

CRUCIAL CONNECTORS FOR DCC WIRING p.46

**New N scale
Mikado** p.48

August 2022 • Trains.com



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New train types and
changing industries keep
the Utah Belt fresh

p.34

3' x 7'6"
**Scenic N
scale layout**

p.28

PLUS

Decal a one-of-a-kind locomotive p.43

A look at interlocking tower operations p.54





45' TRAILMOBILE TRAILERS

DRY-VANS - WITH AND WITHOUT SIDE DOORS



**3D Renders shown, subject to revision.*



The Canadian Piggyback Trailer features:

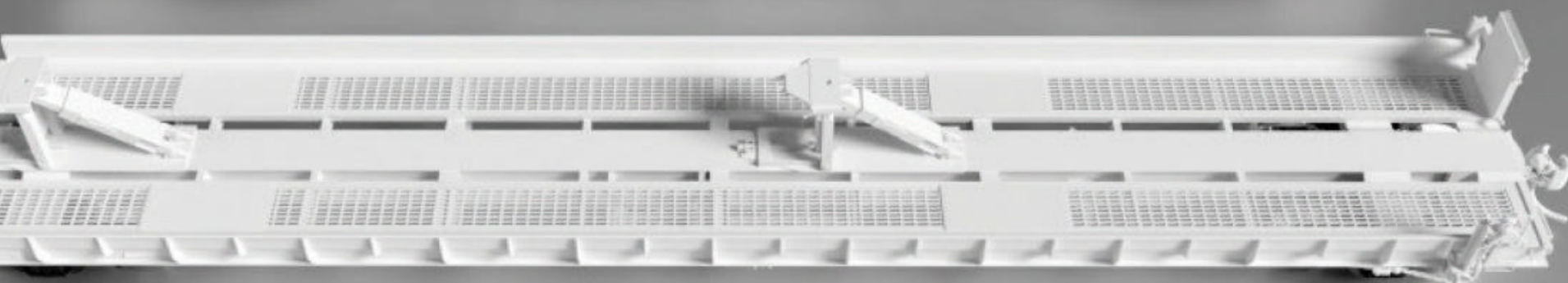
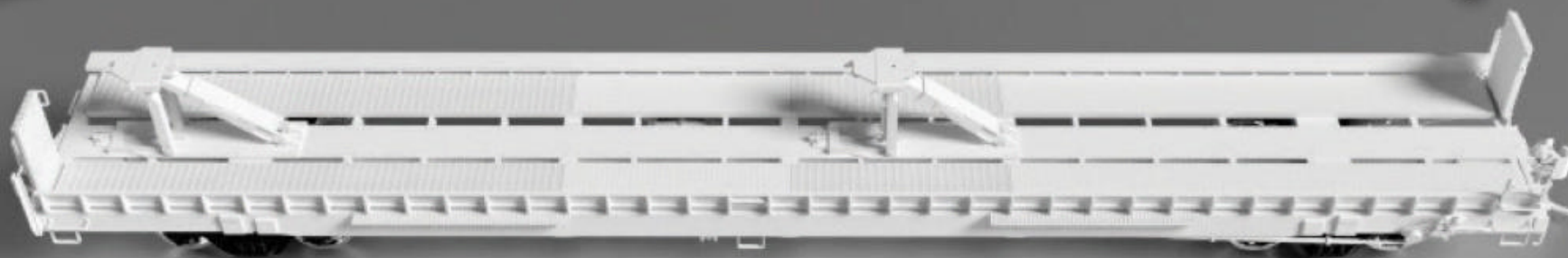
- Landing gear has two separate pieces to create in-motion or parked positions
- Separately-applied mudflaps
- Highly detailed wheel and axle area
- 26' trailers have two styles of front stabilizing bars to create in-motion or parked positions
- Three individual numbers per scheme

The Canadian Piggyback Flatcar features:

- Drawn from original blueprints
- Artworks sourced from original design drawings
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- Photo-etched deck surface
- Two styles of hitches; upright and collapsed
- Barber S-2 trucks with metal wheels
- Rapido semi-scale metal knuckle couplers



CANADIAN PIGGYBACK FLAT CARS



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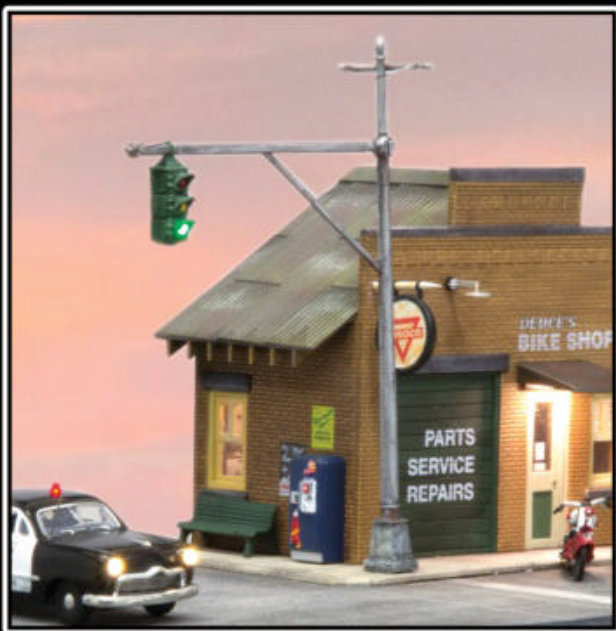
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by Bob McLaughlin



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by Eric Brooman



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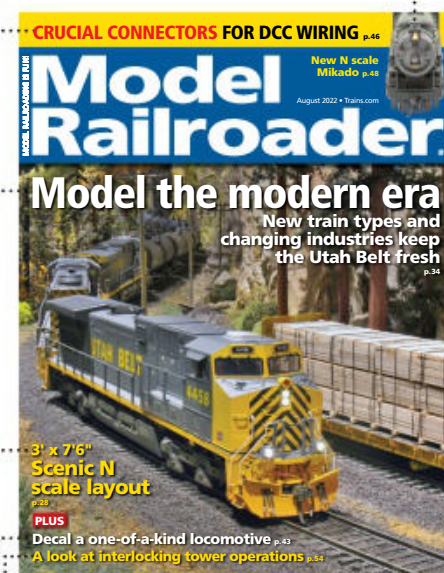
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On the cover: Eric Brooman's Utah Belt is always up to date with both the latest motive power and current railroad practices. Eric Brooman photo



Next issue

In September, visit Chooch Industries founder Mike O'Connell's O scale layout. Plus, see an HO Santa Fe branch line, scratchbuild a smashboard, and more!

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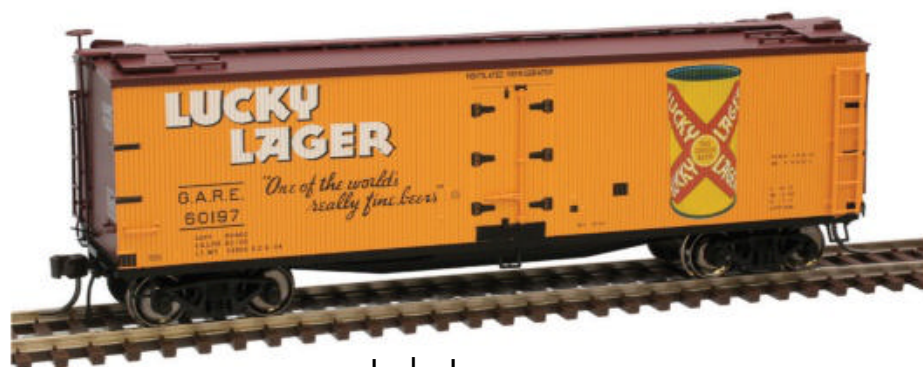
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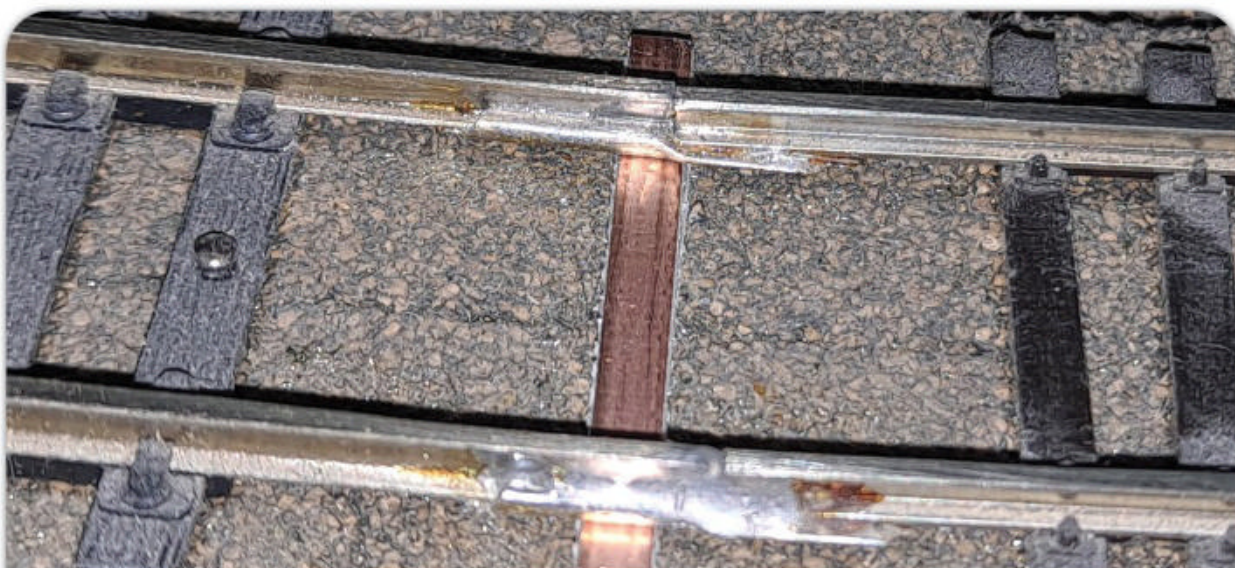
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Expert tips

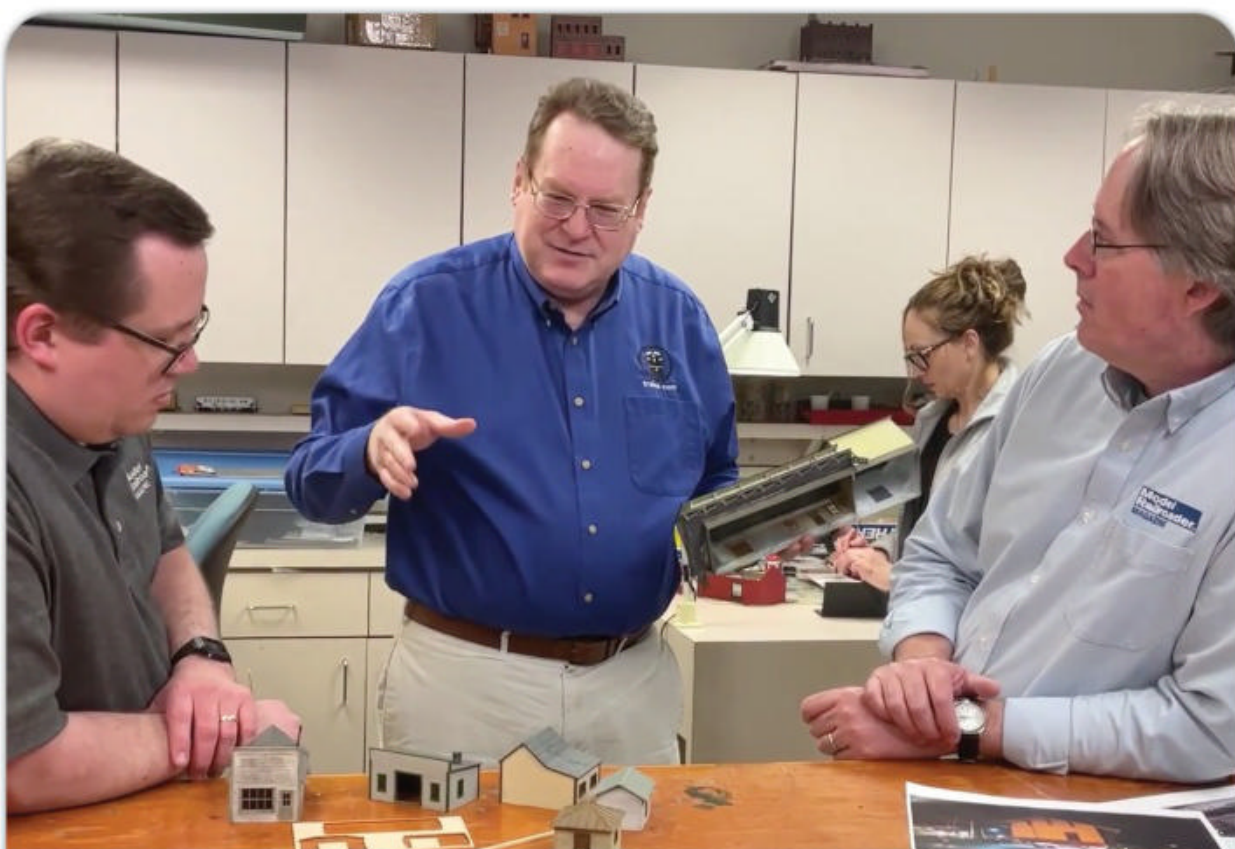
Need to ensure your track stays in gauge? Printed-circuit board (PCB) ties can solve a magnitude of problems on layouts. They're used around the frog to keep the closure rails, guardrails, and frog all in position. You can use them for swing gates or lift spans, they can hold the point rails together as a switch rod, and much more. Just go to Trains.com, click on the *Model Railroader* tab, then the How To tab, and scroll over to Expert Tips. Editor Eric White walks you through the process. You can find other expert modeling tips here as well.

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News

Stay in the loop! Pun intended. From Trainfest coming this Nov. 12-13, 2022, at Wisconsin State Fair Park (Milwaukee, Wis.) to current promotions of *Model Railroader* employees to new project railroads, the News (located under the *Model Railroader* tab and News & Reviews tab) will keep you updated on all the changes, events, products and more. As a Trains.com subscriber, you do get full access, or if you just want to visit us, you can enjoy eight free articles each month.



Midday Modeler

Hey friends! Come join us for a sneak peek. Midday Modeler is a new, regular video segment, recorded live and unscripted at Kalmbach Media via Facebook on Wednesdays at 1 p.m. (central).

Each segment is different and features staff (and the occasional special guest) discussing model railroads. Anyone who views the live stream can comment, ask questions, or just say "hi!" But don't get too comfortable; each episode vanishes quickly and is posted to Trains.com for *Model Railroader* Video Plus members and Trains.com Unlimited Members only.

Special issues

Not all issues are created equal.

Some are *special*. If you haven't had a chance to see some of *Model Railroader's* special issues like *The Ultimate Guide 2022* or *Model Railroad Planning 2022*, they are just a few clicks away. Go to Trains.com and click on *Model Railroader Magazine*. Right under the Current Issue section is Special Issues. Here lie many great issues to peruse for summer patio reading. All you'll need is a Midnight Train mocktail and a cozy hammock to make it official.



PRESS RELEASE



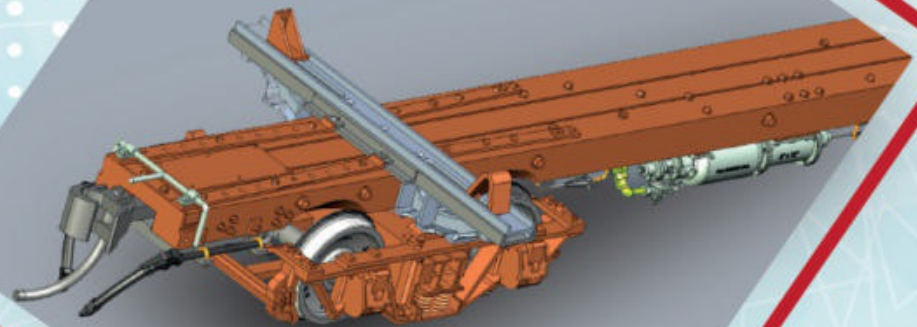
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**We will announce further details as the
project progresses.**

The times, they are a-changin'

A favorite railroad of many readers graces this month's cover. In photos and articles over a span of more than 40 years, Eric Brooman has kept us posted on developments on his HO scale Utah Belt.

Eric's commitment to continually updating his free-lanced railroad to replicate present-day trends in motive

power and operation sets this layout apart.

In addition to new locomotives and rolling stock, Eric adjusts traffic levels, and even changes industries.

As Eric writes in his article starting on page 34, "Even though my layout was finished long ago, keeping the era current gives me a regular

stream of projects to keep the model railroad fresh."

The Utah Belt will be on the layout tour for the 2022 National Model Railroad Association National Convention in St. Louis August 7-13.

Like the Utah Belt, change is a natural part of the world of magazines. This will be my final issue as Editor of *Model Railroader*. I am moving just a few doors down the hall to join the editorial staff of our sister magazine, *Trains*.

Eric White will be taking the helm, and the magazine will be in capable hands. His name will be familiar to many of you. A talented modeler, his handiwork has frequently graced the pages of MR. Eric joined this staff in 2014 as Associate Editor. A promotion to Senior Editor followed in 2020. In addition to his magazine duties, Eric



has also edited many of Kalmbach Media's books.

"I'm excited to be taking on this role at *Model Railroader*, a magazine I've enjoyed since I was a boy," Eric said. "I look forward to continuing to meet modelers at shows, and to operate with them at operating sessions around the country."



The HO scale Utah Belt reflects contemporary railroading, including the use of midtrain helpers. Eric Brooman photo

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VIA parking woes? Accurate

The June 2022 issue has a great article on Jason Shron's Kingston Sub VIA layout. As a Canadian who's had a lot of experience with the Windsor, Ontario, VIA station, I noted how authentic Jason's depiction of Kingston Station is – especially its parking lot, as shown on page 39. The parked vehicles are so close to each other that it's almost impossible to avoid dents in your car as the idiot in the vehicle next to you flings open their door. I wish I were kidding; parking spaces at the Windsor station are miniature and the traffic flow when a train arrives is chaotic!

Jim Yaworsky, Windsor, Ontario

Jason Shron was careful to accurately reproduce every feature of VIA Rail's Kingston station – including the cramped parking lot. Jason Shron photo



Thanks for the time travel

Thank you so much for letting me go back in your time machine.

"What time machine?" you ask. The time machine of your archives going back to 1934.

As a kid in the '60s and '70s, I was a voracious reader of MR, but never got around to building a layout. Sure, I had an N scale set on a board under my bed, but I didn't realize then just how expensive a hobby model railroading was. And after I entered high school, I was busy with other things.

But I always remembered one particular track plan that I thought was small enough to do on my own someday. I couldn't remember what issue it was in except that it was in the early '60s. I wanted to find this track plan, but for the longest time there was no way for me to get my hands on old issues easily.

And then I discovered the online archive and its 30-day free trial.

I was off a few years about the date. I thought it was in '64 or '65, but it was actually 1967. As I browsed through seven years of issues, I went back in time

to my childhood. I saw articles I remembered. I saw names I remembered. I saw layouts I remembered. I remembered learning what sake was from seeing Linn Westcott talk about it at a meet in Japan. And I found the layout I was looking for.

I'll probably never actually build that layout. I'll probably remain an armchair railroader who looks at that particular layout with admiration. But thanks for letting me use your time machine.

Keith E. Gatling

A modeler's last resort?

Dang! I didn't think deeply enough before firing off my e-mail to Tony Koester in response to his May column ("Remaining flexible as we 'grow'").

I forgot that I had already addressed the issue of how to stay with the hobby after retirement, in a letter he responded to in his column back in April 1989!

Tony is four years my senior, and even though it's now 33 years later, it seems neither of us has followed up on my idea to invest in or build a model railroader's assisted living spa and resort. Instead he continues to write for you, and I now

write for *Pennsylvania Fireman* magazine, published in Lancaster County.

I'm also a life member of the nearby Arizona Railway Museum, where I fit in nicely with the rest of the relics.

Jim Wick, Chandler, Ariz.

