Model Railroad Hobbyist magazine™

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Edition

September 2012



Modeling a Frisco GP40

- Allagash gets a quarry
- DCC system comparison
- Better detailing using photos
- Modeling swamp cypress
- Steam loco scratchbuilding finale

... and lots *more*, *inside*!

Model Railroad Hobbyist magazine™



Front Cover: We wanted a different kind of cover this time, emphasizing just the loco model, rather than our more typical "pretty layout scene" shot. Richard Napper's Frisco GP40 how-to article is a good one, complete with some great DCC LED lighting tricks.

ISSN 2152-7423

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John Drye, N scale
Les Halmos, Modular railroading
Bruce Petrarca, DCC

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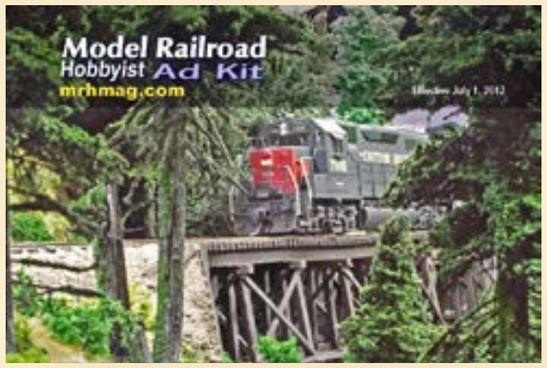
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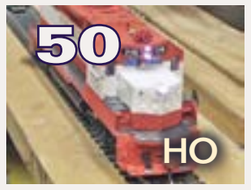
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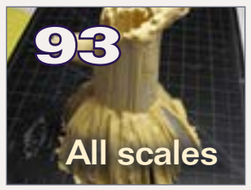
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Enhancing an Athearn Blue Box loco
by Richard E. Napper, MMR



Scratchbuilding a steam loco – finale
Building the cab and tender
by Kenneth Rickman



Modeling swamp cypress
Clever method for modeling these trees
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Big scenery in a small space
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MRH Product showcase
Exceptional products photo gallery
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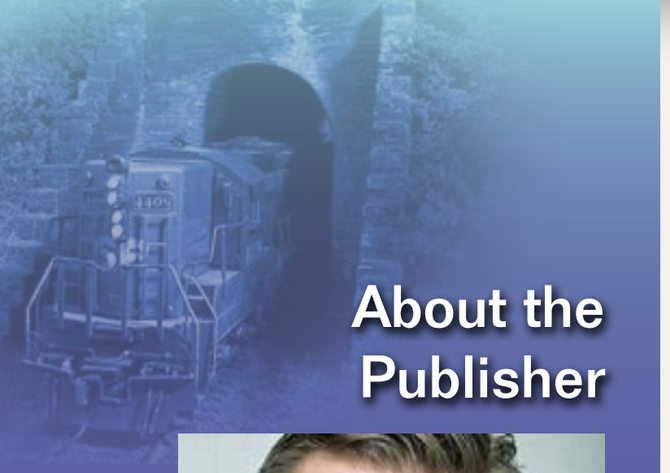
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PUBLISHER'S EDITORIAL: Making the hobby accessible to newcomers

Musings from MRH's founder



About the Publisher



Joe Fugate is the featured expert in many Model-Trains-Video.com videos, and he's also the founder and publisher of ***Model Railroad Hobbyist Magazine***.

To learn more about Joe, click here.

Reader Feedback (click here)

Last month we kicked off our $500 contest. The basic idea is to find clever ways for newcomers to the hobby of model railroading get into the hobby without a huge expenditure.

We see complaints by modelers on various web forums or hear modelers at shows decrying how expensive the hobby has become.

Yes, things have gone up in price. But we maintain that with just a little ingenuity, getting started in the hobby doesn't have to be overly expensive.

In case you haven't checked lately, many other hobbies aren't cheap either.

Have you checked out the price of a better plastic model kit? A Jedi Starfighter is almost $60, and a good 1/700 model of a Japanese aircraft carrier sells for about the same.

Of course, these models don't do anything. For comparable models that operate, we can look at the radio controlled hobby.

A nice R/C car is $200-$300, and how long do these cars last without damage? A nice B-17 R/C airplane from Hobby Lobby is almost $400. And the life expectancy of your average R/C airplane is often only a few minutes!

When it comes to model trains, I can still find entry-level HO locos for less than $60. Here's some from MRH sponsor Horizon Trains,for example.

So we've established getting started in the hobby doesn't have to be all that expensive.

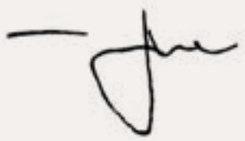
What are some other ways to get newcomers into the hobby?

The modular groups who go set up in public places like shopping malls can be one good approach.

It's even better if, like some modular groups, they include the ability for the youngsters to actually run a train. That's an experience sure to leave an indelible memory in a young, impressionable mind.

Another way to promote the magic of trains is to take youngsters on an excursion train ride. There's lots of excursion trains throughout the US and other places in the world. Just Google "rail excursions" or "tourist trains".

And of course, If you'd like to help show newcomers how they could get started in the hobby for only $500, enter our contest! ☑



Start the hobby for $500 contest

Sharpen your PENCILS!



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

DEADLINE: November 30, 2012

Winners get prizes from MRH advertisers plus get paid for submission publication.

Submit entry (select Contest)

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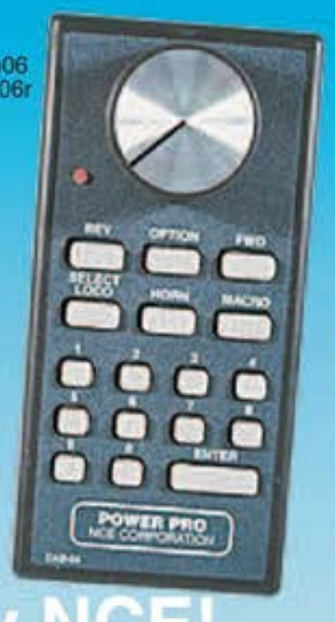
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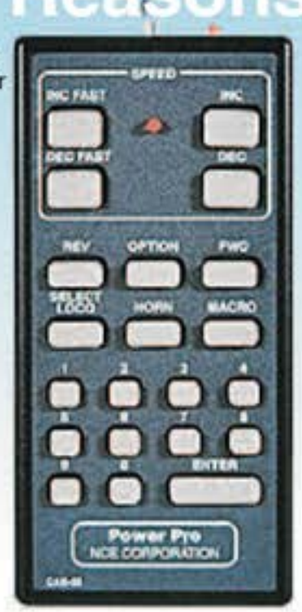


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About The Show

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

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



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Notes from the MRH Staff

Seattle NG convention, Wolfgang Dudler, New video series ...



Narrow Gauge Convention

The MRH staff will be roaming around the National Narrow Gauge Convention in Seattle, Washington from September 12 through 15th. Catch us and say hello!

We're still looking for a new Narrow Gauge columnist, so if you have any inclination in that direction, we'd like to hear from you.

We pay columnists a premium rate that's 50% more than regular authors, which means we want to make it worth your while!

Also if you know of someone you'd like to *recommend* as a columnist, then please pass their name along as well. Just use our contact form to let us know that you'd like to discuss how being an NG columnist with us might work.

You can likewise use our contact form to pass on the name of someone you know whom we should talk to about being an NG columnist.

New sponsors

We have two new sponsoring advertisers this time!

Accurail (accurail.com): If you've been in the hobby for a while, Accurail is a name you should be quite familar with. We're thrilled to have them joining the MRH family of sponsors. Accurail produces a great line of quality, affordable rolling stock and detail parts. Make sure to contact them and say thanks for becoming an MRH sponsor!

Bowser (bowser-trains.com): As a hobby name, Bowser has been around since 1948. The company changed hands in 1961 and has continued making a variety of locos and rolling stock, as well as selling detail parts under such recognized names as Cal-Scale, Cary and Stewart. Drop by the Bowser website and tell them thanks for coming onboard as an MRH sponsor!

Hobby Marketplace (page 47 this issue): Remember to visit our MRH Hobby Marketplace, which houses our economy ads. New smaller, non-sponsoring advertisers appear in there as well.

Wolfgang Dudler, 1946 - 2012



After a long fight with cancer, Wolfgang Dudler lost his battle on August 25th. Wolfgang contributed some great articles, videos, and blog posts to MRH: see the January 2010 and August 2011 issues. Wolfgang also was published in *Model Railroader* and the *NMRA magazine*.

Carsten Möller posted a summary of his friendship with Wolfgang: "I first met Wolfgang at a FREMO meeting he had organized in his hometown of Unna, Germany back in 1985. The records



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

- **4.7** DCC Impulses - Getting the sound out
- **4.4** Bring a wrecking crane to life
- **4.3** Modular Adventure - Blacktop
- **4.3** Modeling the CP Sudbury Division
- **4.3** Publishers Musings - New MRH contest

- Issue overall: **4.8**

Please rate the articles!

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

show that our FREMO memberships both started on January 1st that year.

"In the 1990s, Wolfgang regularly contributed to our HO-Europe meetings where he showed his HO model of the terminal in Naumburg/Hessen.

"At two meetings we had the opportunity to check the accuracy of his craftsmanship right alongside the prototype.

"Later he was interested in American prototype and developed the Westport Terminal RR, which in turn was part of the FBL (Fremo Belt Line).

"Then he got into narrow gauge with the PUEBLO & SALT LAKE RR.

"This project was nearly finished and ready for operations, but he was not able to hold the 'Golden Spike' ceremony due to his deteriorating health.

"Wolfgang published his ideas and the development of his projects in our magazine, *HP1 Modellbahn,* in the LD SIG's Layout Design Journal and on his website.

"His work was honoured by the NMRA and he achieved his Master Model Railroader certification as MMR #452 in 2008.

"Wolfgang voluntered as the membership steward of FREMO, a job he performed modestly in the background until the spring of this year, when we decided to transfer this duty into other hands when he was still able to assist his successor.

"I met him for the last time at the annual meeting of the FREMO in Rastede, where he enyoyed the company of his friends and as always freely shared his modelling expertise.

"Wolfgang, you will be missed.

"I and the members of FREMO have lost a good friend.

"May he have reached the 'Big Yard' he talked about." *– Carsten Möller*

Coming: Notch-it-up video series



Mike Confalone, the modeler who did the amazing paper mill scene that's on our April issue front cover, has proposed doing a monthly how-to video short series he's calling "Notch-it-up".

Mike will do one of these videos a month covering some out-of-the-box thinking modeling technique. Each video will run 15-20 minutes and we'll sell it as a downloadable for $2.99 in DVD format and $3.99 in HD format.

Mike's calling Video Installment 1 "Extreme Diesel Weathering" (see the photo above). We haven't set a date just yet for when this new how-to video short series will be coming from Mike, but we expect it to debut sometime this winter.

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Coming: What's neat this week



And speaking of new things, we're excited to announce a new column coming from Ken Patterson. Ken's modeling has been seen on over 100 model railroading magazine covers, a dozen+ Walthers catalog covers, and two MRH covers: December 2011 and July 2011.

Ken's calling his new column "What's neat this week" and it will cover a potpourri of topics from what projects Ken has on his workbench at the moment to a roving reporter-style presentation on interesting layouts, hobby vendors, and interesting tidbits from the prototype.

We hope you will find Ken's column to be filled with fun and interesting hobby insights about all things railroading. Of course the column will include a steady diet of Ken's fabulous photography. Ken's new column debuts next month in the October issue.

Article submission etiquette

Now and then we talk with new authors who want to submit something for us to consider publishing. In the conversation it comes up that they've also submitted the same article elsewhere.

We understand the logic of trying to hedge your bets, but it's considered bad submission etiquette to send the same article to more than one publisher at the same time.

The problem could be that publisher A decides to publish your article. So they put it into their production pipeline, allocate space, and begin preparing it for publication, and then notify you of their interest in the article – possibly even sending you a check, if they pay before publication.

Meanwhile, publisher B may have done the same thing. In the worst of outcomes, both articles actually make it to publication in both magazines, robbing readers of value with duplicate content.

If you do the right thing and alert one of the publishers to the problem, now the publisher needs to pull the article and potentially rush to find an identical-sized article to fill the hole. That's still a hassle for the publisher who lost and wastes their resources.

It's considered much more professional to submit an article to only one publisher at a time. Yes, publishers can take time to respond, or they may never give you a straight answer on their interest in your piece.

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If you are eager to get your article published somewhere, then give the publisher 2-3 months to review your article and get back to you. If you have not heard anything, inform them you're pulling your article from consideration and submitting it elsewhere.

Before you submit it to the next publisher, wait a couple weeks for the first publisher to respond, perhaps finally accepting your submission.

If two weeks go by and they never answer the email letting them know you're moving on, then go ahead and submit your article elsewhere, and send a reminder email to the first publisher to please not use the article because it's now in the hands of another publisher.

We know it isn't as convenient to just submit your article to one publisher at a time, but savvy authors put their customer's needs first. As the one who is doing the buying in this transaction, the publisher is the customer, and keeping the customer happy with a professional approach will sell more articles.

Not getting our emails?

If you used to get our weekly reminder emails and now you're not getting them, you can easily check your subscriber account on the MRH website and see if notifications from us have been turned off.

Emails can traverse many routes along the path from us to your computer and once in a while, an email will bounce if one of the nodes along the way happens to be offline or is having issues. If your email bounces, we will automatically turn off your notification setting so we don't keep getting bounces.

If the bounce condition is only temporary, the result is we've turned your notifications off and you stop getting emails from us.

If you think this may have happened, you need to log into the MRH website (see login help if you've forgotten your login) and click the My Account menu option on the right.

Along the top of your My Account page you will see a number of tabs: click the Notifications tab. If the subscribe option is unchecked, then your email has bounced at some point. Just click the check box to turn email notifications back on.

Do make sure your email address is current. If you've never updated your email address and your email has changed, that can cause the bounces.

In this issue

We delayed the August issue one week so we could publish a hot-off-the-presses report of the 2012 NMRA National Convention in Grand Rapids. The downside of delaying an issue is we only had 3 weeks until the next issue instead of the usual 4 weeks.

We delayed the release of this issue by one day just to buy us a little time, and we also pretty much ran with what we had prepared for this issue, so it doesn't necessarily have the variety we try to get in every issue.

Still, we're now back on track with 4 weeks until the next issue. This helps us keep the content more balanced, and gives the staff some time to prepare an issue's content to balance the issue better.

This issue has another great modeling out-of-the-box type article from Mike Confalone, complete with a volume 2 video release from Model Trains Video. Mike's techniques continue to open our eyes to new ways to build fantastic-looking scenes!

We've devoted almost 30 pages to the steam loco scratchbuilding article as a grand finale. This series has generated a raft of positive email.

DCC columnist Bruce Petrarca presents the first half of a two-part column on the DCC systems on the market, and what each one can do. You don't want to miss this column if you're in the market for a new system.

There's lots more in this issue, including the Frisco diesel cover story, which has some very clever methods for doing loco lighting. Enjoy! ☑

Reader Feedback
(click here)

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QUESTIONS AND ANSWERS

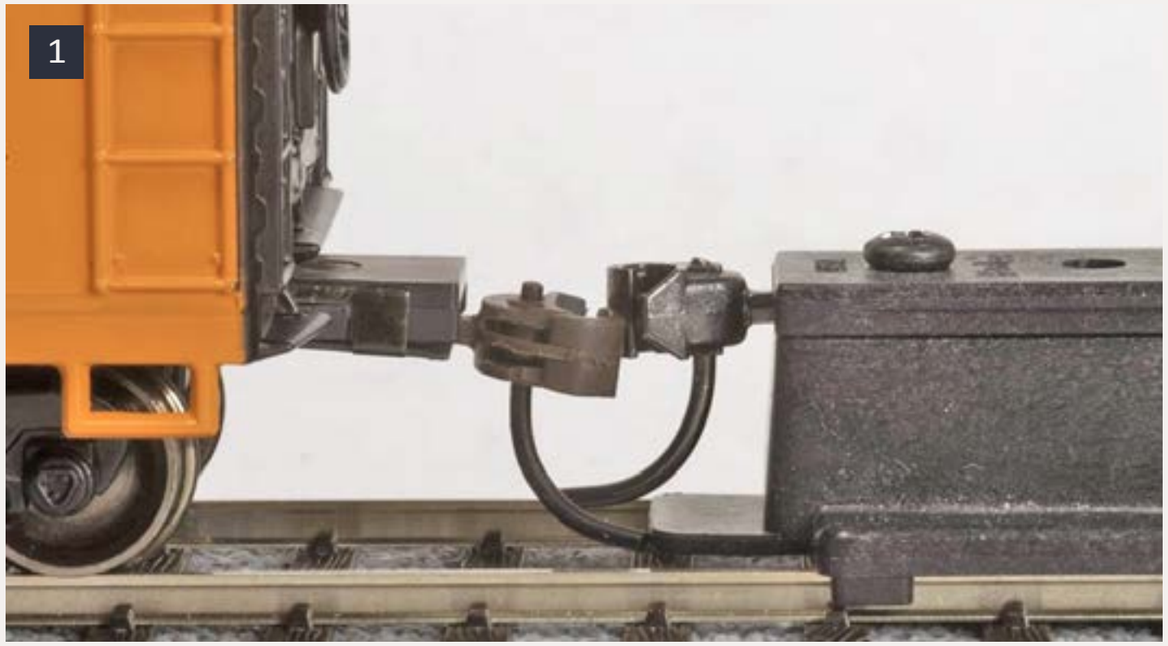
Q. The trip pins on some of my freight and passenger cars' couplers (I model in HO) snag on highway crossings and on switches. What should I do?

A. Some people just cut the pins off, contending that the curved bit of iron doesn't look much like an air hose anyway. Kadee makes "trip pin pliers" that can be used to safely bend the curved pins up or down, or you can finagle it with ordinary needle-nose pliers. The "air hose" is needed to make the couplers work with magnetic ramps and uncoupling tools like the one from Rix Products.

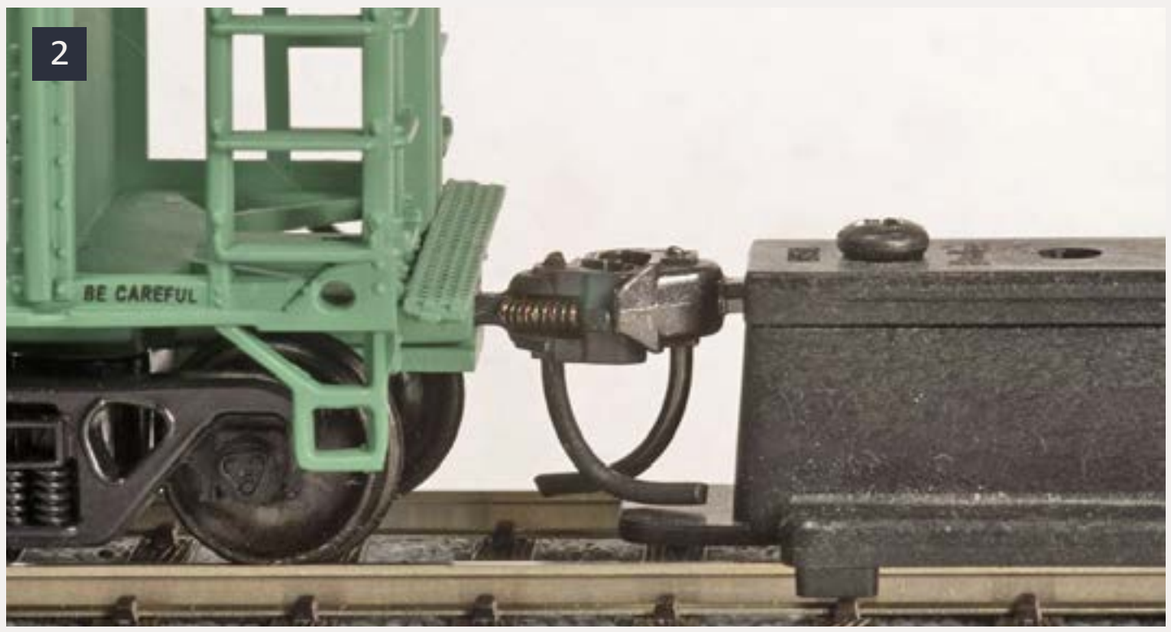
Chances are good the pins aren't the problem. Only occasionally do I need to tweak Kadees right out of the package. More often the problem is slop in the coupler box. Place the car on the rails and look at the coupler shaft from the side. Chances are good the coupler is hanging down farther than it should and the knuckle isn't making 100% contact with other couplers.

Sometimes the vertical pivot pin in the coupler box is a lot smaller than the hole in the coupler shaft, and a bit of plastic or metal tube slipped over the pin will snug it up. Be sure the coupler swings freely.

Sometimes coupler boxes are too deep, or the box lid isn't fastened down all the way. Adding a bit of paper or thin plastic in the bottom of the pocket can help, but it's easy to jam the coupler with material that is



1: Drooping extended draft gear on this refrigerator car lets the trip pin foul the Kadee 206 coupler gauge, even though the coupler knuckle and the trip pin are the correct distance apart.



2: A properly mounted coupler's knuckle matches exactly with the height gauge, and there is a gap visible between the bottom of the iron wire trip pin and the foot plate on the gauge, indicating sufficient clearance.

too thick. Couplers in extended draft gear on modern cars (see figure 1) are particularly prone to droop. Some draft gear can be gently bent to sit level, and it can be reinforced with styrene or brass channel.

In HO, Kadee makes the #206 Insulated Multi-Purpose Coupler Height Gauge (kadee.com/htmbord/page206.htm) which can be plopped down on the layout to make spot checks of problem installations (all Kadee coupler gauges other than the #206 are metal and will cause a short if track power is on). Look at figure 3 and figure 2. The trip pin should clear the foot plate, and the knuckle should be at the same height as the coupler on the gauge. Clearing the foot plate is important: a trip pin that slides up and rests on it can catch on trackwork.

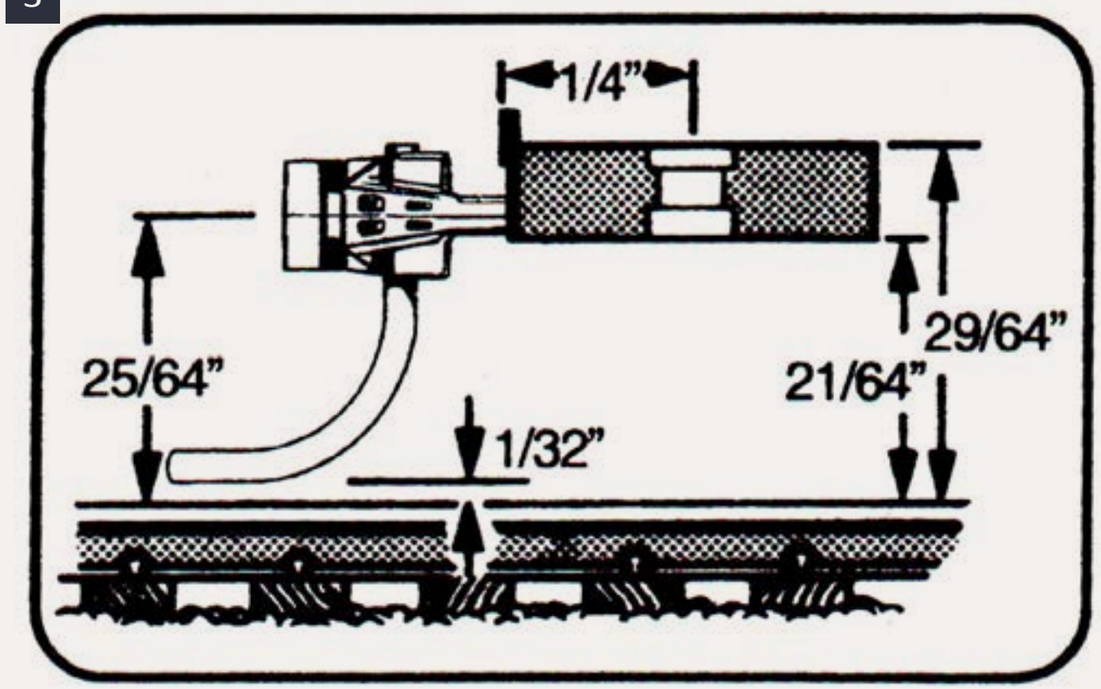
The same principles work with all brands of knuckle couplers, and similar gauges are available in other scales.

– Joe Brugger

Q. Is anyone in the market making dummy locomotives, without motors? So we can run double or triple units without sacrificing a "real" engine? In the old days different manufacturers did this but I haven't been able to locate any of them recently. I've been looking especially for SD40-2 and GP40-2 engines.

A. A quick Internet search shows

3



3: Dimensions marked on Kadee's diagram show the proper height of the coupler face and drawbar, and the amount of clearance for the trip pin above the railhead.

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Bowser/Stewart and Intermountain currently list unpowered F units in HO. Williams, Bachmann, Quality Craft and Atlas have O scale dummies of several locomotive types.

Charlie Comstock uses dummies in several of his Bear Creek lash-ups to create a genuine need for helpers. Four powered Stewart F7s will pull couplers out of their pockets but if some units are dummies, a helper may be needed to boost a reasonable-length train up the railroad's grades.

Joe Fugate has made dummy engines for his HO Siskiyou Line by gutting a powered unit, removing the motor, drive line and some drive gears. The extra parts go into the maintenance stores to keep similar units running.

Using dummies lets him be more realistic with his power sets. He incorporates one dummy in most of his first-generation Southern Pacific lash-ups so they will pull fewer cars than the same number of second-generation locos.

With a dummy in the head-end power set and a dummy in the helpers, he also saves probably half an amp of draw on his power supply per train, and with maybe three trains per power district, he can save 1.5 amps by using dummies.

A motor-less dummy can be turned into a sound dummy with a decoder and speaker, but some dummy units have been sold with plastic wheel sets. Metal wheels or track sliders have to be added to pick up power from the rails. Wheels are sold by nwsl.com and tomarindustries.com makes kits for pickup shoes.

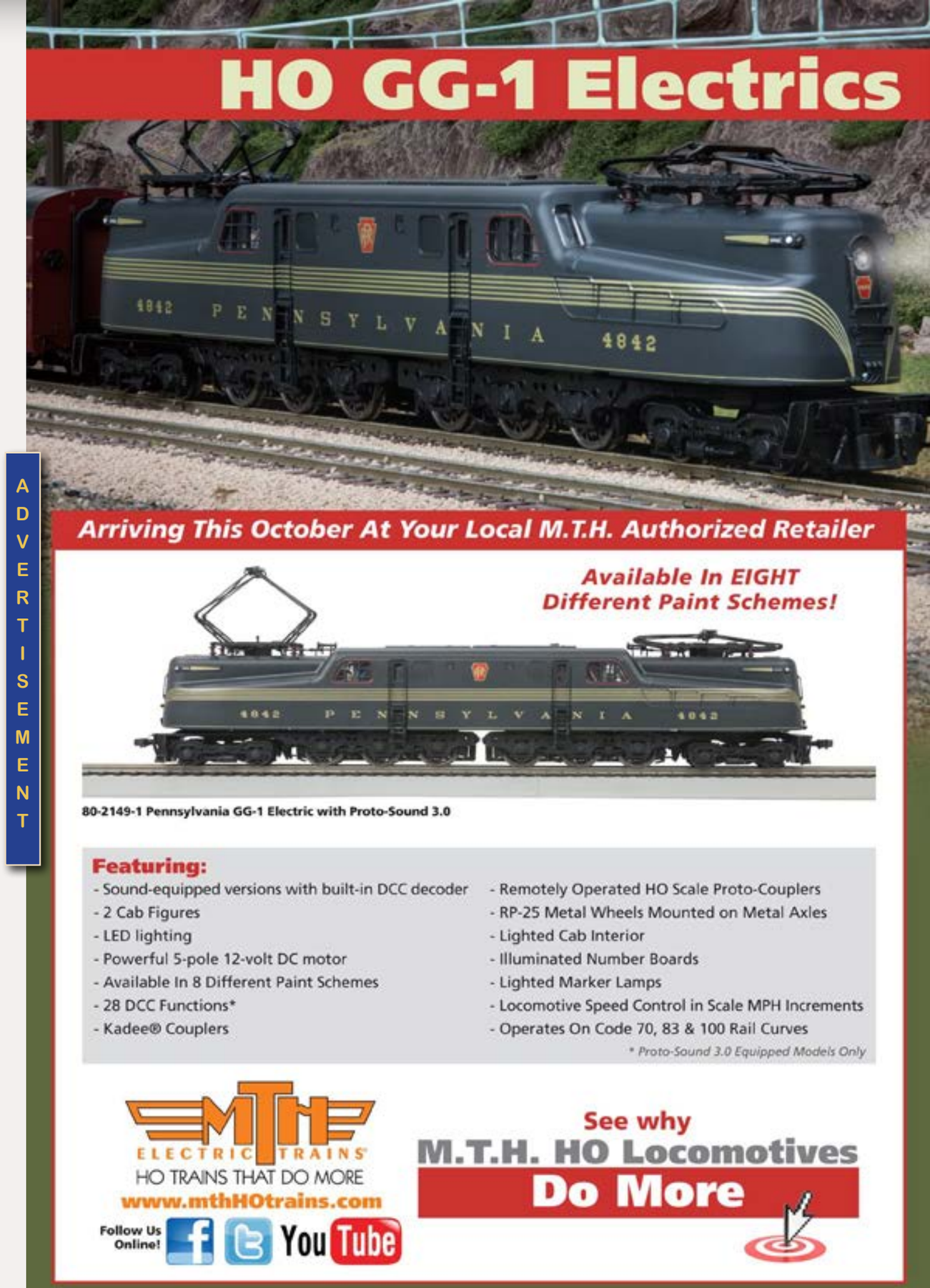
– MRH

Q. When and why did railroads in North America start using ditch lights?

A. Canadian Pacific and Canadian National experimented with lights on F7 units in the 1950s to assist in spotting rock slides. More modern versions appeared in Canada in the 1970s and became mandatory in the United States in the 1990s. But – there's always a but – they could be seen in the U.S. much earlier.

Railroads that operated power pools and routes in cooperation with CN and CP installed ditch lights on some locomotives. In February 1978, Union Pacific equipped nine units (3396-3399 and 3410-3414) to lead UP-CP pool trains operating across the border at Eastport, Idaho. The modifications done at the Salt Lake City, Utah, shops included installation of Canadian-style ditch lights.

Ditch lights give train crews a wider field of light and some railroads link the lights to the horn so they will flash a warning when the horn is triggered. The triangular pattern appears to grow larger as it draws closer to a crossing. Not every locomotive in current service has ditch lights; a train can still run without a Gyralight



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4: Two loaded Union Pacific coal trains, rolling east on the triple track mainline east of North Platte, Neb., clearly show the high-visibility triangular pattern formed by the locomotives' headlights and ditch lights. Photo by Graham Line.

or ditch lights but then cannot go faster than 20 miles per hour over public crossings.

The U.S. federal rules that govern locomotive headlights and "external auxiliary lights" can be found at: ebookbrowse.com/49cfr229-125-pdf-d294187048 and ebookbrowse.com/49cfr229-133-pdf-d301403317.

The definition of ditch lights in the regulations is only slightly different from that of auxiliary lights, having to do with how they are aimed.

Auxiliary lights were required after December 31, 1997 on all locomotives operating over public grade crossings at 20 mph or more. Some lighting arrangements were "grandfathered" until 2000, and locomotives equipped before 1996 with Gyralights are grandfathered forever. Locomotives built before 1949 are considered to be historic equipment and are exempt.

Santa Fe GP60M units delivered in mid-1990 arrived with ditch lights. Conrail adopted them in the early 1990s. Did other companies install ditch lights earlier? Let us know, using the response tab at the bottom of this story. **– MRH**

Q. Do you guys have any good ideas for painting concrete? Roads, building foundations, buildings, coal loadout silos, bridge abutments, bridges, are all around us but I haven't figured out how to do it. It always looks painted.

A. Concrete gets its color from the materials that are mixed together to make it, and from the effects of weather. There is no universal "concrete color" because the aggregate, cement, and water that make it up can come from many sources. The aggregate is generally a coarse gravel or crushed rock such as limestone or granite, along with sand. Cement can include Portland cement, fly ash and slag. Reinforced concrete contains steel rebar.

Using a photo reference helps, and hobby paint marketed for military modelers comes in dozens of shades of gray if you don't choose to mix your own color.

In the photos, look for brown-black weathering bands, dirt and rust streaks caused by rain running off, sun-bleaching, and fresh concrete color revealed by areas of crumbling. Plant life can cause greenish patches.

Texture can be represented with a dusting of plaster weathering colors to give the concrete a dull, dusty look. Hit the concrete with a good coat of Dullcote to kill any shine, let the clear coat set up, dust on some plaster weathering powder, then fix it in place with a mist of water.

For a rougher texture, in HO scale and larger, mix a little Durham's Water Putty (waterputty.com) into the paint. The gritty texture really adds to the concrete look. Another product is CelluClay, a water-activated papier-mache mixture sold by art supply stores, which has a nice gray concrete tone by itself.

Track plan designer Don Mitchell suggests RustOleum MultiColor Textured spray paint to give plain styrene a concrete texture and color. The color is indicated by the can top. One shade is a fine textured light brown/tan made of up of several different colors blended together. The finished product has a texture akin to low-grit sandpaper.

Texture can also be added by airbrushing paint at a very low pressure, creating a "spatter" finish. Experiment on scrap material before painting a finished model. **– MRH**



TIPS

N-scale gear case cover

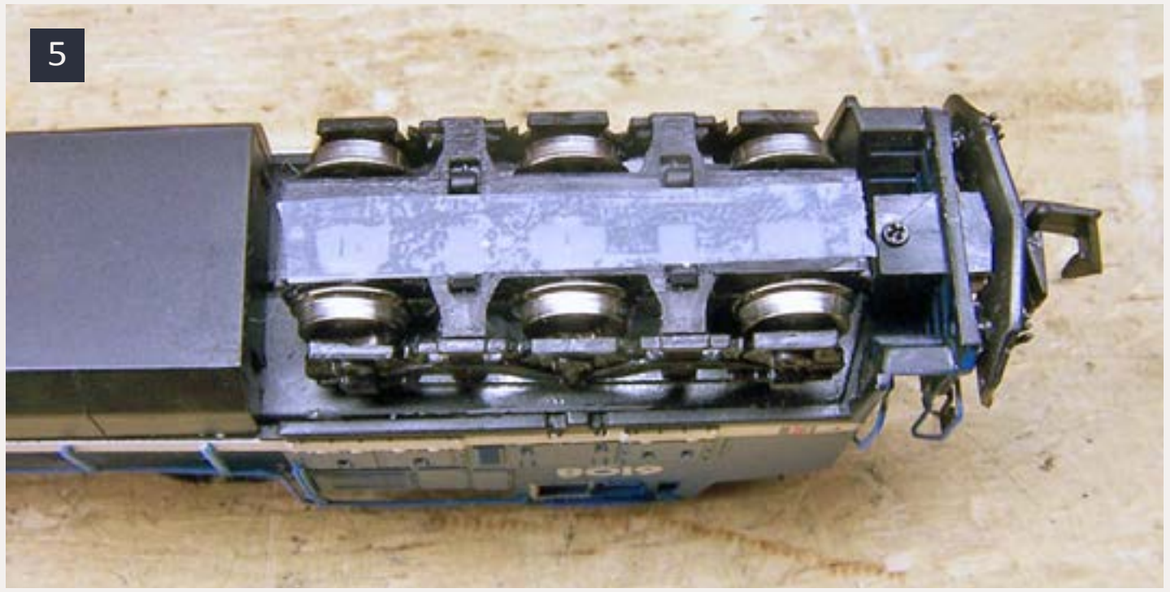
On the underside of many N scale locomotives, there is a opening where the gears project through the gear cover plate.

This opening can allow dust or bits of loose ballast to get into the gears when operating on a layout, especially in a dusty environment. On my layout this problem was getting to the point where I was cleaning my locomotives' gears every six to eight months.

Finally, I realized that this could be easily prevented by simply placing a small piece of Scotch tape over the opening, preventing most of the dust from getting in and acting as a trap for any particles that did get into the gearbox.

Use a plastic compatible cleaner to clean the oil and dust off the surface so that the tape will adhere to it. Also check to be sure the gears do not protrude past the surface of the cover, or the tape might cause binding. I simply change the tape when it collects some dust, which is much easier than disassembling the trucks and cleaning the gears.

– Andrew Kyle



5: A strip of clear Scotch tape keeps layout clag away from locomotive power truck gears and the sticky surface corrals fine particles of grit. Photo by Andrew Kyle.

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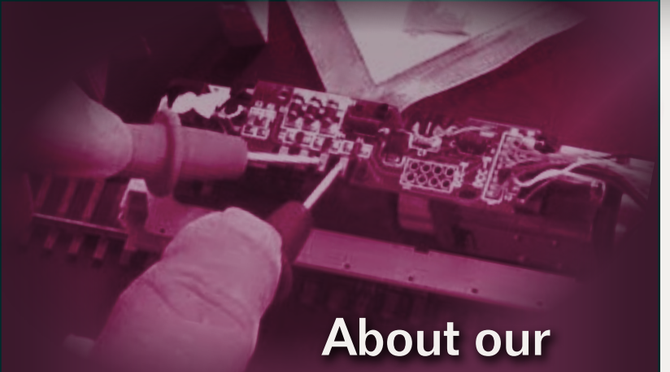
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Bruce Petrarca is a well-known expert on all things DCC.

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DCC Impulses: DCC System Comparison Part 1

DCC Systems from a User's Perspective

Reader Feedback (click here)

There is more to selecting a system than specifications ...

Firstly, let me thank you, the loyal readers of my column. This is my twelfth – a full year. During that time I had a long streak of being in the top five in the "favorite articles per issue" voting; a humbling experience for a columnist. I promise to work hard to keep it interesting and fun. I hope you continue to agree.

This month, I'm starting a two-part article comparing DCC systems.

I cut my DCC teeth on Digitrax. I used a Super Chief for programming and testing most of the time I owned Litchfield Station, purchasing my first about 12 to 13 years ago. I also used a Zephyr and DecoderPro. Both clubs I've belonged to have Digitrax radio systems, as do several layouts that I operate on an almost monthly basis.

I built a demo layout at Litchfield Station that could be operated by Digitrax, Lenz or NCE systems, so interested folks could compare the operation of them side by side.

I am now using a NCE PowerCab on my test bench and small switching layout. My Fn3 layout has the NCE 10-amp radio system. Other layouts that I operate on regularly use NCE.

All three of these manufacturers have a long pedigree, spanning about 20 years now.

I have helped folks design layouts with all three systems. I've even been involved in two mixed layouts; in both cases, using Digitrax radio throttles and command station with NCE boosters. I'll cover how to make this connection in this month's SMP, following this article.

The goal of this column is to share my experiences with these systems to help you make a more informed decision if you are looking to make the jump into DCC or to change your system.

Lenz

To start, I'm going to pay homage to Bernd Lenz. He created the basic structure of what we know as DCC today. He provided for multiple vendors by donating his patents to the NMRA. This helped with the creation of the NMRA DCC Standards and Recommended Practices that keep things running together. Without him, we wouldn't have the consistency we have today, in my opinion. Thanks, Bernd (1).

The Lenz system is beautifully engineered and manufactured; as one would expect, being from Germany.

They sell a lot of systems in different countries outside the USA. The intrinsic language of the system, as displayed on the controllers, is German. Yes, there is an English option, but the abbreviations are still based on German. A lot of the buttons on the throttles have icons instead of labels. I found myself needing to run to the English-language manual every time I tried to set something up.

This is why I never became a proficient Lenz user. So, I don't feel qualified to comment on the details of running on the Lenz system.



1: Set 100 from Lenz – photo courtesy of The Lenz Agency.

Life partners

I have frequently used the analogy that selecting a DCC system is like choosing a life partner. It is full of tradeoffs. The "givens & druthers" come to the fore. Some things you must have and others you are willing to forgo. All systems seem to have some drawbacks.

Sometimes after folks purchase a system, they find features that they didn't know it had, or that they wanted or needed. Sometimes, later on, they decide they are really glad that they have them.

So, what follows is my perspective on the differences between Digitrax and NCE systems.

Why not others?

I'm going to be working from the standpoint of personal experience and I only have extensive enough personal experience with Digitrax and NCE systems to provide a long-term evaluation of them. I don't want to work from hearsay or an hour or two of operation, just to include another system.

Selection criteria

Whatever you do with your DCC system, you most frequently are using the throttle. Some manufacturers call it a cab, but I'll use the term throttle here, just for consistency.

I believe one of the primary selection criteria for your DCC system should be how well you like the throttle. I've looked at a lot of nice cars that I wasn't comfortable driving, so I didn't buy. If you're looking at a starter level system, I recommend you look at all the throttles available from the manufacturer before making a decision that will lock you in. By "look at" I mean hold, run, use, program with, etc. Don't just drive them around the block, but take them on road trips. Compare.

Starter systems

Both Digitrax and NCE sell introductory systems with a street price less than $200. They both support 29 functions.

Digitrax Zephyr Xtra (2) is the highest priced unit. It is a console-style system with the potential to run a bedroom-sized layout. The throttle and function controls are on the top of a unit that can be angle-mounted to the fascia or sit on a shelf.

2



2: Zephyr Xtra from Digitrax – photo courtesy of Digitrax.

With the Xtra enhancement, the Zephyr now supports 20 additional throttles and 20 simultaneous loco addresses.

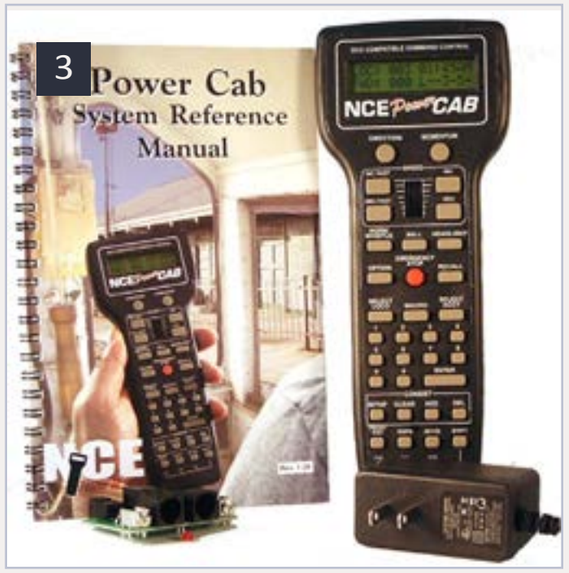
Digitrax wanted to make the transition from DC to DCC as easy as possible. They created a concept, called Jump Ports. The Zephyr series boxes have two connections on the rear where two DC power packs can be connected. The Zephyr takes their voltage and polarity and converts it into DCC signals for two locos. Thus, someone who is converting from DC to DCC, can run three DCC equipped locos immediately when buying only a Zephyr. The functions (lights and sound) for those Jump Port throttles are accessed through the keypad on the Zephyr unit. It takes a few button pushes to get the keypad associated with your jump port in order to tell the Zephyr which DCC address to link with which Jump Port or which functions to activate on which loco.

Personally, I dislike programming with the Zephyr keypad. Some folks have no issues. If I'm forced to use the keypad to program, I usually find myself back in the manual to figure the exact keystrokes to use. I did use a Zephyr on my test track for a year or so at the store, but with a LocoBuffer-USB and my computer with DecoderPro. The Zephyr will not read the CVs from sound decoders without a Programming Track Booster. You can, however, write to any decoder in "blast mode".

If you are looking for building blocks to a larger system, a Zephyr is a bit of a dead end. While you can add more power, in the form of boosters, if you exceed its command station capabilities, you will need to replace it or relegate it to running a yard.

The ***NCE PowerCab*** (3) is one of the NCE ProCabs with a command station and booster built right in. While it is based on a walk-around throttle, it must remain tethered at all times, as the track power flows through the flat cable connected between the PowerCab and the fascia-mounted panel. It provides adequate power for a small layout.

3



3: PowerCab from NCE – photo courtesy of NCE.

The PowerCab supports 2 additional throttles. NCE officially only mentions one, but two work just fine. The command station section will support all the loco addresses that any of the throttles you can connect will need.

One neat feature of the PowerCab is the ability to display the amount of current being consumed by the layout connected to it. This saves the need for a $50 accessory current meter, like the RRAmpmeter from DCC Specialties.

The programming menu system is very much a "lead you by the hand" set of questions. This is helpful for newcomers or folks who don't frequently do programming. For the experienced programmer, they become a bit cumbersome, requiring a lot of repetitive keystrokes to answer the questions. The NCE USB adapter (street price under $40) allows a computer connection. I currently use this on my workbench for programming and testing. The PowerCab has the programming track booster functions built in, so it will write to or read from any decoder I've thrown at it, and do it as well as any system out there. An exception are some MRC decoders that don't support read back, as stated in their literature, so no system can read them.

The PowerCab can be used as a walk around throttle on any other NCE system, so it makes a good building block for an expanding system. A radio board can be fitted, allowing it to be used as a radio throttle, as well, on a radio equipped system.

As I was writing this column, I learned that NCE would announce a new product at the NMRA national Convention.

The ***NCE Twin*** (4) will feature two "yard mode" (center off) control knobs and include a world-wide power supply for a street price around $120. It is rumored to support additional walk-around throttles, an external computer interface and automation. NCE is advertising it with the phrase: "Grows with your layout – *the nothing wasted growth path"*.

Since I haven't had my hands on one, I cannot comment on its functionality, but it would appear to pack quite a bit into a very price-competitive package.

Programming throttles

First, let's look at the throttles used for programming. If you have only one throttle, this will be the type you will need. Guest operators usually are supplied with a smaller throttle that won't allow programming. I'll discuss these later in this column.



