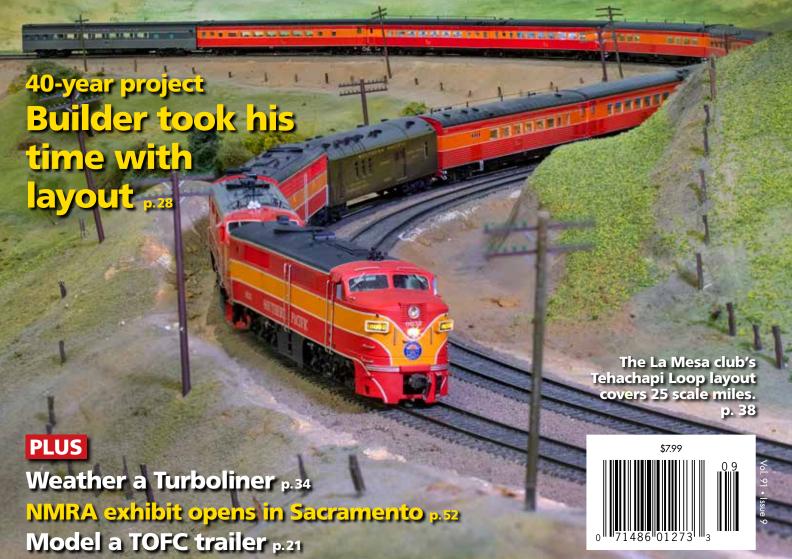
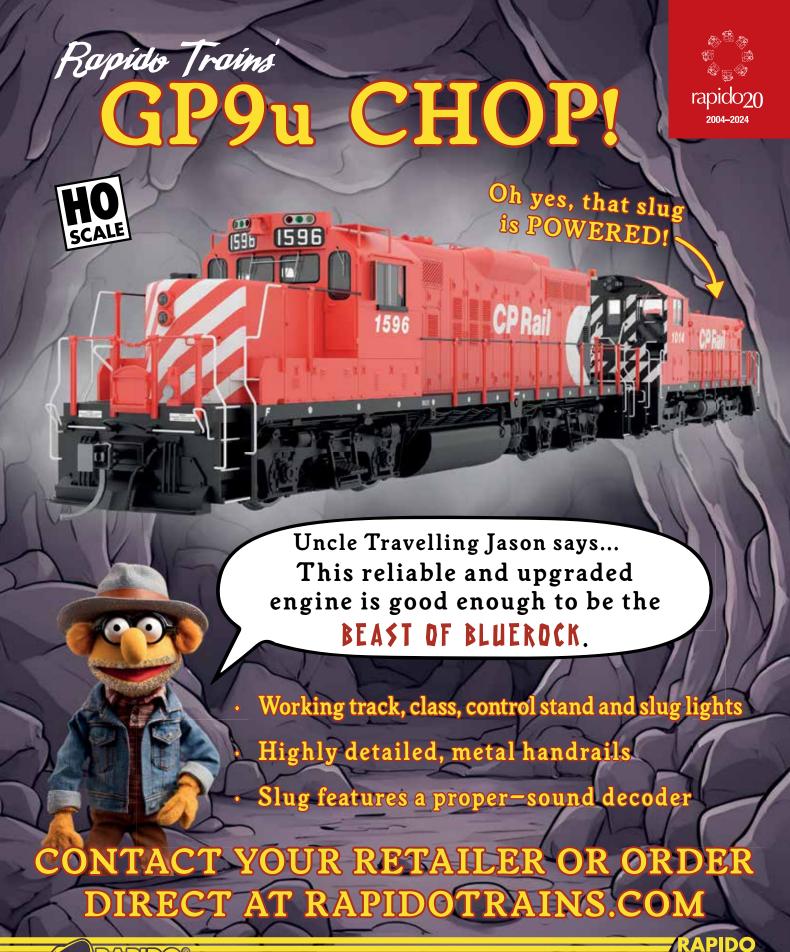


# Mega project update

The La Mesa crew has reached the Tehachapi Loop as progress continues on this Southern California masterpiece p.38

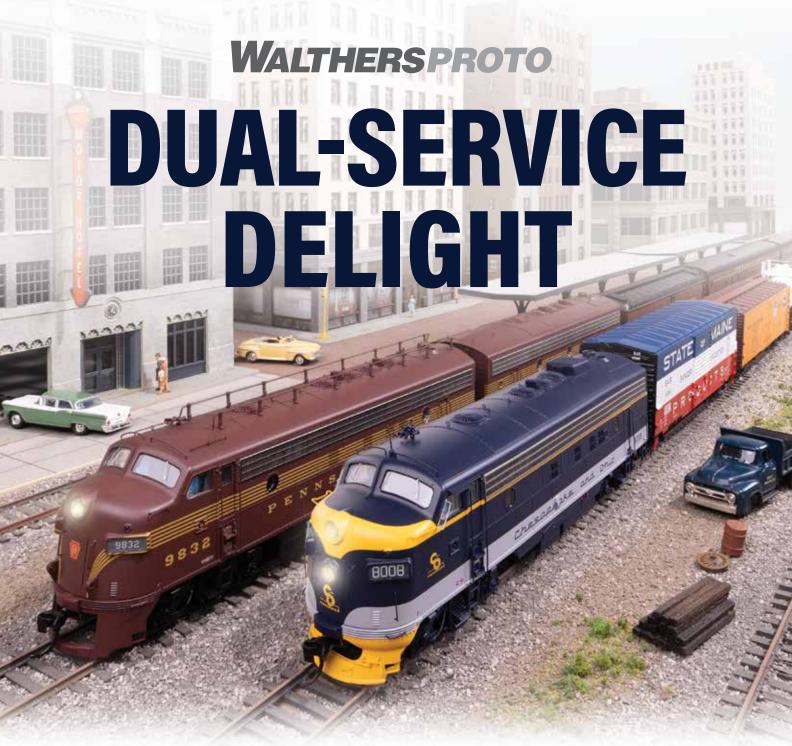




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#### **WalthersProto EMD FP7 Locomotives**

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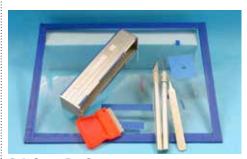


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On the cover: A Southern Pacific passenger train winds its way through Tehachapi at the La Mesa Model Railroad Club. Tom Danneman photo



#### **Next issue**

In October, learn how to scratchbuild a barn in N scale. Plus, visit a club layout, build a roll-on/ roll-off display case, see two Florida East Coast track plans, and more!

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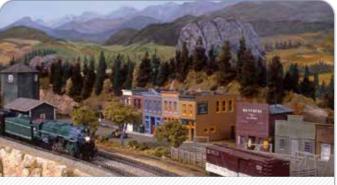
ATLAS MODEL RAILROAD CO, INC. • 378 Florence Ave., Hillside, NJ 07205 • www.atlasrr.com

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#### Rapido Trains N scale Turboliner review

The Rapido Trains N scale Turboliner, based on the Rohr Industries prototype from the mid-1970s, recently paid a visit to our Milwaukee, Racine & Troy State Line Route layout. Join Senior Editor Cody Grivno as he shares a brief history of the RTL Turboliner trainset, points out the details on a 5-car set, and demonstrates the various light and sound functions. Scan the QR code above to watch this review and more only on Trains.com.



# Jack Routledge's HO scale Alberta Pacific Ry.

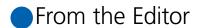
As part of our 90th anniversary celebration, we're featuring never-before-published articles from our archives on Trains.com. Jack Routledge's HO scale Alberta Pacific Ry. is one of those stories.

Jack's retirement home was designed to include a 16 x 25-foot train room where he could create realistic scenes featuring small towns, trackside structures, and industries similar to those found in Western Canada.





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# **Building the stuff of fantasies**

#### The La Mesa Club's

Tehachapi Loop layout is big. Really big. It's the kind of thing you might have dreamed up as a teen when anything seemed possible.

It's not *just* double-decked, it's two stories. It has grades steep and long enough you need helpers or your train won't make it to the top. It's large enough that the dispatcher has time to write train orders that work to control the flow of traffic, without using a fast clock.

It may even be an answer to the million-dollar layout that Linn Westcott dreamed up more than half a century ago (search "million dollar layout" on Trains.com).

But no one has room for a layout the size of La Mesa's in their home. I'm writing this from a hotel in England after meeting and interviewing Rod Stewart about his U.S. prototype layout. Sir Rod's

layout is large, but even though it has its own building, multi-millionaire rock stars aren't building multistory model railroads that need more than a quarter of a mile of track to get from one end to the other. (Yes, we'll have an update on Sir Rod's **Grand Street & Three Rivers** City model railroad in an upcoming issue.)

So, what of the dream? In the story on our website, Lance Mindheim, a professional layout builder, says the goal should be to build something manageable. Now, if you can wrangle more than 100 modelers in a club to hew to a specific vision, and you can convince the government of a major city to grant you significant space at an affordable rate for more than 40 years, you too might be able to build a rival to the Tehachapi Loop. But would you be happy?

Lance points out that when a layout gets larger, either the time to build it increases, or the level of quality and detail decreases (assuming you don't have 100 friends to build and administer the project).

It all flows back to layout designer John Armstrong's "givens and druthers" concept. There are things you can't, or don't want to change, the givens, and things you'd like, but could compromise on, the druthers. Getting that balance correct is what makes for a successful layout project.

The La Mesa Club has a large membership, plenty of space, and the organization to keep the project going over 40 years and more.

Emory Luebke is another person with a layout project that's taken more than 40 years to get to its present condition. He took a much more hands-on approach to build



his Winnebago Rapids & Northern. It's a more modest 14 x 18-foot layout with handlaid track. He runs it pointto-point to scratch his operations itch, but it can also run continuously for display. He hasn't needed a crew of more than 100 to build the layout, but he's having fun.

In the end, that's the best realization of any fantasy.



# Model railroading is fun!

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General Motors Diesel GP9RM mother and slug diesel locomotives. Rapido Trains offers a Canadian National-rebuilt GP9 as both a single locomotive and in a two-pack with a cabless powered slug. Single locomotives are offered in Canadian National's "stripes" and "large noodle" paint schemes. The GP9RM mother and slug sets are available in CN's early and late schemes. The single units and two-packs are offered in multiple road numbers. The GP9RM and slug feature a die-cast metal frame with detailed piping and

traction cables, Blomberg trucks, metal side handrails with plastic stanchions, and detailed pilots. The GP9RM mother unit has light-emitting-diode track, class, control stand, and flashing belt pack lights as appropriate. Single direct-current GMDD GP9RMs are \$239.95. Single locomotives with Digital Command Control (DCC) and sound sell for \$349.95. The MSRP for a direct-current mother and slug two-packs is \$439.95. Two-packs with DCC and sound are \$669.95. Rapido Trains Inc., 905-474-3314, rapidotrains.com

#### **HO scale locomotives**



• Electro-Motive Division SD40T-2 diesel locomotive. Denver & Rio Grande Western, Southern Pacific, and Union Pacific. Multiple road numbers per scheme. Fully hidden rear driveshaft and gear tower. Etched-metal radiator screens. Road-number-specific paint scheme variations, horn and bell type and placement, rooftop air conditioner type, jacking pads, and more. Features

light-emitting-diode ground, walkway, Gyralite, class, and number box lighting as appropriate. Direct-current model, \$199.99; with DCC and sound, \$299.99. Rivet Counter series. ScaleTrains, 844-987-2467, scaletrains.com



• Lima Locomotive Works Class S-2 2-8-4 Berkshire steam locomotive. Nickel Plate Road in four era variations and seven road numbers. Also available undecorated. New tooling produced from engineering drawings and 3-D

scan of No. 765. Roller-bearing trucks and trainline connections as appropriate. Die-cast metal frame. Synchronized puffing smoke and cylinder steam. Lightemitting diode headlight, Mars light, cab lights, and color variable class lights. Removable flags and side push pole. DCC and sound equipped with ESU LokSound decoder. \$699.99. Cardinal River Models, cardinalrivermodels.com



• Pennsylvania RR Class \$1 6-4-4-6 Duplex steam locomotive. Pennsylvania RR in three schemes. One road numbers per scheme. Also available painted but unlettered. Synchronized, variable puffing smoke. Brass boiler, cab, and tender body. Die-cast metal chassis. Separate, factory-applied handrails, grab irons, ladders, piping, cab glass, whistle, and brass bell. Separate spare flanged drivers. Minimum radius: 18". Direct-current model, \$699.99; with DCC and sound, \$799.99. Brass-Hybrid line. Broadway Limited Imports, 386-673-8900, broadway-limited.com

#### HO scale



Thrall 4,750-cubic-foot capacity covered hopper. New paint schemes on this Atlas Trainman series freight car include Transportation Corp. of America; Midwest Railcar; BNSF Ry.; CATX; David J. Joseph Transportation; Minneapolis, Northfield & Southern; and Rail Logistics. New road numbers are available on covered hoppers lettered for Canadian National and Peavey. The ready-to-run HO scale car is also available undecorated. The covered hopper features a weighted body, trucks with metal wheelsets, and Accumate knuckle couplers. Decorated cars sell for \$33.95; undecorated versions are priced at \$23.95. Trainman series. Atlas Model Railroad Co., 908-678-0880, shop.atlasrr.com

#### **HO scale rolling stock**



• National Steel Car single-hood cushion coil car. Wisconsin Central; Burlington Northern Santa Fe; Canadian Pacific; Elgin, Joliet & Eastern; Mexican Railway Transportation (TFM); and Northwestern Oklahoma RR. Three road numbers per scheme; also available undecorated. Newly tooled model based on NSC Type 2 single hood, 110-ton cars. Die-cast metal chassis. More than 35 factory-applied wire parts. Removable hood with detailed interior. Separate, modeler-positioned coil braces. Steel coil load kit available separately. Proto-Max metal knuckle couplers and 36" turned metal wheelsets. \$54.99. Walthers Proto series. Wm. K. Walthers, 414-527-0770, walthers.com



• Pacific Fruit Express R-40-27 and -28 reefers. Pacific Fruit Express. Multiple era variations and road numbers available. Separate running boards and brake wheels. Wire grab irons. Number-specific cooling fan housings. Positionable roof hatches. Lincoln-Washington semi-scale metal couplers and turned metal wheelsets. Single car, \$59.95; six-pack, \$359.70. Rapido Trains Inc., 905-474-3314, rapidotrains.com

#### **HO** scale passenger equipment



• 8-4-4 Duplex sleeper. Amtrak, Canadian National, Canadian Pacific, Great Northern, Milwaukee Road, and VIA Rail Canada. Multiple road numbers per scheme. Track-powered interior lighting with capacitor controlled by Rapido Lighter. Tighter connections between body and roof. Improved design and assembly to prevent warping. Redesigned trucks and new couplers. Detailed underbody and multi-color interior. \$119.95. Rapido Trains Inc., 905-474-3314, rapidotrains.com

#### **HO** scale vehicles



• New Look Transit Bus. Southeastern Pennsylvania Transportation Authority, AC Transit (Alameda-Contra Costa

#### **Conowingo Models acquires Sugar Pine Models**

**Conowingo Models,** manufacturers of HO, O, and On30 scale structures and rolling stock, has acquired the assets of Sugar Pine Models and is folding them into the Conowingo Models name and family of products. The company plans to revive and modernize the Sugar Pine product line utilizing modern technology including laser-cut wood and 3-D-printed parts. Around a dozen kits will be folded into Conowingo's product line. These include a mix of historic and fictional structures.

The first three kits that will be released are the Georgetown Firehouse (formerly kit No. 1103), Farm Style Water Tank (formerly No. 1111), and Water and Tool car (formerly No. 106). All of these will be available in HO scale. For more information, visit conowingomodels.com.

Transit District), Toronto Transit Commission, Long Island Metropolitan Suburban Bus Authority, Miami-Dade Metropolitan Transit Authority, New York City Metropolitan Transit Authority, Ottawa Transportation Commission, and Southern California Rapid Transit District. Tubular body profile traced from 3-D scan of prototype. Era-specific rear engine door, optional left-side emergency exit door, and single- or dual-stream rear doors. Etched-metal interior stanchions, stamped-metal handrails, and separate farebox. Full interior including separate bench seats and grooved flooring. Steerable front wheels with rubber tires. Optional detail parts included. Separate advertisement frames included. Lightemitting diode interior lights, headlights, and tail lights. \$74.95. Rapido Trains Inc., 905-474-3314, rapidotrains.com

#### N scale locomotives



• GE AC4400CW diesel locomotive. Burlington Northern Santa Fe, Canadian Pacific, CSX, Kansas City Southern of Mexico, and Union Pacific. Two road numbers per scheme. Road-specific cab, headlight, inverter cabinet, and number board location. Light-emitting diode ditch lights, number boxes, and directional headlights. All-wheel electrical pickup and blackened wheels. Direct-current model, \$143; with DCC, \$243; with DCC and sound, \$343. Kato USA, 847-781-9500, katousa.com

#### N scale rolling stock



• F89-F bi-level auto rack. Southern Ry.; Chicago, Burlington & Quincy; Chicago, Rock Island & Pacific; Norfolk & Western; Northern Pacific; Southern Ry.; and St. Louis-San Francisco (Frisco). Three road numbers per scheme. Diecast metal underframe and plastic body. Whitehead & Kales auto rack and detailed deck. Undulating safety railing. Prototype- and era-specific end bridge plates. Body-mounted McHenry knuckle couplers. \$49.99. Genesis series. Athearn Trains, 800-338-4639, athearn.com

## Club offerings



• Colorado & Southern HT-10C three-bay hopper. Broadway Limited Imports HO scale model custom decorated for the Amarillo Railroad Museum. Six road numbers available. Ready-to-run model with separate, factory-applied brake lines, brake hoses, and wire grab irons. Car has detailed interior with removable injection-molded plastic coal load, Timken roller-bearing trucks with metal wheels, and metal knuckle couplers. \$39.99 plus shipping. Amarillo Railroad Museum, amarillorailmuseum.com

# ScaleTrains HO scale EMD GP30



An Electro-Motive Division GP30, one of the most recognizable diesels of the second generation, is now available in HO scale from ScaleTrains. The Rivet Counter line model has railroad-specific details, semi-scale Type E couplers, and all-wheel drive and electrical pickup.

**Electro-Motive Division produced** the GP30 between July 1961 and November 1963. During the course of the production run, 908 units were built for railroads in the United States and Canada.

The sample we received is decorated as Conrail 2229, part of the railroad's 2168 through 2249 series. The GP30s in this group were former New York Central, Reading Co., and Pennsylvania RR (PRR) units. The 2229 was built in April 1963 as PRR 2229. The diesel retained its number when it became part of the Penn Central fleet in 1968. Conrail retired the 2229 in April 1991.

The ScaleTrains GP30 has a plastic shell with many separate, factory-applied parts. Some of the prototype-specific details on Conrail 2229 include four round sight glasses behind the cab on the engineer's side (for the oil bath air filters), a cab signal box in front of the cab on the same side, and train-phone antenna brackets along the top edges of the long hood.

To separate the shell from the die-cast metal chassis, I removed the front and rear draft-gear boxes. The motor, framed

by two flywheels, is located in the center of the chassis. The motherboard and ESU decoder are above the motor. The speakers and super capacitors are over the rear truck.

The Conrail Blue paint is smooth and evenly applied. The pilots, walkways, and stepwells are black. The white graphics are opaque, and the placement matches images I found online.

I compared the model to drawings found in *Specifications: General Motors GP30 2250 H.P. Diesel-Electric Road Locomotive* (Electro-Motive Division, 1962). The Rivet Counter line locomotive matches or is within scale inches of published dimensions.

