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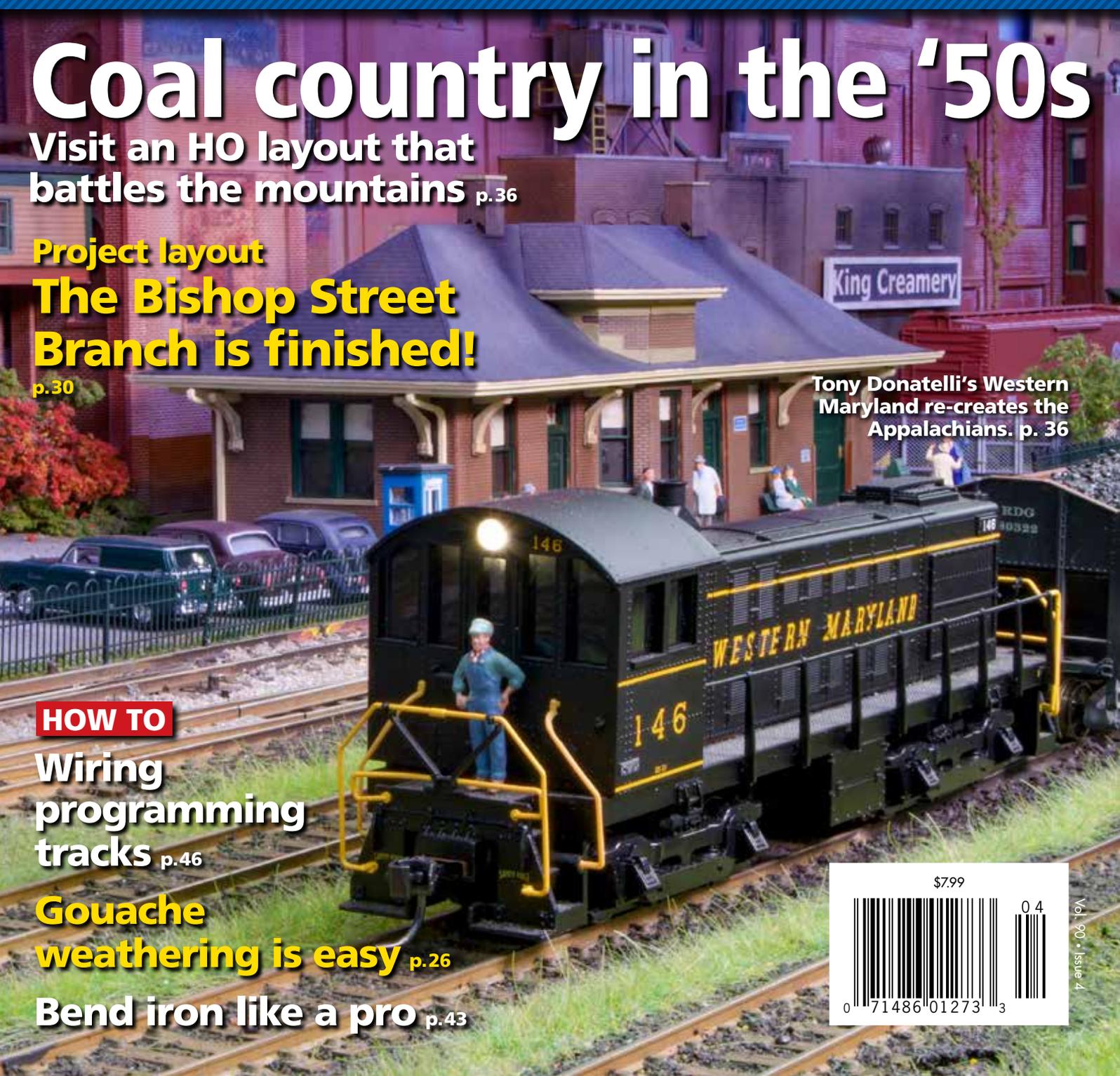
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PHASE 1c



PHASE III

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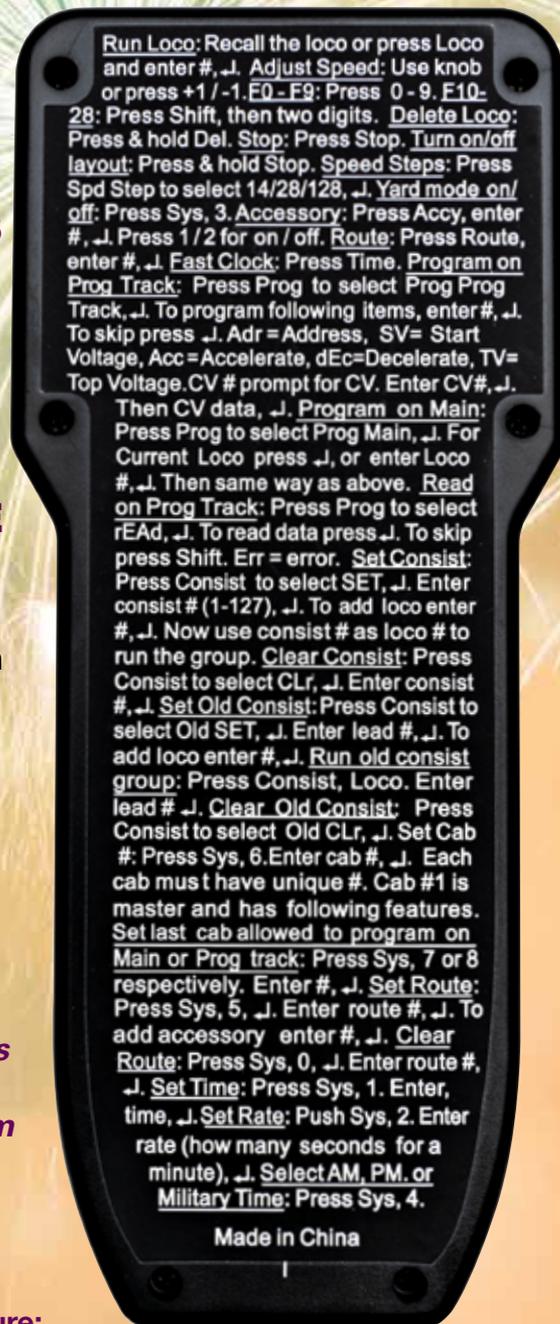


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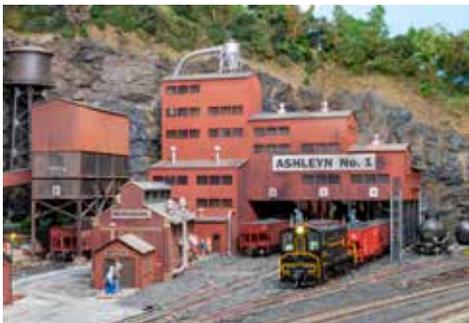
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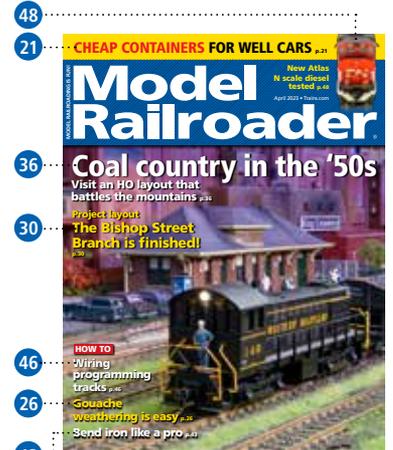
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On the cover: Hardworking diesels move black diamonds on Tony Donatelli's HO scale Western Maryland layout.
Lou Sassi photo



Next issue

In May, you'll get a good look at our MR&T Jones Island rehab project. Plus, a track plan for a Florida branch line, upgrading a flatcar, a working grade crossing, and more!

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Rehab My Railroad | Rehab Effort Recap, Episode 16

As work draws to a close on the HO scale Milwaukee, Racine & Troy Jones Island project, Trains.com Director David Popp and *Model Railroader* Editor Eric White are joined by Senior Editor Cody Grivno and Producer Ben Lake to discuss their contributions to the project, including scenes and structures re-created from the Milwaukee lakefront location.



Model railroad snow plow rolling stock

Model Railroader Senior Editor Cody Grivno takes a look at models of snow fighting equipment available in N, HO, and O scales. This roundup of snow plow rolling stock, comprising ready-to-run models and kits, includes the frequent subject of model manufacturers, the Russell snowplow, shown above in HO scale from Walthers. Check out what's available in your scale and get your layout ready for winter.

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.

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

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Railroad inspiration for all eras and spaces

Full-sized railroads are all about moving freight, and the layouts in this issue feature models of railroads at distinctly different eras of freight transportation.

Tony Donatelli's HO scale Western Maryland Tygart Valley Division is an Appalachian coal hauler. Coal transportation is still a significant portion of railroads' revenue, but nothing like it was in the 1950s, when Tony's layout is set. Even into the 1970s, coal-hauling railroads could still earn up to 66% of their profits from coal. Now, chemical transportation is the leading profit center for railroads.

Coal was the backbone of many Class I railroads, which served coal fields with branches reaching into valleys and hollers and wending along streams, creeks and rivers. Those branches were among the first to be abandoned as

coal seams played out, and as railroading became more challenging in the 1960s and '70s, abandonment of branch lines increased, hitting those branches that served other industries.

The '70s weren't the best of times for railroads as they were still saddled with regulations dating to the era when they were the only freight transportation game in town.

By the 1980s, Class I railroads began focusing on long-haul transport of bulk cargoes. Think solid trains of grain and coal, and eventually, containers stacked in well cars streaming from ports to the interior of the country.

But there were still smaller manufacturers that wanted rail service, and short lines and regional railroads stepped in to fill that niche. Former Class I branch lines became attractive to smaller

railroads that could make a profit with lower overhead and cheaper labor. And some successful short lines were collected into regional railroads that might not be physically connected, but made money by forwarding freight to larger railroads who eventually got the shipments to Class Is.

That's the subject of the other layout in this issue, Lance Mindheim's Bishop Street Branch project railroad. This branch line is a part of Guilford Rail System. Guilford was a regional system serving much of New England, and the Bishop Street Branch is a line with customers which receive a couple of cars at a time, small-time railroading in a big-time railroading era.

Regional railroads generate the traffic that the large Class Is move cross country. For modern modelers, these



railroads make interesting prototypes with accessible footprints in modest spaces.

If you're thinking about building a new railroad, there are plenty of ways to go about it. We hope you'll find some inspiration here, along with useful how-to articles to get your creative juices flowing. As Jim Hediger often said, Onward!

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Nitrogen gas can be deadly

In the February 2023 "Ask MR," Steven Otte was seriously remiss in not telling J. Zawoiski and all readers that the use of nitrogen gas in even a partially enclosed space can result in serious injury or death.

The airbrush might not be a great hazard. I'm more concerned that the gas bottle might leak. Deaths from nitrogen in partially enclosed and enclosed spaces are tragically more common than you would think.

I have personally witnessed at my workplace the recovery of those killed by nitrogen when safety procedures were not followed. In my opinion, nitrogen cannot be used safely by inexperienced hobbyists, and I wish you had said so in your response.

Mike Major

Steven Otte responds: I took it for granted that airbrushes are used in fan-exhausted spray booths. But your point about storage of possibly leaky gas bottles is well taken. Chalk up "airbrushing with nitrogen gas" as another hazardous hobby practice of yesteryear.



Reader Mike Major says that bottled nitrogen gas is too dangerous for use as an airbrush propellant.

Cuba memories

I was most happy to read the February article about the Florida-to-Havana ferry service from the 1940s and '50s. During summer vacations visiting my grandparents, I used to visit the public beach on Singer's Island in Riviera Beach, watch the ferries going into and out of the Port of Palm Beach Inlet, and dream about visiting Havana.

Today, I own two cars decorated for the West India Fruit Co., a 40-foot yellow reefer and a 40-foot boxcar.

Paul Lewandowski, Ocala, Fla.

Where are the dimensions?

I was very disappointed with the article on scratchbuilding the Salida, Colo., art deco depot [February 2023]. I can't remember a time when MR has run such an article without plans showing dimensions. Maybe, I thought, there was a link to online plans at the MR website. No such luck. Nowhere in the article are the building's dimensions given, even though the author refers to adding 10 percent "to all the dimensions in this article." There's a lot of useful information on building techniques and which products to use, but without dimensions or plans, the article is useless.

Robert Brown, St. Charles, Mo.

Thanks for validating my view

I read with great interest Eric White's editorial "When is your realism level good enough?" in the December issue of *Model Railroader*. I'm happy to say this validated a point for me.

I've been into model railroading my whole life. I recently resurrected my railroad after 30 years. When I subscribed to MR, I felt quite intimidated that there are so many model railroaders who have the time, patience, and skills to create turnouts from scratch as well as realistic scenes. I don't have that type of patience or skills. I just want to run my railroad.

I like your phrase "It's my layout and I make the rules." It's nice that I can have some realism, but the rest is up to me.

Mark Cohen

Outside perspective is valuable

Thank you for taking the bold step of allowing an outside expert to build and showcase this year's project layout ["Meet the Bishop Street Branch," January]. The perspective Lance Mindheim brings is incredibly valuable.

Using plywood strips instead of sorting through piles of dimensional lumber is a huge time saver. Going with the DCC system you have used on a friend's layout or at a club sounds better than spending hours on research. His track laying tips are great! And I'd never even heard of XT60 connectors, but will be using them going forward.

I think having a very capable craftsman offering smart, time saving choices was a genius idea. Thank you, Lance, and thank you, MR staff!

Randy Broadright

Don't take ballfield dirt

In February's issue, Mike Bodzewski suggests skipping the hobby shop to gather dust from a baseball diamond, as "the price is right."

Unfortunately, Mr. Bodzewski couldn't be more wrong. I've worked with a local government agency that manages ball fields. The "dust" on a baseball diamond is a specially graded clay material that the owners of the ballfield have paid a lot of money to have shipped and spread on the field for the safety of the players. By stealing that "dust," the field is made less safe and the owners of the field have to replace it or face increased liability. Please go to the hobby shop for your ground cover instead of stealing the dirt from your local ball diamond.

Jon Neuendorff, Springfield, Mich.

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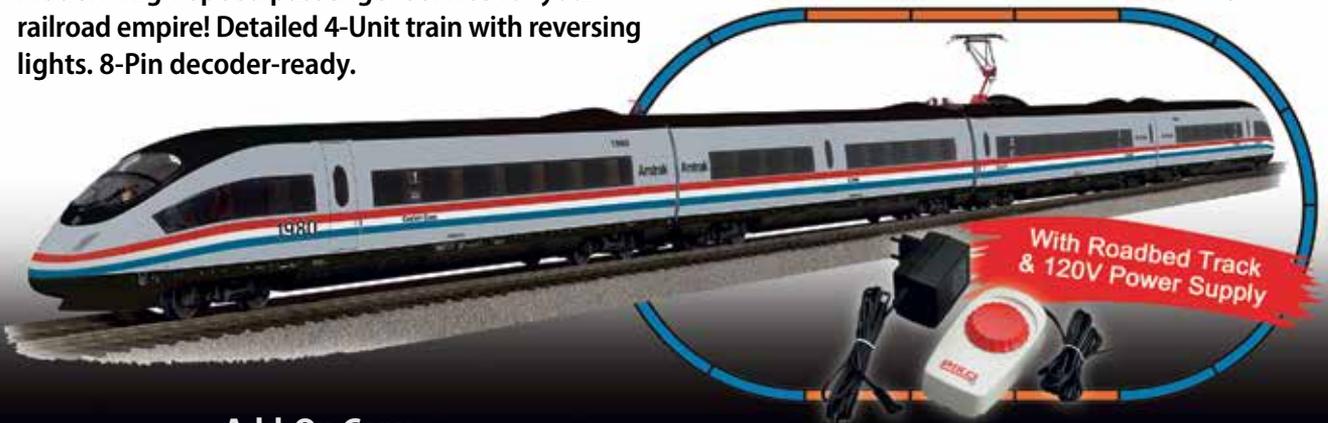
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HO scale



Electro-Motive Division MP15DC diesel locomotive. This Atlas Master Line four-axle end-cab unit is available now. New paint schemes (all with ditch lights) on the HO scale MP15DC include First Union Rail (red and black and red and gray schemes), Larry's Truck & Electric (silver, blue, white, and red), and The Prairie Lines (green and tan). New road numbers (without ditch lights unless noted) are available on models decorated for Missouri Pacific (blue), Norfolk Southern (black and white, with ditch lights), Reading Co. (dark green and

yellow), Southern Ry. (black, imitation aluminum, and gold), and Southern Pacific (scarlet and gray). One to three numbers per scheme; also available undecorated in three body styles. The locomotive features three different hood styles and factory-installed wire grab irons. Direct-control models are priced at **\$179.95**. Models with a dual-mode ESU LokSound Select decoder sell for **\$289.95**. Add **\$15** for models with ditch lights. Subtract **\$10** for undecorated units. Atlas Model Railroad Co., 908-678-0880, shop.atlasrr.com

Rail Center acrylic line joins marketplace

The Rail Center acrylic hobby paints line has joined the model railroad marketplace. Ammo by Mig Jimenez, a Spanish paint manufacturer, recently unveiled its new line of railroad colors.

The paints are sold in 17ml plastic bottles with a flip-top lid and metal stirring ball. The colors can be applied straight from the bottle with a brush or, when thinned with Rail Center Acrylic Thinner, using an airbrush. The matte paint dries to the touch in one hour and cures fully in 24 hours (times may vary based on temperature and humidity).

Once dry, the paint can be overcoated with acrylics, lacquers, enamels, or assorted weathering products. Modeling masking tapes and decal setting solutions can also be used on the paint once it has dried.

The product range currently features 41 individual colors, such as Engine Black, Pullman Green, Boxcar Brown, and Signal Green, as well as weathering colors. Auxiliary products include thinner, along with clear flat, satin, and gloss.

A dozen six-color boxed sets are also part of the Rail Center acrylic hobby paints line. A few of note for North American modelers include the "VIA Rail Canada" set, which actually features



Rail Center is a new line of railroad acrylic paints produced by Ammo by Mig Jimenez. The Rail Center acrylic hobby paints line includes 41 colors, 12 boxed sets, and auxiliary products. Cody Grivno photo

colors for Canadian National's red, white, and black and green, yellow, and black schemes.

There are two sets titled "Classic American Railroad Companies: Locomotives." Volume 1 includes Engine Black, White, Reefer Yellow, Medium Blue, Red, and Pale Greenish Gray. Volume 2 features Engine Black, Caboose Red, Aluminum, Signal Yellow, Medium Blue, and Deep Blue Livery.

The "American Freight Cars" set includes Engine Black, White, Dark Gray, Tuscan, Signal Yellow, and Deep Blue Livery.

Boxed sets (approximately \$18 each) are in stock. Individual colors (around \$3.95 each) will be available soon.

For a PDF with the full Rail Center acrylic hobby paints line, as well as tips and techniques for using the paints, visit migjimenez.com.

Athearn announces new coil car in HO, N

During the Amherst Railroad Hobby Show in late January, Athearn Trains announced a new freight car that will be offered in its HO and N scale Genesis series. The FreightCar America Versa Coil will be the first offering of this coil car in either scale.