4: NCE Twin DCC starter set – photo courtesy of NCE.

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Both manufacturer's "big" throttles allow either button or knob selection of loco speed.

The ***Digitrax DT402*** (5) is the venerable DT400 updated to support 29 functions with no external differences except for the model number.

The DT402 has both wired and infrared wireless modes. I find that folks who live in countries where the available radio modes are illegal are the most frequent users of the infrared mode. There are radio versions available, as will be discussed later in this column.

The sheer quantity of buttons sometimes overwhelms new users. I find that they are well organized and clearly labeled, although the printing is pretty small. Some folks find the display difficult to read. However, it does show the condition of all 13 basic functions. System status is reported by a series of dots in strategic locations around the display.

Street price for the DT402 is about $150, with the radio versions running around $200.

The ***NCE ProCab*** (6) is physically larger than the DT400, allowing for larger buttons and display. Also, NCE has chosen to display less data at one time, making it easier to read.

5



5: DT402 from Digitrax – photo courtesy of Digitrax.

6



6: ProCab from NCE – photo courtesy of NCE.

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With the latest software, the ProCab supports all 29 functions - an upgrade ROM is available from NCE if you have an older unit.

A radio version is available.

Rather than relying on icons and dots to communicate to the user, the ProCab uses English, although sometimes abbreviated.

One feature that many folks like about the ProCab series is the MOMENTUM button. This feature needs a loco decoder that supports both momentum (CV3 & CV4) and programming on the main, as most current decoders do. When the loco is stopped, pressing the MOMENTUM button followed by a number from 0 to 9 adjusts the momentum setting. So, with, for example, a road switcher, you can press MOMENTUM 1 and have quick response while working in the yard. Once you've connected up a long train, press MOMENTUM 4 and watch it lumber slowly away!

Street price for the ProCab is about $125 with the radio version running closer to $200.

User throttles

Intermediate or user throttles are smaller and less intimidating to pick up and use for someone who is not familiar with a specific brand of DCC system.

They do not allow programming, keeping the casual user from making unintended changes to locos or to the system.

None of the current versions of user throttles allow the creation of consists. Thus, the hostler needs a programming throttle for whichever system is in use.

The ***Digitrax UT4*** (7) user throttle is considered by many to be the best in its class. It is easy to use.

There is a center off direction switch on the top. "Centering your selector" really means that the loco won't move. Also, if you are going one direction, you center the selector and then flip it in the opposite direction to reverse the loco.

The address is displayed on the four selector buttons on the throttle.

The loco is selected or dispatched with a funky system of holding down a button while plugging into the

7



7: UT4R User radio throttle from Digitrax – photo courtesy of Digitrax.

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(Photo from our N-Scale layout)

LocoNet panel. Once folks spend some time with it, they seem to get the hang of it. However, frequently folks wind up selecting function 4 on the loco in the process of dispatching it. At our club (pcmrc.org) we frequently find locos in staging with the dynamic brake sound running (F4 on Tsunami decoders).

There are no dedicated buttons (like the NCE HORN button) on the UT4.

There is no combination of button pushes that will do weird things to the loco being addressed, or other locos or to the system.

There are no speed control buttons.

The UT4 is modestly priced (street price about $65, with the radio versions just over $100).

NCE has three basic versions of its intermediate throttles. They share the same small case. The difference is the data displayed and the method of controlling loco speed.

The ***NCE Cab04*** (8) series comes in either potentiometer (270° rotation) or encoder (continuous rotation) knob versions. The encoder version (shown) has a toggle switch on the top to select between two cab (and thereby, loco) addresses.

Direction selection is by two buttons, one for forward and one for reverse. When operating, it is one more thing to remember: which button to push to reverse your present direction.

There are two possibly troublesome buttons: a MACRO button and an OPTION button. These may be set up by different owners to do different things – unbeknownst to a guest operator. Pushing either of these buttons may start a series of events that the user did not intend. The good news is that pressing the ENTER button cancels the progress without any harm. It is a bit disconcerting to be unable to control your loco and find out that you pressed a the MACRO button when you wanted FWD. The OPTION button comes from the factory as a direction toggle button (8).

There is a HORN button that is a non-latching way of activating function 2.

8



8: Cab04e (encoder version) from NCE – photo courtesy of NCE.

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There is no display, so you select a loco by pressing the SELECT LOCO button and pressing up to 4 digits and then ENTER. The only way you can tell if you have successfully selected the intended loco is if it responds to the throttle or function keys.

The encoder version can also be set to yard mode where the loco goes one direction or the other or stops, depending upon the encoder location. The advantage is that it is easy to change direction without pushing any buttons. The disadvantage is that you don't know for sure that you have the loco at a full stop (speed step 0).

Street price for the potentiometer (Cab04P) version is under $75. The encoder adds about $15. Radio adds about $70 for either version.

The ***NCE Cab05*** (9) is just a Cab04e (encoder version) with pushbutton speed control instead of knob.

The remainder of the prior discussion of the Cab04 holds for the Cab05 except for the yard mode.

Cab05 street pricing is about $70 and $145 for radio.

The flagship of the intermediate cabs is the ***NCE Cab06*** (10). Available in both encoder and potentiometer

9



9: Cab05 from NCE – photo courtesy of NCE.

10



10: Cab06 from NCE – photo courtesy of NCE.

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versions, it features a display so you know better what you are controlling.

A single button toggles the loco direction.

There is a shift button that allows access to all 29 functions and many other options for this versatile throttle. Just so you don't get too confused, there is an cheat-sheet on the back of the throttle, showing you what a number of shifts plus pushing other buttons will do.

This is the only throttle in this size range that will allow you to throw turnouts through your DCC system and stationary decoders. Street price is about $80, up to $150 with radio.

Ergonomics

Okay, we have run through the data on all the throttles, but that is kinda like deciding on a car by reading the brochures. What really matters is how it drives. If a picture is worth 1000 words, what is a video worth? Here is a comparison I put together just for you folks. Enjoy it.

Part two in October

This month's column has been oriented to the user interface of DCC systems. Tune back in next month as we dig deeper into the system itself.

Meanwhile, use the Reader Feedback button on the next page to vote on this column and post your comments on the MRH blog.

I hope you find this information awesome. ☑

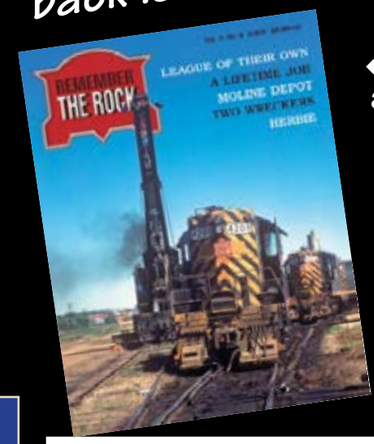
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SMP* Connecting NCE boosters to a Digitrax command station

In this month's column, I mentioned two layouts that are mixed, with a Digitrax command station and LocoNet radio network connected to several NCE boosters.

Why would someone want to do this? In both cases there was a large investment in Digitrax radio before NCE got the wrinkles ironed out with its version 1.5 radio system. The owners wanted the robust NCE booster(s) without buying more throttles and radio bases.

Here is how to make that connection. Starting with two cables, 6-position 6-conductor (6P6C LocoNet style) and a 4-position 4-conductor (4P4C Control Bus style) cable, you simply connect the two internal wires from the Control Bus cable to the outer two wires of the LocoNet cable. Insulate them from each other with shrink tubing and put a piece of shrink tubing over the outside of the cable for support and protection.

In the drawing below, you can see that the tabs of the connectors are up. This is important to keep the phasing of the systems consistent. I removed any reference to the wire colors, as all cables are not colored the same. The tabs are your best way of telling that you have the correct wires connected to each other.

The 6P6C connector plugs into the LocoNet anywhere. The 4P4C side connects to one of the Control Bus sockets on the NCE booster.

Run a wire (the same gauge as your largest track bus) from the Digitrax ground connector on their command station to the case of the NCE booster.

** SMP comes from the Amtrak world and is short for Standard Maintenance Procedure.* ■

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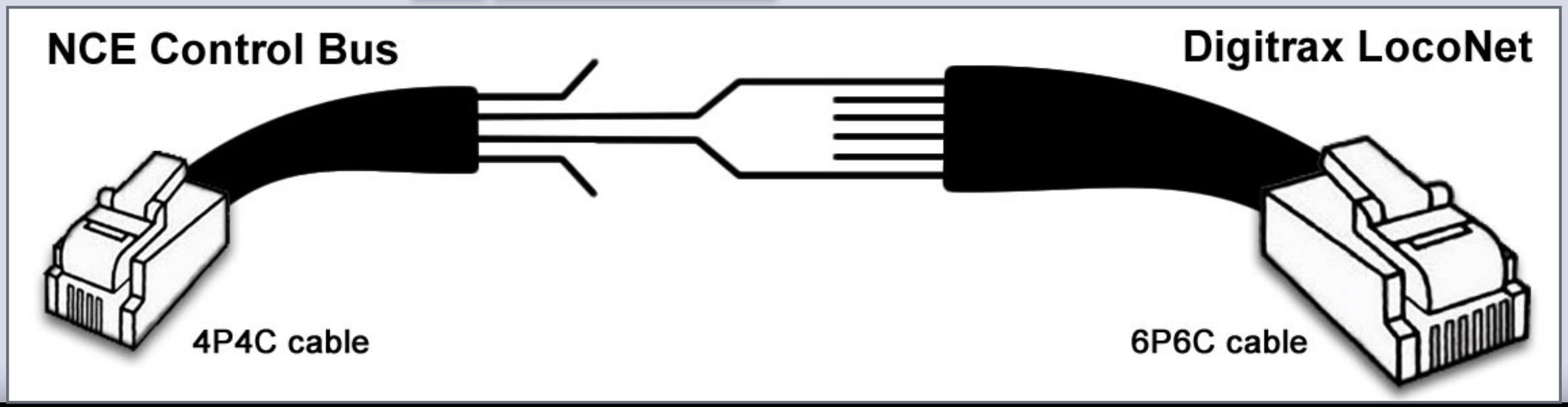
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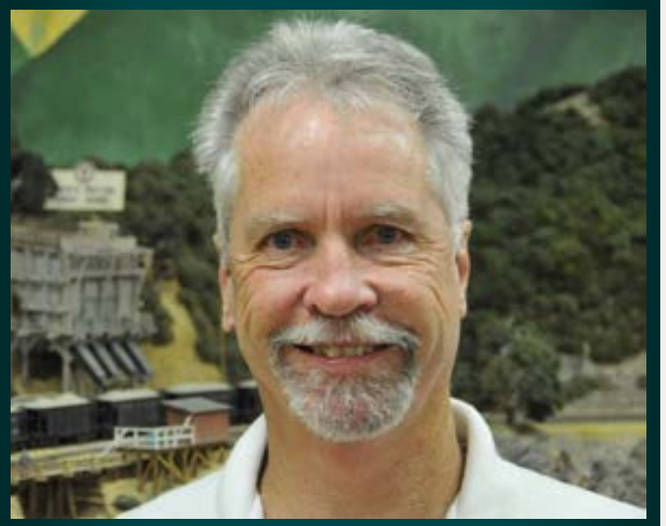
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About this issue's prototype modeling columnist



Jack Burgess has pursued his passion, the Yosemite Valley Railroad, for more than 40 years. His model of this railroad is known around the world for its dedication to following its prototype as exactly as possible.

Jack has also written a book about the Yosemite Valley titled "Trains to Yosemite."

Photos and illustrations by the author unless otherwise credited.

GETTING REAL: Details from photos

Adventures in Prototype Modeling

Adding prototype realism by detailing from a photo reference

Reader Feedback (click here)

For many modelers, adding copious details to each and every scene on a layout is an enjoyable aspect of our hobby. This phase is typically delayed until the end of general construction and it is common to hear many modelers claim that details can be added to a layout forever!

A few decades ago, I agreed with this idea. Back in those days, the owner of Builders in Scale attended NMRA Convention train shows and, as I recall, offered dozens of their custom detail castings for sale for ten cents each. I'd come home from these train shows with several dollars worth of details, confident that I would eventually find a proper place for each and every one of them on my layout. I later discovered that some fit in but many of those I had purchased didn't.

The problem was that, over time, I had eventually evolved a different approach to details. Rather than simply installing all of the casting that I had purchased on my layout, I started paying more attention to the details that I noticed in photos of my prototype, the Yosemite Valley Railroad. Thus, rather than simply using what I had on hand, I started purchasing (or scratchbuilding) the details I noticed in these photos.

I soon came up with the term "observable details" to refer to details that we see every day but typically overlook. For current-day modelers, those details might include drag detectors along the track and concrete automobile wheel stops in parking lots. If one is modeling the 1950s, television antennas on houses would be appropriate, as well as oil stains at stop signs…remember that leaking automobile oil pans were typical in those days. These examples also reinforce the notion that details are "era" dependent.

For those of us modeling earlier eras, historic photos can provide insight to what details fit the definition of "observable details" in those days. Of course, not everyone has several hundred photos of their prototype for reference, and many modelers are proto-freelancers. But neither of



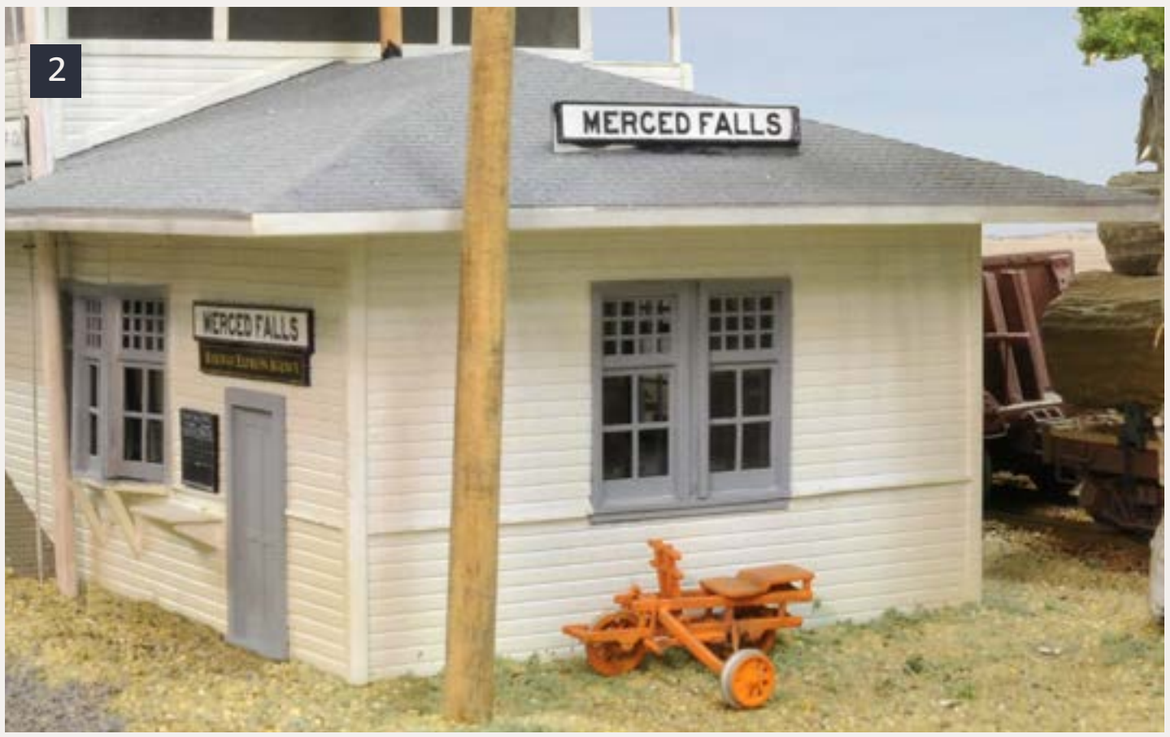
1: Here is a very simple detail based on a prototype photo. This photo was taken at Merced Falls on the YV, probably in the early 1940s, and shows a speeder and velocipede stored alongside the station. As a side note, many years ago I purchased a real YV velocipede which I am reasonably sure is the one shown in this prototype photo. – *Photo by Fred Stoes*

these factors should be considered an excuse to resort to freelanced details. There are a lot of railroad books out there (some of which might actually be about your prototype) which can provide ideas. While a majority of railroad photos concentrate on locomotives, stations, and equipment, many can also provide insight to the authentic details around those same locations. One of the advantages of following this idea is that the details that you add to your layout will look more logical and also be more accurate for your selected era and setting.

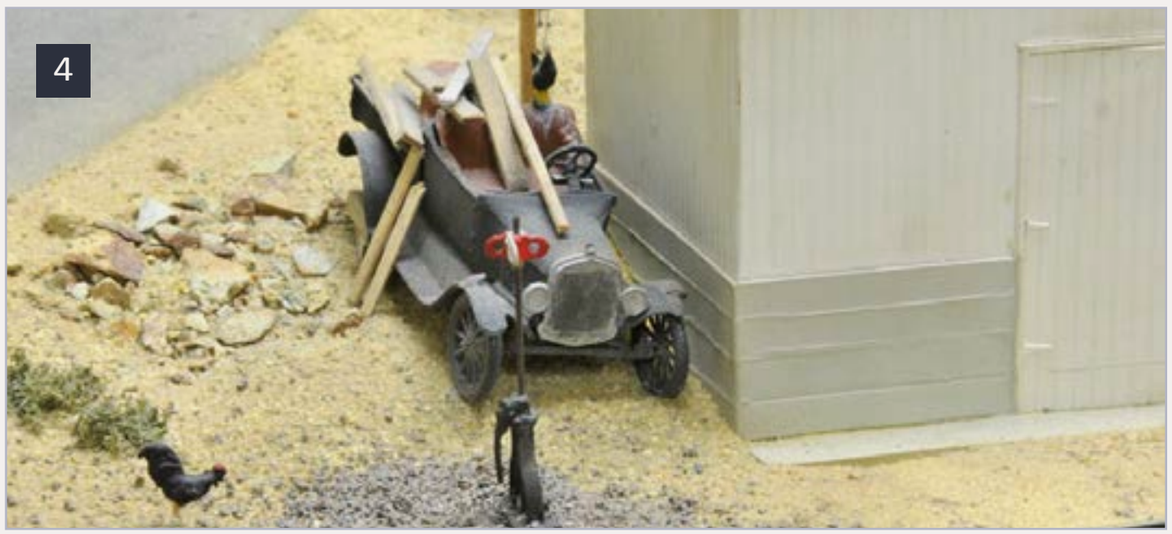
Many years ago, a visitor to my layout was studying the area around Incline which included a few buildings, some grape vines, a hose bib, and a "swamp cooler" mounted to a window of the station agent's house, together with other details noted in prototype photos. After studying the scene, he commented "This scene looks so realistic!" Given that all of the structures and details he was looking at were based on historic photos, it was not an unsurprising comment, but the fact that he realized the authenticity was very gratifying.



3: This photo was taken at Bagby in September 1944 during a railfan trip over the line. Notice what appears to be an abandoned Ford Model T alongside the building to the left of the observation car. – *Photo by Fred Stoes*



2: I haven't yet scratchbuilt the Fairmont M19 speeder but have built a velocipede so that was an easy detail to add to my layout. I used a Sequoia Models kit, still available, for my velocipede. It is painted orange which, based on a color photo of one of the speeders, was the standard color for YV Maintenance of Way equipment such as speeders and trailers.



4: I used a Jordan Miniatures Model T to duplicate the scene, complete with some boards and a couple of chickens. Many years ago, I had a visitor question the nickel-plated radiator on my Model T. However, another visitor later confirmed that Model Ts, while initially equipped with brass radiator shells, later featured nickel-plated radiator shells.



5: This photo looks toward the back side of some buildings in the Merced yards. The building to the right of locomotive No. 22 was the Carpenter Shop. The details that caught my interest were the "ladders" stored behind this building. I wondered for years what they were used for until it finally became evident just a few years ago. – *Photo by Al Rose*



7: The prototype "ladders" had matching "steps" on both sets of rails. I compromised and used some ladders from Central Valley to replicate them. I also stained some 2x8 and 2x10 stripwood with a black shoe dye/alcohol mixture (a ½ teaspoon of Lincoln brand black leather shoe dye to a quart of 70% Isopropyl alcohol) to produce the weathered, silver-wood look for the boards and piled them together on the ground. The pile was bonded together with diluted white glue.



6: Another prototype photo provides a closer view of these details. While they might appear to be ladders, I finally realized that they were actually part of an early-day scaffolding system. These "ladders" were set up alongside a freight car with 2x8 or 2x10 boards inserted between the "steps" of the "ladders" to form the scaffolding needed to work on the upper portion of the car. They thus worked similar to current-day scaffolding systems.



8: The end of the turntable lead next to the Carpenter Shop had another interesting detail which is easy to duplicate. The bumper on this track consists of an old tie chained in place. The photo of the No. 28 is on this same track (Figure 6) and was taken in 1934 and shows the tie on top of the rails. This photo of the out-of-service No. 21 was taken in 1942. By then the bumper had been pushed off of the rails. – *Photo by Bob Lunoe*



9: Here is a model of one of those bumpers on another turntable lead. It would appear that the chains were wrapped around the last tie under the rails and then over the tie on top of the rails. To prevent my ties from being shoved off of the end of the spur by a careless operator, I draped two pieces of chain over my bumper, marked where they touched the surface of the dirt and then drilled holes for both ends of each chain. After I painted and weathered the pieces of chain, I glued the ends of each of them in their respective holes. Some additional ballast (or dirt in this case) hid the holes. This is another quick and easy detail which, at least for the YVRR, is completely prototypical.



10: Some details are extremely easy to duplicate but first need to be noticed…a good example of "observable details." There were no locomotive facilities at El Portal on the eastern end of the YVRR at the boundary of Yosemite National Park. So locomotives were simply parked under steam until needed later that day. A watchman kept the boiler water in the center of the water glass and made sure that the steam pressure would be adequate prior to departure. I'm guessing that YV employees placed the boards along the track where these engines were parked so that inspections, oiling, and other tasks could be undertaken on a sure footing along the track and so that they were also out of any mud and spilled oil. This photo shows No. 29 parked in El Portal with some walkways next to the ties. This is another easy detail to model. - Guy Dunscomb photo



11: While I modeled the boards along the rails, I also added a lot of glossy black paint to replicate the lubricating oil stains between the rails which would have been present there. This detail makes it easy for visiting operators to know where to park their locomotives in El Portal after an operating session.



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12: When the Yosemite Valley Railroad was abandoned in August 1945, the scrapper published a Liquidation Notice, a detailed list of YV items for sale to other railroads and interested buyers. The Liquidation Notice included locomotives, passenger cars, freight cars, buildings, bridges, water tanks, and wood shop and machine shop tools. It also included such mundane items as cattle guards and survey equipment.

After obtaining an original copy of the Liquidation Notice many years ago, I was surprised to discover a listing for four "Type M.B. Rail and Flange Lubricators for 70 lb. Rail". A flange lubricator pumps grease to the flange area of the rail to reduce wear on the rail. Ideally, this was accomplished without reducing tractive effort. I had assumed that the use of flange lubricators would have been limited to Class One railroads.

A couple decades ago, when I saw this listing in the Liquidation Notice, I thought that this would be an interesting detail to add to my layout. Without any information about where these lubricators were located, I arbitrarily choose to install one near Tunnel 1 on my layout using castings from a long-forgotten manufacturer. (Details West currently sells a Flange Lubricator.) In an entirely arbitrary decision, I installed it along the south rail a couple hundred feet west of Tunnel No. 1.

Three years ago, while I looking at some YV photos for a clinic I was working on, I spotted something I had not previously noticed before in any photos near this tunnel. This particular photo was taken during a fan trip and shows locomotive No. 25 coming out of Tunnel No. 1. If you look to the left of the locomotive just opposite the pilot, you can see a flange lubricator along the north rail only a hundred feet or so from the tunnel portal. – *Photo by Bill Pennington*



13: Once I discovered that the prototype photo (Figure 12) actually showed a flange lubricator, it was easy to relocate my flange lubricator from the south rail to the north one and closer to the tunnel. Although I modeled it, I have no idea the purpose of the pipe parallel to the rails on top of the ballast in the prototype photo.



14: The YV switched from using telegraphs to telephones for transmitting Train Orders as of January 1, 1931. A few years later, the railroad began installing telephone jacks at a number of non-station sidings for the convenience of trainmen and other employees using portable phones. This photo shows the box sheltering the telephone jacks at a siding known as Starr on the YV. One of the Bulletins issued by the railroad noted that telephone jacks had been installed at a number of locations including Moss Canyon. Employee Timetables also indicated where telephones were available. (Bulletins were numbered directives issued to train service employees on the YV. Bulletin subjects ranged from the required method of handling loaded tank cars in trains to temporary side clearance restrictions.)

– Photo by Guy Dunscomb

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15: I used a casting of a railroad telephone box to duplicate the telephone at Moss Canyon based on the photo of the one at Starr. I'm not sure of the manufacturer (it might have been Builders in Scale) but it would be easy to scratchbuild them. I also installed them at some other non-station locations along the line based on the information from the Bulletins and Timetables.

16: There are a lot of signs posted on railroad property from highway cross bucks to whistle posts and mile posts. I always liked this sign and suspect that 1930s railfans would have already checked in at the YV office before venturing onto private property. In the 1930s and early 1940s, it was not uncommon for railroad employees to bring locomotives out of the roundhouse and position them "rods down" on the turntable for the benefit of photographer railfans.





17: If I would have had the prototype photo 30 years ago, I would have simply corrected the slight keystoning in Photoshop and resized it to print it in HO scale. However, I modeled my signs years ago before personal computers and such powerful software. So, instead, I reproduced the sign several times larger than HO scale using dry transfers and then had it reduced to scale using a photographic process. I've installed them in a couple of locations on the layout. This one is near the Stores building.



18: In this photo, the crew is turning the No. 28 on the turntable at Merced, probably around 1944 or so. But, what was also of interest to me is the pile of "junk" in the bottom right corner of the photo. The large wooden object is a sawhorse, not your typical carpenter sawhorse but a heavy-duty one. There are also some springs, most likely from freight car trucks, and a lot of scrap material. This pile of "stuff" shows up in some other prototype photos of the area. – *Photo by Stanley Snook*

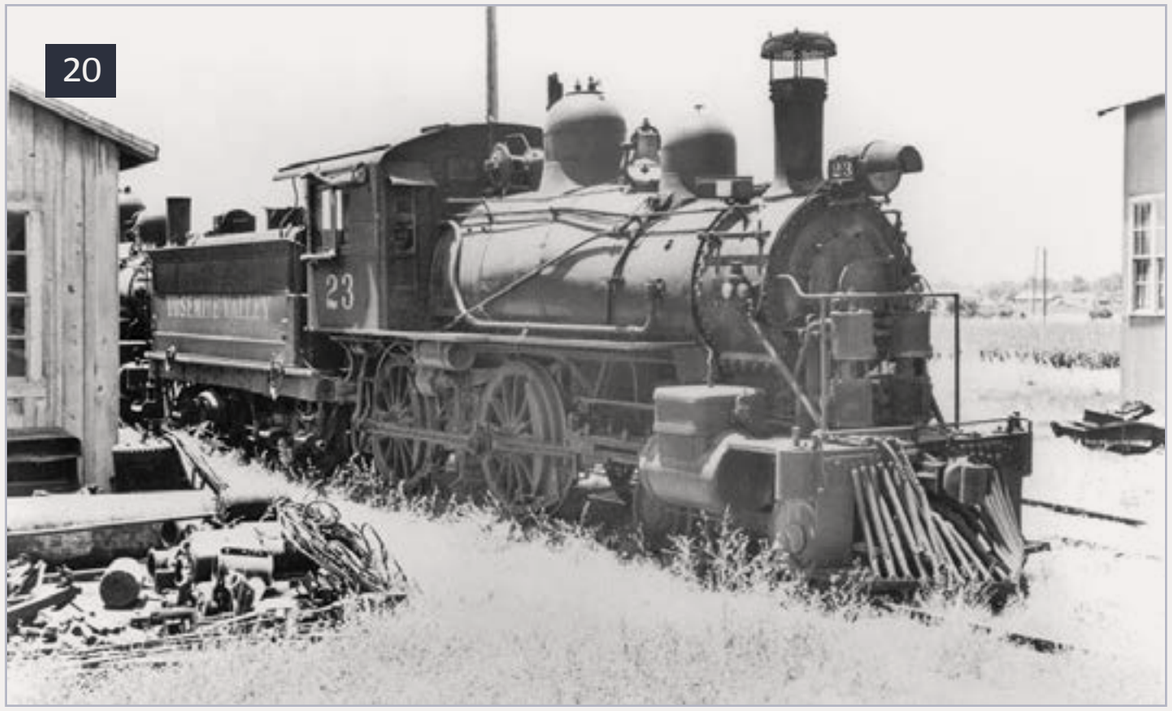


19: I modeled this pile of "junk" using an assortment of stuff from my stash of details but also paid careful attention to the "scale" of the individual pieces. I think this is a very important consideration since modelers sometimes model everyday things "over-scale". Keep in mind that many working model components that we use, such as couplers and wheelsets, are larger than the prototype and thus not necessarily to scale. My pile of "stuff" is somewhat different than that shown in the prototype photo but includes scale details such as a scratchbuilt heavy-duty sawhorse, some boards and springs, a tie plate or two, a headlight casting, a small air tank, and a lot of non-descript items. All of the metal details were painted a lightened black and then weathered with pastel chalks to blend everything together.

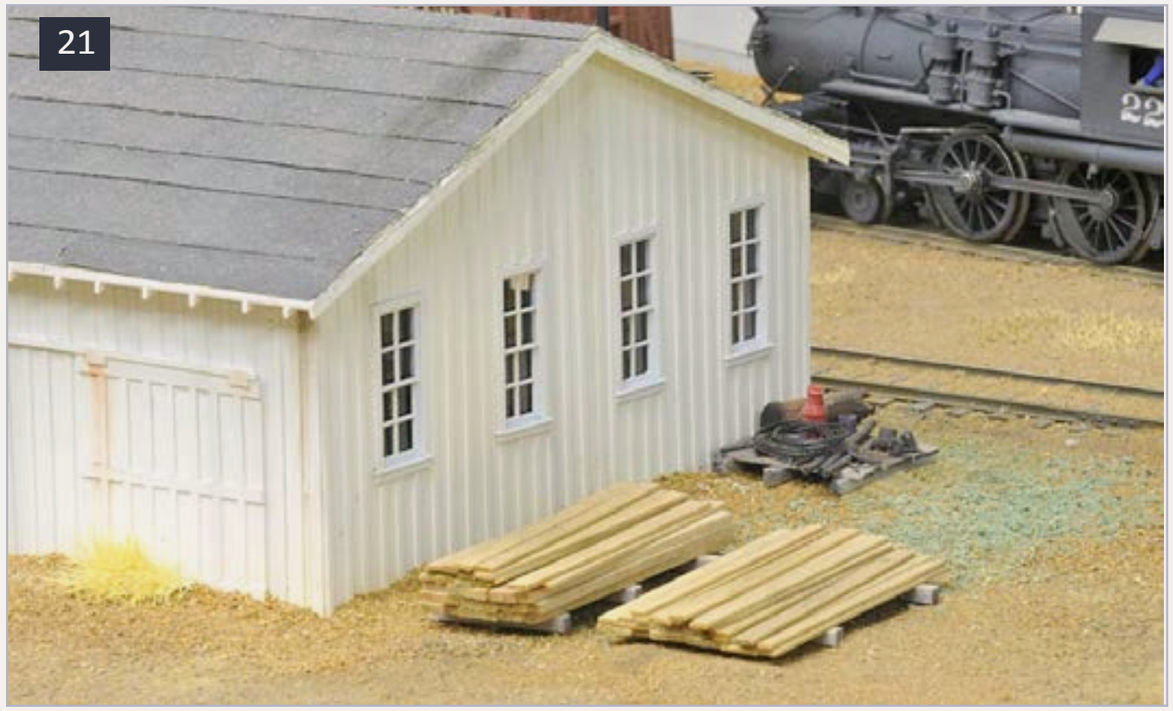
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20: The end of the Carpenter Shop facing the turntable also had an interesting pile of "stuff". However, rather than simply junk, it appears to me that this pile is actually items that were being saved for possible future use since it appears that the things are being stored off the ground. While most of the items can't be identified, the large tank is fairly obvious.



21: Rather than unidentifiable "stuff", I added things that I saw in the prototype photo including the large tank, a coil of wire, a number of small tanks, etc. Everything is stored off of the ground on some boards sitting on 4x4s.

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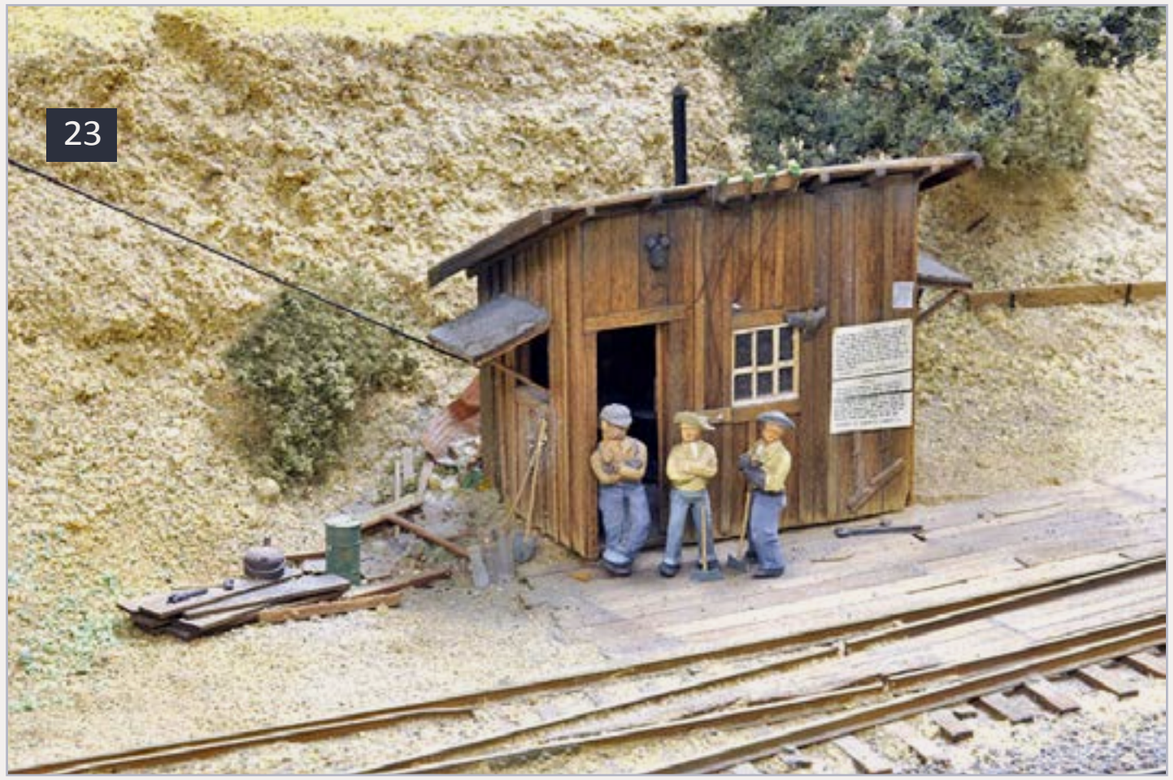
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22: This photo of the telephone shack at the bottom of an 8,300-foot-long logging incline at Incline on the YV was taken in 1926 and highlights a number of interesting details. Note the red tail hawk someone shot and hung by the window, the large sign posted next to the window (it is a legal warning that the logging incline was private property and anyone riding a log car up the incline did so at their own risk), and the broken batten below the sign. A small sledge hammer and large wrench are next to the right corner of the building. To the left and behind the building are tools, empty milk bottles, and other "stuff." In these days of weekly curbside garbage pickup and nearly compulsive recycling in urban areas, it may be difficult to remember that tossing discards "out behind the building" was once the norm. These are all easy details to incorporate into the building and the surrounding scene.

– Photo by Jim Law



23: I built this building and detailed the area around it probably 25 years ago. It was the first prototype scene on my layout. The "milk" bottles were turned on a lathe from clear acrylic while the tools, gas can and 25-gallon drum are Evergreen Hill Design details as are the hammer and wrench below the warning sign. All of these details are still available. I also thought that some broken "glass" might be appropriate. When I was casting water for the water areas on my layout, I'd often end up with a little extra clear casting resin. Rather than throw it away, I'd pour it on a piece of aluminum foil. Once hardened, it could be easily broken into small pieces which looked a lot like broken glass. I many times added a green tint to the first several pours of the casting resin. Saving that excess material and breaking it into small pieces realistically replicated green broken Coke bottles.



24: There was a very large lumber mill at Merced Falls which was served by the YV. The multiple smoke stacks mark the location of the boiler house while the two large buildings in the middle of the photo comprise the saw mill. The building along the track was the Electrical Shop.



25: As shown in this close-up, the area behind the Electrical Shop was obviously a place to store empty 55-gallon drums and other items.



26: I didn't have the space available to model the Electrical Shop but did model the Auto Shop which is barely visible to the right of the Electrical Shop in the prototype photo; the size of the building was based on a Sanborn map of the town. I also modeled the Fire Hose House behind it. The details next to these buildings are from a number of manufacturers and include 55-gallon drums (Grandt Line) and some wooden kegs and wire reels as well as other items. All of these details were weathered with Bragdon Enterprises powdered weathering chalks. Be sure to also add chalks to the areas under these details, especially rust where appropriate. This helps immensely to blend everything together.

Reader Feedback (click here)

There is no question that many of us thoroughly enjoy adding details to scenes on our layouts. However, give some thought to how to ensure that those details are appropriate to your prototype and era. Not every detail needs to replicate a historic photo but studying a prototype can result in more realistic scenes and, thus, more satisfaction with the results.

Photos continued on following page.





27: Of course, not every scene on a layout will have photos available which can suggest details which could be appropriate to that scene. This photo of Emory on the YV shows a number of small buildings including the shed on the far side of the tracks. Without more-detailed photos, I added details to the scene on my layout based on photos of other areas.

28: Based on other photos, I felt that, during the 1930s (I model 1939), the attention paid to storing items seemed to be based on both the value of the items and if they could be reused. Scrap metals, which



might be usable to fabricate something else, might be in a pile on the ground while those which could be reused someday might be stored off of the ground.

For details around this small shed at Emory, I decided to model boxes of more "valuable" parts such as large bolts, as well as some tools. The storage shelves are fairly basic but the horizontal shelves were soaked in water and pre-bent before assembly to reflect the weight of the items. Boxes, typical of fruit boxes such as peach boxes, were fabricated from stripwood to hold some of the items. The yellow tank on the trailer (purpose unknown) is based on another photo of Emory. To the left of the building are some 55-gallon drums on a raised framework so that their contents, maybe lubricating oils, could be easily drained into small containers.

29: This small shed here in El Portal is based on a prototype photo but there aren't any photos of the area behind the building. I do know that the ground sloped away from the rear of the shed so it was logical that discards might have been dumped here. Since they represent discarded material (rather than items saved for possible future use), I limited the materials to some weathered boards and rusted metal. The modeled rusted metal is real rusted metal salvaged from a completely rusted-through, nearly disintegrated metal can. These pieces of metal didn't need any further painting or weathering except for some rust-colored powdered chalks on them and the surrounding area. ☑

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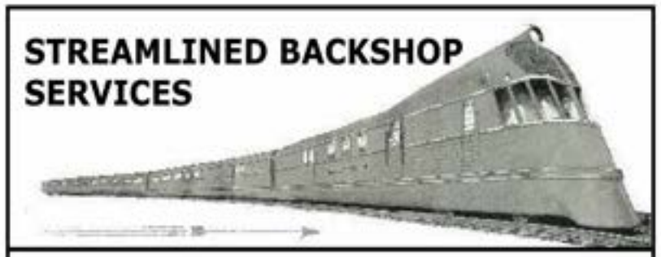
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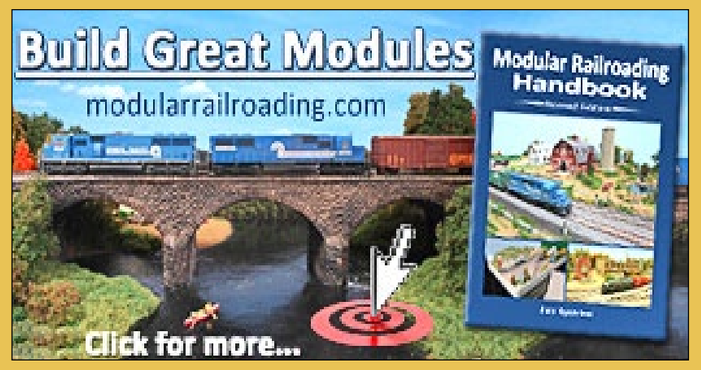
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Kitbashing a Frisco GP40-2



– by Richard E. Napper, MMR
Photos by the author

Enhancing an Athearn Blue Box loco to get a nice DCC diesel with operating lights –

The Frisco railroad owned twenty-five 3000 HP GP40-2s, road numbers 750-774. All were manufactured by Electro Motive Division at La Grange, IL, built in the year 1979. After Frisco merged with the Burlington Northern, the units were renumbered to 3040 through 3064.

I have as a goal to have one powered Frisco diesel of every make they owned, in every paint scheme it was ever painted in. At this point, I am about 80% done. I was looking at my list of diesel models recently and suddenly realized I had not purchased any models of the 3000 HP GP40-2!

I immediately went the hobby shop and purchased two Athearn blue box GP40-2s. I only need two models because this particular diesel was only painted in the Mandarin Orange and White paint scheme while on the Frisco railroad.

As usual, this particular model does not come painted for the Frisco railroad; my local hobby shop only had two Southern Pacific GP40-2 Athearn blue box models (1 next page).

I first stripped the SP paint from the loco the shell so I can re-paint it as a Frisco unit. In the past I have used an excellent paint stripper called Plaststrip, however, it is no longer manufactured (the maker has passed away). Fortunately, I figured out what Plaststrip really is: it's Castrol Super Clean Degreaser, a light purple liquid that will not harm plastic.

You can purchase Castrol Degreaser at any automotive supply parts store, and on Amazon.com. This "paint stripper" is the best I've found for models. In my experience it beats all others hands down, and as if that wasn't good enough, it's re-usable!

Just place your model shell in the paint stripper for about 30 minutes. Remove the shell from the stripper, then use an old toothbrush

Reader Feedback
(click here)

to remove the paint from the shell. When you're done stripping the paint, rinse the shell in warm water and let it dry (2).

I want to put a DCC decoder in this model, and my first rule is if the model does not run well on DC, it will run no better on DCC. Although more recent Athearn blue box locos come "DCC ready", you still need to isolate the bottom motor brush connection from the chassis (3).

I removed the bottom motor clip, broke off the two little tabs that contact the frame and removed any burrs with a file. I then soldered a gray wire to the motor clip while it was still off the motor, and applied black electrical tape on both the clip of the motor and the frame to isolate the motor electrically from the frame. Then I reassembled the drive train and added lubrication as needed.

Using a VOM, I checked to be sure that the lower motor clip is now insulated electrically from the frame (4). I do not proceed until this has been tested!

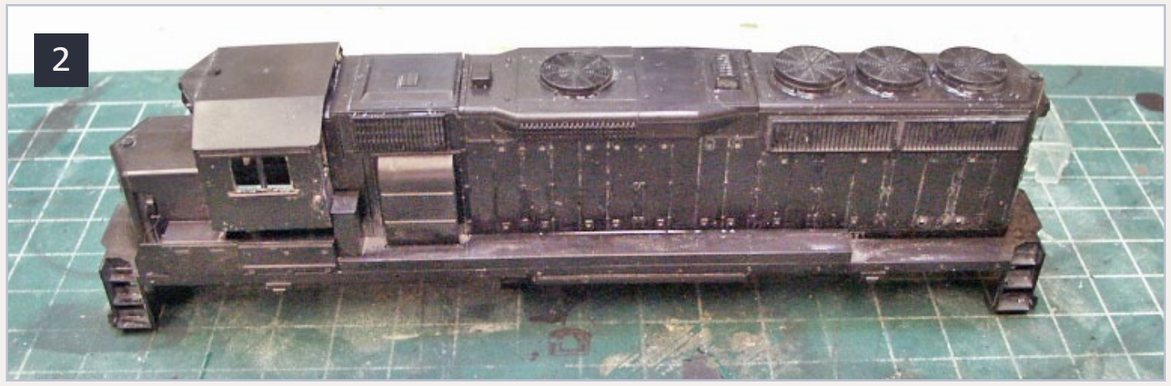
Athearn likes to use small 1.5 volt bulbs in their locos, and this DCC-ready model is no exception. While the circuit board in this model is wired for the 1.5 volt bulbs, I prefer to use LEDs for my loco lighting.

I am using an NCE D13SRJ decoder in this loco, and the NCE decoder has four lighting functions. I plan to install a front headlight, a rear headlight, a rotary beacon, and nose Mars light in this model.

