueprint series freight cars including 40' ACF/URTX wood reefers; 40' post-war boxcars with 6', 7', and 8' doors; 50' postwar boxcars with 8', 9', and double doors; 50' plug-door boxcars; 50' Berwick boxcars; and 50' REA express refrigerator cars, plus a 40' AAR 1937 boxcar from the Yardmaster series. Information regarding other equipment, including Branchline passenger cars, is expected to be announced soon.



Bowser (bowser-trains.com) has an HO scale operating Form-11 trolley pole that uses a brass pivot sleeve that can be imbedded into roofs fabricated from any material including metal, plastic, cast resin or wood. Electrical continuity is attained by a 1mm machined brass pin at the base of the trolley pole that fits snugly into the roof-mounted pivot sleeve. The removable pole permits easy maintenance without having to take apart the trolley assembly. The MSRP is \$16 per pole.



Western Pacific and Chicago North Western are among eight new road names Bowser will apply to its Executive Line VO-1000 switch engine scheduled for delivery in October. The HO scale ready-to-run locomotives will be priced at \$169.95 for DCC-ready (8-pin plug), and \$279.95 for units with DCC/sound installed. Other roads in the release

include Spokane Portland & Seattle, Milwaukee Road, Great Northern, Reading, and Sacramento Northern. A unique Pacific Electric version equipped with a trolley pole (necessary on the prototype to activate signals on the electric line) will also be available for an additional \$10.



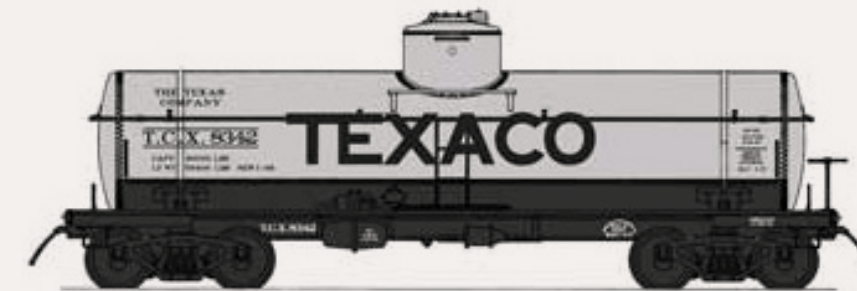
B&M McGinnis is one of several decorating schemes **Centralia Car Shops** has scheduled for the next release of its class NE-5 caboose. Other liveries include, B&M Minuteman, B&M (all

blue), B&M (blue body with black cupola and red ends), B&M (blue body, blue cupola, red ends), Penn Central, Conrail and Raritan. All will be available in multiple car numbers except Raritan. Details include etched metal parts and Kadee® couplers. The HO scale ready-to-run cabooses are due to arrive in November or December and will be priced at \$48.95 each. Centralia Car Shops brand products are available through InterMountain Railway (intermountain-railway.com).



ExactRail (www.exactrail.com) has started shipping its highly-anticipated HO scale 64' Trinity TRINCool refrigerator car. The giant prototype has been accurately replicated in ExactRail's Platinum series and comes with 100-ton ASF Ride Control® trucks with 36" wheels and rotating axle caps. The ready-to-run car is decorated for ARMN that includes a classic three-color Union Pacific shield. The cars are priced at \$32.95 each and are available in 24 different road numbers for both Phase I and Phase III versions with the principal difference being the ladders as shown above.

At the B end of the car, there are four toe-pockets on each side. Phase I cars (left) are fitted with ladders that line up with the pockets. Phase III cars have individual rungs at each toe-pocket (see next column).



Intermountain Railway (intermountain-railway.com) is scheduled to deliver 8,000 gallon tank cars decorated for Shell Chemical Company, Canfield, Spencer-

Kellogg, Mutual Oil Co, Bell, National Coop, Pan-Am and, Texaco (above) in late November or early December.



Also coming from InterMountain this winter are 50' PS-1 single-door boxcars decorated for Rock Island, Chessie-C&O (above), Southern Railway, Detroit Toledo & Ironton,

Frisco Line, Kansas City Southern, Atlantic Coast Line, and Milwaukee Road. Both the boxcars and 8,000 gallon tank cars are priced at \$31.95 each and will be available in six different numbers for each road name.



Kadee Quality Products (www.kadee.com) releases for July include this Union Pacific PS-2 two-bay covered hopper. The HO scale ready-to-run model is decorated in the 1955 as-built alkali-resistant gray paint. Item 8034 is priced at

\$42.95 and will come with Kadee's new two-piece trucks.



Also due for release by Kadee in July is this 50' PS-1 boxcar with a 10' door decorated for Grand Trunk Western following a prototype built in 1970. Kadee item #6346 is priced at \$35.95 and comes ready-to-run with two-piece trucks.