Amazing photos, amazing figures

The June issue of MR was just great! Not only were there several great construction articles, but also two amazing layouts. Bill Clancy's Rio Grande Pacific: I want to know how a guy accomplishes all that in only eight years of layout construction! Talk about a high achiever!

And then Jason Shron's Kingston Subdivision, showcased by that stunning photo on pages 38-39 [reproduced above – Ed.], one of the most realistic model shots I've seen, with the most amazing HO scale figures, arranged with perfection. I'd like to ask Jason where he gets his figures. Are they Rapido products, like so many of his other models?

*Ted Waterhouse
San Luis Obispo, Calif. MR*

Rapido doesn't make figures. – Ed.

Comments, suggestions, and additional information on Model Railroader articles and departments are welcome in this column. Every comment will be read, but not all can be printed or answered. Make your statement in 300 words or less, and send it to **Railway Post Office, Model Railroader magazine, P.O. Box 1612, Waukesha, WI 53187**, or e-mail rpo@mrmag.com. Please include your name, city, and state.

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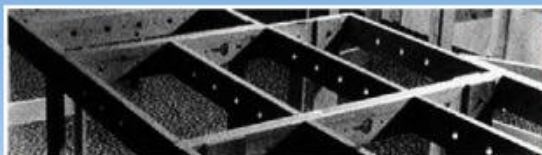
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N scale



Pennsylvania RR P5a electric locomotive. This Broadway Limited Imports model is in stores now. The N scale P5a electric is offered in freight and passenger versions in multiple paint schemes and road numbers. A version painted Dark Green Locomotive Enamel but unlettered is also

available. Features on the N scale model (\$369.99) include separate, factory-applied handrails, grab irons, horn, and bell; a die-cast metal body and chassis; and a dual-mode Paragon4 sound decoder with Rolling Thunder. Broadway Limited Imports, 386-673-8900, broadway-limited.com

Walthers announces new HO scale boxcar

Walthers has added a modernized 40-foot American Car & Foundry boxcar to its popular HO scale Mainline series.

Road names in the first release of boxcars will include Erie Lackawanna, Green Bay & Western, Illinois Central, Lehigh Valley, Penn Central, Pennsylvania RR, Reading Co., and Southern Ry. Each road name will be offered in three road numbers. An undecorated model will also be available.

Features on the new injection-molded plastic model will include a 10-panel

body, tall ladders on the B (brake wheel) end, short ladders on the A end, 8-foot Youngstown doors, and late Stanray 4/4 improved Dreadnaught ends. Up on top, the boxcar will have a Stanray diagonal-panel roof without running boards or mounts and a molded corner grab iron on the B end.

The modernized boxcar will be fitted with roller-bearing or solid-bearing trucks as appropriate, 33" turned metal RP-25 contour wheelsets, and Proto-Max couplers. The boxcars will be priced at \$31.98 each (undecorated, \$29.98).



Wm. K. Walthers Inc. has added a modernized 40-foot American Car & Foundry boxcar to its Mainline series. Erie Lackawanna is one of eight paint schemes offered on the first run of cars. An undecorated model is also available.

Exclusive schemes on Rapido coal hoppers



Rapido Trains is offering its HO and N scale AutoFlood III rapid-discharge hoppers in four exclusive paint schemes through Heartland Hobby Wholesale. The cars are available individually and in six-packs.

Rapido Trains is offering exclusive paint schemes on its N and HO scale AutoFlood III rapid-discharge coal hoppers through Heartland Hobby Wholesale.

The modern coal hopper will be decorated for Alliant Energy, FirstEnergy Generation Corp., Mitsui Rail Corp., and Xcel Energy. The cars will be offered in six to 12 road numbers per paint scheme.

Features on the N and HO scale coal hoppers include a

die-cast metal frame and floor; interior rivet and K-member details; Barber S-2 100-ton trucks with metal wheels; separate, factory-applied crossover platforms and uncoupling levers; and a removable coal load.

Single cars will be priced at \$40.62 (N scale) and \$62.45 (HO scale). Six-packs will sell for \$243.70 (N) and \$374.70 (HO).

For more information, visit rapidotrains.com or hhwonline.com.

HO scale locomotives



• **Electro-Motive Division SD40T-2 diesel locomotive.** Potash Corp. (gray and orange, two road numbers); Denver & Rio Grande Western (black and orange); Southern Pacific (“Kodachrome” scheme, fictional “Black Widow” scheme in two numbers, and scarlet-and-gray scheme with speed lettering); and Union Pacific (Armour Yellow and Harbor Mist Gray). Three numbers per scheme unless noted. See-through radiator grills, new rear truck gearbox, and light-emitting diode lighting. Direct-current model with 21-pin NEM connector, \$179.99; with dual-mode SoundTraxx Tsunami2 sound decoder, \$279.99. May 2023. Athearn series. Athearn Trains, 800-338-4639, athearn.com



• **HO scale Electro-Motive Division E8A, E9A, and E9B diesel locomotives.** E8A: New York Central (experimental green), Erie (two-tone green, four road numbers), Pennsylvania RR (late simplified scheme), Rock Island (as-delivered “Rocket” scheme), Southern Ry. (black “tuxedo” scheme, four numbers), and Wabash (“Bluebird” scheme, three numbers). E9A and E9B: Milwaukee Road (single A unit and A-B sets). Two numbers per scheme unless noted. Two different sides (with and without lifting lug covers), single- or dual-headlight configurations, and dual-mode ESU LokSound decoder. A unit, \$356.96; A-B sets, \$674.95. Produced by Rapido Trains, available exclusively from Heartland Hobby Wholesale, 800-713-8274, hhwonline.com

HO scale freight cars



• **Pennsylvania RR class H43 100-ton three-bay hopper.** CSX (Chessie System patchout, three road numbers), BNSF Ry. (black 2008 repaint, three

HO scale



Milwaukee, Racine & Troy 40-foot hinged-door steel refrigerator car.

This custom-decorated Accurail kit is the latest addition to the Kalmbach Hobby Store. The HO scale 40-foot refrigerator car (\$27.99) includes a one-piece roof and core; applique sides; a separate plastic underbody with molded floor boards, center sills, cross members, body bolsters, kingpins, and draft-gear boxes; modeler-installed brake appliances; solid-bearing trucks with plastic wheelsets; Accumate couplers; and a steel weight. The model is offered in one road number. Kalmbach Hobby Store, KalmbachHobbyStore.com

numbers), Chessie System with Western Maryland reporting marks (black, six numbers), Conrail (Oxide Red, six numbers), Helm Financial Corp. (black 1988 rebuild, three numbers), Louisville & Nashville (orange as-delivered scheme, six numbers), Norfolk Southern (class HP30R with “Thoroughbred” herald, six numbers), Pennsylvania RR (black with keystone herald and yellow circle, four numbers), Pennsylvania Power & Light (brown with yellow double rotary ends in one number and brown with single rotary end in six numbers), Reading & Northern (black with blue and orange end panels, four numbers each), and Reading Co. (black with large “RDG,” three numbers). Injection-molded plastic with roller-bearing trucks, 36” metal wheels, and interior and slope sheet braces. \$29.95. Early 2023. Executive Line. Bowser Manufacturing Co., Inc., 570-368-2379, bowser-trains.com



• **National Steel Car 5,150-cubic-foot capacity three-bay covered hopper.** GrainsConnect Canada (gray), Archer Daniels Midland (gray with molecule logo), BNSF Ry. (Mineral Red with post-2005 herald), Canadian Pacific (gray with black herald), Cargill (gray with ICMX reporting marks), and Union Pacific (gray with shield herald and “We

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will deliver...” slogan). Four road numbers per scheme. Injection-molded plastic body, 100-ton roller bearing trucks, and Proto-Max metal couplers. \$34.98. Walther's Mainline. Wm. K. Walther's Inc., 414-527-0770, walther's.com

HO scale passenger equipment



• **Amtrak Horizon cars.** Coaches: Phase 3 (82 seats, powered sliding end doors, and fold-down steps) and phases 4 and 6 (68 seats, modified parlor end doors, and fixed end-door steps). Americans with Disabilities Act (ADA)

HO scale



Greenville Steel Car Co. 86-foot high-cube quad-door boxcar. This Tangent Scale Models freight car is decorated for Denver & Rio Grande Western (January 1970 as-delivered scheme, two road numbers); CSX (1991+ repaint, six numbers); Illinois Central (February 1970 as-delivered scheme, four numbers); Penn Central (February 1970 class X-60-R, eight numbers); and Southern Pacific (class B-70-54 in February 1970 as-delivered scheme, eight numbers). Undecorated kits (two versions) are also available. The HO scale model (\$56.95) has body shells with overlapping side panels, 70-ton Barber S-2 "Birdsboro foundry" roller-bearing trucks with rotating bearing caps, and Kadee scale couplers. Tangent Scale Models, 828-412-3886, tangentmodel.com

coaches: Phase 3 (72 seats, powered sliding end doors, and fold-down steps in closed position); and phase 6 (78 seats, modified parlor end doors, and fixed end-door steps). Club-Dinettes: Phase 6 (half dinette, half business-class seating; modified parlor end doors; and fixed end-door steps). Dinettes: Phase 3 (full dinette, powered sliding end doors, and fold-down steps in closed position) and phase 4 (full dinette, modified parlor end doors, and fixed end-door steps). New car numbers, full underbody and interior detail, and GSI G70 trucks with metal wheelsets. \$109.95. Release date to be announced. Rapido Trains, 905-474-3314, rapidotrains.com

N scale freight cars



• **Pullman-Standard 4,427-cubic-foot capacity three-bay high-side covered hopper.** Chessie System (yellow and blue with Baltimore & Ohio reporting marks), Cargill (yellow and black), Milwaukee Road (Federal Yellow), Northern Pacific (gray), Rock Island (blue), and St. Louis-San Francisco (Frisco, gray and black). Five road numbers (two single cars and one three-pack) per scheme. Screw-mounted roller-bearing trucks, 36" machined metal RP-25 contour wheelsets, and

body-mounted spring couplers. Single car, \$34.99; three-pack, \$86.99. May 2023. Athearn line. Athearn Trains, 800-338-4639, athearn.com

N scale structures

• **Elf service station.** Laser-cut cardboard kit with gas pumps, signs, and instructions in PDF format. Measures 3.14" x 1.96" x 1.77". \$29.37. Price may vary based on exchange rate. Minifer, minifer.fr/en

N scale scenery



• **Modern City Centre backdrop.** Photo backdrop with assorted multi-story buildings, trees, and sky. Printed on 24-pound paper. Backdrop measures 72" long by 16½" high. \$41.95. "Senior" Roll Out line. BPH Enterprises, 705-739-4878, sceniking.com

O scale locomotives



• **Electro-Motive Diesel SD70ACe diesel locomotive.** Montana Rail Link (red, white, and blue "Essential Workers" scheme); BNSF Ry. (Heritage III, two

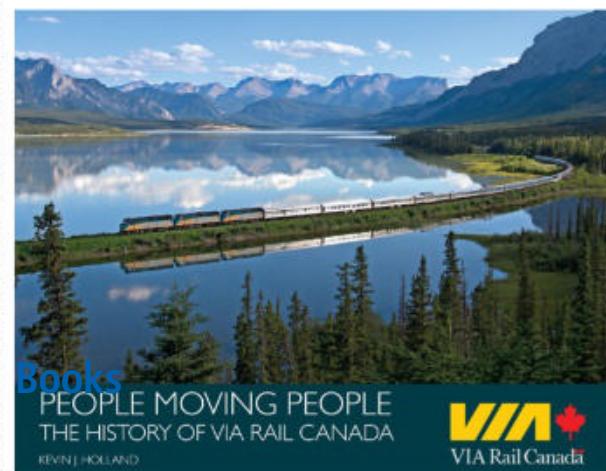
road numbers); Canadian Pacific (Army, Air Force, and World War II military schemes); Ferromex (red, gray, and white); Kansas City Southern (*Southern Belle* "Essential Workers" scheme); Norfolk Southern (Thoroughbred scheme with Positive Train Control antennas); and Union Pacific ("Building America" scheme, with and without United States flag). One number per scheme unless noted. Light-emitting diode lighting, Digital Command Control/Digital Command System decoder, and ProtoSmoke diesel exhaust. \$649.95. Prices are subject to change due to board availability and cost. Fourth quarter 2022. Premier line. Atlas O, 908-687-0880, shop.atlasrr.com

Z scale locomotives



• **Electro-Motive Division SW1500 diesel locomotive.** New paint scheme: BNSF Ry. (Heritage I). Two road numbers. Prototype-specific details, traction tires, clear window glazing, and AutoLatch couplers. American Z Line, 614-764-1703, americanzline.com

Books



• **People Moving People: The History of VIA Rail Canada.** By Kevin J. Holland. Chronicles VIA Rail Canada's history, operations, and equipment over more than four decades since the company's creation in the mid-1970s. Includes foreword by the former federal Minister of Transport Hon. David Collenette. Hardcover. 288 pages. \$79.95. Rapido Trains Inc., 905-474-3314, rapidotrains.com 

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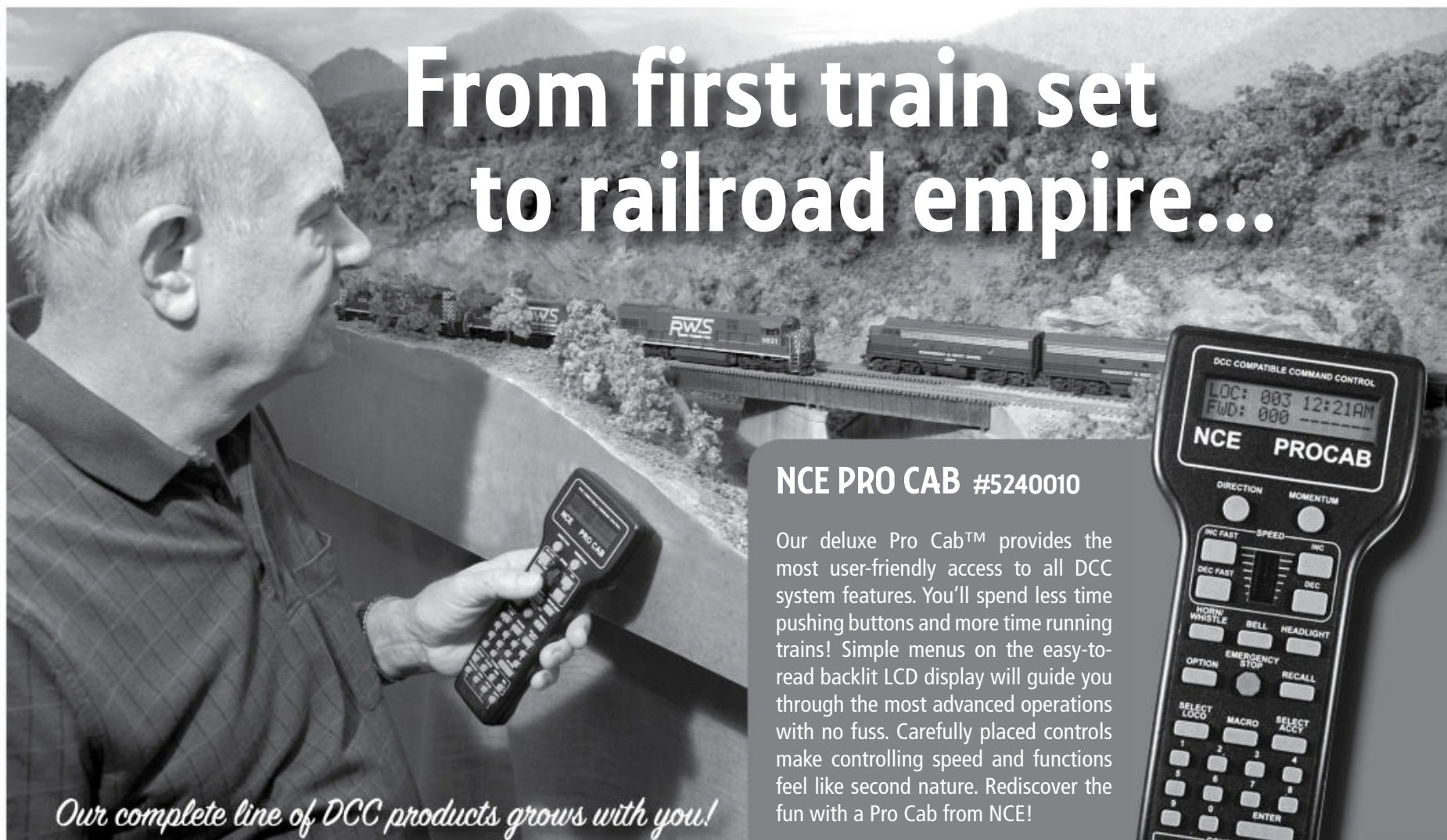
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An operator programs a locomotive using a Digital Command Control throttle. Here's what to do when a DCC locomotive won't hold an address. *Model Railroader* staff photo

When a DCC decoder won't hold an address

Q I've just gotten back into HO scale trains after years in Lionel. My DCC locomotive won't hold an address using my Model Rectifier Corp. Prodigy system. I follow the instructions, but it never changes from the default address 3. The new number is not recognized or remembered. It was easy in Lionel, but DCC hasn't worked for me.

Sam Scheiderer

A Decoders are just tiny computers. They store their data in bytes, which can have a value from 0 to 255. So in order to store a locomotive address higher than 255, it has to be stored in two separate bytes, which are represented in our decoders by Configuration Variables (CV) 17 and 18. But you can't just put the first two digits in CV17 and the last two in CV18; there's a lot of binary math involved, including setting a bit in CV29 to let the decoder know it's a long address. Today, DCC control systems handle all that for you. Or rather, they do so in theory; if yours did, you wouldn't be writing to me. So we're going to try some experiments.

The first step is to make sure your locomotive's decoder is receiving commands. Put it on the track, select address 3 with your throttle, and see if you can make it move, blow the horn, or turn on the headlight. If it responds to address 3, then skip to the next step.

If it doesn't respond to address 3, let's try a factory reset. Put it on the programming track, choose direct programming mode (make sure no other locomotives are on the track first), and program CV8 to 8. This will reset the decoder to factory specs. Try to run the locomotive on address 3 again. If it works, your decoder has been successfully reset.

Time to try programming the address again. Just as a test, we're going to use a short address. Program your locomotive to address 127, then see if you can run it on that address. If so, that's a good sign!

If you're fine with a short address, stop there. But if you want a long address, we can try programming each CV separately. You'll have to do this on a dedicated programming track, in direct mode. First, do a factory reset again. Then read the value of CV29 from your decoder, add 32 to it, and write that number down. Look online for a long address CV calculator, like the one at Model Rail Forum (modelrailforum.com/pages/DCC-long-address-calculator/). Put in your desired address and hit the button. Program CV17 and CV18 to the numbers it gives you, then put the new plus-32 value into CV29. Now try running your engine with the new address.

If after all this it still won't work, try taking the locomotive to a hobby shop or a friend's layout and program it on their system. That will let you know if the problem is with your base station or your decoder.

Q I'm interested in putting a speeder railcar on my layout. I was wondering if any of the manufacturers make/made a pre-assembled speeder in HO scale? The only ones I've seen are kits.

David Bellamy, Caledon, Ont.

A Although we don't know of anyone who sells factory-assembled HO scale rail speeders, you may be able to find a used, pre-assembled kit on eBay or another auction site. Another option is to check online digital-model marketplaces like Shapeways for a 3-D printed model, though those would still require finishing and painting.

Q I just read an article recommending soldering track feeders to every joint. My main line is less than 30 feet long. Won't two feeders be enough? I'm using Kato Unitrack.

Chuck Widick

A Nickel-silver rail is pretty good at conducting electricity, but it's nowhere near as conductive as copper wire. And since you're using sectional track, you have a lot more rail joints than you would with flextrack. If you only have one pair of feeders, you may experience unacceptable voltage drops at the end of your track farthest from the feeders. For 30 feet of mainline, I would recommend five pairs of feeders – one every six feet. And solder your metal rail joiners for more reliable power.