Produced by Johnstown America, which changed its name to FreightCar America in 2004, the VersaCoil design exhibits improvements in versatility, efficiency, and safety in coil steel transportation. These VersaCoils are specially designed to carry multiple coils of steel ranging from 30 to 72 feet in multiple trough configurations. The transverse trough design allows for quick and easy

loading and unloading. The trough design also mitigates forces from train movement and slack action, significantly decreasing the likelihood of load damage in transit.

The Athearn model will be modeled in four of the five phases of transverse-trough VersaCoil gondolas. Every model will feature a detailed underbody and separate, factory-applied details such as etched-metal platforms, rubber train line hoses, uncoupling levers, and wire grab irons. Removable coil loads will also be included.

The model will be decorated for Canadian Pacific (CP), Norfolk Southern (NS), Northwestern Oklahoma RR

(NOKL), and Mitsui Rail Corp. (MBKX). Three single cars and one three-pack with differently numbered cars will be offered for each paint scheme. The CP model features a phase 1 body and isn't equipped with hoods. The NS, NOKL, and MBKX cars have phase 2 bodies and will include removable hoods.

The coil cars will ride on 100-ton roller-bearing trucks with rotating bearing caps and RP-25 contoured metal wheels. Athearn recommends a minimum radius of 22" for these cars.

Individual coil cars are priced at \$64.99 and three-packs sell for \$174.99. For more information, visit the manufacturer's website at athearn.com.

HO scale



Pullman-Standard 85-foot 4-4-2 sleeper. Walther's offers this streamlined sleeper car decorated for BNSF Ry. (*Marias Pass, Cajon Pass, and Raton Pass*). The Proto-series passenger car features GSC 41-NDO outside swing hanger trucks, factory-installed grab irons, tinted window glazing, window gasket detail (as appropriate), and sprung diaphragms. The car has a minimum recommended radius of 24". The sleeper is offered in standard (**\$94.98**) and lighted (**\$104.98**) versions. Wm. K. Walther's Inc., 414-527-0770, walther's.com

HO scale locomotives



• **General Motors Diesel SD60F diesel locomotive.** Canadian National (red, black, and white with North America map in one number; red, black, and white "Zebra" as-delivered scheme in three road numbers; red, black, and white "Zebra" in-service scheme in seven numbers; and red, black, and white with website herald in one number). Operating radiator fans, Dofasco HT-C trucks with traction motor detail and contour, and rotating roller-bearing end caps. Light-emitting diode lighting including tri-color classification lights, step lights, gauge lights, ground lights, and walkway

lights. Prototype-specific details including windshield wipers, winterization hatch and screen, radiator screens, underbody cables and piping, and more. RP-25 contour wheels with code 110 tread width and AuroraJanney scale couplers. Die-cast zinc alloy chassis. Direct-current model, \$209.99; with ESU LokSound 5 sound decoder, \$299.99.

Aurora Miniatures North America Inc., na.auroraminiatures.com

• **Kraus-Maffei ML4000 diesel-hydraulic locomotive.** Southern Pacific (scarlet and dark gray "Bloody Nose" paint scheme). Three road numbers. Prototype-specific details, PIKO couplers, and RP-25 contoured wheels. Direct-current model, \$269.99; with PIKO TrainSound decoder, \$389.99. November 2023. PIKO America LLC, piko-america.com

Club offerings



• **Norfolk Southern Ry. Association of American Railroads 70-ton three-bay hopper.** Accurail HO scale kit produced for the Carolina Piedmont Division of the National Model Railroad Association. Two road numbers. Single car, \$28 plus shipping as applicable. Carolina Piedmont Division 13, cpd13.org

HO scale freight cars



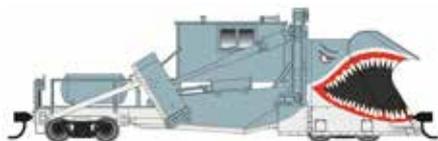
• **Pacific Car & Foundry beer car.** Tropicana (orange with green herald in 12 road numbers); Conrail (brown as-delivered "can opener" paint scheme); Lamb Weston (white with black script herald); Manufacturer's Railway Co. (gray, black, and red); and Progressive Rail (blue with "Moving You Forward" slogan and blue 2004 repaint in three numbers each). Separate, factory-applied details including air hoses, grab irons, door tracks, door bars, and wire

N scale



American Railway Association 70-ton quad hoppers. These Broadway Limited N scale cars are available in four-packs and are in stores now. Paint schemes include Baltimore & Ohio (black with Capitol Dome herald in two four-packs); Atchison, Topeka & Santa Fe (fictional Freight Car Red scheme); Boston & Maine (black post-1947 Minute Man scheme in two four-packs); Canadian National (fictional Freight Car Red with “wet noodle” herald scheme); Canadian Pacific (fictional black with script lettering scheme); Chesapeake & Ohio (black 1940s appearance in two four-packs); Chessie System (black and yellow with B&O reporting marks in two four-packs); Milwaukee Road (Freight Car Red); Missouri-Kansas-Texas (Freight Car Red); Missouri Pacific (black with “Route of the Eagles” herald); Reading Co. (fictional black scheme); Southern Pacific (fictional Freight Car Red scheme); Union Pacific (fictional Freight Car Red with yellow lettering and “Serves All The West” slogan scheme); and Western Maryland (fictional Freight Car Red scheme). One four-pack per road name unless noted. Also available undecorated in both black and Freight Car Red. Separate, factory-applied details include the brake wheel and brake cylinder. A detailed coal load is included. Each four-pack is priced at **\$104.99**. Broadway Limited Imports, 386-673-8900, broadway-limited.com

uncoupling levers. Drop-down brake rigging, bell crank, brake appliances, and brake rods. ASF 100-ton trucks with 36” metal wheelsets. Produced by ExactRail, available from TrainLife.com, 801-226-1909, trainlife.com



• **Jordan Spreader.** Maintenance of way (light blue with “shark teeth” and gray schemes); Burlington Northern (brown); Delaware & Hudson (orange); Milwaukee Road (yellow); Monon (brown); Spokane, Portland & Seattle (brown); and Wisconsin Central (brown and yellow). One road number per scheme. Positionable wings and moldboards, underbody brake gear and piping, thin profile stirrup steps, cab window glazing, and railroad-specific details including four headlight styles. RP-25 contour 33” metal wheelsets and Proto-Max metal couplers on both ends. \$99.98. Proto series. Wm. K. Walthers Inc., 414-527-0770, walthers.com



• **Greenville Steel Car Co. 86-foot high cube double-plug-door boxcar.** Ann Arbor (orange with “Ferry in the Fog” herald); Baltimore & Ohio (dark blue with yellow “Capitol” herald); Canadian National (brown with “wet noodle” herald in 12 road numbers); Chesapeake & Ohio (Chessie C&O Blue with “Chessie” herald in 12 numbers); Conrail (brown with “can opener” herald in 12 numbers and brown with ex-Pennsylvania patch-out in two numbers); CSX (dark blue with yellow “boxcar” herald in four numbers); Erie Lackawanna (brown with white diamond herald); General Electric Rail Services (orange ex-Ann Arbor patch-out with NADX reporting marks in one number); Illinois Central Gulf (orange with black “I-ball” herald); Indiana Hi-Rail Corp. (orange ex-Ann Arbor patch-out in one number); Mississippi Delta Railroad (orange ex-Ann Arbor patch-out in one number); Norfolk &

Western (black with white bold herald in 12 numbers); Norfolk Southern (brown with N&W reporting marks); Penn Central (Deepwater Green with white worm herald in eight numbers); and Pennsylvania RR (brown with white keystone herald). Also available as undecorated kit. Multiple under-car brake system variations and see-through etched-metal end crossover platforms in three options. \$54.95 to \$56.95 depending on paint scheme. Undecorated kit, \$48.95. Tangent Scale Models, 828-412-3886, tangentmodel.com

HO scale passenger equipment



• **Budd gallery commuter cars.** Burlington Northern (silver), Metra-Burlington (silver with blue logo), and Metra-BNSF Ry. (silver with blue logo). Two three-packs (one cab car and two coaches) and one unnumbered coach per scheme. Also available as coach painted for Metra with no placard and unnumbered, and as cab car and coach painted and unlettered. Track-powered interior light-emitting diode lighting, complete interior with “gallery” seating, and tinted window glazing. Controllable cab car lighting in both direct current and Digital Command Control, including headlights, marker lights, ditch lights, and strobe lights as applicable. Detailed trucks with metal wheelsets. Single car, \$119.95; cab coach, \$134.95; three-pack, \$349.95. Rapido Trains Inc., 905-474-3314, rapidotrains.com

N scale locomotives



• **General Electric C40-8M diesel locomotive.** BC Rail (red, white, and blue with yellow frame stripe and red, white, and blue as-delivered scheme in three road numbers each) and Canadian National (red, black, and white “zebra”

HO scale



United States Railroad Administration “clone” boxcar. This unique boxcar from Rapido is available in multiple Canadian Pacific paint schemes including Early (Boxcar Red); Late (Boxcar Red); and Service (Boxcar Red in one three-pack and one single car). Two six-packs and one single car per scheme. Also available undecorated. The boxcar features Murphy 7-8 corrugated ends, KC or AB brakes as appropriate, and an Ajax power hand brake. Additional features include a full underbody with separate brake rods and piping. The car rides on USRA Andrews trucks with in-line brake shoes and blackened metal wheels. Single cars sell for **\$49.95**, three-packs are **\$149.85**, and six-packs are priced at **\$299.70**. Rapido Trains Inc., 905-474-3314, rapidotrains.com

scheme; red, black, and white with web-site and “wet noodle” herald; red, black, and white with large wet noodle herald; and red, black, and white with North America map). Four numbers per scheme unless noted. Light-emitting-diode headlights, rear lights, and ditch lights. Separately-applied grab irons and handrails. Direct-current model, \$149.95; with ESU LokSound sound decoder, \$259.95. Rapido Trains Inc., 905-474-3314, rapidotrains.com



• **National Steel Car 6,400-cubic-foot capacity gondola.** Cardella Waste Service of New Jersey (green with CWSX reporting marks), American Iron & Metal (gray), American Railcar Leasing (gray with FWTX reporting marks), Coastal Distribution LLC (black), DEAX (gray), IWXX (dark green), Murphy Road Recycling LLC (black), Residco (gray with OFOX reporting marks), The CIT Group (gray), and West Coast Cooperative Road (with WCTX reporting marks). Two single cars and one two-pack per scheme. Factory-applied metal grab irons, etched-metal crossover platforms, scrap load, 100-ton roller bearing trucks, and body-mounted McHenry lower shelf knuckle couplers. Single car, \$44.99; two-pack, \$79.99. Athearn Trains, 800-338-4639, athearn.com

N scale structures



• **Modern lumber transload.** Includes parts for two covered storage sheds with interior lumber racks and separate office. Concrete paving with between track crossover accepts Code 80 track. Parts to make eight lumber stacks in four different sizes (2 x 4 and 4 x 4 in 10- and 16-foot lengths). \$64.98. Cornerstone series. Wm. K. Walthers Inc., 414-527-0770, walthers.com

Z scale freight cars

• **89-foot flat cars with loads.** Trailer Train (yellow with RTTX reporting marks and sand M1070 truck and M1000 trailer; yellow with RTTX reporting marks and olive green M1070 truck and M1000 trailer; brown with TTX reporting marks and sand M1070 truck and M1000 trailer; and brown with TTX reporting marks and olive green M1070 truck and M1000 trailer). One road number per scheme. M1070 truck and M1000 trailer by Z-Panzer. Loads available separately. \$97. American Z Line, 614-764-1703, americanzline.com **MR**

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This TTX 73-foot center-beam flatcar carries a load of wrapped sheet material in 2007. The cables and corner protectors are clearly visible against the white wrapping. This method is favored for most types of lumber today. Jeff Wilson photo

How lumber is shipped on the railroads

Q I have made several stacks of scale 4 x 8 plywood for use as scenery on my HO scale layout. I place them as boxcar loads, but was wondering how lumber is shipped on the railroads? Was plywood in fact shipped in boxcars, or were other types of railcars used?

David Bellamy, Caledon, Ont.

A You don't say what time period you model, but how lumber is shipped depends heavily on your layout's era. As Jeff Wilson writes in his new book, *Commodities by Freight Car* (coming in early 2023 – keep an eye on the Kalmbach Hobby Store), railroads have tried lots of different ways to ship plywood and other wood products over the years.

Wood and water don't tend to get along well, so it's always been important to protect lumber from the weather. In the early days, a lot of lumber was shipped in boxcars for this very reason. Unfortunately, this meant that the lumber had to be loaded and unloaded stick-by-stick (or in the case of plywood, sheet-by-sheet), a lengthy and labor-intensive operation.

If the shipper wasn't too worried about the effects of weather on the load – such as if it was low-grade lumber, or had been weather treated, or wasn't going far – it was often stacked on regular flatcars or gondolas, secured with cables and stakes.

But loads secured this way were at risk of shifting dangerously if the car lurched. Railroads started using bulkhead flats, originally developed to carry pulpwood, in the 1940s and '50s to carry lumber loads more

securely. Although they helped keep errant lumber in check, the bulkheads reduced the weight the cars could carry, and the lading still had to be loaded and unloaded stick-by-stick.

In the early 1960s, lumber mills started bundling wood products with metal bands, making it easy to load and unload in bulk using forklifts, at least for lumber shipped on flatcars. But forklifts couldn't easily navigate through 8- or 10-foot-wide boxcar doors. So around the same time, the railroads developed double-door lumber boxcars and even experimented with "all-door" cars that could be opened all along their length. Though different designs were tried up through the 1970s, all-door cars proved to be more trouble than they were worth.

The answer was to return to the flatcar concept. Thrall built the first center-beam flatcar in 1977. The centerbeam was basically a bulkhead flat with a tall steel beam from end to end. This design gave the car a lot of rigidity, allowing it to be built of lighter materials, which meant more revenue tonnage. Once lumber mills started wrapping their weather-sensitive products in treated paper, Tyvek, or other such waterproof materials, center-beam flats have been how lumber is shipped since the late 1980s.

Centerbeams are usually stenciled with warnings to load and unload them evenly on both sides of the beam to prevent them from becoming overbalanced and tipping. Facilities for loading and unloading centerbeams are therefore usually flat areas with paving on both sides to allow easy access all around for forklifts.

Q I'm going to scratchbuild a two-track telltale for both of my tunnel entrances. What material did the railroads use for the pendants that hung down? For a double track, would there be one long horizontal bar or two separate bars?

Wes Barteck

A I talked about telltales in my "Ask MR" column of September 2017. A telltale is a trackside fixture that looks like a bead curtain hanging over the track. Its purpose is to warn brakemen who might be walking on top of a car that a tunnel, overpass, or other low-clearance

situation is coming up. If he hit the pendants, he would know to get off the roof.

The construction of trackside fixtures like this would usually be standardized,

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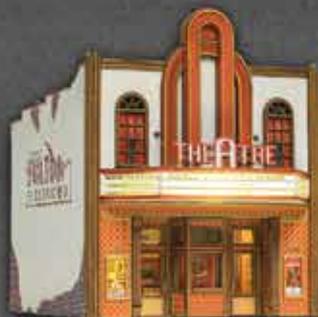
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prefabricated to specifications in the railroad's plan book. The dangling strands of the telltale were generally made of weather-treated rope. Wire or chain might have lasted longer, but the purpose wasn't to hurt the train crew, after all. Most of them would cover just a single track. If two tracks led to an obstruction, a single-track telltale would be installed on each side, and if they aligned, the arms would be linked by a bar to add stability. It's conceivable that a single telltale could be designed to cover more than one track, but such a structure would be unbalanced if it were supported only by a single pole.

Q Why do some railroads use concrete ties vs. wood ties? I live near Altoona, Pa., where the Norfolk Southern runs, and they use all wood ties.

Mark Kroll

A There are a few reasons why a railroad might choose concrete ties vs. wood ties, but generally they boil down to economics. Concrete ties are a fairly new



Newly laid rails on concrete ties stretch into the distance during construction of the Silver Line of the Washington, D.C., Metro system in September 2018. Though some railroads and routes have concrete ties, most tracks in the U.S. still have wood ties. Sol Tucker photo

development. Replacing wood ties with concrete ones is not an easy nor inexpensive task, so you mainly find concrete on lines that were built or rebuilt within the past few decades. When wood ties are damaged or wear out, it's easier to replace them with new wood ties.

There's also the matter of long term vs. short term costs. Concrete ties are

heavier than wood, more expensive to make and lay, and require better roadbed and ballast than many existing lines may have. Wood also does a good job at electrically isolating the rails from each other, important for signal detection. And while it's true that concrete is more long lasting than wood, wood is more resilient to damage. Dragging equipment or a derailment that would bang up a wood tie might crack an unyielding concrete tie in half, rendering it useless. Because of this, railroads tend to place dragging-equipment detectors closer together in concrete-tie territory.

So, while some railroads – in particular Amtrak, BNSF Ry., Florida East Coast, and Canadian National – have embraced concrete, the truth is that in North America, it's still in the experimental stage. Even the claims of concrete's longevity are somewhat conjectural at this point.

You can find more about ties on the *Trains* magazine website, at Trains.com/trn/train-basics/abcs-of-railroading/crossties.

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Q I would like to add red and green lights to my HO scale Peco turnouts. How would I use an LED to indicate turnout direction?

Joseph Chiarolanizio

A There's a simple way to do it, but it depends on your turnout being powered. The easiest way is if you're using a Tortoise by Circuitron switch motor. In that case, simply wire a bi-color red/green LED in series with one of the power leads to the motor. A bi-color LED lights a different color depending on which direction the current is flowing, so when the current to the Tortoise changes polarity, the LED will change color. Conveniently, you don't even need a current-limiting resistor to protect the LED. The Tortoise itself provides just enough resistance to do that.

Now, if you're using a different kind of switch motor, you can't necessarily count on that. A Walthers Layout Control System switch machine, for instance, is servo-based, so it draws enough power to quickly blow out an



If your model railroad turnouts are controlled with switch motors, it's simple to use an LED to indicate turnout direction. Bob Kingsnorth photo

LED wired in series. Instead, the instructions that come with these machines give several ways to connect indicator LEDs, depending on how you intend to wire and control the machine. These instructions are available for download on Walthers' website.

Our DCC Currents columnist, Allan Gartner, talks about Walthers switch machines in our May 2022 issue, including a simple way to add an indicator LED if you're controlling them with DC.

If you're using another type of switch machine, like a twin-coil machine or a manual one like a Blue Point, see if it has an internal double-pole double-throw (DPDT) or single-pole double-throw (SPDT) switch that you can use to power your indicator LED. Check your switch machine's documentation.

Q I've heard about the hairspray method of weathering. It sounds easy, but what type of paint works best?

Harry Heintzelman

A Hairspray can be used to model aged, chipping paint on a structure model. After painting the model the base color that would show after the paint chips (this can be enamel or acrylic), spray it with a light, quick coat of cheap pump hairspray. Once the hairspray dries, apply the second, top-coat color using acrylic paint.

After the top coat dries, you can use a toothpick or wet paintbrush to remove the paint on top of the hairspray, revealing the base color underneath. **MIR**

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Do-it-yourself intermodal containers

Ray Bertolozzi shares how he modeled HO scale intermodal containers using paper, cardstock, and cardboard. His techniques work for both corrugated- and smooth-side containers. Photos by the author

Sometimes necessity leads to invention. I was working on a well car for my HO scale model railroad and wanted to add a flashing rear end device, or FRED, to one end. There was no place to conceal the flasher circuit in the well, so I thought about different ways to hide it. Then I hit on the idea of building a hollow pair of intermodal containers using paper, cardstock, and cardboard.