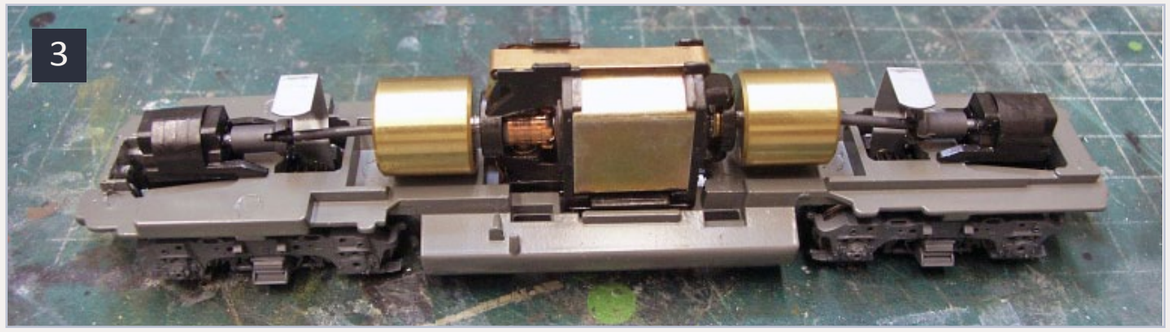
For this install, I am using the blue, white, yellow, green, and purple wire. To provide 14 volts DC to the blue wire (instead of 1.5 volts), I had to remove components from the small DCC ready circuit board provided by



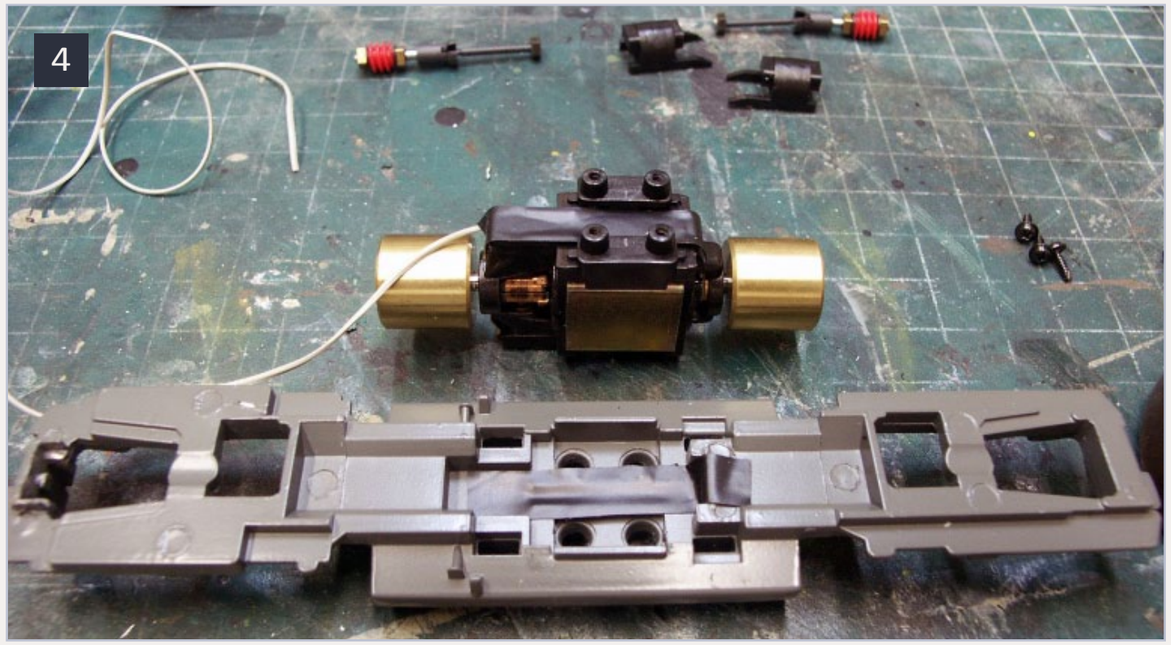
1: Athearn blue box GP40-2 shell on my workbench..



2: The SP GP40-2 shell with paint completely stripped using Castrol Degreaser.



3: GP40-2 chassis, with the Athearn DCC-ready circuit board removed.



4: Motor and chassis insulated with black electrical tape.

Athearn. I then placed two jumpers on the little board to get the 14 V DC to the blue wire contact. I also had to wire a green and purple wire to the circuit board (7).

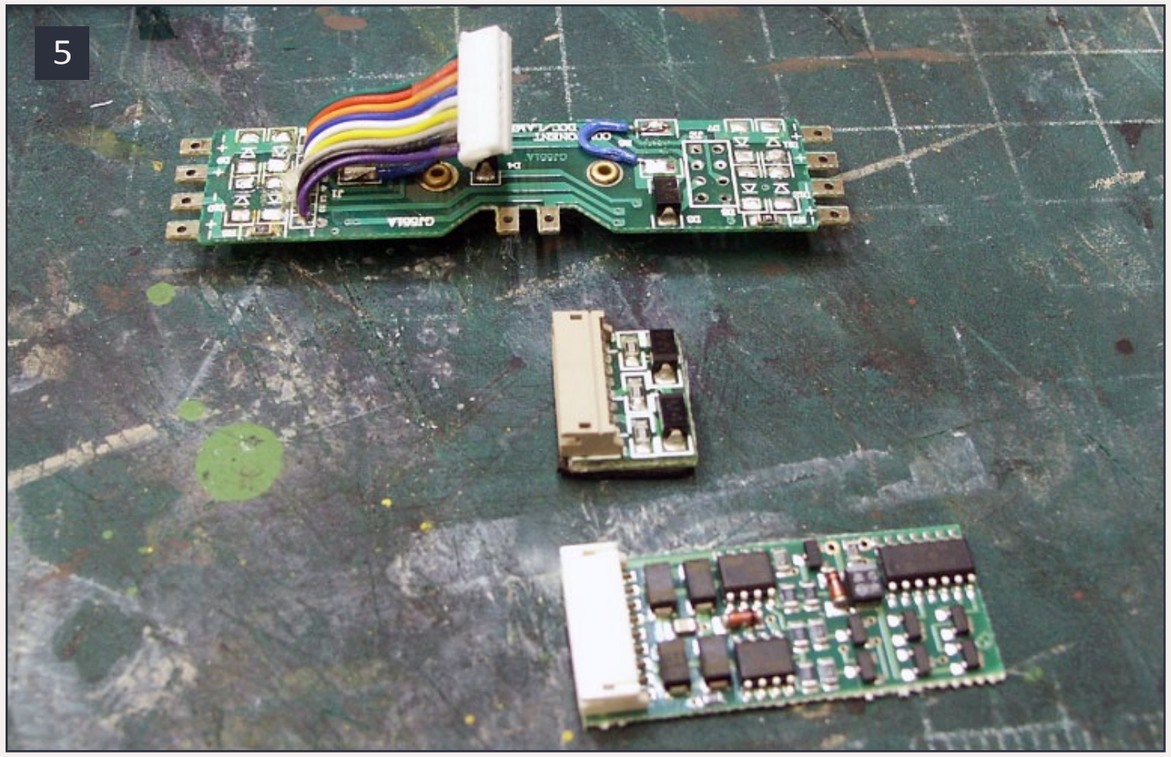
Photo 5 shows two small diodes left on the circuit board, I later removed them as well. Notice in photo 5 that I have also removed the NMRA eight pin socket. Use a pencil soldering iron and some tweezers to remove all the components. The little board in the middle of the picture was removed from the 9 pin JTS socket on the main circuit board; it was used to make the model run on DC (5).

Remove the dynamic brake hatch from the shell and discard the weight pocket completely from the shell or the decoder will not fit (8 next page)

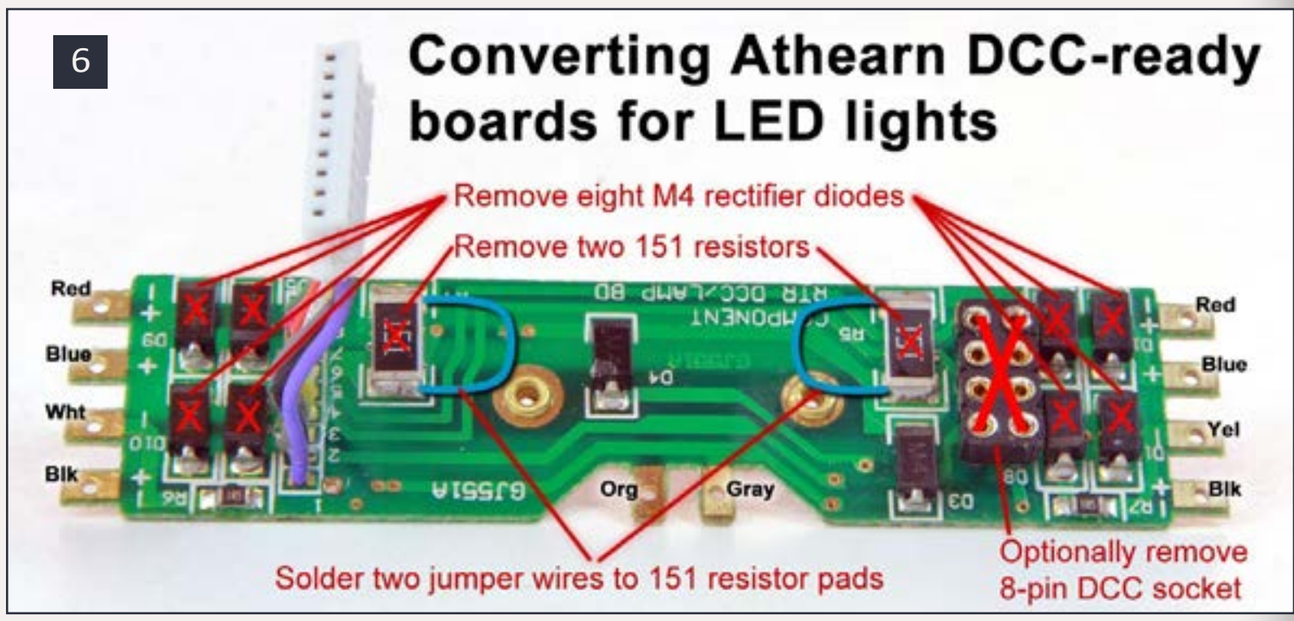
Using a number 50 drill bit, I drilled a hole in the frame and tapped the

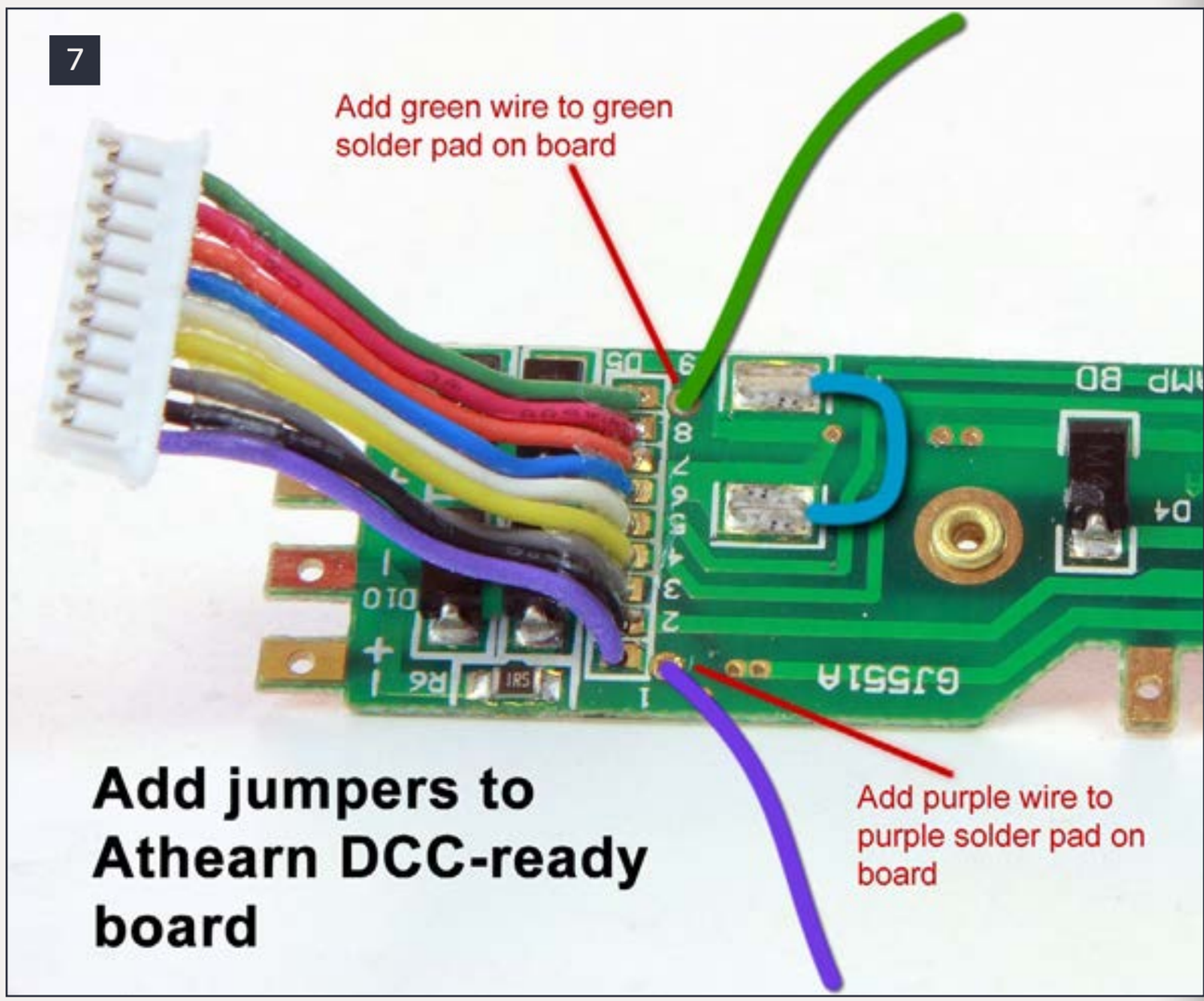
6: Here's the alternations needed to the Athearn loco circuit board so it will supply 14 volts to the blue lighting common feed to the decoder.

7: Also add a 6" length of green and purple jumper wires to the Athearn loco circuit board as shown here.



5: The circuit board out of the Athearn loco (top), the DC jumper board (middle), and the NCE D13SRJ decoder (bottom). Discard the DC jumper board and replace it with the NCE decoder (plugs right into the 9-pin edge connector on the Athearn loco board).





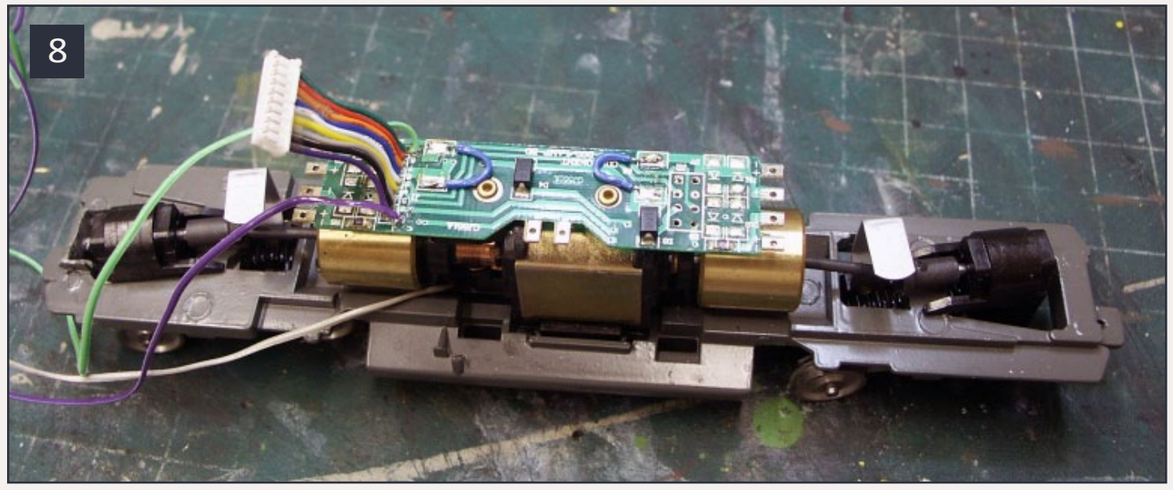
hole for a number 2-56 screw. I then connected a black wire to the frame which I used to bring frame power up to the loco circuit board. The Athearn DCC ready board clips on to the top motor clip. I've found this clip doesn't hold all that well, so I soldered the clip onto the top motor clip to keep the board in place. It's best to remove the motor clip first before doing this solder job to avoid deforming the plastic clip seat on the top of the motor from the heat.

Using slide-on clips for the truck towers, I wired the red wires to the top truck L-bracket and then to the loco circuit board. I also soldered the gray and black wire to the loco circuit board.

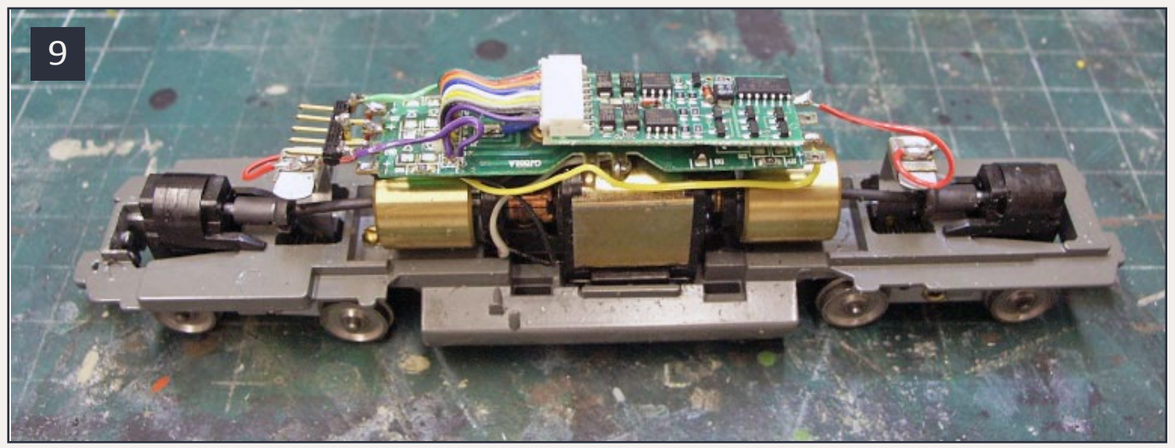
Figures 9 and 10 show a disconnect pin method I use. I bought these plugs in quantity probably 30 years ago. You can get them at digikey.com #920044-13-ND or #920044-15-ND or, mouser.com #644-DR18-250-M or #644-DR14-250-M and finally alliedelec.com #534-0530 or 534-0550. The first numbers are for wire size 22-18, and the second is wire size 16-14 in all three cases.

I soldered a green wire, purple wire, and the yellow wire to the loco circuit board and brought them to the left end of the board. Using a gold plated plug and socket (Digi-Key Part #929850-01-36-ND and # 29647-07-36-ND), I wired the plug to the left end of the loco circuit board and attached the yellow, green, purple, white, and blue wires. By using the plug and socket, I can totally remove the shell from the frame for servicing (9-10).

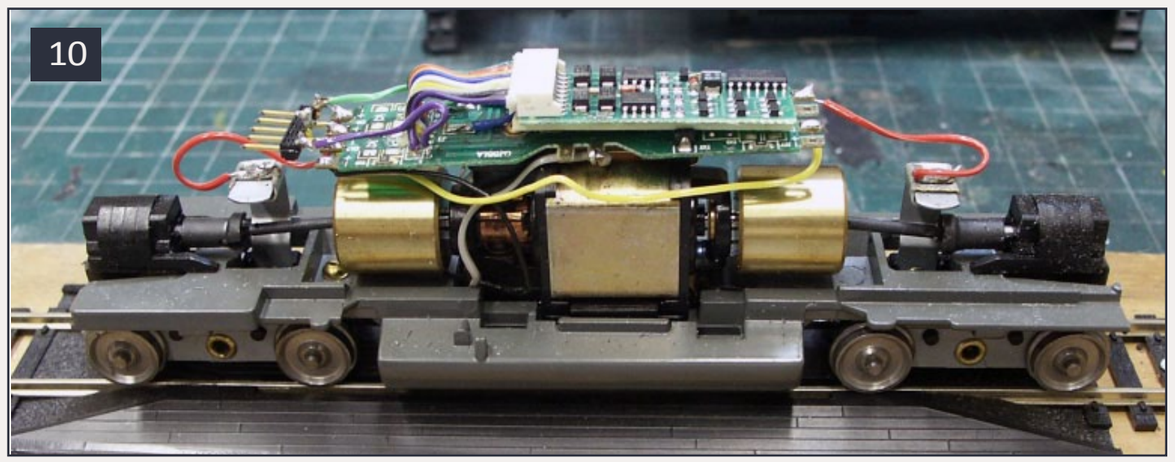
Since the frame is half of the track circuit, the couplers must be fully insulated from the frame. Using a Dremel cutoff wheel, I cut both ends of the frame off.



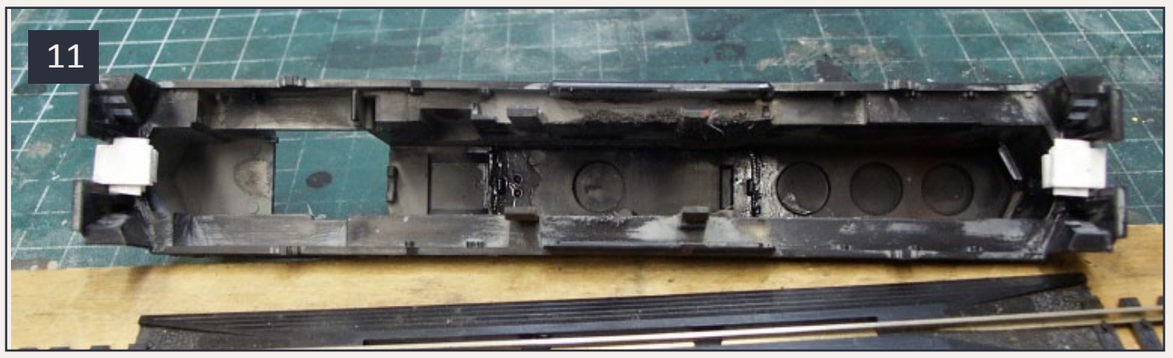
8: The alterations made to the Athearn loco circuit board, including adding a green and purple wire off the green and purple wire pads on the board.



9: Gold-plated Digi-Key plug on the left end of the loco circuit board, to allow easy connecting and disconnecting of the lighting wires inside the loco. Also note the routing of the yellow and gray wires.



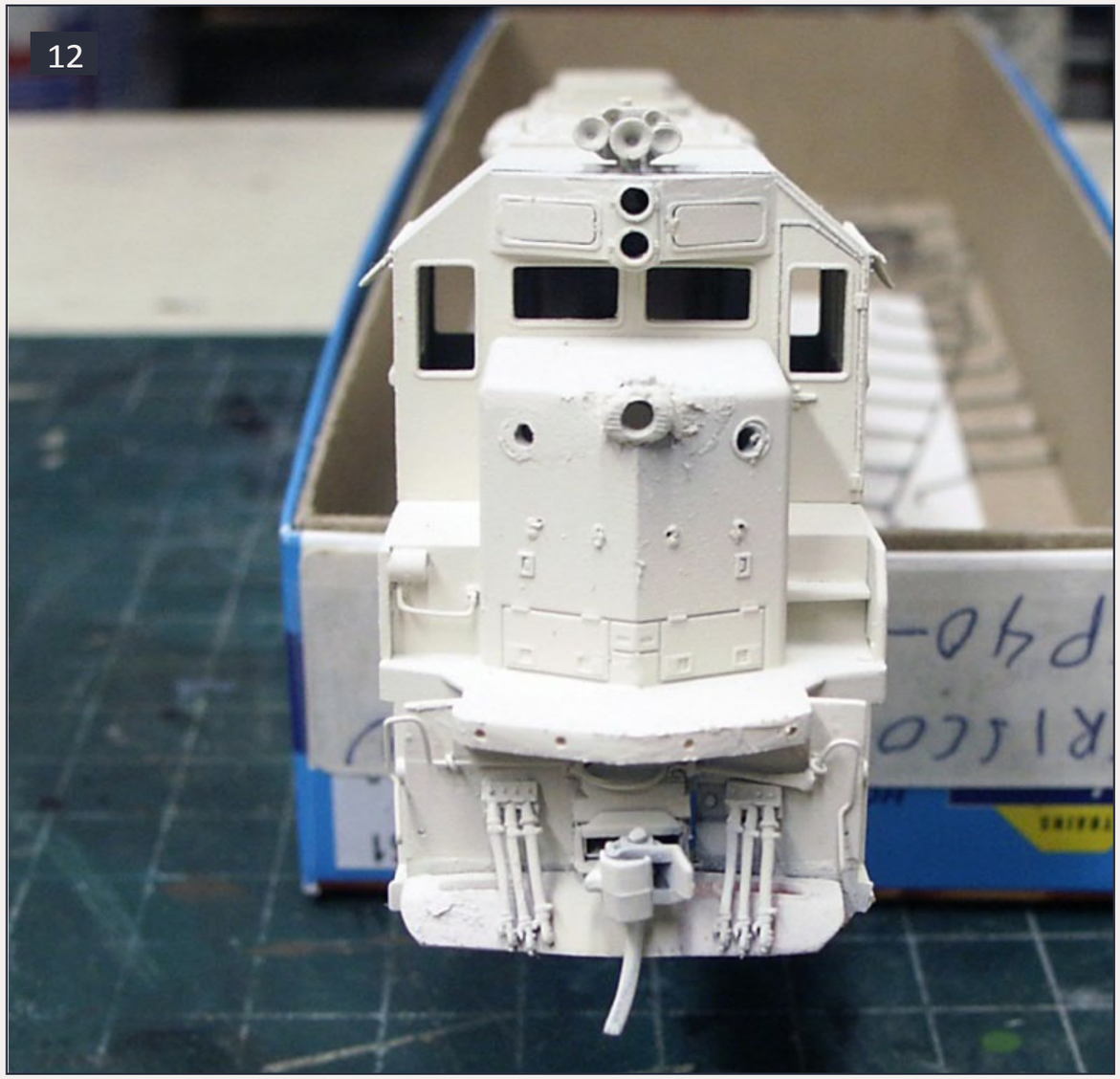
10: Another view of the final loco board and decoder wiring.



11: Loco shell, with the new styrene coupler pads to allow body-mounting the couplers.

Turning to the shell, I added styrene at both ends of the shell to mount the coupler on; I used Kadee number five couplers in their plastic box on both ends of the shell. I used 2-56 brass screws to attach the coupler boxes to the styrene pads I added. I then used plastic to fill in the gap in the pilot sheet below the coupler. This method insulates the couplers and improves the look of the pilots on the shell (11).

I then added the small step plows to both pilots, as well as brass MU hoses and coupler cut levers. Using .080"white styrene I fabricated and installed a new safety pilot porch. Yes, I know in photo 12 that's not the correct air horn, but I like the look of a brass five chime air horn. It's an application of model railroading rule number 1: It's my railroad (12)!



12: Improvements made to the front end of the Athearn GP40-2, shown here in its initial white paint (details show up really well in photos).

Using a number 79 drill bit, I drilled out all of the grab iron holes on the shell. I also drilled out and installed the lift rings on top of the long hood.

I installed the curved grab iron at the end of the long hood, and the one grab iron under the front step. I will install the other grab irons after the shell is painted and decaled.

I installed a Mars light casting in the short hood. Using a number 46 drill bit, I drilled out the front and back headlights and the Mars light. And I added a firecracker antenna to the cab roof. The shell is now ready to paint.

I spray painted Floquil Reefer White directly on to the black shell. This usually works just fine for me, but this time the white turned a slight shade of yellow. Not to be discouraged, I just put the shell back into the paint stripper, and started over.

I spray painted the black shell the second time around with Floquil Foundation Gray and let it dry for two days. Since the only part of the shell that needs to be white is the middle band and the short nose, that is all that I painted white. I again let the shell dry for two days (13).

I have good results using 3M blue painters' masking tape to mask my shells, so I cut new edges in the three-quarter inch wide tape, and applied them to the shell. I burnished the tape edges down completely before painting the next color on the shell.

Note that on the short hood the hand brake cut-out is Mandarin Orange and not white. For the Frisco Mandarin Orange, I prefer using Floquil SP Daylight Red; it has a slight orange color to the red, which, to me, looks just about perfect (14-16 next page).



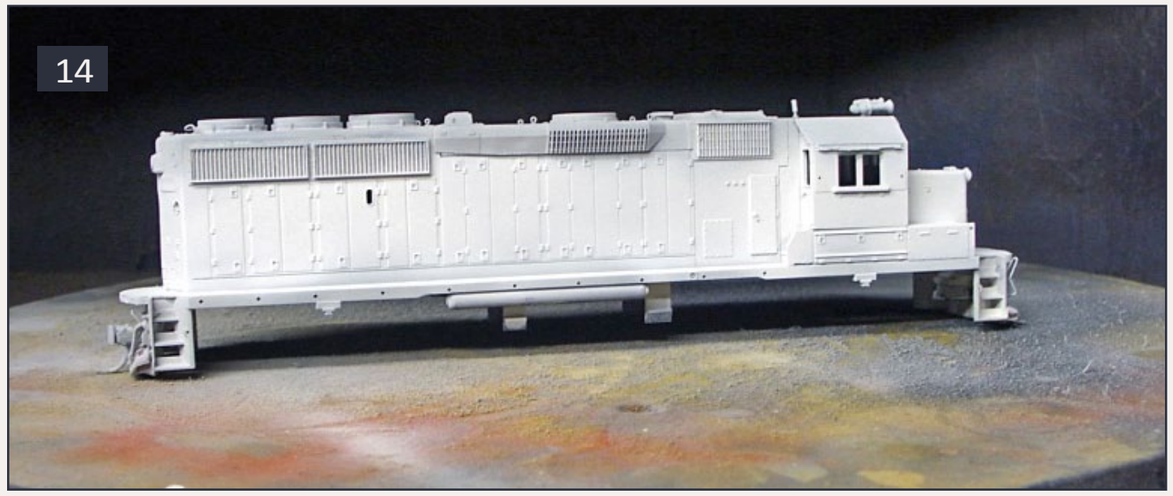
13: Additional roof details added to the stock Athearn GP40-2 shell.

After I spray painted the shell with Mandarin Orange, I immediately removed the masking tape and let the shell dry for about two days (17).

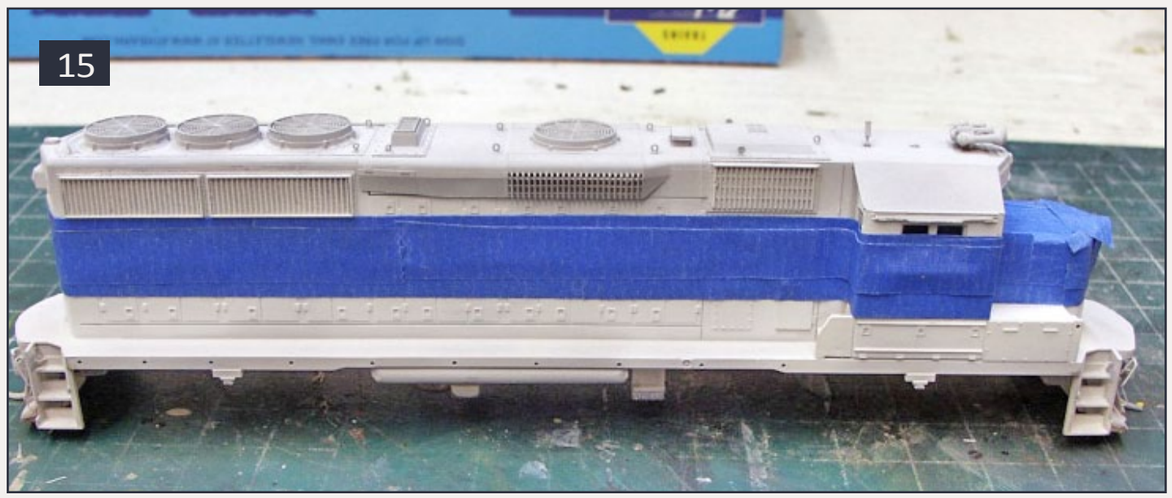
I happen to have a few overhead view photos of the prototype Frisco GP40-2, and I noticed that the frame walkways are black, so I hand-painted them with Floquil Weathered Black (18 next page).

Even on freshly painted diesels, all of the fan vents, air vents, and fans are black and you cannot see through them. I hand-painted these areas on the loco shell with Floquil Weathered Black

The front and back number boards have to be painted black by hand. I painted both couplers rust color and all MU hoses and air hoses are



14: The painted shell on try number two (see the text for details).



15: Masked loco, from the engineer's side.



Figure 16: Masked loco, from the fireman's side.



Figure 17: Loco shell after spray painting the Frisco Mandarin Orange (see text for exact color source) and removing the tape masking.

painted black with a silver tip on the glad hand (19-20).

I used Champ white decals on black bug board numbers and Harold King decal set Frisco number hood unit L–461 (21 next page).

In order to install decals, I first paint a loco shell with a clear gloss coat. After I've applied the decals and they've had time to dry, I spray the entire shell with Testers Dullcote. With all the painting and finish coat applied, I installed the rest of the grab irons and hand-painted them all white.

Next, I added the LED lighting to the shell. I use 2mm tower white LEDs from eBay @ 50 c 2mm White LEDs, 18000mmcd & Free Resistors#LED2W|eBay. For the cab rood Rotary Beacon I chose a T-1 Orange LED #E-199 made by International Light. They have a minimum order of 500 pieces, so I would be glad to sell as many as you need for



18: Loco shell with the walkways painted weathered black.





19: Front of the loco before hand-painting of details.

20: Front of the loco after hand-painting of details.



21: Champ and Harold King decal sets used to decal this Frisco GP40-2.

50 cents each. Contact me at: renapper@centurylink.net.

I used a 1000 ohm resistor with the tower LEDs and I used a 1000 ohm resistor with the orange T-1 LED. As indicated in diagram 23, the tower LEDs must have the rectangle area filed down so they will fit into the headlight opening in the cab roof. Paint everything but the front part of the LED light openings with black paint to eliminate the "glowing cab" effect (26-27 next page).

I drilled a hole in the center of the cab roof and installed the Rotary beacon after I installed the LED in the Rotary beacon casting. I super-glued it in place from inside the shell. Personal note: I prefer Bob Smith Industries superglues – I think they're the best on the market (25 next page).

I painted the areas inside the shell where the lights would go black as well. Be sure and let the black paint dry for about a day before installing the LED lights – I did not do that and I was sorry. The long lead on all LEDs is the positive lead: be sure and connect a blue wire to this lead. Connect the

Text continues on page 59.

Modeling Railroading Rules 1 and 2

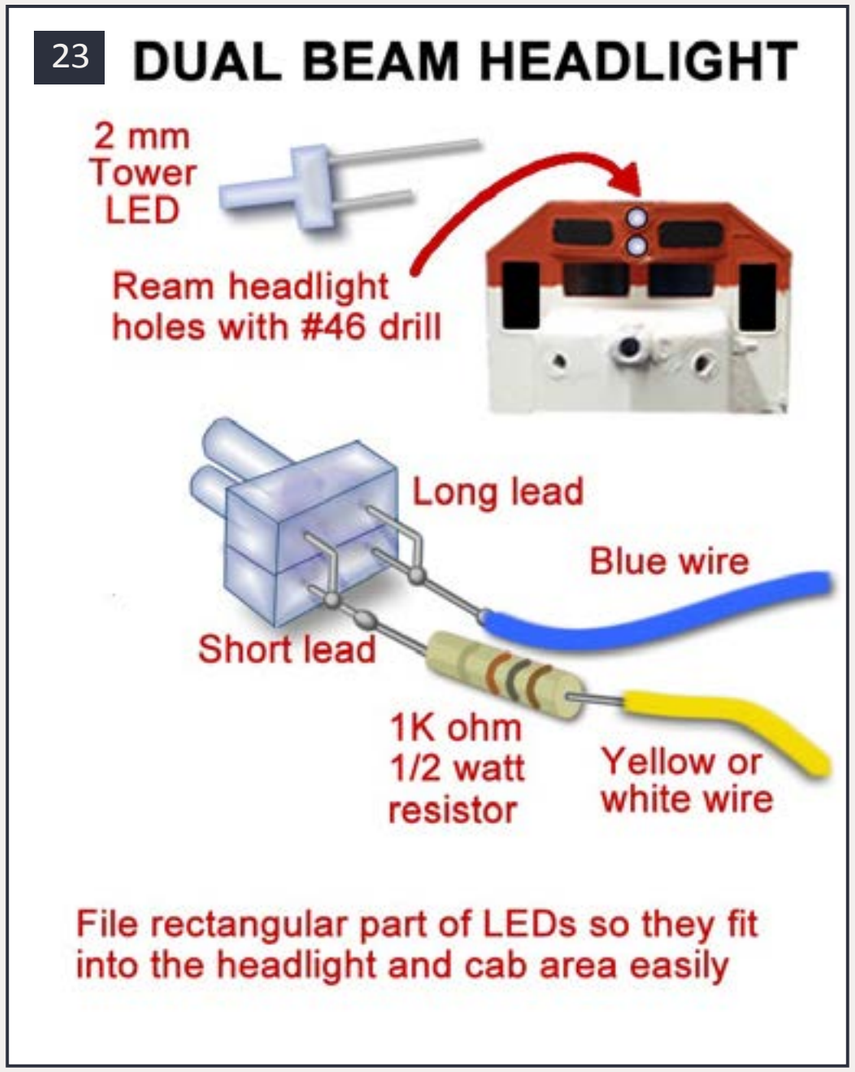
To any Frisco purists, don't complain to me about the Frisco coonskin on the low nose, just refer to rule 1!

Rule 1: It's *my* Railroad!

Rule 2: While an illuminating discussion of prototype history, equipment and operating practices is always welcome, in the event of visitor-perceived anachronisms, detail discrepancies or operating errors, refer to rule 1. ■

22: Loco with the number boards and decals added.
23: Diagram showing how the tower LED headlights are installed.







Richard Napper has been a model railroader for about 50 years. He models the Frisco, Missouri Kansas and Texas, Missouri Pacific, and Chicago Rock Island and Pacific. He is modeling the Kansas City area, including Sheffield Steel on the Frisco Northern division, Kansas City subdivision in HO scale. He enjoys scratchbuilding using styrene, since there are almost no commercial structures for the Frisco railroad. He is a life member of the National Model Railroad Association, Mid-Continent Region, Kansas Central Division.

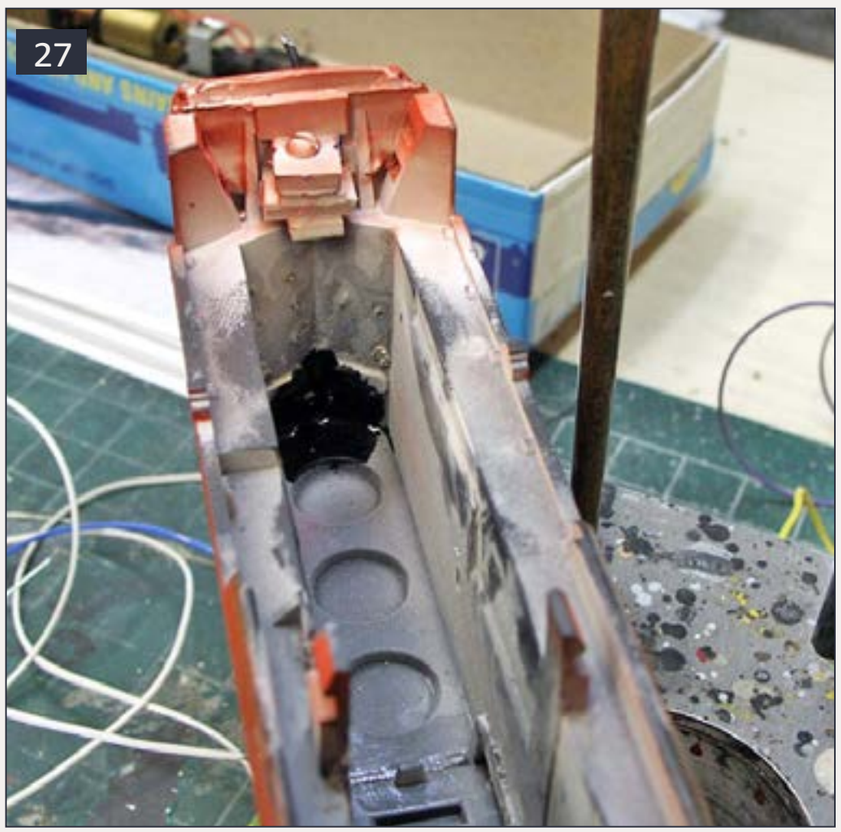


24: Tower 2mm white LED from Miniatronics.



25: Rotary beacon installed in the cab roof.





26-27: Here are the areas that need to be painted black on the inside of the shell.

Text continued from page 57.

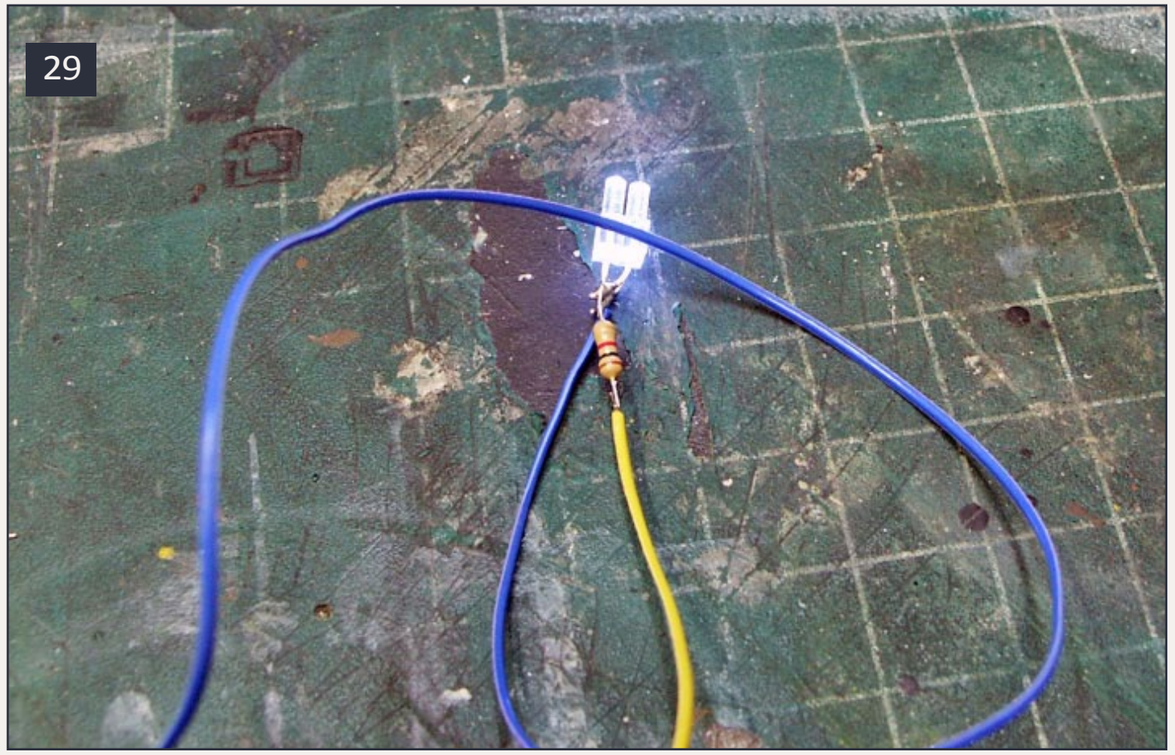
resistor and the correct color wire to the negative lead of all the LEDs. See photos 28, 29, and 30 for pictures of how the headlight LEDs are wired.

Live and learn: I should not have installed the rotary beacon in the cab roof until after I had put the front headlight in place, since it would have made things easier. I twisted all four blue wires together and then soldered them to the socket.

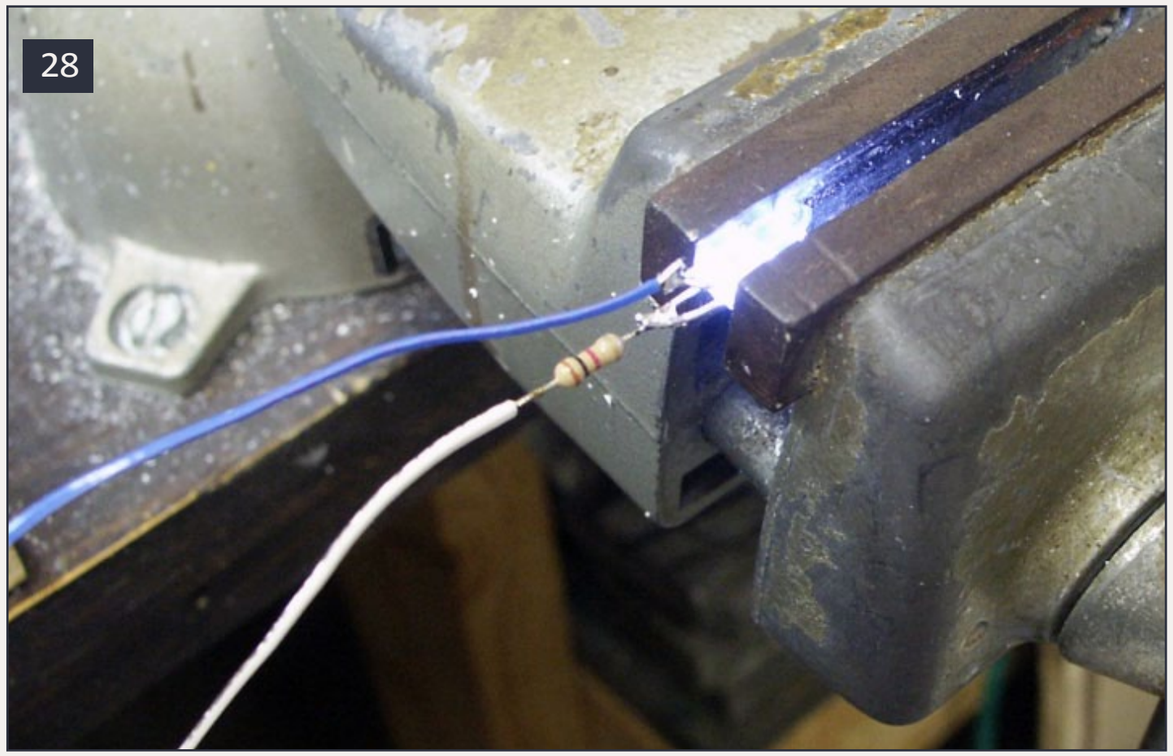
I then soldered the white, yellow, green, and purple wires to the appropriate pins on the socket. Using the plug and socket makes it possible to unplug the lighting and to easily remove the shell completely from the frame (31 next page).

