

MILESTONES IN MODEL RAILROADING p.66



MLW 420 in HO from Rapido p.48

July 2021 • Trains.com

Model Railroader

MODEL RAILROADING IS FUN!

Building a realistic layout

Tony Koester's essential tips for planning a compelling railroad p.28

20
new
products!

The Chesapeake & Ohio comes to life on Mike Burgett's HO layout. See page 28.

Daryl Kruse's UP Geneva Sub Scenic showpiece p.34

PLUS

DCC control for Walthers' turntables p.46

Build a rail-served salt warehouse p.22

Tips for modeling from a wheelchair p.18



Vol. 88 • Issue 7

NOT YOUR AVERAGE MLW

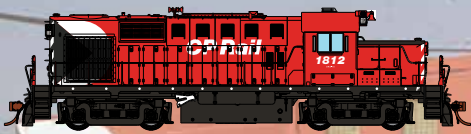
**HO
SCALE**

ESU LOKSOUND
EST. 1999



PHOTOS COURTESY OF BRIAN SCHUFF

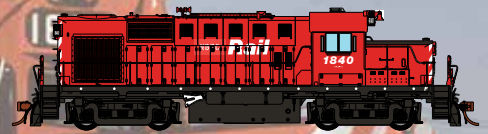
REMEMBER... THE RS-18U ALSO RAN IN THE STATES!



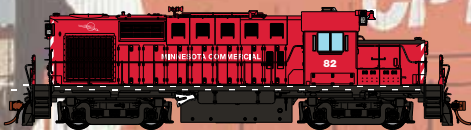
CANADIAN PACIFIC (MULTIMARK)



CANADIAN PACIFIC (NO MULTIMARK)



NEW BRUNSWICK EAST COAST



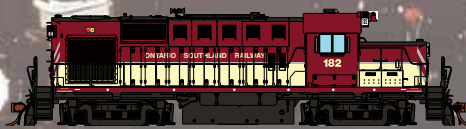
MINNESOTA COMMERCIAL



BATH & HAMMONDSPORT



WESTERN NEW YORK & PENNA.



ONTARIO SOUTHLAND



OTTAWA CENTRAL

CONTACT YOUR RETAILER OR ORDER DIRECT AT RAPIDOTRAINS.COM



Quality. Style. Spirit.™

rapidotrains.com • [youtube.com/RapidoTrains](https://www.youtube.com/RapidoTrains) • [facebook.com/RapidoTrains](https://www.facebook.com/RapidoTrains)

RAPIDO

We don't just play with trains.



Model railroading is our lifelong pursuit for signature scenes and meticulous detail. For just shy of 90 years, Walther's has cultivated our craftsmanship and sparked our imaginations with everything needed to build our dream layouts. Becoming a Yardmaster rewards us with everyday special pricing and priority on the new products we love. That's why we're Walther's Yardmasters. Join us. Visit [Walthers.com/yardmasters-club](https://www.walthers.com/yardmasters-club) to learn more.

WALTHERS®

Support your local hobby shop • visit [walthers.com](https://www.walthers.com) • call 1-800-4-TRAINS

© 2021 Wm. K. Walther's, Inc.

Features



28 Freelancing vs. prototype modeling

Both offer advantages and disadvantages; both remain popular
by Tony Koester



34 From Rochelle to Atlanta
After a cross-country move, the N scale UP Geneva Subdivision is reconstructed and expanded
by Daryl Kruse



42 Foundations for structures
Methods to help blend your building base into the scenery
by Greg Condon

In every issue

6 On Trains.com
The latest features on our website

8 From the Editor
Making a plan and sticking to it

12 News & Products
Hobby industry news

18 Ask MR
Tips on modeling from a wheelchair



22 Rehab My Railroad
Building Cargill Salt, part 1

46 DCC Currents
Controlling your Walthers turntable with DCC



48 Product Reviews
Bachmann N scale NYC J-3a 4-6-4 Hudson, HO scale MLW M420 diesel from Rapido, and more

54 On Operation
The unexpected rewards of one-man crews

56 Trackside Photos

65 Index of Advertisers and Cartoon

66 Trains of Thought
Seven milestones in model railroading



On the cover: Freelance or prototype? Tony Koester cites Mike Burgett's HO scale C&O layout as an example of realism. Craig Wilson photo



Next issue

In August, read how Dave Abeles kitbashed an iconic diesel for his Conrail layout. Plus, visit a layout dug out of the dirt, make a view block from trees, and more!

Model Railroader (USPS 529-810, ISSN 0026-7341) is published monthly by Kalmbach Media Co., 21027 Crossroads Circle, P.O. Box 1612, Waukesha, WI 53187-1612. Periodicals postage paid at Waukesha, Wis., and additional offices. POSTMASTER: Please send address changes to *Model Railroader*, P.O. Box 8520, Big Sandy, TX 75755. Printed in USA. Canada Publication Mail Agreement # 40010760.

Now Available from



Agar Packing Company

ATLAS MASTER® HO 36' WOOD REEFERS



Dold Packing Company



Lange Creamery



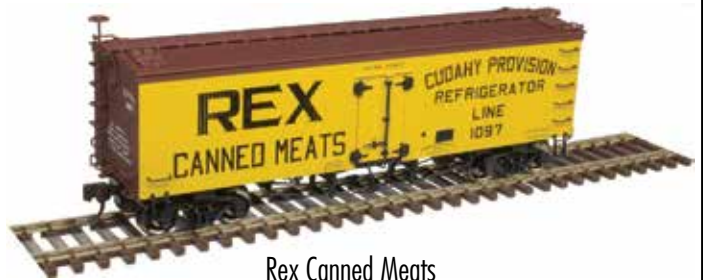
Nuckoll's Refrigerator Line



New York Despatch



Pittsburgh Provision & Packing



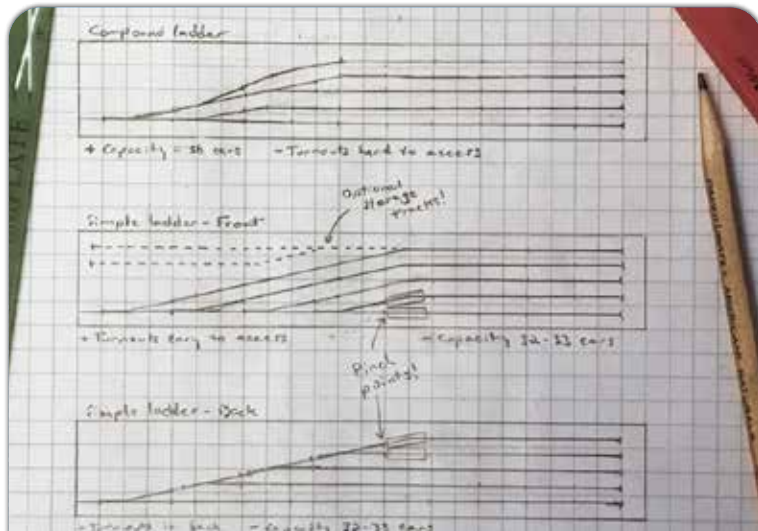
Rex Canned Meats



Schwarzschild & Sulzberger Lard

NEW PAINT SCHEMES!





Sketching with Steve

Follow along with Associate Editor Steven Otte in *Model Railroader's* first-ever edition of *Sketching with Steve*. Through the use of hand-drawn outlines, Steven walks you through the process of designing a yard ladder, explaining the importance of arranging turnouts to allow for different car capacities. For more expert advice, check in every month at Trains.com to see what new tips Steven has on the drawing board.



Feraca Stone Canyon Gallery

Head on over to Trains.com to check out photographs of John Feraca's HO scale Stone Canyon. This impressive freelanced layout was started back in 2003, and now, several expansions later, fills its 28 x 40-foot space with detailed scenes depicting the Mountain West region of the United States. Any modeler is sure to find inspiration for their own layout in this gallery, showing some of the layout's more than 100 town and industry structures.



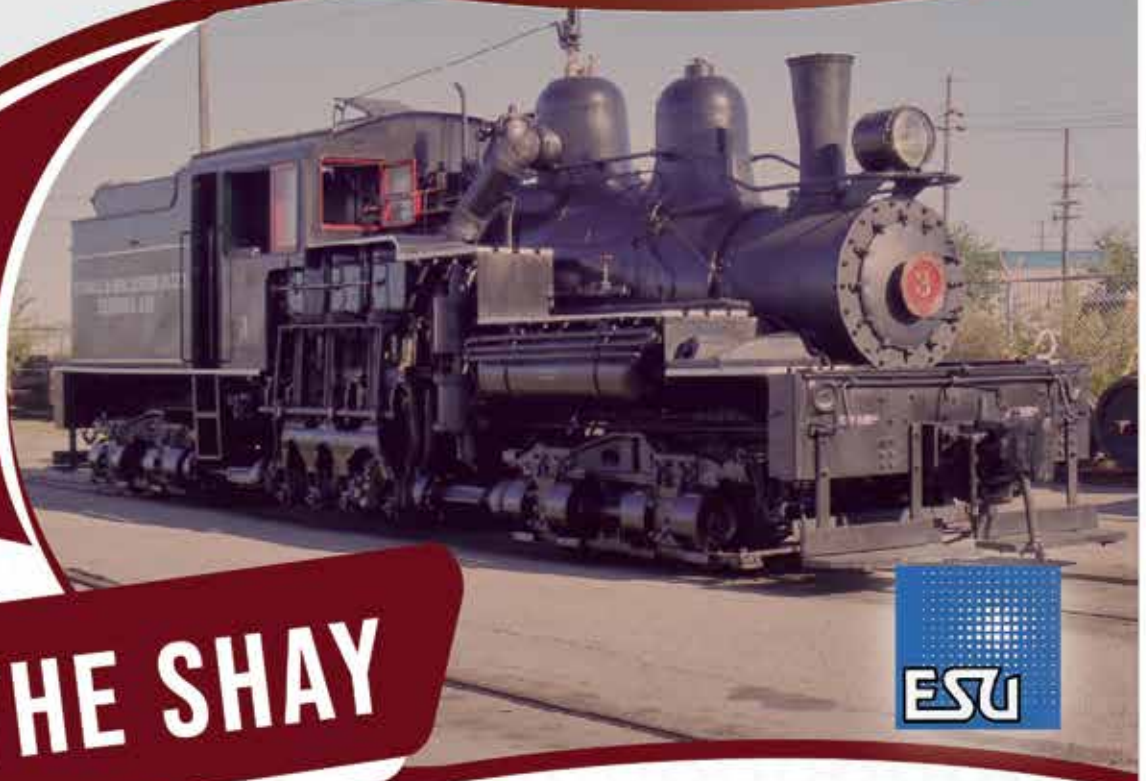
Scale it Down

Be sure to watch this brand-new, exclusive Trains.com video series, where host Steve Brown is attempting to build an N-scale version of his favorite HO-scale layout, the Winston-Salem Southbound Ry. Scaling down the track plan, which was previously featured in the pages of *Model Railroader* magazine and on MRVideoPlus, may prove to be more complicated than Steve had originally thought! To follow his progress in *Scale it Down*, become a Trains.com member for unlimited access to all the *Model Railroader* video series.



Passenger car tips

In this quick how-to, originally published in *The Model Railroader's Guide to Passenger Equipment & Operation*, the late Andy Sperandio recommends a simple solution for making sure your passenger fleet looks better than ever: a stainless steel finish. His easy paint trick involving a few select lacquer layers will help add a heightened level of realism that guarantees your cars are ready for the track.



THE SHAY



The Shay locomotive was the most widely used geared steam locomotive. The locomotives were built to the patents of Ephraim Shay, who has been credited with the popularization of the concept of a geared steam locomotive. Although the design of Ephraim Shay's early locomotives differed from later ones, there is a clear line of development that joins all Shays. In 1884, they delivered the first 3-cylinder (Class B) Shay.

Class B, Lima-built 50-ton 2-truck Shay

Our rendition of The Shay will feature ESU LokSound V5 sound decoder. Cast Chassis, working external valve gear and drive shafts. Working directional lamps front and rear.

**Limited production run
Reservations now Open**

**DCC Ready \$299
DCC Fitted \$339
DCC Sound \$449**

Expected delivery Fall 2022
Easy pay 0% installment plan available

HO scale

www.krmodels.ca

Making a plan and sticking to it

In his cover story this month, Contributing Editor Tony Koester explores the benefits and drawbacks of modeling a prototype railroad versus a less-rigid freelanced approach. It's an interesting topic, and Tony shows how some well-known model railroaders have tackled the subject.

Picking an era is another important decision. You're much closer to creating a believable model railroad if your locomotives, rolling stock, buildings, and vehicles all reflect a given era.

I'll admit to being lazy when it comes to following my era

(mid-1960s, in case you were wondering). If a model appeals to me, it's as good as sold! Consequently, I own rolling stock representative of a broad range of rail history.

Now that I think about it, I see how a little discipline would have given me a more useful fleet and saved money.

So don't be me. Pick an era and stick with it.

While we're on the subject, wouldn't it be great if we could settle on what we're calling these eras? Steam-to-diesel transition era is clear enough, but what if someone told you they model the diesel era? That covers 60 years!

United Kingdom-based retailer Hattons is trying to bring order out of chaos.

"We resell a lot of preowned U.S. model railroad items to customers whose primary interest is U.K. railways," explained Richard Davies, Hattons proprietor. "They tend



to ask 'what should I run with this?' type questions.

"Era information helps make informed decisions on what makes sense for your given road or time."