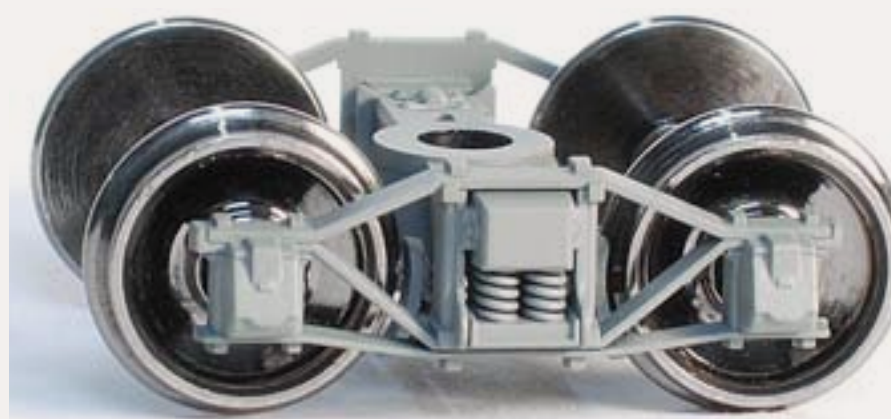
Ring Engineering (ringengineering.com) has introduced an HO scale PowerPickupTruck with four-wheel pickup. The modern-era truck is designed to feed track power to cabooses for lights, sound decoders, and cameras. The pickup system is rated at 750mA maximum current and comes with built-in short circuit protection with auto reset. The pickup system is compatible with most rail supplied signals including DCC, analog DC, and the firm's own RailPro control system. Both 33" and 36" versions are available at \$19.95 each and may be purchased at local hobby stores or direct at the above web site. A matching non-pickup truck is available at \$4.95.

N. J. International (njinternational.com) continues to expand its line of hand crafted brass signals. Among the latest is a Pennsylvania style dual-head position-light signal with a clipped lower back-round for tight clearance. The ready-to-install model uses mini-LEDs and is expected to be available in July at \$49.99 each. See our N scale report for a photo of the new signal.

Roundhouse division of Athearn Trains (www.roundhousetrains.com) is taking dealer reservations for an HO scale ready-to-run 30' 3-window wood caboose decorated for Denver & Rio Grande Western, Pennsylvania Railroad, and Union Pacific. Among the upgraded features on the old MDC model is clear window glazing. It will have a list price of \$24.98.



Smoky Mountain Model Works (smokymountainmodelworks.com) is selling HO scale kits for two versions of a Tennessee Central 40' boxcar originally built by Pullman-Standard in 1941. Modified steam-era Roman lettering was applied to the prototypes that were numbered 7900-7999. These original cars are suitable for modeling the 1941-1968 era and can be replicated from kit number 87-B1. Kit number 87-B2 represents 65 of the original cars that were sent to United States Railway Equipment Company in 1958 for rebuilding which included adding gussets to the door opening, strengthening the side sill and replacing the original Murphy flat panel roof with a new Stanray roof. The rebuilds were leased back to Tennessee Central. They were lettered with Futura-style lettering and renumbered 500-564. Each kit includes a one-piece cast resin body, separate underframe, InterMountain underframe parts, Tichy truck frames, Kadee code 88 wheelsets, Kadee #153 couplers, and laser printed decals. The kits are \$45 plus shipping (\$7 for up to three kits, \$10 for four or more). Similar cars were operated by the Nickel Plate Road and Wheeling & Lake Erie.



This production sample of **Tahoe Model Works** new diamond arch bar truck has been painted gray to enhance the fine detail. The HO scale model replicates a prototype truck with a 5' wheelbase, 20-ton journal boxes and inside brake

shoes hung from the truck. As in the prototype, the ends of the upper arch bar butt against upturned lips at the end of the lower arch bar. Also the tie rod at the bottom is thinner than the two arch bars which carry the load. These two details are seldom replicated in a mass produced model of any scale. Tahoe's one-piece

design is molded in black acetal plastic with separate brake shoe detail and non-magnetic insulated metal wheelsets with RP-25 contour treads. Tahoe's new truck is suitable for use on appropriate freight equipment from 1890s through about 1941, although in reality, the use of arch bar trucks began to decline prior to WWI and the majority had been phased out (or worn out) by the late 1920s or early '30s. The 1939 AAR ban against arch bar trucks in interchange service was extended to mid-1941, after which their use was limited to maintenance-of-way equipment on the home road. Tahoe's arch bar trucks are priced at \$7.25 per pair and are available with .110" wheels or semi-scale .088" wheels. The trucks are available through dealers or direct from Tahoe Model Works, 5801 Sheep Drive #7, Carson City, NV 89701-1420. Please add \$3 for shipping and handling. Nevada residents must add 7.475% tax. Inquiries can be sent to brianleppert@att.net or by phone at 775-882-8822.