The materials for this project are inexpensive and you may have most, if not all of them, already on hand. In addition to printer paper, cardstock, and cardboard, you'll need a computer, printer or copier, and some common cutting tools.

For this article, I'll share how I modeled a pair of 48-foot smooth-side containers using the accompanying drawings. This technique can also be used to build a single intermodal container, welded corrugated-side containers, and highway trailer bodies. Building the containers goes quickly. I can build enough containers to complete a five-unit well car in less than a week.

Ray Bertolozzi of Des Plaines, Ill., has been a model railroader since his father introduced him to the hobby as a child 70 years ago. His main modeling interests are locomotives and rolling stock.

STEP 1 THE CONTAINERS

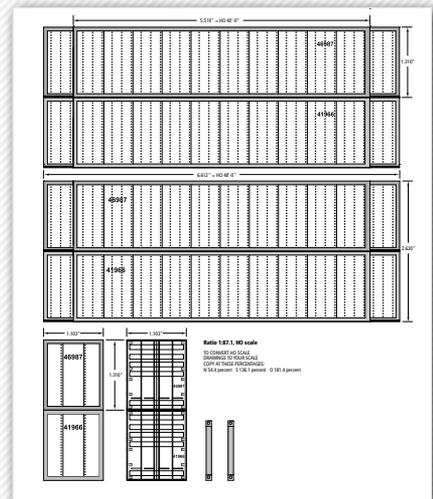
The drawings at right [and at full size for HO scale on the next page – *Ed.*] show two 48-foot intermodal containers in HO scale. If you don't want white containers, copy or print the drawings full-size on color paper. I find red or blue paper yields the best looking containers. I used buff paper for the article so the details would be easier to see.

You can add logos or container company names with photo-editing software, decals, or digital images. I found artwork online using search terms like "48 foot shipping container pictures."

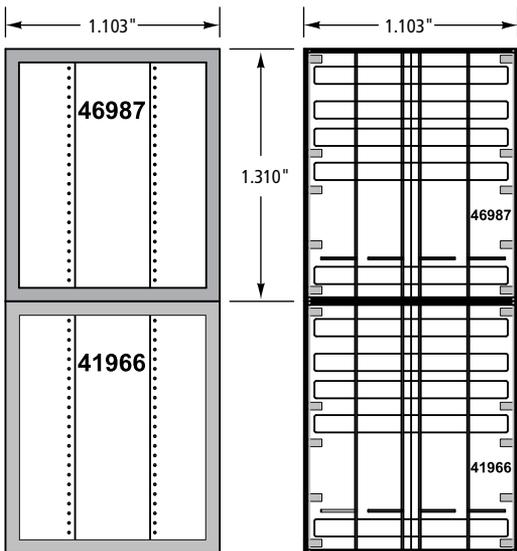
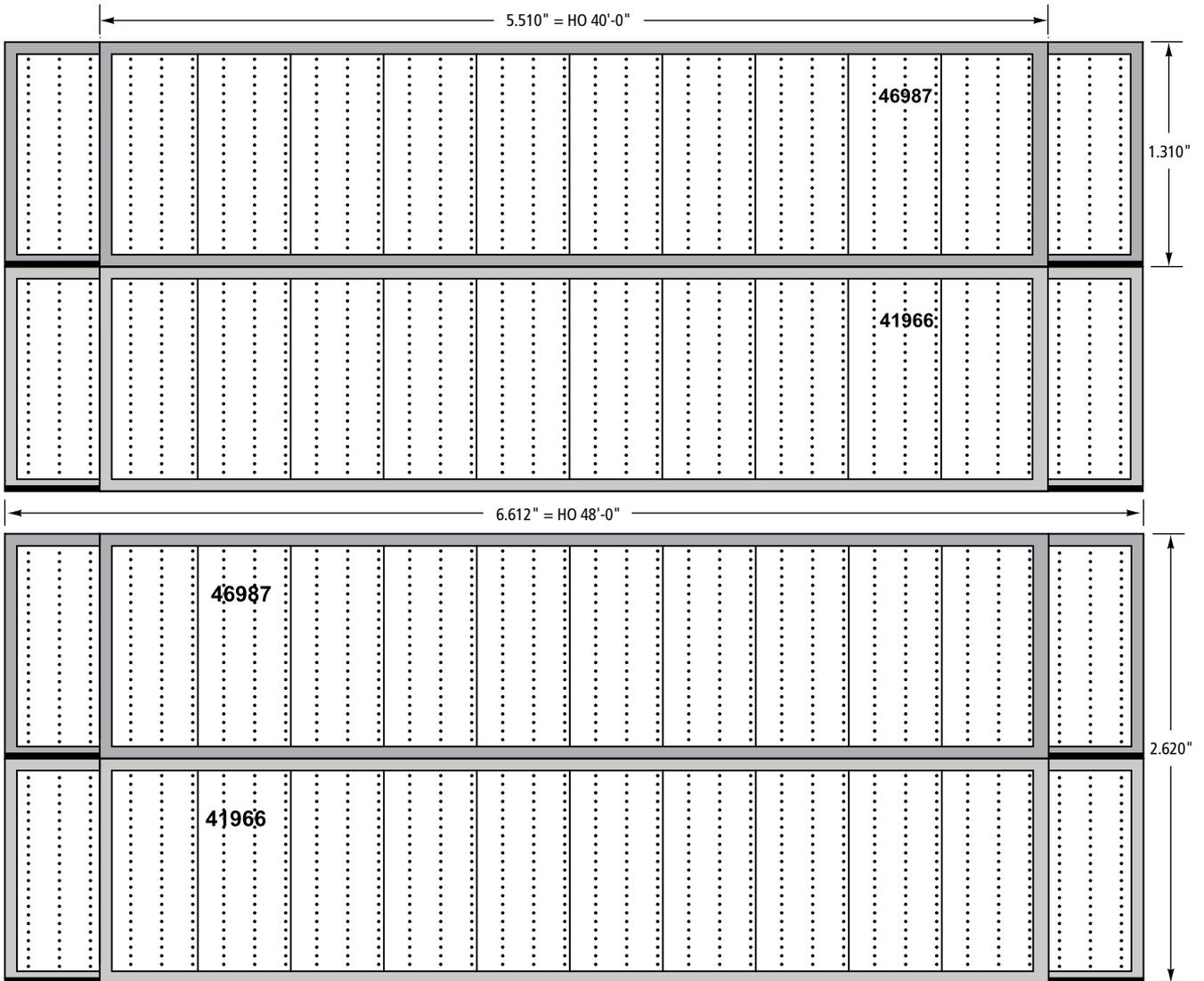
After I downloaded the files, I used photo-editing software to scale the pictures to the correct size. I unlocked the aspect ratio so I could change the length and width independently. If you don't have photo-editing software on your computer, you can scale the images by placing them in a Microsoft Word document.

Regardless of the method used to scale the images, I cropped the pictures so only the parts of the container I wanted to print were visible. The roofs on most riveted-side containers are aluminum. I captured that look by spray-painting the white paper aluminum.

If you're making a corrugated-side container, you'll need to print a formed roof like those used on the prototype. I found pictures and drawings for formed roofs online. You can also make your own with CAD software.

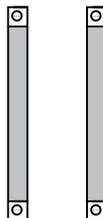


STEP 1 THE CONTAINERS (CONT'D)

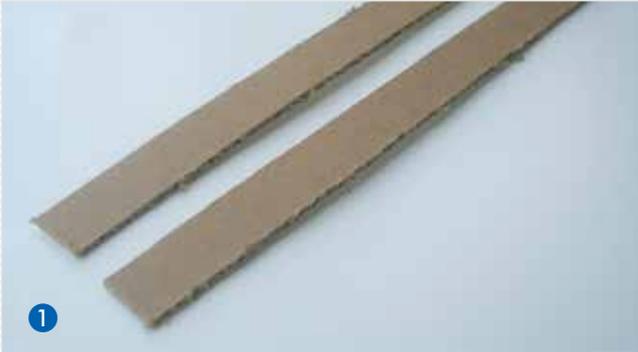


Ratio 1:87.1, HO scale

TO CONVERT HO SCALE
DRAWINGS TO YOUR SCALE
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STEP 2 MAKING THE CUTS



With the drawings printed, I cut out the container panels with a sharp knife and scissors. A trick I use is to score along the cut lines with a knife, then make the cuts with scissors. If you have one, a paper cutter could be used instead. To model shorter containers, cut the side panels at the 40-foot posts.

Next, I glued to the two side panels to the cardstock. Glue sticks and school glue both work well. Wood glue and other adhesives may cause the paper to distort.

After spreading a light coat of glue on the cardstock, I laid the side panel artwork in place. I put waxed paper on both sides and set the cardstock on a level surface with a book on top to keep it flat. I let the glue dry for four to eight hours.

Next, I cut the corrugated cardboard that forms the top, bottom, and ends of the container. You'll need at least 24" of strip material for each HO scale container



stack. I cut the strips with the corrugation perpendicular to the length.

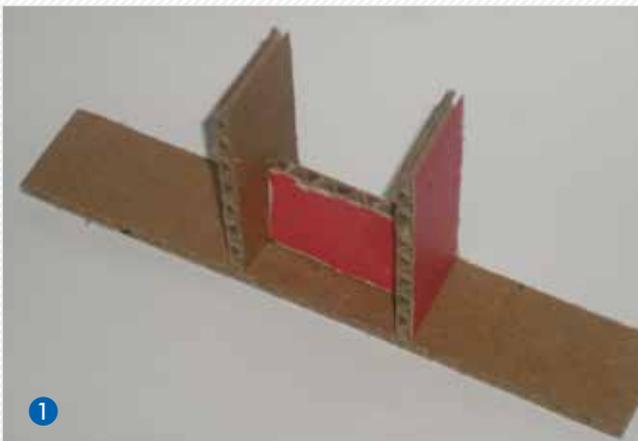
Though prototype intermodal containers come in a variety of sizes, I followed the width and height of a high-cube version (102" wide x 114" high, or 1.103" x 1.310" in HO scale). Picking a standard size simplified construction.

The common thickness of cereal boxes with a sheet of paper glued to it is .028". For the model shown, the width of the strips is 1.047". If you don't have a caliper to measure the width, use a rule with 1/32" increments. A strip slightly wider than 1 1/32" is acceptable ①.

To calculate other strip widths, use the following formula: Width of strip = scale container width - (2 x thickness of the side panels).

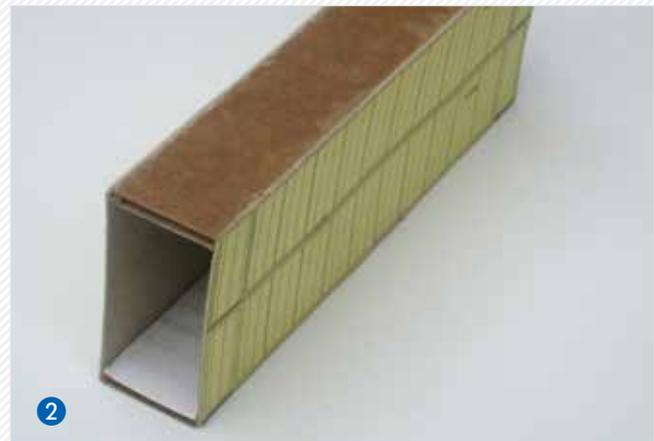
The strips are best cut to length by aligning them with the side panels. The goal is to have the two cardboard strips and two side panels be the same length ②.

STEP 3 ASSEMBLING THE PARTS



Before starting construction, I checked the fit in a well car. I didn't want to finish the project and find out the container was too long or wide.

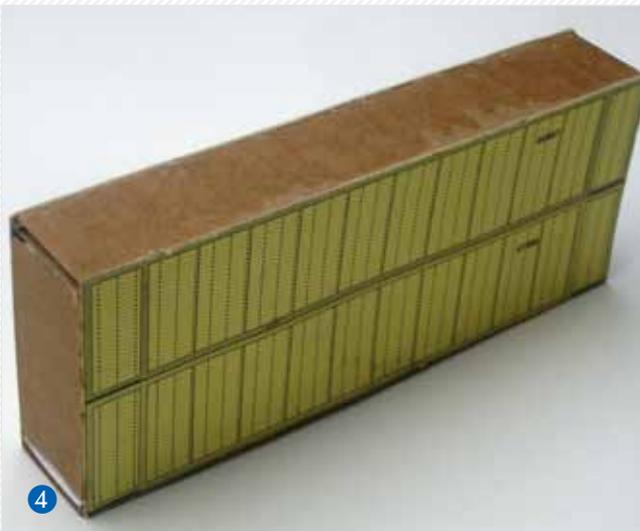
With the dimensions confirmed, I first made an internal stiffener using cardboard strip ①. I cut the vertical pieces 1/8" shorter than the inside height of the side panel. This



gave me flexibility when installing the bottom strip. I used wood glue to assemble the corrugated cardboard pieces.

I attached the two side panels and the container bottom to the stiffener. Remember, the bottom of the stiffener will be the top of the container. The side panels go on upside down ②.

STEP 3 ASSEMBLING THE PARTS (CONT'D)



Most containers have the bottom flush with the side panels. If you want to install a metal weight, recess the strip $\frac{1}{8}$ " below the bottom of the side panel **3**.

I let the assembly dry for a couple of hours. Then I filled the ends with strips of corrugated cardboard **4**. I let the glue dry overnight before proceeding.

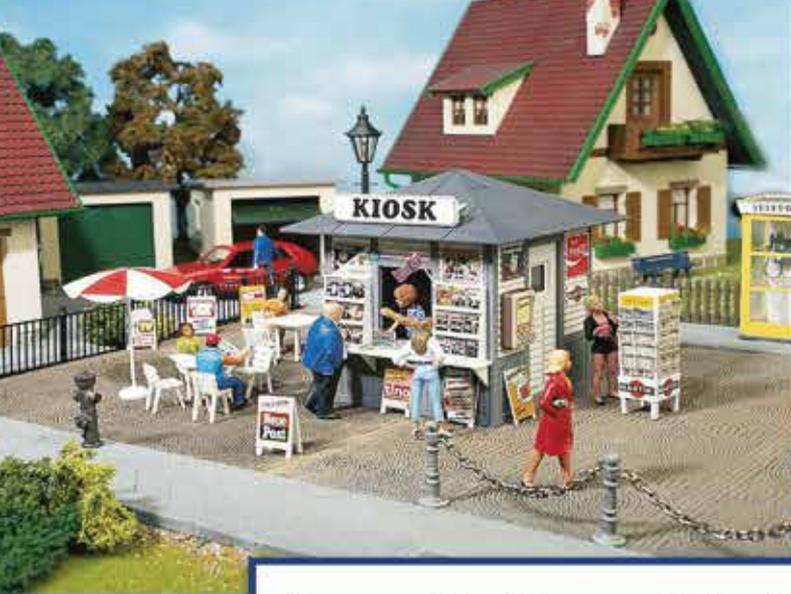
Then I lightly ran a piece of 120-grit sandpaper over the top, bottom, and ends of the assembly. This removed any excess glue and minor imperfections.

Next, I glued copy paper over the ends to cover voids in the cardboard **5**. I then used a glue stick to attach the end panels and roof, the latter painted aluminum prior to installation. If the white paper edges are visible, use a crayon to color them. This is also a good time to add decals or printed logos.

Finally, I added the strips with the inter-box connecting pin detail to the roof. I then sprayed the completed assembly with Testor's Dullcote. This seals the paper and gives the containers a uniform, flat finish **6**.

After the Dullcote dried, I placed the intermodal containers in the well car. You could also use the paper containers to quickly and economically populate an intermodal facility. **MR**



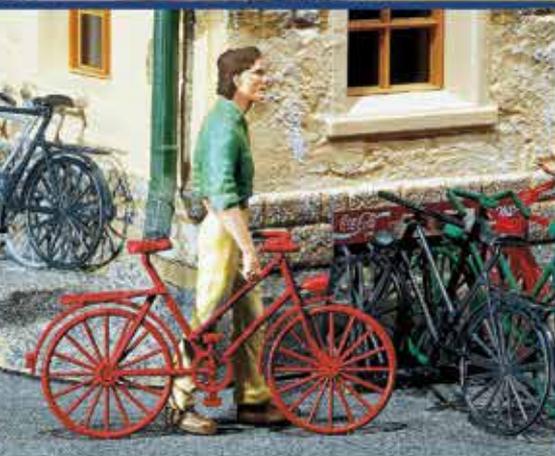


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Oh, my gouache!

Artist's watercolors make a subtle, versatile weathering medium

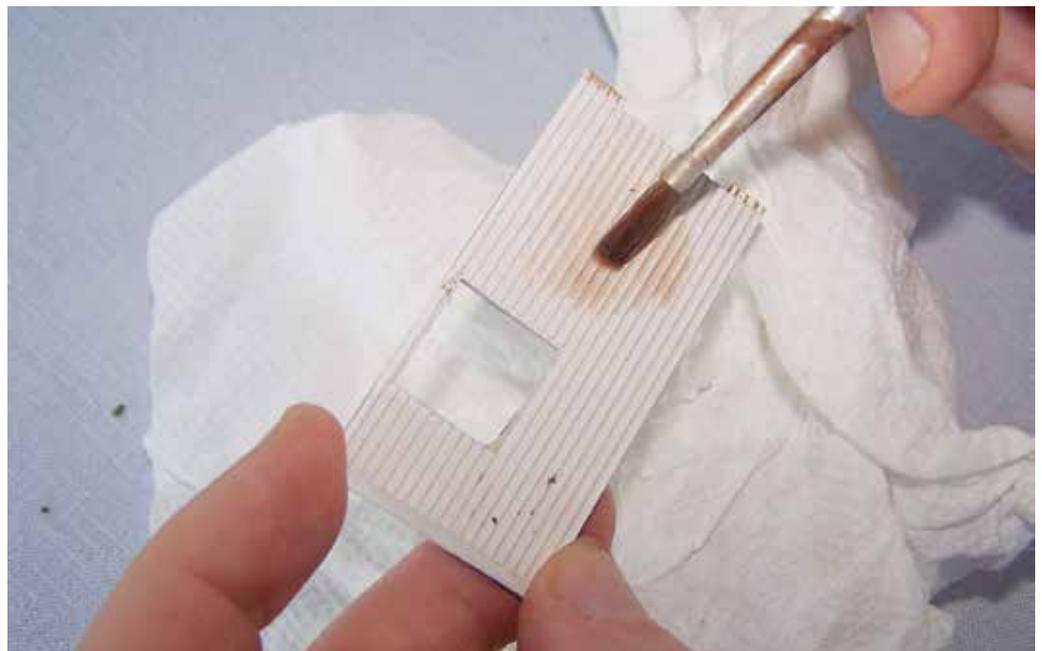
By **Stephen Masri** • Photos by the author



A variety of colors of gouache, or artist's watercolors, were used to weather these HO scale buildings on Stephen Masri's layout. Gouache was used to age the bay window, fill mortar lines on the brick, fade the awnings, stain the sidewalk, and highlight detail on the figures.



Stephen's set of Staedtler gouache paints comes with a divided lid that can be used as a palette to mix colors. Here, Stephen works up a brown wash to stain a wood clapboard wall.