Hattons suggests a system for naming eras in its advertisements, and wants to hear your ideas. Join the conversation at hattonsmodelmoney.com/US-Eras



Set in Milwaukee in the 1940s, our Beer Line project railroad benefited from a specific time and specific place. Jim Forbes photo

Model Railroader

Model railroading is fun!

Founder A.C. Kalmbach 1910-1981
 Editor Carl Swanson
 Senior Editor Eric White
 Group Technical Editor Cody Grivno
 Associate Editor Steven Otte
 Production Editor Rene Schweitzer
 Assistant Digital Editor Sammi DiVito
 Contributing Editors Tony Koester, Pelle Søeborg, Larry Puckett, Lou Sassi

Phone 262-796-8776
 E-mail cswanson@kalmbach.com
 Fax 262-796-1142

Model Railroader Art Team

Design Director Thomas G. Danneman
 Assistant Design Director Scott Krall
 Illustrators Kellie Jaeger, Roen Kelly
 Production Specialist Jodi Jeranek

Trains.com

Executive Producer A. David Popp
 Producer Kent Johnson
 Associate Producers Ben Lake, Diane Martin
 Senior Associate Editor Brian Schmidt
 Assistant Editor Jenny Freeland

Contributing to Model Railroader

We welcome contributions from readers, including articles, photographs, and drawings. For more information on submitting material, e-mail Editor Carl Swanson at cswanson@kalmbach.com. Model Railroader assumes no responsibility for the safe return of unsolicited material. We assume unsolicited material is intended for publication by Kalmbach Media unless otherwise noted. We assume letters, questions, news releases, and club news items are contributed gratis.

Advertising Department

Ad Sales Representative Martha Stanczak

To purchase an advertisement

Phone 888-558-1544, ex. 643
 E-mail adsales@mrmag.com

To sell Model Railroader in your store:

Phone 800-558-1544
 Outside U.S. and Canada 262-796-8776, ex. 818
 E-mail tss@kalmbach.com
 Website Retailers.Kalmbach.com
 Fax 262-798-6592

Customer Sales and Service

Phone 877-246-4879
 Outside U.S. and Canada 903-636-1125
 Customer Service customerservice@ModelRailroader.info


Kalmbach Media

Chief Executive Officer Dan Hickey
 Senior Vice President, Finance Christine Metcalf
 Senior Vice President, Consumer Marketing Nicole McGuire
 Vice President, Content/Editorial Director Stephen C. George
 Vice President, Operations Brian J. Schmidt
 Vice President, Human Resources Sarah A. Horner
 Advertising Sales Director Scott Redmond
 Circulation Director Liz Runyon
 Director of Digital Strategy Angela Cotey
 Director of Design & Production Michael Soliday
 Retention Manager Kathy Steele
 Single Copy Specialist Kim Redmond

SUBSCRIPTION RATE: Single copy: \$7.99 (U.S.). Print + digital subscription rate: U.S.: 1 year \$58.95. Canadian: Add \$13.00 postage. Canadian price includes GST, payable in U.S. funds. All other international: Add \$24.00 postage, payable in U.S. funds, drawn on a U.S. bank. ©2021, Kalmbach Media Co. Title registered as trademark. All rights reserved.



T SHAPES & Z CHANNELS



- Available in a variety of popular sizes
- Packaged in Small Packs, Economy Packs and Bulk
- White Polystyrene

evergreen scale models

visit us at www.evergreenscalemodels.com
Toll Free (877) 376-9099
Facebook: /EvergreenScaleModels

Car Cards

and *SwitchLists*

AlbionSoftware.com
25 years providing software to model railroaders

Ship It! v9

Car Cards v3

Railbase Inventory

Scheduler
String Diagrams
Developed in Richardson, TX

Rpt. Marks: F&CC
Car No: 500
AAR Code: XM Boxcar
Color: boxcar red Lgth: 30

When Empty, Return To:
Goldfield Yard
Goldfield

Fiber Optic Block Signals & Detectors



ModelTrainTechnology.com

RIGHT ON TRACK MODELS

N, HO, S and O Scale Building Kits

Miami, Florida
305.240.8362



WE WILL BUILD ANY MODEL TO ANY SCALE FROM PHOTOS

www.RightOnTrackModels.com

Building High Quality Systems Since 1995



Suspended Railway Systems for Businesses and Residences

Please see web site for details.

Loco-Boose Hobbies

Sales and Mfg. • 6637 76th Lane SW, Olympia, WA 98512 • (360) 754-5596
Sales • 2049 Uplands Circle, Estes Park, CO 80517 • (970) 577-0583
website: www.LocoBoose.com • e-mail: duane@locoBoose.com

IN STOCK NOW!



Flare-top Fans
Dynamic Brakes
Square Exhaust
Sinclair Antenna w/Platform
Rooftop A/C
Beacon
3-Chime Horn

Sloped-Style Bearings
ATSF-Style Mirror
Removed Footboards

FACTORY DIRECT HOBBIES .COM

PARAGON 4 ROLLING THUNDER

HO EMD GP20

w/ Road Specific Details!

FACTORY DIRECT HOBBIES .COM

SELL YOUR PRE-OWNED MODEL RAILROAD COLLECTION FOR CASH

Our UK, USA (East Coast) and Australia teams handle hobby collections of all sizes.
Payment is usually made within 1 or 2 working days of your goods arriving with us

GET A FREE EVALUATION OF YOUR COLLECTION



Get cash for your items in just four easy steps...



1. List

Prepare & submit a list of your items at www.HattonsModelMoney.com or send spreadsheets, documents or photographs via www.HattonsModelMoney.com/upload



2. Offer

Our expert staff will review your list and build an offer based on the descriptions you provide.



3. Send

Once you accept our offer, package your items up carefully and send them to our US collection center.



4. Pay

Items are checked, the offer confirmed and payment made via **Bank Transfer, Check or PayPal.**

Find out more at www.hattonsmodelmoney.com

Phone us on **(833) 621-1260** toll-free Monday to Friday 0930-2230 ET

WhatsApp via **+44 7723 329679**

or email preowned@hattonsmodelmoney.com



USA MODEL RAILROAD ERA SYSTEM



Shouldn't America have it's own Era System?
 Please join us at hattonsmodelmoney.com/US-Eras and give us your thoughts and opinions. We'd love your assistance in developing one!

Our proposed method of grouping products based on prototypes across nearly 200 years of railroads in the United States!

| Era | Date | Name | Steam | Alco | EMD | GE | Passenger |
|-----|-----------------|-------------------------|---|-------------------------------------|---|-------------------|-------------------------------------|
| 1 | 1827-1880 | Old Time | American 4-4-0s | | | | Open vestibule wood cars <60ft |
| 2 | 1880-1916 | Turn of the Century | Atlantics, Moguls, Consolidations, Camelbacks | | | | Closed vestibule wood cars 80ft |
| 3 | 1917-1928 | Golden Age | USRA to Superpower and Modern Steam | | | | Steel Clerestory/Early streamliners |
| 4 | 1929-1949 | Superpower | 4-6-4s, 2-8-4s, 4-8-4s, 2-10-4s and 2-6-6-4s | Small switchers HH, S and DL series | NW Series/Streamline Trainsets/Early E Series | | |
| 5 | 1949-1960 | Steam/Diesel Transition | Steam Decline | FA/PA/S Series Early RS Series | E/F/SW Series Early GP/SD Series | U Series launched | Rise of the post-war streamliner |
| 6 | 1960-1972 | 1st Gen | End of steam | RS27-36/Century Series | SW1000/1500, GP20 to SD45 | U Series | Decline of the post-war streamliner |
| 7 | 1972-1979 | 2nd Gen | | | GP/MP15, GP/SD50, GP/SD60, Dash 2 Series | Dash 7 | Amtrak Heritage/Amfleet |
| 8 | 1980-1989 | Eighties | | | GP50/60 SD50/60 | Dash 8 | Amtrak Superliners/Amfleet II |
| 9 | 1990-2010 | Nineties and noughties | | | SD70 Early AC traction | Dash 9, Early AC | Amtrak Viewliner/Superliner 2 |
| 10 | 2010 to Present | Current | | | SD70 ACe-T4 | AC Series, GEVO | Avelia Liberty (Amtrak Acela II) |

Thank you to **Mr H. Fuller, Mr R. Shirey, Mr J. Agneta** and many others for their help in progressing the eras we proposed in our previous advertisements.

www.hattonsmodelmoney.com/US-Eras

We welcome assistance in developing this resource - please contact our proprietor Richard Davies on richard@hattons.co.uk if you are interested in participating with this project.

HO scale



Electro-Motive Division SD45 diesel locomotive. Give your layout some flare with this road unit from ScaleTrains.com. The HO scale Rivet Counter line model is decorated for Burlington Northern; Atchison, Topeka & Santa Fe (warbonnet); Conrail (blue); and Norfolk & Western (high

short hood; Pevler Blue and American Revolution Bicentennial schemes). Direct current models sell for \$184.99, and versions with a dual-mode ESU LokSound 5 sound decoder are priced at \$274.99 (add \$5 for N&W Bicentennial units). ScaleTrains.com Inc., 423-299-3689, scaletrains.com

Broadway Limited announces Paragon4 line

Broadway Limited Imports announced its new Paragon4 sound and control system with Rolling Thunder. The first two HO scale models with the new technology will be an Atchison, Topeka & Santa Fe 2-8-2 steam locomotive and Electro-Motive Division (EMD) GP20.

Features of the dual-mode Paragon4 system include a built-in GoPack capacitor that's automatically disabled on the programming track for full compatibility with JMRI's Decoder Pro, Switcher Mode for low-speed control, Pro Lighting Mode for individual control of all

lights on a model, quillable whistle, choice of three air horns, adjustable bell ringing intervals, grade crossing whistle signal, automatic forward/reverse signal, load-based diesel engine sound intensity, individually adjustable sound volumes for each effect, and an EZ Reset Button for quick return to factory default settings. A DC Master, sold separately, is required to control sound effects on direct-current layouts.

The Santa Fe 2-8-2 steam locomotive will be offered in two versions: with a switching pilot and oil tender and with a

road pilot, oil tender, and large rear headlight in four road numbers each. The model will be priced at \$499.99.

The EMD GP20 will be decorated for Atchison, Topeka & Santa Fe; Burlington Northern; Chicago, Burlington & Quincy; Conrail; Electro-Motive Division demonstrator (one road number); New York Central; Southern Pacific; and Union Pacific, in two numbers per scheme unless noted. The four-axle road switcher will be priced at \$329.99.

For additional information, visit broadway-limited.com.

HO scale locomotives



• **General Electric U30C diesel locomotive.** Chessie System with Chesapeake & Ohio reporting marks, Conrail (blue and white), Delaware & Hudson (blue, gray, and yellow), Reading Co. (yellow and green), Pennsylvania RR (Dark Green Locomotive Enamel and

gold), and Seaboard Coast Line (black and yellow). Three road numbers per scheme; also available undecorated (with and without nose headlight). New tooling based on Phase I prototype. Features etched-metal grills; railroad-specific cab, headlight, and nose light variations; newly tooled Adirondack truck sideframes; and metal couplers. Direct-current model with 8-pin plug for Digital Command Control decoder, \$189.95; with dual-mode ESU LokSound sound decoder, \$299.95. Fourth quarter

2021. Master Line. Atlas Model Railroad Co., 908-687-0880, atlasrr.com



• **Electro-Motive Division SW7 diesel locomotive.** Chicago, Burlington & Quincy; Atlantic Coast Line (purple and silver); Detroit & Toledo Shore Line (black, three road numbers); Illinois

Central Gulf (orange and white); New York Central (black); and Union Pacific (Armour Yellow and Harbor Mist Gray). Four road numbers per scheme (two each in direct current and Digital Command Control) unless noted. Newly tooled model based on Phase II prototype. Six louvered side doors with letter-board gap and factory-installed grab irons on hood and cab. Direct-current model, \$149.98; with dual-mode ESU Sound and DCC decoder, \$199.98. WalthersMainline. Wm. K. Walthers Inc., 414-527-0770, walthers.com

HO scale freight cars



- **International Car Co. riveted-side caboose.** Norfolk & Western (class C-20, dark blue with “hamburger” herald), Pittsburgh & West Virginia (red and black), and Seaboard Air Line (red and black, four road numbers). Three numbers per scheme unless noted. Prototype-specific details, see-through end platforms and steps, light-emitting-diode lighting, and body-mounted McHenry scale couplers. Without sound, \$109.99; with SoundTraxx Tsunami SoundCar decoder, \$149.99. April 2022. Genesis series. Athearn Trains, 800-338-4639, athearn.com



- **Santa Fe Refrigerated Despatch class RR-56, RR-60, and RR-61 mechanical refrigerator cars.** RR-56: *El Capitan, Chief, San Francisco Chief*, Santa Fe All the Way, *Super Chief*, and *Texas Chief* slogans. RR-60 and RR-61: *San Francisco Chief* and Santa Fe All the Way slogans. Separate, factory-applied door posts, door latches, and uncoupling levers; detailed underframe with piping and equipment; positionable roof hatches; see-through side grills; Trane diesel generator; and Kadee no. 158 whisker couplers. Optional sound unit available. Single car, \$59.95; six-pack, \$239.80. 2022 delivery. Rapido Trains, 905-474-3314, rapidotrains.com