Walthers (www.walthers.com) is quoting a late November delivery date for a new run of Evans 50' cushion coil cars. The HO scale ready-to-run Platinum Line™ models will feature either round or angled removable hoods as appropriate to the prototype road, separate grab irons, etched metal walkways, and individual lift and stack brackets. Roadnames will include BNSF, Indiana Harbor Belt, Norfolk Southern, Union Pacific, Grand Trunk Western, and Elgin Joliet & Eastern. The models will have an MSRP of \$39.98.

This Santa Fe patch BNSF locomotive is one of four paint jobs that will be available on Walthers Proto2000® EMD GP60 diesel. The others are Denver & Rio



TrueLine Trains (www.truelinetrains.ca) will release several new lettering schemes later this month for the Canadian version of a basic 1937 AAR boxcar. Subtle details unique to the Canadian-built AAR design include a flat panel roof, no poling pockets, and ladders with an integral stirrup step.

Canadian National and Canadian Pacific models will each be available in three different schemes, along with two versions for Ontario Northland. The HO scale ready-to-run models will have a list price of \$44.99 each.

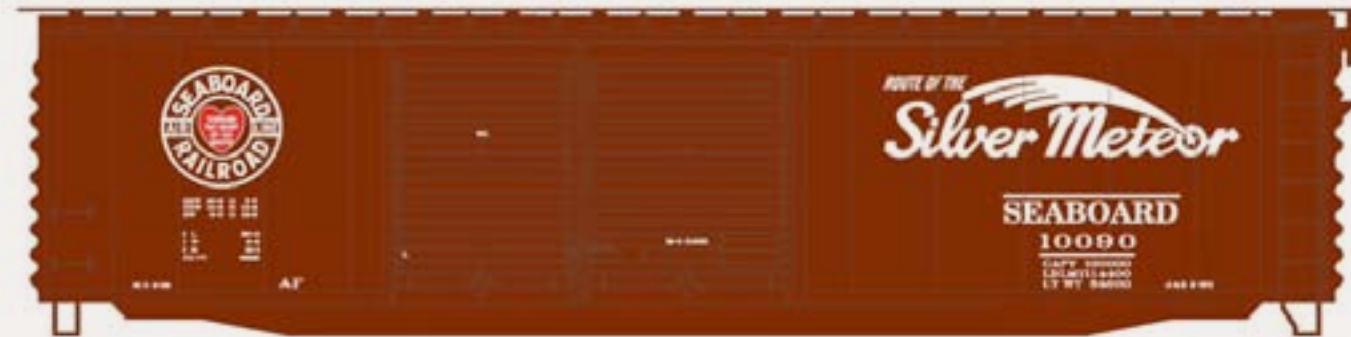


Grande Western, Union Pacific and Norfolk Southern. An undecorated model will be included in the run, which is scheduled to arrive in January 2012. The features on the model include constant and directional LED headlights, a five-pole skew-wound high-torque can motor, and 14:1 helical gears for improved performance at speeds as low as 3 scale MPH. Road-specific details to match units in service from the late 1990s to the present include nose-mounted headlights, short fuel tank, short blower sill duct, long hood sill handrails without safety plate on the left side, roof-mounted cab air conditioner, small Sinclair antenna on cab roof or large Sinclair antenna on long hood roof, raised Leslie S-3L horn, round vent on right side of short hood, oval cab vent, lever-style handbrake, and metal grab irons and lift rings. The HO scale ready-to-run standard-DC model will have an MSRP of \$199.98.

N SCALE PRODUCT NEWS



Athearn (www.athearn.com) has scheduled a November delivery date for an N scale 30,000 gallon Ethanol tank car decorated for GATX-Soy Power, TILX-Global Ethanol and Procor as seen here. The cars will be available individually for \$21.98 or in 3-packs with different car numbers at \$65.98.