Our sample is equipped with a dual-mode ESU LokSound V5 sound decoder. I did the initial testing in our workshop using an NCE Power Cab. At step 1, the GP30 moved at under 1 scale mph. At step 28, the road switcher achieved a top speed of 70 smph. The prototype had a speed range of 71 to 83 mph depending on the gear ratio.

I then took the GP30 over to our Milwaukee, Racine & Troy staff layout for the hill test. The model muscled 11 50-foot insulated boxcars up the 3 percent grade between Williams Bay and Skyridge. Editor Eric White tested the unit on our Wisconsin & Southern layout. He reported that the model ran without issue while pulling a train and switching industries.

ScaleTrains went all out with its initial release of the HO scale GP30. In addition to versions with low and high short hoods, the manufacturer also offers a cabless Union Pacific GP30B in freight and passenger versions as well as the CSX RDMT Road Slug. — *Cody Grivno*, senior editor

#### **Facts & features**

Price: Direct-current model with 21-pin connector, \$199.99; with dual-mode ESU LokSound 5 sound decoder, \$299.99

#### Manufacturer

ScaleTrains 4901 Old Tasso Rd. NE Cleveland, TN 37312 scaletrains.com

Era: 1976 to April 1991 (as decorated)
Road names: Conrail; Atchison, Topeka &
Santa Fe; Baltimore & Ohio; Chicago &
North Western; Chicago, Burlington &
Quincy; CSX (RDMT road slug); Denver &
Rio Grande Western; Norfolk & Western
(high short hood); Pennsylvania RR;
Southern Ry. (high short hood); St. Louis
Southwestern (Cotton Belt); and Union
Pacific (GP30 and GP30B).

#### **Features**

- Correctly gauged wheels
- Metal Type E couplers, at correct height
- Minimum radius, 18"; recommended radius, 22"
- Weight: 14.1 ounces

# Atlas N scale EMD GP40-2



Atlas Model Railroad Co. has released a new run of Electro-Motive Division (EMD) GP40-2 diesel locomotives in N scale. The model, part of the Master Line, features plastic and die-cast metal construction, a Scale Speed motor, and directional golden-white light-emitting-diode lighting.

**Between April 1972** and November 1986, EMD built 903 GP40-2 diesel locomotives. The four-axle road locomotive, rated at 3,000 hp, had a turbocharged 16 cylinder, 645E3 diesel engine; an AR10 alternator; and D77B traction motors.

Canadian Pacific 4650 was built as Boston & Maine No. 308 in 1977. The unit was then sold to Helm Financial Corp., becoming HATX 501 in the 1990s. The four-axle unit was traded by the leasing company to Canadian Pacific in 1999, becoming the 4650 in April 1999. The diesel operated for a time in a patchout scheme. In late 2013-early 2014 it was repainted at railroad's Binghamton, N.Y., shop in a non-standard CP scheme. Canadian Pacific retired the 4650 in May 2018.

The injection-molded plastic body on the Atlas GP40-2 consists of the cab, body, handrails/walkway, and sill unit. Many of the details are molded, such as the grab irons, lift rings, and uncoupling levers. The Sinclair antenna on the cab and the three-chime air horn on the long hood are freestanding parts.

The full-size CP 4650 had front and rear ditch lights, a bell between front truck and fuel tank on the brakeman's side, and a snow plow on the front pilot, details not found on the model.

I gently wiggled the shell while lifting up to separate it from the split-frame chassis. The Scale Speed motor and flywheels are centered in the chassis. The ESU sound board is on top. The fuel tank, with its sight gauges and filler caps painted red, clips to the bottom.

Our sample is neatly painted red and black with crisp separation lines between colors. The step edges, grab irons, and uncoupling levers are picked in white; the molded ratchet handbrake is black. The front number boards are black with white numbers; the rear boards are the opposite, as on the prototype.

The white sill stripes are a bit thick compared to those on the full-size unit. The separation lines between the white handrails and red stanchions are a bit fuzzy, but could be fixed with a fine brush and some white paint.

I tested our decoder-equipped sample using an NCE Power Cab. At step 2, the model moved at 4 scale mph. The locomotive achieved a top speed of 100 smph. The speed range on the prototype ranged from 71 to 83 mph depending on the gear ratio. The model's dimensions closely follow data published in the 1974 edition of the *Car and Locomotive* 

Cyclopedia of American Practices (Simmons-Boardman Publishing Corp.)

If you're in the market for a four-axle road unit for your N scale layout, you'll want to check out the Atlas GP40-2. The full-size diesels have been around since the early 1970s, and many examples can still be found on Class I, regional, and shortline railroads today. — *Cody Grivno, senior editor* 

#### **Facts & features**

**Price:** Direct current with factory-installed speaker, \$134.95; with dual-mode ESU LokSound V5 sound decoder, \$244.95

#### Manufacturer

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

Era: mid-2010s to 2018 (as decorated)
Road names: Canadian Pacific, Burlington Northern, CSX, Florida East Coast,
Guilford Rail System, and Norfolk
Southern. Two to three road numbers per scheme. Also available undecorated (with and without dynamic brakes).

#### Faaturac

- Body-mounted Accumate couplers, at correct height
- Metal wheel stubs on plastic axles, correctly gauged
- Weight: 2.8 ounces

## **Bachmann HO Siemens Venture coach**



Amtrak's newest passenger equipment is now available in HO scale. Entering service in 2018, Siemens has already built more than 100 Venture cars for service with Amtrak, Brightline, and VIA Rail Canada. The company is also under contract to deliver more equipment to existing operators and Ontario Northland Ry.

The full-size cars made their debut in the United States when All Aboard Florida (now Brightline) purchased five trainsets and 10 Siemens SCB-40 Charger diesel locomotives. The Venture-series cars were adapted from Siemens' Viaggo Comfort cars, which are used in Europe. Construction of the Venture cars began in July 2015 at Siemens' factory in Florin, Calif., and continues today.

Bachmann's HO scale Siemens Venture passenger car is available in two different body styles — coach and business class. Two railroads are represented in the manufacturer's first run of cars — Amtrak Midwest and VIA Rail Canada. The Amtrak Midwest cars are only offered as coaches. VIA Rail Canada cars are available as coaches, business class, and a cab car. The models match Bachmann's Siemens SC-44 and SCV-42 Charger diesels (sold separately) that the prototype cars are typically run with.

The sample we received is decorated as Amtrak Midwest No. 4008, a coach class car with Illinois Department of Transportation (IDTX) reporting marks. Though Amtrak owns the locomotives and passenger cars in its long-distance trains, the Venture coaches in Midwest service are owned by the Illinois DOT.

The model's paint is smooth and evenly applied. It closely matches that of the prototype, with crisp lines and

legible markings. The metal grab irons, uncoupling levers, and door steps are separate, factory-applied parts. Molded details, including the antennas, equipment hatches, plumbing, and trainline receptacles, are appropriately located.

The car's interior is molded in gray plastic and features 70 seats with a prototypical aisle width of 24". The windows are untinted sheets of separately applied clear acetate. With the optional included close couplers, the car's length matches the prototype length of 85 feet. However, the width and height of the car are short by around 6" each. The floor height above the top of rail and the door width (51" and 34", respectively) both match the full-size car. The distance between truck centers is a prototypical 59½ feet.

#### When it comes to lighting features,

the Bachmann model has everything that a passenger car could need. The interior is illuminated by constant, light-emitting diode (LED) strip suspended above the seats. The lights are always on.

In addition to interior lighting, the car has selectable end marker lights. These LEDs are on both ends of the interior lighting board with red lenses installed in the shell. A note on the underside of the car and the arrangement of roof details designate the end of the car where the marker light control panel is located.

To activate the markers, a hatch cover next to the exhaust fan must be removed. Two switches are under the cover. One toggles the marker lights on one end of the car, while the other toggles the markers on the opposite end. When finished, the cover snugly fits into place. The interior and marker lights operate on both DC and DCC.

Due to the pickup whiskers contacting the backs of the wheels, the car isn't free-rolling. However the correctly gauged blackened machined metal wheelsets ride in finely detailed trucks, matching the prototype. The couplers are slightly lower than National Model Railroad Association (NMRA) standard S-2. The car weighs 5.8 ounces, 1.2 ounces less than NMRA Recommended Practice 20.1.

#### **Bachmann's HO scale Siemens**

**Venture coach** is a great representation of this contemporary car. The factory installed interior and marker lights add to the value of the model and make it truly ready-to-run. A consist of Venture cars running behind a Bachmann Charger locomotive would makes an impressive modern Amtrak train. — *Bryson Sleppy, associate editor* 

#### Facts & features

**Price:** \$139 to \$149

#### Manufacturer

**Bachmann Trains** 

1400 E. Erie Ave.

Philadelphia, PA 19124

bachmanntrains.com

Era: 2022 to present (as decorated)
Road names: Amtrak Midwest (coach,
four road numbers) and VIA Rail Canada
(business and coach, two numbers each).

#### **Features**

- Bachmann E-Z Mate Mark II couplers,
   .010" to .020" too low
- Blackened machined metal wheels with RP-25 contours, in gauge
- Weight: 5.8 ounces

# I've Seen What's Neat. Have you?

THIS WEEK

In Model Railroading

10

4611

What's Neat This Week is your go-to video podcast for everything model railroading, featuring new products, in-depth tutorials, interviews with experts, and much more. Hosted by Ken Patterson, a lifelong model railroader, professional model railroad photographer, and scene designer, WNTW covers everything you need to know - whether you've been in the hobby for 10 minutes or 10 years. Catch new episodes every week on YouTube, or watch our extensive back catalog of almost 300 episodes at any time.





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# PIKO SmartControl wlan DCC system



PIKO is a well known European manufacturer of HO and large scale model railroad equipment. However, it also produces a line Digital Command Control (DCC) products, ranging from decoders to complete systems. Recently, we received a sample of the company's newest DCC system, the SmartControl wlan (wireless local-area network) introductory set.

What you get. The SmartControl wlan set offers a number of advanced features commonly found on more advanced and expensive DCC systems. Chief among these is wireless remote control via the SmartControl throttle. The throttle connects to the base station by its own network. Up to four can connect at once.

The command station, shown at top center above, delivers 2 amps to the main track and features short circuit and overload protection. This enables

(depending on the scale) without having to use additional boosters, which are available separately.

Track power is controlled primarily by the output voltage of the power supply, which is 16VDC at 2 amps. However, due presumably to power use by the Smart Control wlan system, I

age down to about 15V.

Locomotive control, editing, and programming is done with the Smart Control wireless throttle via the system's self contained Wi-Fi network, or by connecting the system to an existing home network in station mode. The throttle is powered by a 3.7V lithium ion battery that can be recharged with a usb-c cable, both included in the set.

**Getting started.** Setup is quick and easy, requiring only a connection to the main track using the screw terminal connector, plugging in the power supply, and turning on the throttle using the Stop button. Since this was a first use I had to pair the throttle with the base station, which required pushing a couple of buttons when prompted on the screen.

Next, I put an Atlas HO scale Alco multi-train operation of up to five trains RS11 diesel locomotive on the track.

> Since the four-axle road switcher had a RailCom Pluscapable LokSound decoder, the address and description popped right up on the throttle's display screen. Pressing 0 turned on the headlight; 2 activated the air horn. The large red throttle knob below the screen made it easy to control the speed. When I

double-tapped the knob at step 0, it reversed the direction of travel. The central location of the control knob makes it convenient for left- or right-handed users.

#### The PIKO SmartControl wlan is a

highly capable introductory system, with the ability to be expanded and upgraded as your needs increase. I appreciated the ergonomic design of the throttle and the extensive manual that leads you through the process of learning the menu system. — *Larry Puckett, contributing editor* 

#### Facts & features

Price: \$259.99

Manufacturer

PIKO America

4610 Alvarado Canyon Road, Ste. 5

San Diego CA 92120 piko-america.com

#### **Features**

- •16VDC, 2 amp power supply
- RailCom Plus implemented
- Service mode and programming on the main
- Supports up to 61 functions
- Up to 4 throttles on the network





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Descriptive names like the Elevator Job and the Freight House Job were all that was needed for local switchers like this one, seen on the *Model Railroader* staff's HO scale Beer Line project layout. Bill Zuback photo

#### Which trains worked the Beer Line?

I am modeling the Milwaukee Road's Beer Line in HO scale. Which trains worked the Beer Line, and what were the train numbers they used? I can't find any information on the internet. They didn't just call them "Midnight Beer Train" or "Elevator Job," did they?

Jerry Lane

The transfer runs that shuffled cars between the Beer Line and the Milwaukee Road's main yards downtown might have had train numbers assigned to them, but if they did, they've been lost to history. I can't find any mention of these trains on any of the employee timetables in our library. It's likely that they ran as extras. However, I can confidently say that the numerous switch jobs that did the actual work on the Beer Line were not numbered. The Chestnut Street Branch, as the Beer Line was formally called, was all within yard limits.

A number of small yards were dotted along the branch. Each of these yards ran multiple switch jobs that served the industries in their vicinity, with names like the North Milwaukee District Job, the Gibson Job, the "C" House Job, the Elevator Job, and the Freight House Job (those last three out of Humboldt Yard). These local switch jobs each served only a particular group of industries, so they stayed out of each other's way. They would then return to their yards and assemble them into the next Beer Train.

Though the Chestnut Street Branch was only 6 miles long, it was the busiest branch line on the Milwaukee Road. Each Beer Train typically handled 60 to 100 cars. Despite the line's nickname, Schlitz was the only brewery directly situated on the tracks. Pabst Brewing had a grain elevator near the Schlitz complex, but it trucked grain from there to its brewery several blocks away, then trucked finished beer to Pabst Shipping Center No. 30. Blatz had no structures on the Beer Line but shipped its products from the Lincoln Warehouse at the end of the branch.

But beer wasn't the Beer Line's only business. There were close to 100 rail-served industries on the branch. The American Motors body plant was the biggest non-brewery source of traffic on the branch. The huge Continental Can Co. plant received rolls of sheet metal and shipped boxcars of finished cans. Union Refrigerator Transit Lines (URTX) had a large shop facility. The Commerce Street power plant received many loads of coal. Tanneries, metal fabricators, food distributors, coal dealers, warehouses, and lumber yards were other common industries along the line.

For more information about the Beer Line, you can read a longer version of this answer on our website at trains.com/mrr/beginners/ask-trains/which-trains-worked-the-beer-line/.

② I have great affinity for turnaround operations and am designing a new N scale layout that might feature several of these operations. How do the crews manage to reattach the caboose on the end of the train for the return leg where there's only one siding? I have studied the Clinchfield RR's Moss Turn for hours and still can't figure out how the caboose was reattached in the correct position! How did the crews manage this?

Jim Werling

A That depends on what turning and runaround facilities are available there. A wye or a turnback loop (a.k.a. balloon track) simplifies matters, of course, allowing the engineer to turn the entire train. But it's not unusual for there to be no turning facilities at the end of a branch line. That's especially true where right-of-way is in short supply, such as a mining or logging line in the mountains or an industrial switching district in a crowded city.

If that siding you asked about is a double-ended passing siding, not a single-ended spur, the engineer would pull into the siding and uncouple from the train, then run around it on the main. He would then pick up the caboose from the end of the train, back up, switch to the main, shove forward, and drop the caboose on the main past the passing siding's other turnout. Next he would back up on the main, line both turnouts for the passing siding, and shove the train onto the main until it couples onto the caboose. His train is now in the correct order for the run back the way it came.

There is still a problem, though: the locomotive and caboose are now facing backward. That's not that important to a diesel hood unit. But if the motive power is a steam engine, low visibility past the tender makes running backward kind of awkward. It can be done, though, and has been done on the prototype. But if there's a turntable or wye available at or close to the end of the line, the engineer will use it to turn his locomotive before departing for home.

Now, if there isn't even a runaround siding — just a stub-ended industrial spur — the train might have to start its journey home with a long shove maneuver, with

Send questions to Senior Associate Editor Steven Otte at AskTrains@Trains.com.

the caboose and the rest of the train ahead of the motive power. The conductor would ride the caboose's end platform and guide the engineer by radio (or, in steam days, with hand or whistle signals — cabooses were equipped with whistles when necessary). In this case, the engineer would take the first available opportunity to put his locomotive, cars, and caboose back in the right order.

I'm considering converting my N scale diesel fleet to DCC. I have a concern about the sound. On videos I have watched, the diesel acceleration and running sound seems to feature the high-pitched whine of the diesel generators. When I railfan real diesels, I mostly hear the deep-throated rumble of the diesel exhaust. I'm not sure I want to upgrade to sound when the available sound systems are to me not a realistic depiction of what I love about diesels. Is there any alternative to standard sound decoders that feature a low-pitched rumble?



Reading Co. class K-1 2-10-2 runs tender-first with the Gordon Western, a mine run, on Jim Hertzog's HO scale Shamokin Division model railroad. It's not unusual for trains to have to run tender-first or even back down from a branch line in the mountains, where right-of-way for turning facilities might be scarce. Mike Rinkunas photo

A I'm afraid that a speaker small enough to fit in a model locomotive just can't produce a realistically low-pitched diesel rumble. So what's the solution? Get a bigger speaker. I know of a few ways to do this.

Model train manufacturer Broadway Limited Imports offers a system called *Jim Werling* : Rolling Thunder. It consists of a large

diameter subwoofer in an enclosure, a receiver box that mounts under the lavout, and a transmitter chip that's included in the company's Paragon3 and Paragon4 DCC decoders. I have tested Rolling Thunder-equipped BLI locomotives in the MR workshop, and the low frequencies are impressive. The drawback is that Rolling Thunder is a proprietary system that only works with BLI Paragon3 and Paragon4-equipped locomotives. It also only works with one locomotive at a time, whichever is closer to the receiver.

If your layout runs on a Digitrax DCC system with LocoNet, there's a more versatile option available, though it is a bit less plug-and-play. SoundTraxx makes a system called SurroundTraxx DSP-80 that plugs into the layout's control station and echoes your DCC soundequipped locomotives' sound effects through up to six speakers (or five and a subwoofer) that you set up under the layout. This system only works on a LocoNet-equipped DCC base station and : requires locomotives with DCC decoders



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that support transponding. The system also doesn't come with speakers, requiring you to install them yourself.

The final way to do this is a completely homebrewed solution. Install a traditional stereo amplifier and speaker system under your layout, then hook up a sound-only decoder to the layout's DCC bus and wire its outputs into the amp's auxiliary inputs. Program the decoder to the same address as a locomotive (basic consisting) and let it play the locomotive's sounds through the speakers. The biggest limitation of this approach is that it would only work with one locomotive at a time, whichever one is consisted with the decoder hooked up to the amplifier.

In your answer to Paul Savello's question in the July 2024 Ask MR, you mentioned Arduino, "a DCC-connected programmable system." Is that like Java Model Railroad Interface (JMRI) software, and if so, how do the two compare?

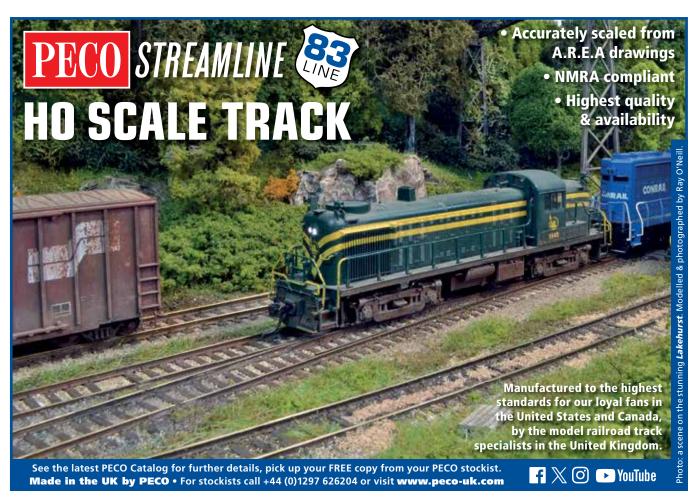


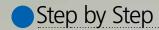
There are many ways to use an Arduino on a model railroad. These tiny, inexpensive, programmable computers can perform functions such as controlling signals, routing turnouts, and running animations. William Mitchell photo

Arduino isn't software — it's hardware. An Arduino is a tiny computer, called a "microcontroller," with its own programming language. Arduinos are open source, meaning that how they are made and the firmware that runs them is public knowledge. Anyone can make and distribute them and their software, they're extremely inexpensive, and *Bruce Fogwell*: upgrades are being made all the time.