The wash settles quickly into the grooves of the clapboard. If the wash is too thin, excess water can be absorbed by a paper towel; if it's too strong, more water can be applied to loosen the pigment, then dabbed up.

My son Freddy and I freelanced a Pennsylvania RR-Reading Co. interchange. Dave Frary's books inspired structures and scenery, with *Model Railroader* articles building our knowledge as we went. Freddy soon had me bewildered with the arcana of DCC, but I still hold my own in the paint shop.

Today's weathering products elevate realism beyond my imagination at his age. Yet techniques and materials that are centuries old still serve. Gouache (rhymes with wash) is a venerable and versatile coloring aid. Museum guidebooks use the term gouache, but we all knew it as our kindergarten watercolors. Craft stores carry amateur gouache sets that cost little and last

long. Our Staedtler Aquarelle set was a disused birthday present that inspired curiosity. Unlike some modeling experiments, it turned out exceptionally well – and without injury or carpet stains.

What it is, what it does

Gouache colors are ground pigments in a binding agent of gum arabic, which is



Porous materials like paper or wood must be sealed before staining, or the water in the gouache will soak in and wrinkle or warp them. Stephen painted the BTS paper shingles on this station with hobby acrylics before weathering.

derived from acacia sap. Worked with water, the particles become solids suspended in solution. When the water evaporates, that particulate nature imitates 1:1 scale rust, dust, and soot deposits. The finish is subtly granular, translucent, and flat. Its look differs from weathering powders, making the two complementary techniques.

Gouache weathers buildings and boxcars. It lightens a figure's denim realistically or shadows in facial details. Black gouache makes soot, while brown, tan, and orange mix to make rust. Green and yellow gives masonry a realistic patina. In general, gouaches fade base coats to a better scale effect.

For all its good, watercolor does present a challenge on models. It beads up on impenetrable surfaces. Then, when gravity trumps surface tension, it runs off in unruly streams. The phrase herding cats will come to mind – and others perhaps less suitable for print. But in all things, persistence makes proficiency, and five minutes' persistence



Multiple layers of gouache were used to weather the scratchbuilt concrete piers on this coal trestle. Red and green were brushed up below, then red and black were flowed down from the top to represent rust and coal dust.

will make you an expert gouache herder.

You might ask, "Why bother?" Because of gouache's key offsetting advantage: if it runs astray, it wicks up instantly with a light touch of paper towel. If it dries too thick or off-color, you just rewet it with your brush and dab it up.

As often explained in MR, colors and weathering are

built up in layers. Testors acrylics form our base coats, straight from the bottle or mixed to match a prototype. Next, we add any decals and lettering. A highly diluted Testors Flat Black wash then picks out the shadow side of details. Drybrushing light-colored Testors acrylics brings out highlights. Gouache comes next, before weathering powders.

Plastic models don't need protection before applying gouache. However, unfinished wood and paper do. I learned the hard way about capillary action on end-grain and roofing paper: finding one unfinished edge, water will warp a whole part. I now protect those surfaces with Testors Dullcote.

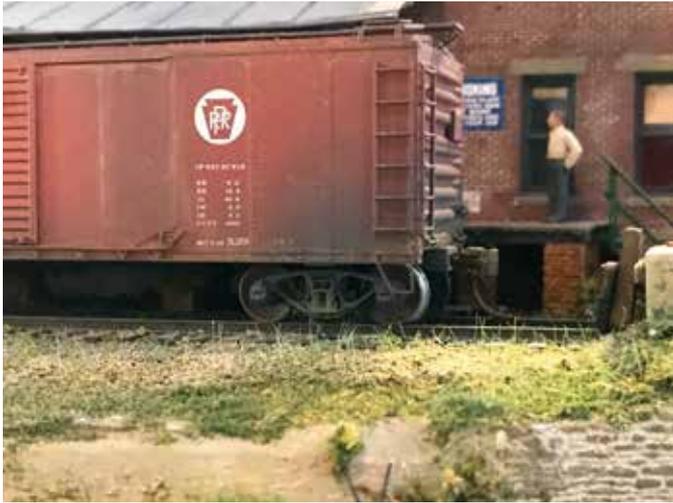
Dust it up

Creating dust with gouache is a good place to start our how-to. I put a bowl of water and paper towel on my workbench, then fold back the gouache set's lid. Staedtler molds ridges in its lids to form a sectioned palette for mixing colors. Mess is no worry: clean-up is a simple rinse in the sink.

I dunk – yes, I said dunk, not dip – the brush in the bowl to collect plenty of water. I swirl the soaked brush in the gray color tray to gather pigment, then dab it onto the palette. Dunking the brush back in the bowl, I rinse it and collect water for the next color. I pick up tan and dab it next to the gray. Liberally and repeatedly rewetting the brush, I mix the gray, tan, and water. Alternating between color trays and water bowl, I adjust tone and density. White can lighten a blend, but water is usually enough.

When the blend looks right, I flow it onto the model with the brush. Angling the model helps distribute the flow while the brush guides it. If it looks too watery and colorless, I dab it up with paper towel, then add more pigment to my palette. Conversely, I correct an excess of pigment by brushing more water onto the model and toweling up the surplus. You can adjust tones not only on the palette, but the model too.

Once the gouache is distributed, I put the model down, wet surface uppermost. It should be horizontally level



Gouache weathering can be used not only on structures, but on rolling stock, too. On this boxcar, Stephen used black and brown gouache to represent road grime and brake dust and white to fade the roof.

so the pigment settles evenly. Working one surface at a time, I let each dry before working the next. It takes but a few minutes, and meanwhile, there's always another project step to attend to. Let it dry naturally; using a hair

dryer to accelerate drying risks spreading pigments unrealistically.

Easy and realistic results

With a good prototype photo, your eye, and the



This before-and-after photo shows how gouache weathering can even out and tie together different colors in a model. The gouache on the bottom roof not only models dust and sun fading, but also eliminates the plastic sheen.

unlimited number of tries permitted by this highly flexible and forgiving medium, you will find that a minimal effort yields astonishingly good results.

When viewers of your layout exclaim, "The realism, my

gosh!" you can answer, "My gouache, actually." **MR**

Stephen Masri lives in Dover Plains, N.Y., where he models in HO scale. This is his first byline in Model Railroader.



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Bishop Str

Part 4: Structures and details wrap up our 10 x 22-foot HO scale project layout

By Lance Mindheim • Photos by the author

Welcome to the final installment of the Bishop Street Branch project layout series. This month, we'll cover two topics popular with modelers, structures and details. As a custom builder, I know these areas involve careful thought and planning at the pricing and cost proposal stage.

The bulk of the cost of having a layout custom built is tied to time

(which drives labor and overhead costs), not materials, as you might think. Since the amount of time a project takes to build drives the cost, staying on schedule is important from a business standpoint.

The methods for keeping things moving, while maintaining quality, may give an idea or two to the average modeler. At the pricing stage, I create a spreadsheet showing the number and type of structures on the job. I also note

whether off-the-shelf kits can be used or if kitbashing and scratch-building will be necessary. Then, based on two decades of experience, I list the number of days it will take to build each structure.

A typical Walthers Cornerstone kit will generally take two days. Large kitbashes and scratch-builds can extend up to a week. When the spreadsheet is complete, I add up the days and multiply that by overhead and wage rates.

What to use

Kits are used on projects that are primarily freelanced affairs. Prototype-based layouts entail more kitbashing and scratchbuilding. Since contracts are fixed price, if I fall drastically behind



Meet Branch finale

schedule, that money comes out of my pocket. Over the decades I've found that by having construction systems in place and staying organized, falling behind isn't something that happens.

As part of the overall project management process, it's crucial to know where the visual impact of structure comes from. It's not details, as many might think. Rather it's color treatment and neatness of assembly. If a detail doesn't add anything visually, I leave it off. I don't detail, or even paint, sides of structures that won't be seen. All of this is discussed ahead of time with the customer.

Overall scene composition, as far as groupings of structures, is also vital. Including mundane, non-rail-served structures heightens realism and serves as a framework to showcase the key

buildings. Early on, client Dan Mills emphasized that he wanted a large percentage of plain steel warehouse structures that parallel the Bishop Street Branch.

From a systems standpoint, kit orders come in and are laid neatly on a nearby table. Tools are placed on racks overhead. I then scan the directions, remove parts from the sprues, clean them up, and begin assembly. Though I use an airbrush on occasion, in most cases spray cans are adequate for structures.

Scratchbuilding with a twist

Followers of the blog on my layouts (lancemindheim.com) know that I scratchbuild most of my structures. Instead of painting them, I use a photo-laminate technique. Images of the actual structure are modified on the computer

Delaware & Hudson Electro-Motive Division GP39-2 No. 385 rumbles across the Forest Avenue crossing in Portland, Maine. Lance Mindheim wraps up our Bishop Street Branch project layout by discussing the structures and details he added to the HO scale model railroad.



Bishop Street Branch series

January: Meet the Bishop Street Branch

February: Benchwork, track, and wiring

March: Scenery

April: Structures and details

with photo-editing software, printed to size, and laminated to a styrene core. Doing this in multiple layers, often with thin styrene sheets sandwiched in between, prevents an overly flat look.

Photos won't work for subjects with rough surfaces, such as corrugated steel and board-and-batten siding. However, they're extremely effective for flat surfaces with complex color patterns, such as brick and masonry. In many cases it would be impossible to capture the color patterns on their surfaces with traditional weathering techniques.

For many years I avoided using photo-laminate structures on commercial jobs because I didn't know if they would stand the test of time without

fading and curling. I now have enough experience, and have modified my techniques for greater durability, to the extent that I know that will last.

What's good enough?

As part of the construction management strategy, decisions are made as to when a reasonable representation is fine. If a viewer looks at a steel structure on the layout and immediately thinks, "That's the green NEPW warehouse," then the model has served its purpose. Nothing is gained from fussing over the number of panels on a door for something nobody would even notice.

Maingas, a liquefied petroleum gas supplier, isn't a major player on the branch. Further, it's partially hidden behind bushes. Here I used the Walthers Central Gas kit and some scraps from my parts box to represent the industry.

When I walked the Bishop Street Branch, one thing that stood out was the concrete team track platform. I fell in love with the color and textures and was

determined to model it. See "West of Forest Avenue" for more information.

Two types of details

How details are handled from a strategic standpoint on a custom-built layout differ from that of how hobbyist would approach them. Staying on schedule is the issue. You simply can't afford to get bogged down with things that aren't that noticeable. I break details into two categories, those that add noticeable visual snap, and those that are fun but don't really jump out.

The focus is put on those that create the most visual impact. At the top of the priority list are things that extend up vertically from the layout surface, such as smokestacks and utility poles. Moving down the priority list are conduits on the sides of structures and utility meters.

That wraps up the HO scale Bishop Street Branch project layout. I hope you can put some of the techniques covered in this four-part series to use on your own model railroad. **MR**

Morrill's Corner



The geographic "bullseye" of the Bishop Street Branch is a neighborhood called Morrill's Corner, where Forest Avenue intersects with the project's namesake, Bishop Street.

Unless you're a railfan, Morrill's Corner is unremarkable and mostly known for having the dubious distinction of consistently being voted the worst intersection in Portland. On the corner is 1190 Forest Avenue, a turn-of-the-century, two-story brick structure with retail on the first floor and apartments upstairs **1**.

Because of the structure's fairly routine appearance, I was tempted to use a kit. However, the building was too prominent and not close enough to any available kits to allow compromise. I bit the bullet and scratchbuilt it using the photo-laminate technique.

After building the styrene core, I stacked and laminated three layers of photos. The prototype, **2** (opposite), uses fairly repetitive patterns, so I was able to compress the building by about a third without it being noticeable.



I struggled with how to handle the east side of Forest Avenue at Morrill's Corner. It's the site of a service station and car wash. To make matters worse, the buildings block the view of the more interesting storage track.

After thinking about it, I modeled the service station and omitted the car wash. The station is a Summit Customcuts kit



3. None of Summit's modern gas stations include Sunoco signage, so I had to take photos of a station near my house.

To give the scene some extra interest, I added a 20-foot intermodal container that's used for storage. I framed the Dumpster storage area with the Walthers corrugated fence kit (No. 933-3632).

West of Forest Avenue



Next, we'll take a look at the structures west of Forest Avenue. First up is the team track platform 1. Though not overly noticeable on the layout, the old team track is prominent when you walk the line.

During my site visit I took photos of the concrete platform from 90-degree angles, printed the images out, and glued them to Pikestuff's injection-molded plastic Versatile Modular Loading Dock kit (No. 541-0017).

Next up is Maingas 2. The full-size industry is no longer rail served, and the liquefied petroleum gas tanks and loading platform are long gone. I did a quick and dirty representation of the business using the Walthers Central Gas kit (No. 933-3011) as the starting point.

Until recent years, Plasmine Technology was one of the primary customers on the Bishop Street Branch 3. The company, which produces paper coating products, received inbound products in tank cars and hoppers.

The masonry block structure has a unique, oblong shape. I've never been a fan of using sheet styrene cinder block material, as the mortar lines seem too pronounced. Because Plasmine is such a key structure, I again turned to the photo-laminate technique.

Since the building isn't directly next to the street, I had Dan take photos of the full-size industry. Using prototype images let me use some artistic license and add the sign to the side with photo-editing software. I scratchbuilt the silo by wrapping styrene sheet siding around a piece of PVC pipe.

At the end of the Bishop Street Branch is BlueLinx, 4, the sole remaining customer on the line. The building products distributor receives boxcars and center-beam flatcars. The structure itself is fairly unremarkable. I used two Pikestuff kits and glued them side by side. I made the foundation from 5/8" - thick PVC wood. I used various colors of Rust-Oleum to spray-paint the building.

Nearby and noteworthy



I included two buildings on the layout that aren't on the Bishop Street Branch. Of all the structures on the model railroad, the Portland Boxing Club is my favorite **1**. I love its multi-hued surface and complex textures. The iconic smokestack is visible wherever you are in that part of Portland.

Re-creating the landmark with commercial kits would be impossible. Dan waited for a day when the weather and sunlight was perfect and shot close to 50 images from all angles.

As with the other photo-laminate buildings, I built a styrene core first. Then I spent several days making the images usable with photo-editing software. After I printed the photos to size, I applied them to the core in multiple layers.

The smokestack was particularly tricky because it's square on the bottom, tapered in the middle, and flared at the top. Fortunately, I had some tapered highway bridge piers leftover from a previous job. I used them as the basis for the stack, which took almost 20 hours to build. As a centerpiece of the project, it was time well spent.

On the east side of the main, a few hundred yards south-east of Deering Junction, is the NEPW Logistics Warehouse

2. The challenge in modeling it was the sheer size. Ten Walthers Lakeville Modern Warehouse (No. 933-2917) kits comprised the final model!

When working with a large kitbash, it's important to keep everything square and stable. I placed a 2 x 4-foot piece of high quality, smooth birch plywood on my Stanley Workmate table. Next, I laid wax paper over the wood to keep things from sticking to it. Then I clamped aluminum rules and angles on the edges to keep things straight **3**.

Another challenge I faced was that the Walthers model has a brick foundation, not concrete as found on the prototype. I filled in the brick pattern as best I could with modeling putty to minimize the brick detail. I used Gatorboard, a lightweight foam board product, for the roof.

I couldn't find an exact match for the yellowish avocado color on the prototype building **4**. I was able to get a reasonably close match by first spray-painting the entire surface with Rust-Oleum Oregon. I followed that with some light puffs of Rust-Oleum Lemongrass and a very light additional puffing of Oregon.

Beyond the buildings

Vertical elements, such as utility poles, contribute more than any other detail to the visual snap of a project. For this reason, they're at the top of the priority list. Be sure to include poles for service drops next to buildings in addition to the typically modeled pole lines.

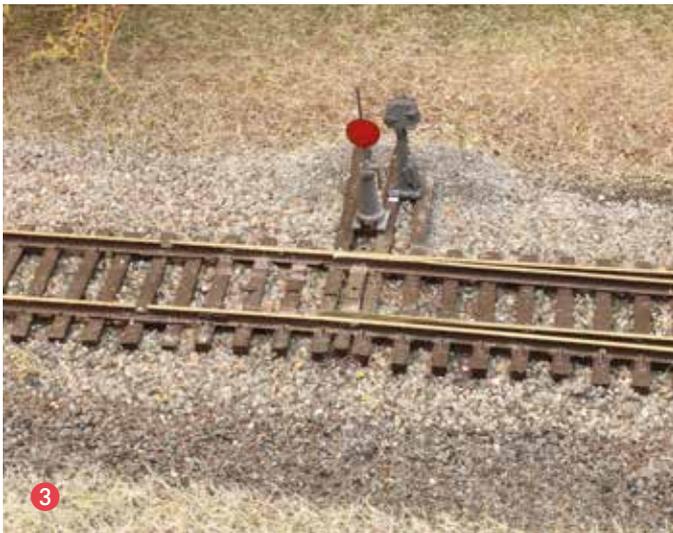
I made the poles shown throughout this series from 1/8"-diameter wooden cooking skewers that I found at the grocery store. The crossarms are 10 scale foot lengths of 1/16" x 1/32" stripwood (1/16" square pieces cut in half).

Color and sheen is vital with utility poles. Using a brush dipped in thinner, I first applied a wash of Model Master Light Sea Gray enamel [Model Master paints were

discontinued by the Testor Corp. – Ed.] I immediately followed that with a wash of burnt umber artists' oil paint thinned with mineral spirits. I let that dry for a day or two.

I harvested the insulators off Atlas poles and attached them to the crossarms with cyanoacrylate adhesive (CA). The angle braces are .010" spring wire shaped to an L and attached with CA. The transformer was included in the Atlas pole kit **1**, opposite.

Utility meters and conduits on the sides of structures are simple to apply. For the conduits I again used spring wire. The meters are from the Walthers Modern Electric Gear kit (No. 933-4075) **2**.



The custom switch stands took time to build, and unfortunately aren't very noticeable **3**. However, omitting them would make the turnouts look incomplete.

While walking the line I noticed marks painted on the web of the rail on the spur serving NEPW Logistics. They make it easier for the switch crews to accurately spot boxcars next to the dock doors. Though virtually unnoticeable on the layout, the marks were simple and fun to add **4**.

Many modern industrial parks use custom crossing signage. During my visit to Portland, I photographed the signs and scaled the images. Then I made my own decals, adhered them to thin styrene sheet, and glued the signs to posts and structures **5**.



Working with Pikestuff kits

Here are two techniques I used when working with Pikestuff structure kits.

First, I painted the buildings instead of relying on the plastic color. Tan, light blue, and white are common colors. The structures should have a dull finish, so use flat paint or apply Testor's Dullcote afterward.

Second, I weathered some kits with a peeling paint effect. I sprayed the building at right with flat gray primer and let it dry overnight. Then I applied Tamiya Wooden Deck Tan (No. TS-68) spray paint, let it dry 10 minutes, and then tapped the still-soft paint with duct tape to lift it off. – *Lance Mindheim*



Paint and weathering give this Pikestuff kit a realistic appearance.

① F7A No. 59 and F7B No. 403 haul coal through Clinton Crossing on their way to Tucker Hollow.



COAL COUNTRY

in the '50s

Mountain railroading in harsh conditions is the goal of this HO scale layout

By Lou Sassi • Photos by the author





② An overall view, looking west toward Bailey Creek.

running steam at that time. Watching and hearing those locomotives fighting the grades convinced him that his next railroad had to have mountain scenery and ample motive power.