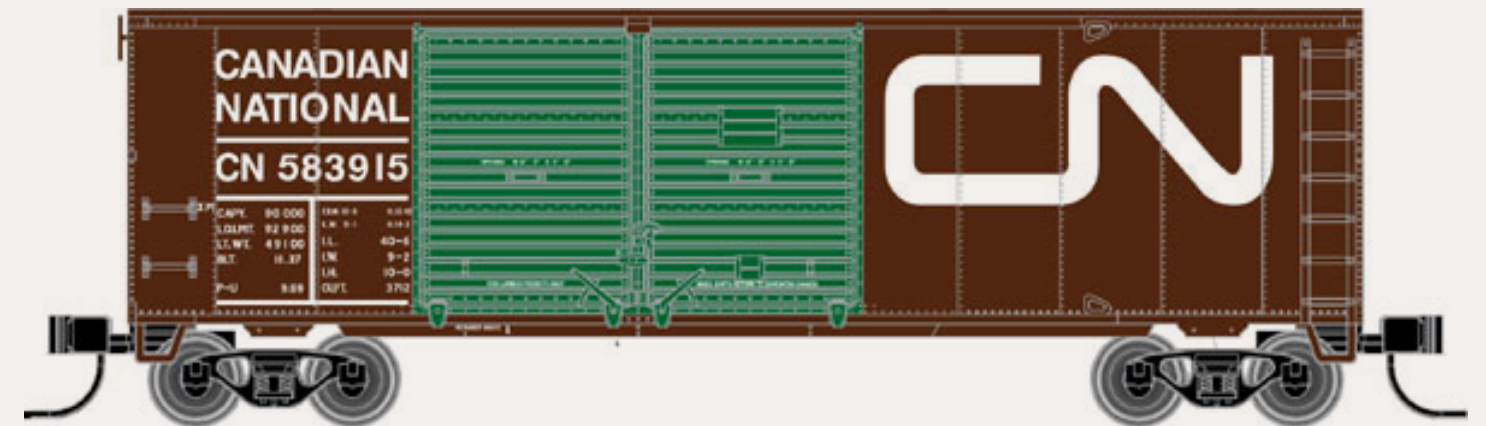


Also scheduled for release from Athearn in November is a standard 50' PS1 double-door boxcar decorated for Conrail, Southern Railway, Western Pacific, and Seaboard Air Line with a two-color herald and silver meteor lettering. The N scale ready-to-run cars will be priced at \$19.98 each.



Atlas Model Railroad Company (atlasrr.com) has scheduled another run of its popular N scale Trainman® series 90-ton triple-bay open hopper car for delivery in October. In addition to the L&N scheme shown here, other road names will

include CSX (black and yellow), Pennsylvania Railroad, Pennsylvania Power & Light, Reading, Santa Fe, Southern Railway, and Southern Pacific. The cars will be equipped with Accumate® operating knuckle couplers. The ready-to-run models will have an MSRP of \$12.95. An undecorated version will also be available at \$10.95.



Atlas' October release will also include Trainman® series 40' double-door boxcars in three numbers each for Burlington Northern, Canadian National, Canadian Pacific, Norfolk & Western, Southern Pacific and Northern Pacific. The ready-to-run N scale cars will be priced at \$12.95 with an undecorated version available at \$9.95.



Bachman (www.bachmanntrains.com) has a Spectrum® N scale version of a Peter Witt Streetcar that comes with a dual-mode NMRA-compliant decoder for speed, direction, and lighting. Additional features include eight-wheel drive, can motor, hidden electronics and drive-train, photo-etched brass safety screen, and LED backup and headlights. Paint and lettering schemes available now include Toronto, Chicago Surface Lines, Brooklyn & Queens Transit, Baltimore Transit Co, Los Angeles Railway, and St. Louis Railway. The N scale ready-to-run model has an MSRP of \$150.

Kato USA (katousa.com) will add a Motive Power International MP36PH locomotive and Nippon Sharyo Gallery bi-level cars to its N scale Starter-Series train sets. The modern bi-level cars follow the concept established by the original Santa Fe El Capitan bi-levels and the subsequent Amtrak Superliners and Bombardier commuter cars. Availability of the new sets is scheduled for August.

A re-issue of Kato's N scale Western Pacific and Denver & Rio Grande Western EMD F3A and F3B diesel is expected to be made official later this month. The prototype units shared responsibility for leading the famous California Zephyr. Details about a new run of N scale California Zephyr train sets with new car names and numbers should be announced next month.



We have no information on pricing or arrival dates but we understand that Kato plans to import a limited quantity of the E5 Hayabusa Shinkansen Japanese Bullet Train. The Hayabusa (meaning Falcon) operates along the eastern coast of Japan from Tokyo to the northern tip of Honshu. It is the fastest of the Shinkansen bullet-train fleet and regularly operates at 300 km/h (186 mph).



Here's a look at a pre-production sample of a Pennsylvania style dual-head position light signal coming in N scale from **N.J. International** (njinternational.com). The brass model uses mini-LEDs and scheduled to be available in June at \$49.99 each.