Plug-in circuit modules called "shields" let you connect an Arduino's inputs and outputs to components like lights, displays, speakers, motors, solenoids, sensors, and other systems useful on a model railroad. Modelers have been using them for such layout jobs as detecting block occupancy, controlling signals, indexing turntables, playing sound effects, lining turnouts, running lighting effects, and more.

We've published numerous articles on ways you can use an Arduino on a model railroad. These include "Scratchbuild a transfer table" in August 2023's issue; "Touchscreen turnout control" in October 2022; "Push-button staging solution" in August 2018; "Build a signal system with Arduino microcontrollers" in December 2016; "Animate structures with microcontrollers" in April 2016; "RFID for model railroad operations" in December 2014; and "High-tech turnout controls" in June 2013. Those articles should open your eyes to what's possible and what's coming in the future of our : hobby. MR







Frequent *Model Railroader* contributor Mont Switzer shares how he detailed, painted, and lettered an HO scale Monon trailer for his late 1950s layout. He used off-the-shelf rattle cans for most of the painting in this project. Photos by the author

# How to detail and paint a semi-trailer

My HO scale Monon layout is set in the late 1950s. During that time, builders of full-size intermodal and highway semi-trailers began using aluminum extensively in product construction. Although most components below the floors, as well as the front and rear headers (framework) were still built of steel, weight-saving aluminum was used on the sides. The result was plain vanilla trailers with natural aluminum bodies and other components painted silver to blend in.

But not all buyers wanted the natural aluminum finish, including the Monon. Builders began offering the aluminum side panels painted in various colors. The panels were prepped and painted, with the finish baked on, prior to installation. The painted panels held up better over time and ultimately became the standard for aluminum trailer body construction.

Re-creating a Monon aluminumbody trailer seemed like an interesting modeling challenge. To make the Trainworx undecorated injectionmolded plastic trailer look more like the Monon prototype I had to add some detail parts, including a document box and three styrene placards per side for the reporting marks, road name, and herald. I also used a hobby knife to scribe simulated rub rails on the sides, as covered in step 2.

Instead of using an airbrush to paint the trailer, I used a combination of hobby and consumer spray-paints. The Rust-Oleum Painter's Touch 2X line is plastic-compatible and worked well for priming and painting. I turned to Tamiya clear paints for the various lights and reflectors.

As you can see, the bright red Monon trailer with yellow graphics adds a splash of color to piggyback trains in an era when muted tones were the norm. If you're looking for a fun project, give semi-trailer modeling a try.

Mont Switzer, a longtime contributor to Model Railroader magazine, lives in Middletown, Ind. His article "Upgrade a ready-to-run flatcar" appeared in the May 2023 issue.



Learn more about railroad intermodal equipment and operations in Jeff Wilson's book *Piggyback & Container Traffic.* Order

online at KalmbachHobbyStore.com.

#### **Materials list**

#### A-Line

50123 record or document box

#### **Evergreen Scale Models styrene**

103 .010" x .060" strip 9010 .010" sheet

#### Model Railroad Supply 5660 N. Quail Ln., Middletown, IN 47356

303 Monon yellow trailer lettering

## Rust-Oleum Painter's Touch 2X spray paint

249846 Flat Black Primer 334017 Flat Gray Primer 334024 Gloss Apple Red

#### **Tamiya**

X-26 Clear Orange X-27 Clear Red

#### **Testor Corp. spray paint**

1246T Metallic Silver 1260 Dullcote

#### **Trainworx Inc.**

80200 40-foot van, undecorated

#### **STEP 1** GETTING STARTED

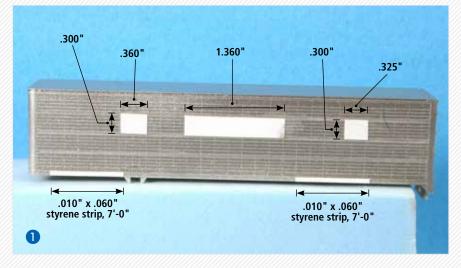


I used the Trainworx undecorated 40-foot corrugated van (80200) as the starting point for this project. The injection-molded plastic kit consists of the body, underbody, landing gear, mudflaps, wheels, and metal axles 1. The multipiece construction made it easier to paint the various components separately.



On full-size Monon trailers, the roof and top and bottom rails (sills) of the body were natural aluminum. To capture that look, I spray-painted the body with Testor's Metallic Silver enamel [2] [Do this in a well-ventilated area and wear personal protective gear. — Ed.] The small aerosol can was convenient and offered good coverage.

#### **STEP 2** ADDING DETAILS





Aluminum trailers in intermodal service were reinforced with steel channel where they came in contact with overhead and side-loading equipment. Four 7-foot-long steel angles (two per side) were located along the aluminum bottom rails. I only modeled the outer portion of the channel using .010" x .060" styrene strip.

In addition, aluminum intermodal trailers were fitted with steel rub rails on the sides. Counting from the bottom up, the trailers were reinforced between the fifth and sixth, eleventh and twelfth, and seventeenth and eighteenth corrugations.

To simulate the rub rails, I scribed three lines between these corrugations using the back of a No. 11 blade. I first dragged the blade along the upper and lower corrugations on the panels. Then I scribed a third line in between, using a straightedge as a guide. The rub rails were hard to see on new trailers, but became more pronounced as the sides weathered.

I made the side placards for the reporting mark/trailer number, road name, and herald from .010" styrene sheet

1. I attached the styrene with cyanoacrylate adhesive.

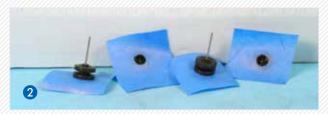
Solvent-based adhesives could distort the thin material.

The nose details on the prototype Monon trailers were recessed. The air and electrical connections on the Trainworx trailer are correctly modeled.

The full-size trailer also had a recessed document box, which the model lacked. First, I cut a .150" x .170" square hole in the nose. Then I backed the opening with scrap styrene. After the glue had dried, I attached an A-Line document box (50123) in the recess 2.

#### **STEP 3** PRIMER TIME





Next, I turned my attention to the bottom of the trailer. I started by spray-painting the underbody and mudflaps, both molded in gray plastic, with Rust-Oleum Painter's Touch 2X Flat Black Primer (249846) 1. You can find the plastic-compatible spray-paint at most bigbox retailers and home-improvement centers.

The plastic tires, rims, and correctly molded cast-spoke wheels are molded as a single unit. However, to match the prototype, the wheels needed to be painted red. To facilitate that, I cut 1/4" diameter circles in blue painter's tape and applied the masks to the castings 2. Then I sprayed the wheels with Rust-Oleum Painter's Touch 2X Flat Gray Primer (334017) and let it dry. I used a light primer here because the wheels needed to be painted red, as shown in the next step.

#### **STEP 4** TO THE SPRAY BOOTH





Though Monon's trailers were primarily red, there were spots that remained natural aluminum. I used painter's tape to mask the roof and top and bottom rails 1.

With the masking completed, I spray-painted the body, landing gear, suspension components, and wheels with Rust-Oleum Painter's Touch 2X Gloss Apple Red. The paint dried to a glossy, decal-ready finish.

Then I used a toothpick to apply Tamiya Clear Red (X-27) to all lights and reflectors facing the rear of the trailer, as well as those on the rear of the sides 2. The remaining nose and side clearance lights are amber, which I simulated with Clear Orange (X-26).

Finally I decaled the trailer using Model Railroad Supply set 303. I used setting solution to help the decals conform to any irregular surfaces.

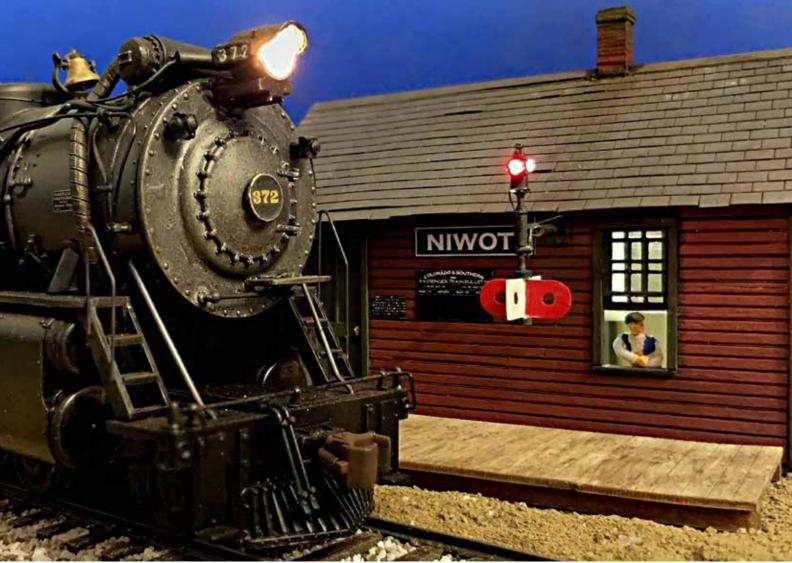
#### **STEP 5** FINISHING TOUCHES



I wrapped up the project by reassembling the trailer. I omitted the spare tire carrier as Monon (and other railroads) didn't specify this optional feature.

The tandem assembly on the Trainworx model is adjustable, but was fixed on the prototype. I assembled the sliding tandem in the forwardmost position.

Finally, I sprayed the model with Testor's Dullcote from an aerosol can. Even after toning down the glossy finish, the trailer still has a like-new appearance.



The evening passenger train has no orders waiting as it arrives at Niwot, Colo., on Jim Ferenc's HO scale Colorado & Southern Northern Division layout. He scratchbuilt the operating rotary train order board based on prototype photos.

# Build a working ROTARY ODDED

A servo motor and controller bring this depot detail to life

**By Jim Ferenc •** Photos by the author

ORDER BOARD

hile researching the depot in Niwot, Colo., for my HO scale Colorado & Southern Ry., I came across early 20th century photographs showing a rotary train order signal above the station operator's window. When the operator had a train order for an oncoming train, he would rotate the signal, or order board, to show a stop aspect. Similar rotary boards were common on Colorado narrow gauge railroads. An internet search revealed their widespread use on standard gauge railroads until semaphore signals replaced them in the 1920s.

Though I model 1958, I've bent reality by modeling coal mines and passenger trains decades after their prototypes disappeared, all in the name of operating interest. The challenge of building a working rotary board for my monthly operating sessions appealed to me, so I decided this was another worthy offense against reality.

Jim Ferenc of Boulder, Colo., models the Colorado & Southern Northern Division in HO scale. His article "Animate a coal mine" appeared in the June 2023 issue.

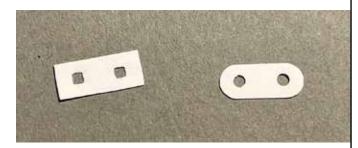
#### **STEP 1 CROSSING BLADES**

I began with the distinctive four-panel signal blades. I chopped two scale 15" x 40" blade pairs from .005" styrene sheet (Evergreen 9009) with a razor blade. I drilled a 1/32"-diameter hole in middle of each blade pair, and then reamed it out to 1/16" with a round jeweler's file.

I squared the white blade holes with tip of a square jeweler's file and rounded the red blades with the holes as a guide.

Railroads have always signaled stop with red blades and lights. Prior to 1920, proceed was indicated with white, not green. Following that lead, I painted the blades Vallejo Red (70.926) and White (70. 951) as appropriate. I followed that with the same company's gloss varnish (70.510) to simulate a metallic look.

To join the blades, I cut a slit from the center to the bottom edge of each blade pair. Then I slid one into the other to form the crossed blades. I had to apply plastic cement to



slide them completely into place, which created a strong bond.

Then I cut two disks from .080" styrene rod (Evergreen 212) a scale 2"-thick and painted them Vallejo Black Gray (70.862). I cemented them to top and bottom of the blade axis to lock the blades in place, as seen in the photo with step 3 (below).

#### **STEP 2 AXLE FOR ROTATION**



The order board's signal blades and lantern attach to a vertical axle. The axle rotates when a connecting throw rod moves back and forth from the depot wall.

First, I stripped insulation from 28AWG stranded electrical wire and harvested a couple of inches of wire. I then wrapped eight turns of wire around a ½6"-diameter brass tube (K&S Engineering 8125) 1. I squeezed the coil together, removed it from the tube, and then soldered it into a solid ring.



I put a small dab of acid-free solder flux (Nokorode 14000 is what I use) a bit over  $\frac{1}{4}$ " from the end of  $\frac{1}{32}$ "-diameter brass rod stock (K&S Engineering 8160) and tinned about  $\frac{1}{16}$ " of rod length. I slipped the ring down to that point and soldered it in place, keeping the ring square to the rod.

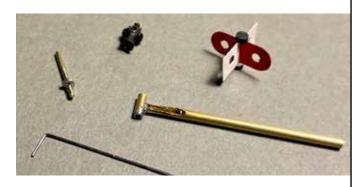
I reamed a roughly .025"-diameter hole next to the rod for the throw bar  $\bigcirc$ . I cut the finished axle from the rod stock  $\frac{1}{16}$ " below the ring.

#### **STEP 3 STAFF AND BUSHING**

The visible portion of the order board's horizontal staff is 5 scale feet. Since the walls of my laser-cut depot are thin, I added another 4 scale feet inside the depot to securely anchor the staff.

I cut and removed burrs from a 9-scale-foot length of  $\frac{1}{16}$ "-diameter brass tube. Then I cut a  $\frac{3}{16}$ " long slot lengthwise from one end of the staff through one side of the tube with a power rotary tool and a thin cutoff disk. Rotating the staff so the slot was to the side, I filed that end to a concave shape with a round jeweler's file to mate with the bushing.

I cut and removed the burrs from a scale 1-foot length of 1/16"-diameter brass tube for the axle bushing. After taping the staff and bushing tubes perpendicular to each



other on a scrap of plywood, I applied flux and soldered them together, working carefully to keep the slot open.

#### **STEP 4 MOVEMENT ASSEMBLY**

I put a 90-degree bend 3/16" from the end of a .015"-diameter steel music wire to form the throw rod, as seen in the photo in step 3. I slid the throw rod into the slot in the staff and out the other end of the tube. I slipped the bend into the axle ring from above and slid the long end of the axle into the bottom of the bushing.

To hold the axle from above, I formed a small axle ring from another length of fine wire, this time using a piece of 1/32"-diameter brass rod to form the coil. As before, I squeezed and soldered the ring together.

With the axle and throw rod assembled in place and the axle ring tight to the bottom of the bushing, I put a touch of flux on the axle just above the bushing. I slipped the axle ring down to the flux and briefly touched it with a hot iron to solder the ring in place. I worked quickly to avoid unsoldering the bushing or the axle ring. I used just a bit of solder on the iron's tip and was careful not to solder the ring or axle to the bushing.

I put a piece of tape on the axle top and tested the movement. The axle must move at least 90 degrees for the order board to work. Satisfied, I finished up by brush painting the brass with Vallejo Black Gray and Burnt Umber (70.941).

Then I bent the tip of the throw rod that's below the axle ring back toward the depot end of the staff to keep the rod in place.



#### **STEP 5 LANTERN AND WIRING**

I needed room to maneuver a light-emitting diode (LED) inside the Utah Pacific switch stand lantern casting (SL-86). Holding the casting in my fingers, I reamed the interior with a pin vise to .0456" (No. 56), and then .0520" (No. 55).

I glued the red lenses opposite each other with cyanoacrylate adhesive (CA). Then I put a dollop of gap filling CA glue across the other two openings for the clear lenses.

I inserted a factory-wired 0402 warm white LED into the casting. Lighting the LED with a dropping resistor (1k $\Omega$  for 12V), I aligned it for maximum lens illumination. I brought the wires out of the bottom of the casting and glued them in place between two adjacent lenses with CA. This minimizes wire stress by limiting their travel.

I sealed the bottom of the casting with white glue and painted it Black Gray when dry. I illuminated the lantern and touched up any light leaks around the edges of the red lenses with more paint.

With the throw rod in the middle of its range of movement, I glued the lantern to the top of the axle. I set the lantern lenses at 45 degrees with the lantern wires running directly back over the top of the staff. This ensures the lenses will be pointing down the tracks at each end of the axle's rotation.

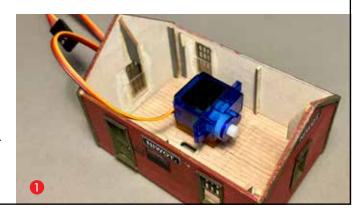
I attached the wires to the top of the staff-bushing joint with CA, leaving a bit of slack between the joint and the lantern for axle rotation.



#### **STEP 6 SERVO MOTOR AND CONTROL**

I mounted the order board midway between the station sign and window, just below the roof eave. I drilled a 1/16"-diameter hole in the wall and a cover plate I made from a .020" thick styrene scrap. I painted the cover plate Black Gray and slid it over the order board staff.

I bought a servo motor and servo controller from Tam Valley Depot. I attached the servo motor to a <sup>3</sup>/<sub>8</sub>"-thick block of wood with CA to match the height of the throw rod. Then I used white glue to secure the block to the floor of the depot. I used pencil lines as a guide to align the motor shaft with the order board throw rod ①. The hole in the floor is for the motor's wires and connector.



#### **STEP 6 SERVO MOTOR AND CONTROL (CONT'D)**

I slid the order board staff into the hole in the depot wall, ensuring it was square to the wall and level. I used CA to hold the staff in place. Then I slid the cover plate against the depot wall and attached it with CA.

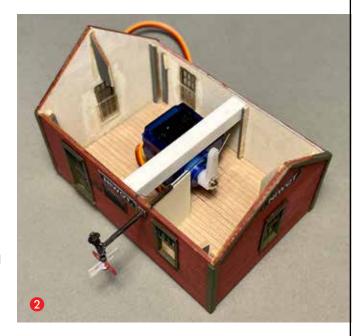
I followed Tam Valley Depot's servo controller instructions to connect the motor to the throw rod and set the rod's movement limits.

To secure the depot walls and floor against the pulling force of the servo, I glued the laser-cut walls to the floor with yellow glue. I used CA to attach a scrap of .060" styrene sheet inside the depot, between the staff, wall, and floor. Finally, I added 1/4" square styrene beam across the top of the depot's walls to keep them from bowing in 2.

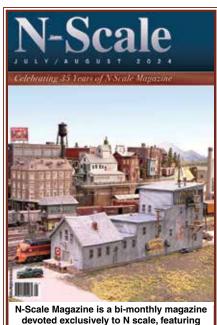
The lantern wires represent the guy wires on the prototype order board. I ran the wires over the top of the wall 1/4" on either side of the staff, keeping them taut. I secured them to the top edge of the wall with CA. I ran the wires out the same hole in the depot floor as the servo control wires, connecting them with a  $1k\Omega$  dropping resistor to a 12V DC power source concealed below the layout.

I connected the signal blade assembly to the bottom of the axle with CA, ensuring the orientation matched the lantern. Red blades with a white light would be confusing.