Q I'm an HO scale modeler and struggling with track laying. I would appreciate guidance on measuring, cutting, and installing flextrack on curves. I'm always disengaging the rails from the ties, and thus having trouble connecting to the next track. Also, when superelevating curves, is it better to attach the risers under the outer rail to the roadbed or to the underside of the ties? Finally, I'm struggling with the beginning and end of grades. Both have too sharp a vertical transition, creating problems with uncoupling and bottoming out. I'm using Woodland Scenics Incline Starters.

Bret Hall, Burlington, Vt.

A Track laying is most efficiently learned by doing. There aren't special

Send questions and tips to associate editor Steven Otte at AskTrains@Trains.com.

tricks; if you design your layout properly and test-fit track carefully before cutting it, you'll soon develop a talent for it. The only suggestion I have when it comes to bending your track is to lay it flat on a surface and press down as you bend it to ensure it flexes only side to side, not up and down or in a twisting motion.

If the track is "stiff" and the rails don't want to slide in the ties, flex them in short lengths to loosen them up. Some manufacturers make their flextrack with one rail firmly affixed to the ties and the other rail looser; bend this kind of track so the rail that can slide easily is on the inside of the bend. That way, after making the bend, you have excess rail to cut off, rather than a gap to fill.

If you want to superelevate your curves, it's fairly simple. We've run articles on how to do it in the past, including "Superelevated curves in 4 steps" in November 2013's issue and "Superelevating flextrack" in October 2008. I prefer the method in Andy Schnur's 2008 article, which uses ramps of masking tape and flexible cardboard shims.

If you're having trouble with vertical curve transitions of your track being too sharp, that's due to the underlying sub-roadbed. Woodland Scenics Incline Starters are made of foam, so you can use foam-shaping tools like rasps or sanding blocks to take off the sharp corner at the top of the grade. At the bottom of the grade, fill in with taped-down layers of cardboard, kind of like you would for your superelevation ramps.

Q Why does the tender on the 4-4-0 American locomotive *The General* have a load of wood instead of coal?

Alexander Brennan

A The ubiquitous 4-4-0 model called *The General* is modeled after a famous prototype – the Confederate locomotive of the same name, which was commandeered by Union spies in 1862 at Big Shanty, Ga. The subsequent pursuit of the stolen engine by the train's conductor, William A. Fuller, using several other locomotives was the subject of the movie *The Great Locomotive Chase*. The



Superelevation lifts the outside rail of curved track so trains can take the curve safely at higher speeds. It's not necessary on a model railroad, but it looks good. Andy Schnur elevates his flextrack with ramps of masking tape and cardstock strips. Andy Schnur photo

Union Pacific Railroad (UP) class 4000

The Union Pacific Railroad rolled out the biggest restoration of 2019, the complete overhaul of the largest steam locomotive in the world – the Big Boy, road number 4014.

TRIX



To commemorate this event, Trix has reissued an accurately redesigned model in HO scale (Item No. 22163). This model was made specifically for the HO US market.

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This metal model has a total of 14 design changes to accurately represent the prototype, including changing to an oil firing tender, "Big Boy" written on the smoke box door, applying the UP 4014 logo onto cab floor and more!

Also available in a Märklin H0 version (37997) and standard Trix HO version (22014).

Trix products are available from authorized Trix and Märklin dealers. See our complete line of products at marklin.com and trix.de/en. Contact customerservice@marklin.com for more information or to request a free New Items catalog.

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The General, the subject of the film *The Great Locomotive Chase*, stands fully restored on Beargrass Creek Trestle in Louisville, Ky., on Feb. 20, 1962. Steam locomotive *The General* burned wood because, at the time, coal was not plentiful in the American South. C. Norman Beasley photo, David P. Morgan Memorial Library collection

preserved prototype is on display at the Southern Museum of the Civil War and Locomotive History at Kennesaw, Ga.

The General was built in 1855 for the Western & Atlantic, a 5-foot-gauge line running from Marietta, Ga., to Chattanooga, Tenn. At the time, wood was a far more plentiful and easier to acquire fuel source than coal for a Southern railroad.

Back then railroads were few and far between and often couldn't interchange cars with other roads. So *The General* would have been designed with a firebox optimized for wood fuel, as many locomotives of the day were. Coal would become practical only after railroads had penetrated the Appalachians, making the fuel cheap and plentiful. **MR**

READER TIP

Watch out for waistlines

I would like to amplify your response to the question about how close to the edge to run track. I also consider how close to waist height the track is. Middle age and older anatomy being what it is, track should not be near the edge without plexiglass protection where tight aiseways or higher levels might cause an operator to brush against the fascia. Closer to eye level might seem more hazardous because of the greater height to fall to the floor, but inadvertently bumping rolling stock happens much more at waist height. You may not even notice the danger except under operating session conditions; solo operations don't require one operator to move so another can get by. – Dave Vetter

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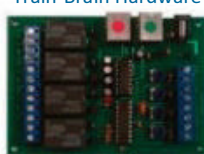
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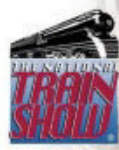
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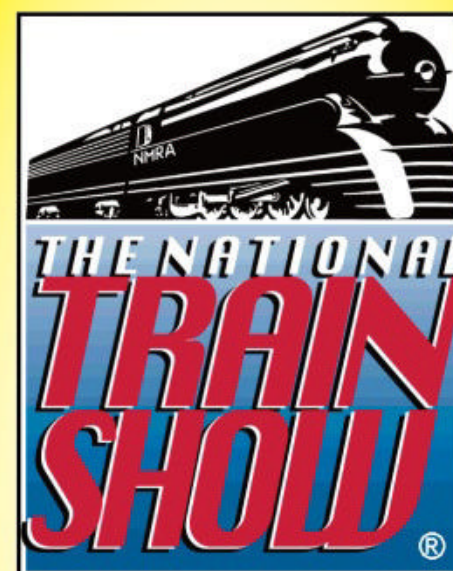
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How to build a multimedia structure kit

One of the things I enjoy about model railroading is the journeys it takes you on. If you've read *Model Railroader* for a while, you know I'm a fan of the post-merger Burlington Northern (1970-1974) and the Minnesota Northern RR, both of which operated in my hometown. So why did I build an HO scale Illinois Central Type A depot kit?

Shortly after I moved to Wisconsin to join the MR staff in 2002, my parents relocated to Sioux Falls, S.D. In its heyday, Sioux Falls was home to five railroads: Chicago & North Western, Great Northern, Milwaukee Road, Rock Island, and Illinois Central.

Of the five, it was the IC that really appealed to me. The 96-mile Sioux Falls District extended from its namesake to Cherokee, Iowa. By the late 1970s, the line (then Illinois Central Gulf) largely served grain elevators, fertilizer dealers, and other agriculture-related businesses. What piqued my interest, though, was the westbound trailer-on-flatcar UPS traffic and eastbound meat shipments in refrigerated trailers. Most of the trains were pulled by an Electro-Motive Division GP9 or Paducah-rebuilt GP10. A side-door caboose or Centralia-built wide-cupola caboose carried the markers.

Further research indicated Type A and B depots were used in several towns along the Sioux Falls District. Fortunately, American Model Builders offers both versions in HO scale. I selected the Type A for this project.

Though the kit has many wood parts, I consider it a multimedia kit because it has a cast-resin chimney; laser-cut cardstock doors, windows, and trim with peel-and-stick backing; and clear styrene window glazing. The kit also includes a small piece of mesh for the optional screen door.

If you've never built a multimedia structure kit, give it a try. They're fun to build, and there are a variety of kits available, including railroad-specific buildings. Who knows, this depot kit might be my springboard to modeling the ICG.

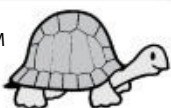
STEP 1 TAKING INVENTORY



Before starting work on any kit (multimedia or not), I check the contents of the box or package against the parts layout in the instructions. Is everything included? Are the parts in good shape? Many companies provide information on what to do if a kit has missing or damaged parts.

Examining the parts and reading through the instructions also helps you become familiar with the kit before assembly. Though the American Model Builders IC Type A depot was easy to build, it contains parts for building it in different configurations. There are front and rear walls for building the kit with the baggage door to the left or right of the operator's bay. In addition, there's a canopy over the waiting room door. I didn't add that to my build.

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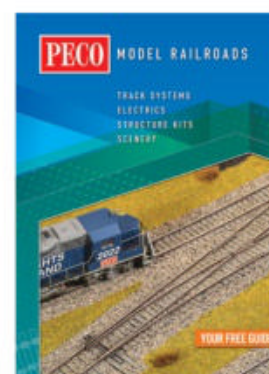
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STEP 2 CUTTING AND ASSEMBLING



If you've built a plastic structure kit, you're more than ready to tackle a multimedia building. Many of the tools and techniques are the same, but the materials and terminology are slightly different. Photo ① shows the bay walls. They're attached to a carrier sheet (like a sprue in a plastic kit) by thin pieces of wood not cut through during the laser-cutting process. Though it might be tempting to simply press the parts out, don't. This may damage or break the wood. Instead, I made light passes with a fresh no. 11 blade in a hobby knife until the parts dropped out of the carrier sheet.

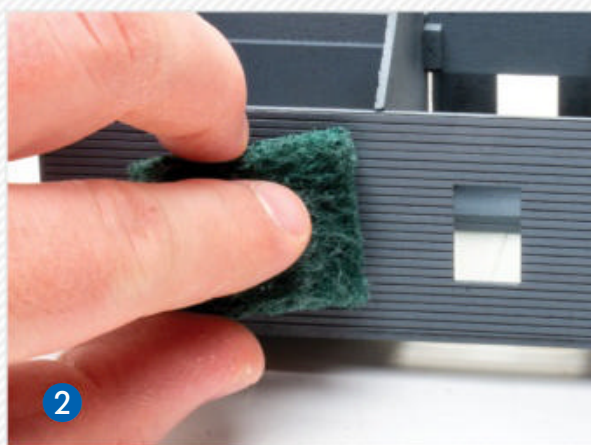
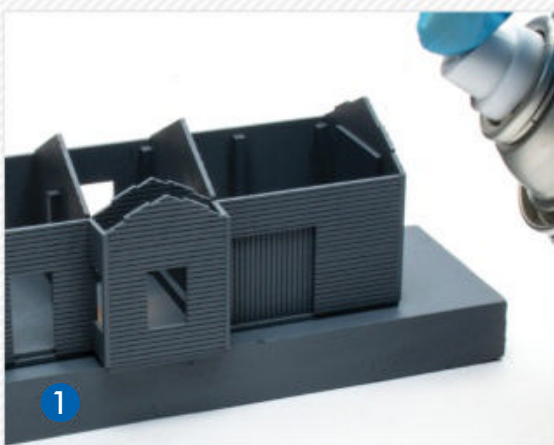
With the parts separated from the carrier sheet, I used a sanding stick to smooth the nubs on the parts ②. A few light passes is usually sufficient. Lightly run a

fingernail over the area to check for any high spots. Keep sanding until the high spots are removed.

Though I've successfully used cyanoacrylate adhesive (CA) many times in the past to assemble wood kits, I tried carpenter's glue this time. Both adhesives are recommended by the manufacturer. The carpenter's glue has a bit more working time than CA, allowing for fine adjustments. If you plan on staining the wood, do that first. Both adhesives will seal the wood, preventing the stain from soaking in.

I used 1/8" x 1/8" stripwood, not included with the kit, to brace the corner joints ③. The square material helps hold the corners at a 90-degree angle and gives the joints some additional strength.

STEP 3 PRIMING AND PAINTING



With the walls assembled following steps 1 through 3 in the instructions, I spray-painted the depot and roof pieces with Rust-Oleum Painter's Touch 2X Flat Gray Primer (no. 249088) ①. The primer serves two purposes. First, it provides an even base coat for the final colors. Second, it seals the porous wood, reducing the chances of swelling or warping from moisture.

In hindsight, I probably should have used a white or light gray primer, since the majority of the depot is painted beige. Though the dark gray primer worked, it took a few extra coats of beige to get good coverage.

I let the primer dry until there was no discernible paint odor. Not surprisingly, there was some wood fuzz and a few other imperfections in the primer. To remove those,

I used a 3M finishing pad (no. 7413NA) ②. For best results, apply light pressure to the pad and move it parallel to the boards. Use canned air and a tack cloth to remove any dust and residue from this process.

Finally, I used an airbrush to paint the depot. The instructions note gray-green was a common depot color, but light tan and brown was used beginning in the 1970s. I opted for the latter, as that's the era I'm interested in. The instructions didn't list specific brands of paint to match the tan-and-brown scheme. I used Vallejo Model Air Beige (no. 71.074) and Hull Red (no. 71.039) ③, which looked close to the color photo of the finished model included with the kit. Do all airbrushing in a well-ventilated area and wear personal protective equipment.



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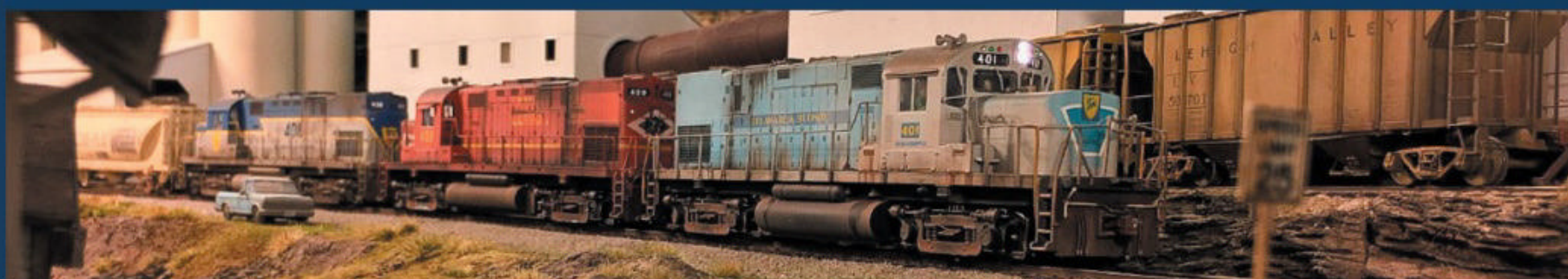
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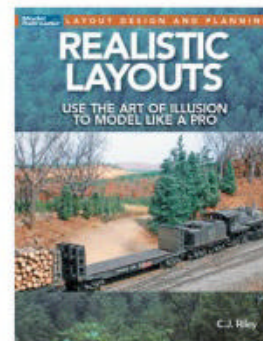
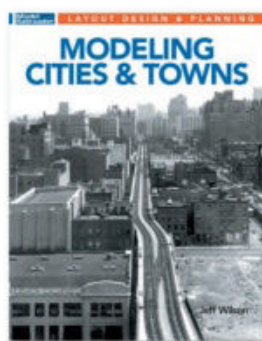
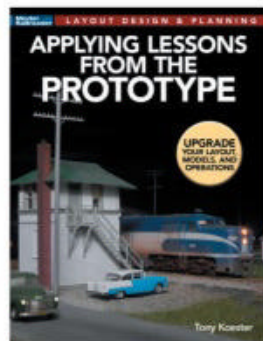
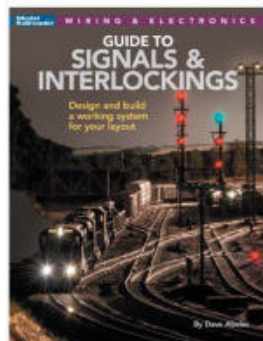
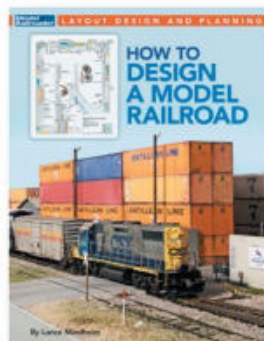
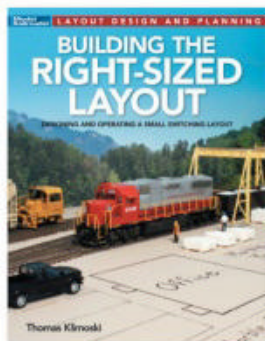
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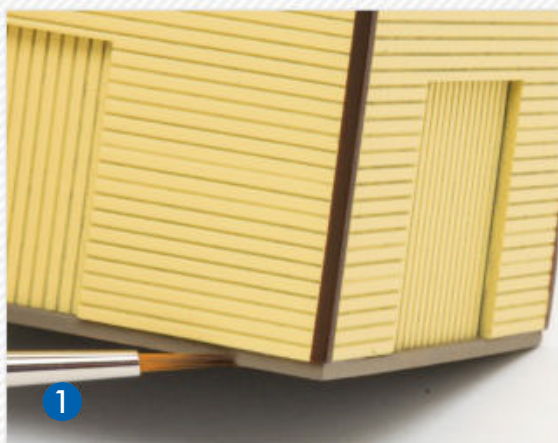
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STEP 4 BRUSH-PAINTING, DOORS, AND WINDOWS



I let the beige paint dry over the weekend. Then I masked the trim and painted it Hull Red with an airbrush. I used a brush to paint the foundation with Vallejo Model Air Concrete (no. 71.131) ①. It took two coats of paint to get even coverage.

Next, I installed the doors, windows, and trim ②. Though these parts have a peel-and-stick backing, I applied Pacer Formula 560 Canopy Glue to the back or edges (as appropriate) with a toothpick. The water-based glue is designed for attaching clear canopies to remote-controlled model planes, hence the name. It also works on wood, plaster, and other materials. The glue is white in the bottle, but dries clear. I cleaned up any glue that oozed out with a damp cotton swab.



Finally, I turned my attention to the clear window glazing. The clear acetate is cut to size. Before installing the material, I wiped the side without the attached tissue paper with Windex to remove any fingerprints or residue from the laser-cutting process. Then I spray-painted it with Tamiya Smoke (TS-71). This gives the glazing a translucent quality without allowing people to see into the unfinished depot.

After the spray-paint dried, I carefully applied Micro-Mark Liquid PSA (no. 84775) to the backs of the window frames. Yes, those parts have a peel-and-stick backing, but I like to add the pressure-sensitive adhesive for an extra bit of insurance. I applied the glazing using a Badger Hobby Pal suction pick-up tool ③.

STEP 5 ROOF, CHIMNEY, AND WEATHERING



I primed and painted the roof before installing it with canopy glue. Once the glue had dried, I attached the peel-and-stick shingles. Take your time and work carefully on this step. I wound up slightly off on a half row of shingles. However, I've seen many interesting patches applied to depot roofs. I'll just call the spot a repair.

The most time-consuming part of the roofing was weaving the shingles in the valley. Some IC depots had metal flashing in the valley. You could simulate the flashing with styrene (not included in the kit) and work the shingles up to the valleys if you don't want to weave the roofing material.

Then I masked the depot and airbrushed the shingles with Vallejo Model Air Dark Gray Blue (no. 71.054) ①.



After that dried, I installed the cast-resin chimney with white glue. I spray-painted the casting with Rust-Oleum Painter's Touch 2X Flat Red Primer (no. 334018), brush-painted the cap Vallejo Model Air Concrete, and painted the flue flat black to give the illusion of depth.

Though out of sequence with the instructions, I next added the verge boards and eave trim. The manufacturer recommends securing the parts with glue. I again turned to canopy glue ②.