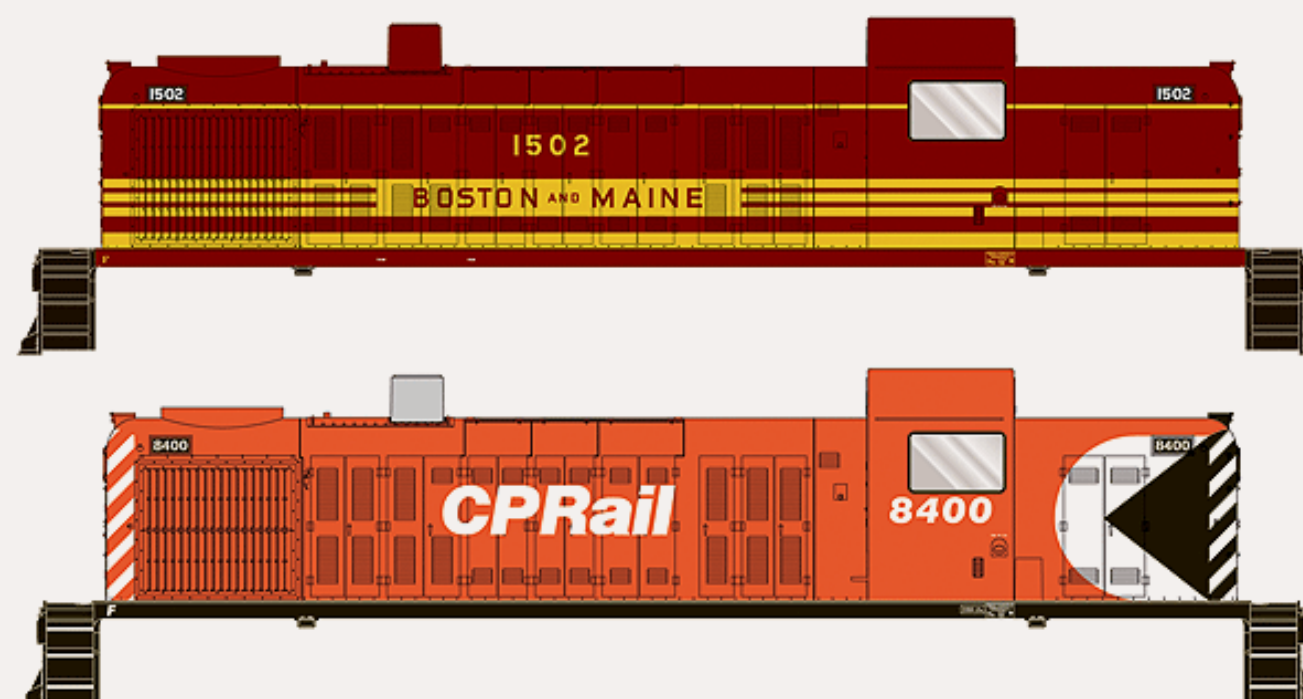
TrainWorx of Delta, Colorado, is taking reservations through the end of May for October delivery of a Pullman-Standard 85' Union Pacific trailer flat car and companion trailers. The N scale ready-to-run car will be painted mineral red with yellow lettering. It will be available in six road numbers at \$28.95 each. Five appropriate 40' corrugated trailers will be offered at \$15.95 each in six different numbers. Trailer schemes include Pacific Fruit Express (twin heralds), Union Pacific (yellow and red scheme), Union Pacific-Trailer Freight Service, Union Pacific Trailer Freight Service (with American flag), and Union Pacific-

We Can Handle It. To make a reservation, visit train-worx.com.



Walthers (www.walthers.com) reports that it will release another run of its Proto N™ EMD GP60 diesels with new road names and numbers in late November. Schemes will include BNSF- with Santa Fe patch, Norfolk Southern, Union Pacific, and Denver & Rio Grande Western as seen here. An undecorated version will also be available. The N scale ready-to-run standard DC models will come with a DCC-friendly mechanism with a Clip-Fit* circuit board, Micro-Trains® knuckle Couplers, all-wheel pickup and drive, dual flywheels, constant intensity and directional headlights, RP-25 wheels, die cast split-frame chassis, and skew-wound motor. The model will have an MSRP of \$99.98.

**(Walthers "clip-fit" is molded into the split frame chassis and holds the analog board in place without screws and provides the electrical connectivity to the circuit board. For DCC, the factory board is slipped out and replaced with the DCC board. If the DCC decoder comes with LEDs or other lighting, it may need to be adjusted to fit).*



Walthers is readying a Proto-N™ Alco RS-2 diesel locomotive for delivery in late October. Road names will include B&M, CP Rail, Santa Fe, and Southern. Features of the N scale ready-to-run model include Walthers DCC-friendly mechanism with clip-fit circuit board, all-wheel pickup and drive, dual flywheels, die cast split-frame chassis, Accumate® knuckle couplers, directional headlights with constant intensity and RP-25 wheels suitable for operation on code 55 rail. The ready-to-run N scale model will have an MSRP of \$99.98.



Selected Events

May 2011

CALIFORNIA, SANTA CLARA, May 13-15, NMRA PCR 67th Convention – Sonora Short Line, Finley Community Center, 2060 W. College Ave. Info at www.pcrnmra.org/conv2011.

CANADA, OTTAWA, May 22-23, Canadian Railway convention (CARM), Bldg A, Algonquin College. Info at trainsandtutorials.com.

CANADA, SASKATCHEWAN, MOOSE JAW, May 20-22, NMRA PNR 6th Division Meet, hosted by Thunder Creek Model Railroad Club. Western Development Museum. Send inquiries to markjohnson@infoharvest.ca.

FLORIDA, Ocala, May 19-22, NMRA SSR Brick City Express Convention, sponsored by Western Division and Ocala Model Railroaders Club, Ocala Hilton Hotel. Info at www.ocalamodelrailroaders.com.