I finished by touching up the lantern wires and other parts with Vallejo Black Gray and Burnt Umber.



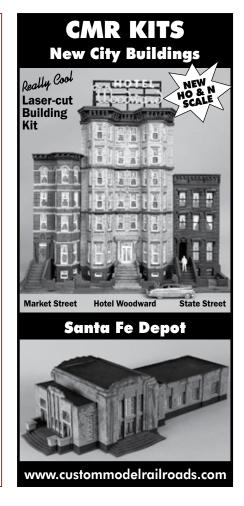
My train crews experience the summer of 1958 during every operating session. Now they will briefly catch a taste of 1910 when they pass the order board on the Niwot, Colo., depot. MIR



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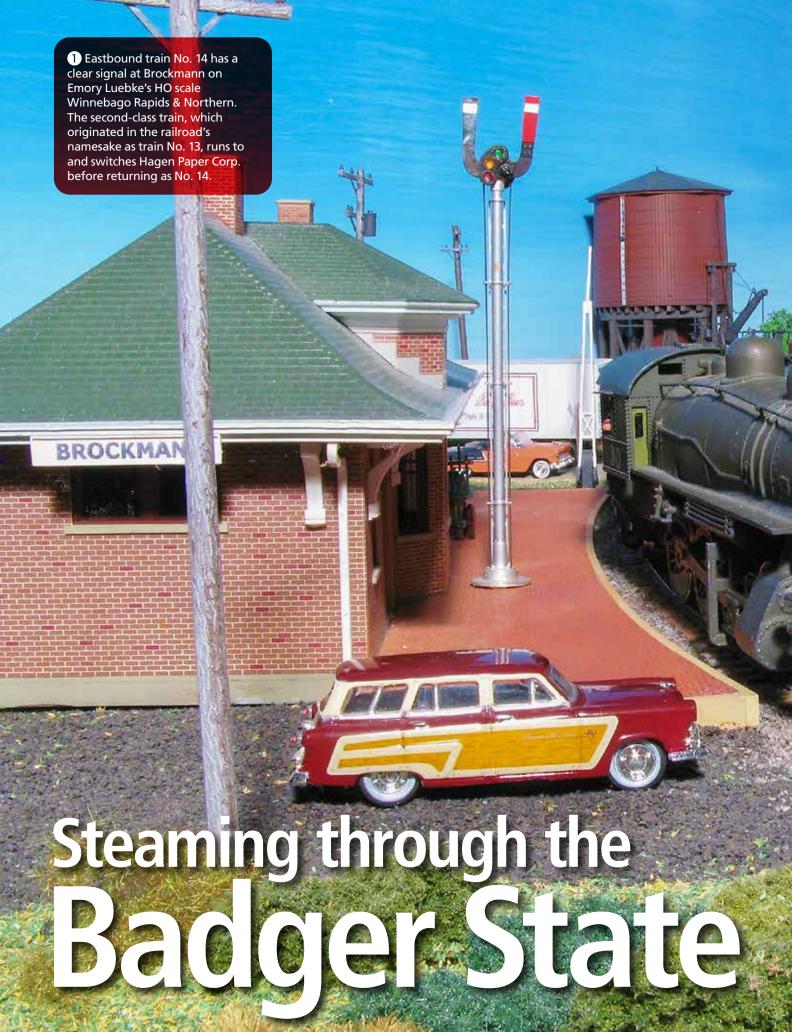
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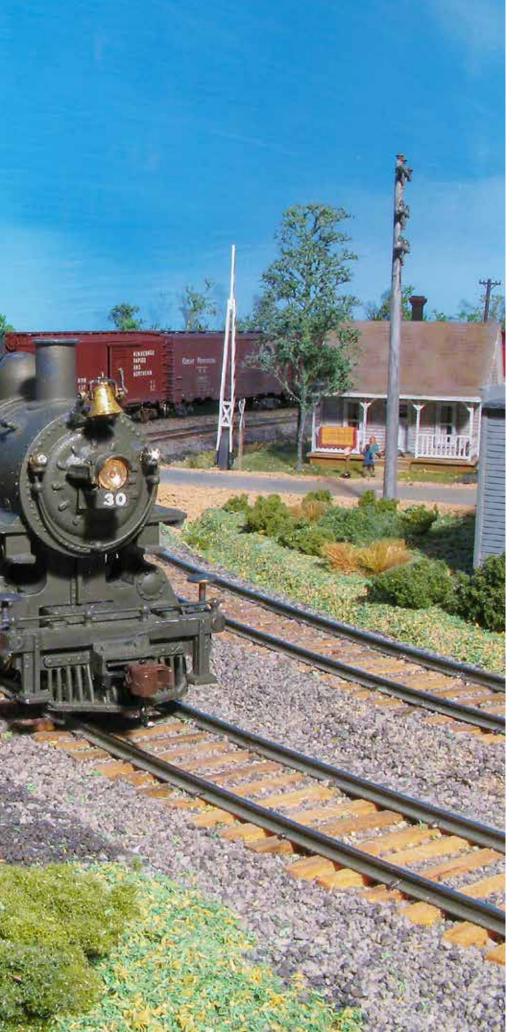
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e best place to find Great





The HO Winnebago Rapids & Northern serves rural Wisconsin's farming community

#### **By Emory Luebke**

Photos by Dave Rickaby

ike many others, trains have always been an important part of my life. While looking for our present home, I eliminated many options because the basement wasn't right for a layout. After selecting a home in December 1979, I started planning my current layout. However, modeling the prototype wasn't as big of a concept then as it is now.

I wanted a model railroad that would look prototypical, but I didn't want to get tied into modeling specific locations. Operation is an aspect of the hobby that brings me a lot of enjoyment, so I wanted a layout that would support that. I liked the idea of freelancing, as it would allow me to name towns, industries, and businesses after family and model railroad friends who supported and influenced me over the years.

I always liked the Soo Line, Chicago & North Western, Green Bay & Western, and the Milwaukee Road, in that order. Based on the pecking order, my first choice for a railroad to interchange with was the Soo Line. If my layout were larger, I would've add interchanges in different locations with the other railroads in the order they are listed.

#### The layout

Construction on the Winnebago Rapids & Northern started in 1980 and is still ongoing. Why has it taken so long? When working, there was a lot of travel involved in my job and I usually spent more time thinking about doing a project than actually accomplishing it — think procrastination.

The model railroad is shaped like a G in a 14 x 18-foot space. Two sides are along the walls, and the other sides are accessible for operating and maintaining the layout. The track plan was strongly influenced by John Armstrong's book *Track Planning for Realistic Operation*.

The L-girder benchwork has 1 x 4 risers supporting a 3/4" plywood



2 Building the model railroad in a G-shape with two sides along the walls allows Emory easy access when operating and maintaining the layout. Out of frame to the right is the stubend Winnebago Rapids Yard, which can be bypassed during open houses for continuous running.

subroadbed. Legs are 2 x 3s with lag screws in the ends to allow for leveling. The fascia is ½" hardboard painted black with pockets and recessed shelves for placing uncoupling tools and beverages.

The main line is 120 feet long and is operated point-to-point, but can be run continuously during open houses. The track is code 83 throughout. I handlaid the track in all visible areas. I used flextrack in hidden locations.

I found handlaying track to be enjoyable and a nice way to wind down after work. I purchased pre-cut ties, which I glued to the Homabed roadbed. I stained the ties individually so they wouldn't have a uniform appearance.

The steepest grade on the layout is 3.5%. Because of this I run shorter trains (but more of them), adding to the operational challenges and fun.

All of the turnouts were built in place, so they may not be exactly a No. 6 or other standard sizes. Though not standard, the turnouts flow smoothly into and out of the tangents.

I also built a long, curved gantlet turnout on the steel arch bridge entering Lake Trudie, an idea I borrowed from a



3 Winnebago Rapids & Northern 2-8-2 No. 46 thunders out of the tunnel by Easton Junction Road with a freight train. Emory weathered the Mikado with an airbrush and acrylic paints.

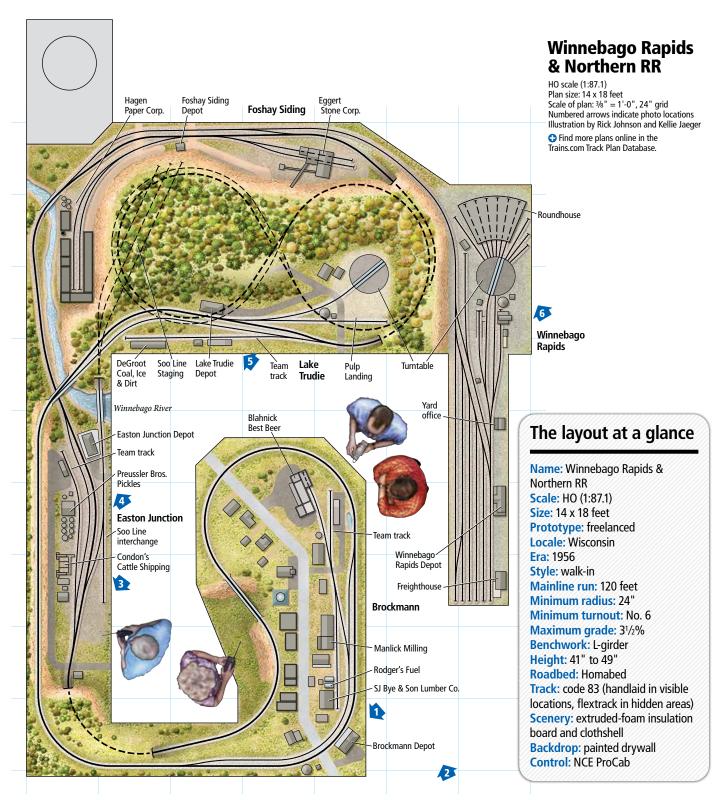
C&NW bridge in Neenah, Wis. The gantlet track allowed for a longer passing siding at Lake Trudie and was something you don't see on many model railroads.

Almost all of those turnouts are operated with Caboose Industries tall switch stands or ground throws. There are six turnouts that can't be reached by operators. At those locations I used Switchmaster stall-type motors to line the routes.

Every piece of rail, no matter how short the section, has a feeder wire attached because I don't use rail joiners. The feeders are soldered to the underside of the rail and can't be seen.

#### The fleet

My locomotive fleet consists of remotored, regeared, and superdetailed Bachmann Spectrum 2-8-0s and a



Life-Like Heritage 0-6-0; Mantua 2-8-2s with Cary boilers; an 0-4-0 shifter; and a Roundhouse 2-8-0. In addition, I have a Bachmann Spectrum Doodlebug and a Whitcomb gas/mechanical locomotive that was scratchbuilt.

The 0-4-0 and the Whitcomb are the only two locomotives without sound. However, the units are equipped with mobile Digital Command Control (DCC) decoders. Most locomotives are fitted with SoundTraxx sound decoders;

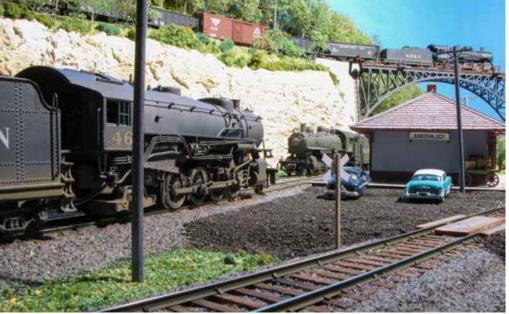
one has an ESU LokSound decoder. I use NCE's ProCab radio system.

The rolling stock is made up of commercial models from a variety of manufacturers, including Athearn and Kadee. There's even an old Varney covered hopper, which gives you an idea of how long I've been in the hobby.

All rolling stock and locomotives have some degree of weathering. I weathered the locomotives with an airbrush and acrylic paints. I used chalks on rolling stock. If the results aren't what I hoped for, I can remove and redo the weathering. I find the chalk weathering doesn't wear off that easily, so I don't seal it with a flat finish.

#### **Wisconsin scenery**

I used stacked and glued pieces of extruded-foam insulation board for the scenery base. Then I shaped it with a rasp or knife and covered it with



4 It's busy time at Easton Junction. Eastbound train No. 14, led by 2-8-2 No. 46, waits on the main for a very late local to get a clear signal. Above, train No. 11 rumbles over the arch bridge on its way to Lake Trudie.

plaster-soaked paper towels. That was, until my friend Gregg Condon showed me his clothshell scenery technique, which is neater and quicker.

I painted the scenery base with a flat tan latex. While the paint was still wet, I sprinkled on scenery materials from various manufacturers. After the paint had dried, I applied bushes and static grass.

I hand-carved Sculptamold where there are rock cuts. In other areas I installed plaster castings made using commercial rock molds. I filled the molds with drywall plaster and put them in place before the material completely hardened. Then I stained the rocks using formulas in Dave Frary's book *How to build Realistic Model Railroad Scenery* (Kalmbach Books).

I used many Scenic Express SuperTrees on the layout. I also made a few trees from weeds that I found. The evergreens are either commercial offerings or scratchbuilt using the bottlebrush technique.

I made the main highway through Brockmann with corrugated cardboard from a shipping box. I spread a thin layer of spackle over it and lightly scribed it to simulate expansion joints and cracks. I then painted the road concrete gray and weathered it with chalk.

The structures on the layout are a mix of factory-built, kits, kitbashed, and scratchbuilt. I've used both styrene and wood for scratchbuilding and enjoy working with both materials.

Fifteen of the buildings have interior details and are illuminated, most with incandescent grain-of-wheat bulbs and a few with light-emitting diodes. On a compact layout, detailed and illuminated

interiors give visitors and operators a little more to look at. There are also many figures on the layout depicting interaction among people. These mini scenes bring the layout to life.

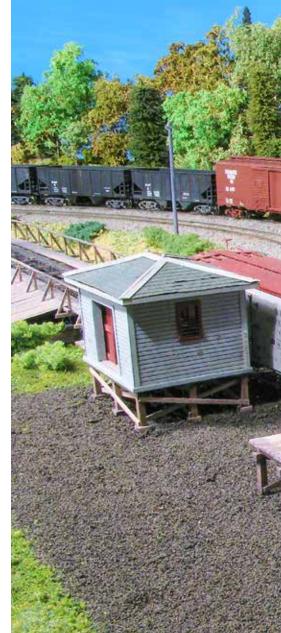
The scenery is about 95% complete. Probably the biggest need is more trees (Wisconsin has a lot of them). In addition, I plan to go back and add small details to enhance scenes that are otherwise complete.

#### **Running trains**

I run trains using a timetable and train orders (TTTO), following a 4:1 fast clock. Each operating session lasts about three hours. Instead of a car forwarding system, switch lists are used. Prior to each operating session, I walk the layout to determine where cars need to be picked up or set out. Then I fill out the switch lists and the yardmaster uses them to build trains. The switch lists are handed off to the crews when their trains are ready to depart.

To keep the paperwork in order, I attach the switch lists, timetable, clearance form, diagrams of the towns to be served, and any special orders to a clipboard. No train can leave without a clearance form from the dispatcher.

During an operating session, seven trains are run as turns per the timetable. Four Soo Line trains are run from staging to Easton Junction and back. Operators must check in or OS (On Sheet) the dispatcher at each station. Thus crews act as depot agents, as well. As with all TTTO operations, crews must pay attention to the clock, not interfere with superior trains, and not



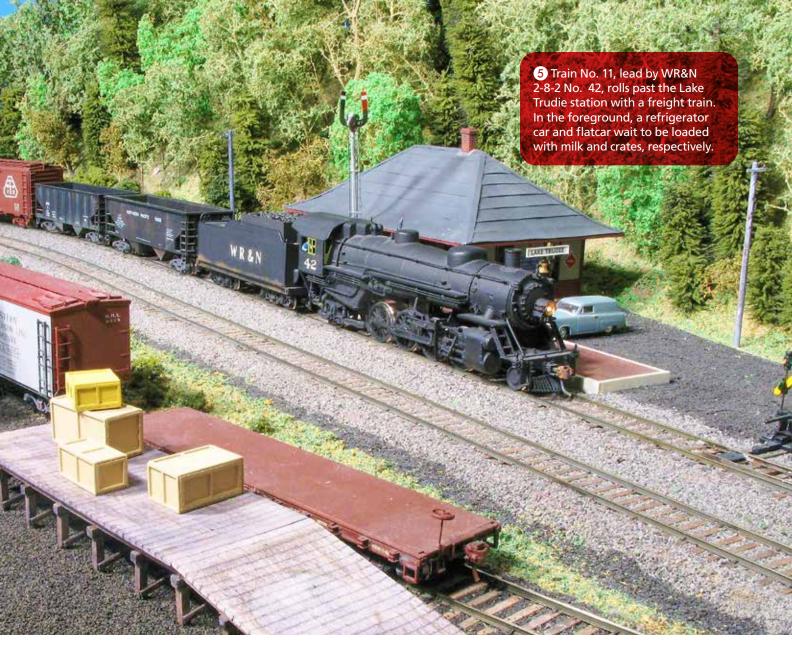
miss a meet with another train while completing their work.

#### **Accomplishing goals**

When I started this layout I wanted to provide a look back to the 1950s, when railroads served small towns and loose-car railroading was still common. I also hoped to provide a realistic representation as to how railroad facilities looked at mid-century.

While meeting those goals, I also wanted a reliable layout with good scenery. I believe I've met my goals, but I'm still going back and reworking areas as my skills have improved.

The WR&N has provided me many years of enjoyment and challenges. People who have operated the layout have commented that they're surprised by the amount of operation a 14 x 18-foot layout can support.



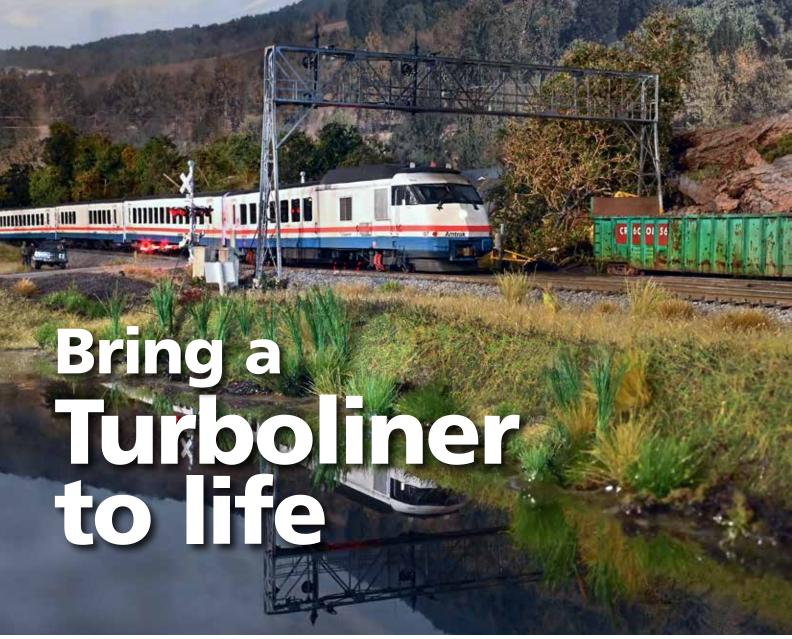


6 Mikado No. 45 emerges from the Winnebago Rapids roundhouse after having work completed on its rear tender truck. Emory refitted the Mantua 2-8-2 with a Cary boiler.



#### **Meet Emory Luebke**

Emory and his wife, Trudie, live in Greenville, Wis. Prior to retirement, he worked as an engineer in both the paper and truck manufacturing industries. When not working on his layout, Emory enjoys being an outdoor sportsman, golfing, bowling, railfanning, traveling, and going to movies with Trudie.