With all this work complete, I placed the shell on the frame and put the engine on my DCC test track, applied power, addressed locomotive number 770, and tested all light functions and motor control (32 next page).

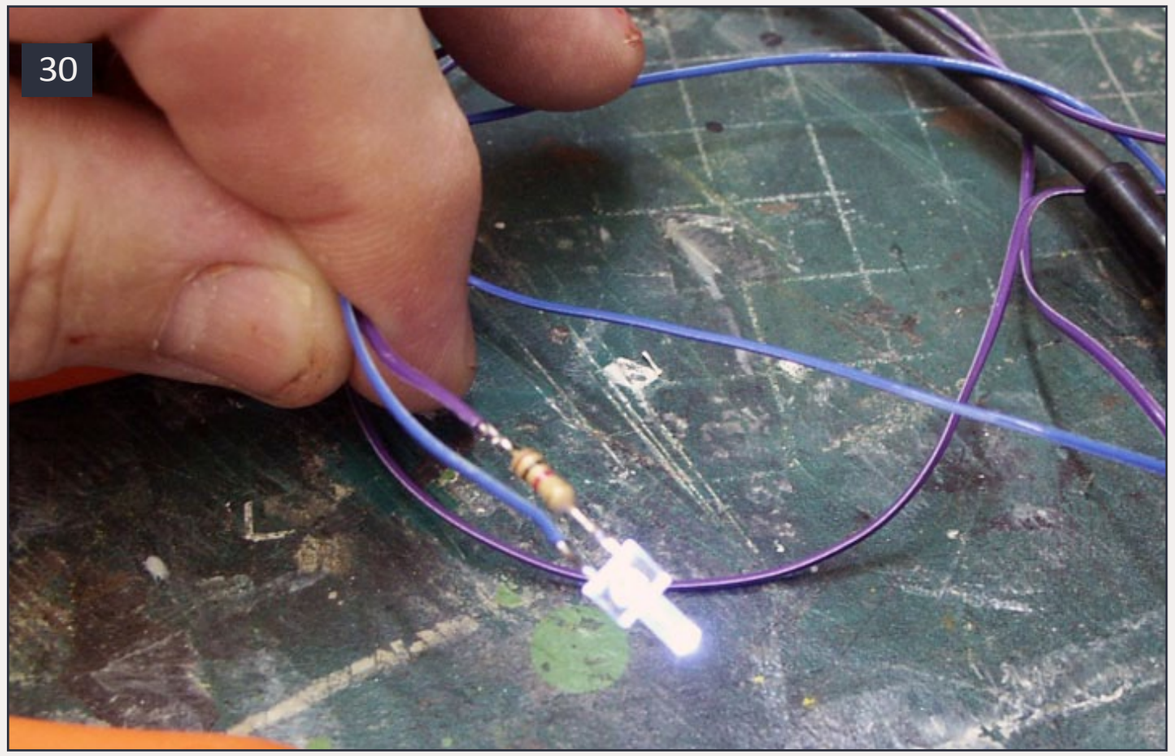
Everything worked correctly! I like a headlight that shines down the track like it should instead of those anemic little bulbs. I use pure white LEDs for all lighting, except for the Rotary beacon which uses an orange LED. You can use a sunny white or yellow glow LED if you wish, but I personally do not like them (refer to rule one again).



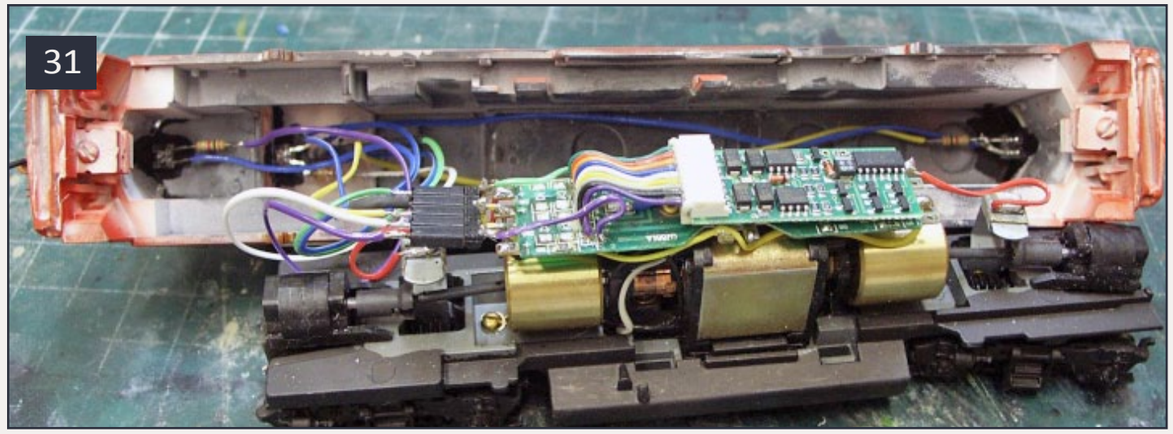
29: Wiring for front headlight LEDs.



28: Wiring for front headlight LEDs.



30: Wiring for the nose MARS headlight.



31: Completed shell with the headlight wired to the front socket. Using this socket makes it easy to disconnect the headlight wiring and completely remove the shell from the chassis.

For window glass I use Microscale Kristal Klear, it is applied with a tooth pick while the shell is lying on its side or front and back. I like the Microscale Kristal Klear because it puts the window glass in the window and not in front or behind it.

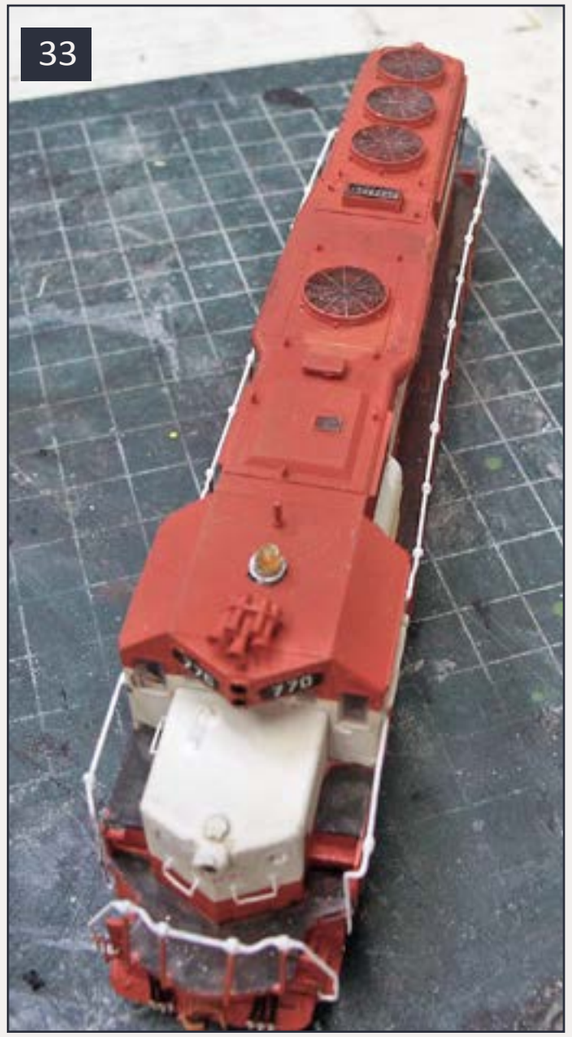
I do not like the new plastic handrails that Athearn is now providing for its diesels. Yes they are scale size, and look pretty, but they break way too easily for my taste. Therefore I installed the old metal handrails on this diesel. They may be oversized but they will stand up to the wear and tear common on an operating layout.

The old Athearn hand rails are 0.020" steel piano wire. After installing the handrails, I hand painted the handrails with White and the stanchions Mandarin Orange (33 this page, 34-36 next page).

With that, I declared my Frisco number 770 now finished. Remember the Frisco! ☑



32: Finished loco going through its paces on my test track.



33: Finished loco, roof details view.

Reader Feedback (click here)



34: Finished Frisco GP40-2 loco from the front.



36: Finished Frisco GP40-2 loco from the engineer's side.



35: Finished Frisco GP40-2 loco from the fireman's side.





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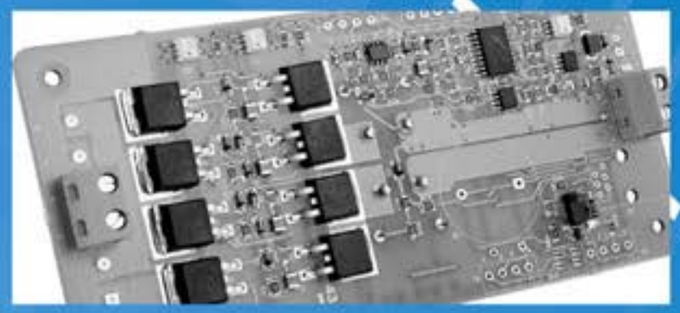
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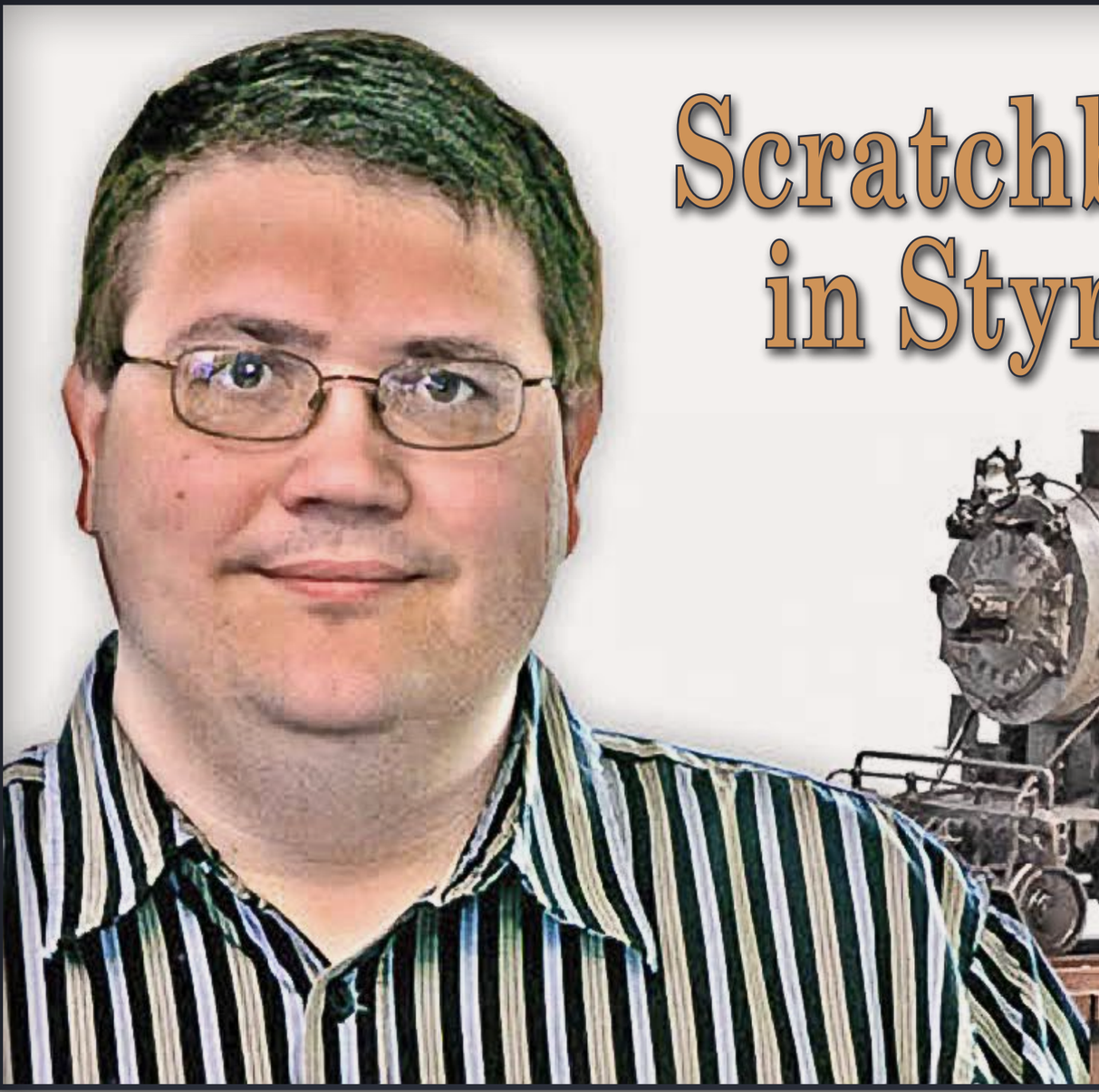
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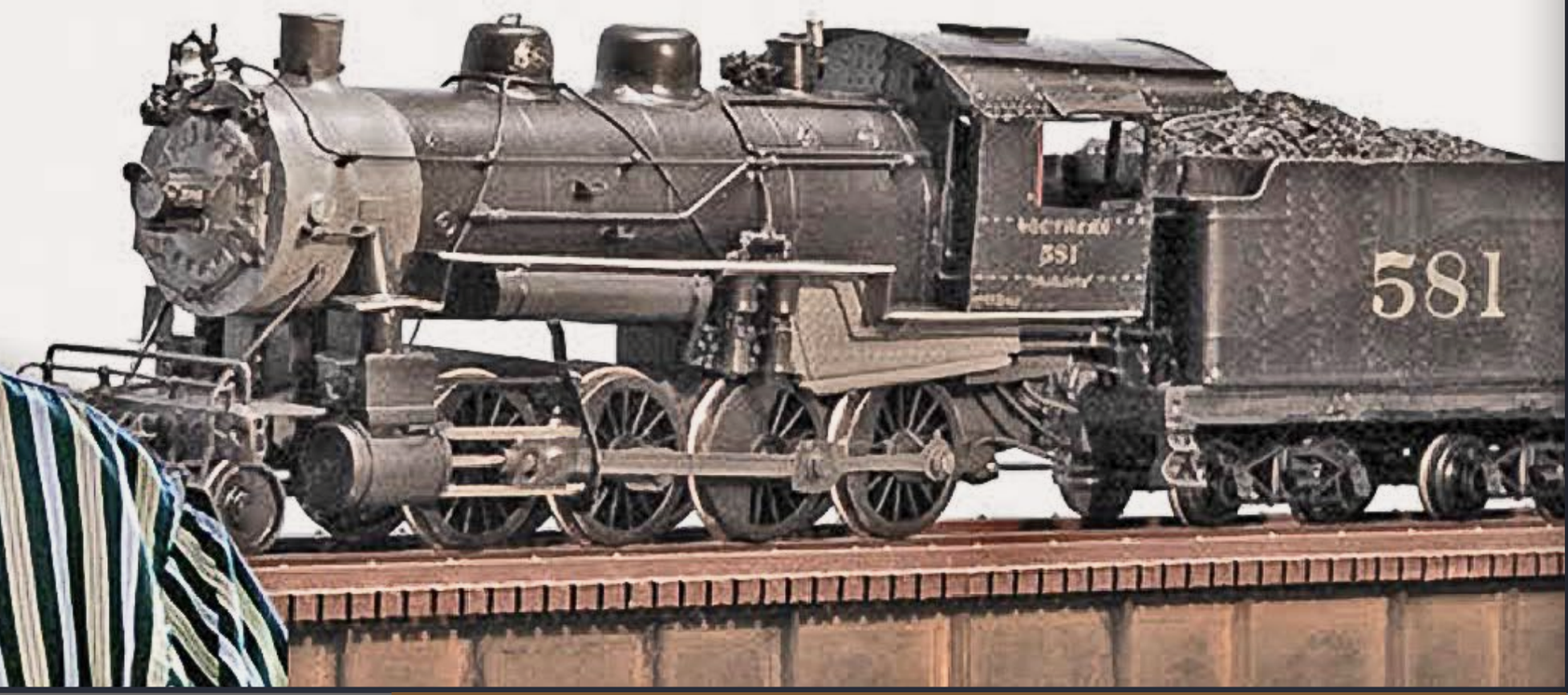
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Scratchbuilding a Steam Loco in Styrene, Part 4 (Finale)





Building the cab and tender, either in brass or styrene ...

– Kenneth Rickman
Photos by the author

In the previous parts of this series, Ken showed you the prototype for this steam loco, the process of building a steam loco boiler out of styrene, adding details to the boiler, improving the stock chassis to perform better and how to detail the pilot deck and cylinders.

Here in Part 4, Ken tells how he built a new cab and tender out of sheet brass. However, Ken built this loco before rivet decals appeared on the market. Thanks to rivet decals from Archer and Micro-Mark, it's now possible to do what Ken did here in brass but do it entirely in styrene. To that end, Ken has added a sidebar on building a cab out of styrene using the new rivet decals, to show you how it's done.

In this final part, Ken also provides side comments on painting the loco.

Ken Rickman started with a Lionel train set under the Christmas tree at two years old, and has always been fascinated by steam locomotives. Ken models primarily in HO, although he's dabbled in N, O, On30, and Fn3, as well as HOn3.

Ken's currently modeling and researching the Danville & Western Ry., a Southern-owned Virginia short line.

Ken is 32 years old and works as an engineer for Norfolk Southern. He has been with the NS for 14 years, starting as a conductor and graduating to engineer in 2005.

Ken's wife Cindy is a constant support as he spends time on research and modeling projects. His other hobbies include cooking, woodworking, and photography.

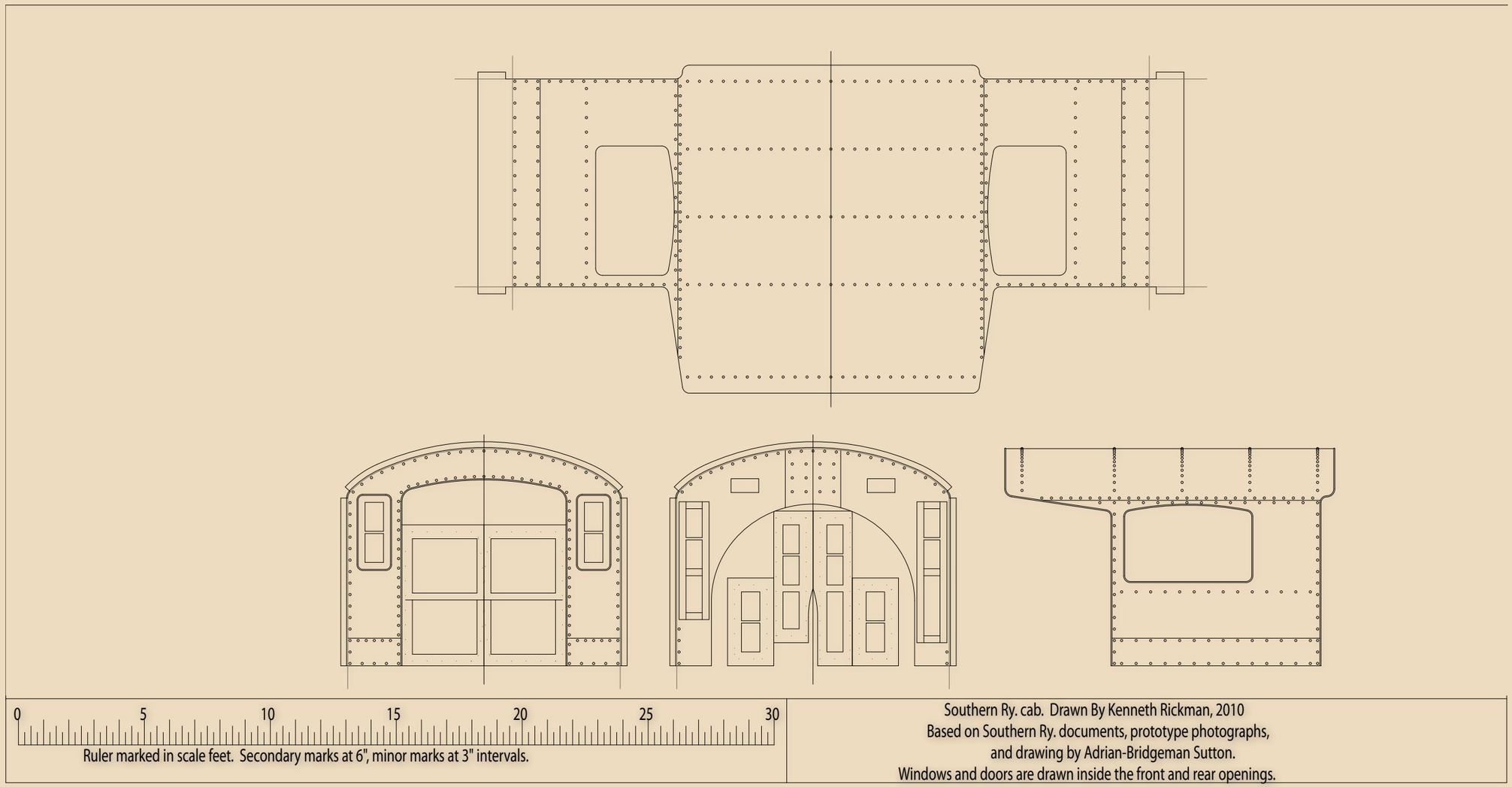
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(click here)

STEP 36: Building the Cab in Brass

Building a cab is a great way to learn some simple brass working techniques, and is very similar to building a tender. You will need an accurate plan which shows the pieces of the cab laid out flat, and ideally the locations of all the rivets. Start by printing out the plan and gluing it to a sheet of .005” brass using spray adhesive or rubber cement.

Use brass instead of styrene, because any styrene thin enough to form the cab roof or emboss rivets would be too thin to have enough strength. You could of course build up multiple layers of styrene, but brass will still give a better looking, stronger cab.

Here’s a scale drawing of the cab for this steam loco. You can use this drawing to make a scale print-out you can glue onto the brass or print out onto styrene sheet. Use the scale ruler on the edge of the drawing to make sure your printout is scaled properly.



Ruler marked in scale feet. Secondary marks at 6", minor marks at 3" intervals.

Southern Ry. cab. Drawn By Kenneth Rickman, 2010
Based on Southern Ry. documents, prototype photographs,
and drawing by Adrian-Bridgeman Sutton.
Windows and doors are drawn inside the front and rear openings.

Embossing the Rivets

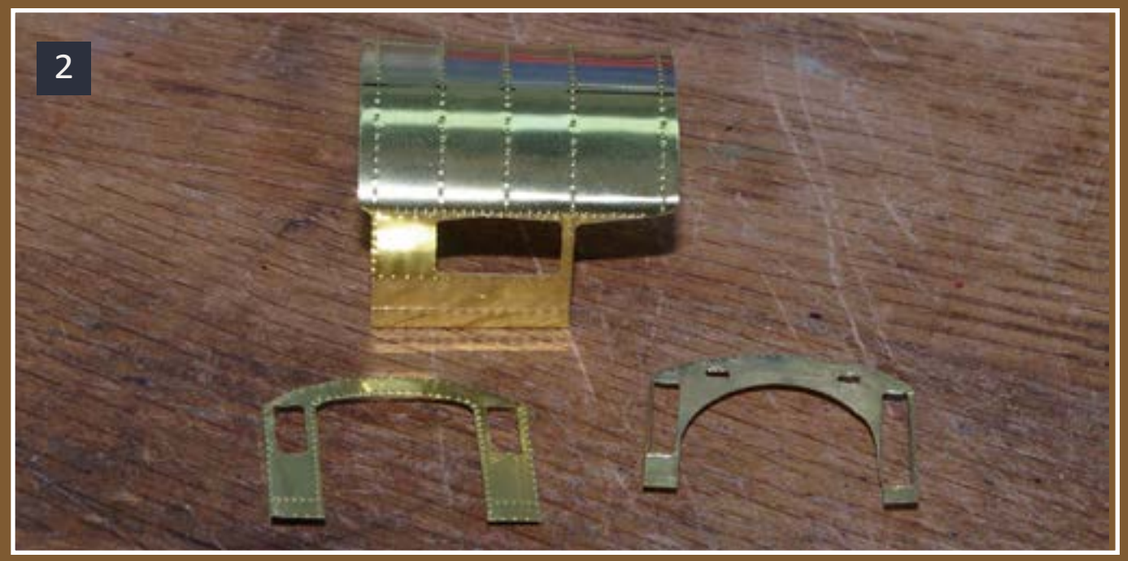
Several parts of a steam locomotive have numerous rivets, and there are several options on how to make them. Archer Transfers (archertransfers.com) sells rivets which can be applied like decals. Micro-Mark and others sell various punch wheels which can be run along a straightedge. Northwest Short Line sells the Sensi-Press, which can make accurate rows of rivets.

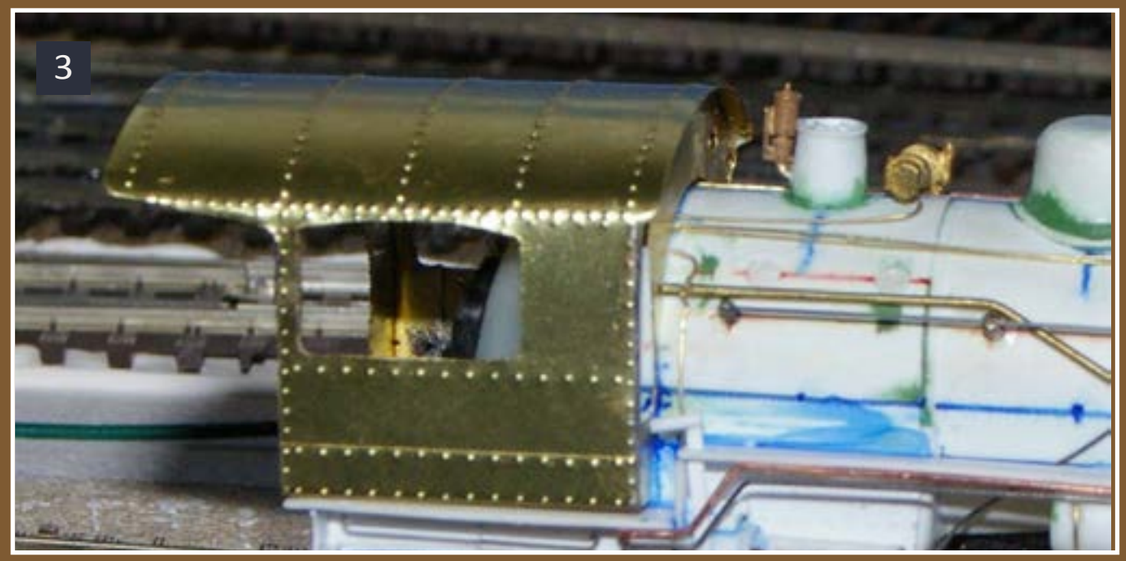
The simplest, least expensive option, and the one which I used, is to make a punch from a sewing needle or small nail in a pin vise. Shape the tool into a slightly blunted sharp point. On a hard, smooth work surface (glass or metal work well), stack a sheet of paper and your brass work piece, with plan side up. The thickness of the paper determines the height of the rivet, and the hard surface prevents punching through.

Individual rivets can be embossed freehand, and rows can be made by holding a straightedge against the line, and using it to guide the punch. Use the rivet punch to mark things like fold lines, center lines, etc. which you will want to be able to see on the other side of the sheet.

After embossing the rivets flip the brass over. Scribe any seams (such as between the sides and roof), mark the centerlines with a fine Sharpie®, and flip the brass plan side up again.







1: A quick paper mock-up is an easy way to make sure everything fits. It's also a good way to fine-tune the fit of the cab on the boiler, so that you don't cut out too much when you start cutting metal.

2: These are the main pieces of the cab, with rivets embossed, openings cut, and bent to shape. The curved ends of the eaves fall on the sharpest bend in the roof, and it's easier to get a smooth curve if you finish the cut after bending the roof.

3: It looks a lot like a cab, and it fits well. That was easy!

Cutting Out the Blank

With a sharp blade and a straightedge, scribe the edges of the pieces, but do not cut through the brass. Drill holes in the corners of the windows and scribe the outline. Cut out the pieces using good scissors, leaving the tabs, windows, and extra material around the eaves.

If you don't leave material around the eaves, you won't be able to roll the edges smoothly. Also leave the opening for the boiler either solid or with extra material for now, so that it can be adjusted to fit later.

You can scribe the cab doors (for a flush mounted door), cut them out completely (for a recessed door), or leave them attached on one side to model the doors partially open (if you leave the doors attached, do all the work described below before soldering the cab together).

Forming the Curves and Solder Tabs

Fold the tabs toward the inside of the cab, using the scribed lines to guide the fold. To make the tab at the top of the front and back walls, cut it into short pieces and bend each one over individually, then dress the curved shape lightly with a file.

To form the curved roof, lay the flat piece with the outside down and on something with a little give to it (like a cutting mat, soft wood, or several sheets of paper), and use a knife handle or other firm round object like a rolling pin to gently curve the roof. If that does not give it enough curve, hold the rolling pin against one eave and pull the side up, letting the pin slide over the width of the roof.

To form the eaves, gently form the sheet over a 1/8" diameter rod, such as a drill bit or needle file handle. The curve should start at the top of the side. Work slowly and carefully, and keep checking the shape against the drawing and the font and back walls. Once the roof is formed and the tabs on the front and rear are all folded, finish cutting the windows, doors, and eaves to final shape. Use needle files to finish the curved portions.

Making Doors

Most cab doors consisted of a two-panel frame which fit inside the cab, looking a little recessed when closed. The lower panel was solid, while the upper panel was glass, and sometimes contained a hinged window. The model's doors are built up in two layers. To cut such small openings, use a very sharp chisel blade to chop through the brass. Small corners can be cut with a pointed blade. Lay the work on a block of hardwood, and use a small hammer to gently tap the blade through the brass.

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STEP 37: Soldering the Brass Cab Pieces Together

Solder the layers together and to the inside of the front wall.

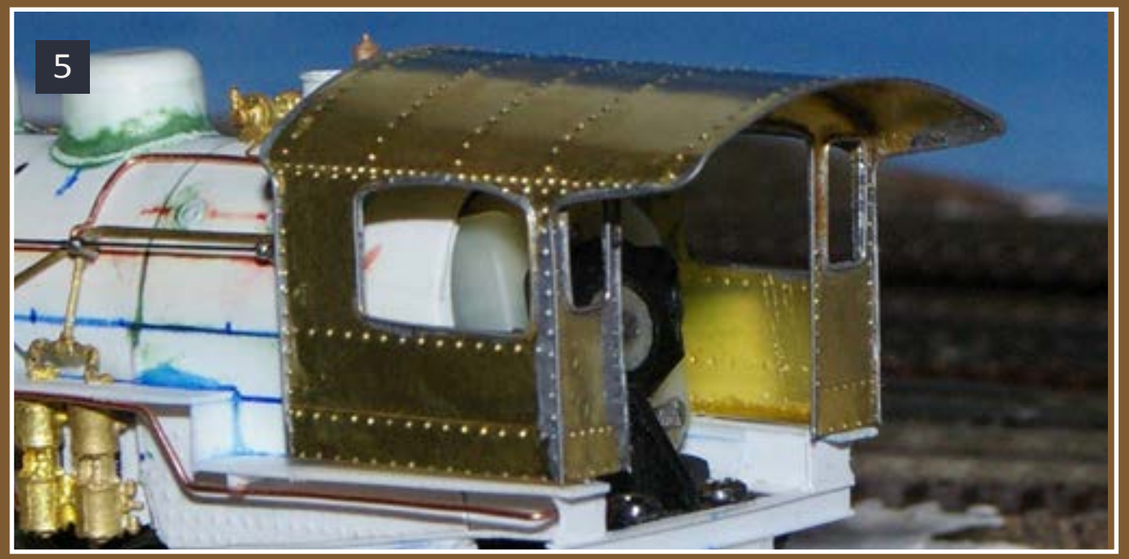
Check that the parts fit together properly, then tin the tabs and mating surfaces. Using wooden clothespins as clamps, hold the pieces together and begin soldering them, working around the seam from one end to the other. If you have trouble keeping the curved top portions of the front and rear flat, solder the two sides in place, then work on the roof joints, doing a little at a time and adjusting the shape as you go

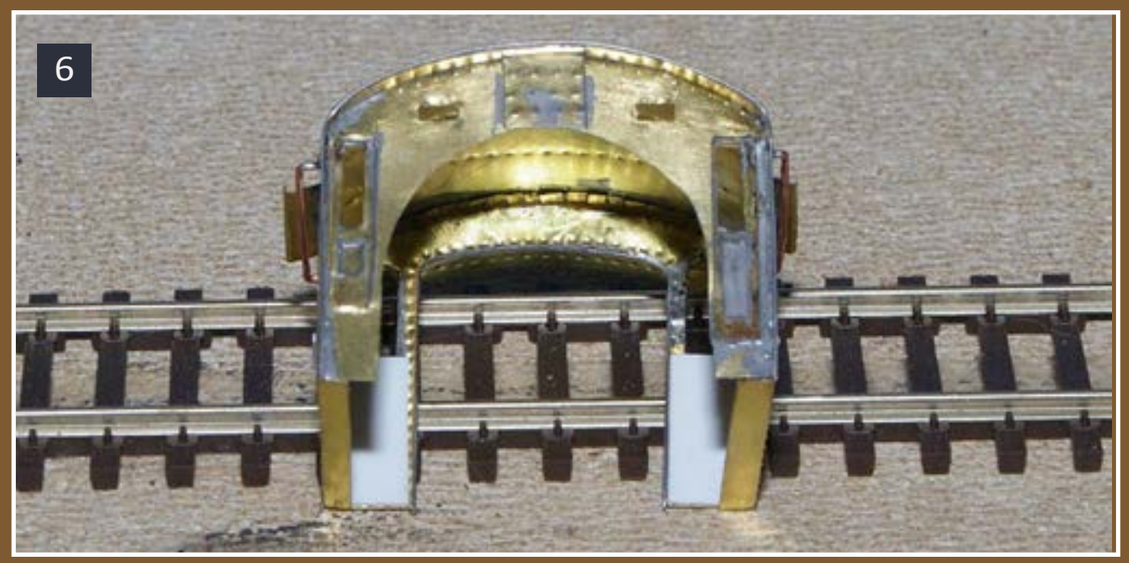
Adding the Bead

To form the decorative edge bead, solder 28 gauge brass wire to the corners, and around the window openings. For the edges, start at one corner and work in short segments, bending and soldering as you go.

I find it helpful to carry a little solder to the work on the tip of the soldering iron, since one hand is needed to hold the free end of the wire. The bead around the window openings is cut and shaped on the workbench, since it would be almost impossible to form a closed loop in place without the seam showing.







4: With the bead soldered in place the cab gets a lot stiffer, and it looks a lot more complete.

5: Soldering the beads around the rear windows is a little finicky, but the results are worth it.

6: The rivet plate at the top center is in place, as well as the doors. You can also see the way the rear wall was cut and bent into tabs to solder to the roof. The bottom of each side is bent in to give a surface to glue or screw to when mounting the cab.

STEP 38: Making the Drip Rails, Sunshade, and Hand Rails *Continued ...*

The drip rails run the full length of the cab on either side of the roof, and are angled slightly down toward the rear. They're nothing but scale 1" angles, and they're made the same way as the rolled edges on the sunshades.

Peen over the edge of a piece of brass the length of the roof, then cut the resulting angle from the sheet and repeat. Solder them in place, referring to prototype photos for placement. Some engines didn't have them, so you may leave them off if you prefer.

Sunshades

There were a few different designs of sunshades. Some were sheets of canvas hung on metal rods, some were neat metal constructions with end caps, and some were apparently just pieces of sheet metal with a raised lip. The last is what I chose to make, as it looks good and is easy to make. Cut two pieces of brass, a scale 15" X 48".

To make the raised lip, hold each piece in a pair of pliers with just a little bit of the edge protruding. If you have a machinist's vice, it would make things easier, but pliers work. Use a metal rod (such as the handle of a needle file or hobby knife, or even a nail) to peen over the edge against the jaws. When you're done, tin the back sides (away from the rolled edges) and solder the shades to the roof, centered above the windows.

Carefully bend the shades up a little, giving them a bit of a curve. If they're a bit irregular, that's okay, as long as they're on straight

Hand Rails

The handrails are made to fit the full length of the cab side. Make a "Z" bend in a piece of wire, then flatten the end in a vise or pliers. Press a single rivet head from the back side, then cut the excess material off and repeat for the other end.

The handrail should just fit between the beads on the front and rear corners. Make another for the other side, then solder them in place. Many K's had a small grab iron protruding forward from the front corner, mounted to the top of each side. Refer to photos, and make them the same way.



7: The drip rails are angled down toward the rear, to help channel rain away from the doors and windows. On the model, they're just soldered into place, positioned by eye.

STEP 39: Adding Styrene Cab Details

Now you have to decide how you want your windows positioned. The rear windows slid down into pockets in the cab wall, and the side windows slid forward. Most in service photos show the windows wide open for ventilation.

That fact, along with the fact that it is much easier to model an open window, drove the decision to have all the windows open, with just the edges of the frames showing. I chose styrene because it's what I have on hand, and because it's easier to cut, but the following parts can of course be made out of brass and soldered into place.

Start with the sides. Cut rectangles of styrene large enough to fit snugly on the inside of the walls, and then remove a smaller rectangle from the top rear corners. The top of the remaining portion should be flush with the bottom of the window, and the taller part up front should be exposed about a scale 4" or so, depending on how wide you want the windows to be open.

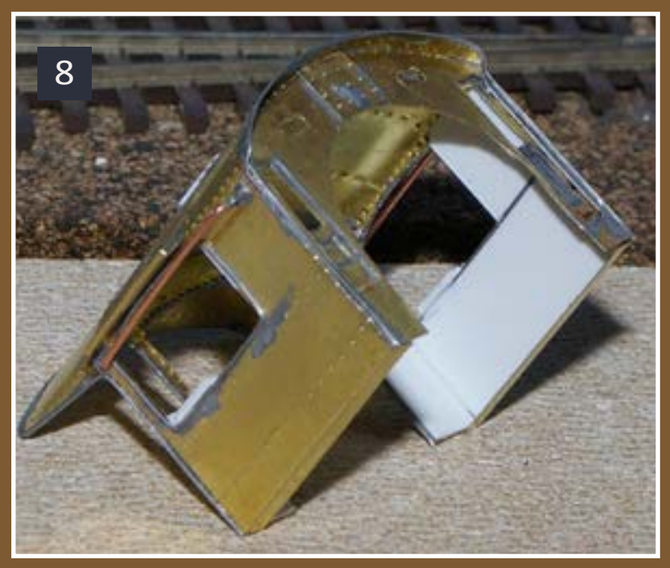
You can of course cut the window openings in this sheet instead, if you want to model a window which is closed or partially open. Glue the sheets to the insides of the cab walls. The rear walls are simpler, being just rectangles of styrene wide enough to fill the openings and tall enough to show about a scale 4" or so in the bottoms of the windows. This gives a very basic cab interior.

More detail could of course be added, and scribed siding could be used to model the interior walls and roof more accurately.

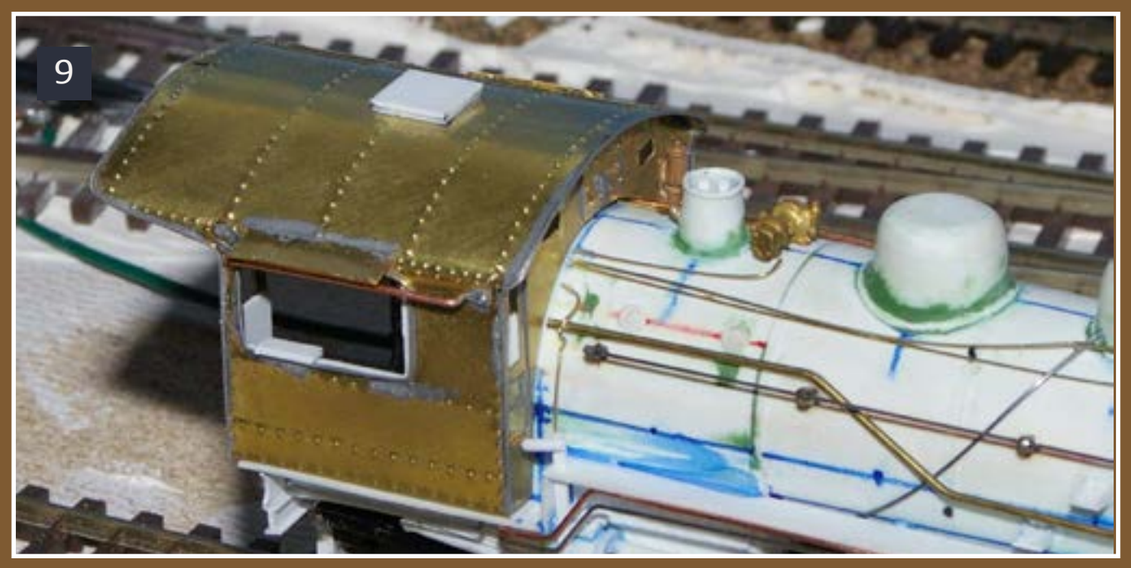
The arm rests are little pieces of .030" styrene, a scale 18" long by a scale 4" wide, glued to the rear of the window openings. Some engines had arm rests which were hinged on the inside, so they would not be visible when the windows are closed, but would protrude from the openings when the windows were open.

Most of the K's had two vents, but some (including, apparently, #581) only had one. For those needing two, make them both the same way. The second vent was in front of the one described, about twice as wide and right against the front wall of the cab.

If you want to model an open vent, you'll have to use a bit of creativity and patience to cut out the hole in the roof and make the raised lip. You'll also want to use brass, as the parts will be a bit thin.



8: I added styrene to the inside of the cab to hide the back sides of the rivets. It also simulates the wooden window frames.

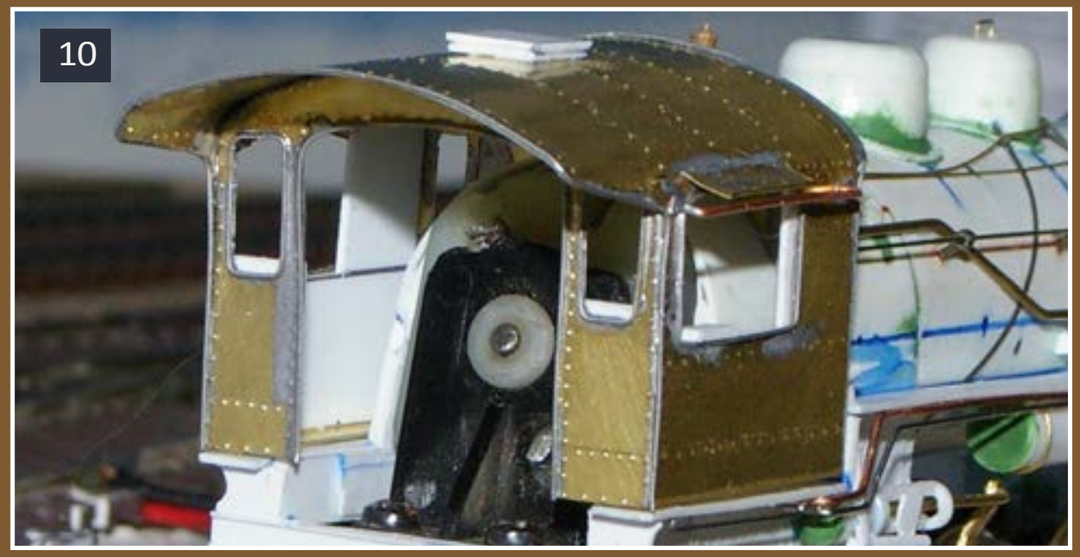


9: The cab vent is a lot easier to model if you leave it closed. You can just see the black marks on the roof to indicate the centerline to keep the vent centered.

STEP 39: Adding Styrene Cab Details *Continued ...*

Modeling the vent closed is easier, since it can be solid. Cut two squares of .020" styrene, a scale 2'-0" on a side. File or sand one until it is about a scale 23" square, then sand a gentle curve into one face so that it sits flush on the curved roof) and file a notch across it to clear the rivets.

Glue this piece in place, centered over the windows and of course on the centerline of the cab. Glue the larger piece on top, positioned so that it overhangs the bottom piece evenly all around.



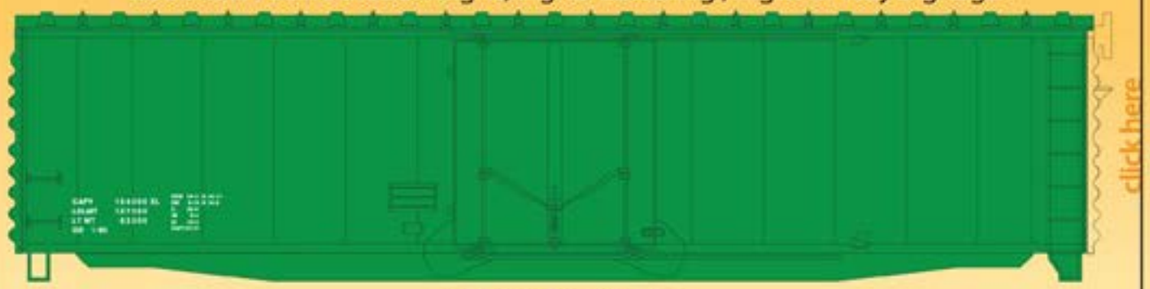
10: The rear windows on the prototype's cab slide down to open. As with the side windows, I modeled them open to make my life easier.