I picked out individual shingles with a paintbrush and Vallejo Model Air Light Gray (no. 71.050). I used the same color to randomly add drybrushed streaks. The flat black around the base of the chimney simulates sealant ③. **MR**

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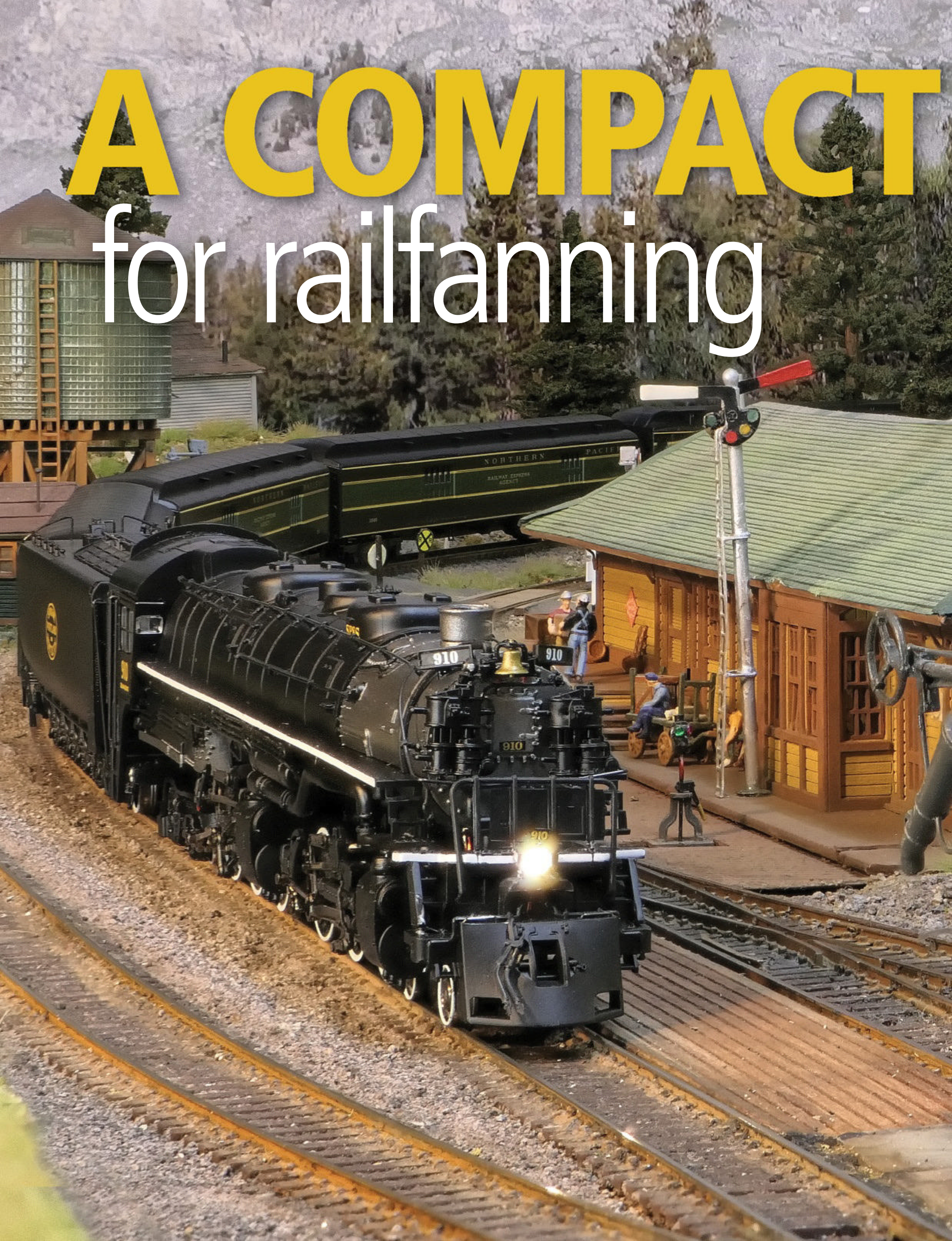


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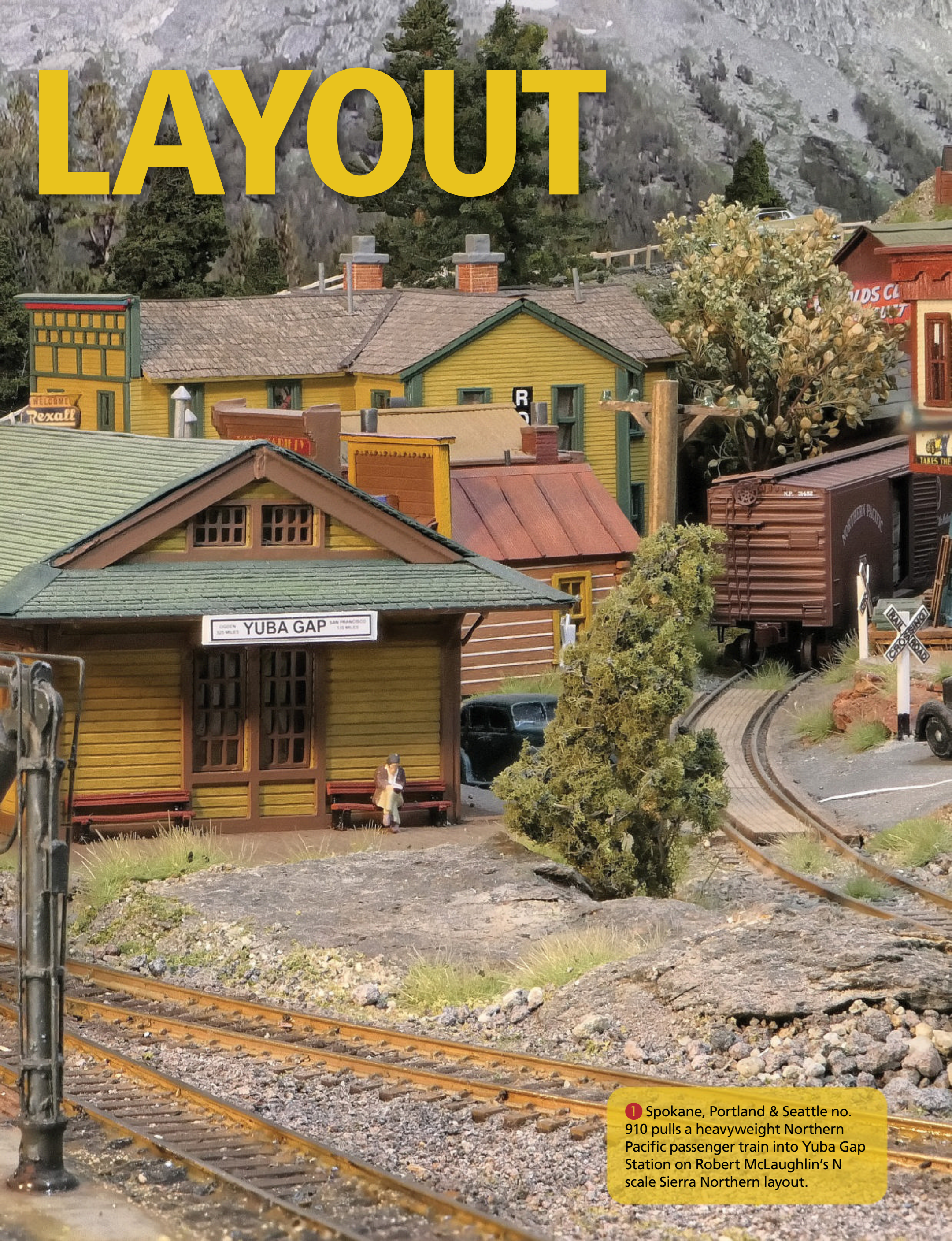
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A COMPACT for railfanning

LAYOUT



1 Spokane, Portland & Seattle no. 910 pulls a heavyweight Northern Pacific passenger train into Yuba Gap Station on Robert McLaughlin's N scale Sierra Northern layout.



2 Steam is the star at the Sierra Northern enginehouse. Robert's layout is set in the late 1940s.

The Sierra Northern is an N scale layout built on a hollow-core door

By **Bob McLaughlin** • Photos by the author

Perhaps the biggest decision a new model railroader must make is what scale to choose. In my case, this decision was a no brainer, because I have very little space for a layout. Thus I selected N scale. I call my layout the Sierra Northern. It is a freelanced layout and is 3'-0" x 7'-6". The layout is built on a hollow-core door and sits on a countertop in an 8 x 8-foot windowless room.

Besides saving space, a major advantage of N scale is the high scenery-to-railway ratio. I am particularly interested in creating realistic scenery, so N is the perfect scale for me.

Time frame and theme

Another important decision modelers must make is the time frame, or era, of their layout. The time frame of my layout

is the late 1940s. Steam is king on the Sierra Northern! My theme is big-time Western mountain railroading in the steam era. I try to include nothing newer than my thematic date, although I do have some freight cars and autos from the early- to mid-1950s. I don't think they detract too much from my late 1940s time frame.

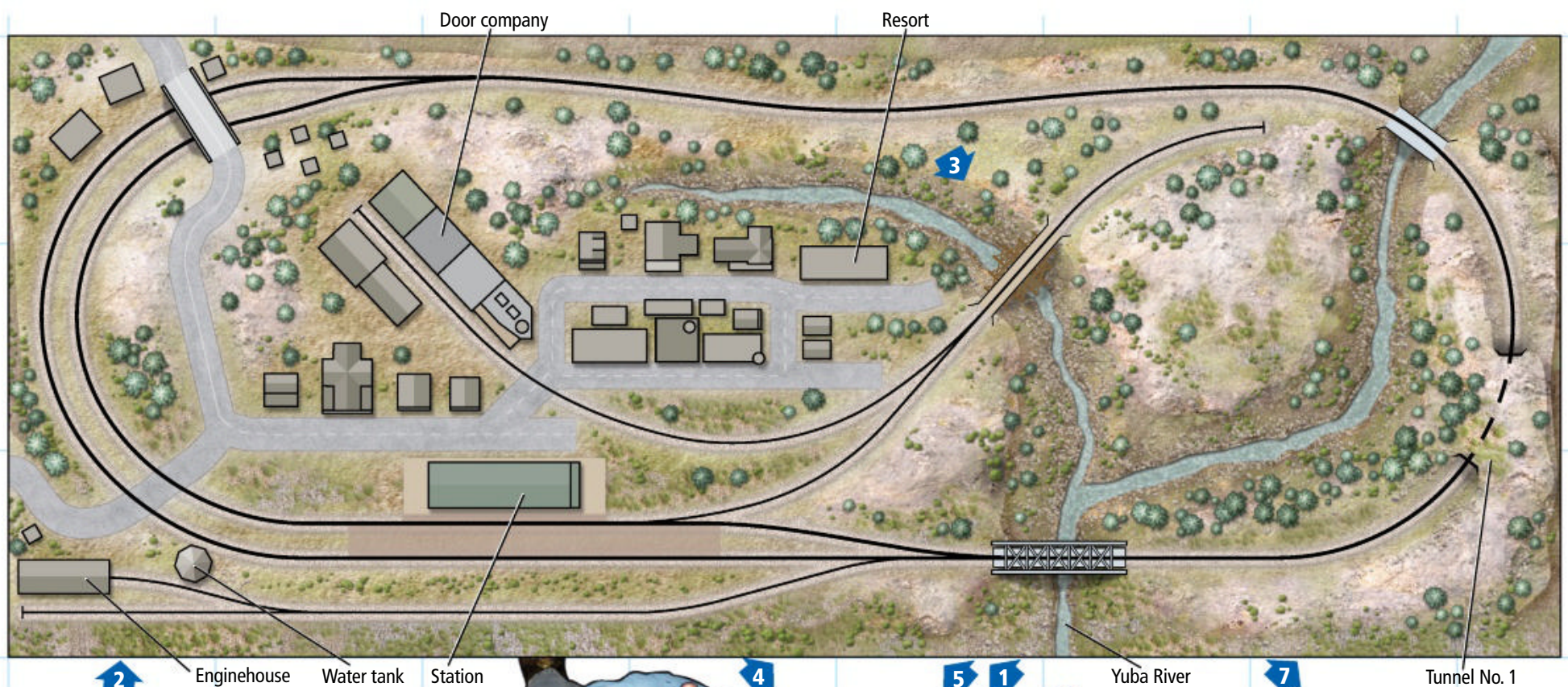
The Sierra Northern is loosely based on Southern Pacific's (SP) Donner Pass and Northern Pacific's (NP) Stampede Pass, with a little Atchison, Topeka & Santa Fe (ATSF) Raton Pass included. I borrowed the town name "Yuba Gap" from the Donner Pass line, although my Yuba Gap bears no resemblance to the real location. It's strictly "imagineered."

The Sierra Northern started with the idea that I would include a secondary branch line and do some switching. I built the branch, but as the layout evolved, I decided to emphasize main-line operation. I like to watch my trains roll by and do virtual railfanning. It's great fun to set up different trains such as an SP reefer block or the NP *North Coast Limited*, then operate them.

In keeping with my time frame, I do have a lot of 40-foot boxcars and heavy-weight passenger cars. Amtrak is nowhere to be seen!



3 A Sugar Pine Lumber Co. Shay crosses a trestle with a log train. Laying his track on Woodland Scenics' SubTerrain Styrofoam Risers allowed Robert to have scenery reach below track level.



Sierra Northern

N scale (1:160)
Room size: 3'-0" x 7'-6"
Scale of plan: 1" = 1'-0", 12" grid
Numbered arrows indicate photo locations
Illustration by Kellie Jaeger

Find more plans online in the
Trains.com Track Plan Database.



Besides appropriate locomotives and rolling stock, a consistent time frame also applies to structures and vehicles. Once you pick an era and setting, I recommend doing research to familiarize yourself with the general appearance of the elements you want to include. This includes both the built environment and the natural environment. It's pretty easy to do this type of research on the internet.

Making a small layout look big

The Sierra Northern is an example of how to make a small layout seem bigger than it really is by using scenery and topography to divide the layout into separate sections. Ridges and river canyons divide my layout in half lengthwise. In turn, the front half is divided in half again by my river canyon and bridge. Thus the front of the layout has two distinct sections: the town of Yuba Gap and the approach to the tunnel. This type of layout segmentation can be accomplished with trees and structures, as well. Here's how I built the Sierra Northern.

Design and construction

Starting with a hollow-core door, I first laid out my track on the bare door surface. I used Atlas code 55 flex track, turnouts, and fixed-radius curve pieces. My turnouts are controlled by BluePoint manual throws. I didn't use templates or

developed track plans. Once I was satisfied with the track configuration, I marked the track centerline with a Sharpie permanent marker.

Then I glued Woodland Scenics styro-foam risers following the Sharpie lines to elevate the track 6 inches above the level of the door. To achieve a realistic look, I think it's vital to have scenery below as well as above the track level. Even in very



4 A Union Pacific streamliner crosses a bridge and heads into an approaching thunderstorm. Robert enjoys railfanning his layout with a variety of late-steam-era trains.

The layout at a glance

Name: Sierra Northern
Scale: N (1:160)
Size: 3'-0" x 7'-6"
Prototype: Northern Pacific, Southern Pacific, Union Pacific
Locale: Western mountain railroad
Era: 1949
Style: island
Mainline run: 18 feet
Minimum radius: 16"
Minimum turnout: no. 4 (main line), no. 6 (branch)
Maximum grade: none
Benchwork: hollow core door
Height: 42"
Roadbed: cork
Track: Atlas code 55
Scenery: plaster cloth over tape
Backdrop: photographs
Control: Digital Command Control with NCE PowerCab

flat areas, there's always some topographic variation, such as little hills, culverts, and drainage ditches.

The Sierra Northern track is flat with no grades. The layout is so small that grades are impractical and would probably degrade smooth operation anyway. Like scenic divides on a small layout, grades can be implied by finessing ridge lines and other features.

After the foam was in place, I glued cork roadbed and my track on top. This process was not "fussy." If the track was a bit misaligned on the foam, I just shaved off some foam or added more as needed. Once in place, I treated



5 Southern Pacific no. 4431 and no. 4305 double-head a passenger train out of Yuba Gap. Although the track is level on Robert's layout, the scenery climbs above and below track level to create a mountain railroad environment.

my track with NO-OX-ID, an anti-corrosion conductive grease. This worked so well that I rarely have to clean my track, usually only the switches.

Scenery

Now it was time to tackle the scenery. First I crumpled newspaper into balls and started filling in the gaps between the risers. Then I connected the balls of paper with masking tape. This method uses a lot of masking tape! Note that using crumpled newspaper balls is a particularly good technique if you are modeling rolling hills because it naturally produces curves.

Once I was satisfied with the newspaper and tape contours, I covered them with plaster cloth and misted the surface with water as needed. In places where the plaster cloth seemed thin, I sprinkled on extra plaster and misted some more. This was great fun. I put on disposable gloves and smeared the plaster all over the place.

When the plaster cloth had dried, I reached in and pulled out the newspaper balls. The surface was remarkably strong and well supported.

Next, I covered the plaster with a combination of rock molds and real dirt. Over the years I've accumulated numerous rubber rock molds, many of which I made using rocks from my yard.

Next, I mixed a small amount of soupy plaster and colored it with pigments. Then I quickly poured the plaster into a mold, and, before it set, pressed the filled mold directly on the plaster cloth shell. After the mold was peeled off, I blended the edges with a putty knife.

My dirt was granite sand from the Sierra Nevada mountains that I mixed with white glue and smeared over the terrain between the rock molds. Most of the time the old adage that "nothing looks more like the real thing than the real thing" is very true for scenery.

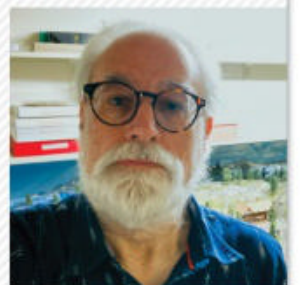
I printed several color photos of the type of landscape I was modeling and taped them above the layout while working on the scenery. I referenced these photos often while working, which helped me maintain realistic contours and colors. Using real dirt also helps ensure realistic colors. I sifted my dirt into several grades

from coarse to very fine. It's easy in N scale to make just about anything too big. This even applies to dirt! Remember that $\frac{1}{16}$ " is almost equal to one foot in N scale, so a hunk of dirt larger than this is the size of a small boulder. I used my coarser dirt to represent talus at the base of cliffs and ravines.

Since the Sierra Northern is a mountain railroad, I needed a lot of pine and

Meet Robert McLaughlin

Robert is a retired information technology technician and lives in Albany, Calif. He first developed his love of steam railroading when his father took him trackside in 1956 to see the last of steam on Southern Pacific's peninsula commuter trains. This made a big impression on the then-7-year-old. Robert has been building N scale layouts and modules for more than 20 years.





6 Southern Pacific Cab Forward no. 4185 barrels across a bridge over a canyon. The 6" risers supporting the track gave Robert the room for dramatic scenes above the surface of the hollow-core door.

fir trees. After several failed attempts to make my own trees from natural materials like sage plant stems, I settled on using commercial trees. I probably have trees from just about every manufacturer over the last 20 years. I found the old model railroading adage that you never have enough trees is certainly true.

Trees are an area where it's particularly important to pay attention to appropriate size for N scale. Generally, I think greater realism can be achieved if you use trees that are actually smaller than scale. I placed my larger trees in front and my smaller trees in back to force perspective.

Structures

Most of the structures on the Sierra Northern are from kits or kitbashes. I love building kits, and I have many more structures than I can fit on a such a small layout. Now that my layout is finished, I'm building modules in part to use up my extra structures.

Besides ensuring that structures are appropriate for your time frame and location, it's important to pay close attention to the colors of your structures to achieve maximum realism. Again, I used color photos to help with this. Most of our towns and neighborhoods are actually pretty drably colored. Most buildings are white, gray, or brown. It's usually best to avoid garish colors. If color photos are rare for the era or place you are modeling, search the internet for color postcard images. They are a great resource.

Wiring and DCC

The Sierra Northern was originally built as a direct-current (DC) layout, but proved very easy to convert to Digital Command Control (DCC). I used bus

wires and attached track connections at both ends of every segment of track. I bent the end of a feeder wire into an "L" shape and soldered it to the bottom of a standard rail joiner. This way the feeder wire is not visible.

I'm an inept solderer, but I managed to make enough connectors to finish the track. The feeder wires are connected to the bus wires with suitcase connectors.

I use an NCE PowerCab for DCC control. My layout is so simple that more elaborate DCC functionality like power districts are not needed.

The Sierra Northern has two SP-style, approach-lit searchlight signals. These are activated by a sensor between the ties. They default to green until a train passes, then turn first red and then yellow, and finally go back to green. Humorously, the Sierra Northern is so

small that a signal barely has time to go green before a train passes again. Nevertheless, the signals are fun and add to the realism. This is the only bit of electronics on the Sierra Northern.

The future

The Sierra Northern is finished, and I've been building 2 x 4-foot modules for the last few years. It was great fun to build my layout and intellectually challenging as well. However, it's far from perfect. After finishing one more module, I will probably tear down the Sierra Northern to the door level and start over again with the goal of making it even more realistic and foolproof to operate.