After graduation, he spent time in the military and was stationed at Fort Knox, Ky. His duties exposed him to eastern Kentucky and West Virginia mountain railroading. As Tony puts it, “From that time on, there was no looking back.”

For this reason, his third layout would be his first attempt at an Appalachian coal-hauling railroad. It centered around several of John Armstrong’s mountain railroad concepts. Unfortunately, it too had to be dismantled because of yet another move. All of this led to the railroad you see here, which is Tony’s fourth layout and his second Appalachian railroad.

The Tygart Valley Division

The railroad occupies two rooms in the basement of Tony’s present home. Before construction on the railroad began in 2002, he installed drywall, painted the walls, and installed a drop ceiling and most of the room lighting. The double-deck benchwork and a

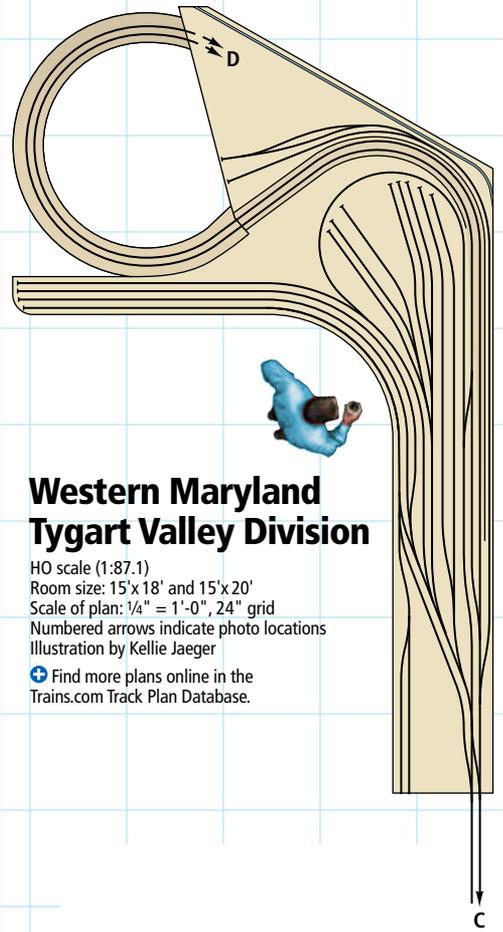
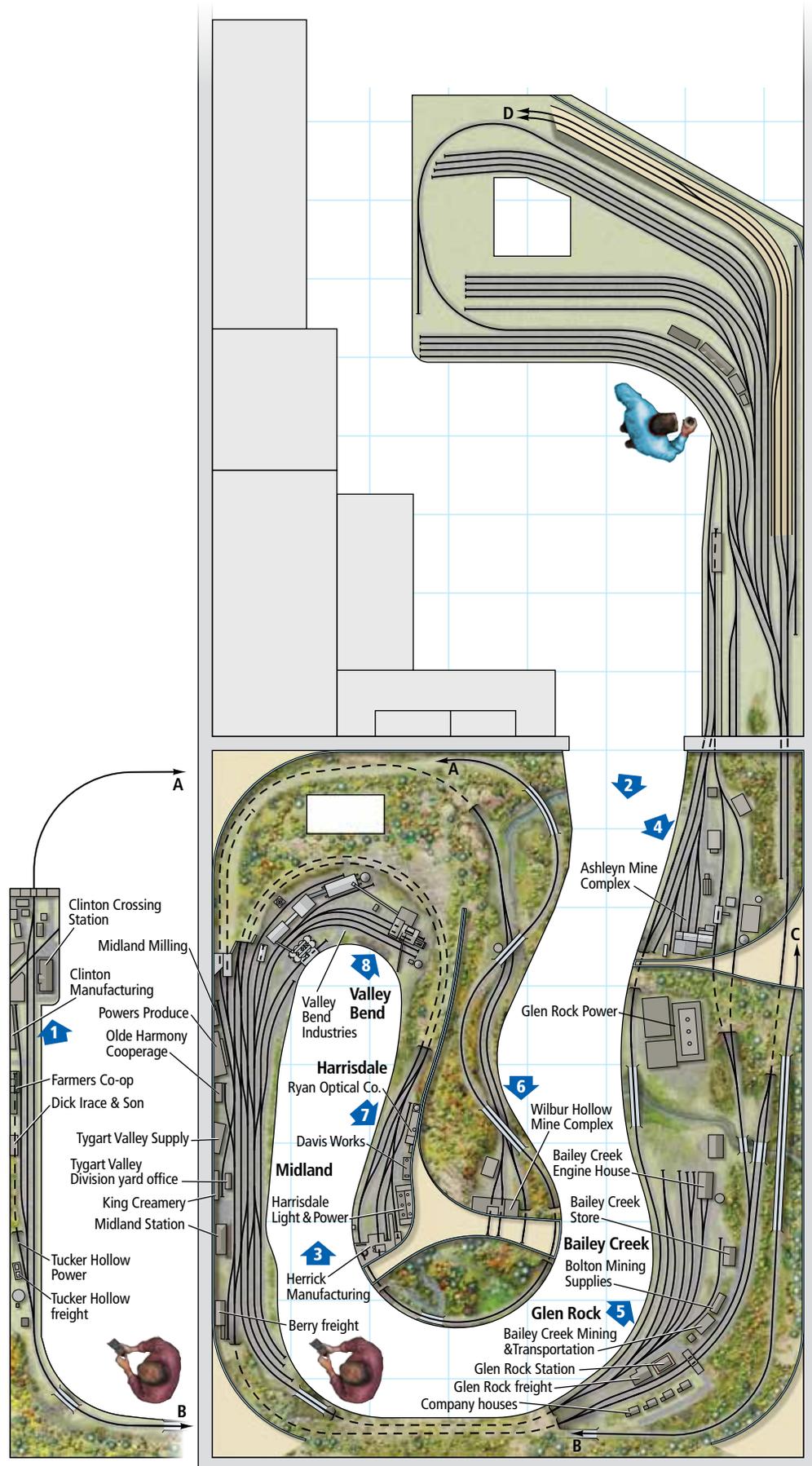


③ Looking west, the upper level is Clinton Crossing and the lower level is Midland and Valley Bend.

Like many of his fellow model railroaders, Tony Donatelli’s initial exposure to model trains was a Lionel train set given to him by his parents while he was a young boy. His first attempt at HO modeling was a 4 x 8 folded dogbone layout he built in his Kentucky apartment and stored under his bed. This first effort allowed him to experiment with scenery

techniques while honing his structure-building skills. His second attempt, also HO, was a switching layout with a brief lifespan due to a relocation to Rhode Island after his military career.

Tony’s interest in mountain railroading began while he was attending Norwich University in Northfield, Vt. The Central Vermont tracks ran through the college campus, and the CV was still



Western Maryland Tygart Valley Division

HO scale (1:87.1)
 Room size: 15'x 18' and 15'x 20'
 Scale of plan: 1/4" = 1'-0", 24" grid
 Numbered arrows indicate photo locations
 Illustration by Kellie Jaeger

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

The layout at a glance

- Name:** Tygart Valley Division
- Scale:** HO (1:87:1)
- Size:** Two rooms, 15' x 18' and 12' x 20'
- Prototype:** Proto-freelanced, Western Maryland Ry.
- Locale:** West Virginia
- Era:** Mid-1950s
- Style:** Walkaround
- Mainline run:** 160 feet
- Minimum radius:** 30"
- Minimum turnout:** no. 6
- Maximum grade:** 2.75%
- Benchwork:** Open-grid
- Height:** 45" to 63"
- Roadbed:** Cork over Homasote
- Track:** Code 100 and 83 flextrack with Peco turnouts
- Scenery:** Cardboard web covered with plaster
- Backdrop:** Painted drywall and styrene
- Control:** NCE DCC



4 Baldwin DS4 No. 134 pulls loads out of Ashleyn No. 1 coal mine.

Solving problems before they begin

The Wilbur Hollow area, where Snake Run climbs to Clinton Crossing, is above the deepest part of the layout. If you ever had an issue in this Hollow, you would have no way to fix it. To solve this problem, I modeled a lift-out section which was completed off the layout and then put in place. I have not had any issues to date with this area, but just in case, there is now a solution. – Tony Donatelli

Freelanced history

The Korean conflict buildup was winding down, but the demand for coal to support the military operation remained strong. The early years of the conflict had led to a reopening of several abandoned mining operations in the Tygart River Valley, resulting in a need for better transportation facilities. Local mining operators chartered the Bailey



5 Alco S1 No. 146 is spotting a car at Bolton Mining Supply, the Bailey Creek company store. On top, GP9 No. 26 highballs over Glen Rock High Bridge.

combination of open grid and “L” girder was a challenge due to the increased depth of some areas of the layout. Certain sections had to be fully completed and scened from the wall before the locations closest to the aisle could be started. The exterior walls were painted sky blue and cloud formations were added. The interior dividers are not full height to allow for air circulation. They

were formed with styrene and painted the same color as the exterior walls.

Trackwork combines spline sub-roadbed for the mainlines and plywood for the yards and towns. The roadbed is Homasote attached to the spline and plywood. The track is code 100 and 83 flextrack and all of the turnouts are Peco, with medium and large radius being used as needed.



6 F7A No. 56 and F7B No. 405 lead a freight train west over the trestle while GP9 No. 29 picks up loaded coal cars at Wilbur Hollow mine.

Creek Mining & Transportation Co. as an independent railroad that used abandoned sections of the defunct Cole & Coke Ry. and trackage rights obtained from the Western Maryland. The newly formed railroad was soon overwhelmed and unable to keep up with the rapidly increasing traffic. The directors of the BCM&T Co. voted to lease the line to the WM, who elected to operate it as the Tygart Valley Division until it was abandoned in 1960. To establish a reason for the Tygart Valley's existence if it existed in the real world, Tony envisioned the railroad based on the Western Maryland in West Virginia from 1955-58.

The layout is what Tony refers to as a "proto-freelanced" design built on the fly and not following any preconceived plan. He started with a 15 x 18-foot point-to-point design, not considering operations a priority. Once he was introduced to the concept of operation sessions by Don Irace and learned about Allen McClelland's vision of a transportation system and his "beyond the basement" theories, he began building a staging area and dispatcher's panel in an adjoining 15 x 24-foot room.



7 Alco RS3s No. 188 and 185 head east with a full load of coal, passing Herrick Manufacturing, Harrisdale Power, and Davis Marble.

Scenery and structures

The finished scenery is built in layers using a large assortment of natural materials and assorted textures and colors of ground foam. Most of the landforms were constructed using cardboard strips covered with plaster cloth. Any areas that require additional texture are coated with a pre-colored Sculptamold mix.

All of the rock formations, also pre-colored, are cast in Hydrocal castings using either commercial or homemade rubber molds. Although he prefers Scenic Express SuperTrees, Tony uses many products to get the look of mountain forests, everything from poly-fiber puff ball trees to natural materials. Mountain railroads need hundreds if not thousands of trees, so, once again,



variation in color and texture is essential. He uses primarily acrylic gloss medium to create water. Gloss medium allows him to layer the wet (water) effect and add color if desired as it is applied to the surface. There are no rivers or lakes, only small creeks.

Tony has also installed backdrops on the inside of several curves around his layout, but curved in the opposite



Meet Tony Donatelli

Tony Donatelli is a graduate of Norwich University and retired law school administrator. He and his wife, Sheila, a retired nurse, live on a small farm in North Scituate, R.I. They have four grown children, seven grandchildren, and seven great-grandchildren. In addition to model railroading, Tony enjoys the purebred sheep industry, traveling, and spending time with his extended family.

direction. In doing so, he creates more room for scenery as well as a scenic block. This adds a great deal of interest and creates a mini diorama in each individual location.

Many of the buildings on the railroad are from kits; Tony tries to kitbash as often as possible so they don't resemble anything on the mass market. Such things as longer or shorter walls, adding height, or changing paint colors can help hide a building's origin.

The longer bridges on the railroad were built using Micro-Engineering parts with hidden reinforcements. The through girder and deck girder bridges are Micro Engineering kits, and the truss bridges are Walthers kits.

Operations

The motive power, 23 units in all, and 175 pieces of rolling stock mirror what would be used by a typical coal hauler of the mid-1950s. The motive power is first-generation diesel, all sound-equipped. All of the original steam locomotives have been retired.

The layout began as a DC-controlled system. Tony converted it to NCE DCC before starting official operating sessions. Even though there are four cabs available for visitors, all of his operators bring their own cabs to a typical session which will last about two hours and feature the movement of both coal, unit, and local trains. There is also bridge

8 Alco S1 No. 146, the Midland switcher, switches aggregate at the MJD Quarry in Valley Bend.

traffic in both directions and several freights. Tony runs no passenger trains now, but plans to eventually.

Sessions have lasted as long as three hours and involved as many as 16 trains. Tony uses a two-position waybill card sequential routing system. Communication is by two-way radio and dispatching is done remotely.

Mainline turnouts are operated by Tortoise switch machines that are dispatcher-controlled using Java Model Railroad Interface's Panel Pro on a dedicated computer. All of the yard turnouts are manually controlled and are the responsibility of the Yardmaster. There are presently no operating signals nor is there a fast clock.

When Tony started construction of his Tygart Valley Division, he hoped it would recreate the look and action of a mountain railroad. He believes he has successfully achieved that goal. Visitors have complimented him on the beautiful scenery and his ability to replicate the characteristics of a mountain railroad operating under such harsh conditions.

The introduction of shorter and slower moving trains fighting steep grades and tight radius curves created the atmosphere he hoped to replicate many years ago. Adding operation to the mix has only increased his satisfaction while adding to the fun. [MRR](#)

TRACK BENDING PLIERS

You'll find all kinds of trackwork uses for this handy tool

By Jeff Johnston • Photos by the author

Most model railroaders need to lay track, and many of them will have problems getting that track to do what they want. The usual array of modelers' tools and some practice can help a person lay track well, but this interesting pair of pliers could be a valuable addition to a hobbyists' toolbox.

This tool comes from the ophthalmology industry. It's designed to gently and safely adjust the curved portion of a pair of eyeglasses, but it also works on model railroad track and rail.

It's a full-size pair of pliers, but instead of the usual steel jaws it has a pair of concave and convex nylon-like plastic jaws that fit together when the pliers are closed. The pliers are available from Micro-Tools.com (PLN6BJ-NSBF) ❶. They're well made and should last a lifetime. They have a good feel in your hand, which can't always be said about tools. The jaws fit between the rails of HO standard gauge track and larger.

In use, the jaws are clamped on the rail and, by squeezing the handle, are forced together. This bends the rail to match the jaw curvature. Less pressure on the handles means less curvature, and with finesse, it's possible to keep a fine degree of control.

Rail is easy to bend with pliers, but it can be difficult to do so without nicking or scratching the rails, and such bends aren't always as smooth as they could be. The plastic jaws leave the rail pristine and spot-free ❷.

Those who hand-lay track may find the pliers handy in some instances for pre-curving rail before laying it. Flextrack and other RTR track components can also be adjusted with the tool, either

❶ The curved nylon jaws on these pliers make fast and easy work of rail-bending adjustments.



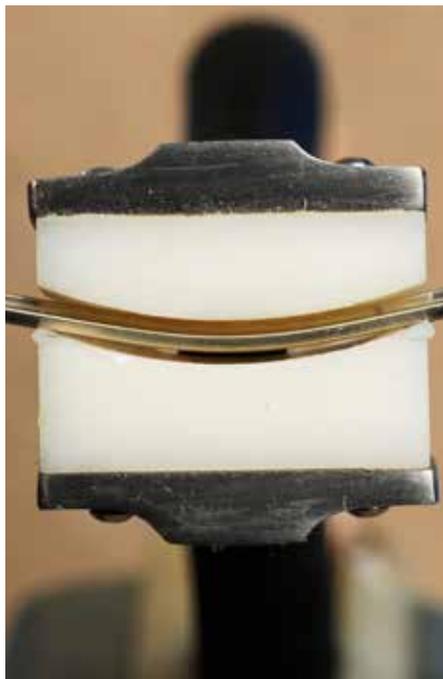
before or after laying the track. By carefully working with one rail and then the other, flextrack can be pre-curved to make it easier to lay. For example, it can be tricky to join two pieces of flextrack on a curve without resulting in a kink. The track ends can be pre-bent at the joint to help ensure the rails follow a smooth curve.

If you've laid some track and discover some kinks or curves that aren't quite right, you can use the pliers to adjust the track alignment as long as it's loose enough to move **3**.

There are situations where you may want to start a curve at the straight end portions of a switch due to some tight-clearance tracklaying situation, in which case the pliers can help you tweak the rails one way or the other **4**.

I've been using the pliers while laying flextrack and RTR switches for our Sugar Pine Lumber Co. layout, and it's good to have them on hand. [MR](#)

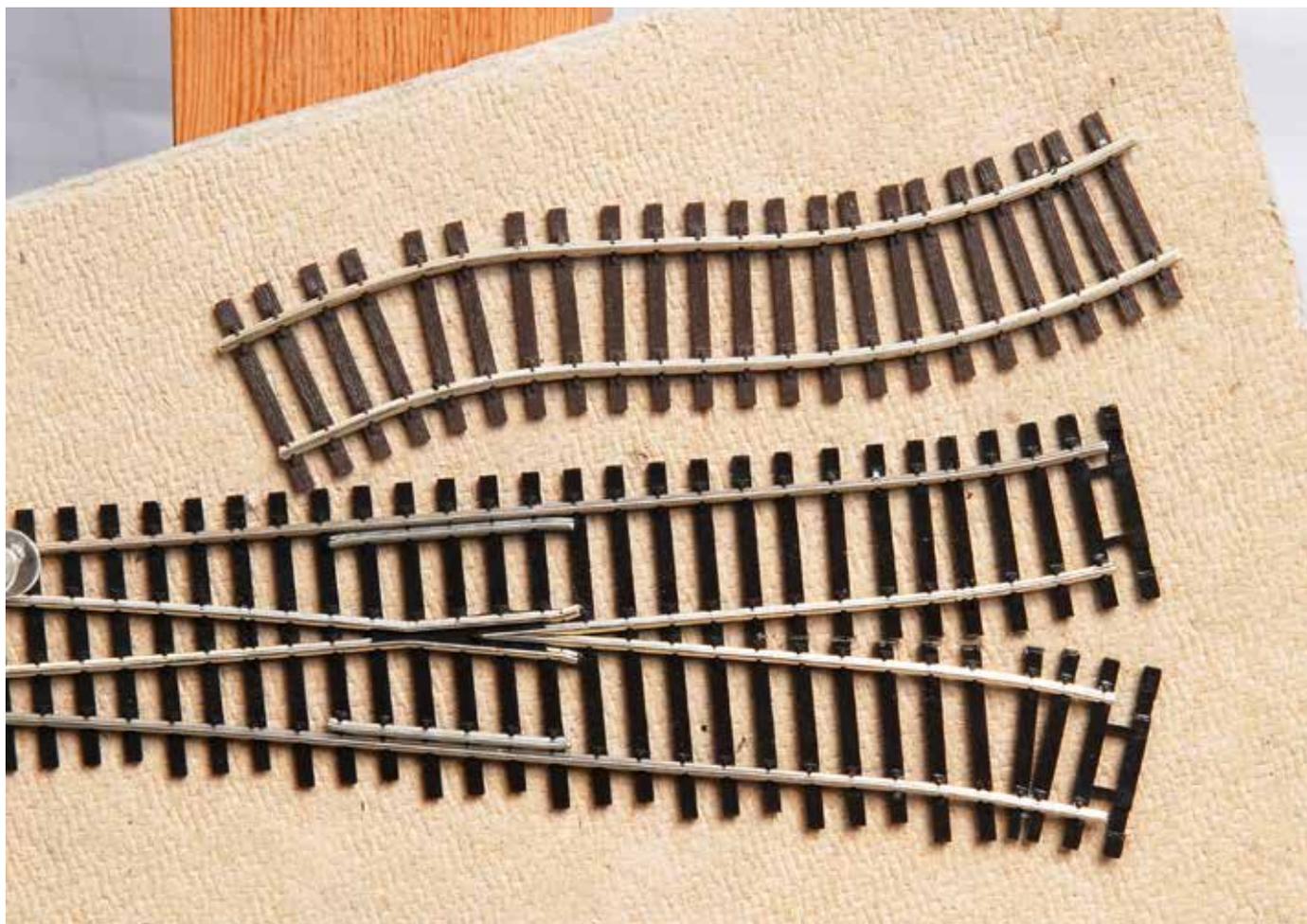
Jeff Johnston is an automotive journalist residing in Eugene, Ore. He has been in the hobby for over 50 years.