HO scale



Milwaukee, Racine & Troy Pullman-Standard 4,750-cubic-foot capacity three-bay covered hopper. This custom-decorated Accurail kit is available exclusively from the Kalmbach Hobby Store. The HO scale car is offered in one road number and features a plastic body with a separate hatch cover casting and running board ends; free-standing end cages with a modeler-installed brake wheel, chain fulcrum, end braces, and crossover platform; roller-bearing trucks with plastic wheelsets; and Accumate couplers. The limited-run kit is priced at **\$27.99**. Kalmbach Hobby Store, KalmbachHobbyStore.com

HO scale details and accessories



- **52'-6" gondola lids.** Early (ribbed) and late (smooth) versions. 3-D printed lid in white scheme. Includes modeler-installed lid locks and grab irons. Designed to fit Atlas, ExactRail, and Walthers Thrall gondolas and cars from other manufacturers. \$20. MAC Rail LLC, macrailproducts.com



- **1980s GMC Brigadier dump truck.** Kit includes cast-pewter wheels, tires, and details; resin cab and dump bed; photo-etched details; and windshield panels. \$34.95. Showcase Miniatures, 334-750-3276, showcaseminatures.net

N scale freight cars

- **52-foot depressed-center flatcar.** Department of Defense with Sheridan tank load: Black flatcar with green tank, desert camouflage flatcar and tank, and

green camouflage flatcar and tank. Without load: St. Louis-San Francisco (Frisco, yellow) and New York Central (black). One road number per scheme. Celcon trucks; blackened metal RP-25 contour wheels; and blackened brass axles. With load, \$49; without load, \$26. Silver Series. Bachmann Trains, 215-533-1600, bachmanntrains.com

N scale structures



- **The house of the labyrinth.** Laser-cut cardboard kit with PDF instructions. Measures 4.33" x 2.16" x 2.16". \$46.76. Price may vary based on exchange rate. Minifer, manifer.fr/en

Z scale locomotives



- **Electro-Motive Division F7A and F7B diesel locomotives.** Western Pacific (A unit and A-B set in silver-and-orange scheme, one road number each; A unit in green-and-orange scheme, two numbers). Blackened metal wheels, directional light-emitting-diode lighting in A units, 7mm motor, optional

Micro-Mark®

THE SMALL TOOL SPECIALISTS

Starting June 19, 2021,
Don't Miss Our Best Deals of the
Year on Tools, Supplies & More!



To get a **FREE Catalog**, go to
the Catalog Request page
at www.micromark.com
and enter **Promo Code 4564**

TRAIN COLLECTORS ASSOCIATION™

JOIN TCA!

**Friendships that
Last a Lifetime!**

Here are just a few great TCA benefits:

- TCA Train Meets (including York, PA!)
- ***3*** Publications: The Train Collectors Quarterly, National Headquarters News & TCA E-Train, our online magazine
- TCA x-change (online marketplace)
- National Toy Train Museum
- Toy Train Reference Library



**Call or visit us online for
your application today!**

717.687.8623
www.tcamembers.org

News & Products

HO scale



Flyer Express Fast-Freight. This WalthersTrainline set is scheduled for release in August. The HO scale set (**\$199.98**) will include an Electro-Motive Division GP15-1 diesel locomotive; a 53-foot smooth-side gondola; a 50-foot insulated boxcar; a wide-cupola caboose (all freight cars have metal wheels and Proto-Max metal couplers); a 36" x 45" oval of Power-Loc track; a power pack and speed/direction controller; and more. Wm. K. Walthers Inc., 414-527-0770, walthers.com

replacement truck with truck-mounted coupler, and drawbar (A units only). American Z Line, 614-764-1703, americanzline.com

Books

- **The Baltimore & Ohio Chicago Terminal History.** By David J. Leider. Book traces the history of the railroads that formed the B&OCT from the LaSalle & Chicago RR projected in 1867 to the Chicago & Great Western, which together with the Chicago & Calumet Terminal formed the Chicago Terminal Transfer, which became the B&OCT. The B&O is followed from its entry into Chicago in 1873 to the formation of CSX in 1980. Softcover, 325 pages. More than 280 photos, 128 maps, 20 drawings and illustrations, and more. \$50 (includes media rate shipping to the continental U.S.; contact for prices outside the U.S.) Check or money order to David Leider, 9070 64th Way N., Pinellas Park, FL 33782-4663; sooauthor@netzero.com

made in AMERICA

Did you know that all SoundTraxx decoders are made in Durango, Colorado? Since 1990, we have been committed to crafting quality products, strengthening our national economy and creating local jobs.

When you buy SoundTraxx decoders, you support building American-made goods. And our products aren't just good—they're excellent!



*Help contribute to a
brighter future for
the entire country
by purchasing
SoundTraxx decoders
at your local retailer.*

SOUNDTRAXX®
www.soundtraxx.com

Authorized
**Lionel, MTH and
Bachmann** dealer



MARIO'S TRAINS™
THE SOURCE FOR THE ENTHUSIAST



GIVE US A CALL (540) 868-0025

**Mention
this ad for
FREE shipping
anywhere in
continental
USA**

mariostrains.com

Just Plug
LIGHTING SYSTEM



COMING SOON

MISS MOLLY'S DINER

Built-&-Ready[®] Landmark Structures[®]

- Interior lighting compatible with Just Plug[®]
- Hand-painted train car styled eatery
- Interior features booths, a kitchen and authentic details
- Pair Just Plug Spotlight with included signage
- Available for N, HO and O scales



O scale

COMING SOON

RECORDS & RECRUITING

Built-&-Ready[®] Landmark Structures[®]

- Interior lighting compatible with Just Plug[®]
- Authentic decals provide superior realism
- Upstairs windows reveal apartments
- Available for N, HO and O scales



**WOODLAND
SCENICS[®]**

Purchase from your local hobby store.
woodlandscenics.com

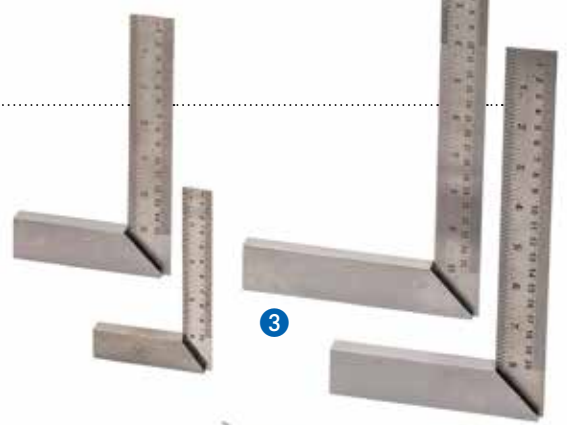
Showcase



1



2



3



6



5



4

The Kalmbach Hobby Store recently received several new tools and sets from Excel Blades Corp. Above is a small sampling of the items. To see the full lineup of products, and to place an order, visit KalmbachHobbyStore.com

1 Hobby knife set. This multi-piece set includes K1, K2, and K5 hobby knives and nos. 2, 10, 11, 16, 17, 18, 19, 22, and 24 blades. The set,

priced at **\$27.99**, includes a wood case.

2 21-piece mini tool set. Included in this assortment set (**\$19.99**) are five hex-nut drivers, six slotted screwdrivers, three hex-key drivers, two Phillips-head screwdrivers, and five open-ended wrenches, all in a plastic storage box.

3 Machine squares. These polished carbon steel tools

include markings in inches and millimeters. Available sizes are 4" (**\$19.99**), 6" (**\$24.99**), 8" (**\$29.99**), and 10" (**\$34.99**).

4 Hemostats. Features on these gripping tools (**\$7.99 each**) include stainless steel construction, a three-level locking mechanism, and serrated jaws.

5 Three-piece pounce wheel set. Trace patterns or

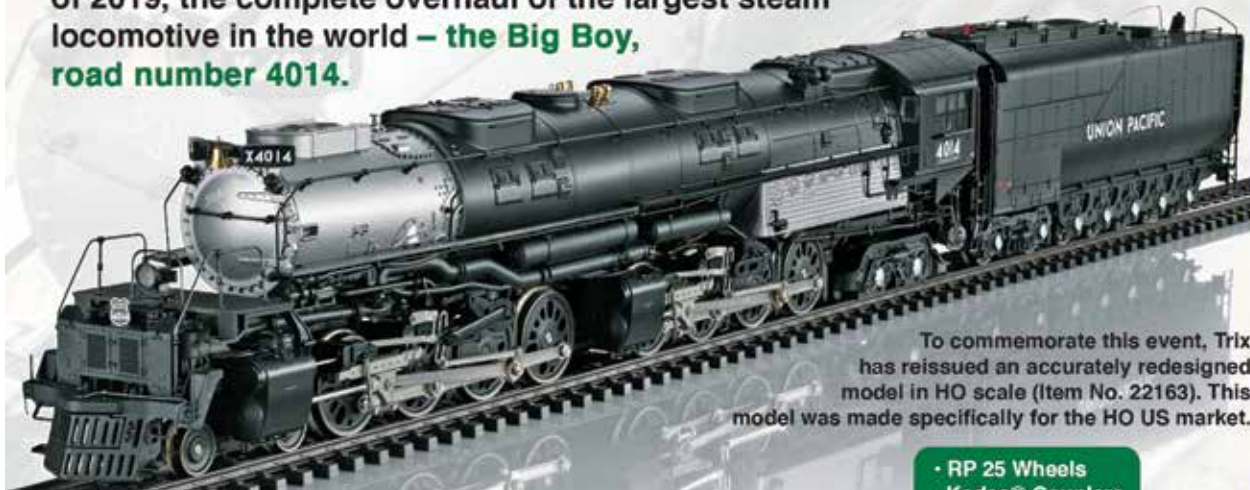
simulate nail holes in wood with these tools (**\$29.99**). Each pounce wheel has a 5" handle and can create 24 (small), 18 (medium), and 14 (large) perforations per inch.

6 Hand tools. Add these end cutters, bent nose pliers, and wire cutters to your toolbox. The tools (**\$9.99 each**) feature carbon steel construction and plastic grip handles. [MIR](#)

Union Pacific Railroad (UP) class 4000

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

TRIX



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

- RP 25 Wheels
- Kadee® Couplers

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

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

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

©2020 Märklin, Inc.

Products bearing "Union Pacific" are made under trademark license from the Union Pacific Railroad® Company

SHOP ON-LINE 24/7 TRAINWORLD.COM

We Supply The World



N, HO, On30 SUPER SAVINGS SALE
10% OFF
 \$100.00 and OVER

@ TRAINWORLD.COM
 On-line Orders Only

Use CODE Word **MRJJ21** In User Comment Box
SALE ENDS July 15, 2021

THIS MONTH'S SPECIAL Limited Quantities
HO MTH 80-2402-1
 CSX Spirit Of Law Enforcement ES44AC
 DCC & SOUND **SUPER SALE \$199.99**
 MORE SALE ITEMS @ trainworld.com

CODE WORD MUST BE APPLIED AT TIME OF ORDER - NOT REDEEMABLE FOR CASH OR GIFT CARDS - NOT RESPONSIBLE FOR TYPOGRAPHICAL ERRORS
 IN STOCK ITEMS ONLY - DISCOUNT DOES NOT APPLY TO SALES TAX OR SHIPPING & HANDLING - LIMITED QUANTITIES ON CERTAIN ITEMS
 NO NEW RELEASES - NO BACK ORDERS - NO PRE-ORDERS - NO REBATES, NO REFUNDS, NO STORE CREDIT ON PREVIOUSLY SOLD ITEMS - CANNOT BE COMBINED WITH OTHER OFFERS OR DISCOUNTS - IF DISCOUNT APPLICABLE, TRAINWORLD WILL APPLY IT WHEN ORDER IS PROCESSED

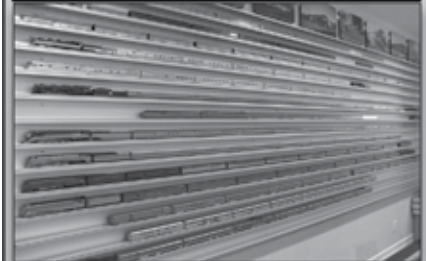
The Products We Sell Are Not Toys and Are Not Intended For Use by Children Under The Age Of 14.