Such a new version will be improved by properly wiring my switches. I've found that sound-equipped N scale steam locomotives without capacitors will sometimes stall on the unpowered point rails of my switches. Previous articles in *Model Railroader* have emphasized the importance of powering point rails for smooth operation. In the future, I will definitely power these. The Blue Point manual switches take care of powering the frogs. I've also been experimenting with using electric micro switches to move the points, power the frog, and tension Atlas code 55 turnouts.

Another potential improvement is to try to create better sight lines for photography. I overdid the ridge size and tree cover in the back of the layout, which limits photo angles. I'll also try using static grass in a new version. In the next Sierra Northern, I likely will include more electronics such as better signals, operating crossing gates, and ambient sound. Since I'll definitely have a river or stream, a new version is a perfect candidate for water sounds. As they say, stay tuned for further developments! **MR**



7 A high-priority perishables train trailing a Sierra Northern caboose heads into Tunnel no. 1.



Electro-Motive Diesel SD70ACe no. 4353 leads an Ogden Municipal Authority unit coal train over the San Pedro River at Wash, N.M., on Eric Brooman's HO scale Utah Belt. The freelance layout keeps up with current trends in the railroad industry.

A UTAH BELT progress report

Eric Brooman's popular freelance HO scale layout keeps up with changes in the railroad industry and economy

By Eric Brooman • Photos by the author



① Manned helper units. The westbound climb between Benton and Furnace Creek Pass is short, but the grade is steep. To keep trains moving on the single-track mainline, Eric uses manned mid-train Distributed Power Units (DPUs). This three-unit DPU set consists of a General Electric AC4400CW, an Electro-Motive Division (EMD) SD70M, and an EMD SD60M.

For more than 40 years, I've been modeling the freelanced HO scale Utah Belt (UB). The current 22'-8" x 39'-6" layout, my second model railroad with the UB theme, is set in northern New Mexico. Though the railroad is fictional, I operate it using prototype practices.

One of the standards I set when I began work on the UB was to keep the layout current with trends in the railroad industry. Some of the changes are obvious, like contemporary motive power on mainline trains, older locomotives demoted to secondary services, and cabooses all but disappearing from the end of trains. Others are a bit more subtle, like new trees and repainted bridges.

Other ways I keep the UB current include adding new train types, adjusting traffic levels, and changing industries, all based on what's taking place on full-size railroads. Even though my layout was finished long ago, keeping the era current gives me a regular stream of projects to keep the model railroad fresh.

It's been a few years since I gave an update on the Utah Belt, so I thought I'd share the latest news on the railroad. If you plan on attending the 2022 National Model Railroad Association National Convention in St. Louis, Mo., August



② Cutbacks in coal. Train PCMOMAC-W (Patriot Creek Mine to Ogden Municipal Authority Coal – West) heads through the S curve at Descanso, N.M. Changing government regulations have forced US Carbon Mine no. 31 in the background to operate at limited capacity, while mine no. 26 at Iron Mountain shut down.

7-13, you can see the layout in person. I hope to see you during the convention.

Manned distributed power

Radio-controlled Distributed Power Units (DPUs) have eliminated the need for manned helpers in most places where they were once commonly seen. Exceptions are where short, but steep, grades create bottlenecks when heavy trains get bogged down even with DPUs.

Crawford Hill in northwestern Nebraska is an example from the prototype. Coal trains from the Powder River Basin have a relatively easy route to eastern power plants. Crawford Hill is a bump in that route. Loaded 120-car coal trains with two or three diesels up front and two DPUs will pick up a manned

three-unit helper set at Crawford for the climb to the summit.

Conveniently, the Utah Belt (UB) happens to have a similar problem. The westbound climb to Furnace Creek Pass from Benton is short. However, the grade is challenging enough to tie up the single-track mainline if a heavy coal or grain train gets down to a crawl. The addition of mid-train helper units keeps trains moving **①**.

Changes in coal traffic

The majority of loaded coal trains head east to power plants in the south and Midwest. Governmental restrictions have caused a drastic cutback in the use of coal, which has had a dramatic impact on the local economy. One of the mines



③ The way it used to be. This circa 1980 image shows a pair of Electro-Motive Division F7As and an SD9 helping a westbound train at Coal Bank. These former mainline units were serving out their final years on the Utah Belt in helper service.

has shut down, and the others have scaled back operations (② on the previous page). Because of this, the number of coal trains on the UB has diminished.

Fortunately, a coal fired power plant in the Ogden area still uses coal that's mined just east of Benton at the Patriot Creek Mine. The Ogden Municipal Authority owns a unit train of blue

Ortner five-bay rapid-discharge hoppers featuring OMAX reporting marks. The real OMAX reporting mark belongs to the Omaha Public Power District. But not having to re-letter all those Athearn hoppers was just too good of an opportunity to pass up. The train symbol is PCMOMAC-W (Patriot Creek Mine to Ogden Municipal Authority Coal-West).

Since the coal train is a relatively short haul, the UB doesn't tie up motive power as DPUs. However, the loaded westbound train out of Benton still needs extra horsepower to get to the summit at Jemez in a timely manner. Manned swing helpers keep the coal trains moving on this single-track grade.

Diesels nearing the end of their service on the UB have traditionally been used as helpers. Last runs were often seen here. Ghosts of F7s, SD9s, and SD35s still roam this stretch of the railroad ③. Today early wide-cab units like EMD SD60Ms and SD70Ms, along with GE AC4400CWs, serve as helpers.

In recent years, with the advent of higher horsepower units, the UB prefers to run helpers mid train to avoid the dynamic force problems encountered if all that horsepower is placed at the rear. Two or three units are cut in mid train at Benton, ④, and taken out at the top of the grade at Jemez. The engineer and conductor usually ride the rear unit. That way they don't have to switch ends for the trip back down the hill.

MORE ON THE WEB

Model Railroader magazine subscribers can see video of Eric Brooman's HO scale Utah Belt at Trains.com.



④ Cutting in the helpers. A trio of helpers are added to a westbound coal train at 12th Street in Benton, N.M. The units are a mix of Electro-Motive Division and General Electric units that have been bumped from regular mainline duty by newer power.



⑤ A new traffic source. Though coal is down on the Utah Belt, a unit ethanol train has provided a new traffic source. An empty eastbound train, with General Electric AC4400CW no. 4458 on the point, snakes its way through Gideon, N.M., on its way back to the refinery in Texas.

Ethanol picks up the slack

In these times of reduced coal loadings and loss of fracking loads, one bright spot has been the initiation of a unit ethanol tank train. Increased demand for ethanol in Ogden and Salt Lake City has led to unit ethanol trains on the UB. Loaded coal trains used to be called “black snakes” by the old heads. The name is equally applicable to the string of tank cars winding through the northern New Mexico scenery **⑤**.

Attracting more business

In order to attract more shippers, the Utah Belt runs specials throughout the year to entertain corporate executives and other potential customers **⑥**. Secondhand passenger cars from a variety of railroads have been refurbished in the company shops. The cars are named for parks in the UB service area. The original office car was named *Pacífico*. The new cars are named *Rincón*,



⑥ Bringing out the varnish. Utah Belt office car *Pacífico* carries the marker on a business train passing over Furnace Creek. The train, used to showcase the railroad to potential customers and entertain corporate executives, is built up of secondhand passenger cars refurbished at the company shops.

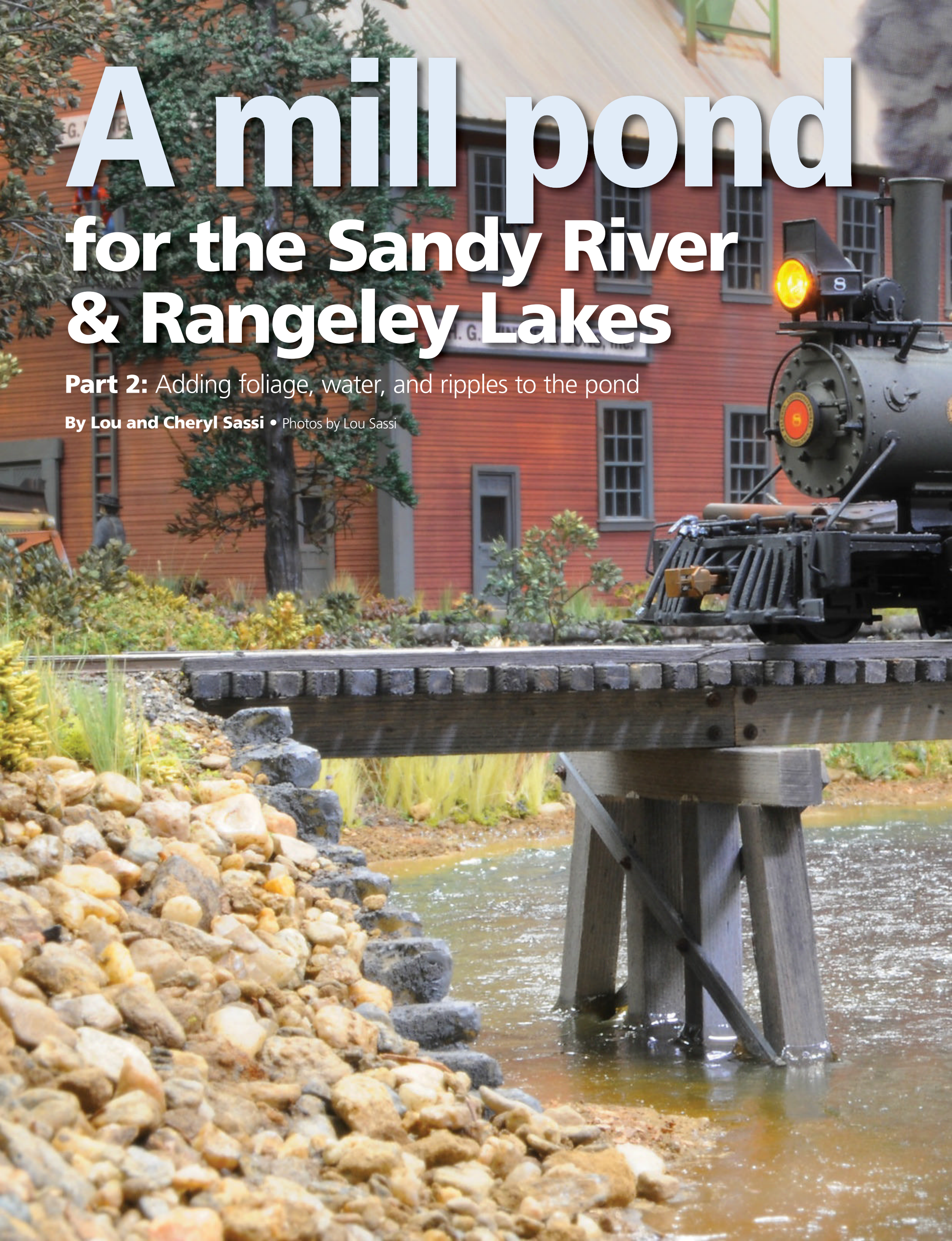
Escalante, Canyonlands, Capitol Reef, and Mesa Verde.

Time marches on

So there you have it, the latest progress report on the Utah Belt. Hopefully coal will make a comeback. One day those EMD SD70ACe and GE ES44AC diesels on today's coal trains will become

mid-train helpers. What will the head-end power will be then? **MR**

Eric Brooman lives in St. Peters, Mo. Articles on his Utah Belt have been appearing in the pages of Model Railroader magazine since January 1986. You can learn more about the history of the layout and see a track plan in the December 2018 MR.



A mill pond for the Sandy River & Rangeley Lakes

Part 2: Adding foliage, water, and ripples to the pond

By **Lou and Cheryl Sassi** • Photos by Lou Sassi

Sandy River & Rangeley Lakes
Forney no. 8 crosses Winter Mill
Pond on its way to Kingfield on
Lou Sassi's On30 model railroad. In
part 2 of this two-part series, Lou
discusses landscaping, pouring, and
detailing the pond.





1 Cheryl Sassi pokes a hole in the terrain with an awl.



2 Cheryl plants a shrub using Aleene's Tacky Glue.



3 Cheryl plants reeds in the mud near the boat landing site.



4 She also used real grass found along a road in this scene.

My wife, Cheryl, and I started converting a stretch of bare terrain on our On30 Sandy River & Rangeley Lakes layout into a mill pond in the July 2022 *Model Railroader*. I had long planned for Winter Mill Pond, on the north end of the layout, to be a signature scene. But after I cut out the extruded-foam insulation board terrain to make room for the pond in 2010, it remained bare plywood for many years.

In 2018, I finally built the trestle, then started on the pond. Last month, in part 1 of this two-part series, I prepared the pond bottom and banks and built the bridge abutments. Meanwhile, company arborist Cheryl planted a hardwood tree along the eroded edge of the pond.

This time, we add weeds, grass, lily pads, and riprap to the pond, then finish up by adding waves. Let's get started.

Brush, weeds, and riprap

Cheryl added various types of brush and ground cover along the edge of the pond up to and along the retaining wall at the mill. She punched holes in the "Ground Goop" terrain with a small awl 1 and planted the brush with a dab of Aleene's Tacky Glue 2. She also added tall swamp grass on either side of the boat launch site 3. For swamp grass, she used a combination of Woodland Scenics "field grass" and natural wild grass she found growing along a northern New York roadside 4.

Between the trestle and fascia beside the enginehouse, we decided to add some riprap. After spreading a layer of Goop on the hillside 5, Cheryl added small stones we had brought back from the bed of the Sandy River in Maine on one of our fan trips there. She pressed them into the Goop and used an eye dropper to apply white glue diluted 1:2 with water



6. [Lou's recipe for "Ground Goop" was printed with part 1 in July's issue. – Ed.]

Adding the water

Since I added a drainpipe protruding from the retaining wall behind Winter Mill, I decided to model a stream of water running out of the pipe. We used clear acrylic silicone sealer to create this effect. I began by squeezing a few lengths of silicone onto a sheet of glass 7. Once the silicone dried and turned clear (about two days later), I scraped a length of it from the glass with a double-edged razor blade.

After applying some Aleene's Tacky Glue to the inside of the pipe with a round toothpick, I pushed one end of the silicone strand into the pipe 8. I also applied a small drop of glue onto the ground where I wanted the water to touch. (Applying the glue helps make the silicone adhere better to both surfaces.) Then I pressed the end of the silicone into the glue. I used a small stiff brush to dab Mod Podge gloss medium onto the ground to represent water running into the pond 9, on the next page.

I decided to use Woodland Scenics Realistic Water as my pond surface. I painted an area a couple inches wide around the perimeter of the pond with earth-colored latex paint, then blended it with Woodland Scenics Hunter Green water undercoat, which I carried farther into the pond. I similarly blended the Hunter Green with satin black latex paint. I used this to paint the remainder of the pond bottom to represent the deepest water.

After all that paint had thoroughly dried, I poured the Realistic Water into the pond, and Cheryl worked it around the edges and pilings with a large wood skewer. I did a two-part pour, each 1/8" thick. After each of these pours had dried for about a week, I added small

5 "Ground Goop" provides color and texture to the terrain.



6 After real rock riprap is added, diluted white glue secures it.



7 Lou squeezes out stripes of silicone sealant onto a glass plate.



8 Lou secures the end of the silicone "water" in the drainpipe.



9 Mod Podge clear gloss medium simulates runoff from the pipe.



10 Lou used Woodland Scenics Water Ripples to add waves to the pond.



11 Cheryl glues paper lily pads onto the surface of the pond.

waves using a stiff (oil paint) brush and Woodland Scenics Water Ripples 10.

Detailing the water

After the water was poured and dried, Cheryl added lily pads on each side of the boat launch site. These were made from tissue paper brush-painted with a variety of Model Master greens. She cut each pad out by hand in different sizes with a small pair of scissors, notching the larger ones. The flowers were made from the flowers of garlic chives from her garden. She cut them from the plants in the fall, let them dry, then nipped off individual flowers. Using tweezers, she dipped them into Aleene's Tacky Glue and stuck them to the top of a few of the larger lily pads. She carefully picked up each pad with tweezers, added a spot of glue to the underside with a round toothpick, and placed them onto the surface of the water 11.

We have noticed that, over time, Woodland Scenics Realistic Water shrinks, especially when doing a large pour. Even though I kept the pours shallow, after a few weeks, a few small cracks appeared along the edge of the pond. I fixed this by adding more Water Ripples to fill them in. I also added more ripples over the entire surface of the pond to create the effect of a light wind blowing across the water, rather than the mirror-like surface most modelers seem to like. The "ripples" look even better as they reflect the room light hitting the surface of the pond. MR



Will Leavitt used prototype images and photo-editing software to make decals for a Bachmann Siemens ACS-64 electric locomotive. Amtrak no. 606 is seen leading a train on his HO scale Amtrak Northeast Corridor layout.

MODEL A WRAPPED LOCOMOTIVE

Combine prototype images and photo-editing software to make decals for a one-of-a-kind locomotive

By Will Leavitt • Photos by the author

Railfan groups in my social media feed started buzzing with sightings of Amtrak Siemens ACS-64 no. 606 in December 2019. The electric locomotive was wrapped with an advertisement for Coca-Cola, featuring the beverage company's famous polar bears and "Share the Magic on Amtrak" slogan. The prototype unit, dubbed the "Polar Bear" by railfans, raced up and down the Northeast Corridor promoting Amtrak's recent switch to Coke products on its trains. Since I model Amtrak in the Northeast, I thought "wrapping" an HO scale ACS-64 with decals would be an interesting challenge.

The key to success for this project was good photographs. Scouring the Facebook Amtrak Northeast Corridor Railfan group, I found a broadside photo of the Polar Bear paused in Trenton, N.J. The image met all the requirements: even lighting, no obstructions, and a nearly direct side view. A telephoto shot of the nose provided the necessary image of the number boards and Amtrak Travelmark herald. I contacted the photographer, Adam Reich, and asked permission to use the images, offering him a set of decals if the project worked out.

The techniques presented here could easily be adapted to make decals for

other locomotives, passenger cars, or freight cars. In addition to modeling one-of-a-kind equipment, the decals could be used for re-creating weathering effects that would be difficult, if not impossible, to achieve with traditional modeling techniques.

Will Leavitt and his wife, Dana, live in Lexington, Mass. He's a firmware engineer at a semiconductor manufacturer and likes model railroading to get away from computers. Together with his grown sons, he models Conrail and the Northeast Corridor in New England. Will also enjoys photography and backpacking.

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STEP 1 PHOTO EDITING

I loaded Adam's images into photo-editing software and got to work. I used ON1 Photo Raw 2020, but any high-end photo editor would work. The ACS-64 has a simple slab design, so a single large decal would cover each side.

The first step was "de-keystoning" the image. Notice in Adam's original photo ① that the lines at the top and bottom of the locomotive aren't parallel. The perspective makes the body into a slight trapezoid. To "stretch" the photo into a rectangle, I placed four anchor points on the image that defined a rectangle ②. I chose the frame and roofline just in front of the windows. Adjusting the vertical and horizontal sliders, I transformed the photo until the locomotive side was rectangular.

I used a scale rule to measure the ratio of length to height on the Bachmann model, then adjusted the photo to match. I knew it wouldn't be possible to precisely align the decal with the windows on the model. To work around that issue I "erased" the windows with the retouch tool.