2 Squeezing the rail between the curved jaws forces it into a smoothly curved shape. The soft nylon jaws prevent the rail from being nicked by the edges of the plier.



3 The eyeglass pliers can be used to adjust track that's been laid, provided it's not yet fastened down too snugly. A gentle touch can make some fine-tuning track alignment tweaks.



4 Pre-bending flextrack for unusual situations (shown exaggerated for clarity) and bending the rails on a ready-to-lay switch are two practical uses for the rim bending pliers.

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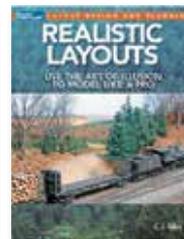
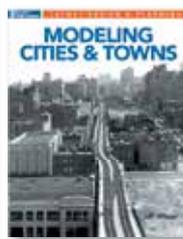
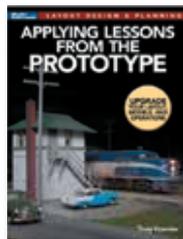
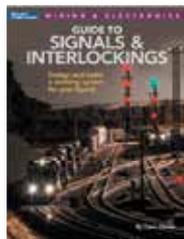
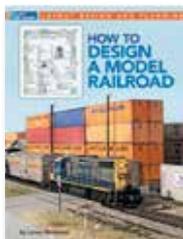
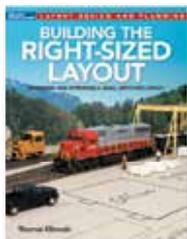
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Wiring programming tracks



1 The NCE AutoSW combines programming and track power into a single output. Just connect an NCE PowerCab to the terminals shown at the top and you'll have main and programming outputs at the bottom. Allan Gartner photo

Unless a friend programs your locomotives, all modelers will need a programming track. A programming track is often needed to set a locomotive's address and configure sounds. I still see questions about programming tracks, so it's time to revisit this topic.

Generally, programming isn't difficult. To make it even easier, many modelers use JMRI's Decoder Pro. If you can't program everything on your locomotive while on the main, you will still need a programming track. A switch is also needed to keep from inadvertently reprogramming your entire layout.

One form of programming is operations mode (also known as "programming on the main") and doesn't require a separate programming track. To use this method, your decoder needs to support it and you need to know the address of the

locomotive that you're programming.

When programming on the main, do NOT select address zero. This is a broadcast address and could potentially reprogram all of your locomotives. At least one system I tried didn't stop me from doing this. Don't find out how your system will act the hard way.

All other modes (called direct, page, or physical) require a programming track. This is also needed if you are not sure of your locomotive's address or you need to reset your locomotive.

There are generally two approaches to implementing a programming track. A popular approach is building a programming track on your workbench. A piece of track mounted to a piece of wood will do. I suggest you put stops at the end of your test track to prevent locomotives

from leaping off your workbench.

Another approach is to build the programming track into your layout. This is done by people who don't have room on their workbench, but there's a catch. If you accidentally run a locomotive from your main track onto your programming track, you can blow the outputs of some programmers. Also, if a locomotive bridges the programming track to the main track, you could reprogram everything on your layout. Ouch! If you want to go with this approach, I have some suggestions on how to minimize this risk.

Except for some entry level systems, most systems provide a programming track output in addition to an output for normal operation.

The NCE PowerCab has a single output that can automatically be a main track output or a programming track output. It can also tell you how much current (amps) is being drawn by a locomotive. Going from programming to testing the

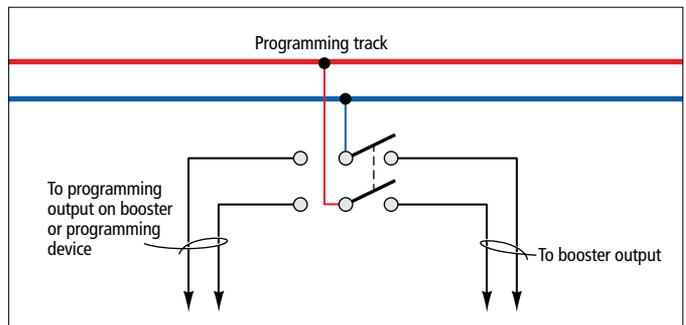
IF A LOCOMOTIVE BRIDGES THE PROGRAMMING TRACK TO THE MAIN TRACK, YOU COULD REPROGRAM EVERYTHING ON YOUR LAYOUT.
— ALLAN

locomotive is effortless. Due to these handy capabilities and its size, it's popular as a portable programmer.

Since the PowerCab's single output can be both a main or programming output, you can inadvertently program your whole locomotive fleet if you use it on your layout. To avoid this, NCE sells its

AutoSW (switch) that breaks this single output into separate main and programming outputs like other systems 1.

A workbench programming track is pretty simple. It can be as short as about 2 feet long. If your programming track is longer than 2 feet, you can run your locomotive on it for a short distance, but I suggest you add the switch shown in 2. You can program your locomotive using one of the service modes (direct, page, or physical) and then test your changes. A double-pole double-throw (DPDT) center off switch is available with screw terminals from All Electronics (allelectronics.com), part number STS-60. You can also



2 This diagram shows how to wire a workbench programming track. If you have a single-output system like the NCE PowerCab, you do not need to use a switch.

get a small project box to mount the switch in from All Electronics. If you have an NCE PowerCab dedicated to programming, you won't need this switch due to its single output.

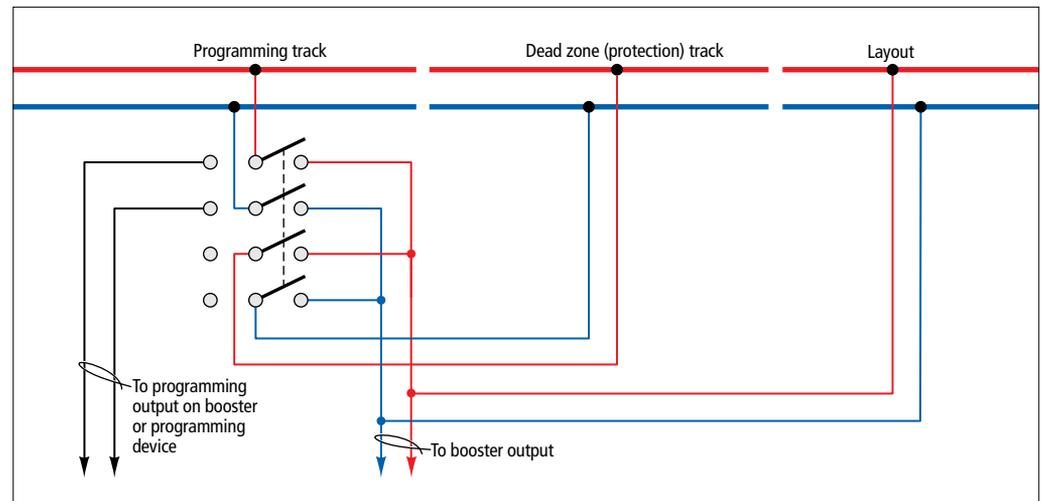
In the schematics I've shown, when the lever is thrown to the left, the switch is connected to the programming track. Toggle switches have a pivot point inside of them. This means when you physically throw the lever to the left, it makes contact with the terminals on the right side and vice versa.

There are several ways to deal with this. The simplest might be mounting the switch in the control panel and labeling the right side as "Programming" and the left side as "Normal."

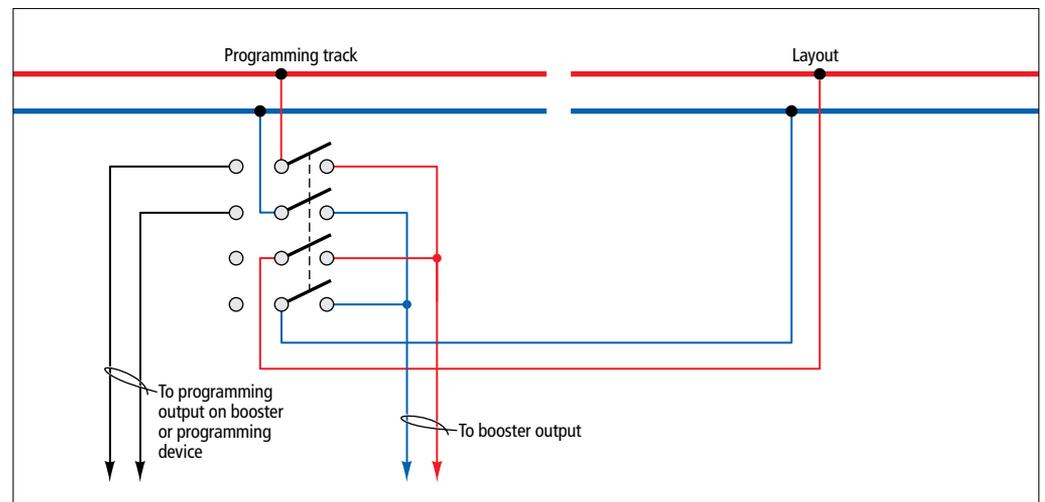
Those who want a programming track on their layout usually start by wiring a toggle switch **2** to a siding. They intend to program their locomotive and then drive it out onto their layout. However, many have learned the hard way that accidentally leaving the switch in the program mode and driving a locomotive from the layout onto the siding might blow the programmer's output.

Digital Command Control decoders are typically designed to apply power to the motor briefly. Your DCC system will sense the current drawn when this happens, which is called an acknowledgment pulse. The pulse causes the locomotive to move slightly. If you aren't careful, the locomotive could bridge the gap between the programming track and your main layout. This is a good reason to include a dead zone in your siding **3**.

When flipped to the right, all tracks are connected to the booster output. When flipped to the left, the programming track becomes active and the



3 If you have a system with a single output for both programming and the main track, you'll want to use the NCE AutoSW. The device prevents accidental programming of other locomotives on the layout. Kellie Jaeger illustrations



4 If you don't add a dead zone between your programming track and the main, use a skewer or other physical block to prevent a locomotive from bridging the gap.

dead zone section goes dead. The dead zone should be at least as long as the longest locomotive you intend to program. A quadruple-pole double-throw center off switch with screw terminals, part number STS-71, is also available from All Electronics.

When using an NCE PowerCab, you'll want to use the AutoSW to prevent accidental programming of other locomotives on your layout.

One way to protect your programming track without adding a dead zone is to add a physical stop. Drill a hole in your layout and put a wooden

skewer in the hole when you are programming. This will physically prevent a locomotive being programmed from inadvertently bridging the gap between your layout and programming track. It's up to you to remember to put it in place, though **4**.

In this situation, if you have a single output system like the NCE PowerCab, you will want to use the AutoSW.

Accessory devices like DCC-controlled switch machines and signaling systems usually aren't programmed on a programming track, but on the main in some way. There's virtually no

risk of reprogramming your entire layout if you don't select address zero.

Each of these devices is programmed differently, so you'll need to read your instructions carefully. Often, you may have to put a jumper in place while programming it when not connected to track power. Don't forget to remove the jumper when you're done. Some devices also have a button you have to press to put it in programming mode. You will also likely need to cycle your layout's track power after you are finished programming each device. **MR**



Atlas Master Line N scale GMDD GP40-2W

A uniquely Canadian diesel-electric locomotive that once prowled Canadian National rails all across the continent has been unveiled in N scale by Atlas Model Railroad Co. Built by General Motors Diesel Division (GMDD) in the 1970s, the four-axle GP40-2W was one of the earliest locomotives to bear the CN-designed Canadian Comfort Cab (a.k.a. the Safety Cab). Atlas' new Master Line offering is an attractive and accurate model that is available equipped with an ESU LokSound Digital Command Control sound decoder.

History. Canadian National ordered its first 91 GP40-2Ws from GMDD, the Canadian branch of Electro-Motive Division, in 1974. The first 50 had high-speed gearing that gave them a top speed of 80 mph, and were assigned to "Express Freight" duties; the rest had standard gearing, for a top speed of 65 mph. Subsequent orders followed, and by 1976 CN had rostered 268 of the wide-nose units, numbered from 9400 to 9677.

Canadian National designated the locomotives as class GF-430 (G for General Motors, F for freight, 4 for four axles, and 30 for 3,000 hp). Atlas' model represents the GF-430d version, of which 34 were built in 1976, numbered 9633 to 9667. All were off of CN's roster by 2002; a few were scrapped, but most were sold.

Appearance. The injection-molded plastic body shell was finely molded, with simulated fan blades beneath the molded plastic roof fan grills. The paint job was similarly accurate and well executed. The paint was smooth and evenly applied, and the separation lines between colors were straight and crisp.

The small lettering on the sills was legible under magnification.

Atlas offers models of both "early" and "late" units, with the late models having ditch lights, snow shields, and the horn relocated from the bell bracket above the cab windows to the top of the long hood. Our sample model represents CN 9633. Though it has a late GP40-2W's ditch lights and snow shield, its horn is mounted on the bell bracket.

Although the GP40-2W's cab is different from a GP40-2, the major dimensions of the model matched those in drawings in the November/December 2000 *Diesel Era* magazine. The model also matched photos of the prototype GP40-2W in the July/August 2000 *Diesel Era*. The wheels were in gauge, and the couplers were at the correct height.

Performance. Our model came equipped with an ESU LokSound DCC sound decoder, which is dual-mode, meaning it will operate on both DCC and direct current. I tested it both ways. Under DC control, the engine's startup sound sequence began at about 7V, and it started to roll at 8.5V. At peak voltage, the locomotive reached 123 scale mph, much higher than the prototype.

Under DCC, the locomotive performed smoothly throughout its speed range, and I had more control over the decoder's functions, including the horn, bell, and lights. At speed step 28, the engine reached 116 scale mph.

Our workbench force meter registered a drawbar pull of 0.8 ounces, equivalent to a train of 19 freight cars on straight and level track. It handled the 11" curves and No. 6 turnouts of our MR&T State Line Route like a champ.

Facts & features

Price: Silver series (DC), \$149.95; Gold (DCC sound), \$259.95. Undecorated models are \$10 less.

Manufacturer

Atlas Model Railroad Co.
378 Florence Ave.
Hillside, NJ 07205
shop.atlasrr.com

Era: 1974-present (CN version, 1976-1999 as decorated)

Road names: Canadian National ("zebra stripe" paint scheme, four road numbers; "URL" scheme, three numbers), Guilford (gray and orange), Huron Central (orange, black, and yellow, two numbers), Pan Am (blue and white). Three numbers per scheme unless noted; also available undecorated (two body versions).

Features

- ESU LokSound Digital Command Control sound decoder (Gold series version)
- Etched metal cab sunshades (user installed)
- "Scale Speed" motor
- Speaker installed on DC version
- Two prototypically specific body styles
- Weight: 2.5 ounces
- Wire nose grabs
- Working ditch lights, as appropriate

Seen everywhere. If you model the '70s and later CN in N scale, at least one of these locomotives belongs on your layout. Around 2000, they started to show up on other railroads, as well. The smooth performance and sharp appearance make them worth checking out.

– Steven Otte, senior associate editor



Bowser HO scale ballast hopper

A second run of HO scale 70-ton two-bay ballast hoppers is now available from Bowser Manufacturing Co. Inc. The model is based on the company's American Car & Foundry (ACF) two-bay covered hopper tooling and features a plastic body; a mix of molded and separate, factory-applied parts; and 33" metal wheelsets. The car is offered in open- and closed-side versions.

Our sample is decorated as Atchison, Topeka & Santa Fe No. 177756, part of the railroad's 176900 through 177861 series of ballast hoppers. These weren't new cars, though. Instead, Santa Fe rebuilt two-bay covered hoppers from the GA-88, GA-101, and GA-105 classes between 1974 and 1985. Car No. 177756 was originally ATSF No. 87668, a class GA-101 car built by Pullman-Standard under Lot 8318A in mid-1956.

During the rebuild, the roof was removed, box tube reinforcement was added along the top edge of the car, and four Morrison-Knudsen 42" ballast doors were installed. Car 177756 kept its high brake wheel after the rebuild.

I compared the Bowser ballast hopper to a kit version of its ACF two-bay covered hopper to see how the tooling was modified. Starting at the top of the car, a partial peaked roof was added to both ends. There's rivet detail along the top edge of the roof closest to the interior.

A one-piece plastic ballast load, painted gray, fills the interior. Because the partial roof pieces are glued in place, there's no way to remove the load without damaging the model. The steel weights and weight retainers are concealed by the load.

Like the covered hopper, the end cages on the ballast hopper have molded posts, ladder rungs, and grab irons. The brake wheel is a factory-applied part.

The A and B ends of the car are fitted with a separate end brace. Freestanding brake details on the B end include the air reservoir, brake cylinder, brake lever, and control valve.

The biggest change to the tooling was on the underbody. To accommodate the four ballast doors, the hopper bays were shortened by approximately $\frac{5}{16}$ ". They now end about $\frac{1}{16}$ " short of the bottom of the sills. The ballast doors are part of plastic pieces attached to the bottom of the car.

Other underframe details are carry-overs from the covered hopper. The center sill, body bolsters, bolster blocks, draft-gear boxes, and end braces are part of a single plastic casting. The inner braces between the ballast doors are separate parts. The draft-gear box covers and roller-bearing trucks are secured with Phillips-head screws.

The Mineral Red paint on our sample is smooth and evenly applied. All of the lettering is crisp and opaque. The reporting mark, road number, and capacity data should all be moved one panel to the right. Some stencils, like the operating instructions on the sides and the reporting mark and road number on the ends, were omitted.

The Bowser ACF car is a reasonable stand-in for the Santa Fe ballast hopper, which was built from a PS covered hopper. The model more closely matches cars decorated for Denver & Rio Grande Western, Louisville & Nashville, Maine Central, and Seaboard Coast Line.