Train No. 276 is eastbound on the Onondaga Cutoff with Turboliner cab car No. 157 leading the way past the eastbound home signals at CP 277, east of Fayetteville, N.Y., on Oct. 4, 1994. Weathering a train for a certain era helps plausibility.

#### Weathering and adding passengers to Rapido's trainset

By Dave Abeles • Photos by the author

Sometimes a manufacturer releases a product that is such a natural fit for your railroad that there's no question it needs a place on the roster. This is exactly what happened when Rapido Trains released its model of the Amtrak Turboliner in HO scale. This is a great model of a familiar prototype for northeastern railfans, and the prototype is one that earned its keep on the route that is the prototype for my Onondaga Cutoff.

When Amtrak was created in 1971, it inherited elderly equipment that was in a state of disrepair. One solution was to

purchase new equipment for certain corridors. Rohr Industries was selected to build the Turboliner sets for Amtrak in 1976. The equipment quickly entered service in both the Empire Corridor (service between New York City and Buffalo) as well as trains to Niagara Falls, Detroit, Toronto, and Montreal.

The Onondaga Cutoff (OC) models operations on Conrail's Chicago Line around Syracuse, N.Y., in the mid-1990s, part of the route that hosts the *Empire Service* trains. This is the former New York Central Water Level Route — a

line where passenger trains have always roamed and where Amtrak has been a fixture since its inception. The unique trains became part of the daily parade across my modeled territory. Like them or not, they were essentially a required purchase for the Onondaga Cutoff. Follow along as I add passengers to the seats and finish the train with details and weathering to suggest 1994 service on the OC. MR

Dave Abeles is a frequent contributor to Model Railroader magazine.

#### STEP 1 Preparing the trainset









In my experience, weathering is a process best accomplished in layers. The initial layer in weathering equipment for the Onondaga Cutoff is to use panel liners and washes to highlight all the molded grills and details on the body shell and trucks. Tamiya Panel Liner makes this simple. I used black, brown, and gray shades of this product on each car. This treatment adds a tremendous sense of depth to each of the details on the shell 1.

The tiny strobe lights on the cab roof are molded in clear plastic with a friction fit to the shell. I removed and lightly sanded them to increase the translucency of the plastic so they would scatter more light from the strobes 2. I reinstalled the strobes with a bit of canopy glue to secure them.

Once the panel liner cured and the strobes were reinstalled, it was time to add passengers. Passenger trains on the prototype are operated to be revenue moves — equipment operating to earn revenue while providing a service. And for any passenger train, revenue comes from the passengers who purchase tickets and ride the trains. Even in the Amtrak era, fare revenue is an important source of funding

for operations. The large, clear windows and light-emittingdiode lighting of the Rapido model allow a great view of the interior, and the seats were ready for their job. This train needed passengers, so I included passenger installation as part of the detailing process.

I followed Rapido's instructions to locate the tabs and then used toothpicks to separate those areas on the shell from the associated clips on the frame in order to have access to the car interiors 3.

After I inserted toothpicks at several locations on each side, the shell slid off the frame smoothly. I worked each part of the trainset in parallel for this process, helping to ensure consistent weathering patterns to suggest a consistent age for the equipment.

I had purchased a bulk pack of used figures at a local train show and had a number of good candidates for this train. Adding figures need not involve filling every seat, especially those without an adjacent window. Keeping the body shell close by allowed for easy examination of which seats would be most visible to visitors 4.

#### **STEP 2** Installing passengers



Figures were added one by one with a dab of canopy glue on the seat of the pants or dress to secure the figures in their seat 1. There will be no moving about the coaches on this train!

One by one, the seats fill, and you can include as many figures as you'd like. Basic painted figures work well in this role. As the glue dried on the figures, I used the time to cut painter's blue tape to shape and begin masking the windows on the body shell 2. Masking will keep the weathering process from fogging the window glass.

#### STEP 2 Installing passengers (cont.)





The power cars on either end of the train had passenger seating as well, so I also removed that body shell to add figures to those seats. On the cab car shell, it's necessary to remove the pilot to allow the shell to release from the frame

3. Rapido's instructions helped with this process, too. The same toothpick trick I used for the cars was used on the power cars with the same positive result. As with the rest of the train, be mindful of details when handling shells.

#### **STEP 3** Time for weathering





After the riders were on board and the windows were masked, I worked to add weathering to the train. Passenger trains require a bit of a different approach with weathering. Windows are generally clean, and the carbody is regularly washed. Even so, in most cases, grime can build in protected places and paint will fade over time.

The prime movers in the prototype Turboliner were smoky and added a residue of black soot and grime to the roofs of the trainsets while in service. I wanted to capture this look on my model.

First, though, an adjustment for era. At some point in the early 1990s, many of the Turboliner power cars lost their large "Amtrak" lettering, leaving a large white area behind the ventilation grills. While I left the lettering on power car No. 156, I noted it was removed on No. 157 by my era. The classic trick of using a bit of tissue paper soaked in Microscale's Micro Sol worked here. The paper holds the solution where it's needed, and after about 15 minutes, the lettering softens enough to be wiped away with dry paper towels, leaving the base paint unscathed 1.

I then used an airbrush to apply several layers of weathering. First was Testors Dullcote, followed by a layer of Sierra



Brown as a highlight layer. A lightly applied fade coat of Reefer White was also added at this time 2.

Once the airbrushed coats dried, I drybrushed several pigments from the Ammo line by Mig Jimenez to represent soot from the diesel exhausts. I also added some additional grime and rust shades 3. Drybrushing allows a great deal of control for specific areas of weathering.

### **STEP 4** Finishing touches



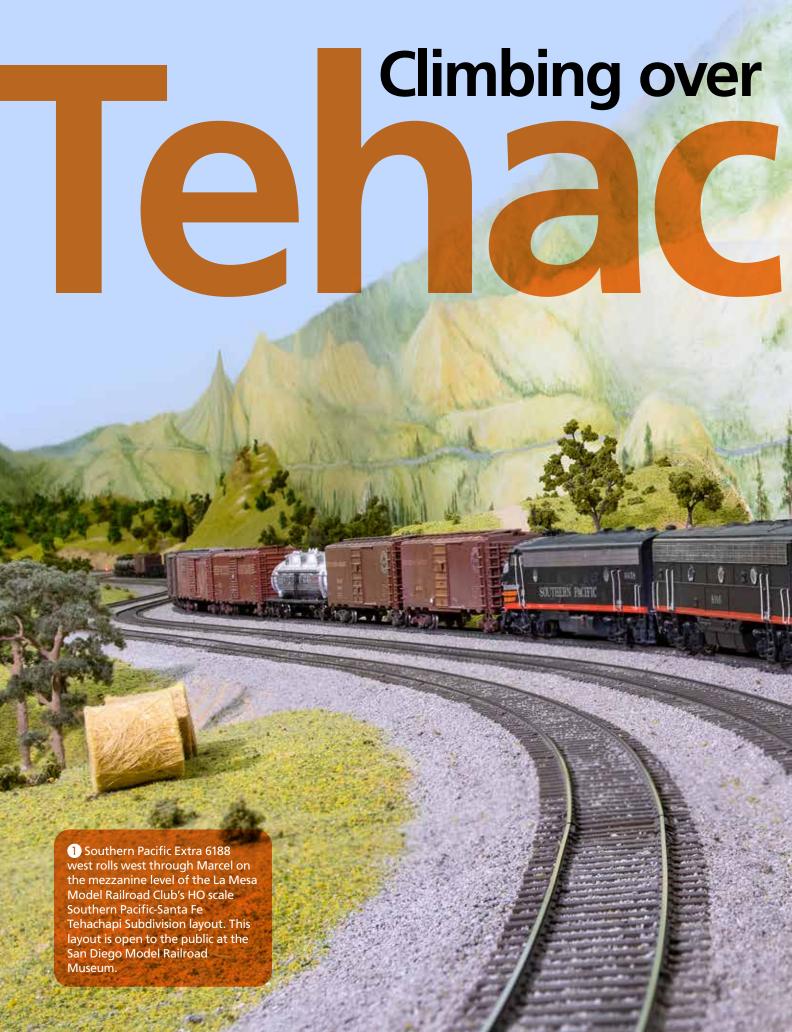


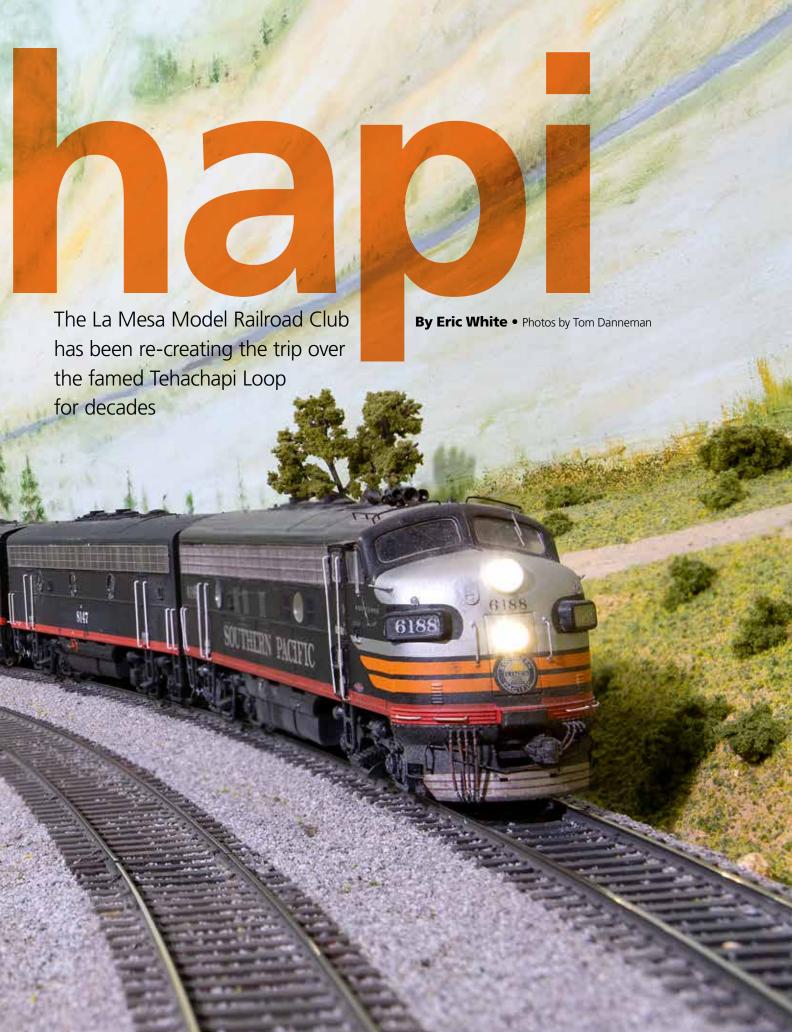
Weathering is drawn down from the roofline to the frame to suggest the effects of rainfall and precipitation over the years. Black and brown help with the soot, while light gray powders help highlight the details on the trucks and underframe 1.

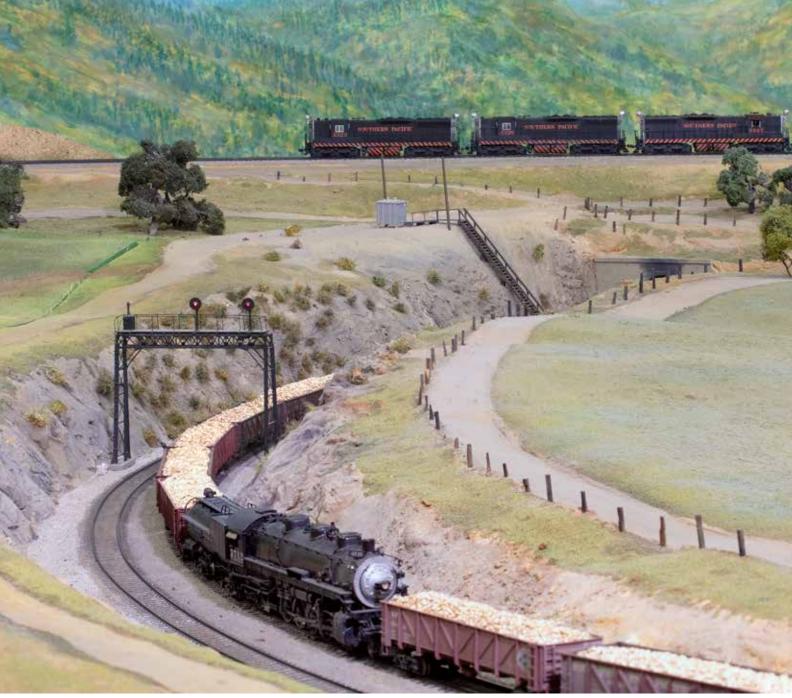
Once the weathering was complete, it was time to remove the masking from the windows. The tape protected the window glazing from the Dullcote and paints and kept it clean of the powders as well, providing a nice, shiny contrast to the lusterless and gritty appearance of the painted areas 2.

The finished product is a satisfying sight rolling along the Onondaga Cutoff — a good looking model of a common prototype for this piece of railroad ③. Now it's another sight along the tracks that helps viewers know where they are and when they are there.









ave you ever fantasized about building a giant model railroad? One with scale miles of track, a minimum of selective compression, and mountains that reached well above your head? Did you know such a thing exists?

Welcome to the La Mesa Model
Railroad Club's Southern Pacific-Santa
Fe Tehachapi Subdivision layout. This
behemoth features about 25 scale miles
of track. Taking a train from one end,
modeling Bakersfield, Calif., to the other,
at Mojave, will take you about an hour
— a full hour, not a fast-clock hour.

The team from *Model Railroader* was invited to an operating weekend at the club in November 2023 and it was quite

the experience. Over three days, I ran dozens of trains, and on the third day, the video and photo crews showed up to capture everything for this story and an accompanying video. The layout is so huge we had to come back the day after the session to set up shots we couldn't get when the "real" trains were running.

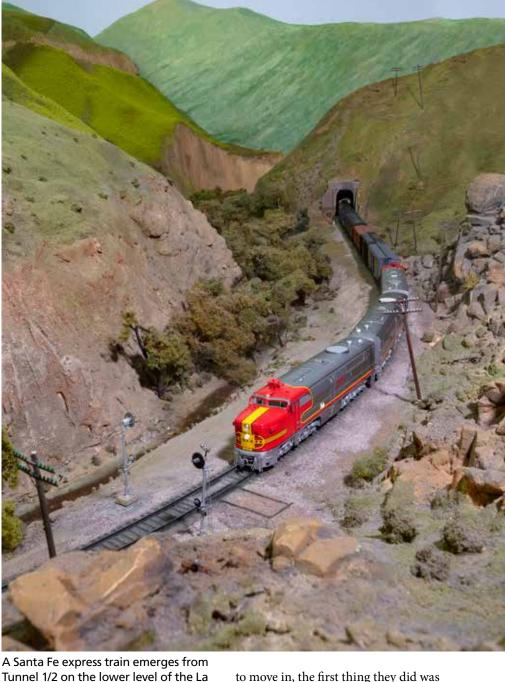
#### A museum layout

The layout is built in the basement of the Casa de Balboa, part of San Diego's Balboa Park complex. The building is designed to appear as one of the structures from the 1915-16 Panama-California Exposition. Although many of the original Expo buildings lasted into the 1970s, by the 1980s they were in poor An eastbound Southern Pacific sugar beet train with 48 loads, three EMD SD7 locomotives on the point and a class F4 2-10-2 helper, crosses over itself as it ascends Tehachapi Loop. The Loop is about 9 feet in diameter and features two sections that open to retrieve derailed trains.

condition, with some of them being targets of arson.

The city's parks and recreation department had decided to build replacements to house the museums that had been established there. One of the displaced exhibits was the San Diego Model Railroad Club, which had a part in the original formation of the La Mesa Model Railroad Club. A group of young model railroaders were interested in





joining the San Diego club, but as teens they didn't meet the age requirement.

The teens formed their own club in 1962, with the help of some of their parents and sympathetic members of the San Diego club, and found a home in an underused building called Nebo Hall in La Mesa, Calif. By the late 1970s, the city of La Mesa was interested in rehabilitating the area, including Nebo Hall, so the La Mesa club needed a new home.

An agreement with the San Diego club formed the San Diego Model Railroad Museum, the umbrella organization that runs the museum and works with San Diego parks and rec officials.

The La Mesa model railroad is one of six train layouts at the museum. Others include the San Diego Model Railroad A Santa Fe express train emerges from Tunnel 1/2 on the lower level of the La Mesa Club's Southern Pacific-Santa Fe Tehachapi Subdivision model railroad. The eastbound train has a steep climb ahead of it to get to Mojave.

Association's two layouts, the Cabrillo Southwestern and the San Diego & Arizona Eastern in O and HO scale, respectively. The San Diego Society of N Scale has its Pacific Desert Lines; the San Diego 3-Railer Club has its Toy Train Gallery; and outside is Freight and Flora: A Garden Railway Exhibit.

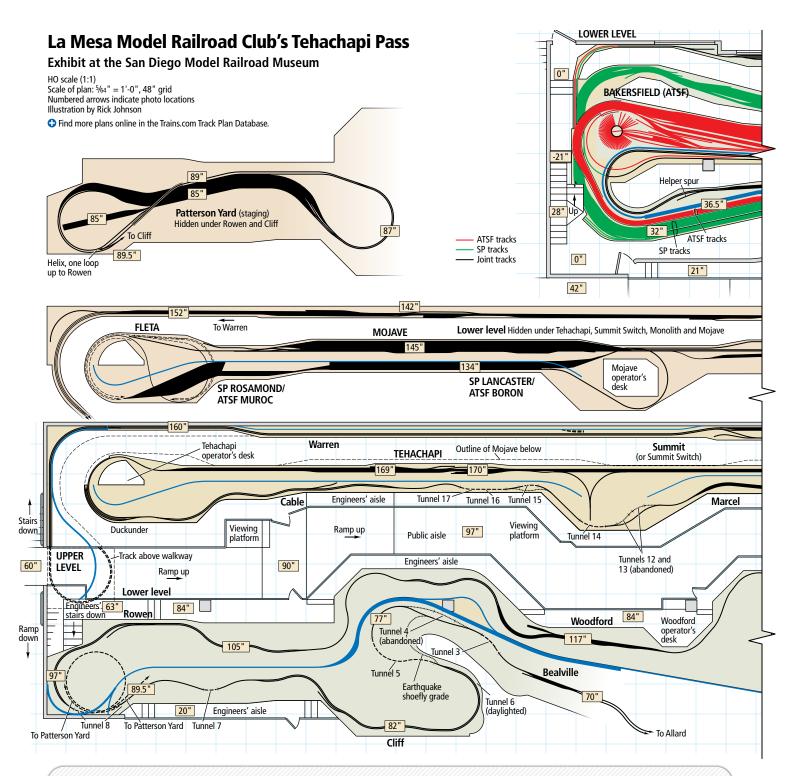
#### Building a mega layout

Once all of the papers had been signed and the La Mesa club was allowed

to move in, the first thing they did was set up a section of their old Nebo Hall layout called Castaic and build a hidden loop connected to a helix to get trains running. As a public exhibit, the club is expected to have trains running whenever the museum is open.

Construction of the planned Tehachapi Pass layout began with the lower section that faces the public and depicts the line from Tunnel 1/2 through the area known as Cliff. This section of the layout is about 42 x 80 feet (the whole layout is about 130 feet long).