SIGN-UP FOR OUR E-MAIL SALES 1-800-541-7010 e-mail: ORDERS@TRAINWORLD.COM
 HUGE INVENTORY • GREAT SELECTION • FAST SHIPPING
 751 McDONALD AVE., BROOKLYN, NY 11218

SHOWCASE-EXPRESS

Wall to Wall Expandable Display Case

Case Size Available: 2, N, HO, 3, O, G, #1 & Standard Gauge



Lighting Kits and Backgrounds Available

Join Top to Bottom
 or End to End

714-842-0672

www.SHOWCASE-EXPRESS.COM

SPRING CREEK MODEL TRAINS

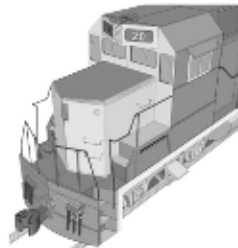
One of the Largest HO & N-Scale Inventories Around!

also Scenery, Details, Books, Tools & More

SpringCreekModelTrains.com

customerservice@springcreekmodeltrains.com

402-365-7628



NICHOLAS SMITH TRAINS

Model Railroading For All Seasons

VISIT OUR WEBSITE, OR GIVE US A CALL
 For orders only: 1-800-848-9119

Product Info (610) 353-8585 • Fax (610) 359-9846

MINIMUM ORDER : \$30.00 • 15% Restocking Fee on Returns
 PA Residents Add 6% Sales Tax

KATO N

| | |
|---|----------|
| KATICE4-DB ICE-4 Set w. Zimo Sound..... | \$849.98 |
| KAT10006 Glacier Express Starter Set..... | \$204.98 |
| KAT10010 E353 Azusa/Kaiji Stater Set..... | \$219.99 |
| KAT10029 Series 225-100 Starter Set..... | \$199.98 |
| KAT10032 D51 Steamer Starter Set..... | \$229.99 |
| KAT101427 E4 MAX Shinkansen Set..... | \$199.99 |
| KAT101529 TGV Reseau Duplex 10 Car Set..... | \$329.98 |
| KAT101604 Hiroshima Type 1000 Tram 2 PK..... | \$230.98 |
| KAT1060425DCC CN F7 A/B DCC..... | \$254.98 |
| KAT1060425LS CN F7 A/B DCC/Sound..... | \$469.98 |
| KAT1060430 Milwaukee Road FP7A/B..... | \$134.99 |
| KAT106084 Santa Fe El Capitan 10 Car Set..... | \$209.99 |
| KAT1060841 Above w. Lights..... | \$369.99 |
| KAT106102 CN Transcontinental 7 Car..... | \$191.99 |
| KAT1061021 Above w. Lights..... | \$309.99 |
| KAT1068001 Amtrak ACS-64 Bookcase Set..... | \$172.99 |
| KAT1068002 Amtrak Amfleet PV VI Coach Set..... | \$39.99 |
| KAT10680012 Amtrak ACS-64 Set DCC/lights..... | \$279.99 |
| KAT1068002 Amtrak Amfleet PV VI Coach Set..... | \$39.99 |
| KAT1065505 Amtrak Enclosed Auto carries PV5(4)..... | \$69.99 |
| KAT1065507 Amtrak Enclosed Auto carries PV3(4)..... | \$69.99 |
| KAT1260402KB1 UP FEF3 4-8-4 #838 Weathered..... | \$309.99 |
| KAT1373001 Amtrak ACS64 #600..... | \$104.99 |
| KAT1373003 Amtrak ACS64 #648..... | \$104.99 |
| KAT148041 Greenmover LEX..... | \$119.98 |
| KAT1560951 Amtrak Amfleet Coach Ph Ivb..... | \$22.99 |
| KAT106095X 5/6 Amtrak Viewliner Baggage..... | \$25.98 |
| KAT106053L Santa Fe PA-1 Goldbonnet..... | \$99.99 |
| KAT1768411LS UP SD70Ace #4141 W.Sound..... | \$269.99 |
| KAT1768521LS UP SD70Ace #9066 w. DCC/SND..... | \$264.98 |
| KAT1768930DCC BNSF ES44AC #5873 W. DCC..... | \$124.99 |
| KAT1768930LS Above w. DCC/Sound..... | \$269.98 |
| KAT1768932 UP ES44AC #5380..... | \$89.98 |
| KAT1768932LS Above w. DCC/Sound..... | \$269.98 |
| KAT1768935DCC CP ES44AC #8743 w. DCC..... | \$149.98 |
| KAT1768935LS Above w. DCC/Sound..... | \$269.98 |
| KAT1769241DCC Mearsk SDP40F w. DCC..... | \$155.98 |
| KAT1769241LS Above w. DCC/Sound..... | \$269.98 |
| KAT23240 3 Stall Roundhouse Kit..... | \$47.99 |

MORE KATO ONLINE @
WWW.NICHOLASSMITHTRAINS.COM

MTH HO

| | |
|--|----------|
| MTH8022881 BNSF Dash 9 DCC/Sound..... | \$229.99 |
| MTH8022911 CN Dash 9 DCC/Sound..... | \$229.99 |
| MTH8023041 SF Dash 9 w. #629 PS3..... | \$229.99 |
| MTH8023501 GE Demo ES44AC w. Charging Lghs..... | \$249.99 |
| MTH8023721 MTH R21 4 Car Subway Set..... | \$284.99 |
| MTH8023791 MTH R22 4 Car Subway Set..... | \$284.99 |
| MTH8023800 Spirit of Up SD70Ace #1943 DC..... | \$174.99 |
| MTH8023801 Spirit of Up SD70Ace #1943 DCC..... | \$244.99 |
| MTH8023960 UP SD70Ace #4141 DCC Rdy..... | \$174.99 |
| MTH8023961 UP SD70Ace #4141 DCC/SND..... | \$244.99 |
| MTH8023970 UP SD70H #9096 DCC Ready..... | \$174.99 |
| MTH8023971 UP SD70H #9096 DCC/SND..... | \$244.99 |
| MTH8023990 UP SD70 Ace #1111 DCC Ready..... | \$174.99 |
| MTH8023991 UP SD70Ace #1111 DCC/Sound..... | \$244.99 |
| MTH8024151 Donald Trump ES44Ac #2020..... | \$249.99 |
| MTH8032721 SP Cab Forward #4131..... | \$514.99 |
| MTH8032741 SP Cab Forward #4130..... | \$514.99 |
| MTH8032981 UP 4-12-2 #9000..... | \$484.99 |
| MTH8520160 BNSF GP38-2 DCC Ready..... | \$79.99 |
| MTH8520180 BNSF GP38-2 DCC Ready..... | \$79.99 |
| MTH8520240 Indiana Railroad GP38-2 DCC Rdy..... | \$79.99 |
| MTH8520270 Maryland Midland GP38-2 DCC Rd..... | \$79.99 |
| MTH8520370 UP GP38-2 DCC Ready..... | \$79.99 |
| MTH8520530 Southern Pacific GP38-2 DCC Rdy..... | \$79.99 |
| **Other road numbers available for the items above** | |
| MTH8577018 UP Powered by Our People Cab..... | \$22.99 |

Hours: M.- TH 12-5 • Friday 12-7 • Sat 12-5 •
 Sun 11-5 (Nov. 1st-Dec. 24th)

2343 West Chester Pike • Broomall, PA 19008
 (610) 353-8585 • ESTABLISHED 1909

Prices Subject to Change Without Notice; Not Responsible For Typographical Errors

www.nicholassmithtrains.com

Model Railroader July 2021

CUSTOM MODEL RAILROADS

Construction of Fine Scale Model Railroads
 Private Layouts - Museum Exhibits - Custom Structures
 Let us build the Model Railroad of your Dreams



Quality built layouts since 1991

www.custommodelrailroads.com

City Station

Laser-cut Building Kit



NEW HO & N SCALE

410-889-0010

Visit our website to see these and more kits from CMR
www.custommodelrailroads.com

TRAINSHOW.COM

The best place to find Great Train Shows in America



OUR SHOWS:

Greenberg's Train & Toy Show
 America's Train & Toy Show since 1976

Great Train Shows
 Quality Train Shows from coast to coast

Great Midwest Train Show
 The best place to buy & sell trains since 1971

SUMMER 2021 Schedule:

- July 24-25 Monroeville, PA - Convention Ctr
- August 7-8 Fredericksburg, VA - Expo Center
- August 8 Wheaton, IL - DuPage County Fair
- August 14-15 Dayton, OH - Montgomery City Fair
- August 14-15 Edison, NJ - New Jersey Expo Ctr
- August 21-22 Pomona, CA - Fairplex
- August 21-22 Oaks, PA - Greater Philadelphia Expo
- September 12 Wheaton, IL - DuPage County Fair

For information & tickets visit

TRAINSHOW.COM

Great American Train Shows Inc - Info@gats.email
 PO Box 1192 - Lombard, IL 60148 - 224-500-4159

Check our website for any last minute schedule changes!

Tips on modeling from a wheelchair

Q I've searched all over the internet for information on how to build a model railroad when you're in a wheelchair, but I've found nothing. Nada! Zilch! Can you help, please? I'm desperate!

Joe Kienlen, Conshohocken, Pa.

A Though we haven't previously published an article specifically about how to build a layout while using a wheelchair, we've run a good number of articles with tips and techniques that add up to the information you need.

Start with the article "New life for the Pennsy Middle Division" by Lou Sassi in our February 2013 issue. In it, the author explains how Jimmy Deignan (seen in the photo at right) and his friends refurbished an existing layout and made it wheelchair-accessible after Jimmy was left partially paralyzed following a motorcycle accident.

Next, check out "Operating sitting down," by Paul Dolkos, in our April 2009 issue. Though that article talks about operating from rolling office chairs, a lot of the same issues mentioned in that article apply – reach-in distance, turnout controls, and visibility. Apply these principles to the entire layout, rather than specific operating stations.

Lastly, Bob Wundrock's article "Modeling with a disability" on Trains.com has good advice for improving accessibility.

To make a layout wheelchair-friendly, I would suggest you keep the following in mind:

Leg and chair clearance. If you don't want your knees or the arms of your chair bumping into your benchwork, you'll want about 28" to 30" of clearance under the model railroad. An around-the-walls shelf layout will let you use low-profile shelf brackets or cantilevered beams to support the layout sections so you don't have to maneuver around benchwork legs or angled supports.

Layout height and reach. While two feet might seem like a



Jimmy Deignan runs a passenger train into St. Andrews on his HO scale Pennsylvania RR Middle Division. The 33-inch-wide aisles of the layout provide plenty of room for Jimmy and his friends to operate the layout. Lou Sassi photo

reasonable maximum distance to reach in to align a turnout or rerail a car, and 36" from the floor might seem like a good height at which to view and operate a layout from a seated position, remember that the higher the layout is, the shorter your reach-in distance will be. Also remember that once your layout is scenicked, you'll be reaching over trees, line poles, and buildings, too. So keep your shelves narrow – 12" to 18" or even less. Consider modeling N scale to pack the most modeling fun onto those narrow shelves.

Benchwork thickness. If we want at least 28" of clearance under the benchwork and a maximum rail height below 36", that's not a lot of wiggle room. Look into commercially available benchwork systems like Mianne, KamKonnnect, and Sievers. If you want to build your benchwork yourself, use an open grid of 1 x 3 lumber to keep your modules as low profile as possible. Look at how Lance Mindheim built benchwork for his Los Angeles Junction shelf layout in "Floating benchwork for shelf layouts" in our Oct. 2016 issue.

Accessibility during construction.

Access to the bottom of the layout for such tasks as wiring and turnout machine installation will be difficult in a wheelchair. I would suggest planning your layout so you can build it in a modular fashion, on the workbench. Plan sections no more than 3 or 4 feet long so you can easily take them to the workbench to access the underside. Once the tracks are laid and wired, mount the sections on low-profile shelf brackets you've installed on the walls.

Turnout control. You'll want to avoid installing switch motors under the benchwork, where they can be bumped. Consider mounting these on the layout's surface, hidden under structures or behind scenery. Or you could line turnouts via choke cables, with controls mounted on the front of the benchwork. Check out the articles "Easy turnout controls" (May 2003) and "Installing ground throws in the foreground" (Oct. 2018) for a few ways to do this.

I hope this provides you with the information and inspiration you need to get started on your layout. Happy railroading!

Q Where did Pelle Søbørg get the parts for his utility poles? They're the most correctly done of any I have seen.

James Bodnar, Brunswick, Ohio

A Luckily, Pelle wrote an article for us explaining not only what parts he used, but how he used them. "Quick and easy utility poles" was published in our November 2016 issue. If that issue isn't in your back-issue stash, you can read and print it, as well as any other article from our 88-year history, by subscribing to our online Archive at Trains.com.

Q After five decades away from model railroading, I dug into my trove of old N scale track, locomotives, and rolling stock, and built a small, old-school, direct-current layout. I moved on to build a sizable layout with new Atlas flextrack affixed to a Homasote surface. Track laying was completed by mid-summer last year. But after the

Send questions and tips to associate editor Steven Otte at AskMR@MRmag.com.

winter in my basement, to my great disappointment, there are stretches of track that are now no longer straight. Sections that were straight last October have become "squiggles."

Obviously, during the fall and winter, there's lower temperature and humidity in my basement. I can't imagine that the flextrack has expanded under those conditions, so maybe something has changed with the Homasote. Have you ever seen this kind of problem?

Mike Weise, Jefferson City, Mo.

A You're right, it's not likely your track has changed size in the basement. More likely is that the benchwork and baseboards you installed the track on have shrunk due to low humidity. It's an imperceptible difference, but there's little to no tolerance in model track to absorb such changes, so you end up with what can look like drastic curves. But you don't have to rip up and reattach all your trackwork. The solution is to cut expansion joints in your track with a cutoff



Model Railroader contributing editor Pelle Søbørg explained how he details his HO scale line poles in our November 2016 issue. Pelle Søbørg photo

wheel in a rotary motor tool. You may have to add a few more electrical feeders to make up for these gaps, but that's sound practice anyway.

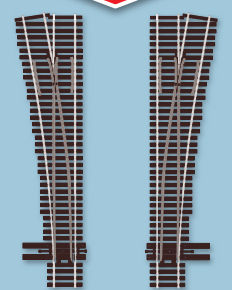
HIGH CALIBRE

NOW WITH UNIFROG
Operate as a dead frog out of the pack, or connect the wire from the underside of the frog to your switch machine's microswitch for even smoother running.