IOWA, DUBUQUE, May 20-22, NMRA Thousand Lakes Region Convention. Speakers include Kevin Copey, Gerry Miller, Jay Manning, Dave Roeder, Les Breuer, and Alan Scotkamp. Info from Gerry Miller at miller20@gmail.com.

OHIO, HILLIARD, May 14-15, 3rd Annual Ohio N-Scale Weekend, Franklin County Fairgrounds. Info at centralohiontrak.org.

OHIO, MARION, May 19-21, 2nd Annual Central Ohio Prototype Modelers Meet, featuring models, clinics, fellowship, prototype trains, operation layouts and a cookout, at Marion Union Station. Info from Denis Blake at www.hansmanns.org.

PENNSYLVANIA, KIMBERTON, May 19-22, Annual Mid-Atlantic Narrow Gauge Meet, Kimberton Volunteer Fire Department Building.

TEXAS, RUSK, May 7-8, Railfest 2011, steam excursions, locomotive shop tour, photo run-bys and special night photo sessions, Texas State Railroad Rusk Depot. Info at www.texasstaterr.com.

WASHINGTON, TACOMA, May 14-15, Train show open house, swap meet and rides on Mt. Rainier Steam Railroad, sponsored by Tacoma Northwestern Model Railroad Club. Info at tnwmrr.org.

WEST VIRGINIA, CASS, May 20-21, Titans of Mountains - 2011 Cass Railfan Weekend. Details at msrlha.org/rfw/index.html.

June 2011

CALIFORNIA, SAN DIEGO, June 20 - July 29, Railroad Summer Camp for Kids, includes museum tours, railroad history, railroad workbooks, railroad safety education, diesel/steam engine mechanics, and assembling model railroad freight car. Registration now open for six 5-day sessions in three different age groups. San Diego Model Railroad Museum, 1649 El Prado, Balboa Park.

Details from Olga Cortes at 619-696-0199 or visit sdmodelrailroadm.com/#/summer-camp/45334222272.

CONNECTICUT, COLLINSVILLE, June 3-4, New England/Northeast Prototype Meet, Canton Community Center, 40 Dyer Ave. Clinicians and vendor tables. For info contact Dave Owens at neprotomeet@gmail.com or visit neprototypemeet.com.

KANSAS, OVERLAND PARK (Kansas City), June 21-26, 27th National Garden Railway Convention, Overland Park International Trade Center, 15th at Metcalf. Info at ngrc2011.com.

MARYLAND, TIMONIUM, June 25-26, Great Scale Model Train Show & Railroad Marketplace, produced by Howard Zane and Ken Young, Maryland State Fairgrounds.

OREGON, PORTLAND, June 4, On30 Modelers Meet, layout tour, modules, clinics, vendor and model displays. Columbia Gorge Model Railroad Club, 2505 North Vancouver Avenue. Info from Gil Hulin at ghuline@earthlink.net.

PENNSYLVANIA, HERSHEY, June 22-26, National N Scale Convention. Harrisburg/Hershey Sheraton Hotel, 4650 Lindle Rd., Harrisburg. Info at nationalnscaleconvention.com.

Future

CALIFORNIA, SACRAMENTO, July 3-9, 2011, NMRA National and National Association of S Gaugers Combined Conventions, Sheraton Grand Hotel. Info at x2011west.org.

CALIFORNIA, SACRAMENTO, July 7-9, 2011, National Train Show, Sacramento Convention Center. Info at x2011west.org/trainshow.html.

ILLINOIS, LISLE, Oct 20-22, 2011, RPM-Conference (formerly Naperville RPM). Produced by Joe D'Elia. Speakers TBA. Hickory Ridge Marriott (630-971-5000).

ILLINOIS, COLLINSVILLE, (St. Louis area), Aug 5-6, 2011, St. Louis RPM Meet, vendor displays, operating FreeMo layout and clinics featuring Rob Adams, Ed Hawkins, John and Dan Kohlberg, Nick Molo, Dave Lehlbach, Clark Propst and Mont Switzer. Gateway Convention Center, One Gateway Drive. Info from John Golden at golden1014@yahoo.com (812) 929-7181, Dan Kohlberg at paducah@mindspring.com, Lonnie Bathurst at (217) 556-0314.

MARYLAND, ELLICOTT CITY, Sept 1-4, 2011, Steel Mill Modeler's Meet, Turf Valley Resort. Includes layout tours, seminars, models, and displays focusing on modeling steel mills in all scales. Sponsored by Magarac Society. Info at peachcreekshops.com/2011steelmeet.php.

Selected Events *Continued ...*

MARYLAND, TIMONIUM, October 29-30, 2011, Great Scale Model Train Show & Railroad Marketplace, produced by Howard Zane and Ken Young, Maryland State Fairgrounds.

MASSACHUSETTS, MANSFIELD, Nov 2-5, 2011, Craftsman Structure Convention, Holiday Inn. Info at csc11.net.