A giant backdrop at the back of this space separates the area from the upper level mezzanine and the lower level areas of Ilmon through Bakersfield. The main area was filled with expansive mountain



#### The layout at a glance

Name: Southern Pacific Tehachapi Subdivision

Scale: HO

**Size:** 72 x 128 feet

**Prototype:** Southern Pacific Tehachapi

Subdivision

Locale: Bakersfield to Mojave, California

Era: 1950s-1960s

Style: Multi-level walkaround

Mainline run: Bakersfield to Mojave: 1,500 feet; between staging yards, Goshen Jct. to

Lancaster: 1,800 feet

Minimum radius: main tracks, sidings and yards: 48"; branch lines and industry tracks: 36" Minimum turnout: main tracks, sidings, and yards: No. 9; branch lines and industry tracks: No. 7 (approximately 750 turnouts total)

Maximum grade: 2.38%

Benchwork: plywood beams and welded square steel tubing

Height: 32" to 172" above ground floor; 22" to 68" above adjacent aisles

Roadbed: 3/4" plywood with 1/4" laminated

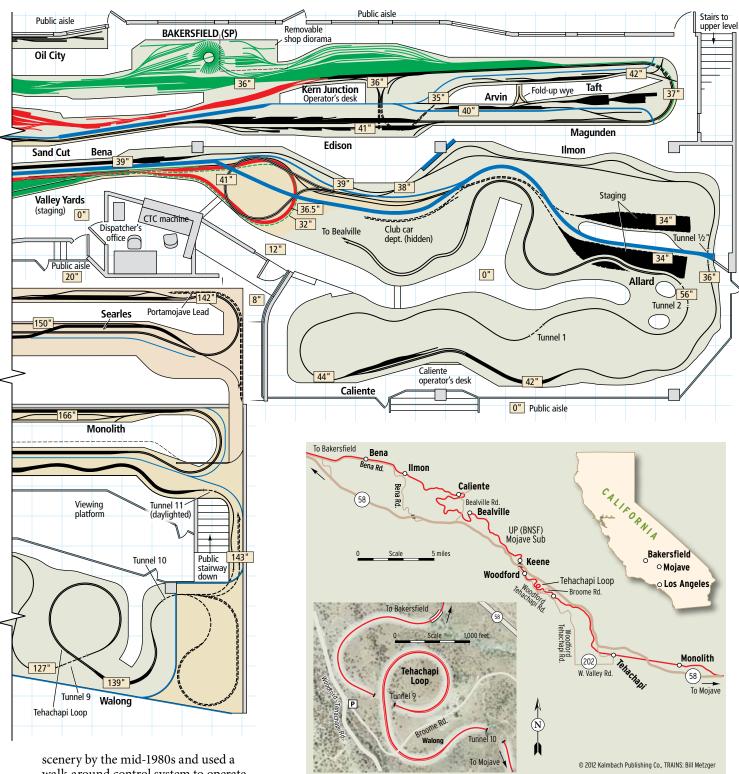
pine strip ballast board (main tracks and sidings) or Upson board (yards)

Track: code 83 and code 70 flex track with handlaid turnouts on wooden ties

Scenery: Hydrocal on chicken wire or extruded-foam insulation board, with drywall mud surfacing

Backdrop: hand-painted on "door skin" (1/8" plywood)

Control: NCE Digital Command Control, using plug-in and Wi-Fi throttles



scenery by the mid-1980s and used a walk-around control system to operate multiple trains through the area. By the late 1980s, Bakersfield Yard was under construction. To build this huge yard, the subroadbed was built with a long hinge to allow wiring and testing of the 80-plus turnout motors. When everything was working as intended, the surface was secured to the benchwork.

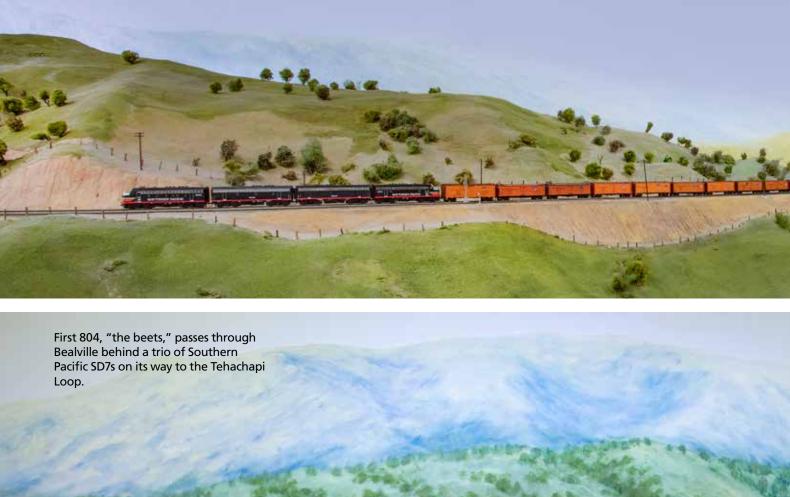
Early parts of the benchwork were built with wood, much of it 2x lumber for durability. The Castaic section was superseded by a shoofly loop between Bakersfield and Ilmon that would later be replaced with an aisle that would add several more scale miles of track.

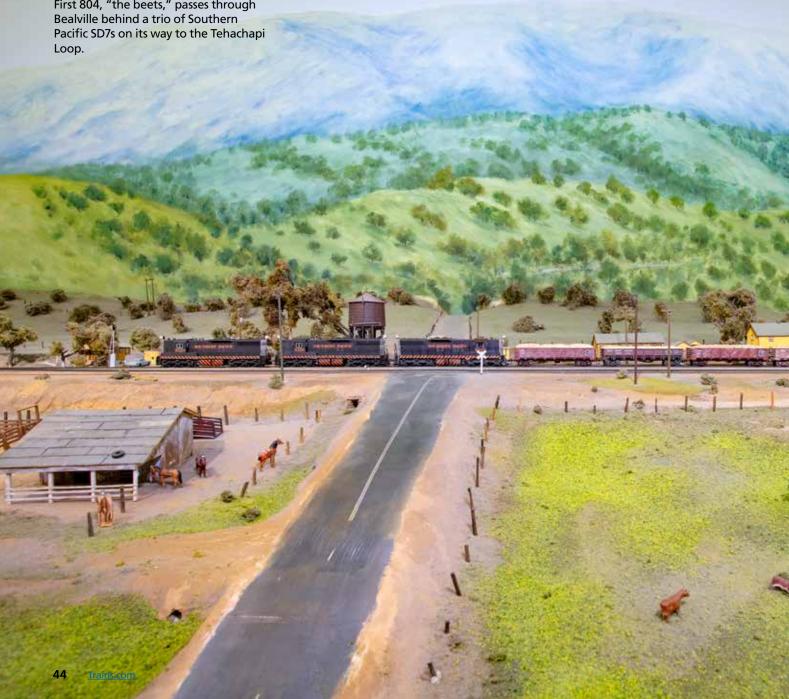
But the railroad still hadn't reached its goal of Tehachapi Loop. To do that, a mezzanine would have to be built above Bakersfield Yard and the adjacent Ilmon to Mundelen aisle. More than \$200,000 was raised for the project, built by an outside contractor.

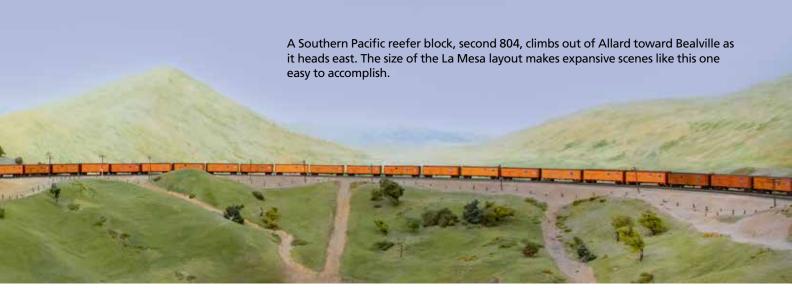
Bakersfield Yard was covered while the steel and concrete mezzanine was built above it, and the city approved the area for occupancy in 2004. You'll notice that when *Model Railroader* visited La Mesa in the January 2004 issue, there were no photos of the Loop. Construction of that area started in March and continued through August 2015, when the golden spike was driven.

#### **Layout construction**

Benchwork on the mezzanine is a combination of steel tube and 1x











Second 804 pulls out of Caliente on its way to Mojave. This photo shows about half of the lower level's main scene between Tunnel 1/2 west of Caliente, where the climb begins, to Tunnel 8 east of Cliff where is disappears to head to the mezzanine.

dimensional lumber. Subroadbed is plywood, and track is a mixture of handlaid and flex. Turnouts are mostly handlaid to fit the individual situations, and all are lined electrically.

Much of the scenery is still built using chicken wire overlaid with plaster-soaked newspaper, although some of the newer sections also have stacks of extruded-foam insulation board under the finished scenery.

Since the layout has been under construction since the mid-1980s, scenery materials vary from primarily ground foam on the lower levels to areas of static grass in the more recently scenicked portions. Most of the layout that is visible to the public is scenicked, although there is an area along the mezzanine aisle across

from Tehachapi Loop between Cable and Marcel that during our visit was an excellent representation of the scenicing process, showing every stage from bare benchwork to completed scenes.

Much of the layout is separated from the public by a simple metal fence. There are gates in the fence to allow operators to enter the "engineer's" aisles and stairs, which separates the layout from the public by about 2 or 3 feet. Some areas, such as the Bakersfield Yard complex, are separated from the public by a wall, although there are large view windows so people can see what's going on inside. A few areas are either difficult to see or completely hidden from the public but make up important parts of the model railroad from an operations standpoint.

#### Capital "O" Operations

The Southern Pacific-Santa Fe Tehachapi Subdivision model railroad was built for operations. Specifically, the model railroad runs on Timetable and Train Order operations (TTTO). Among dedicated model railroad operators, TTTO operation has a passionate following because of the need to be thoughtful about what you're doing on the railroad.

The tools to make TTTO work are a timetable listing all of the scheduled trains and the times they're expected to be at particular points on the railroad; an accurate clock or watch; and train orders for use when the timetable must be adjusted to accommodate late trains, extras, or special movements.

Modelers have been building layouts with the goal of using timetables and train orders, but there are limitations. It takes time to write and implement train orders, which are instructions to train crews to deviate from the timetable. Often, layouts are too small for the orders to be written in the time it takes to get from one spot to another.

The Southern Pacific-Santa Fe Tehachapi Subdivision is nearly 30 scale miles long. That's more than an actual quarter mile of track between Bakersfield and Mojave. Most model railroad main lines are measured in hundreds of feet, not thousands.

Two of the people I operated with — Steve King, who along with Tony Koester and Allen McClelland made up the trio of Appalachian Lines freelanced railroads, and Bill Darnaby, builder of the well-known Maumee Route — shared their thoughts on the layout.

"I've been going to Tehachapi for over 20 years. Things have changed a bit over that period of time, but it's always been a very stimulating experience," said Steve.



"It's always been a unique experience too, but now that the railroad is 'complete' it's the closest to the reality of any railroad experience."

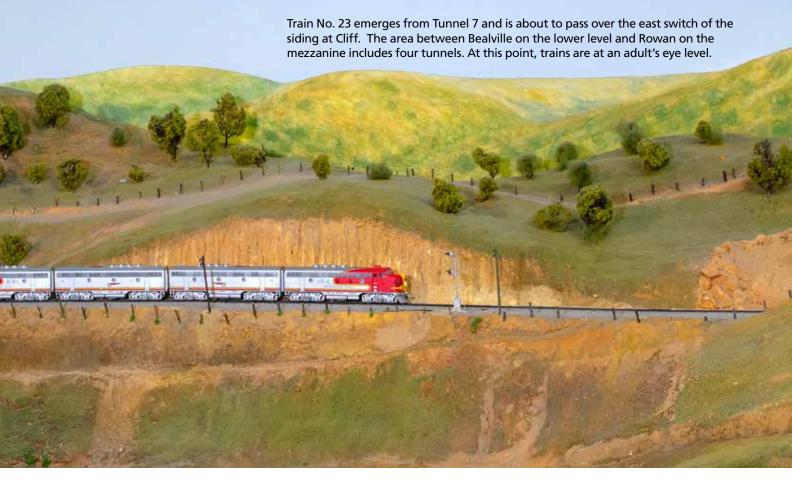
"I've been going out there (San Diego) since about 2001 for regular TO sessions shortly after the DCC conversion at the club and I have probably 36 sessions under my belt," said Bill.

"Obviously, I like it there. There is nothing else with the distance, prototype fidelity, and one-to-one clock in the country that provides the feel of real TO (train order) railroading. "It takes a first-class train a real hour to get across the road because the layout has 30 scale miles of railroad," Bill continued. "I had only one train over the road the whole weekend and it was perhaps my favorite, a westbound extra freight that had to work its way downhill against traffic. Including the time I got on the engine at Lancaster and time parking it at the Bakersfield roundhouse, I was on duty 5 hours."

Steve added, "In fact, the entire Tehachapi experience is unique. The fact that it takes over 35 operators to



Our sugar beet train holds the main track as it passes over the west switch of the siding at Cliff after emerging from Tunnel 5.



fully staff the railroad is special. People who want a different experience from the railroad can get it — from working in a yard, to running yard jobs, to running over the main line, to the support jobs such as being an operator or dispatcher. It's all different. Some enjoy a mix of the railroading experience, while some like to participate in one or two areas. But each takes away that special railroading experience."

"The operation at La Mesa appeals to me because of the mental stimulation," Bill said. "One has to think to get across the road, particularly on a westbound extra, as you have to understand the orders and watch the timetable for opposing trains.

"The dispatcher's job is also appealing, although it can be stressful. It requires real concentration and planning, and I am usually whipped but satisfied at the end of the trick."

The future of the model railroad looks bright. The La Mesa Club has more than 100 members of all ages, and work is continuing on the layout as operating sessions are held. Areas that are out of public view have their trackwork completed, but scenery is in varying stages.

Besides the early 1950s timetable and train order session that I attended, the



An eastbound Southern Pacific reefer block, running as Second 804, waits in the clear at Caliente for a meet. The westward train order signal has been cleared for the approaching train, indicating it will not have any orders to pick up here.

club also holds sessions set in the late 1970s and the modern era. In addition, the museum draws a good crowd of visitors on the weekends.

An unusual aspect of the operating session was allowing children to blow

the horn or whistle on my train while I waited in a siding for a meet.

The museum is open Tuesday through Sunday, 10 a.m. to 4 p.m. If you're in San Diego, be sure to head over to Balboa Park and check it out!





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Ed McCreary heads down Main Street in Strong, Maine, with his home-built O scale hay wagon. Model Railroader Contributing Editor Lou Sassi shows how he scratchbuilt the wagon for his On30 Sandy River & Rangeley Lakes layout.

# Scratchbuild a WAGON

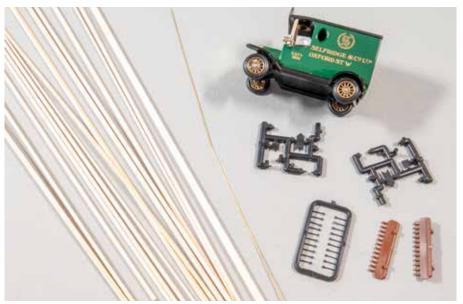
Stripwood, wire, and salvaged wheels make a simple, rustic vehicle

#### By Lou Sassi

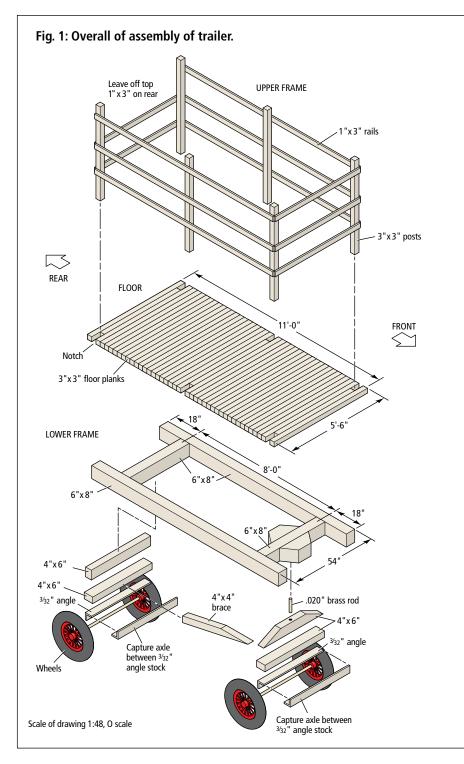
Photos by the author

hile spending an afternoon watching On30 layout videos on YouTube, I spotted an O scale farm wagon being pulled by a John Deere tractor on the Spruce Coal & Timber Railroad, Joey Ricard's On30 display layout. Since McCleary's Farm in South Strong needed just such a wagon, I decided to take a shot at scratchbuilding one.

After putting the video on pause, I took a screenshot of the wagon and studied it carefully to determine what sizes of wood were used to build it. Figure 1 and



The materials needed for the project include dimensional scale lumber, .024" brass wire, eyebolts, nut-bolt-washer castings, and the washer from a Caboose Industries switch stand. The wheels came from a bargain-bin delivery truck.



the materials list at right depict the sizes I arrived at.

Note that although I'm building in O scale, all the scale lumber I used for this article was HO scale dimensional stripwood from Northeastern Scale Lumber. Although 1/87.1 is not exactly half the size of 1/48 proportion, at these sizes the stripwood's dimensions are close enough to treat as half size for O scale. All scale dimensions in this article are O scale.

In addition to the wood, I also needed wheels, nut-bolt-washer castings, and a

drawbar to attach the wagon to McCreary's 1930s Farmall tractor. I opted to make the drawbar out of 2 x 2-inch wood stock and a leftover washer removed from a Caboose Industries Hi-Level switch stand sprue. The drawbar would be mounted to the wagon via a .024" brass rod passing through four eye bolts culled from my On30 freight car lift bar article.

Fortunately, while I was planning this project and deciding what parts I needed, I was near Mile Post Hobbies

Fig. 2: Front axle/wheel assembly supports.

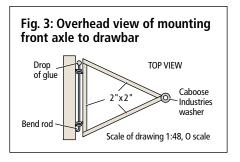
Drill #72 and insert Tichy eyebolts

3/32" angle stock

2"x 2" drawbar

FRONT

Washer from Caboose Industries high rise switch



# Caboose Industries washer from 103R Hi-Level Switch Stand Northeastern Scale Lumber HOSCAL2624 HO scale 2 x 6 (0 1 x 3) HOSCAL4424 HO scale 4 x 4 (0 2 x 2) HOSCAL6624 HO scale 6 x 6 (0 3 x 3) HOSCAL6824 HO scale 6 x 8 (0 3 x 4) HOSCAL81224 HO scale 8 x 12 (0 4 x 6) 332ANG 3/32" angle stripwood

## **Tichy Train Group** 8034 eyebolts

#### Miscellaneous .024" wire

(mileposthobbies.com), Matt Giardino's model train shop in Amsterdam, N.Y. Matt had all the additional materials I needed, including the stripwood and wheels, which I removed from a (\$3.00) 1930s delivery truck that I picked out of his bargain bin.

#### Frame and floor

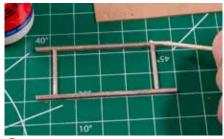
Next, I stained all the wood with a homemade weathering mix made from 1 pint 70% rubbing alcohol and two teaspoons India ink 1. Once the stain was dry, I built a  $4^{1}/_{2}$  x 11 scale foot frame for the wagon by first cutting the 3 x 4 wood to length using a North West Short Line



1 Lou stains the stripwood with an isopropyl alcohol and India ink stain.



2 The NWSL Chopper makes it simple to cut boards to uniform length.



3 Lou uses the grid on a cutting mat to align the boards as he glues them.



4 O scale 3 x 3-inch stripwood (HO 6 x 6) makes up the floor of the wagon.



**5** Lou got the wheels and axles for his wagon from a \$3 discount-bin vehicle.



6 Two pieces of 3/32" angle stock enclose the axle.



**7** The front axle pivots on a kingpin made of brass wire.



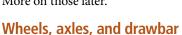
8 A wire link between the front axle and the drawbar lets it pivot two ways.