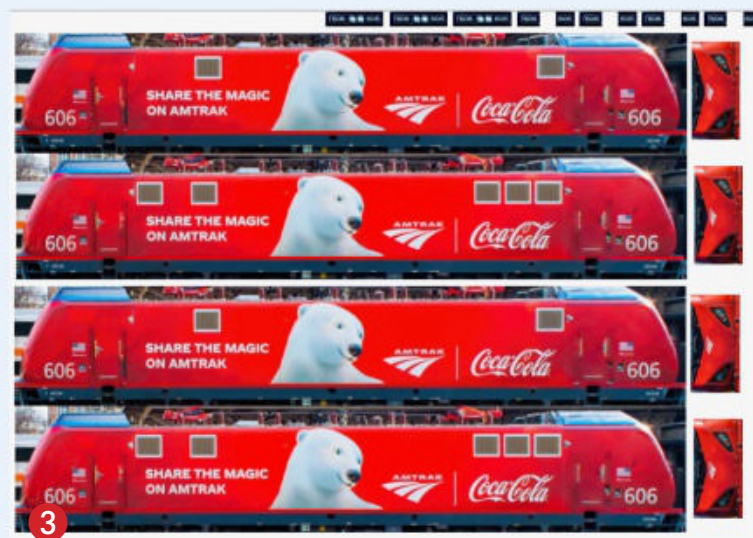
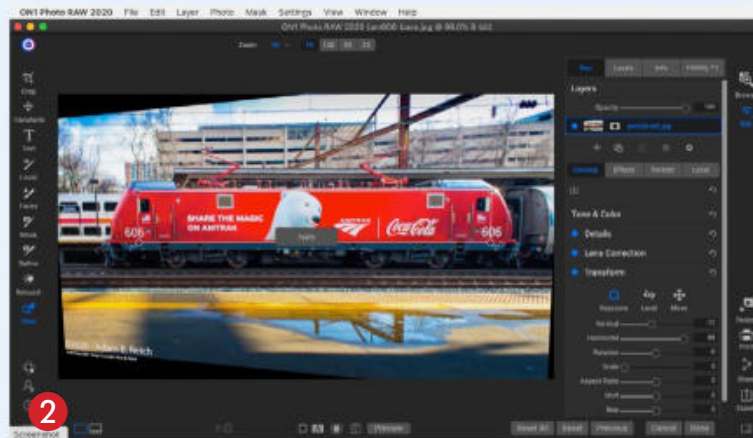
The ACS-64 has two vents on one side and five on the other. I created a "layer" of a single vent – like a transparent slide with only the vent visible. I used the retouch tool to erase the vents on the photo and made two copies, one for each side. Then I added the vent layer on top of the locomotive layer and used the cursor keys to position the first vent. Once placed, I duplicated and shifted the vent layer multiple times to place the remaining vents.

The prototype photograph of the front of the unit was nearly straight on. I just cropped the number boards, headlights, and Amtrak herald.

Next, I exported the side and front images and added them into a Microsoft PowerPoint document for printing. I didn't closely crop the images, deciding to keep the surrounding area to provide context. I'd do the final cropping with sharp scissors.

To scale the images to the right size, I used the PowerPoint ruler tool and held down the shift key when resizing to keep the width and height ratio locked ③.

I printed the document on white SunnyScopa (sunnyscopa.com) Waterslide Decal Paper for laser printers on a Xerox color printer.



STEP 2 MODEL MODIFICATIONS

With the decals printed, I turned my attention to the model. First, I removed the shell and carefully took off the handrails, windshield wipers, mirrors, and number boards with a hobby knife ①.

Then I took out the cab interior ②. I used ethanol to soften the glue holding the windows and pried them out. I removed the ditch lights as well. In retrospect, I should have just masked them.

The decals weren't opaque enough to hide the blue of the factory paint. To remedy that, I airbrushed the body with several light coats of silver ③. The brand and specific color doesn't matter, as the paint would be covered by decals. Be sure to mask the inside of the windows prior to painting.

I airbrushed the ends with Tru-Color Paint Soo Line Red no. TCP-055.



STEP 3 APPLYING THE DECALS

Now came the fun part – applying the decals. To get a feel for how they'd handle, I first applied the decals to styrene sheet. It turned out the large side decals were easier to handle than I anticipated.

I made the decals slightly oversized and trimmed them to fit with scissors **1**. I used Walthers Solvaset, a setting solution, to get the decals to conform to the vents, doors, and other irregular surfaces.

To open the side cab windows, I cut an "X" in the middle of the windows and folded the resulting triangular edges inside the shell **2**.

The cut edge of the decals had a slight white edge **3**. To eliminate that, I feathered the transition between the decals and red paint with the airbrush. I used a permanent marker to hide the transition between the decals and black paint.



STEP 4 REASSEMBLY AND RUNNING

Re-installing the handrails and windshield wipers was surprisingly challenging. To locate and re-open the holes, I drilled from the inside of the shell. I attached the parts with thinned white glue **1** because styrene cement would dissolve the laser printer toner.

I stripped the old number boards with ethanol, applied the new decals, and re-installed the castings **2**. Finally, I added a layer of grime to the roof with powdered pastels and sealed the model with a light coat of Testor's satin clear (no. 1959).

Back at the layout, I put the shell on the chassis and went to run the electric locomotive. Whoops! What was the number again? The last step was to reprogram the ACS-64 to its new road number, 606.

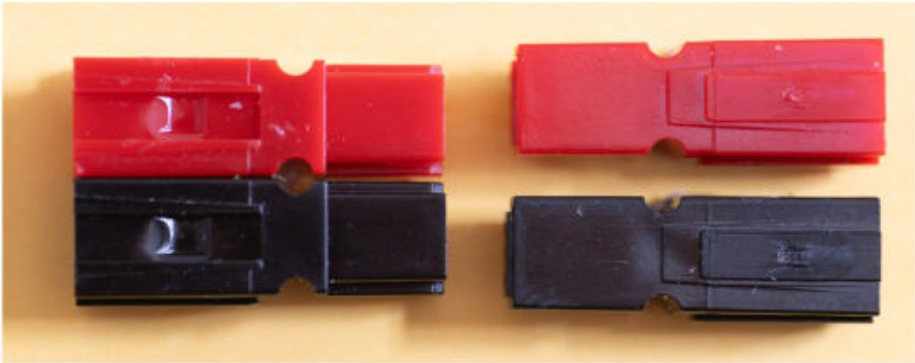
The full-size Amtrak no. 606 was stripped of its Coca-Cola livery in late January 2020. However, on my HO scale layout, the Polar Bear will live on for years to come. **MR**



Useful connectors for DCC wiring



1 21-pin motherboards. This month we'll look at connectors useful to the DCC model railroader, including connector/motherboards for 21-pin decoders like the Digitrax sound decoder shown above. The tiny TCS motherboard is at upper right. Below are the NixTrains Decoder Buddy and Mini. If your decoder isn't encased in shrink wrap, wrap it in Kapton tape (available from NCE) or electrical tape so the decoder won't short to the motherboard.



2 Anderson Power Poles. The pair on the left are locked together, while those on the right aren't yet locked and are shown ready to mate those on the left. Any Power Pole can mate with any other by simply flipping it over. The bodies can be locked together side by side and on top of each other to create whatever arrangement of contacts you need.

This month I continue exploring the websites of DCC vendors who sell products that make DCC easier and more enjoyable for you. It's worthwhile to see what other DCC manufacturers are selling, not just your chosen system's manufacturer. Another company might be selling just what you need.

I'll focus on connectors in this installment. There are so many I can't show them all, but I've provided a list of connectors and their suppliers in the table below.

Twenty-one pin decoders are the latest and greatest **1**. They're loaded with features that wouldn't fit on a decoder with fewer connections. If size is a critical issue and you don't need any electronics on the motherboard, then the TCS board may be for you.

Next up size-wise is the NixTrainz Decoder Buddy Mini. It has larger soldering pads and onboard resistors for use with LEDs. If you have the room, the Decoder Buddy features a connector (right side of **1**) that allows

disconnecting the leads to LEDs and other items on a locomotive's shell. This makes your wires shorter and your installation neater.

One power connector is unique and deserves some discussion. The Anderson Power Pole connectors and contacts are completely symmetrical **2**. They mate just by flipping one over. There are no male or female parts to keep track of! Pretty slick. All you need in your tool box are some contacts and bodies.

NCE (ncedcc.com) sells the 1327 series of bodies and the 1331 series contacts that are good for 30A and crimp onto 14AWG stranded wire. These are for joining electrical leads between modules or anywhere else you want to be able to disconnect wires.

The Power Pole product line is rather broad. If you want bodies in other colors, you can get them from amateur radio supplier DX Engineering (dxengineering.com).

The bodies slide and lock together to become a single, custom, multi-contact connector. This makes it easy to link multiple bus wires, accessory power feeds, block sensor leads, etc. between modules.

To keep things compact, the opening in a body isn't much bigger than the contact. So if you typically use pliers to crimp a connector, don't do that, as the contact probably won't fit into the body after you smash it flat. You will need a crimper that folds the gap in the contact into the stranded wire and maintains the general circular shape of the contact.

If you can't find a suitable crimper at your home improvement store, you can get the "TRICrimp" crimping tool **3** for 15, 30, and 45A

DCC Supplier	Description	Uses
NCE	Euro-style terminals, available in 2, 6, 8, and 12 circuit blocks (Fig. 4)	Good for bus terminations and hazardous voltages
NCE	2, 3, 4, or 6 pin micro connector sets	Decoders and lighting Features highly flexible wires
NCE	Anderson power poles for 12-16 AWG stranded wire	Layout module power interconnects or anywhere you may occasionally need to break a connection
NCE	T-taps (Fig. 7)	Track bus to feeder connections
NixTrainz	Decoder Buddy and Decoder Buddy Mini (Fig. 1)	21 pin decoder motherboards
SoundTraxx	2 pin micro, M/F	Decoders and lighting
SoundTraxx	9 wire harness (Fig. 5)	HO and N scale steam locomotive installations
TCS	2 pin micro, M/F, 3 color sets available (Fig. 6)	N and Z decoders and LED lighting All TCS connector sets feature high flexibility wires
TCS	2 pin mini, M/F set, 3 color sets available (Fig. 6)	HO decoders and lighting
TCS	4 pin micro, M/F set, 2 color sets available	N and Z decoders and LED lighting
TCS	4 pin mini, M/F set, 2 color sets available	HO decoders and lighting
TCS	6 pin (2 x 3 or 1 x 6) mini, M/F set, 2 color sets available (Fig. 6)	HO decoders and lighting
TCS	6 pin (1x6) micro, M/F set (Fig. 6)	N and Z decoders and LED lighting
TCS	JST 6 (1x6), M/F set	Locomotive installations; connector is keyed
TCS	21-HW (Fig. 1)	Smallest footprint 21 pin decoder motherboard available



③ TRicrimp crimper. If you don't already have a suitable crimper in your tool box, this versatile tool crimps 15-, 30-, and 45-amp contacts. The "M"-shaped die folds the crimp in on itself rather than flattening it. If you want to use 14AWG stranded wire for your buses, that fits the 30-amp contacts. Available from Powerwerx (powerwerx.com).

Power Pole contacts from powerwerx.com.

When you need a terminal strip, consider the Euro-style. NCE sells them, as well as hobby electronics supplier All Electronics (allelectronics.com). This type of terminal strip has recessed screws and protected wire contacts that makes it virtually impossible to make accidental contact with a live circuit **④**. This minimizes short circuits and shock hazards.

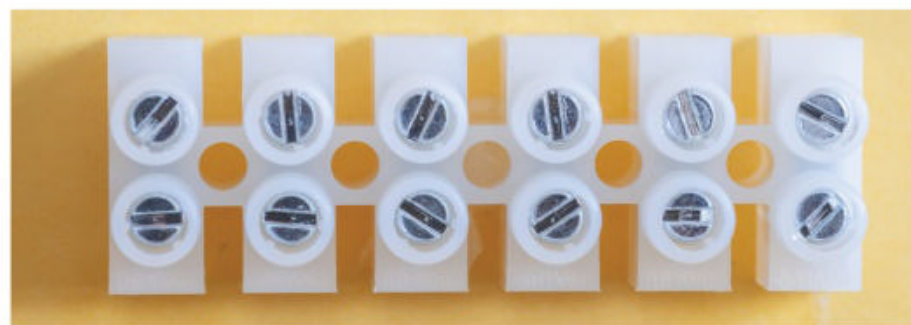
There is a large number of small connectors available that you can use to connect steam engines to their tenders; connect decoders to lights attached to locomotive shells, speakers, and stay-alive circuits; as well as to power trackside signals.

Perhaps the most curious miniature connector is the SoundTraxx DBX-9000 **⑤**. It interconnects HO and N scale steam

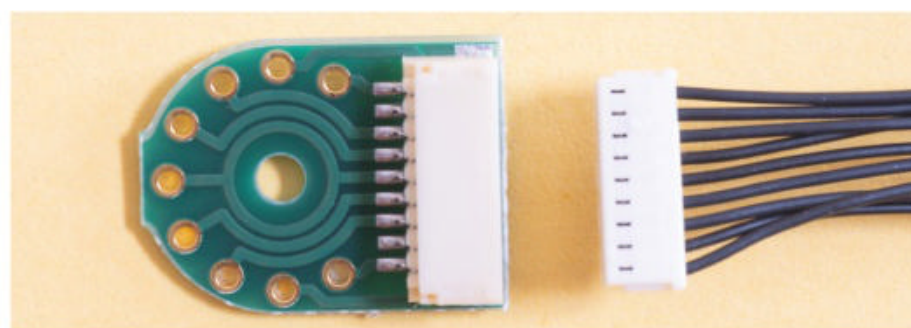
locomotives to decoders in their tenders. Its nine wires are all black.

The table lists tabulated connectors that are available. Connectors for general model railroader use come with two, four, or six contacts **⑥**. You have options of all black wires or colored wires. Most have their connections in a single row. TCS offers a four- and six-contact connector set that has two rows.

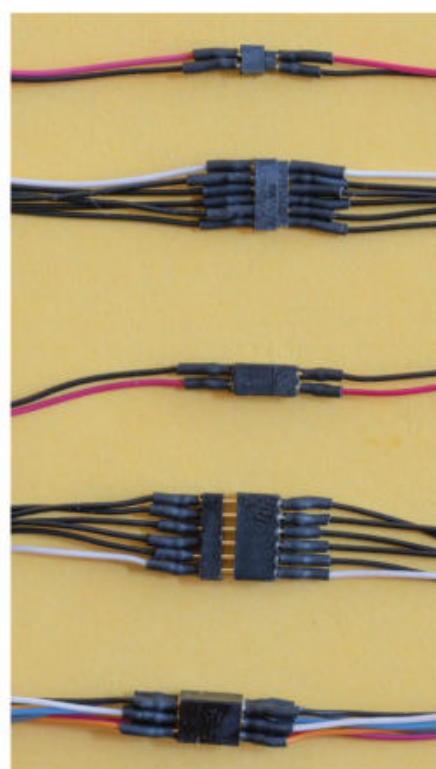
T-taps are popular with modelers for providing solderless connections of feeders to track buses **⑦**. They're available from NCE, Amazon, or eBay. They consist of a spade lug that crimps onto a feeder wire and a insulation displacement connector (IDC) that clamps onto the track bus. The ones from NCE snap together. When installing the spade lug into the IDC, make sure the spade lug is centered to



④ Euro-style terminal strip. These terminals feature recessed screws and protected contacts to minimize contact with live wiring. They come in strips of two to twelve sets of contacts; the above example has six sets. These are easily cut apart to make whatever length of terminal strip you need.



⑤ The SoundTraxx DBX-9000. This connector is for installing decoders in the tenders of HO and N scale steam locomotives where most of the electrical connections are in the engine. Two wires are for power, two for the motor, and two for the headlight, leaving three for a speaker or other uses.



⑥ Tiny TCS connectors. Top to bottom: 2 and 6 pin TCS micro connector, 2 and 6 pin TCS mini connector, and the 2 x 3 TCS mini. If you blacken the wires, leave some color showing, as these connectors aren't keyed.

ensure a connection is made when fully inserted.

A correction. Reader Sandy Samuels wrote in regarding



⑦ T-Tap connectors. These connectors make solderless feeder-to-track-bus connections a breeze.

the Walther's Layout Control switch machine I discussed in May's column. Although Walther's instructions don't say so, in order to control the machine with direct current, you need to solder across the pads marked "Polarity Route." **MR**

**THERE IS A
LARGE NUMBER
OF SMALL
CONNECTORS
YOU CAN USE
TO CONNECT
STEAM ENGINES
TO THEIR
TENDERS.
—ALLAN**



Rapido HO scale New Haven EP-5 electric

The Jets are here! Rapido Trains is offering highly detailed HO scale models of New York, New Haven & Hartford General Electric EP-5 passenger locomotives for the first time in plastic. They are available with dual-mode sound decoders or as direct-current (DC) models without sound.

The New Haven's General Electric EP-5s were a first and last locomotive. They were the first production rectifier locomotives on an American railroad, and they were the last new electrics the New Haven (NH) owned.

The EP-5s were six-motor, double-ended cab units designed to pull long-distance and commuter trains under the 11,000V alternating current (AC) New Haven catenary between New Haven

and the tunnels to New York City's Grand Central Terminal and Penn Station. To access the New York Central's Grand Central Terminal, the locomotives were equipped with pickup shoes for the NYC's 600V DC third rail.

Accessing Grand Central also affected the design of the locomotives due to the Park Avenue Viaduct, which had weight restrictions. General Electric would have to design a compact, light-on-its-feet, and powerful locomotive.

In 1951, using DC traction motors would result in better efficiency than AC motors. It also simplified using the NYC's DC third rail. Converting the AC from the overhead into usable DC power for the trucks had been done before using bulky and heavy motor-generator sets, where an AC motor spun a DC generator.

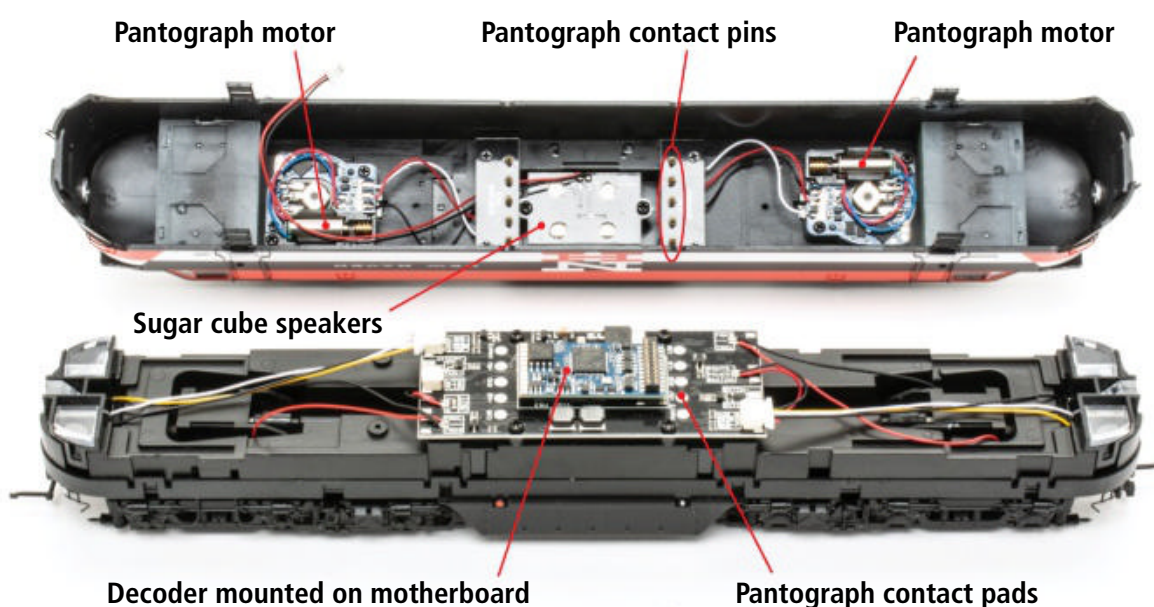
A better solution was an Ignitron rectifier tube. These "tubes" were actually steel cans with a pool of mercury in the bottom. When an electrode fired current into the pool of mercury, the current that came out the other end was only half of the AC wave, essentially a rough DC. This was further refined with a smoothing reactor.

The power was then sent through accelerating resistors, which required a great deal of cooling. The resistors were housed on the roof of the locomotive in a box ventilated by high-speed blowers, which produced the noise that earned the locomotives the nickname "Jets."

The New Haven ordered 10 of these locomotives from GE, and with a rebuild in the early 1960s after neglect during the McGinnis era, they lasted until the merger with Penn Central. Two even had second lives as freight haulers out of Morrisville Yard in Pennsylvania, heading north into New Jersey. None of the locomotives were preserved.

Our sample from Rapido depicts no. 377 as it was delivered, before grills were added high on the carbody sides to equalize the air pressure created by those high-speed fans. The model has a plastic body shell on a die-cast metal frame.