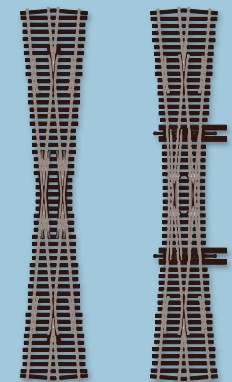
**HO SCALE
CODE 83**



*Green River, built by Bob Phelps
Photo: Andrew Burnham*



#6 LH Turnout SL-U8362 #6 RH Turnout SL-U8361



#6 Diamond Crossing SL-U8364 #6 Double Slip SL-U8363



PECO STREAMLINE CODE 83

FOR ACCURACY, RELIABILITY & QUALITY

PRITCHARD PATENT PRODUCT CO. LTD • BEER • DEVON • EX12 3NA • ENGLAND



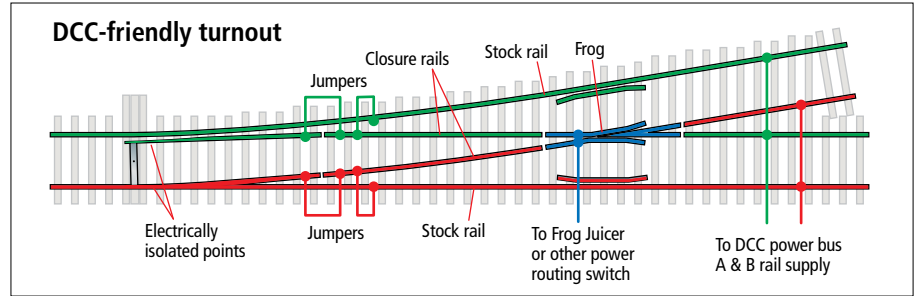
Get the **Free Catalog** from your local hobby shop to see the full line. Download free track templates at www.peco-uk.com

Q Are Atlas turnouts “DCC friendly” in the way Walthers turnouts are advertised? Do I need to do anything special to make Snap-Switches and other track products operate properly on a Digitrax DCC-powered layout?

Edward Gardineer, East Berne, N.Y.

A Before I answer your question, I have to give you two caveats. First, although our DCC Currents columnist Allen Gartner coined the term “DCC friendly,” neither the National Model Railroad Association nor any other body enforces an official definition. So a turnout might be DCC-friendly even if it’s not labeled or sold as such. Second, if it’s properly installed and maintained, and traversed by rolling stock whose wheels are in gauge, any turnout can be used on a DCC layout. Direct current is actually less tolerant of short circuits than DCC.

That said, Atlas has several different lines of track – code 100, code 83, Snap-Track, True-Track, etc. So the answer is “it depends,” which I recognize is less than helpful. So instead let’s look at what



A DCC-friendly turnout will have point and closure rails that are wired to their adjacent stock rails to minimize the chance of short circuits.

“DCC friendly” means. When a metal wheel that’s slightly out of gauge comes in contact with a point rail and a stock rail that are energized with opposite polarities, a short circuit occurs. A DCC-friendly turnout is one that minimizes the risk of that happening by electrically isolating the points and closure rails; powering those components the same as their adjacent stock rails; and switching the frog’s polarity depending on the route lined through the turnout.

A turnout that’s labeled DCC-friendly should come wired like that out of the

package, but if your turnouts aren’t, you can still make them so. Use a razor saw or a cutoff disk in a motor tool to separate the closure rails from the frog and install jumpers under the track connecting each point/closure rail assembly to its adjacent stock rail, as shown in the diagram above. Then attach a wire to the frog and run it to a switch that will change the polarity depending on the way the points are lined, like a Tam Valley Frog Juicer or the secondary contacts on a Tortoise by Circuitron switch motor. [MR](#)

HALFPRICEHOBBY.COM

100's of HO and N Scale specials at 50% off of M.S.R.P. at www.halfpricehobby.com

Regular Stock items always discounted from 20 to 50% off with low flat rate shipping of \$8.99

Featuring products from Athearn and other quality brands

Special orders and pre-orders accepted at regular discounted prices. Please email service@halfpricehobby.com for pricing and availability.

YankeeDabblers.com

Thank you for making YankeeDabblers your favorite hobby store!

Check out our complete train store!

Repairs and decoders installed. N, HO, S, O, G

Authorized Dealer:
Digitrax, ESU-LokSound, NCE, Soundtraxx, TCS

OPEN Tue-Sat Web(24x7)

www.yankeedabblers.com

(856) 312-8084 101 W. Kings Hwy., Bellmawr, NJ 08031

Tortoise™

For 25 Years, Simply... **The BEST!**

Slow Motion Switch Machine

MADE IN THE USA

800-6000 \$22.95
6006 6-PACK \$132.00
6012 12-PACK \$250.00

- Enclosed Gear Drive Mechanism (NOT a Screw-Drive Machine!)
- Simple Mounting - All Linkage Included!
- 2 Sets SPDT Auxiliary Contacts

AT YOUR LOCAL HOBBY SHOP OR DIRECT
INCLUDE \$8.00 FOR SHIPPING & HANDLING

Send SSAE for more info or \$8.00 for complete 60 page Catalog & Application Book to:

CIRCUITRON
211 RocBaar Dr., Romeoville, IL 60446-1163

Call **TODAY** to order! 1-800-466-3131

Storage Boxes

Foam Lined
Self Closing
Fully Assembled

HO Scale
Holds 20 Cars - \$29.95

N Scale
Holds 36 Cars - \$29.95

Tote Bags
\$35.95
Plus S&H

AXIAN TECHNOLOGY
623-580-0800
fax: 623-580-8008
21622 N. 14th Ave. • Phoenix, AZ 85027-2806
www.axiantech.com

Go Digital! Read *Model Railroader* on your tablet or laptop!

Visit <https://www.trains.com/mrr/subscription-plans/>

Handcrafted STRUCTURES

Prebuilt & Prelit | Limited Edition | Original Designs

CRIPPLE CREEK ENGINE WORKS

HO Scale (279-6292) | O Scale (279-5926)

Fully lit with an astounding 40+ LED lights

Three train openings measuring 3-1/4"H x 2"W

Includes two figures, eight bushes, barrels, trash can, pallets, handcart and Jack the German Shepherd

HO Scale Dimensions:
10-1/2"W x 6-1/2"D x 6"H



FEDEX® FREIGHT BUILDING

HO Scale (279-6324) | O Scale (279-6395)

Fully lit exterior with 15 LED lights

Includes FedEx worker, three packages, flagpole and three bushes

Simulated tarpaper roof with two AC units

HO Scale Dimensions:
6-5/8"W x 3-5/16"D x 3-1/16"H



PATRIOT LIGHTING BACKGROUND BUILDING

HO Scale (279-6298) | O Scale (279-5925)

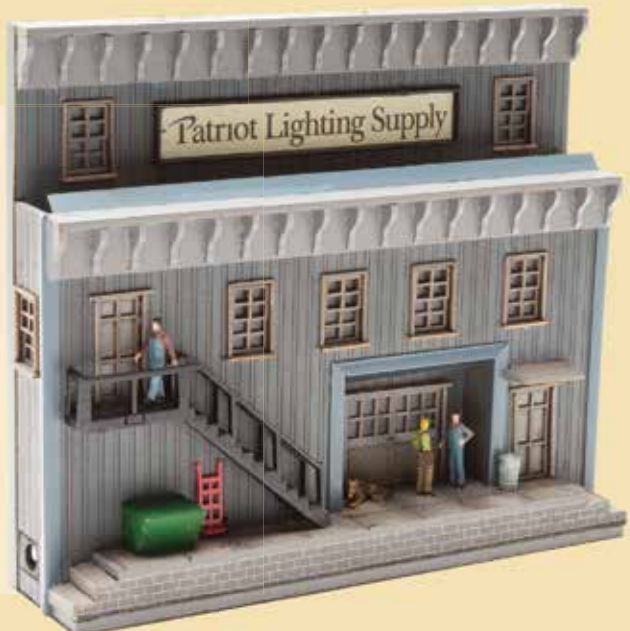
1-1/2" profile fits almost anywhere

Fully lit exterior

Includes a loading dock with 3 figures, dumpster, handcart, trashcan, and Jack the German Shepherd

Architectural details including 8 intricate windows, 3 doors, stairs and parapet

HO Scale Dimensions:
6-1/8"W x 5-1/4"H x 1-1/2"D



FOR MORE INFORMATION OR TO ORDER, VISIT [MENARDS.COM/TRAINS](https://www.menards.com/trains)



Cody Grivno used two Pikestuff structures to kitbash the warehouse for Cargill Salt. He shortened the truck scale, a Walthers kit, that will go next to the building. Bill Zuback photos

Building Cargill Salt, part 1

In last month's *Rehab My Railroad*, I showed you how I weathered and restenciled a three-bay covered hopper to look like those used in salt service on full-size railroads. This month, we'll start a two-part series on how I built Cargill Salt, the industry that car (and others) will be spotted at on our HO scale Jones Island project layout.

The prototype Cargill Salt is located on the Milwaukee Municipal Mooring Basin, just to the southeast of the COFCO International grain elevator. The industry receives solar salt from Utah by rail, as well as mixed salt from the Midwest. The solar salt is bagged, placed on pallets, and distributed to hardware stores by tractor-trailer. The

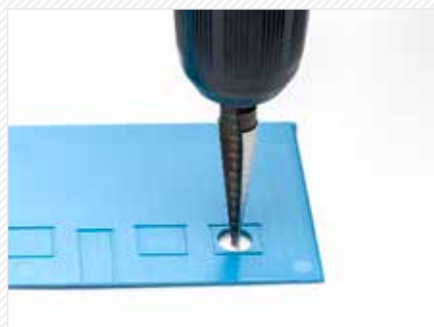
mixed salt is loaded into trucks and used in animal feed.

Those familiar with Jones Island will recognize that this isn't an exact copy of the office/warehouse portion of the full-size industry. However, by using a similar color palette and adding signature details, this building looks the part using off-the-shelf components.

STEP 1 CUTTING AND SANDING



I built this part of Cargill Salt with Pikestuff's One or Two Door Engine-house (no. 541-0008) and Truck Terminal (no. 541-5001) kits. Since I'd be adding a foundation, I ran the bottom edge of each wall panel over a piece of 600-grit sandpaper. Hold the panels against a piece of wood to keep the edge square.



Next I worked on the openings for the windows, personnel doors, and roll-up doors. Cutting guides are molded into the back of the wall sections for the windows and doors. On the window openings, I used a tip from veteran modeler Wayne Wesolowski. I removed most of the plastic using an $\frac{1}{8}$ " to $\frac{1}{2}$ " step drill bit.



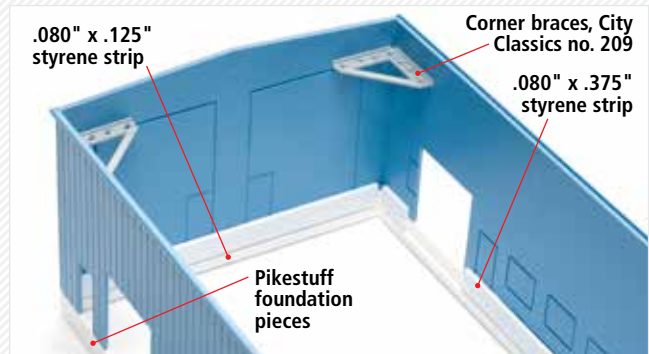
Then I used a nibbling cutter to remove the remaining plastic close to, but not on, the molded lines. I used files to finish the openings.

I turned to a no. 11 blade in a hobby knife for the door openings. Make the cuts in several light passes. Do any clean-up work with files and sanding sticks.

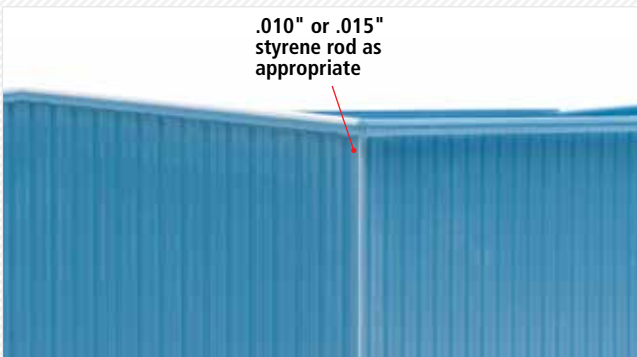
STEP 2 ASSEMBLY, BUMP-OUT, AND ROOF



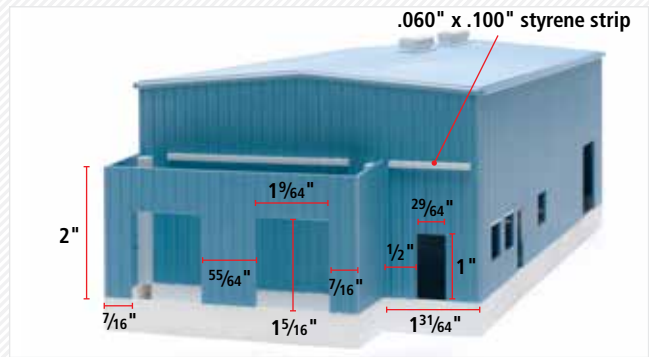
I assembled the enginehouse walls using plastic solvent cement applied with a Microbrush. To keep the walls at right angles during the assembly process, I used Bachmann's magnetic snap and glue set (Kalmbach Hobby Store item no. 84013). The set contains four clamps. I used two per corner, one near the top as shown above, and one at the bottom. The clamps have notches, making it easy to apply glue.