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STEP 39A: Building the Cab in Styrene

When I built my model, I used brass for the cab and tender because I did not feel that styrene could be made strong enough without being too thick to be prototypical. I punched the rivets because there was no other option aside from photo etching, and rivet decals were relatively unknown at the time.

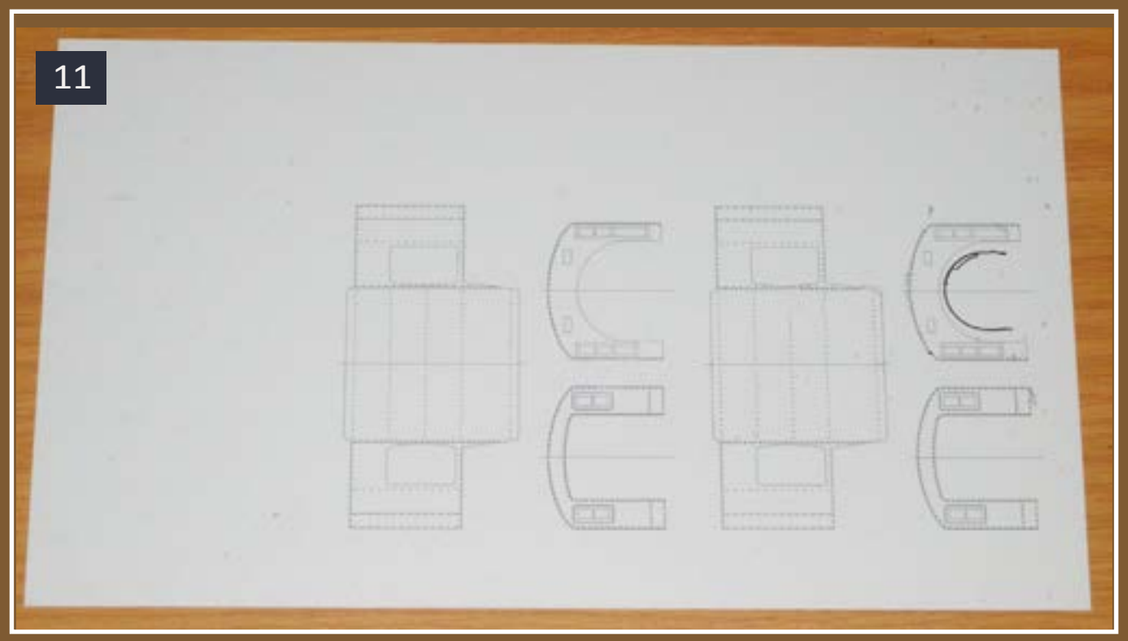
Since then (and partly because of my experience building this model) I have become more comfortable and confident working with styrene, and I had a couple packages of rivet decals just waiting for a project. Since I need a cab for another locomotive I am building, I decided to see whether it could be made out of styrene, and how it would compare with the brass version.

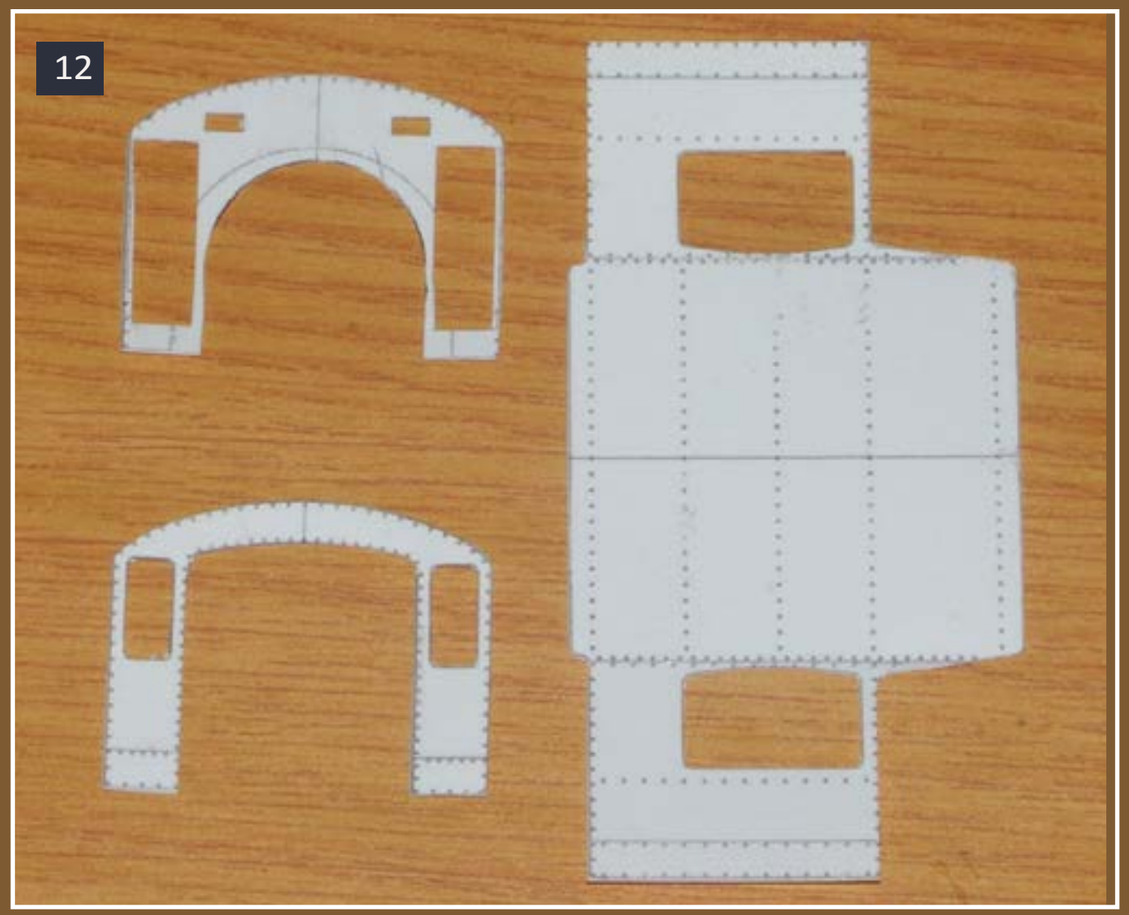
I chose to work with .010" styrene sheet, feeling that it would be a suitable compromise between thin and strong.

Because styrene is white and fairly flexible, I simply ran it directly through my printer, rather than printing on a sheet of paper as I did with brass. I measured the piece that I had available, and defined a custom paper size to match. My printer automatically detects the paper type, but I have had good results in the past using the transparency or gloss photo paper settings on older printers.

The key when printing on styrene is to let the ink dry completely, which can take a day or more. You can see in the photograph that I did not wait long enough, and smudged some of the lines. Fortunately, I was still able to see them well enough, but if I had to start over, a little alcohol will usually remove the ink for a clean slate. I chose not to seal the ink with a clear coat because I knew I would be gluing to the surface later, and I did not want to interfere with that in any way.

Just as with the brass, I cut the three main pieces out with a sharp hobby knife. Rather than following the plans exactly, I cut the boiler opening smaller and doors larger to suit the locomotive for which this cab is destined.





11: The .010" styrene after printing. I have marked the front of one cab for a smaller boiler opening.

12: Here are the three main parts of the cab. Very little cleanup will be needed.

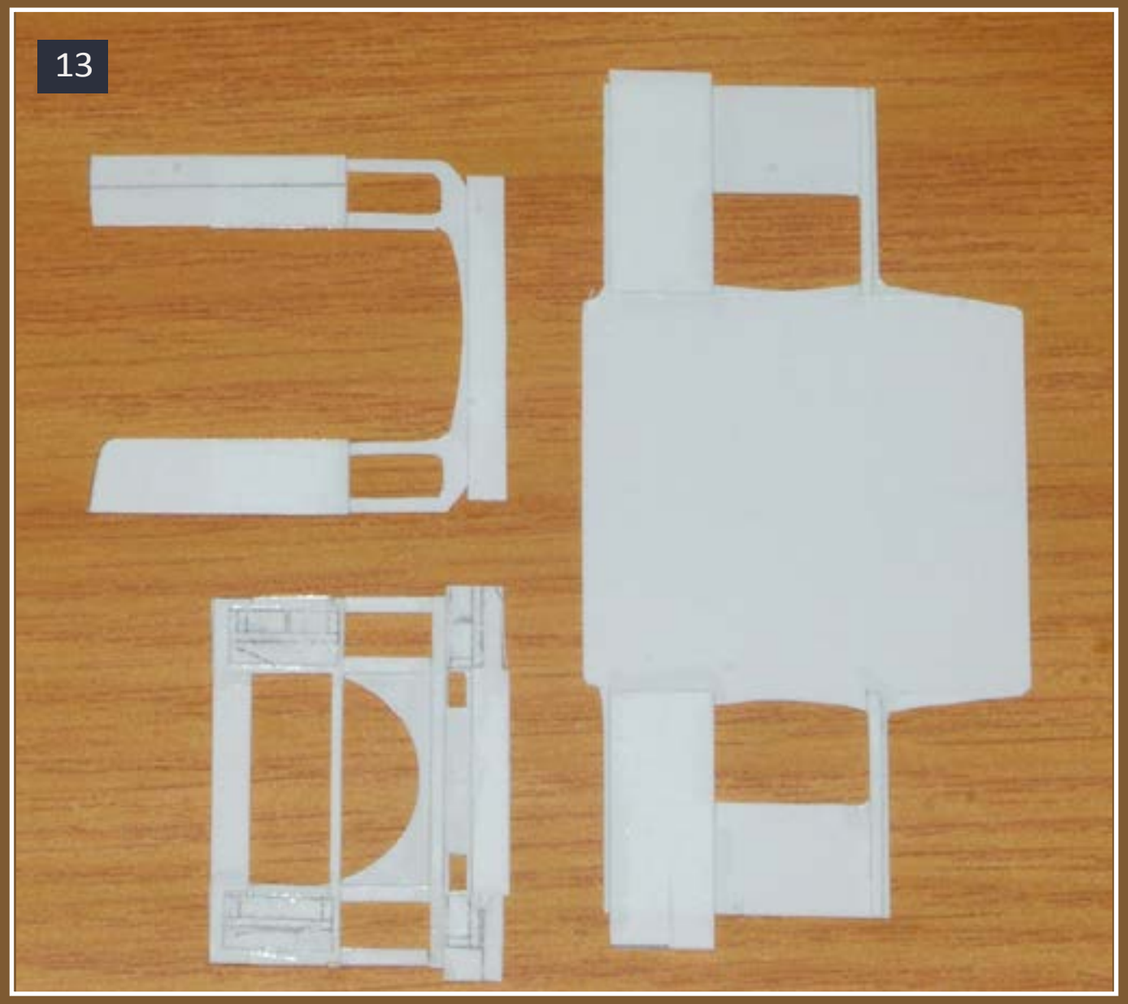
STEP 39A: Building the Cab in Styrene *Continued ...*

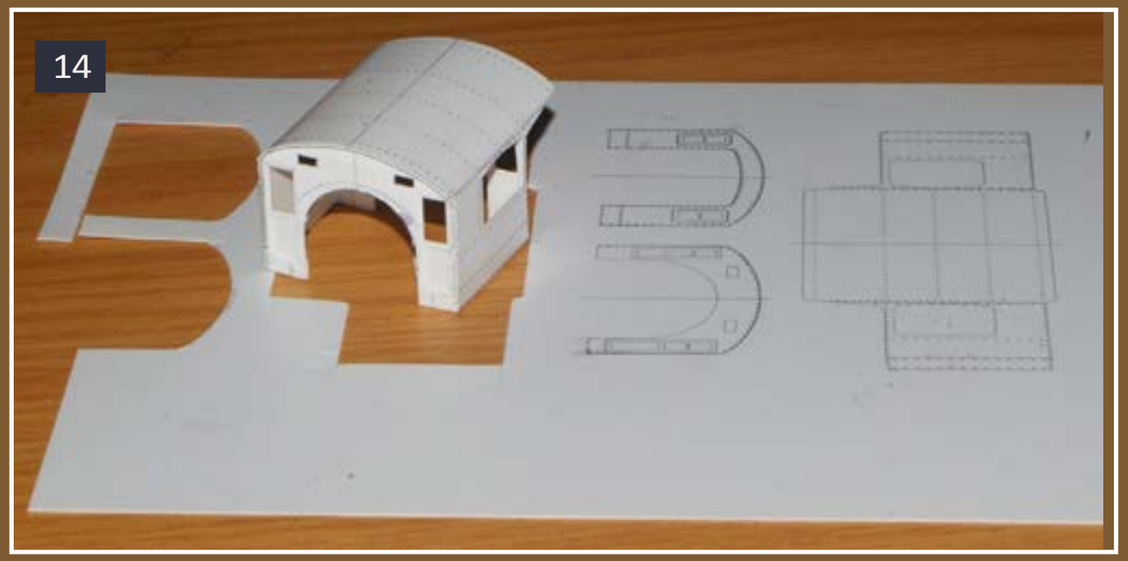
Unlike the brass cab, I cut the pieces out exactly to their finished size before bending, and I left no tabs since styrene cannot be folded to sharp angles without breaking. I also scribed the seams along the lower sides of the cab and between the sides and roof, using the back of my knife blade.

The .010" styrene I used is not very strong, especially when cut into very thin sections. The areas around the doors, in particular, were quite weak. To strengthen them and to form the doors themselves, I built up the frame and panel doors with various styrene strips (cut from the scraps left after cutting out the walls), leaving them long and trimming them once the glue dried.

I took care to leave the area around the windows just a single sheet of styrene, so that I can glue in "glass" after painting and have it nearly flush. I built up the side walls as well, simulating the open windows as I had done with the brass cab.

I made sure to leave the inner side pieces recessed from the edge about .020", so that they would form a notch into which I could later glue the front and back walls. Finally, I reinforced the tops of the front and back walls to give a little more strength when gluing the roof in place.





13: The internal bracing has been glued to the backs of the parts. It will be trimmed to length after the glue dries completely.

14: The cab is glued up and sitting on the sheet from which all the parts were cut.

STEP 39A: Building the Cab in Styrene *Continued ...*

When the glue had completely dried, I trimmed everything to length and did any final adjustments to make sure everything fit together properly.

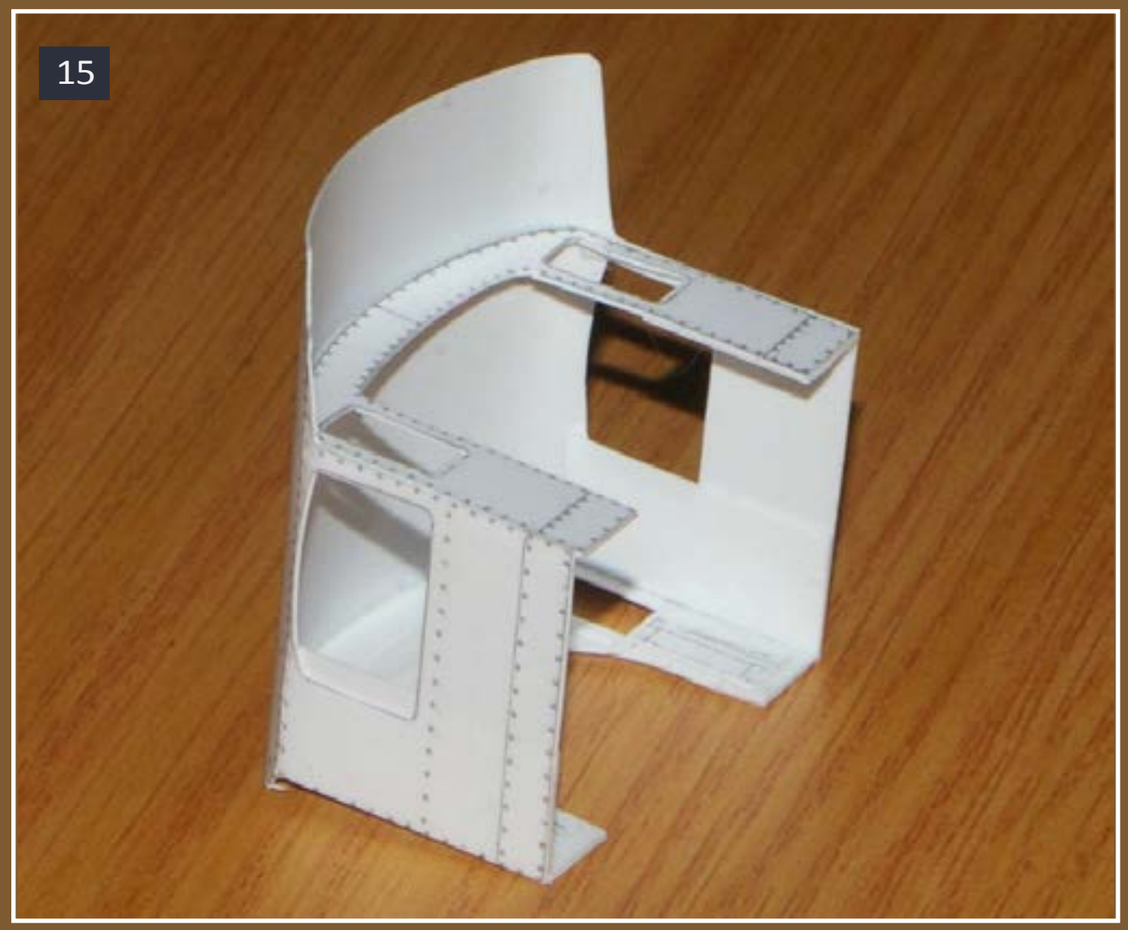
I bent the roof and formed it much like the brass version, although the styrene does not take and hold a curve as well. My goal was to predispose the styrene to bend into the final shape so that it would not crease or break when glued around the front and back walls.

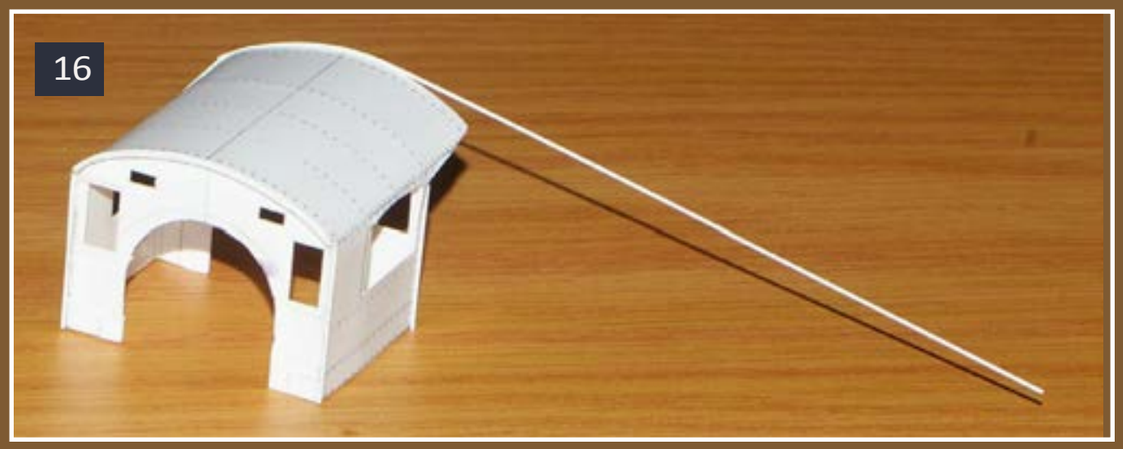
I glued the front wall in place first, starting at one corner and working around the seam. The notches in the side walls formed perfect guides to ensure that it went together squarely, and the thin styrene of the roof took the curve without difficulty. The rear wall went in as easily as the front, again registering nicely with the notches and forming a strong joint.

With the basic cab formed, I started working on the corner beads. Much as I did with the brass wire, I used .020" styrene rod and worked from corner to corner. I made the corner vertical pieces separately, so that I would not have to make sharp reverse curves in the fragile styrene rod.

To get the sharp bends around the corners of the cab roof and windows, I bent the rod around a small pair of needle nose pliers, being careful not to pinch and flatten it in the process. I formed the broader curves along the roof by gluing one edge and then working across to the opposite side.

Forming the beads around the windows was a bit tricky, and I decided to leave the rod long across the top and trim it to fit. I used a very sharp hobby chisel with my finger (a piece of wood might have been a bit safer!) inside the cab to press against, carefully slicing through the rod. I chose not to put a bead around the rear windows, due to the difficulty that it presented.







15: Looking inside the cab from the rear, you can see that the back wall did not line up perfectly. Nothing that a little sandpaper cannot fix later on.

16: The corner beads have been glued in place, and I am working on the bead across the rear of the roof.

17: The bead around the cab window was partially glued in place, and then trimmed to fit.

STEP 39A: Building the Cab in Styrene *Continued ...*

One of the really nice things about working with styrene is the ease with which it can be modified. I discovered at this point that I had made my cab door too large, and it was an easy job to fill in the openings a little, with a little putty to hide the seams. I then added a “floor” to the cab for additional strength and to hold it square, using pieces of .040” styrene cut to fit.

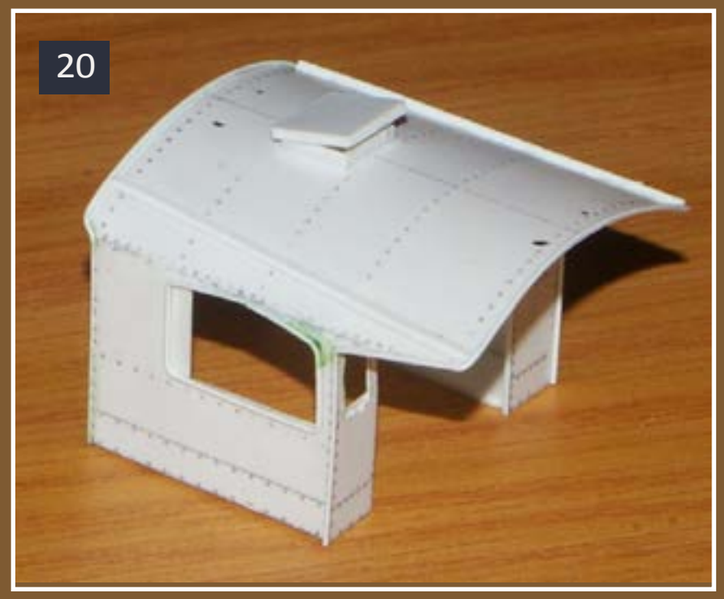
With the body of the cab finished, I turned my attention to the roof. After going back and forth for some time, I finally decided to model an open ventilator, and very carefully cut a scale 2’ square hole between the middle rows of rivets.

It would have been far better to cut this while the roof was flat, but since it was an afterthought I had to improvise. I used a very sharp knife, again with my finger inside the roof, to gently slice almost completely through the roof, and then finally piercing the corners and finishing the cuts after my finger was out of the way.

The body of the ventilator is a simple box glued in place one piece at a time, starting with a .040” thick front and .010” thick sides and back. I lightly sanded the front edge to slope toward the front of the cab, and glued a .040” cap in place. I don’t know how much strength it adds, but I also glued a sliver or .010” styrene inside the hatch at the rear to simulate the handle and bracket which would have held the prototype hatch open.







18: Here you can see the hole in the roof for the ventilator, as well as the gutters, the floors, and the patched doors.

19: With apologies for the overexposed photo, here you can see the body of the ventilator, with the extra thick front wall.

20: The ventilator roof is simply glued on top, completing the construction of the cab.

STEP 39A: Building the Cab in Styrene *Continued ...*

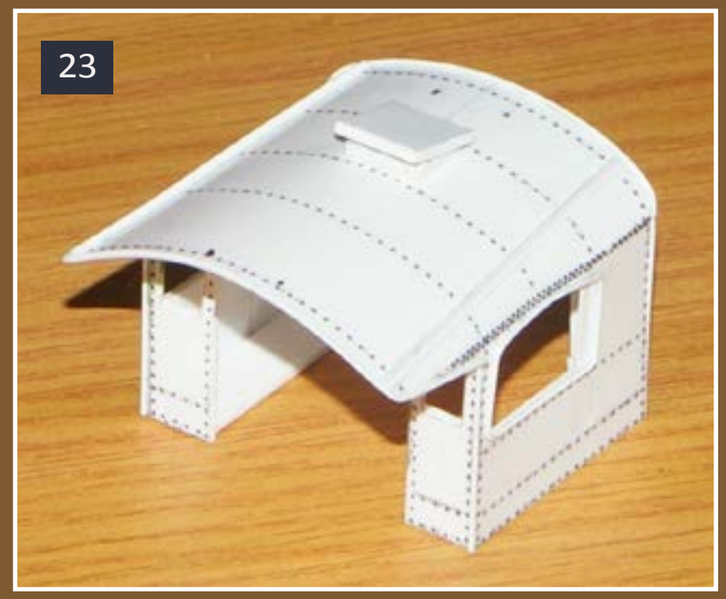
To make the gutters, I glued .010" X .030" strips to the roof, and then a second set of strips on edge against the first to simulate the angle iron used on the prototype.

With the construction finished, I turned toward something completely new to me – rivet decals. Not knowing how they would work, I decided to follow my standard decal procedures. With that in mind, I first very carefully (to avoid damaging the printed rivets still visible) washed and dried the cab, and then sprayed it lightly with acrylic gloss coat to seal everything and give a good gloss surface. After that, it was a relatively simple matter of cutting out the decals and applying them according to the printed locations.

Having every rivet marked on the styrene was helpful, but in the end it came down to making sure that the lines were straight and the rivets were evenly spaced, which I did by eye. When everything was as I wanted it, I liberally applied setting solution to hopefully bond the rivets to the cab and hide any decal film.







21: The cab after the rivet decals are applied. What look like smudges are the printed rivets underneath the decals.

22: Another view of the finished cab. The black marks on the roof are alignment marks for cutting out the ventilator opening.

23: The rear of the finished cab. The rivets over the cab window are tank car seam rivets, while the rest are individual strips.

STEP 39A: Building the Cab in Styrene *Continued ...*

I finished with another gentle wash and a coat of solvent based primer. Since I plan on trying an experiment with decals on this cab, I may have to remove some paint, and I am hoping that the solvent based primer will help protect the decals in that event.

In the end, I have to say that I am quite happy with the way the styrene cab turned out. Construction was a little more challenging than with brass due to the extra bracing needed and the fact that I could not bend it to shape as easily. But cutting and assembling the styrene cab was significantly easier than the brass cab.

The rivets decals are much better looking than the brass ones, although I estimate they took 50% of the total time spent on this project. The film on those decals is quite thin, and getting that many rivets into perfect alignment is a laborious task.

The finished cab feels very light to me, and I have some concerns about strength, but overall I think the cab will be usable and durable if treated with care. I will definitely be making cabs out of styrene again, and hopefully I can further refine the techniques to make things go more smoothly.

Tenders are built very much like cabs, so the styrene construction with rivet decals should work well. Using styrene construction ought to work even better on a tender because there is less material that has to be thin to look good.

I will likely also experiment with a brass cab and rivet decals, to get the best of both worlds. At the very least, I now know that styrene can be used to make a usable cab without having to be obviously thick, and that rivet decals have a permanent place in my modeling toolbox.









24: Oxide primer is even prototypical. The rivets nearly dissapear, but are definitely noticeable.

25: I am very pleased with how the roof in particular turned out.

26: The front is quite plain. What looks like a thick roof is primarily the bead along the front edge.

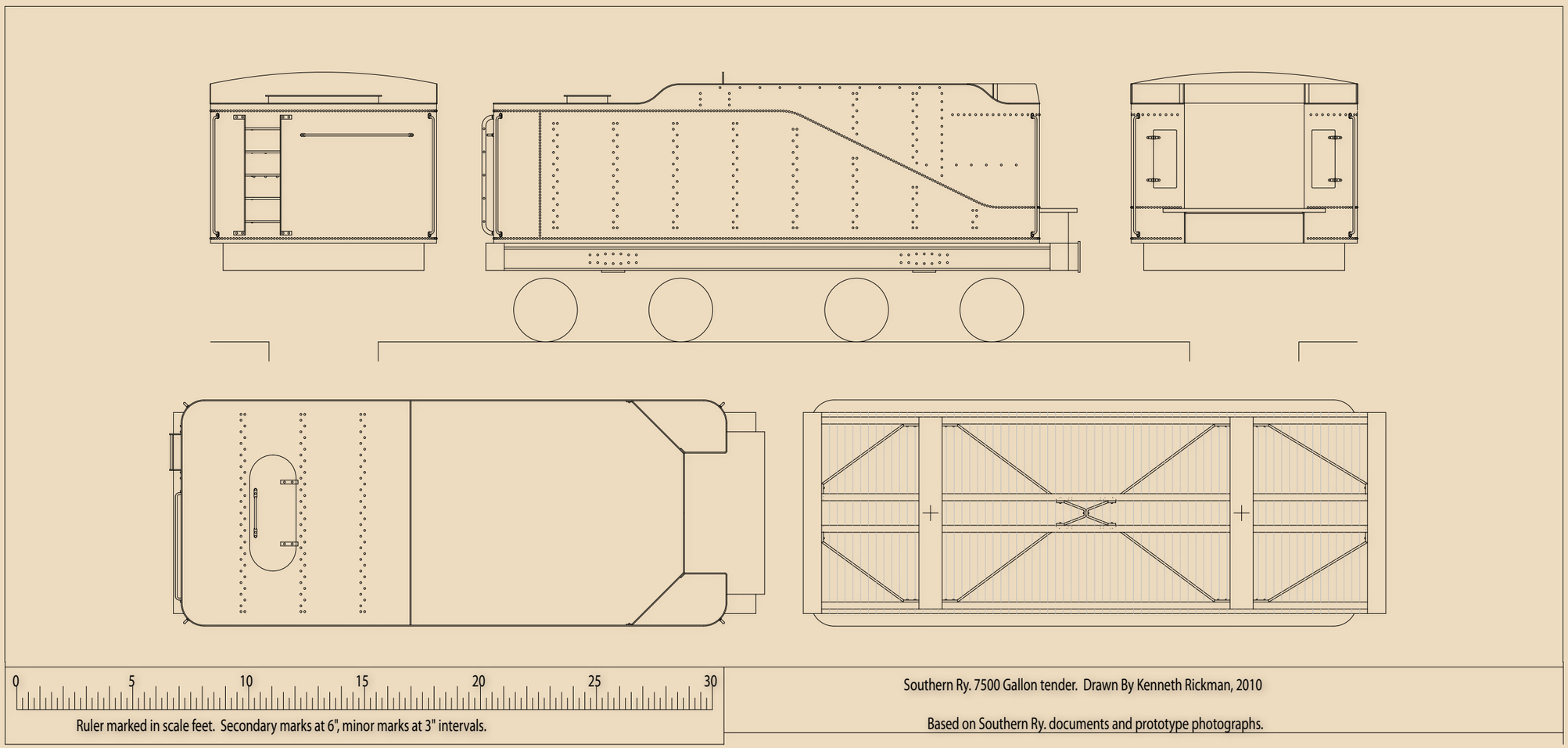
27: The body of the ventilator sticks into the cab, but it's not visible except from this angle so there's no reason to trim it.

STEP 40: Starting the Tender Frame

Rather than building an exact scale model of a tender frame, it's far simpler, easier, and faster to make only the parts that show. The tender frame floor is basically a flat hollow slab made from two sheets with a center sill, steps, and details on the edge.

Rather than modeling the tender's I-beams along the side, I soldered the sides of the floor inset to the bottom sheet and then soldered on a top sheet, making the tender frame floor a thick hollow slab. Along the floor edges below the tank, the edges of the two sheets with an inset edge looks like an I-beam.

I cut two pieces of .010" sheet a scale 8'-8" X 25'-11/2", and cut two pieces of 1/8" square tube a scale 8'-8" long. I soldered the 8' square tube to each end of one of the sheets to form the end beams. I cut two more squares long enough to fit between the end beams, and solder them to the sides, recessed just slightly.

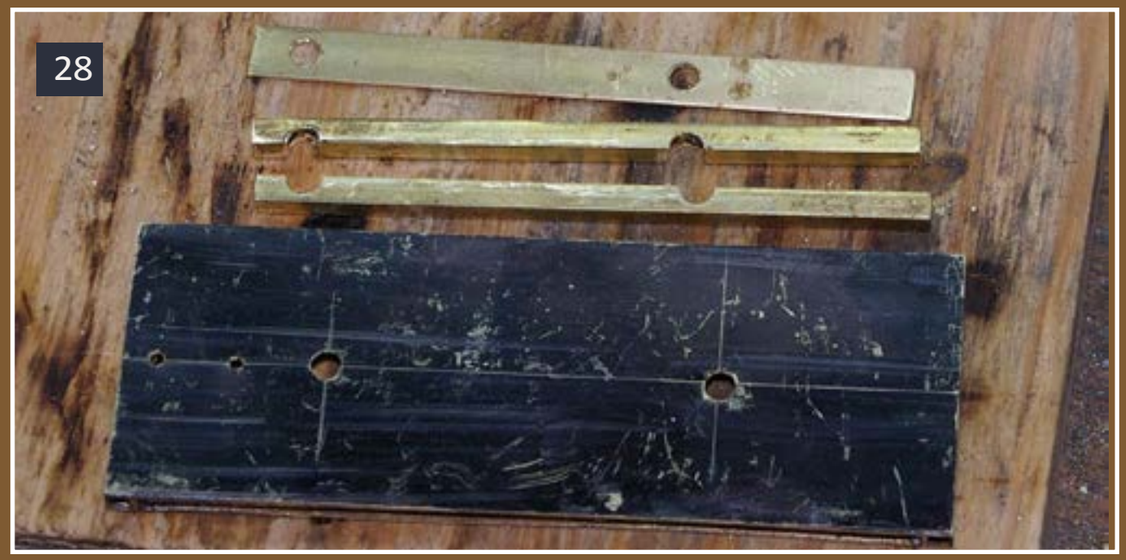


Here's a scale drawing of the tender for this steam loco. You can use this drawing to make a scale printout you can glue onto the brass or print out onto styrene sheet. Use the scale ruler on the edge of the drawing to make sure your printout is scaled properly.

STEP 40: Starting the Tender Frame *Continued ...*

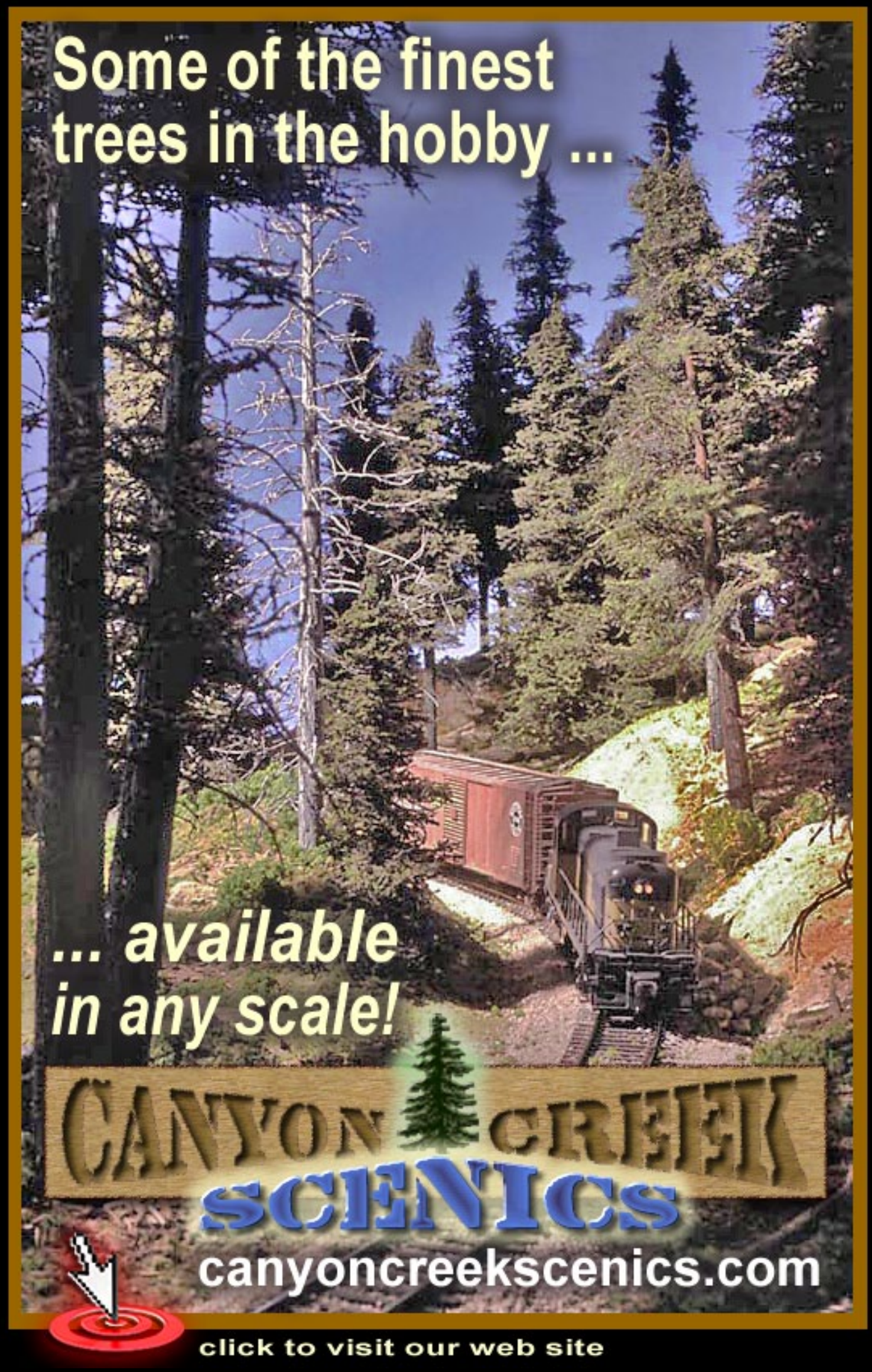
Adding Weight

Cut flat steel or brass (old freight car weights work well) to a size which will completely fill the space between the square tubes. I glued them into the floor, and soldered the second sheet on to enclose them and make a heavy, solid slab frame.



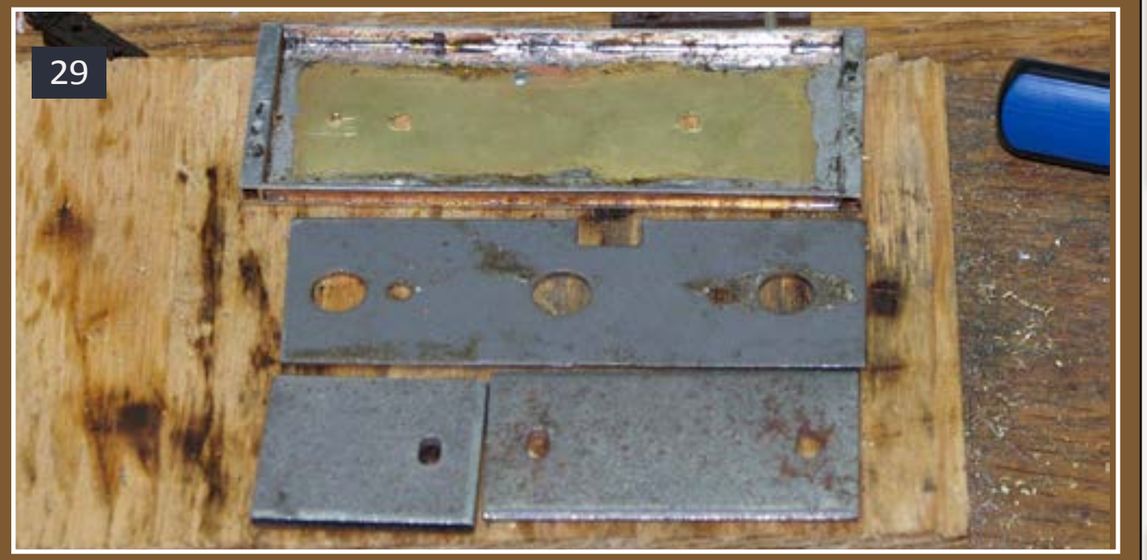
28. Since I don't have any layout dye (used by machinists to make marks visible on metal) I use a cheap marker. I've drilled the holes for the truck mounting pins and coupler box. Above the frame are the parts that will become the center sill.

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STEP 40: Starting the Tender Frame *Continued ...*

I found soldering the two sheets into a slab made mounting the tank more difficult. If I were to do this again, a better design would be to attach the weights to the bottom sheet, and to screw that assembly to the top sheet. That way, it would be easy to gain access to the floor, and to screw the tank on from the bottom up.



29. The weights are salvaged from old freight car kits and scrapped locomotive tenders. A lot of older models used flat steel weights, and they're perfect for this job.

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STEP 41: Making the Center Beam

On the bottom of the frame, mark the center line and the locations of the trucks. Drill a 3/32” hole at each truck location. Cut one 1/4”x1/8” or two 1/8” square tubes the length of the frame, minus the length of your coupler box of choice.

Drill or notch these to match the holes in the floor, and solder them in place. I chose to add a .020” thick cap to the beam, in order to make it sit at the correct height on the trucks, but in retrospect smaller brass washers or shims would have been much easier and more practical to make.

Drill a 3/32” hole in the center of the bolster, close to the front, to locate the drawbar attachment. Solder 3/32” tubes into the three holes, leaving them projecting slightly above the bolster surface. The truck mounts should be just long enough that a screw in them will not clamp the truck tightly to the bolster, but not long enough to let the trucks droop.

The drawbar mount should stand about .040” proud of the surface of the bolster. Drill and tap all three tubes for 2-56 screws.

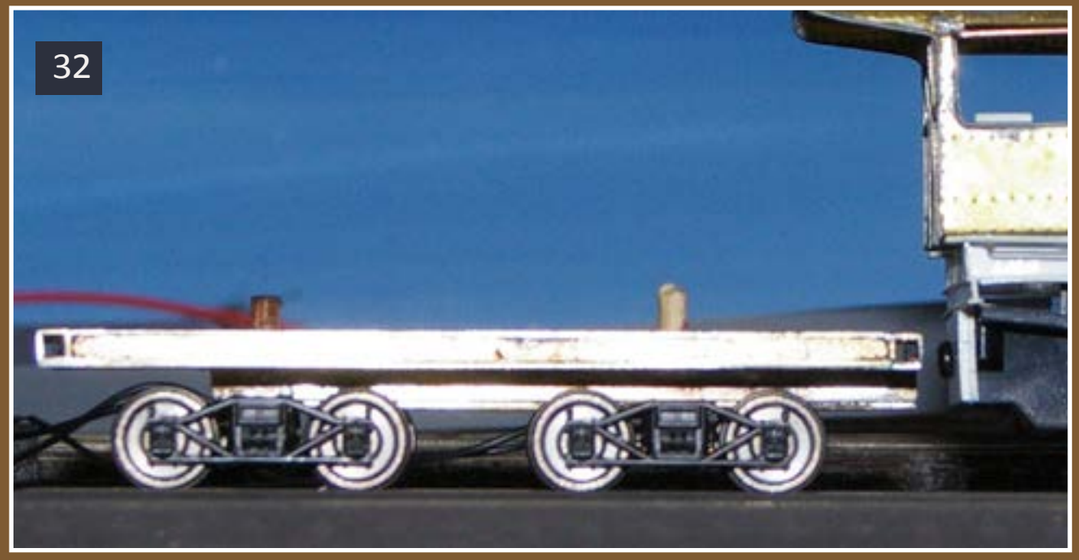


30. I made the center sill with the same dimensions as the scale Accurail Proto coupler box. With most trucks, that puts the coupler at just the right height.

STEP 42: Trucks

Trucks depend on engine and date, but were generally either arch bar or Andrews designs. Andrews trucks are available from various sources (though not often with leaf springs) but the only arch bar truck which is close is the MDC/Roundhouse old time tender truck, which is available from Athearn, part #2428-PR03. As mentioned above, the choice of truck will dictate the mounting design.





31. To test the height of the floor, I stuck some pieces of bamboo skewer in the trucks and slid them in the holes.

32: The bottom of the center sill just happened to come out almost exactly the same height as the rear of the loco frame. That makes mounting the drawbar very easy.

STEP 43: Finishing the Frame and Drawbar

Mount your coupler of choice, and screw the trucks in place temporarily. Set the frame on the track and check the coupler height, and adjust as needed. 1/8" difference between the bolster and coupler pad seems to work out well in most cases, but different trucks and couplers may require adjustments. Remove the trucks and coupler and set them aside for now.

The drawbar is incredibly simple – it is made of a flat piece of brass with two holes in it. Glue a piece of 3/32" tube in the bottom of the engine frame, and drill and tap it for a 2-56 screw. The distance between the engine and tender will depend on your layout, but should be about 1/4".

Make sure that the frame is flat by checking it against a piece of glass. If not, twist it until it is. Fill the open ends of the tubes on the front of the center sill, and on the front beam, with bits of scrap brass and solder. File everything smooth and square. Solder Precision Scale #31461 tender steps on the front corners, and make the rear steps from .010"x.030" strip.

The foot board is identical to the foot board on the pilot from the previous article, and both can be made at the same time. The foot board is made by cutting a scale 9'-0" piece of 3/16" square brass tube, removing one side to form a U channel, and slicing that in half. The legs are .010" X .030" brass strip bent into a "Z" shape to go beneath and behind the foot board and underneath the tender frame. Solder the foot board to the rear beam/frame, making sure to leave enough room to mount the coupler and keeping the bottom a scale 8" above the rail head.