Facts & features

Price: \$29.95

Manufacturer

Bowser Manufacturing Co. Inc.
1302 Jordan Ave.
Montoursville, PA 17754
bowser-trains.com

Era: early 1980s to present (as decorated)

Road names: Atchison, Topeka & Santa Fe (two paint schemes); Dakota, Minnesota & Eastern; Conrail (two schemes); Denver & Rio Grande Western; Erie Lackawanna; Louisville & Nashville; Maine Central; Morrison Knudsen; Ontario Northland; Penn Central; Reading & Northern; and Seaboard Coast Line. Three to four road numbers per scheme.

Features

- 33" metal wheelsets
- Body-mounted plastic couplers
- Weight: 2.9 ounces (.4 ounce too light per National Model Railroad Association Recommended Practice 20.1)

For real-world testing, I put the ballast hopper in a train on our Wisconsin & Southern layout. The car performed without issue while being pushed and pulled in a train. The car will comfortably navigate 18" radius curves.

I like to see manufacturers be creative with existing tooling, and the Bowser 70-ton two-bay ballast hopper is a great example of that. The maintenance-of-way car would look good parked on a siding, in a work train, or with a cut of other ballast haulers in a freight train. – Cody Grivno, senior editor



Rapido Trains HO AutoFlood III coal hopper

A FreightCar America AutoFlood III coal hopper has joined the ever-growing lineup of HO scale freight cars from Rapido Trains. The modern era car features a die-cast metal frame and floor, etched-metal see-through crossover platforms, and interior rivet detail.

Rapido Trains offers the AutoFlood III in eight contemporary paint schemes. For this review, I'll focus on our sample decorated for BNSF Ry. Car No. 652973 is part of the railroad's 652829 through 653348 series, produced by FreightCar America at the builder's Roanoke, Va., plant in July 2006 under Job 1466-110.

The 4,200-cubic-foot capacity coal haulers can be unloaded in rotary dumpers or using the automatic discharge doors. Sales literature from FreightCar America notes that the AutoFlood III cars have a MegaFlo door system, which "uses tension rather than compression to keep the doors locked over center." This eliminates the need for regular door adjustments.

The five-bay car has a trio of double-door pockets in the middle and single-door pockets on each end. Steep slope sheets and a relatively smooth interior further expedite bottom unloading.

The Rapido hopper features a clever design. Instead of using a one-piece body, the slope sheets and hopper bays are a single die-cast metal piece that form the car's core. This also accounts for most of the model's weight. The plastic sides and end cages are separate pieces attached to that.

As you'd expect of a Rapido model, the AutoFlood III hopper is detailed

inside and out. The interior has rivet detail and separate, factory-applied cross braces. A removable coal load, molded in black plastic, has a metal plate on the bottom. A magnetic wand, like those included with Rapido's passenger cars, is included for removing the load.

The end cages have molded rungs, posts, and stirrup steps, complemented with wire grab irons. Other end details include uncoupling levers (with the handle picked in white paint) and separate air and brake piping. The B end features a freestanding brake wheel and related brake appliances.

Underneath, a one-piece plastic casting with the center sill and draft-gear boxes spans the car's centerline. The hopper bays are equally well detailed, with numerous factory-installed plastic parts. The car is fitted with Barber S-2 100-ton trucks and 36" metal wheelsets. The reporting mark and road number are printed on the sideframes.

Our sample is neatly painted aluminum with Mineral Red panels on the rotary end. The lettering placement matches prototype photos of cars from the same class that I found online. All but the smallest printing in the red boxes is legible. The job number and build date are accurate to the road number. Nice attention to detail!

I compared the model to data published on the FreightCar America website. The AutoFlood III closely follows prototype drawings.

I put the three samples we received in a train on our Milwaukee, Racine & Troy staff layout. The cars all ran without incident. The manufacturer notes that while

Facts & features

Price: Single car, \$59.95; six-pack, \$359.70

Manufacturer

Rapido Trains
500 Alden Rd., Unit 21
Markham, ON L3R 5H5
Canada
rapidotrains.com

Era: July 2006 to present (as decorated)
Road names: BNSF Ry., Carolina Power & Light (PGNX reporting marks), CIT Group (CEFX marks), Indiana Rail Road ("2,000,000th carload" slogan, one number), GATX Corp. (GGPX marks), Union Pacific (CMO marks), and Western Resources Inc. (KPLX marks). Multiple numbers per scheme unless noted.

Features

- 36" metal wheels
- Body-mounted metal couplers
- Weight: 5.3 ounces with load (1 ounce too heavy per National Model Railroad Association Recommended Practice 20.1)

the car will run on 18" radius curves, the wheels may rub slightly on the underbody. The car will look and run better on 20" or greater curves.

FreightCar America AutoFlood III coal hoppers can be found on virtually every Class I railroad today. Rapido makes it easy to build a unit train with single cars and multiple six-packs. A string of these behind some modern road locomotives would be an impressive sight. – *Cody Grivno, senior editor*

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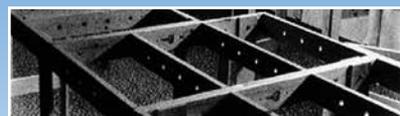
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WalthersMainline HO scale Horizon coach

A new run of Amtrak Horizon fleet coaches has been released by Wm. K. Walthers in its WalthersMainline series. The HO scale models feature a revised body, improved underbody, and new details not found on previous releases.

As Amtrak was expanding service in the late 1980s, it needed short-distance passenger cars to supplement the existing Amfleet cars already in service. The answer for this need was Bombardier and the carbuilder's adaptation of the Comet I commuter coaches. Bombardier purchased the rights to the Comet design in 1982 and modified it for intercity service. All 104 cars were delivered between 1989 and 1990. The rapid delivery was made possible because of the existing design.

The modifications included new General Steel Industries GSI-G70 trucks, which are also used on Superliner IIs. In addition to new trucks and a higher maximum speed, 10 cars were given an all-table dining configuration and eight were fitted with table seating on one end and business class seating on the other. Almost all of the coaches have been rebuilt as Americans with Disabilities Act (ADA)-compatible cars, and 11 of the food service cars have been rebuilt with new configurations. Many of the original 104 cars are still in service, with several operating out of Chicago on regional trains such as the *Hiawatha* and Michigan Services.

The newest release of Horizon coaches features a revised body with molded drill starter points for modeler-installed grab irons, found in the Horizon Fleet Car Detail Kit (no. 910-202). Our sample is a coach decorated in Amtrak's phase 3 paint scheme. Walthers sells Horizon cars in phase 4, phase 6 with the Travelmark herald, and painted silver but unlettered. Walthers also offers food service cars in the same schemes.

In addition to a revised body, the car features mounting points for a separately available lighting kit, factory-installed end diaphragms, modeler-installed close-coupling drawbars, and an improved underbody with center sill crossmember details.

The underbody equipment and its placement matches photos of phase 3 Horizon coaches. While the windows are tinted, they lack black weather seals. The interior seats are visible through the tinting material. Our phase 3 coach is fitted with 82 seats.

Phase 3 Horizon cars feature manual sliding doors on both ends that are accurately represented. The prototype also utilizes folding step traps on each side of the vestibules to be able to serve both high and low platforms. The steps modeled on this car lack prototypical tread detail and are in the folded down position. The ends of the car have vestibules with operating diaphragms and interior doors. However, the car lacks train line and head-end power hoses and receptacles as well as red marker lights.

Our Horizon coach's dimensions are close to those listed in Amtrak's 2013 *Station Program and Planning Guide*. With the close-coupling drawbar installed, the coupler is at the correct height. Without the factory-installed drawbar, the coupler is about 2mm lower than National Model Railroad Association S-2 coupler standards. The car rides on prototypical GSI-G70 roller-bearing trucks with correctly gauged 36" metal wheels on plastic axles.

The car is finished in a smooth silver paint. The red, white, and blue phase 3 narrow stripes are evenly applied. Full-size phase 3 Horizon coaches featured Amtrak lettering, the class designation, and road number on the carbody. The lettering and class designation are printed on the model. A sheet of decals is included for adding the road number.

Facts & features

Price: \$49.98

Manufacturer

Wm. K. Walthers Inc.
5601 W. Florist Ave.
Milwaukee, WI 53218
walthers.com

Era: 1989 to present

Road names: Amtrak (phase 3, 4, and 6 paint schemes). Also available painted silver but unlettered.

Features

- Available as coaches or food service cars
- 36" metal wheels, in gauge
- Proto-Max metal couplers, mounted at correct height with close-coupling drawbars installed
- Improved underbody with center sill crossmember details
- Interior seats and factory-installed diaphragms
- Starter points for grab irons and mounting points for lighting kit, both sold separately
- Weight: 7 ounces (.25 ounces over NMRA RP-20.1 recommended weight)

Horizon coaches have an interesting combination of smooth sides and a fluted roof, and this car accurately captures that look. In addition to a fluted roof, the roof vents are properly located, and the rivets and placard brackets are correctly positioned on the ends of the car.

If you model the United States within the past three decades, the Horizon Fleet coach from WalthersMainline is a perfect fit for your layout. The prototypes have been in service on trains from the *Three Rivers* to the *Kentucky Cardinal*. This model looks good straight from the box but leaves opportunity for upgrades with detail parts and interior lighting.
– Bryson Sleppy, associate editor

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A scene on Tim Neale's Lemmington Park. Photo: Geoff Hellivell.



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The vocabulary of railroading

Picture yourself in a setting in which you're a newcomer. A group welcomes you, but the conversation tosses around indecipherable terms and it's awkward to ask what they mean. I remember rubbing elbows my first time at an operating session. Everyone accepted me graciously, but I might just as well have joined a squadron of Navy fighter pilots absorbed in the details of snagging a tailhook in a night landing on a carrier.

If you're eager to join an operation but unfamiliarity makes you hesitate, here's some vocabulary work to calm the first-time jitters. One definition the *Merriam-Webster* dictionary gives is "the body of words used in a particular field." Contrast this with slang. I'll argue that the words used in this sense have definitions and slang is associated with words. So, engineers and cabooses (words) can be hogheads and crummies (slang). There's no slang in rulebooks, which rely on precise definitions. Try out these few definitions I selected.

Engine: A unit propelled by any form of energy, or a combination of such units, operated from a single control, used in train or yard service.

Train: An engine, or more than one engine coupled, with or without cars, displaying markers.

Regular train: A train authorized by a timetable schedule.

Extra train: A train not authorized by a timetable schedule.

Timetable: The authority for the movement of regular trains subject to the rules. It contains the classified schedules with special instructions relating to the movement of trains.

Schedule: That part of a timetable which prescribes a regular train's class, direction, number and movement.

These definitions come from a mid-20th century edition of the Standard Code of the Association of American Railroads. However, all are very similar to the Code's earliest 20th-century editions. They are also recognizable, if not identical, to definitions of the same terms in the General Code of

Operating Rules (GCOR) and Northeast Operating Rules Advisory Committee (NORAC) rulebooks in wide use today.

It's time for some discussion. "Engine" provides for multiple-unit operation and unwittingly predicts the use of distributed power.

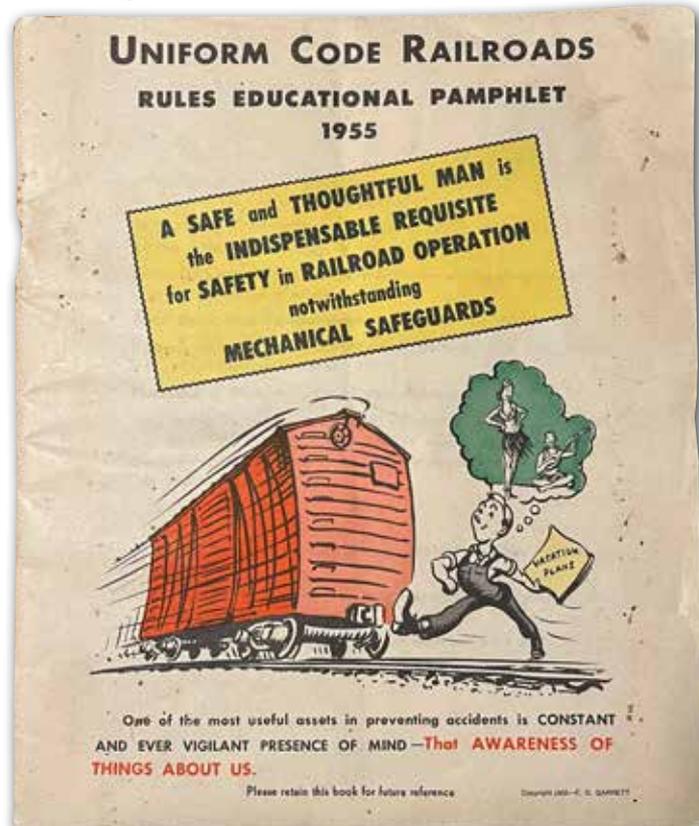
"Train" allows for more than one engine, as with a steam-era double-header or any era's helpers and pushers. "Train" has another important qualifier, "marker."

NORAC rule 24 and GCOR rule 5.10 specify that a marker, a red flag or lamp, must be at a train's end. Simplified for model railroads, it can be a caboose behind a freight. However, modern electronics can put light-emitting diode markers on any train, including engines running light without cars. Engines or cars without markers are not trains.

"Timetable" is the TT part of timetable and train order (TTTO). It refers to an employee timetable, not one issued for use by the traveling public. It may or may not contain schedules. A lightly used branch or a short line may see only unscheduled extra trains. However, a timetable always contains special instructions and other information such

as stations and their mileposts, passing siding capacities, and speed limits. Some model railroad employee timetables are bound booklets, authentic versions of their prototypes. A table displaying schedules and carefully chosen special instructions printed on a single sheet of paper does the trick, too.

Let's skip back to "extra train." How is one authorized, if not by timetable? Here's the TO part of TTTO:



This Rules Educational Booklet from 1955 in Jerry's collection describes the Uniform Code rulebook in full, in layman's language. Jerry Dzedzic photo

a train order. Think of these words by reversing them: a train order is an order to a train. A schedule allows a regular train to move but an extra can't move unless it has a train order stating, for example, ENG 261 RUN EXTRA PEWAUKEE TO MILWAUKEE.

These few terms are a good start on a full vocabulary. Expanding it can be less intense than studying a rulebook or Peter Josserand's *Rights of Trains*. The photo shows a 62-page pamphlet, a joint effort of the Uniform Code railroads, among them Texas & Pacific, Katy, Rock Island, Missouri Pacific, and Cotton Belt. It's well-illustrated and easy to read, an excellent operating rules primer I found on an internet auction site.

New railroaders hit the books hard to learn the craft, but a hospitable host won't be so demanding. Accept the invitation, enjoy the session, work on vocabulary, and begin a deeply satisfying learning journey. What are hobbies for, after all? **IMR**



THERE'S NO SLANG IN RULEBOOKS, WHICH RELY ON PRECISE DEFINITIONS.
- JERRY

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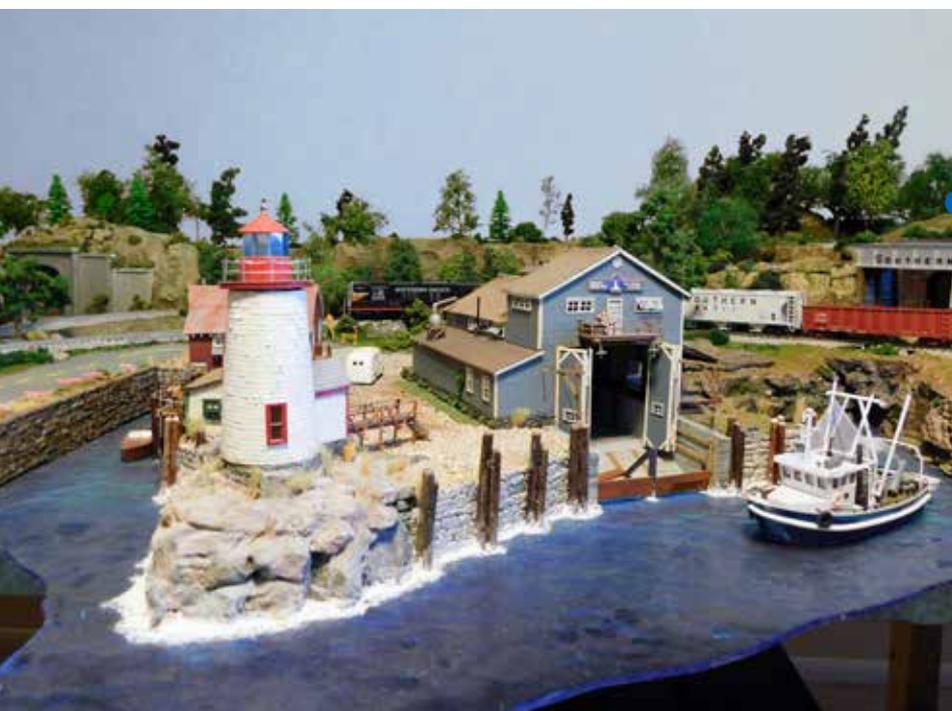
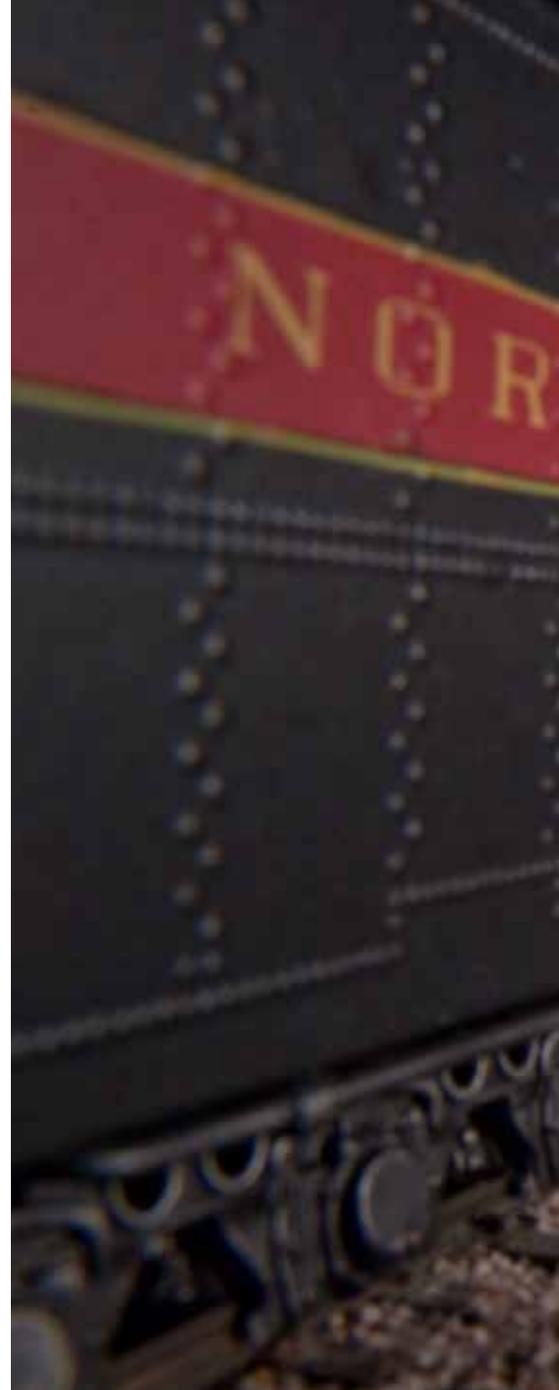
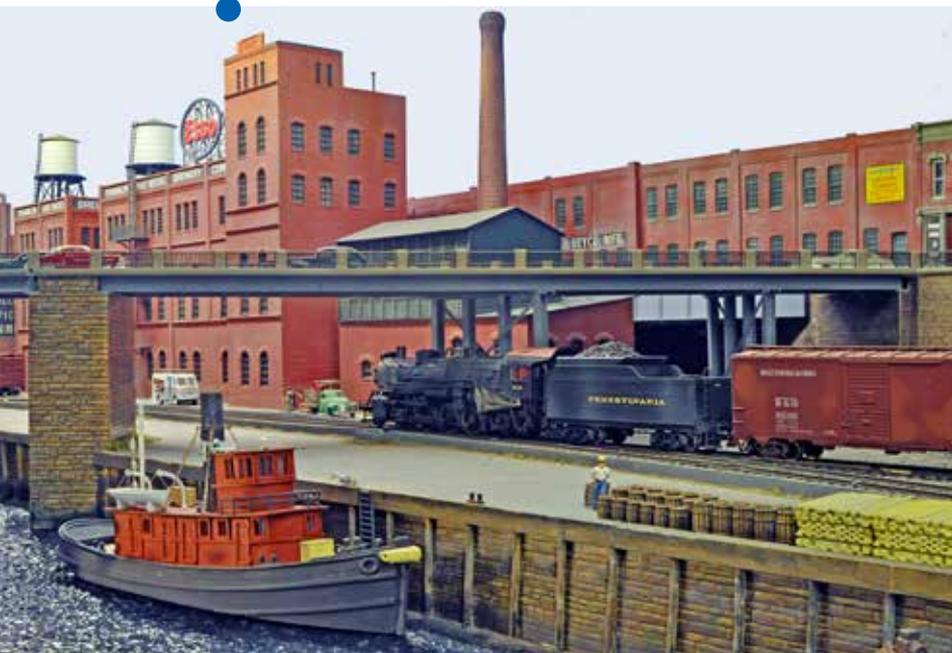


Conducted by Steven Otte

It's an overcast morning in Kingfield, Maine, and the enginehouse crew is up bright and early to make sure that Sandy River & Rangeley Lakes Forney No. 6 is ready to roll for a day's work. The scene takes place on Lou Sassi's On30 scale SR&RL layout, which was featured in *Great Model Railroads 2020* (and numerous how-to articles in MR). Lou shot the photo. His wife, Cheryl, scratchbuilt the layout's many trees.