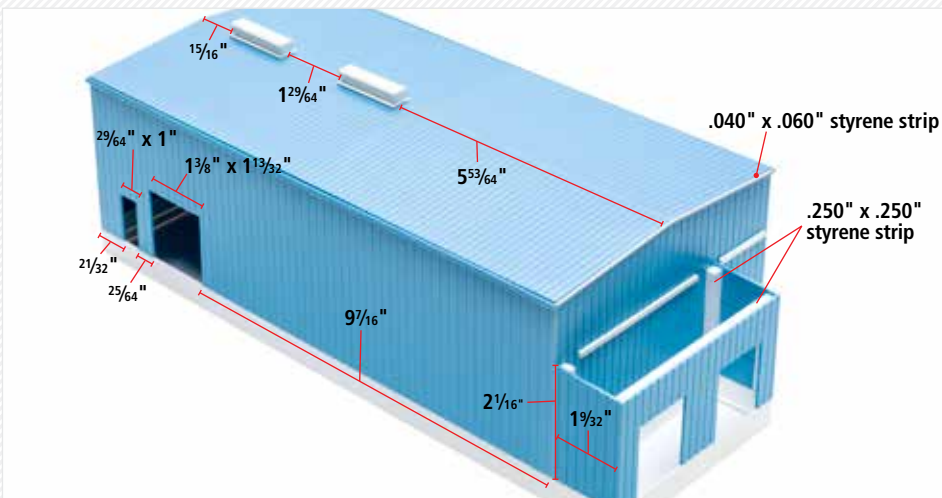
After the glue had dried, I installed City Classics corner braces (no. 209) to the interior. Then I added the foundation pieces, which I had in my scrap box from previous Pikestuff kits ($\frac{1}{2}$ " styrene strip would also work). I glued $.080" \times .125"$ styrene strip along the bottom edge to tie the pieces together. I used plastic solvent cement to attach $.080" \times .375"$ strip behind the joint where the foundation meets the wall.



There were a few corner joints that had gaps I wasn't happy with. To fix those, I used $.010"$ or $.015"$ styrene rod as appropriate. With the styrene in the gaps, I flooded the joint with plastic solvent cement. This melted the styrene rod, filling in the gaps. Once the glue dried, I used a sanding stick to blend the styrene with the adjoining plastic.

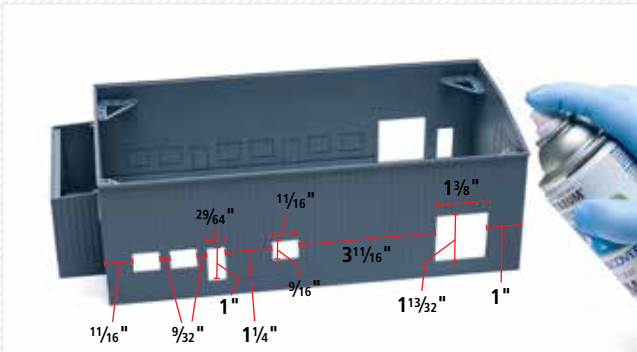


I made the bump out for the truck dock using pieces from Pikestuff's Truck Terminal kit. The openings are sized for doors and weather bellows in the Walthers Truck and Railroad Docks kit (no. 933-4070). The $.060" \times .100"$ styrene strip supports the roof, which I fashioned from left-over Pikestuff corrugated roof material.

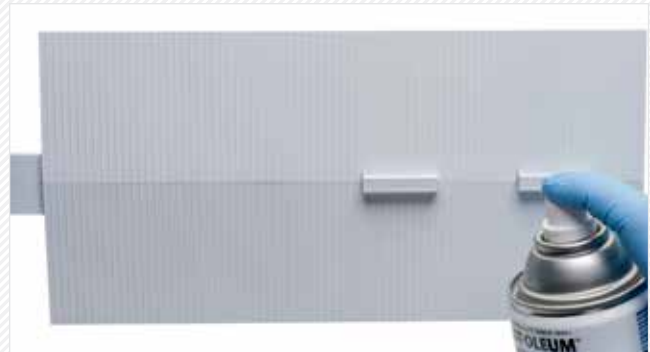


Next I assembled the roof halves per the instructions. I added the two ridge roof ventilators, supplied with the enginehouse kit, as shown. I mistakenly removed the upper molding for the gutters on the end walls (I had the instructions for a few Pikestuff kits on my workbench – I looked at the wrong one!) To remedy the mental lapse, I applied $.040" \times .060"$ styrene strip.

STEP 3 PRIMING AND PAINTING



With the building and roof sections completed, I washed the parts in warm water with dish soap added. This removed dust, skin oils, and other impurities that may affect paint adhesion. Once dry, I primed the building and roofs with Rust-Oleum Painter's Touch 2X Flat Gray Primer.



I let the primer dry for 24 hours. Then I used Flat White (no. 249126) from the same Rust-Oleum line to paint the building and dock roofs. Don't forget to paint the underside of the roof where it will be visible along the edges of the truck dock and by the personnel door.



The truck scale and bridge plates, which both have diamond-tread pattern, and the open-grate platform have finer detail that I wanted to preserve. Though the Rust-Oleum primer probably would have been OK to use, I opted for Tamiya Surface Primer L for these parts.



I used a variety of Vallejo Model Air acrylic paints, noted in the materials list below, to paint the building and details. As shown above, I used Concrete on the foundation. I painted the corrugated metal walls Light Sea Blue.

Materials list

City Classics

209 Corner braces

Evergreen styrene strip

155 .060" x .100"
166 .080" x .125"
371 .080" x .375"
409 .250" x .250"

Pikestuff

541-1010 Concrete staircase
541-1114 Staircase handrails
541-0008 Enginehouse
541-5001 Truck Terminal

Rust-Oleum spray paint

1917 Khaki (Camouflage line)

249088 Flat Gray Primer

249126 Flat White

Tamiya

87064 Fine Surface Primer L
TS-82 Black Rubber

Tichy Train Group

8001 Open-grate platform with handrails
8011 Brackets

Vallejo Model Air and Model Wash

70.520 Matte Varnish
71.001 White
71.062 Aluminum
71.072 Gunmetal
71.089 Light Sea Blue

71.122 Desert Tan

71.131 Concrete

71.135 IJA Chrome Yellow

76.516 Gray (Model Wash)

76.518 Black (Model Wash)

76.521 Oiled Earth (Model Wash)

Wm. K. Walther's Inc.

933-4068 Truck and Rail Scale

933-4070 Truck and Railroad Docks

933-4074 Security Details

933-4075 Modern Electrical Gear

Computer Control

Turn your PC into a
Centralized Traffic
Control Facility!

Operate your model railroad
from a state-of-the-art
control console on your PC

- DCC or conventional
- All gauges, Z to G
- Easy-to-use software
- Works on any PC
- Modular hardware
- Just plug & play

Control signals, turnouts, accessories, sound, reversing loops, collision avoidance, and so much more. Have trains obey signals, make station stops, or run according to timetables

All automatically from your PC ...

Introducing "Train-Brain" the fast, easy, and fun way to control your model railroad!

Train-Brain Software

Train-Brain Hardware



The Only Fully Integrated Model Railroad
Computer Control System Available Today

System Prices Starting At Just \$99 Learn More At:

www.cti-electronics.com

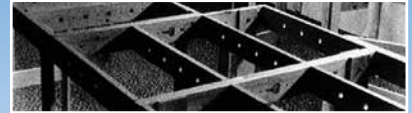
Model Railroaders in all scales from points all over the world know **READY TO ROLL** is their #1 destination because of our extensive in store inventory.

All roads, cruise ship ports, and airports lead to

RTR
READY TO ROLL

831 NW 143rd STREET
MIAMI, FL 33168 - 3017
(305) 688-8868
rtrtrains@aol.com

BENCHWORK in a HURRY



Use Our Simple Modular System
You Design Any Size Layout
For Any Gauge Track
Easy to Assemble

Sievers BENCHWORK

Washington Island, WI 54246
920-847-2264

www.sieversbenchwork.com

TRAINZ

Trainz wants your N and HO scale collection!
With over 45 years of experience, we make it easy to sell your collection.

sellmytrains.com/mrr
(866) 316-0175



Looking for a great selection of new and used trains in N & HO?
Visit trainz.com

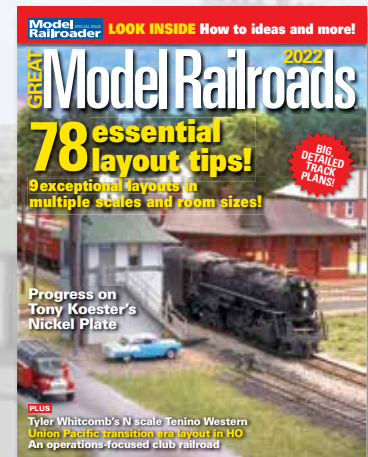
The Best Layouts from Today's Top Modelers!

Great Model Railroads 2022 is an all-new, 92-page special issue that highlights the best in contemporary modeling. Featuring **9 realistic layouts** in a complete and expanded presentation, you will learn techniques such as operation, control, track planning, and scenery.

Featured stories include:

- Progress continues on the Nickel Plate, by Tony Koester.
- A freelanced gem in N scale, featuring Tyler Whitcomb's N scale Tenino Western Railroad.
- Lone Star State railroads on a modern HO layout.
- And more!

Don't miss your guide for planning and building a successful model railroad!



\$1 OFF + FREE SHIPPING!

Reserve your copy today at
KalmbachHobbyStore.com/GMR22

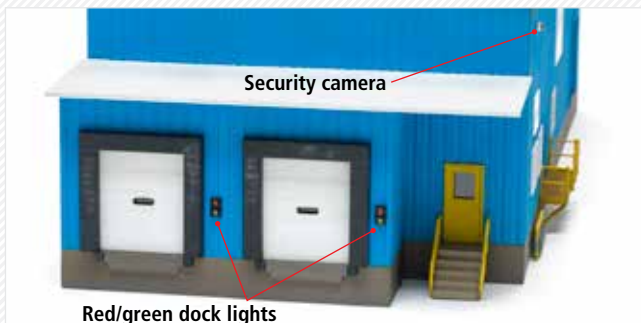
Free standard shipping to U.S. addresses only. Offer expires 10/7/21 at 11:59 p.m. CT. Sales tax where applicable. Great Model Railroads 2022 will be available October 2021.

STEP 4 DETAILS



The full-size warehouse has a covered platform by the truck scale for drivers to exchange paperwork with the office. Pinched for space, I used Tichy Train Group's open-grate platform with handrails instead. I placed two brackets under the platform.

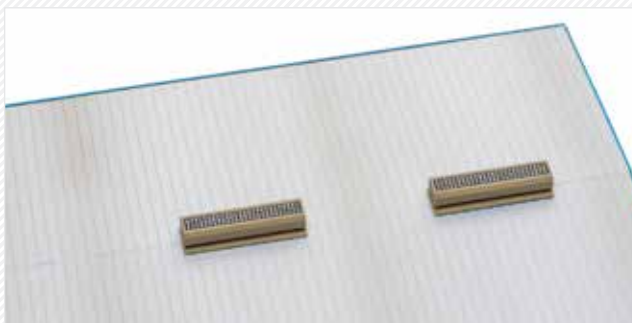
When studying prototype images, I noticed gas meters on the scale side of the building. I found these in the Walthers Modern Electrical Gear kit (no. 933-4075).



The roll-up doors, weather bellows, and bumpers/dock leveler are from the Walthers Truck and Railroad Docks kit. I painted the doors Rust-Oleum Flat White, the bellows and bumpers Tamiya Black Rubber, and the dock leveler Vallejo Gunmetal. The red/green dock lights (modified) and dome-style cameras are from Walthers kit 933-4074.



Though it will be somewhat obscured by the hallway window frames, I wanted to include a truck scale. I used the small scale included in the Walthers Truck and Rail Scale kit (no. 933-4068) for this. I shortened the weigh-bridge and base by one panel each using the molded cut lines on the underside of those parts and the curbs by two lengths each. I painted the base with Rust-Oleum Khaki and the weighbridge Vallejo Gunmetal.



To make the ridge roof ventilators stand out, I masked the roof and airbrushed the parts Vallejo Model Air Desert Tan (no. 71.122). Once the paint had dried, I brush-painted the top with the same company's Aluminum (no. 71.062). To add depth to the casting, I applied Vallejo Black Model Wash (no. 76.518).

STEP 5 FINISHING TOUCHES



To weather the building, I used an airbrush to apply Vallejo Gray and Oiled Earth Model Wash. I found 20-25 psi the ideal pressure for spraying the weathering washes. The manufacturer says dry time is around 20 minutes, but to be safe I waited a few hours before overcoating the washes with Vallejo Matte Varnish.



Finally, I asked Trains.com associate producer Ben Lake to make signs for the building. After printing the signs on a color printer, I attached the paper to a piece of .015" styrene sheet with 3M Super 77 spray adhesive. Once the individual signs were cut, I attached them to the building with Micro-Mark Liquid PSA. [MR](#)



LGB® Garden Railroading

Get on board and join the fun!

Amtrak is all set to celebrate its 50th anniversary in 2021. For five decades, Amtrak trains have been taking passengers where they want to go. LGB is proud to announce a special series for the anniversary "50 Years of Amtrak."



21581 F7B Diesel Locomotive



21580 / 21582 F7A Diesel Locomotive (different road numbers)



36601 Coach Passenger Car (#4813)



36600 Baggage Car



36603 Vista Dome Car



36602 Coach Passenger Car (#4817)



36605 Observation Car



36604 Dining Car

Running sounds for the digital F7A Amtrak Locomotives work in analog operation.