MASSACHUSETTS, PEABODY, Oct 13-15, 2011, The Fine Scale Model Railroader Expo, Holiday Inn. New event includes extended paid clinics from experts including Lou Sassi, Dave Frary, Bob Hayden, and Bob Mitchell. For clinic fees and additional details visit modelrailroadexpo.com.

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

NEW MEXICO, ALBUQUERQUE, June 6-9, 2013, Rails Along the Rio Grande 2013, Rio Grand Division 6, Rocky Mountain Region NMRA regional convention. Layouts, clinics, tours, train show, opsig sessions, UPRR modelers showcase night, BNSF RR modelers showcase night, banquet and more. Marriott Pyramid North. Info from Al Hovey at alhovey@comcast.net.

NORTH CAROLINA, HICKORY, Sep 7-10, 2011, 33rd National Narrow Gauge Convention, Hickory Metro Convention Center, featuring layout tours, clinics, vendor displays, prototype events and narrow gauge camaraderie. Speakers are Trains editor Jim Wrinn and David Pfeiffer from the National Archives. Headquarters hotel (Crown Plaza) is sold out. Visit web site at narrow-gauge2011.com for information on alternative hotel space.

OHIO, MOUNT VERNON, Sept 17 thru Oct 6, 2011, exhibit of "Life Along the Line," original railroad photography of O. Winston Link, Mount Vernon B&O Depot, 507 West High Street. Hours and fee information available at mount-vernondepot.org.

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

WASHINGTON, SNOQUALMIE, Aug 19-20, 2011, 17th Annual Northwest Logging Modelers Convention, vendor displays, model contest, vintage machinery, clinics and layout tours. Snoqualmie Depot, 38625 SE King Street. Additional info from Clark or Lloyd at loggingmodeler@gmail.com or phone 310-951-9097. ■



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.

Send us your product announcements

If you are a hobby manufacturer with a product announcement, just [click here](#) and submit your announcement to us.

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REVERSE RUNNING: Decisions, decisions ... DCC or DC?

Stepping outside the box with a contrary view



— by Joe Fugate

One of the common control questions asked by new modelers is DCC or DC better for small layouts?

The most common answer: DCC is not needed for small layouts – unless you plan to run more than one train at a time.

I think that's the wrong answer – and I'll tell you why.

On a smaller layout, I will tend to run fewer trains and may operate more often by myself – yes, that's true. But that means I tend to focus more on the quality of the running experience, savoring the moments more since there's less layout on which to run.

This means the quality of individual loco performance becomes a bigger deal on small layouts.

With DC, there's not a lot I can do to tune individual locomotive performance beyond cracking the shell and fiddling with the mechanism. Now if I like that sort of thing, then great. But the laws of physics put limits to what I can do with the mechanism.

With DCC, however, I can individually tune a loco's performance across many different dimensions. Here's just *some* of the things I can individually configure:

- Crack-the-throttle voltage/speed
- Max throttle voltage/speed
- Mid-throttle voltage/speed
- Up-throttle acceleration momentum
- Down-throttle deceleration momentum (“braking”)

- Adjust reverse speed as needed to match forward speed

- Startup kick voltage spike amount

Then there's more advanced capabilities like dithering/torque compensation (DTQ) and Back EMF (BEMF).

You can think of DTQ as being a little like DC pulse power in effect – although technically they work quite differently. With DTQ, I can apply different amounts of static adjustment to “smooth out” loco performance at lower voltage levels, making the motor turn more deliberately.

Then there's BEMF, which takes smooth operation of a loco to a whole new level. With BEMF the decoder dynamically senses the spinning of the motor and applies more or less voltage in an attempt to keep the motor spinning at the same rate.

If you set BEMF up high, you can grab and hold the loco in place and the wheels will speed up as the decoder attempts to compensate for the fact the loco has slowed down!

With BEMF tuned properly, you can make a yard switcher literally float through complex yard trackage like it has great mass. It's delightful!

My point is this – if small layout owners care about getting the best loco performance possible, then they *need* to be running DCC, not DC. With DCC you can tune your loco performance in a dozen or more ways in seconds – all without ever removing the shell!

I think DC is on its way out, frankly. Model airplane modelers today immediately think radio control – a similar thing's coming with model railroading. Before much longer, it will just be assumed you go with DCC when you get into the hobby.

While independent loco control is a great feature of DCC, the equally powerful but often overlooked application of DCC is its ability to tune individual loco performance.

You just can't get that level of loco performance tuning out of straight DC – only with DCC.

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- Ken Patterson on building a flat car tank load
- A Byron Henderson track plan!
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... and lots more!