**9** Lou drilled holes in the vertical posts for nut-bolt-washer castings.

Chopper 2, sanding the ends on some fine sandpaper, then gluing the pieces together (placing the 4-foot dimension vertically) with Weld Bond on a self-healing cutting mat. I used the mat's printed-on grids for alignment 3. I set the 4½-scale-foot crossmembers 18 scale inches in from the ends of the 11-scale-foot side boards.

Once the underframe was dry, I cut a batch of 3 x 3-inch deck planks and glued them in place 4. Before installation, I shortened three planks on each side of the deck (see Fig. 1). This allowed me to later attach 5½-scale-foot 3 x 3 vertical corner posts to the underframe. More on those later.



I began this stage of construction by removing the wheel and axle assembly from the bargain box truck. I snapped off the plastic underframe, pulled out the axles 5, and brush painted the wheels Model Master Rail Brown.

The wagon's axle/wheel support mechanisms both consist of two lengths of 4 x 6 boards, stacked with one vertical and one horizontal, in a T shape. I then added two pieces of 3/32" angle stock that enclose the axle/wheel assembly 6. The rear assembly is glued to the underframe, while the front rotates on a brass pin that I inserted into the underframe and glued in place 7.

The drawbar is a triangular affair made up of 2 x 2 stock. After drilling holes with a No. 72 bit, I inserted four Tichy Train Group (item No. 8034) eye bolts, two into the drawbar and two into the axle assembly. I bent one end of a length of fine wire and passed it through the eyebolts, applying a drop of Weld Bond to the opposite end to hold it in place 3. Figure 2 and Fig. 3 show its construction.



The open lattice framework surrounding the bed of the trailer is made



Lou glues horizontal rails onto six vertical posts to make the upper frame.

up of six 3 x 3 posts. I drilled a No. 72 hole in the base of each for a Tichy nutbolt-washer casting **9**. I glued them into the notches in the floor, then added three lengths of 1 x 3 horizontal cross members spanning from post to post on three sides of the wagon **10**. On the rear I left off the top horizontal board to make loading and unloading easier.

This enjoyable two-evening project has enabled Ed McCreary to haul the hay from the fields of his farm in South Strong much more efficiently. MR



# SHARING THE MAGIC of Scale Model Railroading



Charlie Getz examines the Parts Wall, a 40-foot display showing the materials, kits, tools, and techniques used by model railroaders, at the Magic of Scale Model Railroading exhibit at the California State Railroad Museum. The exhibit introduces visitors to the hobby.

Come along on a tour of the NMRA's exhibit at the California State Railroad Museum

By Jim Providenza

Photos by the author

If you've heard about the model rail-road exhibit at the California State Railroad Museum (CSRM), you know the buzz is pretty good. But can it really be that good? Yes! And is it really that important for our hobby? Yes, again.

The Magic of Scale Model Railroading is sponsored by the National Model Railroad Association (NMRA) and was designed and built with the group's guidance. There's a wonderful

story to how it came to be, which I'll touch on in a bit, because it says something good about those of us in the hobby.

But to really get a feel for the exhibit, we need to go there. And to understand how it came to be and why our hobby is presented the way it is to both model railroaders and to the general public coming to the museum, we need to talk with someone who knows the whole story. So let's take a walk with Charlie Getz, past president of the NMRA and one of the prime movers behind the exhibit. Think of it as a personal layout tour with the owner.

RAILROAD

MUSEUM

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#### **Walking with Charlie**

"Charlie, my first question is maybe a bit personal. How do you feel when you see folks walking through the exhibit, stopping to marvel at the incredible scenes? Transfixed by the Wall of Trains or the 40-foot Parts Wall display?"

**Charlie:** Of course it's humbling, but also gratifying to see people mesmerized by what they see and experience. That is exactly what we had hoped for.

"So, Charlie, how did the exhibit finally come about? I know Howell Day, longtime hobby shop owner and model railroad manufacturer, first proposed a model railroad museum to the NMRA back in 1995. Bob Brown, longtime editor of *Narrow Gauge and Short Line* 

*Gazette*, and you were both very involved, but it took a lot of heavy lifting involving a whole bunch of people over a long time."

**Charlie:** The NMRA had been looking for museum space to house an exhibit on model railroading since 2004. Many

museums didn't have the space, weren't interested, or had financial requirements that weren't possible. During that time, I was an attorney for CSRM, and one day mentioned our search to the CSRM executive director. I was astonished when he immediately thought of a space on the gallery level which the museum had trouble filling due to its curved space segmented by roof trusses. A

memorandum of understanding was signed in 2009.

CALIFORNIA STATE

"How is it that CSRM agreed to the exhibit in the first place?"

Charlie: Well, the folks at CSRM were all for it.
But their bosses at the California Department of

Parks and Recreation were really concerned that "amateurs" like the NMRA, with no experience in creating a major museum exhibit, wouldn't be up to the task. Finally in 2017 we were able to convince the state that the NMRA was the expert on model railroading and would use a professional display company for the design and installation.

"The consultants — how did that work? Let's talk about disparate elements..."

Charlie: Bob Brown developed the initial design for the exhibit. Sibbett Design and Gizmo Art Productions evaluated Bob's design and we worked through changes with them, resulting in a final design. Gizmo Art Productions worked from the final design to produce and install the exhibit. Having non-model railroad firms guide us "amateurs" was really needed, as the public looks at our

hobby far differently than

we do.

#### The exhibit's impact

"I love many of the individual model displays — but I keep coming back to the History wall. Why do you think it's such a draw? Is that just because I'm a

model railroader? Does it have the same impact on the general public? Or is there another part of the exhibit that speaks more to the other visitors?"

**Charlie:** The History wall presents a compelling object-rich lesson in model railroading history, so it's popular.



Visitors to the exhibit are greeted by a larger-than-life photo mural of John Allen's groundbreaking HO scale Gorre & Daphetid model railroad. The layout, which appeared many times in the pages of *Model Railroader*, was destroyed in a house fire shortly after John's death in January 1973.

There's even a model railroading connection to the sinking of the *Titanic*! So of course, it's interesting. But so is the 40-foot Wall of Trains and the Layout Under Construction, which pulls back the curtain on how our layouts are made.

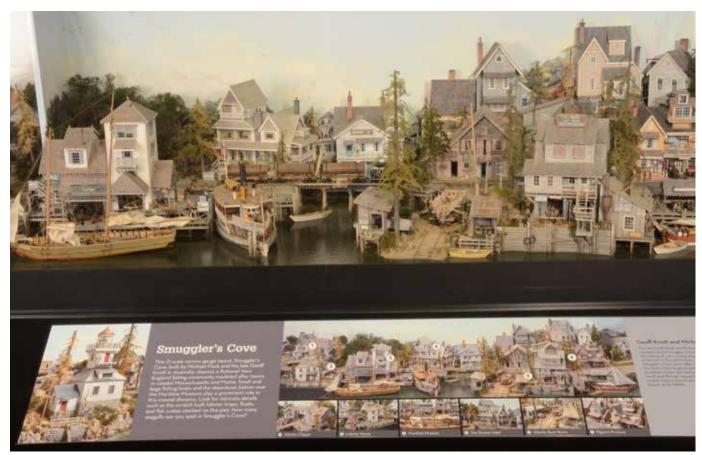
"Charlie, I recall how, as National Model Railroad Association president, you discussed the potential impact of the exhibit to the hobby in terms of public exposure. Now that the exhibit is live, is it living up to your hopes?"

**Charlie:** The philosophy of the exhibit is simple. As Bob Brown has long maintained, in order to attract new people to the hobby, we need to show them what we do. Gizmo added their expertise of museum exhibit design to that goal. The purpose of the exhibit is to explain our hobby to the public, educate them on our history, and teach them how to become a participant. I think it fulfills that goal.

"How could the exhibit be improved to better 'tell the story' and encourage the public to dip their collective toes in the water?"

Charlie: Well, it would be great if we could have modelers present to answer questions or demonstrate model building but that is impractical. We are fortunate to have docents who are also NMRA/PCR members and can answer questions. Otherwise, a small hobby shop near the exhibit would be fantastic. As it is, the museum gift shop carries magazines and books and train-related toys, so hopefully, people can buy MR or RMC and learn a bit more."

Our tour comes to an end because Charlie has another appointment. I plan



The model railroads on display at the exhibit came from all over the world. Smuggler's Cove, an On30 diorama depicting a fictional New England harbor town, was built by the late Geoff Knott and Michael Blake in Australia.



The curved main gallery features a selection of compact model railroads, modules, and dioramas in N, HO, S, and O scales. The sky backdrop behind the displays is animated.

to stay behind to take a few more photos and talk to some of the other folks involved in the museum and exhibit.

Charlie says goodbye and starts to walk back down the North Hall toward the main entrance where we started. Now I kid you not — Charlie really has to leave, but stops at least three times to talk to museum visitors, explaining what they are seeing, pointing particular things out, and encouraging their interest. Amazing. Thanks, Charlie!

#### **Talking with Carly**

Carly Starr is a Special Projects Manager for the California State Railroad Museum Foundation and spent the time with Charlie and me during our tour. After Charlie left, Carly and I sat down and chatted for a bit.

"Carly, does the exhibit meet the goals of the museum?"

**Carly:** Yes. It's wonderful to see visitors be impressed and amazed by the exhibit. They often say "wow" out loud when they first see the models. Many have

never seen scale models like this before, so this exhibit is a wonderful way to introduce a new aspect of railroading to our community. The exhibit is truly beautiful; photos can't really do it justice. At CRSM, we say, "Our lives are made of railroad stories." The Magic of Scale Model Railroading exhibit is another way of showing how railroads are a part of our lives.

THE PURPOSE OF THE EXHIBIT IS TO EXPLAIN OUR HOBBY TO THE PUBLIC, EDUCATE THEM ON OUR HISTORY, AND TEACH THEM HOW TO BECOME A PARTICIPANT. I THINK IT FULFILLS THAT GOAL. — CHARLIE GETZ

"What about the future? What improvements or new avenues would the museum like to see for the exhibit?"

**Carly:** We're working on having a group of modular railroads on display in November 2023. We see this as a first step in developing a more interactive side of the exhibit. For example, we could have hands-on activities or simple interactive computer simulations.

"How has it been working with the 'amateurs' from the NMRA?"

Carly: It's been a good working relationship. The NMRA owns the exhibit, and so there's always a meeting of the minds about any changes. There are sometimes communication hurdles because NMRA speaks "model railroad" and we speak "museum." But we always find ways for the exhibit to communicate visually and verbally in ways that make sense to our visitors who have no railroad or model railroad background.

"Carly, you've mentioned that your own life experience and professional



One of the model railroad layouts on display at the museum is Malcolm Furlow's famous San Juan Central, a project layout built for a series of articles published in *Model Railroader* from November 1983 to August 1984.

work didn't give you exposure to our hobby. What are your own thoughts now that you've spent a couple of years working with the exhibit?"

Carly: Model railroading was just something on the fringe of my awareness. I knew it existed, but that was about it. Working with the exhibit has been really eye-opening. Model railroading involves so much more than I thought and has a much larger and more diverse community than I was aware of.

#### Reaching out to the public

Ty Smith is the current CSRM executive director. During a conversation with him, Ty emphasized what he saw — interaction between groups with compatible missions where people are willing to put effort in and work with other professionals toward a common goal. Designers, fabricators, museum folks, and subject matter experts combined their knowledge and skills to create an exhibit that helps the museum tell its story and helps the NMRA reach out to the public.

Ty maintains that museums constantly need to look to the future and reimagine themselves. Exhibits in turn work best when they work with handson programming — the modular layouts display Carly described being a good example.

I can't think of anything that better sums up the impact of the NMRA's Magic of Scale Model Railroading exhibit than Carly's observation: "It's wonderful to see visitors be impressed and amazed by the exhibit. They often say "wow" out loud."

To take your own tour of the exhibit, go to the NMRA's website, nmra.org/magic-scale-model-railroading-gallery, and click on the Tour link. You won't be disappointed.

Jim Providenza is a retired police officer who lives in San Rafael, Calif. His HO scale Santa Cruz Northern model railroad first appeared in the May 1996 MR.









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Neal Schorr modeled this Pennsylvania RR scene from Port Royal, Pa., in O gauge using an Atlas Trainman structure model and a scratchbuilt bridge. Model photo by Neal Schorr; prototype photo courtesy of Ray Kohler







#### The town of Port Royal,

Pa., is in the central part of the state along the route of the former Pennsylvania RR Middle Division. In 1910, the railroad constructed a concrete arch bridge over the railroad along with a new station to serve the small town. Though the station was closed in the late 1940s and demolished in 1969, the bridge lived on and became one of the signature structures of the railroad for modelers and railfans. As such, models of both structures were must haves for my layout.

My model of Port Royal represents the mid to late

### Send us your scenes

Have you modeled a scene based on a prototype photo? Send both the prototype and model photos, along with a brief description of the scene and the modeling techniques shown, to: Prototype to Model, *Model Railroader* magazine, P.O. Box 1612, Waukesha, WI 53187-1612; or email them to Senior Associate Editor Steven Otte at steven.otte@firecrown.com.

1950s. To model the scene, I worked from photographs taken at the time of their construction in 1910 as well as others shot later. I also visited the prototype location many times over the years, and though the station was gone, I took many photos and measurements of the still standing bridge.

The first order of business was to construct a mock-up of the bridge out of foam core to make sure the model would fit into the scene and closely resemble the prototype. Once this was done, I began work on the final model 1 using industrial-sized 4 x 8-foot sheets of styrene in various thicknesses. I cut out the arched side walls and the underlying arch, as well as the road surface, sidewalks, and parapets.

It was all glued together using Evergreen and Plastruct structural shapes both for internal reinforcement and for trim. A few pieces of trim were made of stripwood, as well. Various shades of khaki and sandstone-colored spray paint were used to re-create the concrete, along with dark gray flat primer for the asphalt road surface. Finally, I weathered it to match images taken in the 1950s. A final touch was the 3-D printed "1910" sign 2 made by a young model railroader and family friend by the name of Charlie Blenko.

The station 3 is an Atlas O Trainman structure that's very similar to the prototype.

It was painted in colors typical of a PRR structure, and classic PRR signage was attached prior to weathering.

A British-made railroad pedestrian overpass marketed by a number of companies was kitbashed into the stairs that allowed pedestrians to descend from the bridge to the station 4. Space wouldn't allow me to include the long bridge approach and the trees seen behind the station in the prototype photograph. However, I did model the concrete wall 6 that supports Second Street above the station and weathered it to reflect its age.

As in the real town, I included frame houses and structures **6**. The orange brick structure to the right is a somewhat compressed version of the Hotel Royal **7**, which served passengers of the railroad. It was heavily kitbashed from a Lionel structure and was modified to include the front porch as on the prototype.

The use of tall line poles 3, which I had manufactured and then marketed through Weaver Models, is the final touch. Sadly, the prototype bridge reached the end of its life and was demolished on May 8, 2023.

My thanks to Ray Kohler, curator of the PortRoyal200 website, for permission to use the prototype photo.

Neal Schorr's PRR Middle Division appeared in Model Railroad Planning 2017.

Three prolific, influential modelers make up September's candidates

## NOMINEES

#### By Steven Otte

ver the course of the previous eight issues, the Model Railroader staff has advanced the names of 24 candidates whose contributions to the hobby warrant their inclusion in the Model Railroader Hall of Fame. These nominees have included writers, publishers, innovators, entrepreneurs, inventors, and more. But one word describes all of them: modelers. Each one stretched the boundaries of what was thought possible to bring

new techniques, ideas, and products to our hobby. Here are three more model railroaders whose names are worthy of inclusion in the Hall of Fame.

Use your phone or tablet to scan the QR code at right to vote for your choice of this month's nominees. The final results will be announced in December.



#### **Jim FitzGerald (1923-2013)**

#### Known to many as "Mr. Ntrak," Jim FitzGerald was one of the first modelers to sign onto the idea of a modular model railroad standard. Joining with Ntrak founder Ben Davis in 1973, Jim Jim FitzGerald

launched the



*Ntrak Newsletter* to promote the standard. In his 40 years as the newsletter's editor and publisher, it grew from a one-page flyer to a full-fledged magazine featuring layout articles, how-to tips, product reviews, advertising, and more.

When health reasons forced Ben to step away from running the group in 1977, Jim stepped up. In addition to helping develop the Ntrak standard and editing and publishing the newsletter, Jim helped organize clubs, displays, and conventions. Ntrak revolutionized the hobby, allowing modelers to assemble and run large, impressive display layouts at club meets, train shows, and public exhibits. The versatility and popularity of Ntrak led to the development of other modular standards such as HOtrak, Free-Mo, and T-Trak, the creation of which Jim also had

Jim FitzGerald died in October 2013 in Paso Robles, Calif., at the age of 90.

#### **Cliff Robinson (1913-1991)**

Although he was a modest man who preferred to stay behind the scenes, Cliff Robinson was well known in model railroad circles, influencing many who became wellknown modelers themselves. Most



**Cliff Robinson** 

of those people knew Cliff thanks to his HO scale Marquette Union Terminal (MUT), which hosted numerous operating sessions.

As MR Contributing Editor Tony Koester wrote after Cliff's passing, "Cliff knew everyone of note in the hobby. ... If you knew Cliff and his friends, you knew almost everyone."

Cliff's byline appeared several times in Model Railroader, including a visit to his layout in June 1978.

"He never wanted to be in the limelight and rarely took credit for his accomplishments," Keith Gutierrez said of Cliff in the January 1992 MR. One of those accomplishments was helping Keith develop and test the CTC-16e walkaround throttle system featured in the April-August 1994 issues of MR.

Cliff died in October 1991 at the age of 78, leaving his wife, Mary; daughter, Fran; son, Jack; and five grandchildren.

#### Whit Towers (1917-1999)

Model railroaders of a certain age may remember the Alturas & Lone Pine RR. And if that name doesn't ring a bell, the name of its owner, Whit Towers, surely will. As MR Senior Editor Jim Hediger wrote in



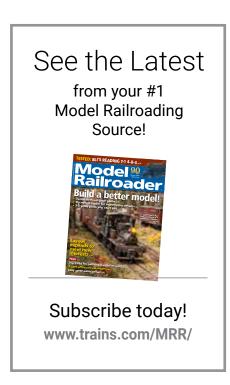
Whit Towers

a 1983 article on the ALP, by that time Whit's name had appeared on more than 100 articles published in the hobby press.

Whit discovered the hobby by chance when, riding a Los Angeles Ry. streetcar in 1938, he spied a discarded magazine with no cover. It turned out to be an issue of Model Railroader. "That one issue hooked me," Whit wrote in the January 1983 MR.

But Whit didn't just focus on his own layout; he also worked hard to spread the hobby to the world. He served in several positions in the National Model Railroad Association (NMRA) and spent 10 years as editor of the Bulletin.

In that 1983 article, Jim Hediger wrote that Whit's reserved demeanor hid "an impish sense of humor," evidenced by tongue-in-cheek scenes hidden around his layout. "Model railroading is supposed to be fun," Whit said. "So why not keep it that way?" MR







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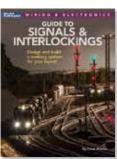
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## Floating Big Muddy

Long before Creedence Clearwater Revival and Tina Turner performances made a pop icon of the words "rollin' on the river," the adventures of Mike Fink, the "king of the keelboaters," impressed me with the Mississippi.