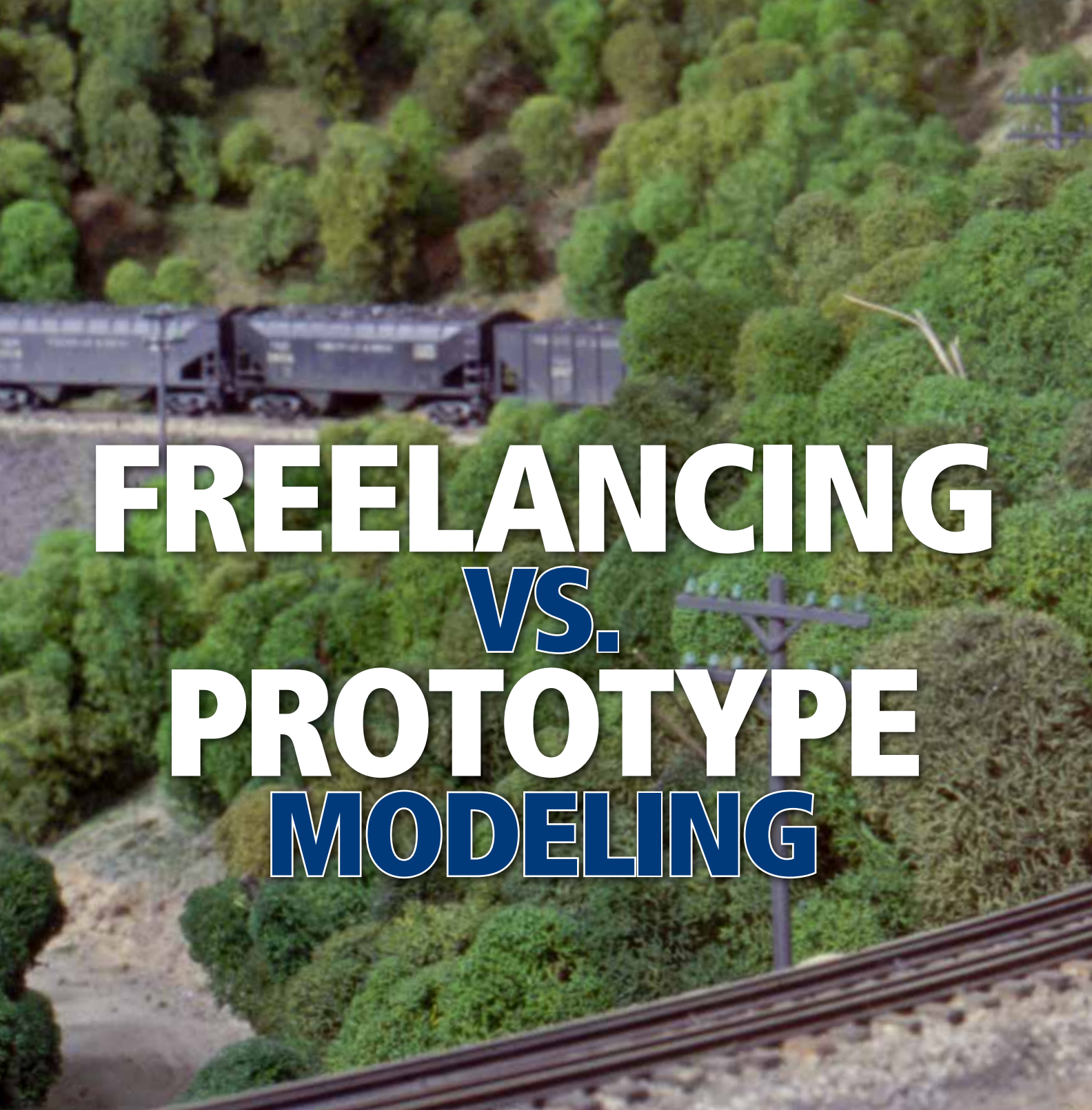
The famous "Sunset Limited" train can be assembled using the new Amtrak cars. All cars include built-in LED interior lighting.

For a FREE LGB New Items catalog, please email customerservice@marklin.com.

Visit LGB.com to see our complete line of products and find a dealer near you.

Official licensee of Amtrak. Amtrak is a registered trademark of the National Railroad Passenger Corporation.

©2021 Märklin, Inc.



FREELANCING VS. PROTOTYPE MODELING

Both offer advantages and disadvantages; both remain popular

By Tony Koester

Photos by the author except where noted

Those who are just venturing into model railroading have enough decisions to make without worrying about refining their rosters to model a specific prototype railroad or even one that reflects the characteristics of a specific region. But as one's knowledge of full-size railroading matures, he or she begins to notice that many model railroads are indeed based on one prototype, or they are what we

call prototype-based freelanced railroads – proto-freelanced, for short.

In the latter case, one bases the physical characteristics of his or her railroad on those of a narrowly defined set of prototype (full-size) railroads in a given region – central Appalachia, New England, the Southeast, and the Pacific Northwest, for example. The idea is for the mythical railroad to look so much like its full-size counterparts that one



can easily assume it actually existed in 12"-to-the-foot scale. Indeed, I recall hearing about modelers who traveled to the Virginias and were very disappointed to find no traces whatsoever of Allen McClelland's Virginian & Ohio!

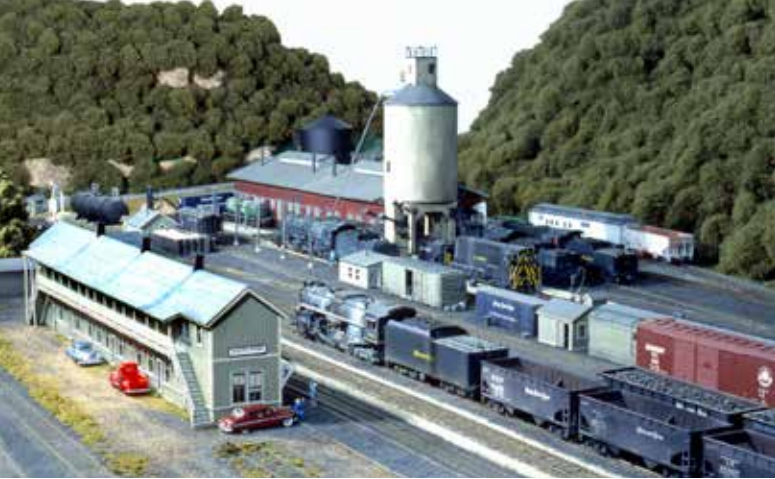
Prototype-based freelancing

I've built basement-sized HO railroads of both types. Before the concrete

floor was poured in our under-construction home back in early 1973, I was already sketching out the right-of-way of the proto-freelanced, HO scale Allegheny Midland – the Midland Road – in the sand. It was my first home layout of any size or sophistication, but I was entirely confident that I could “get there from here.” That was due to a large degree to visits to see Allen McClelland's original HO Virginian & Ohio and Jim

The original master of showing us how to create a plausible freelanced railroad using “everyday” models was Allen McClelland. The Virginian & Ohio rostered Athearn plastic F units and Geeps but looked every bit the part of a workaday Appalachian coal hauler.

W. Allen McClelland photo



Tony's Allegheny Midland (the Midland Road) connected his favorite prototype, the Nickel Plate Road, with McClelland's V&O. It depicted various eras from the late 1970s back to the 1950s and lasted for 25 years before being replaced by an NKP layout.

Paine's Durham & Southern in the Dayton, Ohio, area.

The gold spike wasn't driven until 1980, the result of a busy job (I edited *Railroad Model Craftsman* at the time), handlaying every inch of visible track, and learning how to fly sailplanes and teaching others how to do so on warmer weekends. When regular operating sessions commenced, there were a number of gray-primer locomotives

bedecked with nothing more than decal road numbers.

Slowly, the roster of properly painted and lettered equipment grew. The lesson I learned was to get most of the roster ready for prime time before work on the railroad commenced. Not helping things was my decision to keep the railroad relatively up-to-date to ensure RMC readers were also being kept up to date on what was happening on the full-size railroads.

When I left RMC for Bell Labs in 1981, that need went away, and I decided it was time to go back to my original goal, which was to operate the railroad in the steam era. Dynatrol had a very good steam exhaust sound system, and Key Imports was producing an excellent line of Nickel Plate Road Mikados and Berkshires as well as Chesapeake & Ohio articulateds. The Midland Road was clearly an amalgamation of the rosters and structures of those two railroads, so it was an easy and plausible decision to make.

The era therefore shifted back to 1957, the last year a timeline chart I made showed the NKP still ran steam in southeastern Ohio, where it connected with the northern end of the AM. The Nickel Plate also took delivery of EMD SD9s and Alco RSD-12s that year. This gave me enough roster latitude to add some Atlas RSD-12s as well as RSD-4s to the AM roster.

One of the primary pitfalls of free-lancing is succumbing to the one-of-these, one-of-those temptation. By modeling your roster after a base prototype, you'll avoid most of the clangers. That's especially true for first-generation diesel paint schemes, as most were designed by a handful of stylists at Alco, Baldwin, and especially EMD. Each had their individual characteristics, so the less creative and the more plagiaristic you are with your freelanced livery, the better. Better still, you may be able to modify a factory paint scheme or use a commercial decal set to this end.

Prototype modeling

British modeler Brian Moore, who models "a chunk of" the Southern Pacific's Coast Division centered around Guadalupe, Calif., in 1954, points out that prototype modeling is always a compromise in some way. "I'd probably always compromise some aspects of appearance because my primary interest



Bill Darnaby's Cleveland, Indianapolis, Cincinnati & St. Louis – the Maumee Route – is based on a rock-solid foundation of prototype knowledge and practices. Bill chose to freelance when he found that he couldn't obtain steam power for his favorite prototype in the most interesting operating era. Here's No. 57 westbound leaving Avoca, Ohio. Craig Wilson photo



World-famous Tehachapi Loop is the centerpiece of the La Mesa Club's HO railroad at Balboa Park in San Diego, Calif. Tony rates it as the finest expression of prototype modeling in terms of both scenery and operation to be found anywhere. Don Mitchell photo

is running actual trains in a reasonably realistic setting.”

But it's important to get key elements right, he adds. “The Guadalupe depot is a ‘signature’ model; by modeling it accurately, people won't look so much elsewhere for compromises.” You can take Brian's advice to the bank: Focus on key elements, and don't spend time on lesser aspects that can consume vast amounts of research and modeling time with little promise of paying equal dividends.

After a quarter century of prototype-based freelancing, I decided it was time to pay homage to my favorite railroad. So at the turn of the century, the

Allegheny Midland was dismantled. Frank Hodina drew plans for a double-deck HO railroad representing the Nickel Plate Road's Third Subdivision of the St. Louis Division from Frankfort, Ind., to Charleston, Ill., which filled the same basement and a little more, as it usurped the back 9 feet of our garage.

A timeline I had prepared showed that 1954 was the year that Alco RS-3s – my favorite B-B hood units – were delivered and steam was gone from that division by the next summer. So the fall of 1954 was chosen to capture the last fall grain rush with steam power. Making timeline charts showing when key events

occurred, especially when certain locomotives debuted or were retired, is probably the most important first step the proto-freelancer or prototype modeler can take.

By setting the railroad in autumn 1954, I had established limits on my spending. I could acquire 1955 vehicles, as new cars and trucks appeared in showrooms in late summer or early fall. But I couldn't add Pullman-Standard PS-2 covered hoppers, as they first appeared in 1955. The NKP's first GP9s showed up in the summer of 1955, ending steam's reign west of Frankfort in July, so they were off the table. Alco

NKP ST. LOUIS DIVISION TIMELINE

| EVENT | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 |
|-------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MARS LIGHTS ON 2-8-2s, 2-8-4s | •••• | •••• | •••• | •••• | •••• | | | | | | | | | |
| STEAM TO PEORIA | •••• | •••• | ••• | | | | | | | | | | | |
| STEAM TO ST. LOUIS | •••• | •••• | •••• | •••• | •• | | | | | | | | | |
| GP7s | | | •• | •••• | •••• | •••• | •••• | •••• | •••• | •••• | •••• | •••• | •••• | •••• |
| RS-3s | | | | ••• | •••• | •••• | •••• | •••• | •••• | •••• | •••• | •••• | •••• | •••• |
| GP9s | | | | | •• | •••• | •••• | •••• | •••• | •••• | •••• | •••• | •••• | •••• |
| RS-11s | | | | | | •••• | •••• | •••• | •••• | •••• | •••• | •••• | •••• | •••• |
| NEW NKP PAINT SCHEME | | | | | | | | | •••• | •••• | •••• | •••• | •••• | •••• |
| NOS. 9 AND 10 | •••• | •••• | •••• | •••• | •••• | •••• | •••• | •••• | • | | | | | |
| GP18s | | | | | | | | | | •• | •••• | •••• | •••• | •••• |
| BAY-WINDOW CABOOSES | | | | | | | | | | | | •••• | •••• | •••• |
| RS-36s | | | | | | | | | | | | •••• | •••• | •••• |
| GP30s | | | | | | | | | | | | • | •••• | •••• |
| GP35 | | | | | | | | | | | | | | •• |
| C-420 | | | | | | | | | | | | | | •• |

Making a timeline chart like this one is a key step for both proto-freelancers and prototype modelers to determine what year key events such as when certain locomotive types debuted or were retired took place. Tony's chart showed that 1954 was an excellent choice. Each • symbol represents a quarter-year (three months).



Mike Burgett is a professional railroader but enjoys reliving an earlier time on the Chesapeake & Ohio's James River Line in HO. Here SD35 no. 7426 leads two mates and a long string of hoppers past Mitchell's Dry Goods along U.S. 501 at Waugh, Va. Craig Wilson photo

RS-11s were also unavailable, as they debuted in 1956.

(Full disclosure: Several of Athearn's gorgeous Genesis GP9s in NKP's as-delivered paint scheme are on the roster, as many of today's modelers can't tell a GP7 from a GP9 anyway, especially during a busy operating session when they're used in multiple-unit consists.)