Pennsylvania RR No. 9630, a USRA light Mikado, guides its freight train through dockside trackage in Port Trenton, N.J., on its way to switch the Franklin & Weiss Brewery in the background. The HO scale scene is the work of Mike Tricker, from Ashford, U.K. The locomotive is a Trix model that Mike lightly weathered. The brewery is a Heljan kit. Mike shot the photo.



Southern Pacific No. 5325, an Electro-Motive Division SD7, pulls its freight train past the wharf district at Danzburg while a fishing trawler brings in the day's catch. David Bartholomew of Houston photographed the scene on the HO scale Danzburg & Willoughby RR, which was built by David and his friend Daniel Cleveland. The structures in the harbor scene are all from Builders in Scale's Tidewater Wharf kit.



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In a shot reminiscent of the work of famed Norfolk & Western photographer O. Winston Link, the tower operator gives the highball to a westbound N&W passenger train at Forest, Va. Gary Hoover of Florissant, Mo., photographed the night scene by “painting” the locomotive with a small light fixture during a two-minute camera exposure. The locomotive is a Key brass import that Gary painted and decaled. The operator’s lantern is a 1.5V micro-bulb attached to the figure’s hand. The depot is scratchbuilt.

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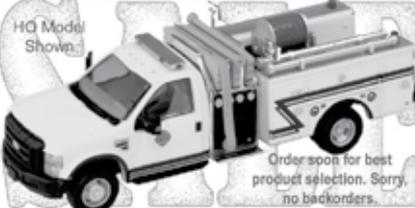
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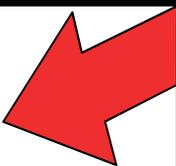


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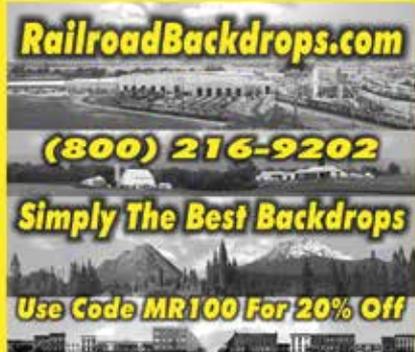


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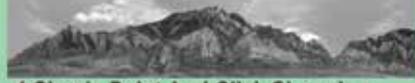
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Schedule of Events

CO, DENVER: Rocky Mountain Train Show. April 1-2, 2023. National Western Complex, 4655 Humboldt St., Denver, CO 80216. Saturday, 9:00am-5:00pm, Sunday 9:00am-4:00pm. 3 acres of model trains, all scales, 30 layouts, 700 sales tables, clinics and more. Admission \$13.00, under 12/scouts in uniform FREE. Discounted tickets available for military/first responders through VetFix.org. Free Parking. 303-364-0274, www.RockyMountainTrainShow.com

CT, ANSONIA: Classic Shows, LLC will hold a Train and Toy Show on Sunday, May 7, 2023, from 9:00am-2:00pm at Warsaw Park, 119 Pulaski Hwy (Route 243), Ansonia, CT 06401. Admission \$6.00, children 15 and under are free with an adult. For information, please call 203-926-1327 or go to: www.ClassicShowsLLC.com

FL, CRYSTAL RIVER: Regal Railways presents Toy Trains & Hobby Show. Florida National Guard Armory, 8551 W. Venable St., Crystal River, FL 34429. Saturday, April 29, 2023, 9:00am-2:00pm. Admission: \$6.00 adults, children under 12 free. Vendors and operating layout. Lunch items available. Contact Joe: 727-244-1341 or visit www.regalrailways.com for more information.

FL, PINELLAS PARK: Suncoast Model Railroad Club Train Show/Open House. Saturday, April 1, 2023. SHOW- New venue! Pinellas Performing Arts Center, 4951 78th Avenue N., Zip: 33781. 9am-3pm. Admission: \$7.00, Children \$2.00, under 11-free. Free parking. Food/snacks. Tables: Hugo Sacco: saccohugo459@gmail.com OPEN CLUB HOUSE- 12355 62nd Street North, Suite A, Largo, FL 33773. Admission: FREE. www.suncoastmrrc.com

IL, COLLINSVILLE: 16th Annual St. Louis Railroad Prototype Modelers meet. Gateway Convention Center, July 28-29, 2023, Friday 9:00am-9:00pm and Saturday 9:00am-5:00pm. Admission: \$35.00 for both days; \$25.00 for Saturday only. For information, www.stlrpm.com or Contact: Lonnie Bathurst at bathurst@litchfieldil.com or 217-556-0314

IL, LENA: Depot Stove Gang 33rd Annual Model Railroad Show and Swap Meet. March 18 & 19, 2023. 10am-4pm both days. Lena-Winslow Elementary, Junior & Senior High Schools. 401 Fremont Street, Lena, IL 61048. Over 26,000 sq.ft. Operating exhibits, vendors, and food. Free parking. Info: Roger Schamberger 815-238-7888 or email: depotstovegang@gmail.com

IL, URBANA: Lincoln Square Train Show, 100 W. High St., Urbana, IL 61801. March 25-26, 2023. Saturday 10am-5pm, Sunday 11am-4pm. Hosted by Illinois Terminal Division, NMRA. FREE public admission. Display layouts in multiple scales. Free parking and wheelchair accessible. Refreshments available. Vendor table info at http://itd.illinoisterminaldivision.org/show/show.htm or via: trainshow@illinoisterminaldivision.org

IN, PERU: Miami County Model Train Show and Swap Meet. Saturday, April 8, 2023, 10:00am-3:00pm EST. Miami County Fairgrounds, 4-H Project Building, 1029 W 200 N, Zip: 46970. All scale trains, books, and memorabilia. \$3.00/person. 6 and under free. Free parking! Vendor tables \$20. Questions, contact Paul Forman at 765-432-1052.

MI, KALAMAZOO: Annual Spring Swap Meet. Kalamazoo County Expo Center, 2900 Lake Street. Saturday, April 1, 2023, 10am-3pm. Admission \$3.00; Children 12 and under free (when accompanied by an adult). Operating layouts, vendors, railroad memorabilia, model trains, accessories. Concessions, free parking and more! Presented by Kalamazoo Model Railroad Historical Society. Contact: David Hayes-Moats, 269-344-0906, www.kmrhs.org

MN, ST. CLOUD: Granite City Train Show and Sale. River's Edge Convention Center, 10 4th Avenue South. Saturday, April 15, 2023, 9:00am-3:00pm. \$6.00, kids 10 and under FREE! Buy/sell model/toy trains, books, videos, railroad collectibles. Operating model & toy train display. Win a LIONEL train set! 320-255-0033; edwarddolson@cloudnet.com or www.GraniteCityTrainShow.com

MN, WOODBURY: Newport Model RR Club Train Flea Market. Woodbury High School, 2665 Woodlane Drive, Woodbury, MN 55125. Saturday, April 15, 2023, 9:00am-2:00pm. Admission \$5.00. Club Address: Newport Train Club, PO Box 0061, St. Paul Park, MN 55071. Contact: Don, 763-257-5443

NC, GREENSBORO: Train Show. Lewis Recreation Center, 3110 Forrest Lawn Dr. Greensboro, NC 27455. March 25-26, 2023. Saturday 9:00am-5:00pm & Sunday 10:00am-4:00pm. Admission \$10 (includes both days), \$1 off with flyer, children under 12 free with adult. Visit us: www.carolinamodelrr.org. Contact Kenn at kcassell@twc.com or call 336-501-0233

NC, HICKORY: 21st Annual NC Railroad Expo. Hickory Metro Convention Center. Friday, March 31, 2023, 12:00pm-7:00pm and Saturday, April 1, 2023, 9:00am-4:00pm. Admission \$5.00, children under 12 free with paid adult. Contact: Newtondepotauthority@gmail.com

NH, DOVER: The Great Northern New England Spring Train Show. Dover Lodge of Elks #184, 282 Durham Road, Dover, NH 03820. Saturday, April 1, 2023, 10:00am-3:00pm. Admission: \$5 per person, children under 12 free. Exhibitor tables \$35, includes entrance fee. All scales, operating layout, railroadiana items, and food on premises. Contact Ed Martin, efmenter@aol.com or 603-362-4300

NJ, BRICK: ECTP and Collectibles LLC presents The Brick Train Show. Elks Lodge, 2491 Hooper Avenue, Brick, NJ 08723. Sunday, March 19, 2023, 9:00am-2:00pm. Admission: \$7.00; under 12 free with adult. John LaLima 732-845-5966. Go to www.eastcoasttrainparts.com and click on The Brick Show.

NJ, WAYNE: ECTP and Collectibles LLC presents The Wayne Train Show. P.A.L. Hall, 1 Pal Drive, Wayne, NJ 07470. Sunday, March 26, 2023, 9:00am-2:00pm. Admission: \$7.00; under 12 free with adult. John LaLima 732-845-5966. Go to www.eastcoasttrainparts.com and click on The Wayne Show.

OK, BIXBY: UPDATE-CANCELED. Greater Tulsa Area Train Show. Bixby Community Center, 211 N. Cabanis Avenue, Bixby, OK 74008. Saturday, April 1, 2023, 9am-3pm. Admission: \$5.00 adults, under 18 free w/ paid adult. Buy/Sell/Trade. Operating train layouts and door prizes. Concessions available. For further information visit: www.ttos-soonerdiv.org

PA, HAWLEY: Model Train Show & Sale. Hawley Fire Department, 17 Columbus Ave., Hawley, PA 18428. Sunday, April 16, 2023, 9:00am-2:00pm. Admission \$3.00, under 12 free with adult. Bill Delling, 618 Fern St., Hawley, PA 18428, 570-226-3206.

PA, MONACA: Beaver County Model RR Spring Train Show & Sale. Monaca Turners, 1700 Old Brodhead Road. Sunday, April 2, 2023, 10:00am-3:00pm. Adults \$5.00, under 12 free. All scales, 50/50 raffle, food, fun for the whole family! Sponsored by Beaver County Model RR & Historical Society. Contact: Walt Steiner, 724-843-3783 or www.bcmrr.raifan.net or beaverctymrr@gmail.com

PA, YORK: All Gauge Train Show. April 17-19, 2023. Monday 8am-5pm, Tuesday 8am-5pm, Wednesday 8am-2pm. Wyndham Garden Hotel, 2000 Loucks Rd., York, PA 17408. 175 indoor tables, with an additional 150 outdoor vendor spaces available. Free admission (rain or shine). Vendor info, contact: Chuck Janiga, 716-390-8216, chucktrainroom@live.com

WA, CHEHALIS: Lewis County Model Railroad Club. Annual Spring Train Show and Swap Meet. Southwest Washington Fairgrounds, Blue Pavilion Building, 2555 N. National Ave., Chehalis, WA 98532. April 1-2, 2023. Saturday 10:00am-4:00pm and Sunday 10:00am-2:00pm. Admission \$5.00. Free parking. Contact information: Ted, 360-985-7788, or email: TedsTrains@LewisCounty.com

WI, LA CROSSE / ONALASKA: La Crosse & Three Rivers Railroad Club's 42nd Annual Model Railroad Show. Omni Center, 255 Riders Club Road, Onalaska, WI 54650. March 18-19, 2023. Saturday 9:00am-5:00pm, Sunday 10:00am-3:00pm. Adults \$8.00, \$7.50 with a non-perishable food item, children 11 and under free w/ adult. Info: Belva Thompson, 608-780-7364

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

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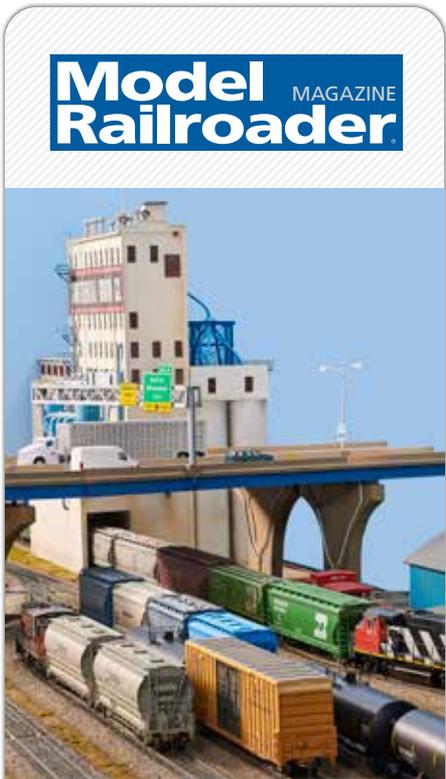
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The Someday Central



The term “vaporware” could have been coined to describe the dreams of grandeur closely held by modelers who are absolutely, positively going to build the Someday Central. Someday.

Photo illustration by Tony Koester

“It’s great to see you again!

How’s the Someday Central coming along? Is it running yet?”

“Well, I have been giving it a lot of thought lately. I see that a model manufacturer has announced that they are thinking of producing second-generation Geeps lettered for the SC. That’s exciting news.”

“I thought you had quite a few locomotives already.”

“Well, yes, I do. None of them have been painted and lettered yet. I need to get a paint spray booth and an air brush.”

“You could test run your railroad as each section comes on line using any old locomotive, right?”

“Well, right. But I’m really looking forward to the day when I can run 30-car trains behind a consist of GP30s, all painted and lettered for the Someday Central and equipped with DCC sound decoders.”

“So you finally decided on which DCC system to buy?”

“Well, no. But I have it narrowed down to three or four manufacturers. I may decide to use radio throttles. And I’ve been reading about the developments using battery power.”

“Me too, but installing the new ‘keep-alive’ super capacitors to keep the locomotive running over dead frogs and dirt spots has been working really well on my railroad. Last time we talked, you were planning a test section to develop your track-laying skills, do some trial scenery, add a structure or two. How is that coming along?”

“Well, I couldn’t decide which part of the Someday Central I’d really like to model. It’s such an interesting railroad with lots of interesting scenery and structures to model.”

“But don’t forget that the enjoyment of building scenery or a structure can be

fleeting. Once it’s done, it’s done. You can’t sit around staring at it for weeks and months and years on end. The part of the railroad you choose to model should be chosen as much for its operating potential as for its scenic attributes.”

“Well, I guess you’re right. Maybe I should get copies of those books you recommended and join the Someday Central Historical Society. I hear they now have an online modeling magazine. I hope it’s free.”

“Supporting the historical society

that’s documenting your favorite railroad sounds like a good investment to me. The dues are probably less than a good dinner.”

“Well, I suspect you’re right about

that. But it just seems that everyone expects me to pay for everything these days. I can probably find information on their website and Wikipedia for nothing. And I used to be able to buy a box-car kit for four bucks and a decent locomotive for \$25 or so. Of course, it wasn’t lettered for the Someday Central, and it wasn’t detailed correctly. The electrical pickup wasn’t too hot, either, now that I think about it. No DCC, either. But it was cheap.”

“So, assuming that rumor about someone producing a GP30 detailed, painted, and lettered for the Someday Central comes true, what’s your projection for having a place to run it?”

“Well, that depends on whether I can get some help building the railroad. I can’t do it all myself, you know.”

“There are a lot of modelers in your area, some of whom are NMRA Master Model Railroaders. Part of being an MMR is agreeing to help other modelers achieve their goals. All you have to do is ask. You can find those folks at your Division meeting or Region convention.”

“I guess you’re right. Do I have to join the NMRA?”

“Let me see whether I can round up a few volunteers.

When will it be convenient for you to hold work sessions?”

“Well, let me think about that. I’d hate to have them telling me what to do on my railroad. I want to get my layout running the way I have it all figured out. I’d hate for folks to mess up my plans.” **MR**

“WELL, NO. BUT I HAVE IT NARROWED DOWN TO THREE OR FOUR MANUFACTURERS.” —TONY



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NORFOLK SOUTHERN #9256 (Operation Lifesaver)
Item No. 90903

NORFOLK SOUTHERN #9252 (Operation Lifesaver)
Item No. 90908



UNION PACIFIC® #9599
Item No. 90904

UNION PACIFIC® #9807
Item No. 90909



SANTA FE #625 (Gull Wing Cab)
Item No. 90910

SANTA FE #635 (Gull Wing Cab)
Item No. 90905



Features include:

- advanced nonproprietary plug-and-play circuit board to accommodate the control system of your choice, including conventional DC power, NMRA/NEM DCC, and/or RC operation
- 1:29 scale, 45mm gauge
- performs best on 10' diameter curves or greater
- operating diesel smoke unit
- white LED directional headlights and ditch lights
- lighted front number boards
- interior cab lighting and interior cab detail
- lighted porch, walkway, and step lights
- opening side windows
- engineer figure in cab
- windshield wipers, see-through steps, and MU hose detailing
- operating AAR knuckle couplers
- factory-installed speaker with wire pigtail to allow for easy installation of aftermarket sound
- power cables on each end to allow for battery operation or RC control from trailing car
- length: 32"

Preproduction Union Pacific sample shown.

Shipping Now • MSRP: \$1499.00 each

Bachmann Industries, Inc. • 1400 East Erie Avenue • Philadelphia, PA 19124 USA • www.bachmanntrains.com