Later, Mark Twain made me chuckle, describing how thunder and lightning chased him from a steamboat pilot house in his "Life on the Mississippi." My romance blossomed in years in Louisiana early in my career where I witnessed a stern-wheeler race in which the Natchez bested the Delta Queen. This brings me to its namesake, the historic port city, and the Missouri Pacific car ferry there.

Rail ferry service across the lower Mississippi continued well after railroads built their three bridges south of Memphis: Vicksburg (1930), New Orleans (1935) and Baton Rouge (1940). The Illinois Central ferry to Helena, Ark., from Trotter's Point, Miss., lasted until 1972. This made the Missouri Pacific operation between Vidalia, La., and Natchez the last, sailing until 1982.

Curiously, Helena was the only place Illinois Central

served Arkansas and Natchez, MP's only entry in Mississippi. A diesel towboat aptly christened Natchez entered Vidalia-Natchez service in 1961 when it replaced the *James Y*. Lockwood, a venerable sternwheeler. (Sources vary. Sidewheeler Willard V. King also steamed at Natchez, perhaps

the predecessor to the *James Y. Lockwood.*)

The float used a 12-car barge rebuilt from the hull of the Ste. Genevieve, a sidewheeler which previously served MP's Ste. Genevieve, Mo.,-Kellogg, Ill., ferry. The approaches weren't typical of float bridge design. Single track on each side reached the river down a long timber trestle. A wheeled cradle rolled atop the trestle, raising track from the trestle to the barge. A locomotive could maneuver the cradle up and down the trestle as the Mississippi's level rose and fell through the year.

A good photo of the arrangement leads off Michael Palmieri's coverage in Railroad Pictures Archive; search "MP Vidalia-Natchez Ferry." Missouri Pacific assigned crews on both sides of the river; their power ferried across the river when necessary, too.

The Mississippi side needed two switchbacks to climb the river bluff atop which the city overlooks the river. MP's Natchez & Southern subsidiary was the actual entity in Mississippi and served the sprawling International Paper mill there.

#### More distinguishes the

operation. Three railroads used the Vidalia-Natchez float: MP, Kansas City Southern predecessor Louisiana & Arkansas, and Mississippi Central. The L&A. later Louisiana Midland, used MP trackage rights to reach Vidalia and Natchez. L&A and MSC made it part of their Natchez Route, through service between



Missouri Pacific's River Job unloads the car ferry tied up at Natchez, Miss., on Aug. 15, 1978. GP18 No. 1883 handles a cut behind a caboose stenciled "For Yard or Transfer Service Only." Jerry Dziedzic photo

Shreveport, La., and Hattiesburg, Miss., Natchez Route lettering and MSC's herald blazed from Pullman-Standard PS-1 boxcars, new in 1949.

All this holds strong appeal for me. Former L&A lines remained under timetable and train order operation in the mid-'70s and L&A rostered Russian Decapods, my favorite locomotive type, during the steam era.

The reborn Louisiana Midland I saw relied on Alco RS1s, my favorite diesel. And, researching this topic brought me a very pleasant conversation with longtime friend Louis Saillard, a Baton Rouge historian who shares his deep knowledge of area railroads generously.

Trains published Saillard's two-part Louisiana Midland series in September and October 1991 and MR his Mississippi Central in June 1998, in which George Sebastian-Coleman's MSC trackplan als appeared.

#### Such colorful operations

could inspire an interesting switching layout design. I can imagine two modules representing the ferry landings with their cradles and trestles, with the barge carried between them by a rolling cart. One side would have switchbacks and a paper mill or other large industry. A dash of creative freelancing could add Pullmans because lower Mississippi floats carried them, too.

Missouri Pacific passenger trains barged to Baton Rouge by ferry until 1947, seven years after the river was bridged there. A wonderful film in the University of South Carolina's Moving Image Research Collection shows the Sunset Limited crossing to New Orleans in 1920, passengers milling about the deck festively. And hats off to the modeler who makes a sternwheeler the layout's centerpiece. Were naming up to me, it could only be the Proud Mary. MR

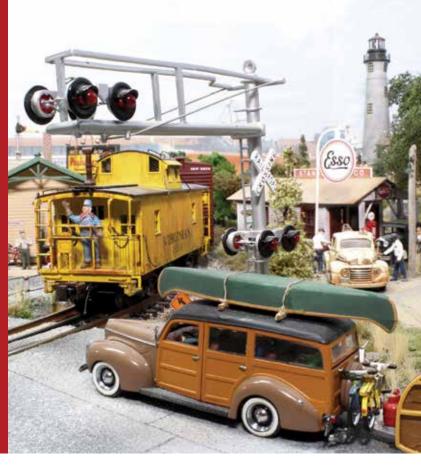


SUCH COLOR-FUL OPERA-TIONS COULD INSPIRE AN INTERESTING SWITCHING LAYOUT DESIGN. — JERRY



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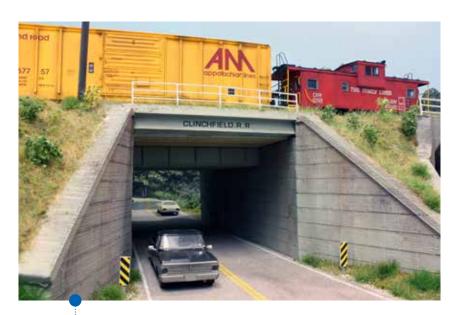
docks at Lake Linden on the Laurium, Mohawk & Brockway RR. Larry Burk of Holly, Mich., photographed the action on his On30 model railroad. The locomotive is made by Bachmann with a custom "Americanized" cab from Lambert Locomotive Works. The freight cars are from Bachmann and the office building from Bar Mills. The lakefront backdrop is by Trackside Scenery.

As the San Joaquin Valley changes from a primarily agricultural economy to a transportation and manufacturing center, traffic is increasing on the San Joaquin Valley RR, increasing the wear and tear on cars like patched-out covered hopper No. 12237. Rick Sutton of Atascadero, Calif., photographed the scene on the Union Pacific interchange near Goshen on his HO scale SJVR. The rolling stock is from Wm. K. Walthers, ExactRail, and Atlas.



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The tail end of northbound Clinchfield freight No. 95 crosses over U.S. Highway 70 in Marion, N.C., in June 1977. Brent Johnson of Troy, Ohio, modeled and photographed the HO scale scene. The Allegheny Midland boxcar — decorated for MR contributing editor Tony Koester's former HO scale railroad — is an InterMountain Ry. Co. car decorated by Home Shops. The caboose is an Atlas model Brent painted and decaled.



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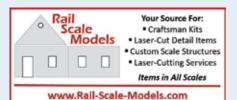
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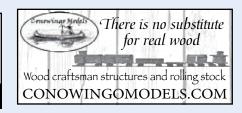


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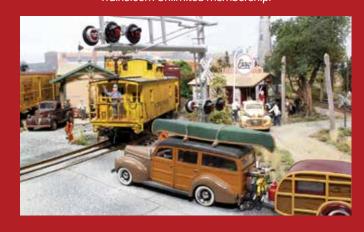






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All ads must be prepaid and pertain to the subject of model railroading.

#### **Schedule of Events**

- AR, CONWAY: Central Arkansas Train & Hobby Show. Conway Expo Center, 2505 E. Oak Street, Conway, AR 72032. August 24-25, 9:00am 4:00pm. Vendors, Layouts, Contests. Admission \$5.00, 12 and under free. Jacksonville, AR 72076. 501-982-6836, or railandsprue@aol.com
- AZ, PRESCOTT: Beat the Heat Model Train Swap Meet and Show. Saturday, August 10, 2024, 9am-1pm. Embry-Riddle Aeronautical University, 3700 Willow Creek Rd., Prescott, 86301. Enter on Haas Blvd and follow the signs. 150 tables of vendors and sellers bringing model trains, toys & railroad memorabilia, children's drawing. Admission: \$5/adult, children 12 and under FREE. www.camrrc.com/bth
- CA, OCEANSIDE: North County Model Railroad Society Model Train Swap Meet and Club Layout Tour. Saturday, September 28, 2024, 8:00am-1:00pm, at Oceanside Heritage Park, 220 Peyri Dr., Oceanside, CA 92058. Door prizes for kids and Grand Prize Raffle. Food/Drinks available. Admission is free. Vendor space \$10. Vendor registration, contact John Burrow at swapinfo@ncmrs.org
- CA, SACRAMENTO: International Railfair 2024, November 2-3, 2024. Cal Expo, Building C, 1600 Exposition Blvd., Sacramento, CA 95815. Saturday 10am-5pm and Sunday 10am-4pm. Vendors, Kids Activities, on-site food. Help judge our 'Fall into Winter' Square Foot Diorama Challengel More information at internationalrailfair.com or contact Tom Campbell at tom.c.irf@gmail.com
- FL, MELBOURNE: The Melbourne Train and Toy Show. Azan Shrine Center, 1591 West Eau Gallie Blvd, Melbourne, FL 32935. Saturday, September 7, 2024, 9am-2pm. Admission: \$5, kids under 10 FREE. Vendor tables \$25 each or 3 or more \$20 each. Join us for trains, toys, and furl Lunch/snacks available. For more information: SchultzSpaceCoastTrains@aol.com or 321-805-1963
- IA, IOWA CITY: 4th Annual lowa City Train Show. Sunday, October 20, 2024. 10am-3pm. 4261 Oakcrest Rd. SE, lowa City, IA 52246. Admission: \$5, children 10 and under free w/adult. New club building open house! All different scales! Displays and layouts to see! Sponsored by the Hawkeye Model Railroad Club. lowacitytrainshow@gmail.com or visit: www.hawkeyemodelrrclub.com
- ID, CALDWELL: Southwest Idaho Train Show. O'Conner Fieldhouse. 2207 Blaine St., Caldwell, ID. September 21-22. 2024. Saturday, 10AM-7PM, Sunday, 10AM-5PM. Admission \$5.00, \$6.00 w/card. Under 12 free w/adult. Clinics, operating layouts, exhibits, rides, vendors, all scales. Concessions available & free parking. Sponsored by Caldwell Model Railroad Club & Historical Society. Contact Dave 208-936-5730 or visit www.cmrchs.org
- IL, CENTRALIA: Railroad Day at the Centralia Area Historical Museum, 240 South Locust Street, Centralia IL. Saturday, September 21, 2024, 9am-3pm. Train exhibit & historical photo display, vendor tables, photo stand for Amtrak, NS, CN & BNSF Mainline, food truck, and much more! Sponsored by Freight Car Locomotive Experts (FCLE). Vendor tables \$30, call 618-907-4052

- KS, TOPEKA: TMRR Club 3rd Annual show. Great Overland Historic Station, 701 N. Kansas Ave., Topeka, KS 66608. October 5-6, 2024. Saturday 9am-5pm; Sunday 9am-3pm. Admission: \$8 Adults (13 and up); Children 12 and under Free with paid adult. 10,000 sq.ft. of operational layouts, railroad histories and vendors. Free parking. Contact: philskow@yahoo.com or 785-221-2174
- MI, BATTLE CREEK: Battle Creek Train Show & Swap Meet. Calhoun County Fairgrounds, 720 Fair St., Marshall, MI 49068. Saturday, September 14, 2024, 10am-3pm. Admission: \$5 adults, under 12 free. Operating layouts, hands-on displays, door prizes. Refreshments available. Dealers welcome, \$30 per table. For information: contact Andy Buck 269-268-0910, Shawn Rhoades 269-224-1142.
- OH, BEREA: The 50th Annual Great Berea Train Show hosted by the NMRA. Saturday, October 5th and Sunday, October 6th. 10:00am to 4:00pm both days. Cuyahoga County Fairgrounds in Berea, Ohio. Admission \$10.00. Under 16 free with an adult purchase. 70,000 square feet of model railroading. Show Contact: David James showmanager@thegreatbereatrainshow.org 440-785-9907. Visit: www.thegreatbereatrainshow.org
- TX, AUSTIN: Austin Train Show. Over 25,000 sq.ft. of railroading fun for the whole family! Palmer Events Center, 900 Barton Springs Road, Austin, TX. August 24-25, 2024. Saturday 10am-5pm, Sunday 10am-4pm. Admission: \$8 online, \$10 at the door (includes both days), 12 and under FREE w/adult. Kids train ride, vendors, model/Lego railroads, tour, clinics. Visit: austintrainshow.org
- TX, HOUSTON: Houston Area Model Train Show, November 16-17, 2024. Saturday 10am-5pm, Sunday 10am-4pm. Adults \$7, 17 and under free. All scales, operating layouts, club/museum displays, table sales and more. Pearland Knights of Columbus Hall, 2320 Hatfield Rd., Pearland TX 77581. More information at http://houstonttrak.org or by email info@houstonttrak.org. Sponsored by Houston Area T-TRAK Association, Inc.
- TX, TEMPLE: 42nd Annual Temple Model Train & RPM Show by CentraMod Inc. Central Texas Area Model Railroaders. Frank W. Mayborn Convention Center, 3303 North 3rd St., Temple, TX 76501. September 21-22, 2024. Saturday 10am-5pm and Sunday 10am-4pm. Admission: \$10, Seniors & Military w/ID \$9, 12 and under free w/ adult. FREE Parkingl Additional information: 254-760-3761 or www.centramodrr.com
- WA, BATTLE GROUND: Southwest Washington Model Railroaders, Great Train Swap Meet. Battle Ground High School Gymnasium, 300 W. Main St., Battle Ground, WA 98604. Saturday, September 28, 2024. 9.00am, Beat-the-Crowd, admission \$10. 9:30am-2:30pm, Adults \$5, Students \$3, under 6 FREE with adult. Take N. Parkway Avenue to Free Parking. Vendor tables \$25.00. Info: Larry Sprenkel, Larry. sprenkel@qmail.com
- WA, SPOKANE: River City Modelers Fall Train Show. Spokane Fairgrounds. 404 N. Havana. Sunday, October 13th, 9:30am-3:30pm. Admission: \$8 for adults, 12 & under free. 200+ tables of Railroad-related items for sale, operating layouts, Free-MO, Operation Lifesaver & more. Free Parking. For table rental or general info, contact: Shirley Sample, 509-991-2317 or email: shirley@busnws.com
- WI, MONROE: Green County Model Railroaders 46th Annual Model Train Show & Swap Meet. The Stateline Ice and Community Expo, 1632 4th Avenue West, Monroe, WI 53566. September 28-29, 2024. Saturday & Sunday, 10am-4pm. For information contact Kevin Johnson, 608-558-9332, or visit www.gcmrrinc.org
- CANADA-ON, KITCHENER-WATERLOO: Sunday, September 29, 2024. BRESLAU TRAIN SHOW sponsored by WOD-NMRA. Manufacturers, vendors, four "free" clinics, operating layouts, \$300+ in Door Prizes. Preview video: https://youtu.be/sSC-TA\_feMM. Ample free parking. Preslau Community Centre, 100 Andover Drive, Breslau, ON. 10am-3pm. Admission: Children under 12 free; General -S6.00; NMRA members: \$4.00. TrainShow@wod-nmra.ca

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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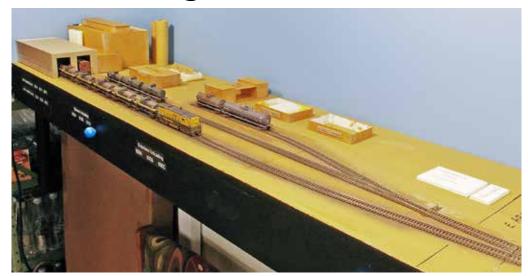
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## Good enough for now?



It took Steve Holzheimer roughly 8 hours to build N scale mock-ups of Goodyear's synthetic rubber plant in Akron, Ohio, from thick club-store cereal-box cardboard. He feels that figuring out how to compress the structures and still get the right feel was not a waste of time. Now when an operator switches the plant, it's evident what he's doing. Steve Holzheimer photo

**Steve Holzheimer recently** finished a mock-up of Goodyear's Akron, Ohio, synthetic rubber plant. "The parts I'm able to fit on the layout, anyway," Steve said. "Now the tank cars I recently finished have a destination that's not just a siding on the brownfields of Akron. A detailed model of that facility will be a fun build. Someday.'

Matt Goodman suggested that Steve "hit them with some gray or red primer, and they'll be a bit more satisfying, unless your goal is to encourage the Someday-build sooner."

To which Clark Propst cautioned, "That's the problem with mock-ups. They put off Someday."

#### I've heard other arguments

for and against mock-ups. Bill Darnaby, whose Maumee Route is now complete, feels they waste time, money, and materials. But he's an engineer, and efficiency counts in his world.

Others with a more artistic bent have made a case for mock-ups as a way to tell

whether a planned structure will actually fit and look good in the allotted area. Photocopies of scale drawings or of kit walls can be used to make trial cuts to reduce the structure's size. This lets a modeler ensure the final structure will still convey the basic appearance of its prototype before cutting the actual kit.

My take is that I'd rather switch, and ask my crews to switch, a mocked-up structure or a kitbashed stand-in than have them delivering and/or picking up cars from a bare spot on the ground. I think a bonus this accrues is that the railroad tends to look more finished a lot sooner than it actually is.

#### As I was writing this, I

thought about my Nickel Plate layout. It has finally reached the stage where very few industrial stand-ins are still present. There's a stockyard and a Marathon Oil dealership at Charleston, Ill., that are stand-ins; I don't have much information on either one, so I've dragged my feet on anything permanent.

At the other end of the railroad in Frankfort, Ind., is Kramer Bros. Lumber, switched by a dummy spur off the truncated Pennsylvania RR (cars are moved on and off of it by hand). Walthers kits serve as stand-ins, but I think I have enough information to build a decent model.

I need to be careful, however, as it's way too easy to keep improving the stand-ins to the point they become permanent. They won't be really good renditions of the proto-

types, or they wouldn't have been regarded as stand-ins in the first place. That happened in several locations on the Allegheny Midland, although since it was a freelanced railroad, with no prototype to represent, perhaps this was a lesser

Some modelers use a trackside

photo or drawing of a structure dry-mounted to heavy cardstock and propped up alongside the industrial spur the final model will one day serve. It's close to Bill's philosophy of not wasting resources on mock-ups, and it does tell the local's crew what sort of industry they're switching. I'd call it a good compromise.

You could even plop down a 3 x 5 card folded in half labeled "Jordan's Dairy" or "Danville Brick & Tile" to help a crew with a car billed to either of those destinations figure out where to spot that car. It wouldn't do much to enhance the realism of their job or your railroad as a whole, but it would allow them to accomplish their work without much head-scratching.

The main objective here is to inform your crew members about what they have to do and where they have to do it. If visitors can also glean a better understanding of what your railroad does for a living, that's a nice bonus.

If you have time to build the correct structure at the outset, that will save time and money in the long run. It's almost always a good idea to

get a head start on painting and lettering locomotives and rolling stock prior to the beginning of layout construction, which will consume most of your modeling time. That same thinking applies to structures; build the key ones as soon as you have determined the space they can occupy. MR



THE CORRECT **STRUCTURE AT** THE OUTSET, THAT WILL SAVE TIME AND **MONEY IN THE** LONG RUN. **-TONY** 



## Start off on the Right Track,



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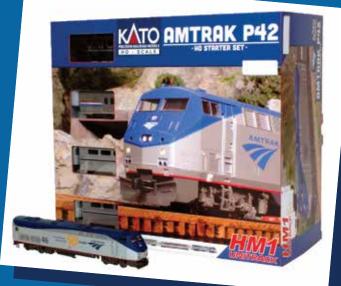
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