The frame details include the brake cylinder (Precision Scale #29604), air hose and angle cock (Cal-Scale #AH-277), and rerail frogs (Details West #RF-293). Of course there are other similar parts, so use what you can find, or what suits your needs. The remaining details are made of brass or steel wire, and include the pole hangers, cut lever, grab irons on the rear beam, and handrail on top of the beam. The poling pockets are simple dimples drilled into the face of the rear beam.







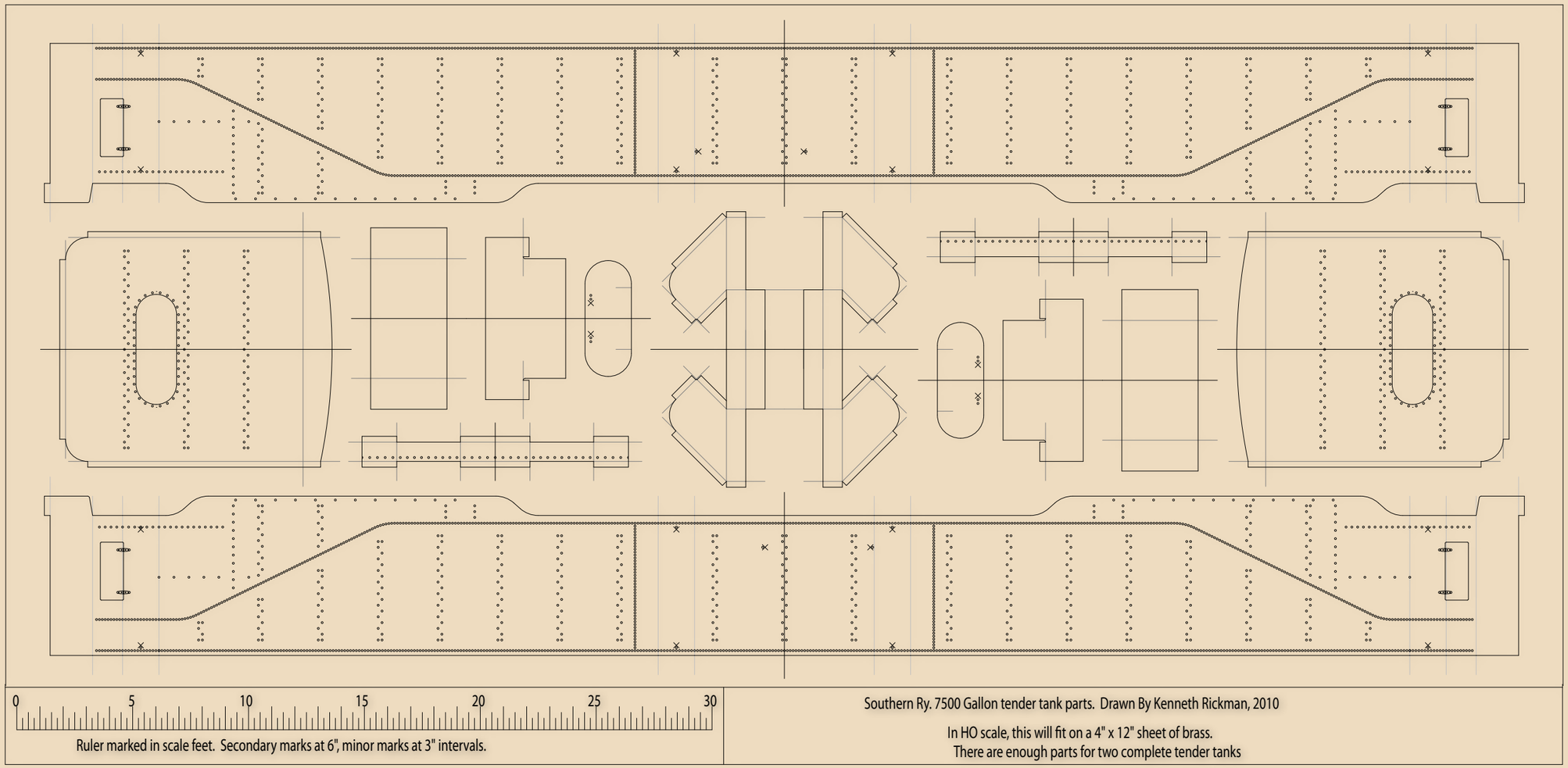
33. The tender frame is fairly simple. Here it is, minus a couple finishing details, ready for a tank.

34. I chose to fill the center sill with solder, just to make a solid surface which I felt would look better. Filling in the ends doesn't really add enough weight to make a difference.

35. The Roundhouse trucks have wires already attached. I fed these through holes in the floor to connect with a DCC decoder later on.

STEP 44: Making the Tender Tank – Embossing the Rivets

Print the plans for the tender, and glue them to a sheet of .005” brass. Emboss the rivets as you did on the cab. Using a larger, less pointed tool, emboss the hinges for the hatches on the water legs and water fill hatch. Using a sharp hobby knife and a straightedge, scribe the fold lines in the various pieces. From the outside, scribe the vertical seam at the back of each side, just ahead of the column of rivets.



Here’s a scale drawing of the tender parts. You can use this drawing to make a scale print-out you can glue onto the brass or print out onto styrene sheet. Use the scale ruler on the edge of the drawing to make sure your printout is scaled properly.

STEP 44: Embossing the Rivets *Continued ...*

9

Cutting Out the Blank

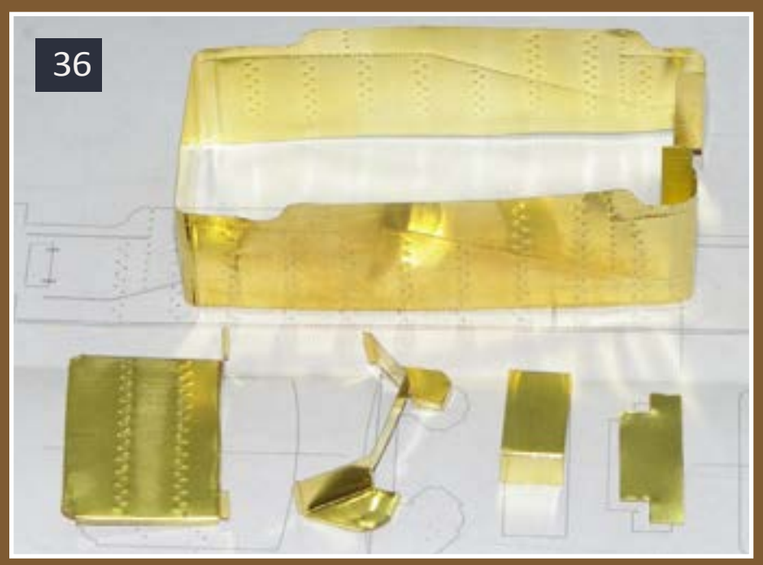
Using a heavy pair of scissors or kitchen shears, cut the pieces out. You should be able to cut out everything except the top piece and the ends of the coal bunker with the scissors.

Use a sharp knife to cut out anything the scissors cannot reach. Cut as close as you can without damaging anything, then use a hobby knife to pierce the inside corners of the top and a round file to finish the ends of the coal bunker. Be sure to cut the opening in the top of the tank for the water hatch.

Forming the Curves

Carefully peel the paper pattern off of the tank wrapper, and stick it back on the other side (outside). Scribe the hatches in the water legs, then remove and discard all of the paper. Fold the various parts up, remembering that there should be a narrow tab on each edge to stiffen the pieces and give something to solder to.

The front top piece is the only complex piece, so refer to the photos to get an idea what it should look like. Bend the corners of the tank around a small round object, such as a tool handle, brass rod, etc. Work slowly and carefully, and check the shape against the plans frequently. When you're satisfied with the shape of the corners, carefully file the corners of the top pieces to fit the finished sides.



36: The tender tank parts are cut out and folded up, like brass origami. A few bends makes them surprisingly strong.

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STEP 45: Soldering the Tender Body

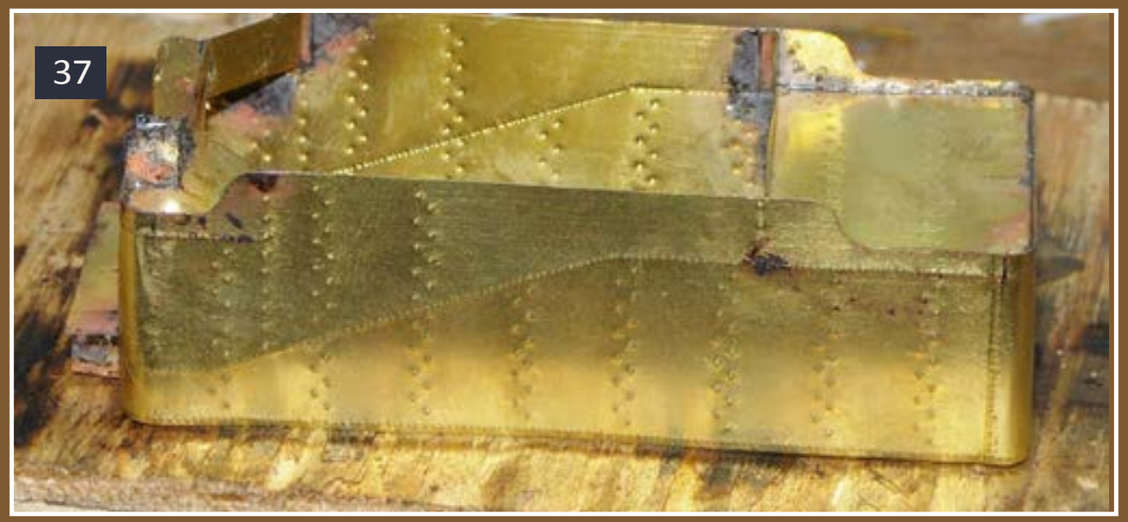
Start assembly by soldering the rear top piece in place, using the top row of rivets and the top of the coal bunker to make sure you have it at the right level. At the front, solder the deck support and deck in place to stiffen the water legs, then solder the top piece in place. Again, use the top of the coal bunker and the rivets to line it up.

Adding Reinforcement

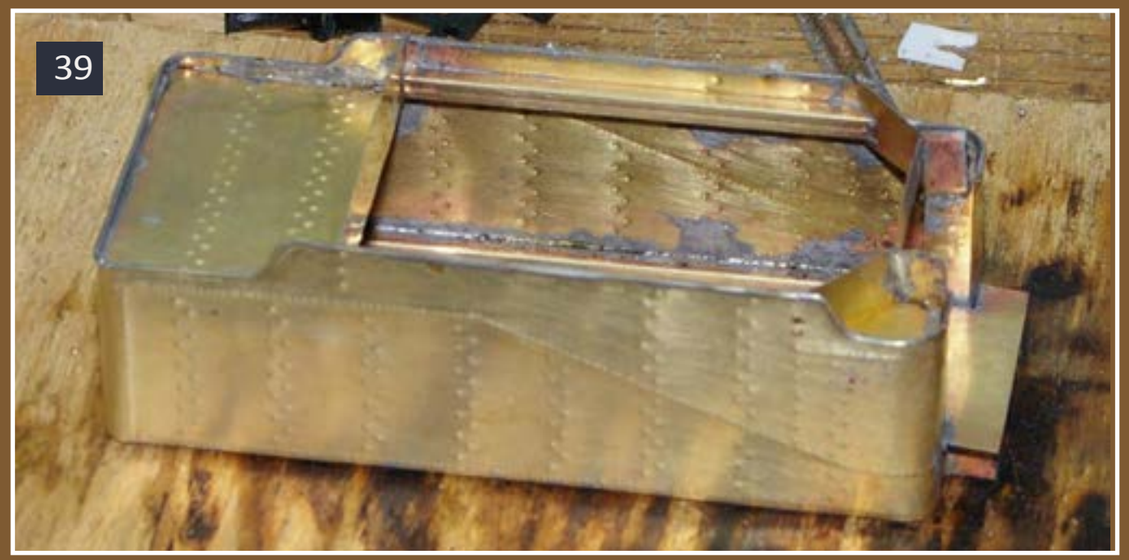
The assembly at this point will look like a tender tank, but be very floppy. To strengthen it, cut lengths of 3/32" square brass tube to fit around the rear and sides at the bottom of the tank, and to fit inside the coal bunker at the top.

Solder the bottom sides in first, then cut and fit the rear between them. Make sure to file the ends round, so that they will support the curved corners as well. Bevel the front of the upper braces 45 degrees, which will add considerable strength to the front of the coal bunker. It is helpful to have a block of wood to work against, pressing the braces down with another piece of wood while soldering.

When soldering the top braces in place, make sure to get them a consistent distance from the top of the bunker. This will allow you to insert a false bottom later, to hold the coal load in place. While you have the tube out, cut a couple of short segments and solder them to the inside of each deck support. Not only will this strengthen the legs, it will provide a surface to screw the deck and tank together later.







37. Here is the tank, right after soldering the pieces together. It helps having a sacrificial piece of wood to work against.

38. I never claimed to be any good at soldering. It's not pretty, but it works. The sides of the tank are still pretty wavy at this point.

39. The bead and the square tube inside go a long way toward making the tank rigid. The tubes also make a shelf that the coal load can sit on.

Adding the Bead

Add the bead around the top edge, just as on the cab. Cut a piece of 28 gauge brass wire long enough to fit all the way around the tender, then solder it to the edge at the rear and work your way around. Trim the ends at the inside corners of the water legs, and go back and fill in any gaps between the tank and bead with extra solder.



40. Square tubes make the bottom of the tank more rigid, and provide a mounting point to connect the tank and frame.

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STEP 46: Mounting the Tank

Check that the tank sits flat. File or trim anything as needed to get it to do so, and clean everything up. To mount the tank, drill holes through the top sheet of the frame, such that they will line up with the square tubes you soldered to the bottom of the tank.

Drill the holes large enough to clear a 00-90 machine screw, then drill and tap matching holes in the tubes in the tank. The front of the deck should line up with the front of the frame, and of course the tank should be centered on the frame. Screw the tank in place.

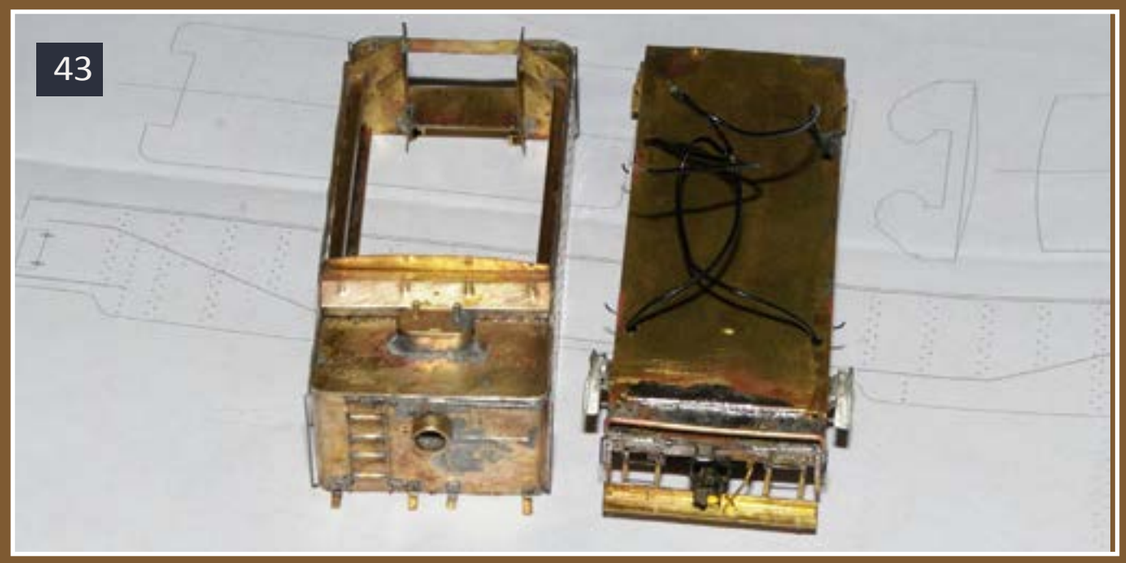




41: The tank should sit nice and flat on the frame. The two are not attached in any way in this photo. The front of the tank is open, to provide an opening for the speaker to be heard through.

42. Here, the rerail frogs, pole hangers, and grab irons have been added. The rerail frogs are glued on, everything else is soldered.

43. Because of my frame construction, I could not easily use screws to hold the rear of the tank. Instead, I made a simple clip out of wire and soldered it across the rear of the frame. You can see it here. The ends hook over the bottom brace inside the tank.



STEP 47: Making the Ladder, Headlight, and Water Hatch

The main details on the rear of the tank are the ladder and headlight. There are commercial parts available for both, but they can be scratch built relatively easily. The ladder is made up of .010”x.030” brass strip which is bent to shape, and brass rod for the rungs.

The light is a short length of 7/32” tube with the edges rounded on both ends, and 5/32” tube passing through a hole in the tender body (with a 3/16” tube spacer between them). This should allow an LED or bulb to pass through from the inside. The headlight also needs a conduit for power, which is made from 28 gauge brass wire and soldered along the engineer’s side, just under the bead.

On top of the tank is the water hatch. Cut the lid and body from the sheet as shown on the plan. Emboss the hinges and bolt heads in the lid as with the tender tank. Fold the tabs (bottom out, top in) and bend the body to shape. Insert the body into the tank from inside, and solder the body of the hatch to both the tank and the lid.



44. I chose a brass air hose on the rear, for added strength. All the details are in place at this point.

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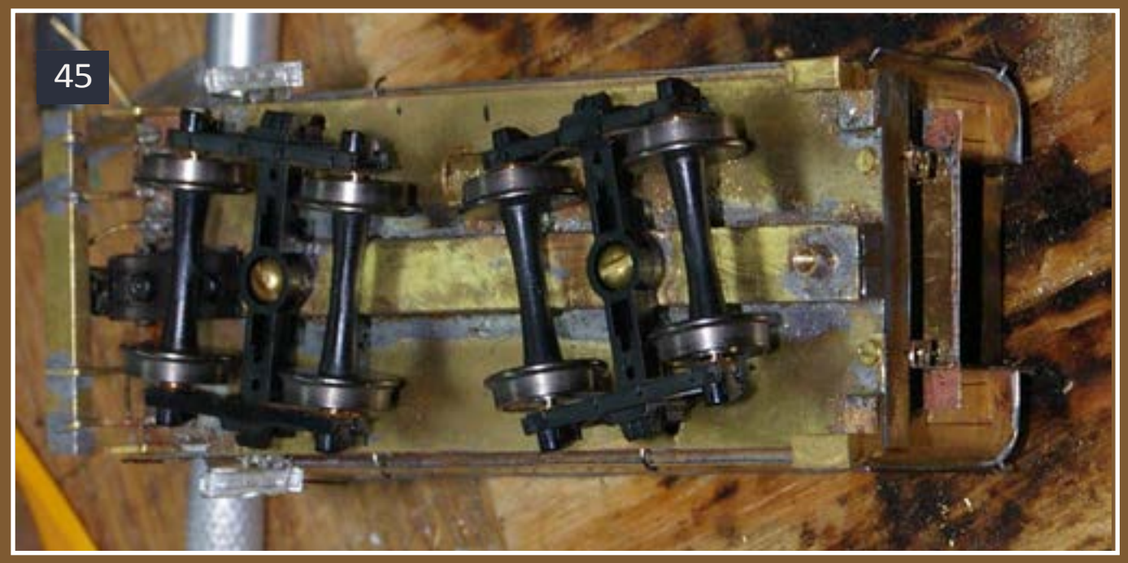


STEP 48: Finishing Off the Loco Construction

There are hold-down brackets soldered to the bottom of the tank – 4 in the rear, and 2 in the front. Solder them to the tank, then bend them to shape to make sure that they will sit flat on the frame later. Make the handrails from hard brass wire or steel piano wire, and solder them in holes drilled in the tank body.

The space under the deck is open to allow the wires to pass through, and the space above the deck, between the water legs, is open to allow a speaker to be mounted there. If you don't want sound, or want to locate the speaker elsewhere, feel free to fill the space with boards and loose coal. Fill the opening in the top with a sheet of brass, making room for speakers, decoders, or anything else you want to put there.

This concludes the series on scratch building a steam loco, mostly using styrene (and now possible completely with styrene, thanks to the new rivet decals). Please drop by the MRH website and post details of your own loco kitbashing and scratchbuilding efforts that this series has inspired. ☑





45:The underside of the tender is extremely simple. The only detail part is the brake cylinder. You can also see the post at the front of the center sill where the drawbar will be mounted, as well as the 00-90 screws holding the front of the tank on the frame.

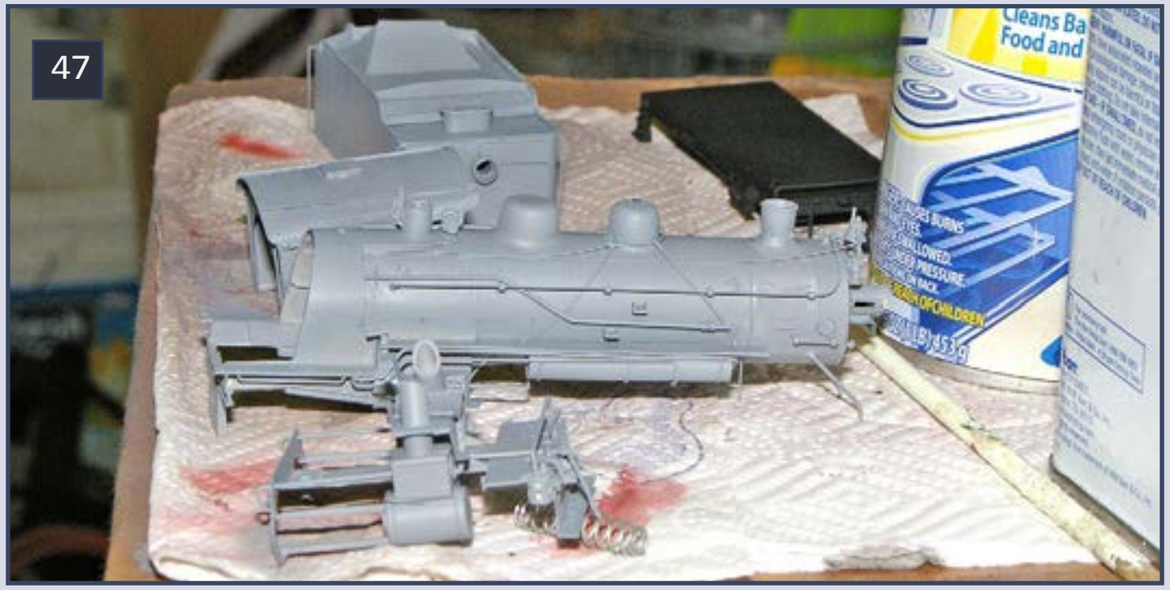
46. I seriously considered not painting this model. There's something about this look that I really like.

PAINTING THE LOCO

Fortunately, painting a steam locomotive is a fairly simple painting project. I started by giving everything a careful bath in warm soapy water and letting them air-dry. I was careful not to let the model sit in water, for fear of loosening the transparent tape boiler lagging bands. When dry, I gave the entire a model a coat of gray primer. The primer allows me to easily see any rough spots on the model that need more attention.

I did not find any problems on my model, so when the primer was dry I gave the smokebox and firebox a coat of graphite. The exact color of graphite varied widely by railroad, location and date, but in the era I model, Southern used a very light shade. In some cases it was almost straight silver. I mixed roughly equal parts of silver and gray primer to give a fairly light and slightly metallic shade.

Painting the graphite first can be a problem, because masking tape can lift some of the metallic particles and leave unsightly splotches instead of a nice even color. It's easier to paint the lighter color first, and it is a little easier to mask the graphite than the black. To make it possible to paint the graphite first, the trick is to clear coat the graphite before masking (be careful to not put the clear coat on too thick).

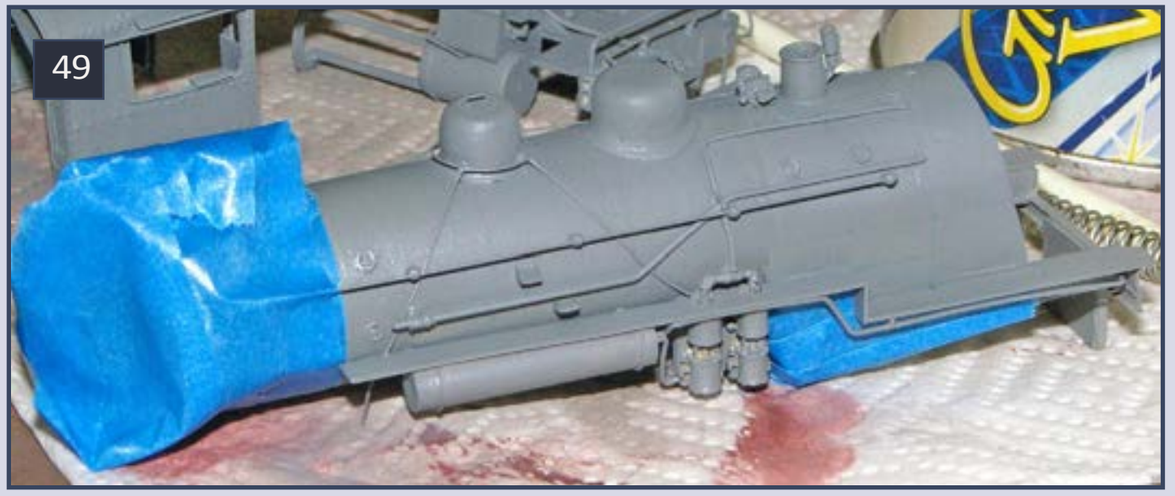


47: Everything got a coat of gray primer. Not only does this show any defects, it helps to hide the variety of colors on the bare model. Sharp eyes will notice that the tender frame is already black. I tried painting it with a spray can, which turned out to be a mistake.

With the clear coat over the graphite, I masked off the smokebox and firebox, and painted everything else gloss black. As soon as the paint has set up, I removed the masking tape. I like to take the tape off quickly because I feel that it helps prevent the paint from lifting and peeling, but also because I am impatient and excited to see the results.



48: Because I used the primer as the base for my graphite mix, the two are very close to the same color. That helps hide any variation and lets me get a thinner coat. Only the gloss gives away the fact that the smokebox has been painted.



49: Blue painter's masking tape is great for a simple job like this. For the firebox, I trimmed it to fit after burnishing it into place. It is important to get the tape around the handrail as tightly as possible. I think I even slipped little pieces up tape under the handrail as well.

When the black was dry, I hand-painted the loco hand rails and other smoke-box details black. I painted a little brass on the bell and whistle, and some red on the window frames and inside the bell, which really helped bring out a finished look. I also hand-painted the drivers in black, and painted the rods in grimy black. Rather than try to paint the white edges on the running boards, I carefully scraped the paint away to reveal the white styrene underneath.

I gave the entire model a clear gloss coat. My gloss of choice is Future® (I believe it's now Pledge® with Future) thinned with household ammonia. It smells bad, but it's cheap and looks great plus it is quite strong (it is meant as floor polish, which must stand up to a lot of punishment).

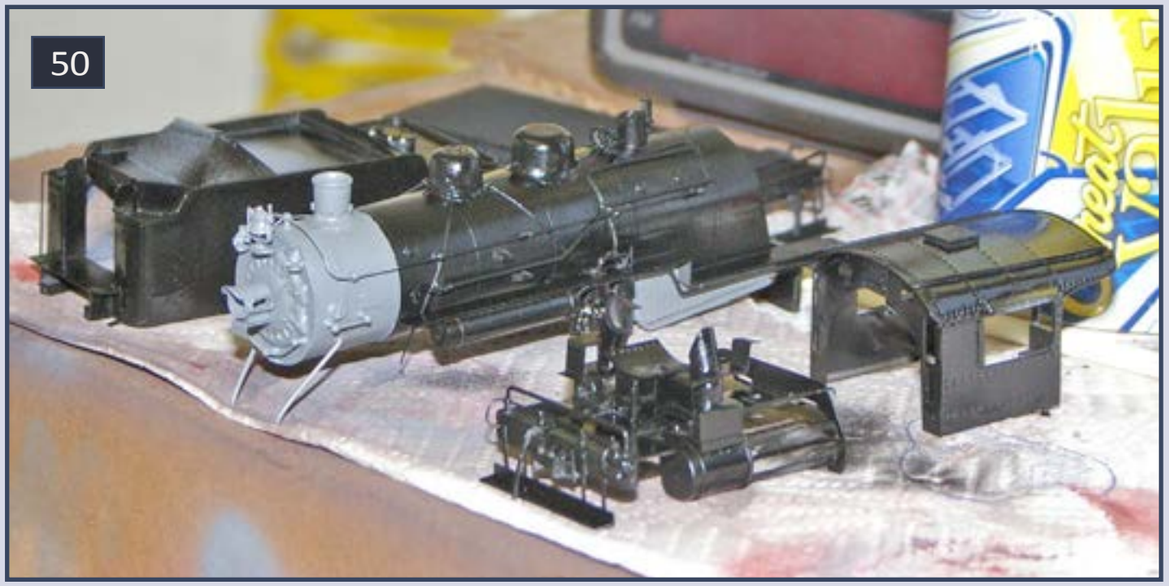
Fellow Southern Ry. modeler, Donnie Dixon made the decals. He devoted more time and effort to researching his artwork than I did on this model, and I was extremely lucky to get one of the sets he made on his Alps printer. Champ made some Southern steam decals, although they are no longer in business and the decals were not as accurate.

I followed standard decal application procedure, using setting solution and clear coating afterward. I finished up with another gloss coat, because I wanted the model to represent a well-cared for locomotive fairly fresh from the shop.

I gently weathered the model, to give the look of being in service but fairly clean. To simulate the opalescence that black paint gets in the sun, I rubbed some thin gloss blue paint into all the broad surfaces, particularly the boiler, cab roof, and tender sides. I then airbrushed some thin flat black around the smokebox, especially near the stack, and around the tender.



51: The details have been hand-painted, and the decals applied. The gloss is still pretty strong at this point, but weathering will tone it down just enough.



50: Removing the tape shows a nice clean separation, with no touch-up needed.



52: I couldn't resist seeing how the model would look sitting on the layout. The power reverse rod seems to have gone missing.. At least it's easy to make another one.

I airbrushed some very thin dirt color around the running gear, trucks, and underside of the model. I used a very light touch of white around the pop valves, whistle, and tender tank to represent mineral deposits from the water. With the weathering done, I glued crushed real coal into the tender to cover the hump over the speaker enclosure.

Finally, I finished the headlights and number boards. I printed the number boards on the computer, covered them with Scotch® tape, and cut them out.

I cut the headlight lenses from clear styrene, using a sharpened brass tube as a circular chisel. I soaked both the number boards and the headlight lenses in un-thinned Future® and then placed them on the model. Soaking these parts in Future® and using it as "glue" gave them a crystal clarity like glass and gave the paper number boards a nice translucent quality. ■



53: A little light weathering helps tone down the gloss, and gives the model a well-loved look. All it needs now is coal and couplers.

Reader Feedback
(click here)

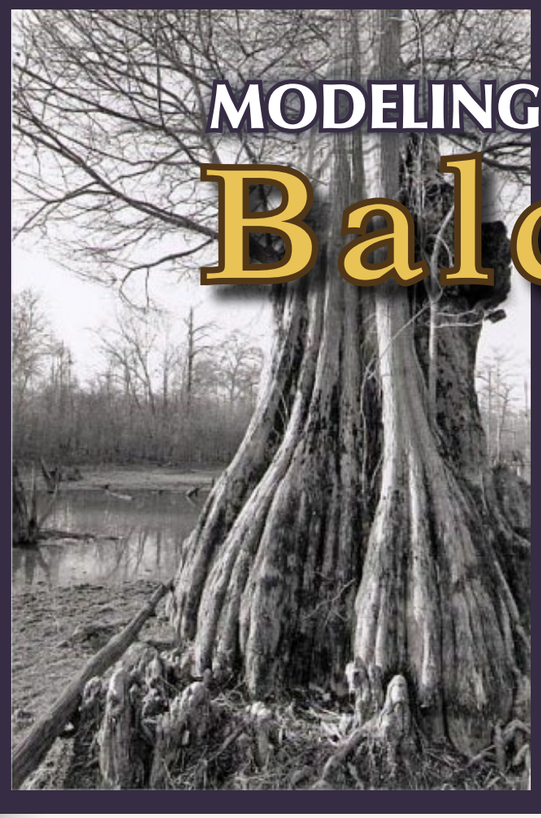
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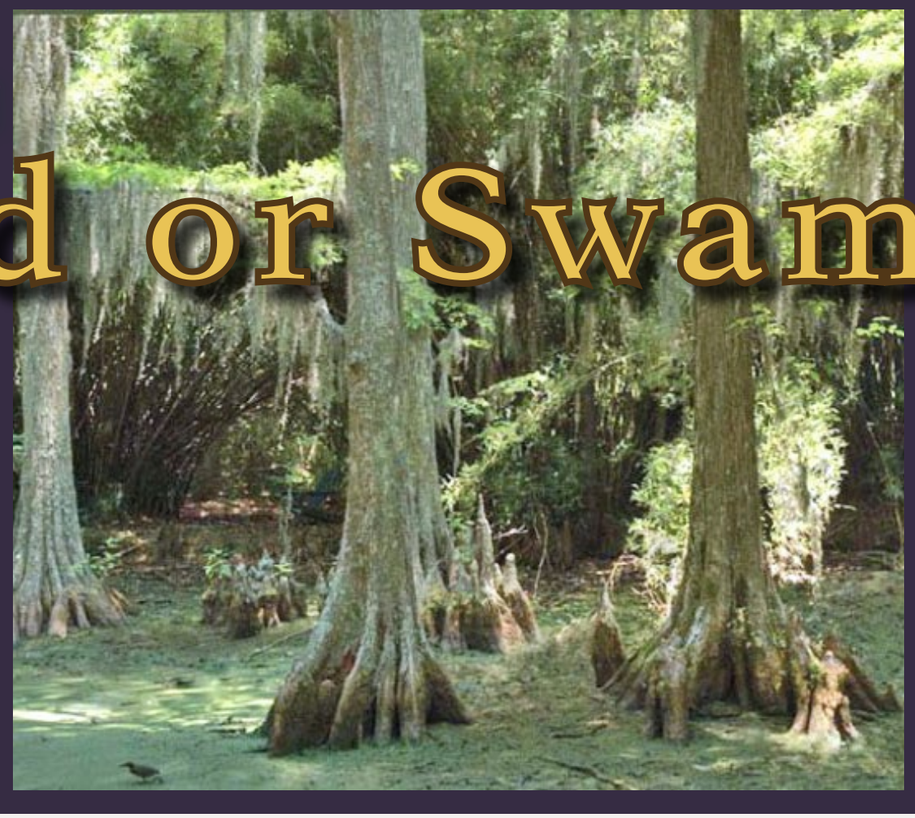
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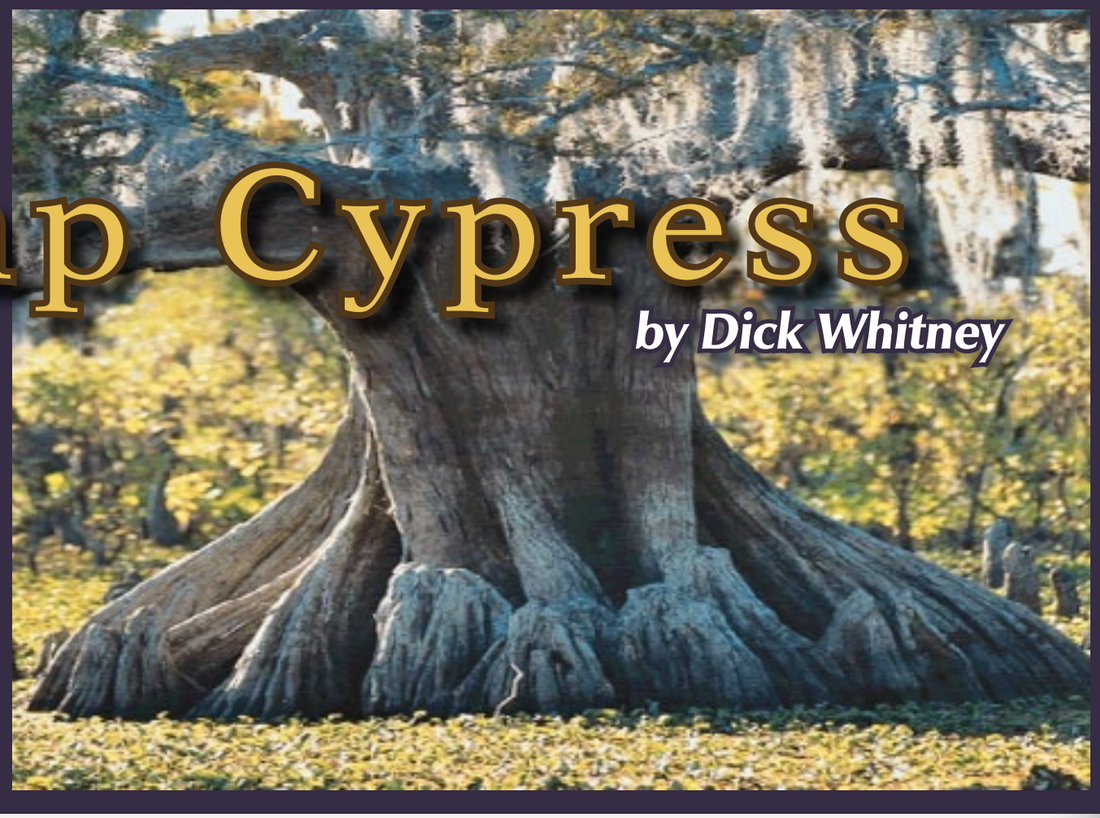
MODELING

Bald or Swamp Cypress

by Dick Whitney







Trees with amazing root systems for your deep south swamp railroads ...

1 and 2: My small swamp scene. The cattails were made from slim slivers of green paper. The tails have a band of copy paper wound and glued around a piece of floral wire. Drill a hole in the scenery base and glue the cattail in place.

Reader Feedback (click here)

The Muskrat Ramble series ran in the Narrow Gauge and Shortline Gazette starting in the Nov/Dec 2009 issue. I was fascinated by the great logging model railroad set in a Louisiana swamp. My attention was especially drawn by the swamp cypress trees.

Because I live in Idaho I couldn't walk out my back door and find a few of these in my neighborhood. I also wondered how modelable these trees would be in a large scale such as G or Fn3. However, I decided to jump right in and try modeling one using balsa wood.

Instead of carving the trunk and roots from a single chunk of wood, I elected to cut my tree parts from 1/16" thick sheets of balsa wood.

Tree Shots

Before starting you may want to look at some photos of these trees. The easiest way to do that is head over to Google and search for "swamp cypress trees". You'll have a much better idea of what they look like and how the tree trunks rise up out of a mass of splayed-out roots.



1



2

Getting Stumped

I started my tree making project with an old stump, but a complete tree is built similarly. Just make it taller and add some additional limbs.

Swamp cypress trees (also called bald cypress and *taxodium distichum*) have a distinctive root structure that flares out from the trunk. On a growing tree the roots rise up out of the water and smoothly sweep into the trunk. But I noticed on some old stumps, the trunk seems to have slipped down into the root system a little – the tops of the roots tend to bend down where they connect into the trunk.

I didn't have scale drawings of these trees – I just cut these pieces out of the balsa sheet freehand. The G scale stump I show here is about 4" tall and the roots flare out to a diameter of about 3-1/2" at water level. The bottom of the trunk is about 1" diameter (at the top of the roots) and tapers slightly as it rises.

My construction sequence was to build a framework, add strips to model the trunk outline, then coat the wood with water putty. Many stumps, especially older ones, have rotted away inside and are hollow – the balsa strip construction makes a hollow interior easy to model.

I just cut and glued the pieces "designing" it as I went – remember there's no standard tree design that must be followed. It may surprise you how your trees develop.


3

Steps to a stump

3: Cut out a stump "backbone" and some rounded pieces.

4: I cut away the top of the stump and the inside of the round pieces – I wanted a hollow stump. Start making a 3D stump framework.

5: Use vertical balsa strips to form the trunk surface. I started adding a branch.

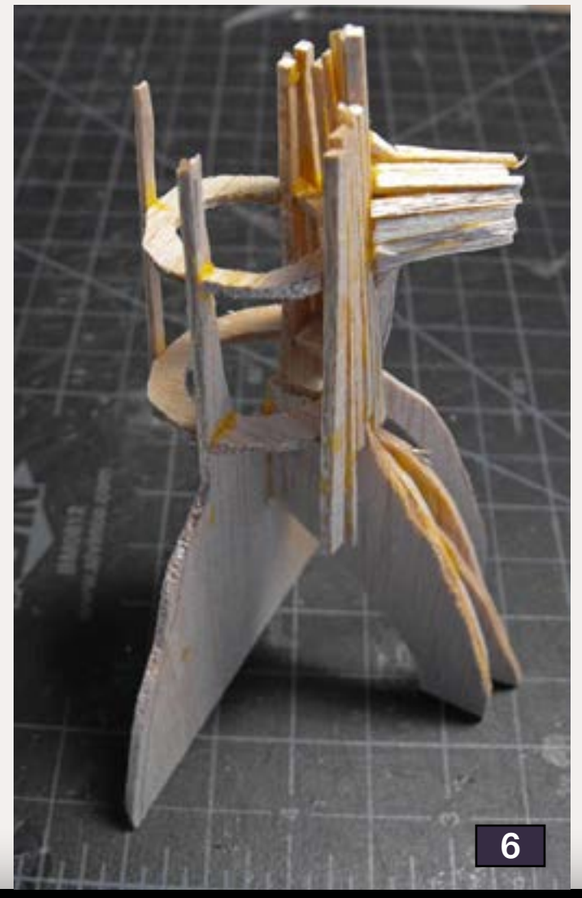
6: More branch progress.

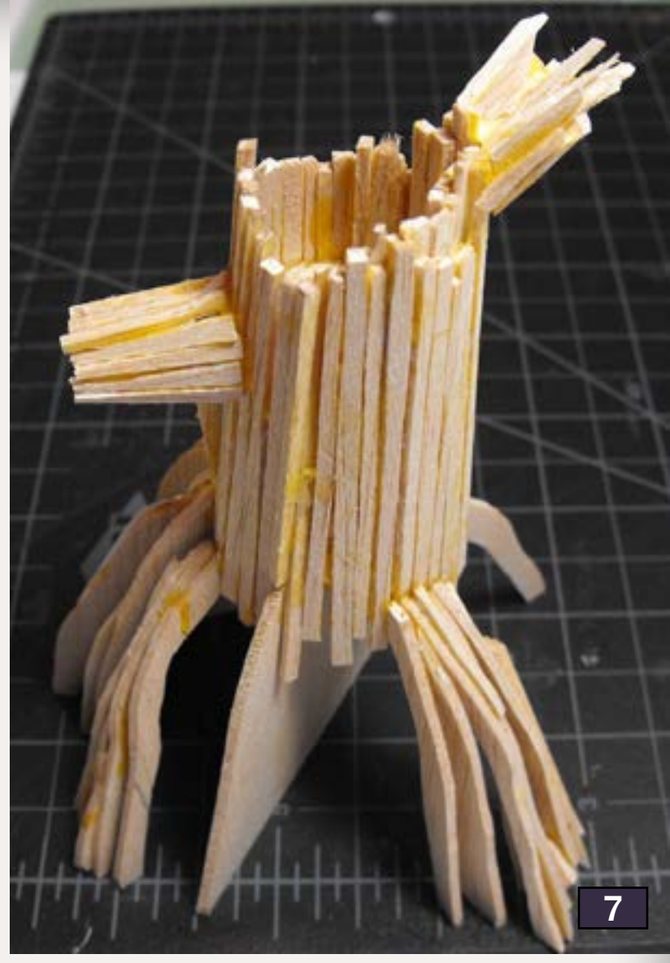
7: I cut out root forms and glued them in place around the base of the trunk.

8: The completed roots.


4


5


6


7


8





Steps to a stump (*continued*)

9: The top of the stump gets a jagged tip, bent to the side where years ago a hurricane snapped off the tree trunk.

10 and 11: Cover the trunk and roots liberally with water putty. I use a mixture of 1 part Elmer's yellow wood glue mixed with 2 parts of water and stir it into Durham's Rock Hard Water Putty.

I use a thin consistency for the first coat. Don't worry about complete coverage; the following coats will fill in any holes. Let the first coat dry 4 or 5 hours, then add repeat coats. Make sure they're thin and they'll dry rapidly. Bark texture can be added as the putty is brushed in place.

Don't worry too much about any gaps and cracks in your balsa stump. If your trees' root structure have some larger gaps, just glue a piece of folded copy paper in place. Real trees have some openings in their root structure, too.

Once the balsa woodwork is complete, coat the surface with water putty to fill in the cracks. Finally, finish it off with gray paint.

Now you're ready to include a swamp on your layout! ☑







Reader Feedback
(click here)





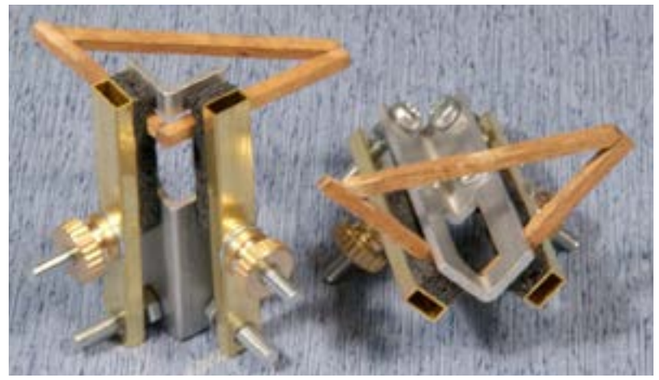
Dick Whitney

Dick started with trains by sharing a Lionel set with his dad in Christmas, 1942. It wasn't until the '50s, when he read articles by authors such as John Allen and Jack Work, that he was hooked. He retired a few years ago, allowing more time for modeling.