The body shell is finely molded with a plethora of added detail, much of it metal. There are wire grab irons and handrails (factory-painted, of course), photo-etched metal grills on the resistor box and under the pantographs, and all-metal pantographs, as well.



Rapido's New Haven EP-5 has a die-cast metal frame with a molded plastic body shell. Equipment in the body includes the powered pantograph drives.

PERFORMANCE CHARTS	
DRAWBAR PULL	3.84 ounces 54 free-rolling freight cars or 27 passenger cars
SCALE SPEED (DC)	
VOLTS	SCALE MPH
6.25V (start)	1.4
7	3.6
8	8.8
9	16
10	27
11	42
12	59
13 (max.)	77
SCALE SPEED (DCC)	
SPEED STEP	SCALE MPH
1	.9
7	7.9
14	27
21	54
28	71

The colorful, blocky “McGinnis” scheme, named for controversial NH president Patrick McGinnis, is also well-executed. The color separations are sharp and opaque, with a smooth finish. The lettering is likewise well done, with the trust plates and most of the GE builder’s plates legible under magnification.

The trucks are unique to the EP-5, with the middle axle slightly off center to accommodate the traction motor. In addition to the usual brake cylinder and speed recorder details, separately applied third-rail shoe details depict the shoes in a stowed position. I compared the dimensions of the model to drawings in *New Haven EP-5 Jets* by Joe Cunningham (N.J. International, 1991), and all were within scale inches of one another.

The instruction booklet describes how to remove the shell from the chassis, and it went just as described. As mentioned in the instructions, be careful of the wiring connecting the frame and body shell.

The model’s die-cast metal frame surrounds the motor and driveshafts. A plastic detail piece depicting locomotive frame and piping detail snaps onto the bottom. The fuel and water tanks for the diesel fuel-powered steam generators is a plastic piece between the trucks. There’s a pantograph switch on the bottom to turn the mechanism on and off.

An Electronic Solutions Ulm (ESU) LokSound V5 dual-mode decoder is plugged into a motherboard mounted to the top of the frame above the motor. The motherboard has plug-in connections for the lights and speakers and contacts for the pantograph controls.

Miniature electric motors raise and lower the pantographs based on commands from a DCC throttle. Direct-current models have manual pantographs.

I started testing the Rapido EP-5 in our workshop with our NCE PowerCab. Like most LokSound-equipped models, there’s no sound until you press function button 8 (F8). On this model, be sure you turn the switch on the bottom of the steam-generator fuel tank on. The pantograph drive control is shipped in the off position. Be aware that if you don’t have catenary installed above your track, the pantographs could collide with obstructions like through truss bridge members.

When I pressed F8, there was a clanking, then a whoosh of compressed air, and the rear pantograph rose up. Then the cooling fans started in the resistor box, which is also where the dual sugar-cube speakers are mounted.

The fans stay at a steady rate once the locomotive is started. Lighting for the number boxes also illuminated when I pressed F8.

At speed step 1, the locomotive started moving at less than 1 scale mph. At speed step 28, the locomotive reached 71 scale mph – the speed limit New Haven had set for the EP-5.

In addition to F8 raising the pantograph, there are two function keys, F13 and F14, that will raise and lower the no. 1 and no. 2 pantographs. On the New Haven, the rear pantograph, based on direction of travel, was the proper pantograph to raise. Pressing the direction control switches the pantographs, too.

Another unique New Haven feature is the Hancock Air Whistle. It’s reminiscent of a small steam whistle, and not the sort of sound one might expect from a large locomotive, but the sound is correct for New Haven power.

On DC power, the sound started at 5.5V, and the locomotive started to move at 6.25V at 1.4 scale mph. The top speed at 13V, the maximum our power pack could provide, was 77 scale mph. The prototype was capable of 100 mph top speeds, which it attained in testing on the Pennsylvania RR, but it wasn’t expected to reach those speeds on the New Haven.

Sounds and lighting control were automatic on DC power. The sounds were limited to the resistor fan, and the headlight was directional.

Facts & features

Price: \$459.95 (DCC, Sound), \$349.95 (DC, no sound)

Manufacturer

Rapido Trains Inc.
500 Alden Road, Unit 21
Markham, Ontario, Canada
L3R 5H5
rapidotrains.com

Era: 1955-1970 as decorated

Road names: New York, New Haven & Hartford (as-delivered scheme, repaint, and experimental yellow) and Penn Central, all in multiple road numbers as appropriate

Features:

- All-wheel-drive and power pickup
- Blackened metal wheels, in gauge
- DC models equipped with 21-pin plug for decoder
- Directional operating pantographs (sound models only)
- ESU LokSound V5 DCC decoder on sound-equipped models
- Factory-installed MacDonald-Cartier metal couplers, at correct height
- Full cab interior
- Period-correct detail options, including carbody, pantograph, and hardware variations
- Weight: 1 pound, 1.3 ounces

I took the model to our staff layout, the Milwaukee, Racine & Troy, for some “real world” testing. Since I knew the EP-5s were drafted into priority freight service later in their careers, I attached it to a trailer-on-flatcar train with mostly 85- to 89-footers, and sent it up the 3 percent grade out of Williams Bay. The Rapido EP-5 pulled 11 cars plus a caboose with just a bit of wheel slip as it negotiated the climbing S-curve. It should have no trouble with prototypical length trains on most layouts.

New Haven modelers have an excellent choice for passenger service on their layouts. Other Northeastern modelers have plausible rationalizations for including the Rapido EP-5 on their New York Central and Pennsylvania RR layouts. And if you want an all-black Penn Central locomotive to pull local freights in New Jersey, Rapido has you covered there, too. – *Eric White, senior editor*

Walthers HO 89-foot flatcar with bi-level open auto rack



An 89-foot flatcar with a bi-level open auto rack has been added to the ever-growing WalthersMainline product range. The HO scale model features plastic and die-cast metal construction, metal wheels mounted on plastic axles, and Proto-Max metal couplers.

The WalthersMainline model is based on a Bethlehem Steel 89-foot flush-deck flatcar and a staggered-post Paragon II auto rack. Though auto racks made it easy and economical to ship vehicles, the open-sided design didn't afford protection from vandalism, weather, or other damage. The cars were replaced by partially, and later fully, enclosed auto racks.

Our sample is decorated as TTBX no. 962945, a class BSH11 car from leasing company Trailer Train's fleet. To translate Trailer Train's code, B = Bethlehem Steel, S = standard level, H = hydraulic end-of-car cushioning, and 11 = design number. The rack is leased by Baltimore & Ohio and features the railroad's Capitol Dome herald on a separate, factory-applied placard.

Walthers acquired the tooling for the 89-foot flatcar with bi-level open auto rack from Accurail. But don't think this is simply the kit offered in ready-to-run form. Walthers made several upgrades to the model, including a new die-cast metal underframe, retooled underbody details, prototype-specific roadname placard placement (as appropriate), factory-installed rack cross braces, and

swinging drawbars for operation on 24" radius curves.

The model consists of a one-piece injection-molded plastic deck and flatcar body. The deck has molded rub rails and a corrugated top. The flatcar has molded rub rails on top and molded stirrup steps and jack pads on the sides.

Underneath, the screw bosses were redesigned, relocated, and added to accommodate the underframe and other upgrades. Most of the model's 6.5 ounces of weight comes from the metal casting.

The underframe, secured to the bottom of the flatcar with three Phillips-head screws, runs the length of the car. Details cast into the underframe include body bolsters, center sills, crossmembers, and stringers. A plastic center sill cover with angled crossmembers is fastened to the underframe with screws.

The side stanchions are separate pieces with rear gusset detail. The gussets on the front are separate, factory-applied pieces. There's no cable handrail detail on the second deck.

A small plastic bag with modeler-installed bridge plates and bridge plate latches (four of each) is included with each model. A written, illustrated instruction sheet shows where to install the parts.

Our sample is neatly painted in Trailer Train's Freight Car Red scheme, which was used until 1970. The white and yellow lettering on the side is opaque and legible under magnification. The

lettering placement matches prototype photos I found online and in books. The model's dimensions match or are within scale inches of data in the January 1971 *Official Railway Equipment Register*.

I tested the car on our HO scale Milwaukee, Racine & Troy (36" minimum radius and no. 6 turnouts) and Wisconsin & Southern (30" minimum radius and no. 5 turnouts). The car performed without incident on both layouts. Though the model will operate on curves down to a 24" radius, the car will look better on broader curves.

It's nice to see the HO scale 89-foot flatcar with bi-level open auto rack back on hobby shop shelves. Carefully executed tooling upgrades, especially to the underbody, have brought the vehicle hauler up to the standards of today's ready-to-run cars. – Cody Grivno, senior editor

Facts & features

Price: \$39.98

Manufacturer

Wm. K. Walthers Inc.

5601 W. Florist Ave.

Milwaukee, WI 53218

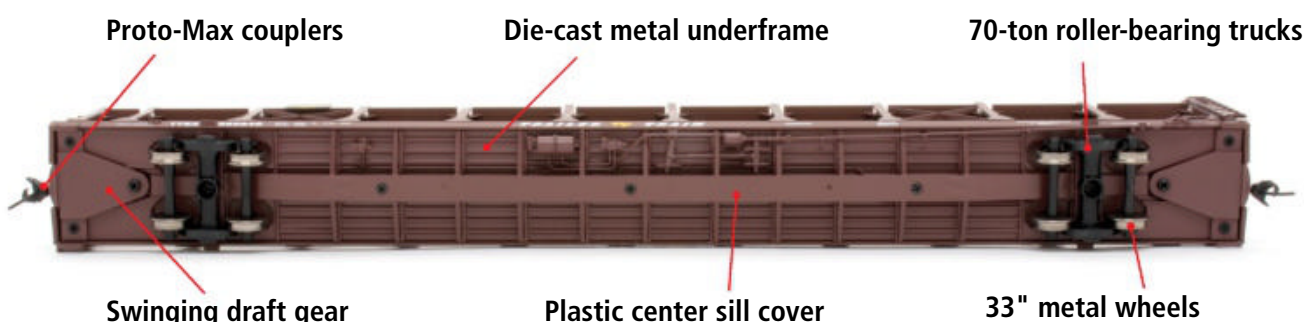
walthers.com

Era: 1968 to early 1980s

Road names: Baltimore & Ohio; Atchison, Topeka & Santa Fe; Erie Lackawanna; Norfolk & Western; Penn Central; Pennsylvania RR; and Union Pacific. Four road numbers per scheme.

Feature

- 33" turned-metal RP-25 contour wheels on plastic axles, in gauge
- 70-ton roller-bearing trucks
- Proto-Max metal couplers, at correct height
- Weight: 6.5 ounces (0.7 ounce too light per National Model Railroad Association Recommended Practice 20.1)



A die-cast metal underbody accounts for most of the weight on the Walthers Mainline auto rack. Other features include metal wheels and couplers.



Broadway Limited N scale heavy Mikado

A hard-working United States Railroad Administration (USRA) steam locomotive has come to Broadway Limited Imports' N scale line, and it's both a brute and a beaut. Equipped with a Paragon 4 Digital Command Control (DCC) sound decoder, the USRA heavy Mikado has powerful, realistic sound effects that sound even better when the locomotive is paired with BLI's Rolling Thunder subwoofer. It rolls smoothly and sounds great under both direct current and DCC, and has the pulling power to handle a sizeable freight train by itself.

Wartime service. During World War I, President Woodrow Wilson nationalized the railroads and placed them under the authority of the United States Railroad Administration (USRA). One of the USRA's actions was to purchase hundreds of new steam locomotives, built to 12 standard designs to simplify maintenance. After the USRA returned control of the railroads to their boards in March 1920, locomotive builders Alco, Baldwin, and Lima continued to use the USRA's designs for years afterward.

One of the most successful of the USRA's designs was the 2-8-2 Mikado, which came in light and heavy versions. The USRA ordered 233 heavy Mikados like BLI's new N scale model, and over 950 more were built after USRA's end.

Our sample locomotive came decorated as Great Northern no. 3202. The book *Steam Locomotives of the Great Northern Railway* (Kenneth R. Middleton and Norman F. Priebe, Great Northern Ry. Historical Society, 2010) gives the history of the Great Northern's class O-3 heavy 2-8-2s. The first four, built in the American Locomotive Co. (Alco)'s Schenectady Works, were

received by GN in April 1919 and numbered 3145-3148. When it was pointed out a few days later that the new Mikes had different features from the railroad's other class O-1s, the four were reclassified as O-3s and renumbered 3200-3203.

In January 1920, five more class O-3 locomotives came to the line. These had been built by Alco's Brooks shops in November 1918 and assigned to the El Paso & Southwestern Ry., which found them to be too heavy for the railroad's light track. Great Northern numbered them 3204-3208.

The locomotives were assigned to the railroad's Minot Division in North Dakota until 1936, when they were transferred to the Mesabi Division, which served the iron ore mines of Minnesota's Mesabi Range.

In 1943, the nine O-3 Mikados were remodeled to make them appear more GN standard. Broadway Limited's model depicts the locomotive before these changes. The O-3s were all converted to oil burners by 1951, and four years later, the last of them was scrapped.

Measuring up. I found a blueprint of the class O-3 Mikado in a collection of GN locomotive plan drawings in Kalmbach Media's David P. Morgan Library. Applying my trusty caliper, I found that all the dimensions I checked were within scale inches of the measurements on the drawing. The driver wheelbase was dead on, without shrinking the driver diameter – quite a feat in N scale.

The paint and printing on the model is amazing. Under magnification I could read every word on the builder's plate on the side of the smokebox – and we're talking about five lines of text in a space about .05" high. The locomotive numbers on the headlight, the silver lettering on

Facts & features

Price: \$369.99

Manufacturer

Broadway Limited Imports
9 East Tower Circle
Ormond Beach, FL 32174
broadway-limited.com

Era: 1918 to mid-1950s

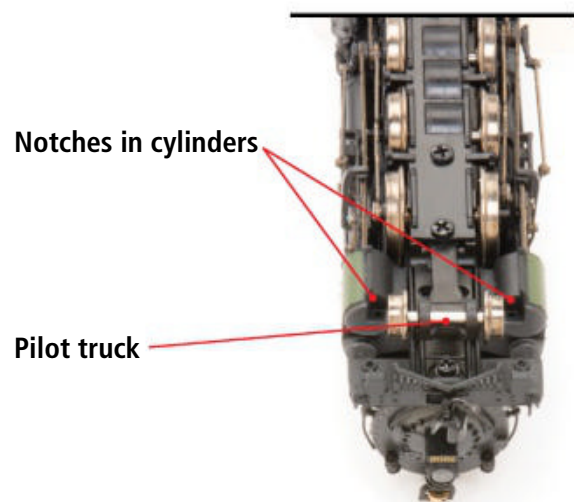
Road names: Great Northern (Glacier Green boiler); Atchison, Topeka & Santa Fe; Baltimore & Ohio; Chesapeake & Ohio; Chicago, Burlington & Quincy; Denver & Rio Grande Western; New York, New Haven & Hartford; Northern Pacific; Pennsylvania RR; Southern Ry. (green boiler and tender, one number); Southern Pacific; Texas & Pacific (Russian iron boiler); and Union Pacific. Two numbers per road name unless noted. Also available painted but unlettered.

Features

- Blackened metal wheels
- Cast brass details
- Die-cast metal body
- Directional light-emitting-diode headlight
- Micro-Trains compatible knuckle couplers
- Minimum radius: 9.75"
- Paragon4 Digital Command Control sound decoder with Rolling Thunder
- Prototype-specific headlight
- Traction tires on the rear set of drivers
- Weight: Engine only, 2.4 ounces; with tender, 3.7 ounces
- Wire grab irons and uncoupling levers

the cab and tender, and the tender's "Rocky" herald were equally well done.

A couple of tiny detail parts included in a separate plastic bag with the



Notches in cylinders

Pilot truck

The cylinders are notched to let the engine's pilot truck swing wider so it can handle tighter curves. BLI provides wedges to fill those gaps if the locomotive will only be run on wider curves.

locomotive baffled the MR staff until senior editor Cody Grivno found the answer on BLI's website. To let the locomotive handle tight curves, two small wedge-shaped cutouts were made in the front of the cylinders to clear the pilot truck. If the purchaser has a layout with broad curves, the two wedges provided can be glued into the cylinders to fill those gaps.

DCC testing. The locomotive's Paragon 4 decoder is dual-mode, meaning it will work under both Digital Command Control and direct current. I tested it both ways, starting with DCC.

The most notable thing about the locomotive is the sound. Since N scale models don't have a lot of room for big speakers, their sound can often be tinny

or weak. But when I pressed function key F1, the bell came through rich, vibrant, and clear as, well, a bell. The steam whistle was throaty and strong.

The sound became all the more impressive when I turned on our Rolling Thunder unit. This is a system made by BLI that receives transmissions of low-frequency sound signals from an appropriately equipped decoder and sends them to a subwoofer. With Rolling Thunder enabled, each cylinder chuff vibrated the floor in the workshop.

Time to see how it rolls. At speed step 1, the engine delivered a nice, slow roll. It topped out at 94 scale mph at speed step 28, a bit fast for a freight engine, but not by much. Adjusting Configuration Variable (CV) 5, also known as Vmax, to a value of 130 yielded a top speed of 64 scale mph. That seemed about right.

Now for DC. Sound decoders take a lot of voltage just to power the sound chip, leaving only a small part of the throttle's range to control the locomotive's speed. This engine was typical in that regard. The startup sequence I'd heard when pressing F9 in DCC sounded when the power pack passed 8.5V, and the model started moving at 9V, without hesitating.

The manufacturer recommends that if you're going to run this locomotive under DC control, you get a 16V power pack. I didn't find that necessary. The pack I was using goes up to 13.5V, and at that voltage, the engine reached a top speed of 79 scale mph. That's fast enough for a low-driven freight engine.

PERFORMANCE CHARTS

DRAWBAR PULL	1.1 ounces
	26 free-rolling N scale freight cars
SCALE SPEED (DC)	
VOLTS	SCALE MPH
9	2.9
10	14
11	23
12	48
13	74
SCALE SPEED (DCC)	
SPEED STEP	SCALE MPH
1	2.4
7	15
14	25
21	60
28	94

Although fewer sounds were available under DC, they sounded just as good. Broadway Limited also makes a control box called the DC Master that you can use to blow the horn, ring the bell, and perform some basic programming.

The engine has rubber traction tires installed on the rear set of drivers. This gave the little locomotive a fairly hefty drawbar pull of 1.12 ounces, enough to haul 26 free-rolling N scale freight cars on straight and level track.

An icon of the steam era. The USRA's Heavy Mikado, one of the most popular locomotives of its day, was a powerful and versatile performer. Broadway Limited's N scale model is a worthy representation of these wartime workhorses, ready for duty on your N scale layout. Its sound, performance, and looks measure up to the prototype in every way.