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For the love of model trains

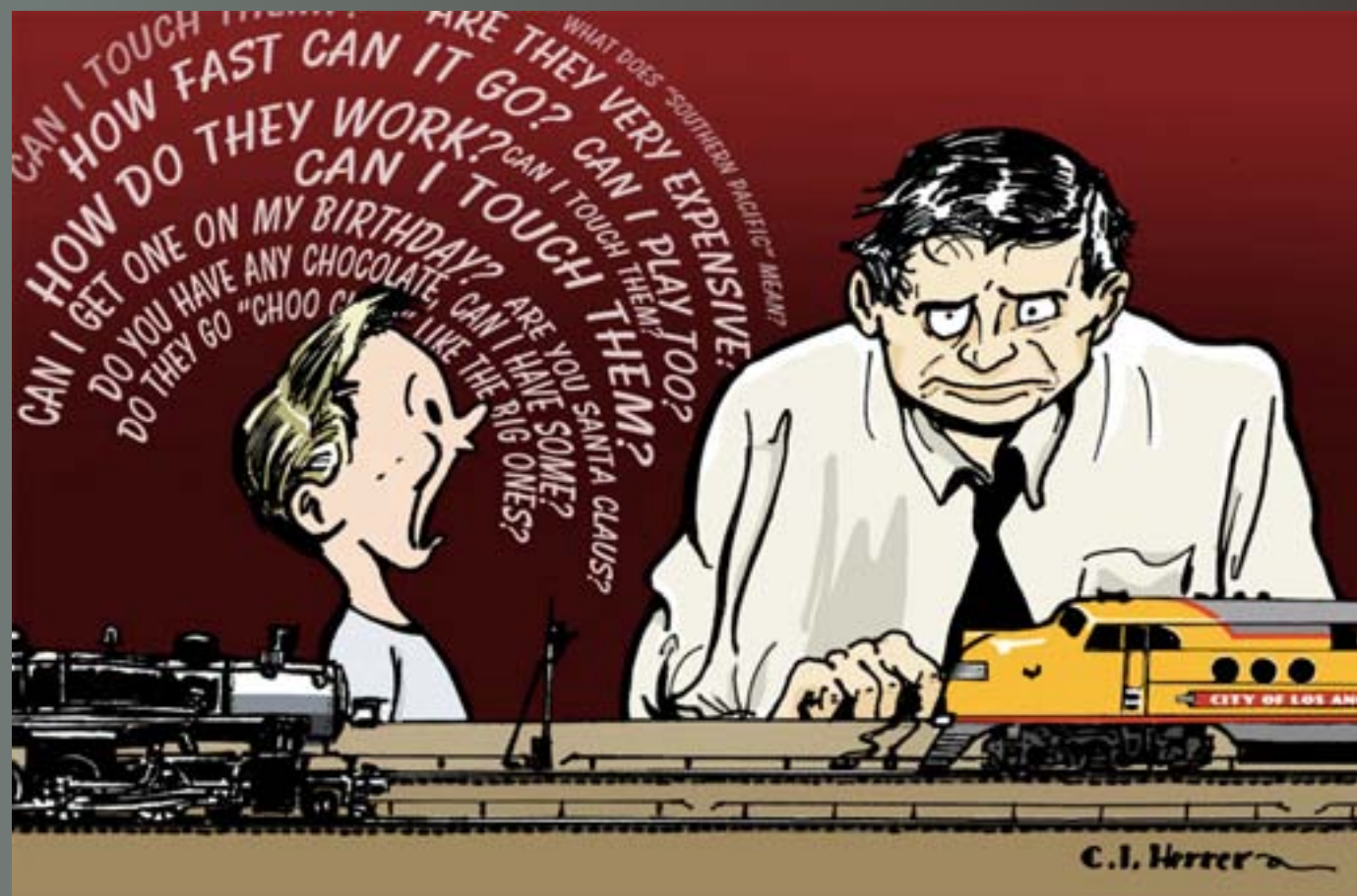


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**Derailments, humor,
and Dashboard on
next page ►**

Derailments

Having fun with trains?



Roosters news service: May 2, 1952 - Fire Engulfs Car Repair Facility

A fire broke out at the South Jackson BC&SJ car repair facility this afternoon. After investigation, the local fire marshall S.T. Behr said it was started by Gus Wielder, a repair man working on a damaged boxcar.

Reached at a local tavern, Gus was loudly telling everyone about his experience. "I were jest arc-weldin a patch on a boxcar when the side of it just kinda melted an' the whole car were in flames in nothing flat! I couldin hardly see nuttin with that black smoke fillin' the place. I bar'ly made it out! Now I'd heard rumors that freight cars was catchin fire fer no reason ever since the railroad started using them new car parts made of that light-weight steel stuff, but I never really believed 'em. Guess I sure-nuff believe 'em now!"

A source inside the railroad, speaking anonymously since they weren't authorized to comment, claimed the railroad has been working on low temperature welding for years. In fact, the source said, the new method uses no heat at all. Instead a special steel-melting glue joins the parts!

In the meanwhile, the railroad has suspended all conventional welding.

If you're the first to [submit a good bit of humor](#) and we use it, it's worth \$10!



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