His main interests are historic small logging and mining operations in the Pacific Northwest, especially researching the machinery they used.

Dick lives with his wife, Cami, in Coeur d'Alene, Idaho and belongs to the **Inland Northwest Garden Railroad Society**, Museum of North Idaho and the Sprag Pole Museum in Murray, Idaho.

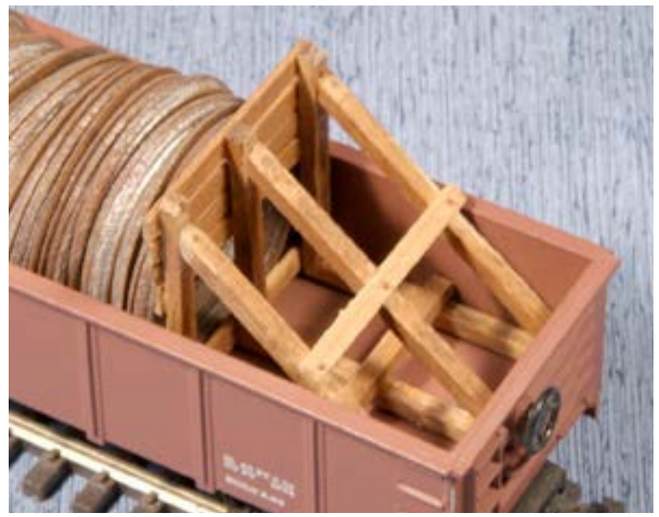
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The Allagash Gets a Quarry, Part 1

Big Scenery in a Small Space

– by Mike Confalone
Photos by the author



Mike Confalone shows how he added a quarry to a finished scene, giving his layout a "big" new industry in a small space ...

Reader Feedback (click here)

My proto-freelanced HO scale Allagash Railway (AGR) operates in west-central Maine in the early spring of 1980. One of the things I wanted to accomplish when I created the Allagash concept was traffic diversity. Railroads haul more than just boxcars of general merchandise, tanks of fuel and hoppers full of coal. I wanted to emulate this diversity on my railroad.

One of the traffic sources, often overlooked, that I like to model is aggregates (sand, crushed stone and gravel). In Maine, and all over the country, rock quarries and gravel pits are common. Many are rail-served. Modeling a rock quarry where crushed stone could be moved out by rail has been high on my list of things to model for some time.

The quarry I modeled is loosely based on an actual quarry operated by a company here in New Hampshire called Raymond Sand & Gravel. We first passed by the quarry on our way to visit a nursery a couple of summers ago, in pursuit of my wife Susan's passion – gardening. I was immediately struck by the intense colors in the granite being blasted and drilled away, the extreme pitch of the quarry face, the huge pine trees bordering the property and the compact nature of the entire scene. It was begging to be modeled and I just knew I was going to tackle it someday. During the winter of 2012, I drove out to Raymond, camera in hand and obtained some terrific shots of the operation to be used for modeling reference. The seed was planted. It was time to launch the project.

Planning the scene

I quickly determined that the quarry would be located at the end of the Allagash's White Mountain Branch. This was already a finished scene, with the tracks disappearing around a corner, while an effective photo backdrop drew the eye into the distance to a concrete batch plant. The fascia was installed long ago, and the scenery long complete. But this was the spot.

It's always difficult to disturb a finished scene, especially when there is nothing in particular "wrong" with it. But I knew that this location made the most sense. The aisle was wide and could accommodate additional railroad, and the scene, as it stood, seemed somehow "incomplete." Beyond that, a quarry, co-located with a concrete batch plant seemed to fit. I had the location; now it was time to make a mess of things.

Before we move on, it is interesting to note that effective January 1, 1980, the Allagash Railway jettisoned the marginal White Mountain Branch. It is now operated by a fledgling shortline called simply – Western Maine. The new railroad utilizes a former Allagash Alco RS3 for power, and services the few remaining customers on the branch, including the quarry.

STEP 1: Getting Started

The first order of business was to disconnect the fascia from the end of the existing bench. At first I left it attached at the other end in hopes of re-attaching it after the bench was expanded. Later on, I realized that the old fascia was not long enough, so I had to remove it and install a new expanse.

I cut the main line with a pair of rail nippers, installed a new Micro Engineering code 70 switch, and then expanded the bench with a 1x4 frame and some ¾" plywood. After that came the installation of the quarry siding.



1: Video at the previously finished scene location, with Mike talking about expanding the scene to include a quarry, in hopes the new scene will be an improvement.

STEP 1: Getting Started *Continued ...*







2: I reluctantly detached the old fascia, disturbing a completely finished and reasonably attractive scene.

3: I severed the code 55 main line track with a pair of rail nippers.

4: I went ahead and installed a Micro Engineering code 70 LH turnout. To keep a smooth track flow, the curved portion of the turnout would handle the main line, while the straight portion would begin the siding into the quarry. I had some difficulty with this installation because of tight spacing, and the fact that I was mating a code 70 turnout to the code 55 main line.

STEP 1: Getting Started *Continued ...*







5: Now it was time for some lumber. I installed a 1x4 frame to the existing frame, and to the wall.

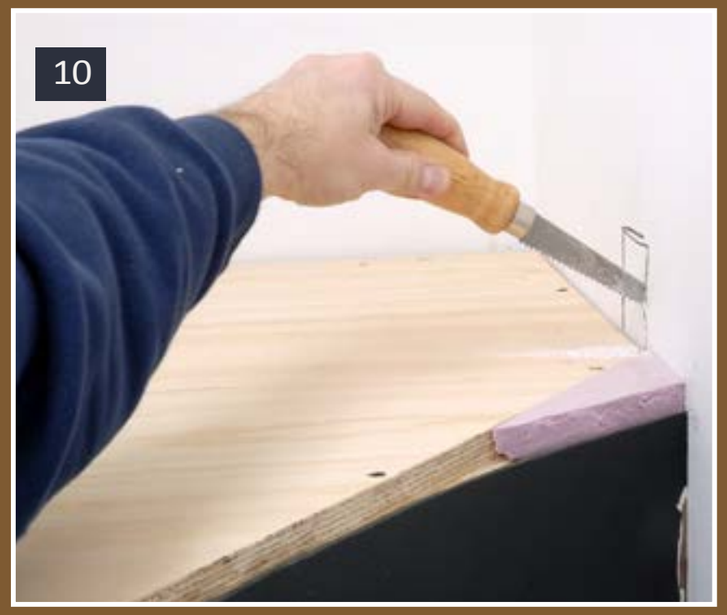
6: I inserted a sturdy piece of ¾" plywood to provide a smooth and level surface for the quarry.

7: Scrap pieces of pink extruded foam fill the gaps between the old plywood bench and the new. I used a razor saw to cut the pieces to size and hot glue to secure them.

STEP 1: Getting Started *Continued ...*











8: I test fit a piece of Micro Engineering code 70 flex track on the new plywood base.

9-12: My intent from the beginning was to have the quarry siding penetrate the stud wall into the garage so I could spot longer cuts of cars in the facility. I marked off the location of the "tunnel" with a Sharpie, and cut a door into the drywall with a keyhole saw, removing the insulation in the process. I built a sub-roadbed tail on the other side of the stud wall. I had to sharply curve the alignment to fit it next to the Allagash's Androscoggin Subdivision main line. This tail will eventually be covered by a lift-away scenery structure.

STEP 1: Getting Started *Continued ...*







13: It was now time to permanently install the quarry siding. I started by removing ties from my flex track with a rail nipper. I like to remove every 6th or 7th tie. This thins the tie density on the flex track, which is important to differentiate secondary sidings and industrial tracks from main line track.

14: I used small pieces of wood shim to bridge the gaps from the original bench to the new bench. I secured them with Cypox adhesive.

15: I tested a 70-ton hopper over the new alignment to make sure there were no derailment issues.

STEP 1: Getting Started *Continued ...*

16



17



16-17: After a few spikes were nailed directly into the plywood to hold the siding in place, it was time to paint the turnout and the siding. I masked the area to be painted with some cardstock and painted the track with Krylon Camouflage paint. This dries very quickly and dead-flat. I use two colors, brown and black, and blend them to give a uniform base color for the rail and ties.

STEP 2: Building the Quarry Base-structure

After I had installed and tested the quarry turnout and siding, I turned my attention to the quarry itself. First, I determined that the old fascia had to go. After that was removed, I gathered some ½" pink extruded foam and proceeded to cut pieces into large squares. They were placed against the wall, marked, cut and carved into shapes that would represent the actual quarry structure. This would serve as my base for adding rock castings, trees and ground cover later on.

18



18-19: I placed a square of pink extruded foam against the wall and traced the outline of the terrain with a black Sharpie marker. The terrain continued along the same horizon line featured on the photo backdrop.

19



STEP 2: Building the Quarry Base-structure *Continued ...*







20: I cut the foam with a razor saw.

21-22: I removed the initial piece of foam and traced it onto another piece of foam, then repeated the process until a terraced effect was achieved with three pieces of foam.

STEP 2: Building the Quarry Base-structure *Continued ...*







23-25: I used a Sharpie again to draw the outline for a shelf. This area would represent part of the quarry that was cut away, and give depth to the scene. Strips and small pieces of foam were stacked along the shelf, and I glued all of the foam pieces together with hot glue.

Mike Confalone does it again!

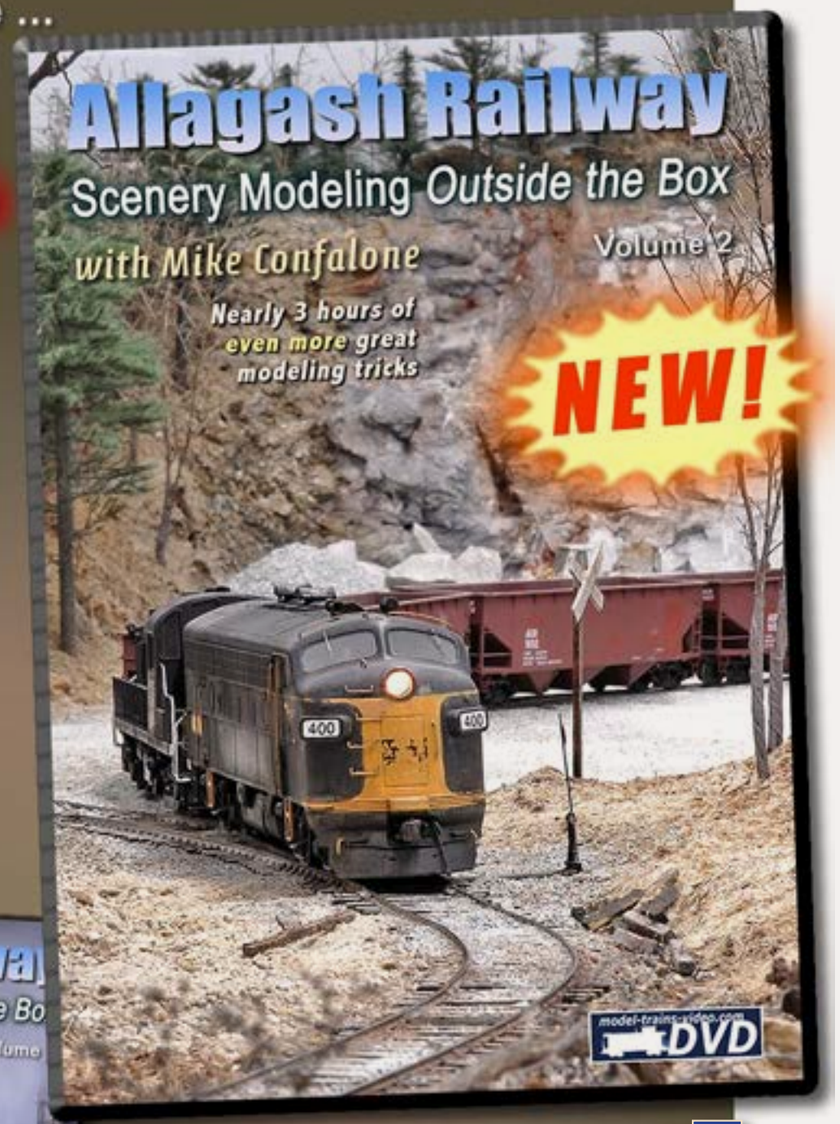
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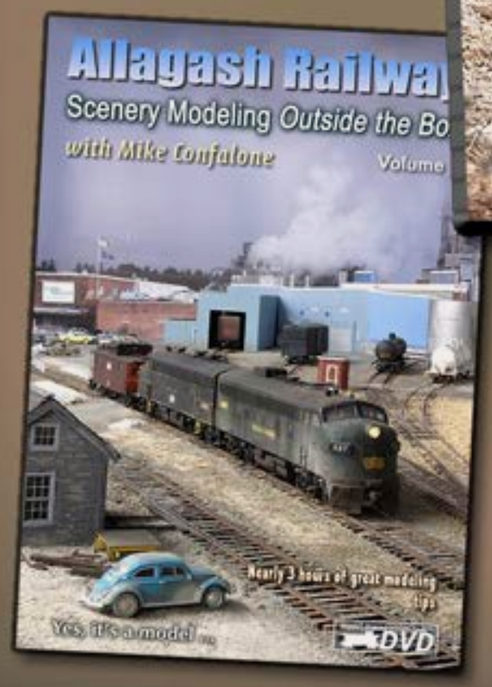
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STEP 2: Building the Quarry Base-structure *Continued ...*



26: I used my razor saw again, this time to carve away at the foam to remove the sharp edges.

STEP 2: Building the Quarry Base-structure *Continued ...*







27: It is always a good idea to periodically step back during a major scenery project to evaluate progress. With the quarry base structure in place, I placed a single pine tree right at the junction between the 2D photo backdrop and the 3D quarry base-structure to test the perspective. So far, so good.

28: I painted the entire quarry base-structure with some leftover white primer I had around. Any light gray or white would work fine here.

29: After the quarry structure was painted, I put a coat of earth brown flat latex paint on the flat surface to give a clean, uniform appearance. I also painted the ridge line above the quarry with the same brown paint. This area will be treed-in later.

STEP 3: Adding Rocks

With the quarry base-structure in place, I turned my attention to the next step in the process – making the actual rock material that would make up the essence of the quarry. I used a combination of deep rock molds from Sterling Models and Woodland Scenics, and plaster of Paris.



30: A variety of mold depths and shapes provides the most varied rock texture. A container of plaster of Paris, a bucket of water and a mixing spoon are all you need. I mix the plaster fairly thick (consistency of pancake batter). The rocks set up in a few hours.



31: After the rock castings are removed from the mold, I hot glue them in random order to the face of the quarry.





32-33: Smaller pieces of rock are needed to fill gaps. I simply bang away at the larger rocks with a hammer to create smaller rocks that can be used on the quarry face, or used to represent material in the quarry that has been created from the drilling and blasting process.

STEP 3: Adding Rocks *Continued ...*









34-36: After most of the surface area of the quarry face was filled with pieces of rock, there were still very small areas that needed to be filled. I mixed up a small batch of plaster of Paris in a bowl, using VERY cold water. This slows the curing time considerably. I used a thicker mixture this time, and spread the material into the remaining gaps with a butter knife. Image 42 shows the finished rock face, with all gaps filled.

37: After the plaster of Paris in the gaps dried, I went back and scraped-in some texture with a Stanley knife. Any sharp tool could be used for this step.

STEP 4: Coloring the Rocks

Now that the quarry face was completely "rocked" it was time to consider the most important step in this entire project – coloring the rocks in the quarry. Getting the proper coloration on the rocks means the difference between successfully capturing the look of a granite quarry, or not. The colors and textures in a granite quarry like this are infinite. The colors range from white to bright orange/rust to yellow to nearly black. I employed several methods to try to get proper color intensity and texture.



38-39: The first step was to provide a basic gray tone to the rocks, and get rid of the raw plaster look. I mixed a batch of black Rit dye and 70% rubbing alcohol. You can also use India ink. I prefer Rit dye because of its color intensity. You only need a little bit. A 90-10 or 80-20 alcohol-Rit dye ratio works best. I washed the Rit dye/alcohol solution into the rocks with a soft paintbrush.





Mike Confalone grew up in Smithtown, New York, and got into model railroading at about age 10 or 11. Like many young teens, he joined the local model railroad club and got his first glimpse of model railroading on a large scale.

College in the mid 1980s took him away from the hobby for a while, but he still found time to visit the local hobby shop in Scranton, Pennsylvania, and do some modeling on the side. Railfaning also became a favorite pastime. After graduation in May 1989, he and his wife, Susan, moved to New Hampshire.

He publishes a Northeastern prototype railroading magazine called Railroad Explorer (www.railroadexplorer.com), and has published six books on prototype railroading.

He has built several layouts over the years, but it wasn't until the early 2000s, after a visit to Dick Elwell's Hoosac Valley layout in western, Massachusetts that he really got a kick in the rear. Seeing Dick's fully-scenicked and operational layout prompted him to get serious.

Today, his proto-freelanced, under-construction Allagash Railway occupies a 58′ x 24′ space – his entire basement and the former two-car garage. This is a long term project that will take much of the current decade to complete. For him, the challenge of bringing his own piece of New England railroading to life in HO scale is the driving force behind his passion. He loves all aspects of model railroading, from benchwork on up, but his specialty is scenery and weathering. He also enjoys the challenge of prototypical operations.

Besides the trains, he and Susan love to garden and landscape their wooded two-acre property in southern New Hampshire. He also plays a mean guitar, but his Fender and Marshall-fueled rock-band gigging days are over, at least for now!

STEP 4: Coloring the Rocks *Continued ...*









40-41: After the base wash was into the rocks, it was time to consider options for the all-important coloring process. I like to use artist oils from Winton or Grumbacher. To my eye, nothing captures color intensity like oils. Acrylics would also work here, but I don't believe the end result would be as convincing. I gathered six or seven tubes of colors I thought I would use. As I moved through the process, I realized I was only using maybe four or five. I've found that the most important ones for coloring rocks are as follows: Burnt Sienna, Yellow Ochre, Titanium White, Van Dyck Brown and Unbleached Titanium. I spread a bit of each color on a scrap block of wood.

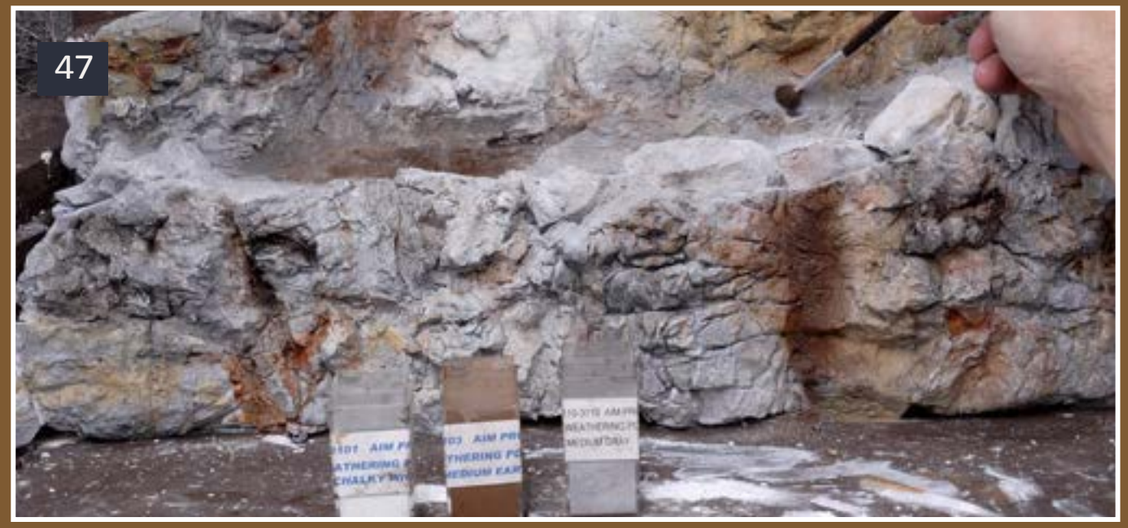
42-43: The oils are very potent. Only small dabs of color are needed to cover a large area. I use a wooden skewer to randomly apply bits of color to different areas of the rock surface, and then wash that color in with a brush soaked in turpentine. The turpentine washes the oil paint into the crevices and brings the surface of the rock to life.

STEP 4: Coloring the Rocks *Continued ...*









44: Here's how things looked after the initial application of oil colors. The plaster rocks have begun to take on the look of a real granite rock quarry.

45: To add highlights, I dry-brushed full-strength Titanium White oil paint onto the outer edges of the rock surface.

Reader Feedback (click here)

46: After the dry-brushing was complete, and after an additional random application of oils, I returned to my Rit dye/alcohol wash, and brushed-in another heavy coat to the rock surface.

47: To create the dusty look of drilling and blasting on the shelf area, I applied generous amounts of AIM weathering powders. Chalky White, Medium Earth and Medium Gray were used here.

Part 2 continues in the October issue with Mike finishing off the rockwork, adding trees and details to the scene.

Reader Feedback
(click here)

Athearn: Genesis F-Units

➔Visit athearn.com

Many fans of EMDs F7 diesel units consider Athearn's HO scale Genesis version the most accurate model ever created of the iconic locomotive. In 1998, Athearn purchased the finished molds for its Genesis F7 A and B units from toolmaker Paul Lubliner, who retained the rights to sell undecorated kits for several variations of F-units (F2, F3, F5, F7 and F9) under his Highliner brand. The innate correctness of EMD's historic F7 design is further enhanced when decorated in Santa Fe's legendary warbonnet paint scheme.



Reader Feedback
(click here)

Walthers: WalthersProto™ Type 21 Tank Car.

➔Visit walthers.com

Beginning in 1921, American Car & Foundry produced thousands of Type 21 riveted tanks cars with 6, 7, 8, and 10,000-gallon capacity tanks. Life-Like introduced this HO scale Proto2000 version of an 8,000-gallon car in 1997. The model accurately represents a prototype built after 1930 with AB brakes and 50-ton Bettendorf-type plain-bearing trucks. Using original tooling obtained with the acquisition of Life-Like in 2005, WalthersProto™ will release several new HO scale ready-to-run versions of the model this fall.



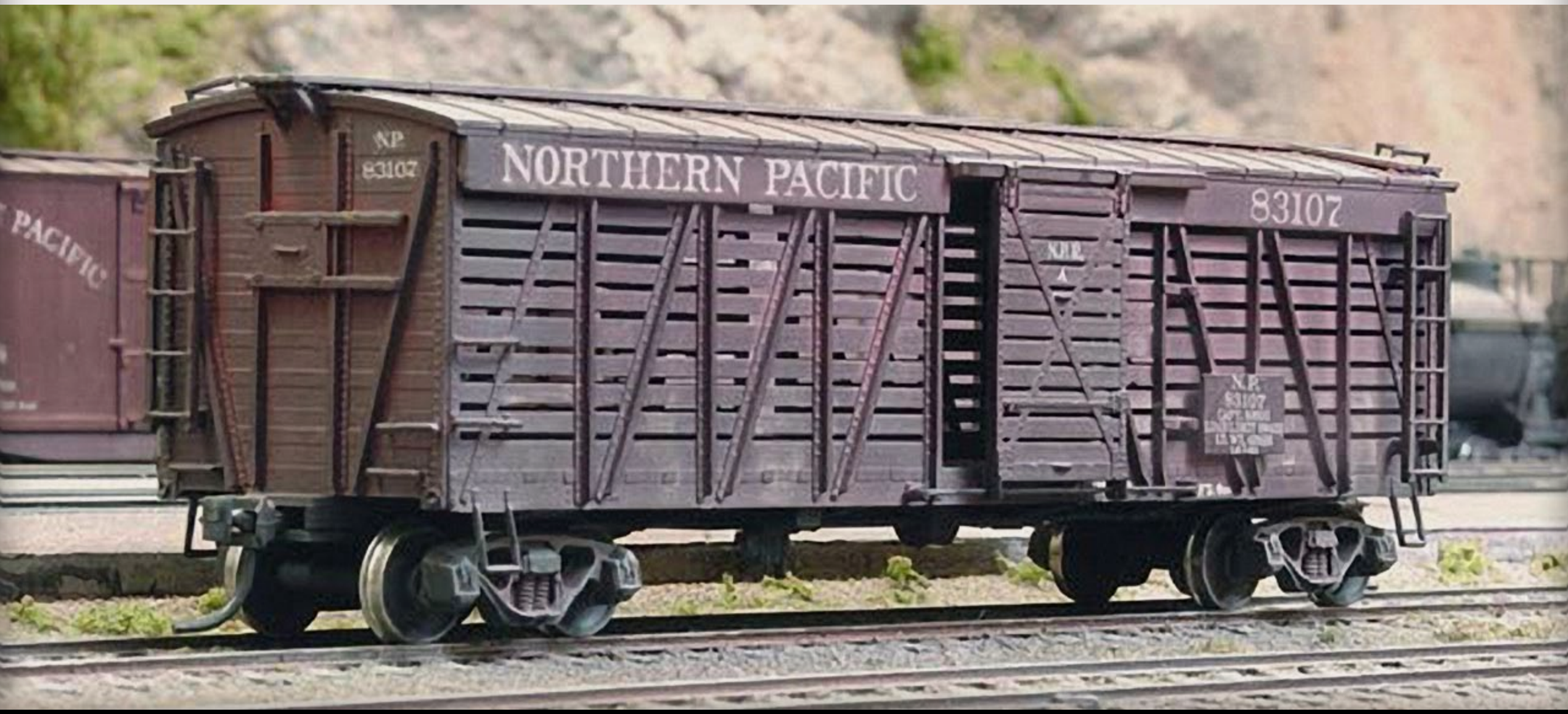
Reader Feedback
(click here)

CVMW: Northern Pacific Stock Car

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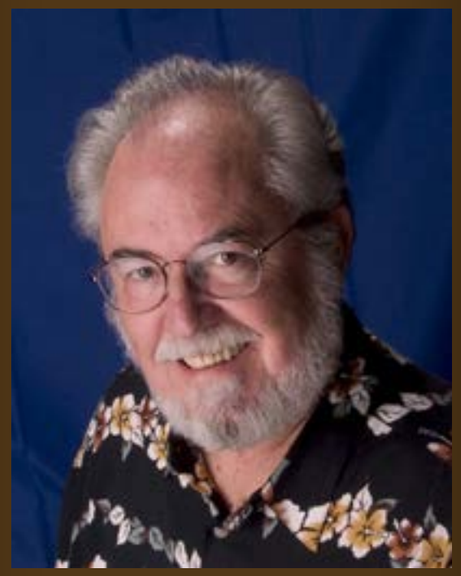
Although Central Valley Model Works is best known for its track components and intricate bridge assemblies, the company also produces a highly accurate HO scale styrene kit for a 40-foot Northern Pacific wood stock car. A distinctive feature of the 9-panel class SM car is the unusual radial roof. The prototype was built in 1932 with large numbers of the original 748 cars remaining in service into the early 1970s. The kit continues to be available direct (cvmw.com) or through suppliers such as Walthers.

The late Jack Parker designed and cut the tooling for the stock car kit in 1990. Before he purchased Central Valley, Jack was a toolmaker at Revell where he developed dozens of projects including the famous two-bay Engine House.





About our News & Events Editor



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

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

Reader Feedback
(click here)

MRH News Desk: The Latest Model Railroad News, Products, and Events

September 2012

2012 NTS Attendance Announced
Officials of the National Train Show (NTS) report that 17,139 people attended this year's event held in August in Grand Rapids, Michigan. NTS is presented in conjunction with the annual convention of the National Model Railroad Association. Attendance at past NTS events include 19,800 at Sacramento in 2011 and 15,510 at Milwaukee, Wisconsin, in 2010. Next year's NTS will be in Atlanta, Georgia…

Bobbye Hall Award to Bud Reece
Congratulations to Bud Reece, senior vice president of Bachmann Trains, on being named to receive the 2012 Bobbye Hall Distinguished Service Award. Presentation of the award was made by the Model Railroad Industry Division of the Hobby Manufacturers Association during the NMRA's National Train Show held in August in Grand Rapids, Michigan. The annual award recognizes industry leaders who have contributed significantly to the model railroad segment of the hobby industry. The award is named in honor of Mrs. Bobbye Hall who was president of Hallmark Models, Dallas, Texas…

New Walthers Catalog Released
Wm. K Walthers Company has released the 2013 edition of its HO and N&Z Reference Books, publications that have served as industry catalogs for many years. New this year is a handy 16-month wall calendar that features photos of recent new products along with a variety of train show dates and other key dates in the world of model railroading. The HO Reference Book (#913-213) is available this month. The N&Z version (#913-253) will be released in October. Both are priced at just $15.98 each…

Canada's TLT and CMT Undergo Changes
True Line Trains (TLT) has purchased the remaining inventory and internet domain of Canadian Model Trains (CMT). The purchase does not include the business itself, only the inventory and the domain. Both TLT and CMT are located in Ontario, Canada. The status of consigned models and information about deposits made on future purchases is available at trueline-trains.ca/home/news/cmt-updates …

Simpson Model Company For Sale
A deadline of September 15, 2012, has been set for the sale of Simpson Model Company. Serious buyers may contact Rod Souza (rodwslc@me.com) for a list of items included in the sale…

More Hobby Stores Call It Quits
A combination of a weak economy and Internet sales continue to take a toll on traditional store-front hobby stores. Among the latest model railroad shops to shut down are The Whistle Stop in San Diego, Trains West in Albuquerque, and Bruce's Trains in Sacramento…

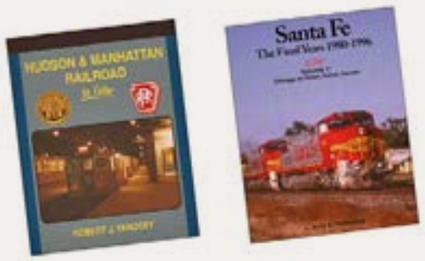
Worlds Largest Train Maker Gets New Boss
Kenneth Ting Woo-shou has replaced his son, Ivan Ting, as managing director of Kader Holdings Company of Hong Kong. The younger Ting had been in the top executive position at Kader since mid-2010 when the company announced that Sanda Kan, it's manufacturing division, would only make model railroad products for its own brands. Those brands include Bachmann, Williams, Liliput, and Graham Farish. The decision, which forced many American based brands to scramble for new manufacturing sources, continues to impact production schedules and the timely availability of model railroad products from China…

Paul Lyons 1944-2012
Paul Stuart Lyons, an architectural engineer known for building outstanding models as well as real buildings, has died at the age of 68. A life-long rail fan, Paul was a life member and past president of the Southern Pacific Historical & Technical

Society. Paul was an outstanding and prolific model builder with a preference for challenging resin kits. He amassed a sizable collection of model railroad equipment including virtually every Southern Pacific brass model ever imported. Over the years he built a library of 1000-plus volumes of railroad related subjects which he donated to the SP Society. We extend our sincere sympathy to Mr. Lyons' family…

Here's a look at what's new as well as what's coming soon to your local hobby shop …

NEW PRODUCTS FOR ALL SCALES



Morning Star Books (morningsunbooks.com) has released "Hudson & Manhattan Railroad," by Robert J. Yanosey. The all-color book marks the 50th anniversary of the H&M's demise. Author Yanosey examines the final days of the Hudson & Manhattan and the 15-year period under PATH, the agency established to operate the Hudson Tubes.

Another all-color book just released by Morning Sun is "Santa Fe - The Final Years: Volume 1," by Jerry A. Pinkepank. Subtitled "Chicago to Belen, Raton and Denver, 1980-1996," the book documents the colorful last years of the Santa Fe including the red and yellow SPSF liveries mixed with red and silver Super Fleet warbonnets. The books are priced at $59.95 each.



P-B-L (p-b-l.com) has released a DVD that covers every aspect of soldering for model railroaders. It is the most thorough instructional I have ever seen or read on the subject. Titled "The Art of Soldering As Applied To Model Railroading," the 90 minute DVD plainly and clearly demonstrates the proper use of soldering irons (both large and small), miniature torches (oxygen and acetylene), and resistance soldering using a probe, and tweezer soldering devices. Various types of solders are explained along with the proper application of acid and fluxes.

While demonstrating various soldering techniques, narrator Bill Peter explains which type of solder and soldering devices are best suited for various metals and applications ranging from electrical circuits and PC boards, fine wiring on motors and speakers, track wiring, and repairing brass models. Bill wraps things up with a step-by-step instructional on building and detailing a steam locomotive boiler backhead. It's all here – literally everything you've ever wanted to know about soldering, and most importantly, how to do it yourself. Remastered from a P-B-L video that has been out of print for a decade, the new DVD is available now at $25.00 post paid. Visit the above web site or phone 707-462-7680 for more information.

Dr Ben (DEBENLLC.com) is selling HO, S & O scale kits for Coke Ovens that include revised instructions and weathering techniques. The kits are based on the Cascade Coal & Coke Company prototype. The masters for the castings were hand-carved by Tom Yorke. See the above web site for additional details including pricing.

NEW LARGE SCALE PRODUCTS



Bachmann (bachmanntrains.com) is scheduled to begin shipping its new 1:20.3 scale class C-19 locomotive in October. The large scale 2-8-0 model is driven by a can motor linked to an all-metal gearbox with appropriate reduction to allow realistic speeds. Additional features include equalized driver suspension; electrical pickup from all drivers and both tender trucks; a choice of track or battery power pickup; non-proprietary plug-and-play printed circuit board to accommodate a variety of systems including DC, NMRA/NEM DCC, and/or RC operation; and a choice of either DC or DCC operation of the smoke unit, cab lights, firebox flicker, ash pan glow, and classification lights.

The C-19 comes with a factory-installed speaker and has constant lighting of the headlight, classification lights, and cab light using soft white LEDs. For a final touch of authenticity the Johnson bar is connected to the adjustable Stephenson valve gear and moves prototypically with the reverse linkage.

The DCC-ready model will be available in six different paint and lettering schemes including three D&RGW liveries (Flying Grande on a short tender, Royal Gorge herald on a long tender, and the Bumble Bee scheme on a short tender), plus a Rio Grande Southern version with a sunrise herald on a short tender as illustrated here. Two painted but unlettered versions of the C-19 will also be available with a choice of either a short or long tender. All versions have an MSRP of $1,575.00.

NEW PRODUCTS FOR O SCALE



Atlas (atlasrr.com) is scheduled to begin delivering O scale ready-to-run models of Gunderson 5-unit Twin-Stacks™ with new road names and numbers during the first quarter of 2013. All five units will be available in two packs: Pack #1 will contain units A and B and will have an MSRP of $159.95. Pack #2, listed at $209.95, will contain units C, D, and E. In addition to the Susquehanna version shown here, other roads are CSX, NOKL, and TTX. Suitable containers will include 40’ APL, FESCO, Hyundai, and Triton at $24.95 each, and 50’ cans decorated for APL and Sea-Land at $27.95. Undecorated container models will also be offered.



Additional O scale items coming from Atlas early next year include a PS 4427 low-side triple-bay hopper car decorated for Akron, Canton & Youngstown; Santa Fe; CTIX-Commodity Traders; SLSF – Frisco; and TLDX-Louis Dreyfus. Two-rail versions will list at $73.95 while 3-rail versions will have an MSRP of $67.95.

A variety of new 2-rail trucks designed as drop-in replacements for all Atlas O rolling stock are scheduled to arrive late this year. Truck types will include 50-ton Barber-Bettendorf (above), 70- and 100-ton roller bearing types, Andrews, Commonwealth express, and roller bearing caboose trucks. All are priced at $24.95 a pair.



Bachmann (bachmanntrains.com) has an On30 2-4-4-2 steam locomotive with several options including a choice of three stacks, three headlight styles, and optional oil bunkers and road pilots. The model comes with basic DCC for speed, direction, and lighting. The system is ready to accept an optional Plug-and-Play sound module (sold separately) for 16-bit Tsunami® sound specific to the prototype. The model features die-cast construction and all-gear drive. It is available with either a steel or wood cab. The models are unlettered and come in plain black or black with red windows and white stripes. The 2-4-4-2 locomotive has an MSRP of $525.00 each. The optional Plug-and-Play sound module lists for $119.00.

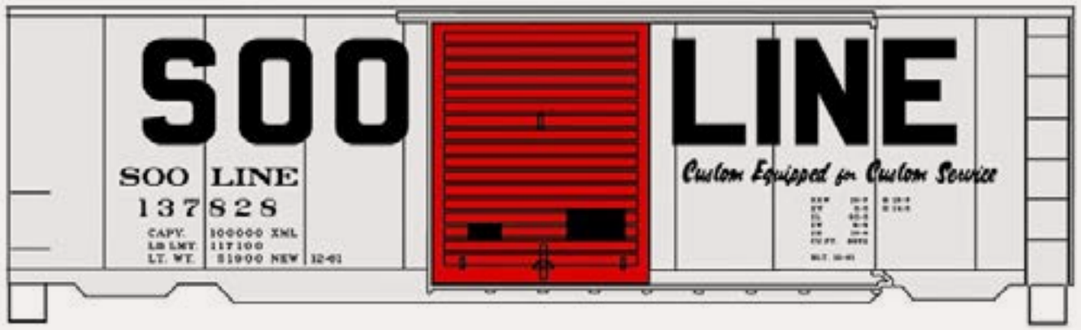


Morgan Hill Models (morgan-hillmodels.com) is selling a kit that builds into an On30 20’ Tank Car. The tank and car frame are cast resin. Basswood is supplied for the deck and tank supports. Suggestions for painting, staining and weathering are included with the kit that sells for $34.95. The photo shows a built-up model with Macleod Western T-16 trucks and Kadee #5 couplers, however, trucks, couplers and decals are not included with the kit.



MTH (mthtrains.com) has announced a Premier series O scale model of a F40PH diesel locomotive decorated for Florida Tri-Rail. The model comes with Proto-Sound 3.0 and Hi-Rail wheels for operation on O-31 track. Features include directionally controlled headlights, lighted cab interior, illuminated number board and marker lights, working ditch lights, and two remotely controlled Proto-Couplers. The model has an MSRP of $439.95. Availability is planned for December.

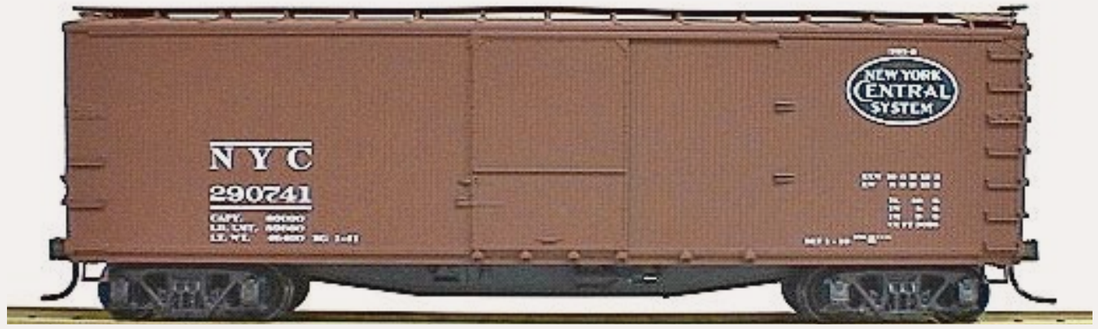
San Juan Car Company (sanjuancarco.com) eexpects to begin shipping its highly anticipated drop-bottom gondola this month as well as new arch bar trucks with a 3' 7" wheelbase. A new supply of On3 flex track is scheduled to arrive in late September or early October.



NEW PRODUCTS FOR HO SCALE

Accurail (accurail.com) will release kits for several HO scale freight cars this month. The list includes a two-car set (item #1213) of 40' PS-1 steel boxcars decorated for Soo Line at $29.98. The decorating scheme features the Soo's white car body contrasted against red doors.

Also new this month is a trio of ACF triple-bay private owner covered hoppers. The cars are decorated for Central Farmers Fertilizer Company – SHPX, Southern Clay Products – ACFX, and Columbian Plastics – SHPX. The three-car set has an MSRP of $49.98.



Kits for 40' double-sheathed wood boxcars will also be released by Accurail this month at $15.98 each. Decorating schemes include Central Vermont and New York Central as shown here.





Accurail is also selling kits for HO scale USRA 55-ton wood-side twin-bay hopper cars decorated for Delaware & Hudson, Monon, and Chesapeake & Ohio. The kits have an MSRP of $14.98. All Accurail kits include appropriate trucks and Accumate couplers.

In addition to a wide assortment of freight car kits, Accurail also sells a variety of detail parts. One of the most popular is a set of brake parts for adding extra underframe detail to 40' steel boxcars as shown here. The brake rod sets



are available in black, oxide, and mineral red at $2.98 for three sets. Additional items, viewable at accurail.com/accurail/parts.htm, include brake wheels and vertical staffs for wood boxcars, offset twin and triple hopper car details, steel refrigerator car parts, and several types of boxcar doors.





At the recent National Train Show in Grand Rapids, **Athearn** (athearn.com) showed samples of a newly tooled Genesis series 57' FGE mechanical refrigerator car that features optional on-board sound that replicates the prototype sound of a generator set or refrigeration unit randomly cycling on and off. The genset is visible through the see-through screens on the as-delivered reefers. The modernized versions have tractor/trailer-style refrigeration units. The HO scale ready-to-run car will have numerous separately applied details such as see-through end platforms, door rods, ladders and grabs, uncoupling bars, and air hoses. Brake detail will be either truck-mounted or body-mounted as appropriate to the prototype car. Also, per the prototype, the side sills will be either riveted or welded. Six road numbers will be offered for BNSF/WFE and UP/ARMN. Cars without sound will have an MSRP of $44.98. Sound equipped cars will list at $79.98. Delivery is planned for April.

Athearn has scheduled another release of its big eight-axle DDA40X for July 2013. The run will include five UP road numbers with subtle variations in the decorating treatment of each locomotive. Non-sound units will be DCC-ready using Quick Plug™ technology. They will have an MSRP of $369.98. Sound-



equipped models will list at $499.98 and have two Soundtraxx® Tsunami® DCC decoders (and two speakers) with authentic DDA40X sounds recorded from Union Pacific #6936.

Arriving in April are three ready-to-run Trinity triple-bay covered hoppers decorated for BNSF, DM&E, and Ferromex. They will have etched metal roofwalks and wire grab irons. The MSRP will be $39.98.



Delaware, Lackawanna and Western Genesis series F units will be available in March in both the F7A freight scheme (bottom) and the F3A passenger scheme (top). Non-sound units will be DCC-ready using Quick Plug™ technology. They will be priced at $169.98 each or $269.98 for two units. Sound-equipped models have Soundtraxx® Tsunami® DCC decoders and are priced at $309.98 each or $489.98 a pair. The run will include single F7A freight units, matching F7A-F7B freight units, and F3A-F3A passenger units. DL&W occasionally assigned F3A units to handle freight.



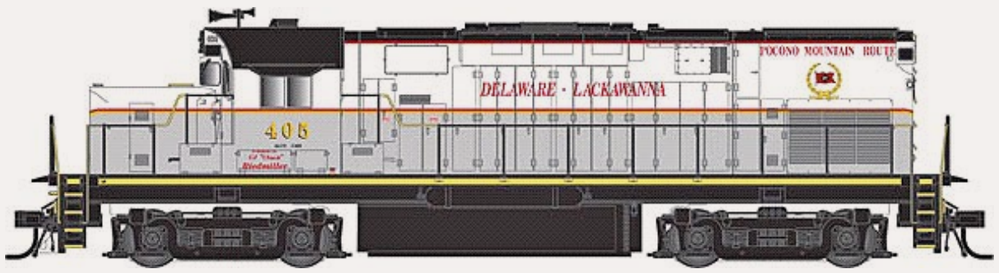
Also due to arrive in March are three Genesis series GP9 locomotives decorated for Chessie (in both C&O and B&O schemes), Western Pacific, and in Southern Pacific's passenger scheme. Because SP used the number boards to indicate the passenger train number, Athearn has left them blank so the modeler can use a decal for any train number they wish. Non-sound units will be DCC-ready using Quick Plug™ technology. They will have an MSRP of $189.98. Sound-equipped models will list at $289.98 and come with Soundtraxx® Tsunami® DCC decoders.



Athearn will recreate Norfolk Southern's ES44AC Heritage program by applying the memorable paint schemes of NS predecessor lines to ten of its HO scale AC4400 ready-to-run locomotives. The series includes (from left to right starting at the top row) Monongahela, Conrail, Southern Railway, Nickel Plate road, Central of Georgia, Pennsylvania Railroad, Norfolk & Western, Lehigh Valley, Interstate, and Norfolk Southern. Athearn says the DC models will be DCC-ready using Quick Plug™ technology. They are scheduled to be available in December at an MSRP of $139.98 each.



Atlas Model Railroad Company (atlasrr.com) has just released FMC 5077 cu ft Plate B boxcars with a single door decorated for Atlanta & St. Andrews Bay, Atlantic & Western, Burlington Northern, and RailBox. A later version of the same car will soon be released for Cadiz Railroad; Escanaba & Lake Superior; Lake Erie, Franklin & Clarion; and Port Huron & Detroit (with St Clair Blue Water Route slogan). The suggested list price of the HO scale ready-to-run models will be $34.95 each. An undecorated version will be available at $29.95.



During the first quarter of 2013, Atlas will begin shipping both low- and high-nose phase 1 versions of Alco's C420 locomotive. The prototypes have an interesting history that began in 1963 when Alco introduced the Century series 2,000 hp C420 as a replacement for its RS-32 series diesel. Atlas's low-nose C420 represents locomotives originally owned by Lehigh Valley that were transferred to Delaware & Hudson when Conrail was formed in 1976. LV 405 was later sold by the D&H but was eventually returned and is now operating as Delaware-Lackawanna 405 in their attractive gray/white "corporate" scheme as seen here.