— Steven Otte, senior associate editor **MR**

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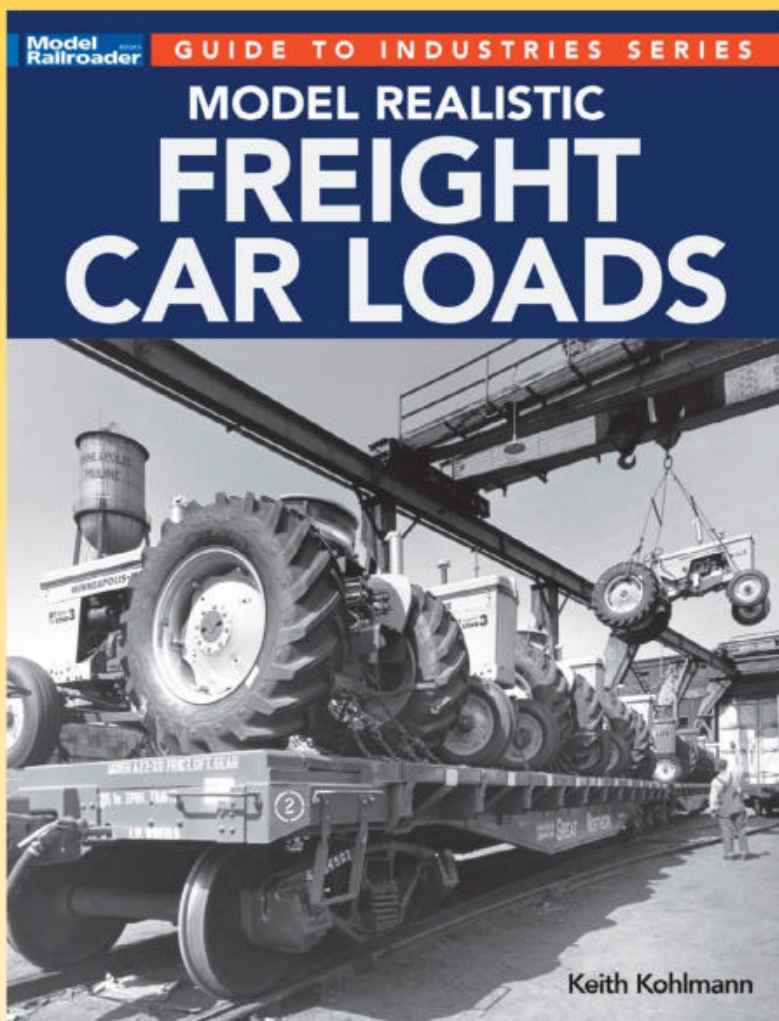


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Another look inside the tower

Gathering material for last October's column, "Tower Mysteries Revealed," had me interview some railroad retirees who began their careers in towers. They explained procedures patiently and shared entertaining recollections. This month, I'll reveal a few more.

An interlocking's routes and signals could only be changed when track occupancy allowed doing so. Consider an interlocking at a junction where a branch enters the main track. An operator was free to line the switch for movement over the branch or the main if no trains were approaching. He could then clear a signal for the chosen route; all other signals indicated stop. Electrical track circuits detected occupancy. (Today's optical and current detectors have the same function.) A circuit which detected an approaching train locked its route, protecting it from another train nearing the interlocking at the same time.

Suppose the operator lined a main line train to the branch by mistake. An approaching engineer would stop at a home signal, as the signals guarding an interlocking are called, which indicated such a misroute. He'd send his fireman to the phone box or, in later years, use a radio (if the stop itself didn't alert the operator to the mistake). However, the train occupied the track circuit, locking the route and signal. The

operator then would then start a timer. Typically, locking released after five minutes, so the operator could change the route and pull up the proper signal.

The photo at right captures a moment in the tower at the Wheeling & Lake Erie crossing of Erie's double-track main line in Creston, Ohio. The "model board" displays the track diagram. Operator Vernon Caston faces two large, round, glass-enclosed objects – the timers. The lever-manipulation chart for Erie movements is above the timers; the W&LE chart is above his head. If Caston were to turn his head toward the photographer, he would be facing the interlocking machine's levers.

Qualifying for a tower job, called posting, depended on its complexity. A new man was at the mercy of its operator. Many helped them, but some thought training them a nuisance. Jim Mardiguan asked "Where's Pen Horn?" at one tower he posted. The operator pointed out the win-

dow to a signal and asked if Jim could see it. He nodded and the operator pointed out another window: "Do you see that signal?" "Yes." "I don't care about anything beyond those signals."

Operator Mike Bednar says R Tower in Allentown, Pa., was far friendlier, "the railfan capital of the world." Not only did Mike welcome company, he also liked to grin at the crowd: "Who



Operator Vernon Caston watches the model board at SE Tower in Creston, Oh. in June 1957. SE guarded Wheeling & Lake Erie's crossing of the Erie there. John Long photo from the Dan Biernacki collection

wants to tie up these orders?" A flag in a holder on a tower's exterior or a metal panel placed in a window alerted an approaching train to receive train orders.

Communication took other forms. There was always an order wire, an open phone line connecting with a dispatcher. Trackside phones near home signals for use by train crews were also typical.

Hand signals could expedite moves. A conductor who wanted a crossover placed his hands on opposite shoulders, forming an X. Wiping a hand across the mouth indicated the crew planned to tie up for a meal. In the steam era, a fist raised to the mouth with thumb extended asked to take on water.

Adjoining towers talked to one another, especially about extra trains, and unusual movements. "Here comes the Ford Drill on track 1" would alert the next down the line to prepare.

Stephen McEvoy wrote *The Classic Railway Signal Tower*. The foreword, written by the Smithsonian Institution's Bill Withuhn, includes this supreme compliment: "the best book, bar none, ever written about railroad signal towers." *Railroad Operation and Railway Signaling* by Edmund Phillips, Jr., is another good source of information.

There's plenty of modeling inspiration in all this. I created manipulation charts for my tower operator, and I recently installed a model board. I'll begin coaching my dispatcher to announce approaching trains like this: "Maybrook Turn coming east." Winding an egg timer to correct a misroute adds another touch.

Proximity has my crews explaining moves they need face-to-face with the operator, but installing an intercom is appealing. Until then, hail hand signals! **MR**



SUPPOSE THE OPERATOR LINED A MAIN LINE TRAIN TO THE BRANCH BY MISTAKE. AN APPROACHING ENGINEER WOULD STOP AT A HOME SIGNAL, WHICH INDICATED SUCH A MISROUTE.
— JERRY



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Southern Pacific Electro-Motive Division SD40 no. 8476 leads the *Pacific Coast Expediter* through a tunnel near Cisco, Calif., on the SP's Sacramento Division in 1969. Ken Harstine of Holyoke, Mass., photographed the action on his N scale layout. The locomotives are Kato models, and the tunnel portal, switch stand, and utility poles were 3-D printed to match the prototype. The backdrops were printed from a panoramic photo shot at Tuolumne Meadows in Yosemite National Park.

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In August 1965, the Chesapeake & Ohio had a contract to move iron ore imported from South America, a job that called for the most powerful diesels the railroad could muster. Here, a General Electric U25B leads a trio of diesels hauling a westbound ore extra through Galt's Mill, Va., on Mike Burgett's HO scale C&O Clifton Forge Division layout. The structures were scratchbuilt to match photos taken at the prototype location. Craig Wilson of Cadillac, Mich., shot the photo.



In the early morning mist, a Shay pulls a string of empty log cars up a 10 percent grade along the second leg of a three-tier switchback. After pulling ahead to clear the switch, the train will back up to the log loading site. The photo was taken on a 2 x 4-foot HO scale module built by Peter Vassallo of Schenectady, N.Y. The hills are carved extruded foam board, painted and textured with dirt, crushed leaves, and a variety of ground cover products. The locomotive and log cars are Keystone and Durango Press models.



New York, New Haven & Hartford motor no. 3, an EY-1 electric locomotive, negotiates the street trackage on Seaview Avenue in Bridgeport, Conn., in the early 1950s. Above on the busy mainline, EP-4 no. 0363 hauls a heavy Grand Central Terminal-bound express. Rick Abramson of Trumbull, Conn., photographed the action on his HO scale New Haven layout. Rick built the layout with an authentic catenary system like that used by the New Haven, using components by Model Memories. The EP-4 is from Overland Models.





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Schedule of Events Rate: \$45 per issue (55 word maximum). Ads will contain the following information about the event: state, city, sponsoring organization and name of event, meet, auction or show, dates, location, times, admission fee, name and/or telephone number and/or email of person to contact for information. Name, daytime telephone number and street address of the person providing the information is also required but need not be included in the ad. Unless otherwise requested, ads will be published in the issue month that the event occurs in. Please specify issue date(s). **Word Ad Rates;** per issue: 1 insertion — \$2.03 per word, 6 insertions — \$1.89 per word, 12 insertions — \$1.77 per word. \$40.00 MINIMUM per ad. To receive the discount you must order and prepay for all ads at one time. Count all initials, single numbers, groups of numbers (i.e. 4-6-0 or K-27), names, address number, street number, street name, city, state, zip, phone numbers each as one word. Example: John A. Jones, 2102 South Post St., Waukesha, WI 53187 would count as 10 words. For MR's private records, please furnish: a telephone number and, when using a P.O. Box in your ad, a street address. *Model Railroader* reserves the right to refuse listing. **All Copy:** Set in standard 6 point type. First several words only set in bold face. If possible, ads should be sent typewritten and categorized to ensure accuracy.

Send your submissions to: *Model Railroader* — Classifieds, P.O. Box 1612 Waukesha, WI 53187-1612. Toll-free (888) 558-1544 Ext. 551 Fax: 1-262-796-0126. E-mail: classads@kalmbach.com

All ads must be prepaid and pertain to the subject of model railroading.

Schedule of Events

AR, CONWAY: Central Arkansas Train & Hobby Show. Conway Expo Center, 2505 E. Oak Street, Conway, AR 72032. August 27-28, 9:00am - 4:00pm. Vendors, Layouts, Contests. Admission \$8.00, 12 and under free. Contact RAIL & SPRUE Hobbies, 1200 John Harden Drive, Jacksonville, AR 72076. 501-982-6836, or railandsprue@aol.com

AZ, PRESCOTT: Beat the Heat Model Trains Swap Meet. NEW LOCATION! Embry-Riddle Aeronautical University, 3700 Willow Creek Rd., Prescott, AZ 86301. Saturday, August 6, 2022, 9am-1pm. Raffle and door prizes handed out during the swap meet. Admission: \$5.00, children 12 and under FREE. Sponsored by the Central Arizona Model Railroad Club. Contact: Fred Williams, 928-830-5913

CA, SIMI VALLEY: Swap Meet, Santa Susana Railroad Historical Society, Santa Susana Park, 6503 Katherine Rd., Simi Valley, CA 93063. August 27, 2022, 8:00am-11:00am. \$2.00 donation, kids under 12 free. All scales, equipment, scenery, books and photos. For vendor table availability contact Chris, 805-494-1044. Website: www.santasusanapacific.org

GA, ATLANTA: Scott Antique Markets (featuring Anton's Antique Toy & Train Show), September 8 - 11, 2022. Atlanta Exposition Center, 3650 & 3850 Jonesboro Rd., Atlanta, GA 30354. Thursday: 10:45am-6pm, Friday & Saturday: 9am-6pm, Sunday: 10am-4pm. Admission \$5, good all weekend. Contact: Anton 937-397-3499, or email: tweissmann6@gmail.com

IA, DELMAR: Delmar Train Show & Swap Meet. Sunday, September 4, 2022. 10am-4pm. Delwood School Gym, 311 Delmar Avenue, Delmar, IA 52037. Admission: Free Will Donation. Free tours of Delmar Railroad Museum. Vendor tables: \$15 each (limit 10 tables per vendor). Food & drink available. Free parking/handicapped accessible. Information: sjbsen@fbcom.net

IA, ELKADER: 10th Annual Elkader Model Train Show-Swap Meet. Sunday, August 21, 2022, 10:00am-3:30pm. Johnson's Reception Hall, 910 High Street. Adults \$5, children 6-12 \$2, under 5 FREE. Free parking, lunch-stand and door prizes. Information: Larry Lerch, 563-880-2066 or 563-245-3345

IN, INDIANAPOLIS: Central Indiana Division/NMRA announces the Franklin Train Show at the Johnson County Fairgrounds, 250 Fairground St., Franklin, IN 46131. August 27-28, 2022. Saturday 10am-4pm, Sunday 10am-3pm. Admission \$3, Family \$5. Demos, Displays, Operating Layouts, Door Prizes, Free Parking, Food available. Info/table rental: Michael Roderick, 317-833-3556, FranklinTrainShow@hotmail.com or www.cidnmra.org

KS, KANSAS CITY AREA: Turkey Creek Division train show/swap meet. Saturday, August 6, 2022, Lenexa Community Center, 13420 Oak Street, Lenexa, Kansas 66215. 8:00am-3:00pm; Layout tours 3:30pm-8:30pm. Admission: \$10.00, NMRA members \$9.00 at the door. 12 and under free with paid adult. Pre-register to receive \$2.00 off admission. Vendors/registrants contact Jack Ferris, fhs1955@gmail.com, 816-804-0152. www.tc-nmra.org

OH, VAN WERT: Van Wert Railroad Heritage Weekend Model Railroad Show & Swap. Van Wert County Historical Society, Van Wert County Fairgrounds, 1055 S. Washington St., Van Wert, OH 45891. July 23-24, 2022. Saturday 10am-4pm & Sunday 10am-3pm. Adults \$6.00. Scouts in Uniform and Children 12 & under: FREE. Info: Chuck White, railcarman@frontier.com, 260-760-1666, www.vwrrhw.com

TX, AUSTIN: Austin Train Show. Over 25,000 sq.ft. of railroading fun for the whole family! Palmer Events Center, 900 Barton Springs Road, Austin, TX. August 27-28, 2022. Saturday 10am-5pm, Sunday 10am-4pm. Admission \$8 (includes both days), 12 and under FREE w/adult. Vendors, model and Lego railroads, clinics, home layout tour included. For more information visit: austintrainshow.org

WA, CHEHALIS: Lewis County Model Railroad Club, Annual Fall Train Show and Swap Meet. Southwest Washington Fair Grounds, Blue Pavilion Building, 2555 N. National Ave., Chehalis, WA 98532. October 8-9, 2022. Saturday 10:00am-4:00pm and Sunday 10:00am-2:00pm. Admission \$5.00. Free parking. Contact information: Ted, 360-985-7788 or TedsTrains@LewisCounty.com

WI, LA CROSSE: Rail Fair, Copeland Park, Rose & Clinton Streets. Saturday, July 16, 2022, 10am-4pm. Admission \$5.00, under 12 free with adult. Railroad Show-Flea Market-Swap Meet. BUY/SELL/TRADE. Model, Toy & Antique Trains & Memorabilia, Railroad Exhibits & Displays. Information: 4000 Foundation, PO Box 3411, La Crosse, WI 54602, 608-781-9383 or 608-498-9522. www.4000foundation.org

All listed events were confirmed as active at the time of press. Please contact event sponsor for current status of the event.

Classifieds

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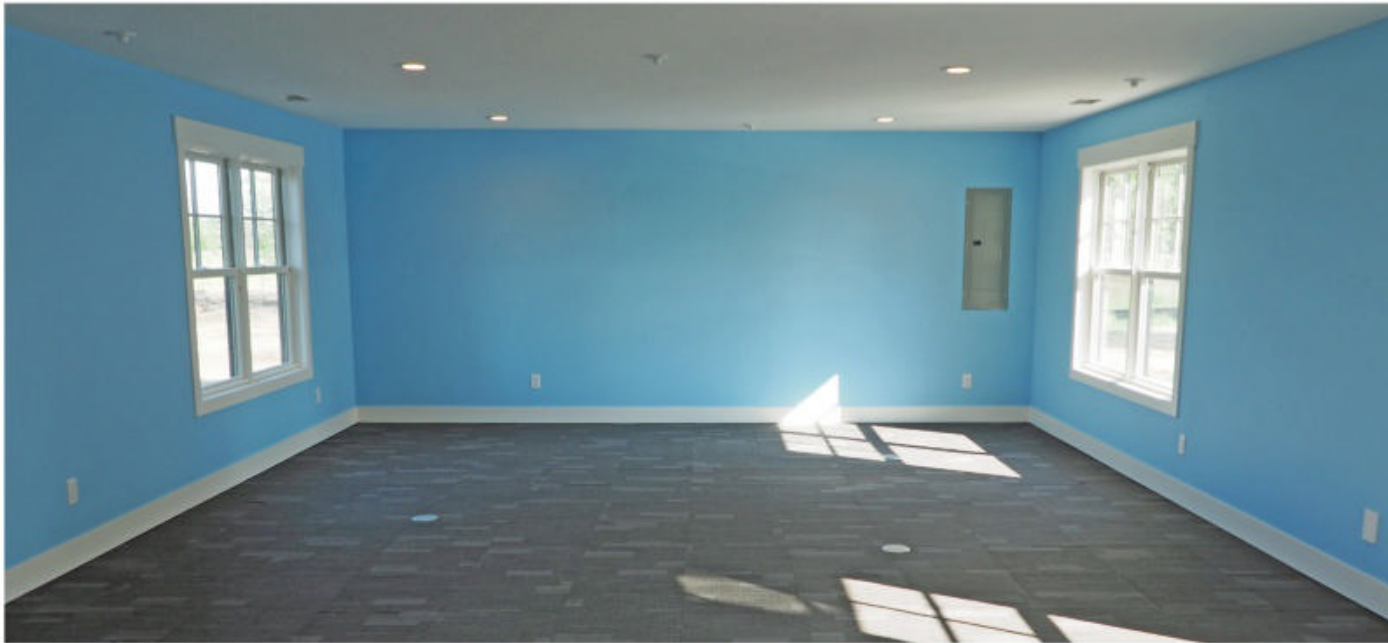
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A blank canvas



A blank canvas should include provisions not only for the new railroad but also for layout lighting, access to electrical panels, perhaps a workbench, and so on. And plan for the future (as in avoiding duckunders). Gerry Leone photo

Model Railroader reader

Daniel Rawers of Hinckley, Ill., sent an e-mail that discussed a number of things related to comments both Steven Otte and I had made in the May 2022 MR. One struck a chord with me: “A large unfinished basement is indeed a blank canvas for the modeler to work with, but it is very difficult without better lighting and some of the basic creature comforts that allow us to be able to work longer and more efficiently.” He added that getting older was compounding his concerns about some aspects of layout design, such as avoiding duckunders.

There’s nothing quite like starting out fresh with a blank canvas. But just as an artist has to contend with the length and height of her canvas, the fact that the awaiting model railroad room is “blank” translates to almost unlimited opportunities, but within set boundaries.

The accompanying photo shows the blank canvas that Trains.com contributing editor Gerry Leone had to work with when he and his wife, Renay, moved into their new home near Minneapolis. The

overall room size is 20 by 30 feet, but the entrance end will have a couch, desk, and bookshelf, and a workbench and spray booth will inhabit another corner of the room. It’s both inviting and intimidating.

We’ve all stared at a blank sheet of paper the night before a school composition or business plan was due. Rather than seeing it as the opportunity to eloquently express ourselves, it becomes a mesmerizing blank void that paralyzes our thoughts.

A three-dimensional blank space isn’t any easier. In fact, now that multi-deck model railroads are commonplace, and mind-bending mushroom layouts have sprouted up across the land, layout design has become even more complex – if we allow it to be.

As the editor of MR’s annual *Model Railroad Planning* magazine, I get to see a lot of good track-planning efforts, and I am happy to report that many are linear, along-the-wall plans that are in no way challenging to construct. The 2023 issue, on sale in January, will feature two such plans – one in N scale,

another in O. Since there are no aisles to contend with, these plans are easily converted to another scale.

Avoiding the “analysis paralysis” that can come when faced with a blank canvas in any form is a matter of coming to the table with options. If you’ve been reading MR, MRP, and/or *Great Model Railroads* for any length of time, you should have a bucket list of ideas for your next model railroad. But just as a blank canvas seems to offer limitless opportunities, it also offers limitless pitfalls.

The dial tone you sense in your brain while staring at a blank sheet of paper can come from too much information as well as from too little. Job one is to refine your objectives to one consistent theme that seems to resonate with you. Don’t refine your objectives too narrowly at first

with regard to region, era, scope, and so on; rather, find a type of railroading that appeals to you. It may well be your current or former hometown railroad.

Then decide whether you can model that railroad accurately or would prefer to create a version of it that allows some leeway; this is called prototype-based freelancing. Pure freelancing (the Mom & Pop RR) is less popular than it once was because we can now buy ready-to-run models that accurately depict specific prototypes, thus saving time we can use to build our railroads.

Once you have a likely candidate, do your homework. Join your railroad’s historical society and online chat groups, but use caution here; you can blow a lot of modeling time online. Good books haven’t gone out of vogue. Attend conferences, in person or virtually, devoted to your favorite railroad(s) and prototype modeling in general.

Filling in the blank canvas with an increasing amount of informed detail is one of our hobby’s greatest rewards.

Armed with well-sorted reams of information and the desire to complement it with additional data, the path from Here to There is one of discovery, the Eureka! moments that once kept explorers on the trail.

Enjoy every minute of it. Just remember that it’s easier to erase on paper than to cut away wood. And, as Daniel advised, get the room ready first. **MR**



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