The high short-hood models in this production run represent locomotives originally owned by the Long Island Railroad. When their lease expired in 1976, LI's phase 1 C420s were placed in storage on the Delaware & Hudson and Morristown & Erie Railroads. Some were leased by the D&H in 1977 and

operated in patched Long Island blue and yellow paint. The Vermont Northern eventually became the Lamoille Valley Railroad. Buffalo Southern number 2010 is a former Susquehanna unit still in service today. Both Canada and Mexico are represented in this release by the Nacionales de México scheme and Roberval & Saguenay, a Quebec short line.

Special features on Atlas's HO scale ready-to-run C420 include redesigned AAR type B truck sideframes, a 3,100 gallon fuel tank, and either flat or step-type pilots as appropriate to the prototype road. Units will come with or without dynamic brake details as appropriate to the road. LIRR units have the correct air horn placement and include smoke deflectors for the long hood. Road names on low-nose units include Delaware & Hudson, Delaware Lackawanna, and Lehigh Valley. Locomotives with a high-nose will be available for Long Island, Delaware & Hudson (ex LI), NdeM, and Roberval & Saguenay. Limited edition models will be available for Buffalo Southern and Vermont Northern. Atlas Master™ Silver series models (decoder ready with NMRA 8-pin plug) will have an MSRP of $169.95. Atlas Master™ Gold series models (with Dual-Mode® Decoder that permits DC or DCC operation) will list for $259.95. Undecorated models in both Silver and Gold series will be available at $10.00 less.



Atlas's next production run of AAR type J311 aluminum coal gondolas is scheduled to arrive during the first quarter of 2013. The Trainman® series HO scale model will be available decorated for BNSF, Union Pacific, Canadian National, CSX (2012 scheme), and Denver & Rio Grande. The ready-to-run models come with a load and have an MSRP of $22.95. An undecorated version will be offered at $18.95.

Bachmann (bachmanntrains.com) will release a new HO scale model of an Alco 2-6-0 steam locomotive in November with an MSRP of $195.00 each. The newly-tooled model will have factory installed DCC and a SoundTraxx® 16-bit



sound package with steam exhaust, long and short whistle blasts, bell, air compressor, and blower. Road names will be New York Central, Santa Fe, Union Pacific, Boston & Maine, and Pennsylvania Railroad.

Bachmann has an HO scale Alco model S2 diesel switcher in five road names including Southern, Western Pacific, CP Rail, and Chicago, Burlington & Quincy. The ready-to-run model is DCC-ready (decoder not included) at an MSRP of $109.00 each. A DCC equipped version decorated for Santa Fe, Baltimore & Ohio, Pennsylvania, Union Pacific, and U S Army is available at an MSRP of $195.00.

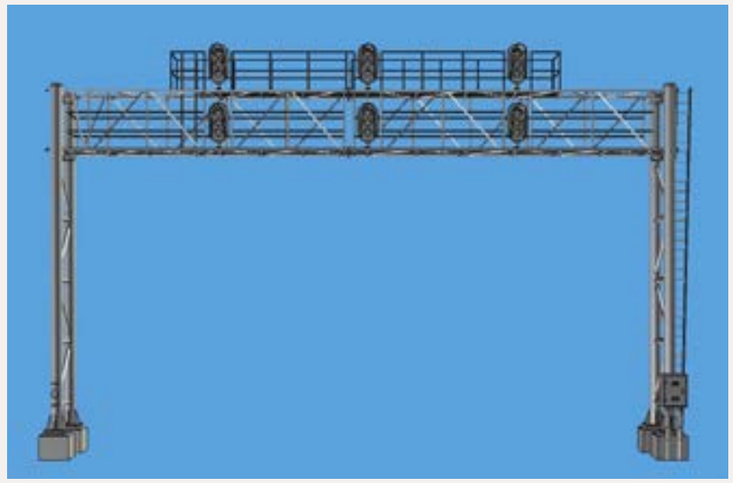


In December Bachmann will release HO scale ready-to-run F7A diesel locomotives decorated for Western Maryland (speed writing), Denver & Rio Grande Western, C&O, B&O, and Alaska Railroad at an MSRP of $79.00 each. Identical locomotives equipped with DCC sound will be available at $169.99 decorated for Santa Fe (warbonnet), NYC (lightning stripe), Norfolk Southern, Southern Pacific (black widow), and Pennsylvania Railroad as seen here. B units in comparable liveries will also be available at the same price.

Bachmann is developing a Hi Rail maintenance-of-way truck that will have factory installed DCC for speed, direction, and to control the headlight and brake light. The truck also has a manually operated swivel crane. Road names will be Norfolk Southern, Conrail, Union Pacific, plus a unit painted white without lettering. The



HO scale ready-to-run model will be available in November at a list price of $109.00.



Here is an engineering drawing of a modern three-track signal bridge under development by **BLMA** (blma.com). The assembled HO bridge will be fully operational with six lighted signal heads – that's a total of 18 separate micro LEDs. The bridge legs are on 62' centers (8.55" in HO). The bridge is constructed of injection molded plastic with etched metal handrails and walkways. The tentative MSRP is $124.95. Delivery is planned for next spring.



This pre-production sample of an HOn3 East Broad Top 3-bay steel hopper under development by **Blackstone Models** (blackstonemodels.com) shows the company's usual attention to detail including individual wire grabs, complete brake rigging, and underbody details. Reservations are being taken now for the ready-to-run EBT car which will be delivered with factory installed couplers and Vulcan-type trucks. The HOn3 ready-to-run models have an MSRP of $54.95 each. Weathered versions will be available for an additional $5.00. Other new items coming from Blackstone include a 3-pack of Chili Line open-platform coaches.

Concept Models (conceptmodels@con-sys.com) is selling an HO kit for a PRR heavy duty depressed-center flat car. The 60' car has a load-bearing platform of 30'. This is a basic body kit consisting of resin castings and assembly hardware. Hand grabs, ladders, trucks, couplers, and related detailing parts are not included. The kit is priced at $39.95. An optional truck frame kit is available at the above website.



Classic Metal Works (classicmetalworks.com) September schedule includes the release of this colorful Yellow Freight 1940s-era billboard scheme applied to an AeroVan trailer. It is pulled by a 1941/1946 Chevrolet tractor cab. Also coming this month is the much anticipated Scenicruiser intercity bus. Other HO scale vehicles new from CMW include four versions of 1953 Ford Couriers as well as four different paint schemes applied to 1941/1946 Chevrolet trucks.



ExactRail (exactrail.com) is selling its Pullman Standard 4427 cu ft low-hip covered hopper in five road names plus an undecorated version. Features of the Platinum series model include a photo-etched stainless-steel roof walk and brake platform, 100-ton ASF Ride Control trucks, and Kadee #58 couplers. Road names on the PS-2CD triple-bay hopper are UP, NP, WM/Chessie, Soo Line, and Soo Line/Colormark as shown here. The HO scale ready-to-run model is available direct from ExactRail at $36.95 each.

ExactRail is developing new HO and N scale wheelsets. The precision wheels are designed to replicate the subtle contour of both the outer and inner face of prototype



Photos courtesy of ExactRail

wheels. As illustrated above, the interior face of the wheel sweeps beyond the margin of the flange. ExactRail notes that this is one of the distinctive features of a prototype wheel -- which is that the flange is offset from the plane where the wheel meets the axle. The axles themselves are precision milled to provide the distinctive curve at the junction of the axle and wheel. ExactRail will manufacture the new wheelsets at their facility in Orem, Utah, using newly-acquired Swiss turning machinery.

Both 33” and 36” wheelsets will be available in HO and N scale. HO wheels will be available in RP-25 (0.110) treads as well as 0.088” tread widths. The HO axle length will be 1.005”. Axles of different lengths are under consideration and may be offered in the future. Wheel sets will be available in nickel-silver, natural brass and blackened brass. They will be packaged in 12 and 100 unit quantities. A formal announcement of the new wheelsets, including pricing, is expected soon.



Brownsville Depot is the newest HO scale kit from **Fine Scale Miniatures** (finescaleminiatures.com). Designed and produced by master craftsman George Sellios, the finished structure has all of the intricate details and features typical of FSM models. More than 120 cast metal detail parts are provided including two baggage wagons. The kit is available direct from FSM at $280.00 plus $15.00 postage. Production will be limited to 600 kits.

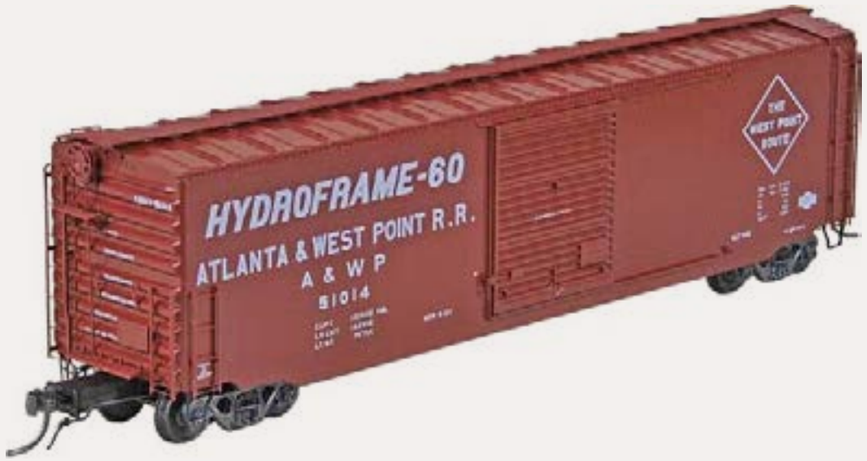
InterMountain (intermountain-railway.com) will produce all ten of the Heritage Series road names Norfolk Southern has applied to their prototype General Electric Evolution Series ES44AC locomotives. Series ES44AC locomotives including Monongahela, Pennsylvania, Conrail, Norfolk & Western, Southern Railway, Lehigh Valley, Nickel Plate Road, Interstate, Central of Georgia, and Norfolk Southern. InterMountain’s HO scale ES44AC will be available ready-to-run on DC at $179.95, or DCC with optional SoundTraxx® Tsunami® sound at $295.95. Availability is expected in March or April.

InterMountain is also taking dealer reservations for delivery in March or April for HO scale AAR two-bay open-top hopper cars. These ready-to-run cars adhere closely to the prototype with more than 150 separate parts going into each model. Variances include different end configurations in accordance with the practice of each road name which include B&O, M&StL, Cambria & Indian, NKP, C&O, P&S, Litchfield & Madison, and Pittsburgh & West Virginia. All of the hoppers in this run will be painted black with white lettering. The MSRP will be $38.95.

Also in the works at InterMountain are HO scale R-70-20 refrigerator cars decorated for BNSF, Milwaukee Road, ARMN, UPFE, SPFE, BN (white), and FGE (Real Cool slogan). The ready-to-run models have an MSRP of $34.95 and are expected in March or April.



Kadee Quality Products (kadee.com) November production schedule calls for the release of a 40’ PS-1 boxcar with an 8’ door decorated for the St. Louis & San Francisco Railroad. The HO scale model will be decorated in the prototype’s 1952 as-new red oxide paint with a Frisco Fast Freight slogan. The ready-to-run car will have an MSRP of $35.95.



Also coming from Kadee as illustrated here in November is a 50' PS-1 boxcar with a 9' door decorated for Atlantic & West Point Railroad. The A&WP model will have an MSRP of $36.95.

At the recent National Train Show, **Moloco Trains** (molocotrains.com) showed a preproduction sample of an assembled HO scale General American 50' RBL boxcar with a 10' 6" offset plug-door. It is scheduled for release in September or October. Road names on the ready-to-run model will be Erie Lackawanna, Wabash, Rock Island, and Milwaukee Road. The MSRP is tentatively set at $53.00. Moloco previously offered the model in kit form.



NJ International (njinternational.com) is selling kits for an HO scale Maintenance Platform. The platforms are composed of injection molded parts and etched stainless steel see-thru steps and platforms. The platforms are sold in pairs in lengths 68' at $25.99, 102' at 34.99, and 136' at $45.99. Extra 68' hand rails are available at $6.99 each. Individual 68' etched walkways are $12.99 each.

Peach Creek Shops (peachcreekshops.com) has created a craftsman kit that makes into an HO scale model called the Cass Doctor's House, a structure that still stands in Cass, West Virginia. The model was constructed from the original architect's plans and all dimensions are to scale. Construction is laser-cut basswood



with all interior walls included. Windows and doors are styrene plastic and were custom made for this kit. Step-by-step instructions are provided along with color pictures and a CD with interior and exterior photos of the prototype. Construction is not difficult but may take 30-40 hours to complete. Only 50 kits have been produced. The cost is $97.50 plus postage. .

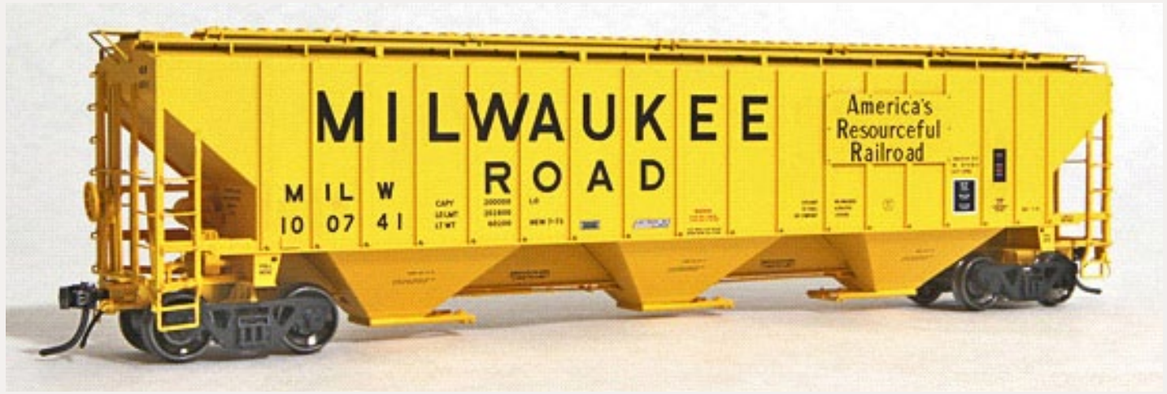


Rapido (rapidotrains.com) is resurrecting its HO scale Bombardier LRC (light, rapid, comfortable) locomotive which, among other assignments, handled VIA Rail Canada on the Ontario-Quebec corridor. The LRC was also tested by Amtrak. Tooling for the 1:87 scale version was completed in 2009 but the project was put on hold due primarily to lack of up-front reservations. Things have changed in the past 36-plus months and Rapido will soon announce paint schemes, pricing, and arrival dates on the renewed LRC.



Tangent Scale Models (tangentscalemodels.com) has added new decorating treatments to its highly-regarded Pullman Standard PS-2CD 4000 cu ft triple-bay covered hopper. New

road names on the HO scale ready-to-run model are Wabash, Monon, and CGW as seen above in the original 1963 gray.



Tangent has also announced eight new decorating treatments on its Pullman Standard 4750 triple-bay covered hopper. Roads now available include GTW (original 1972 blue), ICG (1974 orange scheme), PC (green with white and yellow stenciling), NAHX-Farnhamville Iowa (pink), PTLX–Michigan Elevator Exchange (yellow with black underframe), PTLX–Pillsbury (gray), PTLX-Tri-County Grain (gray), and Milwaukee Road (1973-era Federal yellow, as seen here). Both the 4000 and 4750 models sell for $42.95 each. Tangent offers discounts for multiple car quantity purchases in increments of 6, 12, 24, 36, and 48 models. Visit the above web site for details.



Walthers (walthers.com) has released additional details on its C&O Pere Marquette six-car project. The distinctive blue and yellow livery is based on the color treatment used on the prototype between 1954 and 1963. Special features on Pere Marquette equipment includes accurately tinted windows, factory installed grab irons, and appropriate trucks with 36” metal wheelsets. A minimum 24” radius is recommended for the HO scale ready-to-run models. All of the Pere Marquette passenger cars have an MSRP of $69.98. Optional factory installed DC/DCC LED lighting will be available on some windowed cars at $79.98.



The project kicks off with the 86’ ACF RPO-Baggage car and a 72’ Pullman-Standard Baggage car both of which are scheduled for release late this month. Next to arrive will be the 85’ P-S 52-seat Coach due in October. The coach will be available both with and without fluted skirts. November will see the arrival of two newly tooled cars; an 85’ P-S Lunch Counter/Lounge car and an 85’ P-S Diner/Coach. Also newly tooled is an 85’ P-S 10-6 plan 4167 Sleeper (see above) scheduled to arrive in December. WalthersProto™ EMD E7A unit is due in March. It will be available in standard DC at $199.98 and with Tsunami® Sound and DCC decoder at $299.98. All prices noted are MSRP.



Wathers new Proto 25’ C&O wood caboose is available now at $39.98. Four different paint schemes are offered on the HO scale ready-to-run model that is based on C&O 90700 series cabooses that were built in the 1920s and remained in regular service through the 1960s.



Also available now is Walthers Mainline™ series 40’ single-sheathed, wood boxcar with steel Dreadnaught ends. In addition to the CB&Q car shown here, the HO scale ready-to-run model is available decorated for Great Northern, Milwaukee Road, and Union Pacific. The MSRP is $19.98.



WalthersProto™ 53’ AAR 50-ton flat car decorated for KCS, N&W, SOO, and Western Maryland (above) are set to arrive in March, 2013. The HO scale ready-to-run models will have an MSRP of $29.98 and will feature complete underbody details including all brake rigging.



Also coming in March is a group of 50’ coal gondolas in Walthers Mainline series. The HO scale ready-to-run models will have an MSRP of $24.98. Road names will be Burlington Northern; Depew, Lancaster & Western - DLWR; Trinity Industry Leasing – CEPX; and as seen here, Joseph Transportation – JTIX.



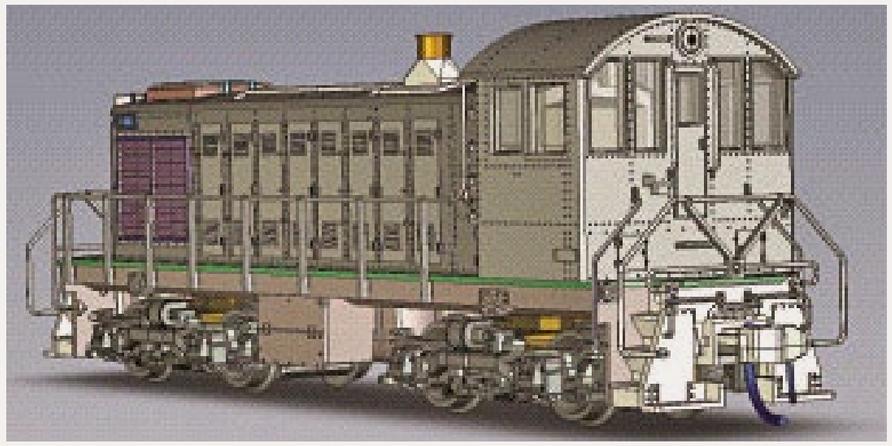
Andrew Dahm, the new owner of **Westerfield Models** (westerfieldmodels.com), says the backlog of orders has been fulfilled and he is now able to accept new orders for several HO scale resin kits including the new #12100 series Rock Island class B-2 conversion stock car shown above. Other kits now available include class HR hopper cars (kit #5100), and class Sk.L/N/P Caswell stock cars (kit #11500). Still undergoing development but expected to be available soon are PRR class H21/H21A hopper cars (kit #3200), PSC ore cars (kit #3400), class R-30-4/5/6 reefers (kit #4900), and class GKA NW battleship gondola (kit #11000).

NEW PRODUCTS FOR N SCALE



Atlas (atlasrr.com) is scheduled to begin delivering N scale Dash 8-40B and 8-32BHW diesel locomotives with new numbers and new paint treatments during the first quarter of 2013. The 8-40B version will be decorated for BC Rail, CSX, Southern Pacific, and Seminole Gulf. The Dash 8-32BHW will be available in Amtrak’s “Pepsi Can” scheme.

Both versions of the diesel will be offered for basic DC operation at a list price of $129.95, and with a Lenz decoder for DCC operation at $169.95.



Here is a preliminary computer drawing of an N scale Alco S-2 diesel locomotive currently under development by Atlas. The ready-to-run model will have all-wheel electrical pickup, all-wheel drive, directional lighting, flywheel drive, DCC-ready plug, and both horizontal and vertical grilles as appropriate to the prototype being modeled. Information about road names and pricing is expected to be announced soon.

Bachmann (bachmanntrains.com) has a new N scale boxcar with sliding side doors. The newly tooled model comes with body-mounted E-Z Mate Mark II couplers. In addition to the Delaware & Hudson paint scheme shown here, the model



is also available for Central of Georgia (football scheme with running board), New York Central (jade green with running board), Santa Fe (with running board), and Union Pacific (without running board). The MSRP is $27.00 each.

Later this month, Bachmann will release a new N scale model of an Alco 2-6-0 steam locomotive with an MSRP of $179.00 each. The newly-tooled model comes with factory installed DCC for speed, direction, and lighting. Construction features include a die cast chassis and cylinders with metal side rods and valve gear. Road names will be New York Central, Canadian National, Santa Fe, Union Pacific, Boston & Maine, and Pennsylvania Railroad.



Eastern Seaboard Models (esmc.com) second release of its X58 boxcar will include a Conrail car decorated in the mid-1980s scheme. The body and underframe of the ESM N scale model are injection molded plastic, with etched brass running boards, brake platform, and end platforms. The model comes with BLMA ASF 70-ton Ride Control roller-bearing trucks. The X58 will be offered in five variations: 1) as-built with running board, high brake gear, and high ladders; 2) high brake gear, low ladders except on the A end, and without running board; 3) high brake gear, high ladders, and no running board; 4) modern-era with lowered brake gear, low ladders, and no running board; 5) with Hydra-Cushion or Keystone cushioned underframe. The models comes with Micro-Trains® #1015 couplers.

InterMountain (intermountain-railway.com) is taking dealer reservations for N scale R-70-20 refrigerator cars decorated for BNSF, Milwaukee Road, ARMN, UPFE SPFE, BN (white), and FGE (Real Cool slogan). The ready-to-run models have an MSRP of $22.95 and are expected in March or April.

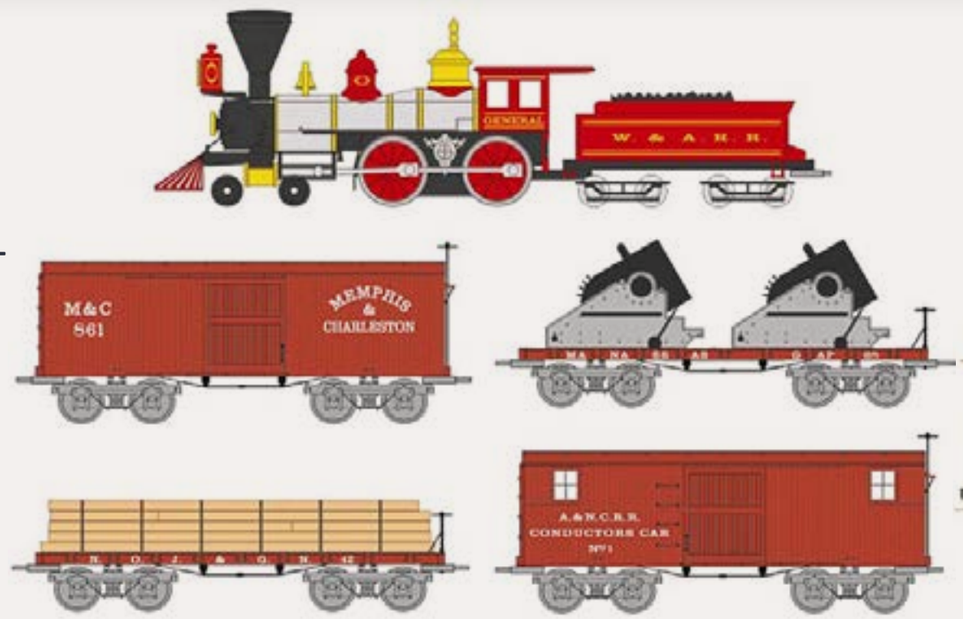


Kato USA (katousa.com) has released a brief video that demonstrates how their clever new "bookcase" packaging for the three-car sets can be expanded for additional cars and locomotives. To see the video on youtube visit youtube.com/watch?v=31kJ38SEs9I.

Late this month, Kato will release EMD F40PH Amtrak phase III locomotives with ditch lights (above) and phase III Amfleet II cars (below). This will allow N scale hobbyists to model Amtrak equipment from the early 1990's such as the Missouri River Runner, which operates between St. Louis and Kansas City, or the Hiawatha that serves Chicago and Milwaukee.



The F40PH Phase III locomotives will be available in two road numbers at $115.00 each. Matching Amfleet II cars available in Phase III paint will be offered in a package of two coaches, and in a two-car pack containing a baggage car and a lounge car (above). The two-car packs have an MSRP of $55.00 each.



To mark the 150th Anniversary of the American Civil War, **Micro-Trains Line** (micro-trains.com) will introduce a new series of rolling stock that will reflect early North American railroad equipment with appropriate underframe and truss-rod detail, new rigid-frame trucks with 33” wheels, and simulated link-and-pin style coupler that are not intended for hands-free operation. Micro-Trains standard Magne-Matic® couplers will be included. M-T has contracted with Bachmann to produce an appropriate 4-4-0 steam locomotive. The initial release will be a W & A 4-4-0 locomotive and tender with four Civil War-era 26’ freight cars including a flat car loaded with a pair of 13” siege mortars. The set will have an MSRP of $189.95. It is scheduled for availability in December 2012. A similar set will be available decorated for the Union Army.



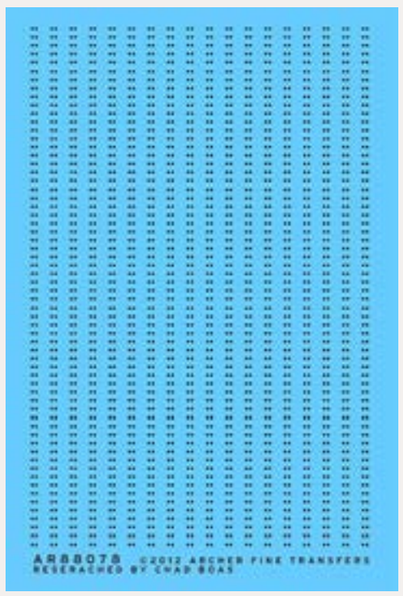
Micro-Trains is selling a Cotton Belt train set that include a GP7 diesel locomotive, three 57’ SP flat cars with 40’ trailers, and an SP caboose with a Trailer-Flatcar Service slogan. Although Southern Pacific took control of the St Louis and Southwestern Railroad, aka the Cotton Belt, in 1932, the parent road permitted the StL&S to operate as an independent company until 1992 when their operations were consolidated. Cotton Belt’ diesels continued with their own liveries until 1959 when they adopted SP’s Bloody Nose scheme, but retained the Cotton Belt name on their sides. The Micro-Trains eight-piece set has an MSRP of $239.95



Micro-Trains is selling their N scale heavyweight passenger cars unlettered. The ready-to-run cars are painted in Tuscan red with black roofs and underbodies. Clockwise from the upper left are a Railway Post Office car, 12-1 sleeper, 3-2 open-end observation car, and 10-1 sleeper. The cars have an MSRP of $20.40 each.

In addition to railroad items, **Trainworx** (train-worx.com) also offers modelers vehicle components for scratch building or modifying N scale trucks and trailers. Components include parcel van frames, trailer dolly kits, and trailer landing gear assemblies. Wheel/Tire sets include 10 x 20 duals with Dayton and Budd wheels, and 7.50 x 15 Little (Dayton) duals. Visit the above web site for more information.

NEW DECALS, SIGNS, AND FINISHING PRODUCTS



Archer (archertransfers.com) has added resin detail decals with rivet heads in single rows, double rows, close double rows, and staggered double rows. The new sheets are suggested for S scale streetcars and come with 5/8” rivet heads (Item 88076) and 7/8” rivet heads (item 88077). Also new are beltline rivets with double rows of 7/8” rivets spaced every 3” with the rows spaced 1.5” apart. The beltline rivets are available for O scale (item 88078 –shown here), S scale (item 88079), HO scale (item 88080), and N scale (item 88081). All sheets come with instructions and are priced at $17.95 each.



Jerry Glow (home.comcast.net/~jerryglow/decals) has released decals for Jersey Central Lines PS-2 two-bay covered hopper, and URTX Milwaukee Road steel refrigerator car for upgrading a Walthers HO scale model. The lower car shown has a modified sill. Also new are decals for a Great Northern combination door boxcar, and Missouri Pacific decals for a 45' flat car built from Chad Boas HO scale resin castings. Most N and HO scale decal sets are $4.50. Visit the web site for ordering details and a complete list of available decals.

Great Decals (greatdecals.com) has HO scale white decals for Norfolk, Franklin & Danville 50' double door boxcars. Each set provides road name, a dozen random road numbers, dimensional and capacity data, and date lettering. The decals are available at $4.99 postpaid from Great Decals, P. O. Box 994, Herndon, VA 20172. An image of the decal sheet can be viewed at greatdecals.com/GreatDecals/WSM-121.JPG.



Microscale Industries (microscale.com) has released HO and N scale decal sets for Missouri Pacific/Texas Pacific express boxcars including slogans and stripes (shown here). Also data and markings for 40' and 50' Burlington Northern boxcars. HO sets are $7.00, N scale sets are $5.75. A new 2-sheet set of decals of Southern Pacific station signs and signal milepost numbers is available now at $11.25 for HO and $7.50 for N scale.

Currently under development and expected to be released soon are decal sets for Southern Pacific/Cotton Belt Fruehauf trailers, 85' and 89' SP/SSW flatcars, Burlington Northern bulkhead and centerbeam flatcars, Santa Fe 40' and 50' boxcar dimensional data including reweigh station abbreviations, and NOKL centerbeam cars including DOMTAR and BC Rail.

San Juan Decal Company (sanjuandecals.com) has new On3 two-tone lettering sets in both yellow/red and gold/red for Brooks, Dawson & Bailey, and Baldwin locomotives, as well as Denver, South Park & Pacific Mason-Bogie locomotives. The thin-film lettering sets are created from artwork developed by George Sebastian-Coleman who did extensive research on the circa 1883 locomotives. The On3 sets are $10.95 each. An On3 lettering set is also available for the San Juan Car Company D&RGW pile driver OB or the Durango Press kit at $8.95.

HOn3 decals for renumbering Blackstone D&RGW equipment are now available for 3000 series box cars (both black and white letters), 5500-5800 series stock cars (white), high-side gondola (white), drop-bottom gondola (white), 6000 series flat car (white), and long caboose (white). The sets are $6.95 each. Also new are 15mm (1:20.3) decals for OR&L yellow freight cars at $12.95. Visit the SJDC web site for full details.

DISCLAIMER

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Selected Events

September 2012

CALIFORNIA, COSTA MESA, September 8-9, The Great Train Expo, Orange County Fairgrounds. Info at trainexpoinc.com.

CALIFORNIA, OXNARD, September 6-9, NMRA Pacific Southwest Region "Ventura Flyer" 2012 Convention featuring clinics, prototype tours, layout tours, swap meet, and hobo auction. Scheduled banquet speaker is Michael Gross. Courtyard Marriott, 600 East Esplande Drive. Info at psrnmra.org.

CALIFORNIA, PERRIS, September 8, Fall Railroadiana Meet, Orange Empire Railway Museum. Info at oerm.org.

CALIFORNIA SAN JOSE, Septembr 15-16, The Great Train Expo, Santa Clara County Fairgrounds. Info at trainexpoinc.com.

COLORADO, COLORADO SPRINGS, September 14-15, TrainExpoCO, swap meet, operating layouts, clinics, manufacturers presentations. Financial Services Expo Center, 3650 N. Nevada. Info at tecoshow.org.

INDIANA, INDIANAPOLIS, September 7-8, Hoosier Traction Meet, an educational conference on public transportation history and progress includes eleven illustrated talks on prototype electric railway and trolley bus systems, plus all day swap meet featuring display photos, books, miniature models, timetables and other collectibles. Clarion Hotel & Conference Center. Info at eastpenn.org/hoosiermeet.html.

NEW JERSEY, BRIDGEWATER, September 29, Northeast Fallen Flags RPM meet featuring RPM models and speakers. Somerset County 4H Facility, 310 Milltown Road. Additional details including registration info at hansmanns.org./neff_rpm.

NEW YORK, LIVERPOOL (Syracuse area), September 6-9, Empire Junction '12, NMRA Northeastern Region Fall 2012 Convention, Holiday Inn Hotel & Convention Centre on Electronics Parkway. Information at nernmra.org.

NEBRASKA, NORTH PLATTE, September 14-16, Rail Fest 2012, multiple events including tour UP challenger 3977, DD40, and dozens of railcars at Cody Park, model train expo, tour of diesel shops, car repair facility, and Bailey Yard that process 150 trains and 10,000 railcars each day. Details at nprailfest.com.

TEXAS, TEMPLE, September 15-16, 30th Annual Temple Model Train Show sponsored by Central Texas Area Model Railroaders. Frank Mayborn Convention Center. Info at centramod.com/show2012.htm.

WASHINGTON, BELLEVUE, September 12-15, 32nd National Narrow Gauge Convention, with 50 clinics, 35 layout tours, and 80 plus vendors. Single day registration of $45 at the door. Meydenbauer Convention Center. Info at seattle2012.com.

WASHINGTON, LA CONNER, Sept 8-9, 18th Annual North West Logging Modelers Convention, antique engines, logging equipment displays, donkey hunt, Snag boat tour, model contest, vendor tables, and logging fan camaraderie. Contest info at sites.google.com/site/nwlmconvention. Additional info from Loyd Lehrer at lloydlehrer@gmail.com or phone 310 951-9097.

October 2012

ILLINOIS, NAPERVILLE, October 18-20, 19th Annual RPM-Naperville Conference with blue ribbon panel of speakers. Revised list includes Michael Borkon, Jack Burgess, Paul Dolkos, John Golden, Glenn Guerra, Richard Hendrickson, Tony Koester, Martin Lofton, Lance Mindheim, Pierre Oliver, Jim Panza, Stan Rydarowicz, Bill Schaumburg, Andy Sperandeo, Mont Switzer, Tony Thompson, Bill Welch, and more. Sign up for three-day registration or one-day Saturday only. Hosted by Joe D'Elia at Napervile Marriott Conference Hotel. Info from Joe D'Elia, PO Box 2701, Carlsbad CA, 92018, (760) 721-3393, or visit railroadprototypemodelers.org.

MARYLAND, TIMONIUM, October 27-28, Great Scale Model Train Show with more than 350 vendor tables. Hosted by Howard Zane in Exhibition Building, Maryland State Fairgrounds. Info at gsmts.com.

NORTH CAROLINA, BREVARD, October 12-13, Narrow Trak 12. Annual narrow gauge and logging mini-convention featuring model displays, operating modules, popular-vote model contest, seminars, camaraderie, and Saturday night bluegrass music. Seminars begin at 2:30 PM Friday. Speakers include Matt Bumgarner, Jerry Ledford, and Tom Yorke. Transylvania County Recreation Center, 1078 Ecusta Road. For information contact narrowtrak@mac.com or send inquiry to Narrow Trak 12, 102 College Station Dr., PM 104, Brevard, NC 28712-3195.

OHIO, CLEVELAND, October 11-14, iHobby Expo, annual hobby industry trade show, IX Center.

OKLAHOMA, TULSA, October 19-20, Oklahoma Narrow Gauge Meet. Clinics include Bob Hyman on 20.3 scale outdoor RGS layout, and Chuck Lind on logging and sawmills, plus op sessions. Progressive meet in private homes requires RSVP as early as possible. Info at **okng.org** or e-mail Ken Ehlers at: **ehlerskd@hotmail.com**.

PENNSYLVANIA, STRASBURG/LANCASTER, October 11-13, Fine Scale Model Railroader Expo, with manufacturers displays, clinics, dioramas, display lay-outs including Muskrat Ramble On30 layout, plus others activities at the Strasburg Railroad, and The Pennsylvania State Railroad Museum (PSRM). HQ at Lancaster Host Hotel & Conference Center, Strasburg, with special awards dinner at PSRM. Info at **modelrailroadexpo.com**.

SOUTH CAROLINA, MYRTLE BEACH, October 13-14, Grand Strand Model Railroaders 3rd Annual Model Train Show, at Lakewood Conference Center, 5837 S. Kings Hwy. Info at **isfans.com/gsmrrc**.

UTAH, SALT LAKE CITY, October 26-28, NMRA Wasatch Division hosts Wasatch Rails 2012. Grand Building, Promontory Hall, Utah State Fair Park. Info at **nmrawasatch.org/html/events.html**.

VIRGINIA, SUFFOLK, October 18-21, 2012 NMRA Mid-Eastern Region Convention at Hilton Garden Inn. Guest speaker Jim McClellan former vice president of Norfolk Southern. Info at **nmra-mer-tidewater.org/Convention/convention.html**.

WASHINGTON, SEATTLE, October 13, Rails By The Bay 2012, Pacific Northwest Railroad Prototype Modelers meet.
Info at **northwestrpm.com/RPM_Meet.html**.

FUTURE 2012

COLORADO, COLORADO SPRINGS, December 15-16, TrainExpoCO, swap meet, operating layouts, clinics, manufacturers presentations. Financial Services Expo Center, 3650 N. Nevada. Info at **tecoshow.org**.

PENNSYLVANIA, YORK, November 25, and December 2, 8-9, 15-16, 22-23, and 29-30, Annual Open House, hosted by Miniature Railroad Club of York, Saturdays 3 to 8 PM, Sundays 1 to 5 PM. 381 Wheatfield Street. Donation at door. Info at **mrrcy.com** or call 717.458.2932.

FUTURE 2013

AUSTRALIA, MELBOURNE, April 12-14, 2013, 13th National Australian N Scale Convention, Rydges Bell City Event Centre, Preston, Melbourne. Info at **convention2013.nscale.org.au** or send email to **nscale2013@bigpond.com**.

CALIFORNIA, PASADENA, August 28-31, 2013, 33rd National Narrow Gauge Convention. Hilton Hotel, 199 S. Los Robles St. Info at 33rdnngc.com. Send inquiries to Jeff Smith at **jeff@railmasterhobbies.com**.

CALIFORNIA, SACRAMENTO, February 23-24, 2013 World's Greatest Hobby on Tour, featuring manufacturers displays, operating displays, interactive activities, and workshops presented in a family-oriented atmosphere, at Cal-Expo. Attendee and exhibitor info at **wghshow.com**.

CALIFORNIA, SAN DIEGO, February 9-10, 2013 World's Greatest Hobby on Tour, featuring manufacturers displays, operating displays, interactive activities, and workshops presented in a family-oriented atmosphere, at Del Mar Fairgrounds. Attendee and exhibitor info at **wghshow.com**.

CALIFORNIA, SANTA CLARA, January 24-26, 013, O Scale West and S West Annual Meet, Hyatt Regency Hotel, 5101 Great American Parkway. Info at **oscalewest.com**.

FLORIDA, COCOA BEACH, January 10-12, 2013, Prototype Rails/Cocoa Beach 2013, Major RPM meet hosted annually by Mike Brock. To preregister send $35 check payable to "Prototype Rails" to Marty Megregian; 480 Gails Way; Merritt Island, FL 32953. Event at Hilton Hotel, 1550 N. Atlantic Ave. (Highway A1). For reservations call 800-526-2609 or 321-799-0003. Refer to Prototype Rails for reduced room rate.

GEORGIA, ATLANTA, July 14-20, 2013, National Model Railroad Annual Convention and National Train Show.

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

MISSOURI, ST. LOUIS, January 12-13, 2013 World's Greatest Hobby on Tour, featuring manufacturers displays, operating displays, interactive activities, and workshops presented in a family-oriented atmosphere, at America's Center. Attendee and exhibitor info at **wghshow.com**.

NEW MEXICO, ALBUQUERQUE, June 6-9, 2013, Rails Along the Rio Grande, NMRA Rocky Mountain Region, Rio Grande Division 6, convention with

clinics, layout tours, train show, OpSig sessions, UPRR and BNSF modelers showcase night, and banquet. Marriott Pyramid North. Info at rarg2013.org.

PENNSYLVANIA, YORK, January 5-6, Annual Open House, hosted by Miniature Railroad Club of York, Saturdays 3 to 8 PM, Sundays 1 to 5 PM. 381 Wheatfield Street. Donation at door. Info at mrrcy.com or call 717.458.2932.

TEXAS, FORT WORTH, January 5-6, 2013 World's Greatest Hobby on Tour, featuring manufacturers displays, operating displays, interactive activities, and workshops presented in a family-oriented atmosphere at Will Rogers Memorial Center. Attendee and exhibitor info at wghshow.com. ■

Reader Feedback
(click here)



REVERSE RUNNING: Where there's a will, there's a way

Stepping outside the box with a contrary view



Reader Feedback
(click here)

— by Joe Fugate

How many times have you heard someone say the hobby of model railroading is just getting too expensive? Often, the person has been in the hobby for decades and they recite how they could get a locomotive for $25 and a freight car for $2 ...

Yes, the hobby costs more today than it did 10, 20, or 30 years ago. But what doesn't?

Did you really expect the hobby of model railroading to somehow be exempt from the cost increases that have affected everything else?

Have you checked the price of a gallon of gas today, compared to 10, 20, or 30 years ago? Or the price of candy bars, or postage stamps?

Higher costs to do the hobby today are a given. But let's agree practically nothing costs what it used to and that hobby vendors deserve a decent living as much as the next guy.

Part of the concern about the cost of the hobby leads to wondering how anyone can afford to do the hobby today, and fears that the hobby might be doomed because no one can "afford" to get into it.

At this point, I start wondering what has happened to us? Where has the concept of planning and saving for something gone?

Does all gratification have to be instant? What about having a passion to for something you really would like to do but can't afford - but that passion drives you to plan, save, and dream of the day when you can finally do what you worked and scrimped for?

Half the fun of major purchases is the anticipation and the planning! Have we forgotten that?

Let's say I see a $250 sound loco that I want, but my monthly hobby budget is more like $50. So what's wrong taking an assessment of things, and then planning to put aside $25 per month out of my hobby budget toward eventually getting that sound loco?

Or how about getting a DCC system? Most starter systems are under $200, and nice fleet decoders in HO go for less than $20 each.

With today's emphasis on modeling a specific prototype in a specific time and place, that can actually help this "don't have enough money" situation. Being very specific limits your choices so you won't be tempted as easily by stuff you should not be buying!

Jack Burgess, of Yosemite Valley fame, tells of how this very situation lead him to model the Yosemite Valley. He selected this small prototype road to model so he would be less tempted to spend money he didn't have on all kinds of stuff he didn't need.

Okay, so Jack deliberately chose to focus his interests at least somewhat due to a limited pocket book (a common situation most all of us share, frankly). Jack took a potential negative and turned it into a lifetime passionate pursuit for modeling a specific prototype well, a pursuit that has lead to a lifetime of pleasure and accomplishment.

In hindsight, Jack's lack of funds turned out to be a blessing in disguise! And that's just my point.

By focusing our interests, we can zero in on the few items we need to model an interest well. Rather than be a bummer that has us frustrated, our resource limitation leads us to a way to pursue the hobby that ultimately satisfies better than ever.

By taking this approach we all can start planning and saving for a more limited modeling passion. And we need to stop focusing on what we don't have and learn to enjoy the journey! That's a big part of the hobby, too.

If you want something with enough passion, you'll find a way to get it, and yes, even save for it.

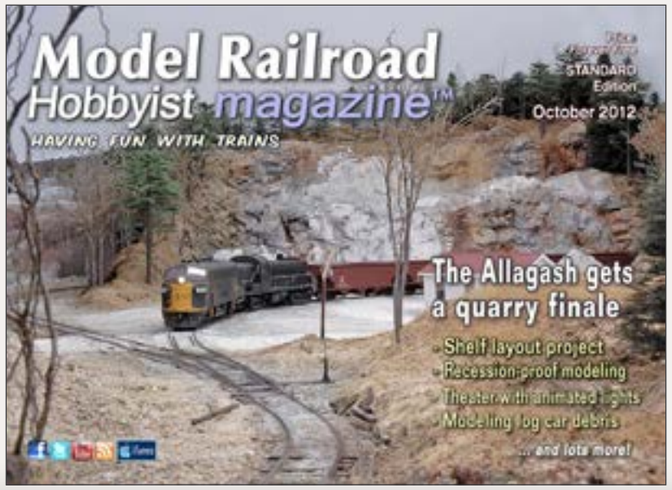
Just because we can't run out and buy anything we want whenever we want doesn't mean we can't do the hobby well and have a total blast in the process. Just remember Jack Burgess.

Like Jack demonstrated, where there's a will there's a way! ☑

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For the love of model trains

Coming in October 2012 MRH

- Allagash gets a quarry finale
- Movie theater with animated lights
- Recession-proof modeling
- Shelf layout project
- Modeling log car debris ...*and lots more!*

Derailments, humor, and document options on next page ▶

Derailments

humor (allegedly)



Maintenance tickets found in an old diesel loco shop ...

Problem: Loco brake causes throttle lever to not move.
Solution: That's what it's there for.

Problem: Engine is missing.
Solution: Engine found under hood after brief search.

Problem: Something loose in cab.
Solution: Something tightened in cab.

Problem: Loco dances up / down when brake applied at 70 MPH.
Solution: Could not reproduce problem in loco shop.

Problem: Evidence of leak in crankcase.
Solution: Evidence removed.

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

Reader Feedback
(click here)

Can't remember what MRH back issue that article was in?

Have you checked the online index?

Click here to learn more ...

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