Such roster limitations are perceived as an advantage for the prototype modeler, as it "bookends" one's roster and hence purchases. But the same principles apply to prototype-based freelancing. Obviously, the anything-goes freelancer has no such limits, and indeed that is seen as an advantage by some and a concern by others.



Pennsylvania RR Extra 1122 East is what the PRR called a "mineral train." It originated at Mingo Junction, Ohio, to move coal from southern Ohio mines to the mills around Pittsburgh. The engine is just clearing Weirton Junction on Bill Neale's HO tribute to the PRR's Panhandle Division. The L1 2-8-2 is a rebuilt PFM brass model; the tower was scratchbuilt by a friend to ensure the proper PRR setting. Craig Wilson photo

'Almost' railroading

Perhaps the strongest argument in favor of prototype-based freelancing is that it lets you get very close to a specific goal without actually having to reach it. If your favorite railroad had most of the features you most admire but lacked a few you wished it had, you can bend reality just a tad by including them. Perhaps an industry went out of business a few years before the year that otherwise seems ideal to model. Maybe they had a passel of Geeps but never bought an SD and you admire six-motor power.

You can keep the prototype road name up to a point, but at some juncture you reach a breaking point. In my case, the NKP had Alco RS-3s and RSD-12s, so adding some RSD4s or -5s to the fleet wouldn't have been a big stretch. But extending it 200 miles into West Virginia probably would have been, hence the subsidiary Midland Road. Now that I'm actually modeling the Nickel Plate, there are only very small such transgressions.

No right or wrong

If you've been looking for a right way to approach scale model railroading, you won't find that advice here. I know some very bright folks who model specific prototypes, and I know some equally sharp people who are devout prototype-based freelancers. All of them seem to be having a delightful time.

I just had a conversation with one of the best-known freelancers about what he'd do if the very real possibility of a relocation comes to fruition. Like me, he has long had a favorite prototype, but when he built his freelanced railroad, it wasn't practical to model it in the steam era when traffic density was high. So here's a chance to do just that, I assumed. I assumed wrong.

"I really like my railroad," he told me. Job one would therefore be to find a new basement with a similar footprint that would accept the extant railroad with minimal modification. It's not that he wouldn't like to model his favorite prototype. Rather, it's that he has done such a good job creating a "new prototype" that he sees no reason to walk away from that.

Put another way, done well, prototype-based freelancing is a form of prototype modeling! So you really don't have to worry about making a choice. But you do have to be concerned about doing a good job once you make the choice. [MR](#)



Proof of the pudding: comparing the modeled scene with the prototype, here a November 1952 photo of train 72, the daily eastbound *Coast Mail* at Guadalupe, Calif. (top), and Brian Moore's fall 1954 version (bottom). Like most British modelers, Brian has to do more with less; see *Model Railroad Planning 2020*. Prototype photo, Dallas Gilbertson; model photo, Brian Moore



Maumee Route caboose 1015 is labeled for the Youngstown Division it is assigned to. The slogan and letterboard stripe hint at Bill Darnaby's knowledge of Midwestern railroad practices, here the Nickel Plate Road High Speed Service slogan and gray stripe. Bill Darnaby photo

After a cross-country move, the N scale UP Geneva Subdivision is reconstructed and expanded

By **Daryl Kruse** • Photos by the author

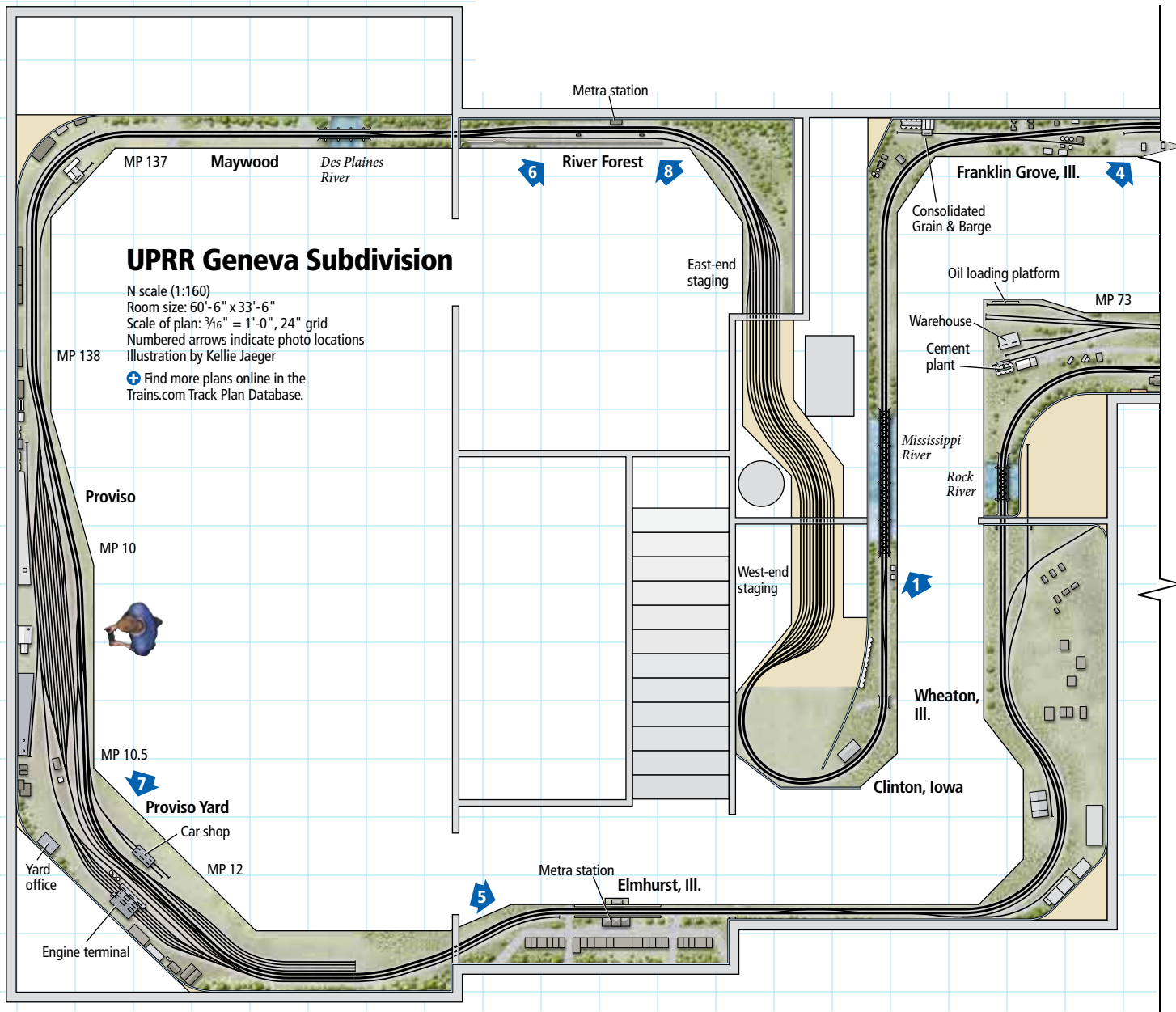


From Rochel



1 Union Pacific no. 6463, a General Electric AC44-CW, leads a double-stack train over the Mississippi River on Daryl Kruse's N scale Union Pacific Geneva Subdivision. This signature scene is one of several Daryl moved from his previous basement in northern Illinois to his new Georgia home to build the new Geneva Sub.

le to Atlanta



I fell in love with Midwestern railroad-ing while living in Rochelle, Ill., from 1997 to 2014. Rochelle is home to both the Union Pacific and BNSF railroads, which cross each other at grade there. A major intermodal facility, UP Global III, is just one of the railroad-served industries in Rochelle, along with several large warehouses.

Best of all, on average more than 100 trains a day passed through the city. I could always count on seeing multiple trains whenever I visited the main line. Rochelle is a great place to be a railfan. It's even better for someone modeling the Union Pacific main across northern Illinois, the Geneva Subdivision.

The 140-mile Geneva Subdivision runs from Chicago to Clinton, Iowa, through mostly flat suburbs, farmland,

and small midwestern towns. My N scale Geneva Sub includes the Chicago suburb of River Forest, Maywood, Proviso Yard, Elmhurst, and Wheaton. It then skips 45 miles and picks up again just east of Rochelle and continues through Rochelle, the Global III intermodal yard, Franklin Grove, the Mississippi River bridge, and finally Clinton.

Move to Georgia

The first six years of construction began while we lived in Rochelle (see the September 2016 MR). A job move in 2014 required dismantling, relocating, and reassembling the layout in our new home in Georgia. Thanks to some good planning before construction, I was able to cut the layout into 8-foot sections and

carefully pack the pieces for the moving van. The 11 sections made it to Atlanta in great shape, and after some remodeling and preparation in the basement, the layout came back together without issue.

Our larger basement in Georgia allowed me to expand the layout. I was able to add the towns of River Forest, Maywood, Elmhurst, and Wheaton, as well as expand Global III. The town of Fulton was eliminated from the layout.

The layout is a continuous loop of double-track main line with an 11-track staging yard connecting the west end of the layout to the east end. Operating sessions begin with five eastbound trains and five westbound trains.

After a train makes its run across the modeled layout, it returns to staging and is ready for the next session. It can also

The layout at a glance

Name: UPRR Geneva Subdivision

Scale: N (1:160)

Size: 60'-6" x 33'-6"

Prototype: Union Pacific

Locale: northern Illinois

Era: 2014

Style: walkaround

Mainline run: 250 feet

Minimum radius: 36"

Turnouts: no. 10 (main), no. 8 (secondary and yards)

Maximum grade: 0.5 percent

Benchwork: open grid

Height: 55"

Roadbed: 3/16" cork (main), 1/8" cork (secondary and yards)

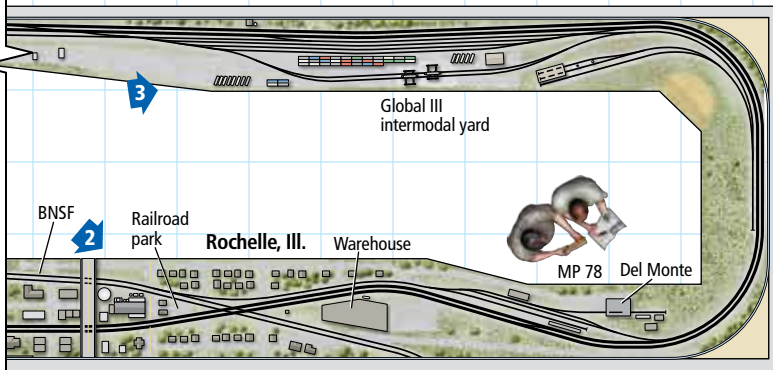
Track: Micro Engineering code 55 flextrack with handlaid turnouts

Scenery: plaster on screen wire

Backdrop: styrene deck flashing roll with photos

Control: Digitrax

Digital Command Control



be run a second time, if time and manpower permits. Trains also originate and terminate at the Proviso Yard, so trains can run from the staging yard to Proviso and vice versa.

The Geneva Sub is fully signaled using a variety of signals from various manufacturers. Searchlight signals are used throughout. At some point, I plan to switch over to hooded signals, which are more prototypical for the Geneva Sub. Signals are controlled through Centralized Traffic Control (CTC) and a dispatcher. However, when our crew is smaller or I operate solo, I swap the signals over to “automatic” and dispatch on the fly.

The commuter district

Heading westbound on the Geneva Sub, the 250-foot main line begins on elevated tracks through the River Forest Metra commuter station. A main feature of the prototype is a shallow underpass and retaining wall along Hawthorne Avenue. The tunnel through the retaining wall allows passengers to walk from their parked cars under the tracks and up to the middle passenger platform.

From the Metra station, the main line runs through the forest preserve and a hole in the wall. The forest hides the hole in the wall with tall trees on both sides. Mirrors on both sides complete the illusion. Once through the forest preserve, the main line continues across the Des Plaines River and into Maywood, Ill., which has a small Metra platform as well as a street along the tracks, two road crossings, and some storefronts.

From Maywood, we continue past a few industries to Proviso Yard. Proviso is a major yard on the prototype (though less so recently) as well as on my N scale

layout. There's an 11-track classification yard that holds 125 cars, two arrival/departure tracks, a foreign power track, a car shop, yard tower, warehouses, and major engine facility. I made quite a few photo research trips to Proviso and have modeled the structures and track layout as faithfully to the prototype as I could.

Three trains originate and three trains terminate at Proviso. There are two yard switcher sets, one for each end of the classification yard. The yard crews also take care of any local switching for the warehouse, car shop, and other industries around Proviso. The yard can keep three people busy during an operating session, or operations can be streamlined, with limited switching of the yard.

West of Proviso, the main line heads through another hole in the wall and into the city of Elmhurst. The hole this time is concealed with trees on one side and a highway overpass and mirror on the other. There are no industries served in Elmhurst, but there is a Metra station in the middle of the busy downtown. The Metra station is a Kato kit modeled after



2 Rochelle, Ill., Daryl's former hometown and a favorite spot for railfans on the prototype, was Daryl's inspiration to model the Geneva Sub. Here, a BNSF Ry. manifest freight (foreground) waits for the Union Pacific to clear the quadruple diamonds seen behind the signal bridge.



3 At 20 feet long, the Global III intermodal yard is the biggest industry on the layout. The intermodal facility is big enough to have its own engine servicing terminal. Four trains a day stop here.

4 Daryl put a lot of research into intermodal yard operations to model Global III, and is particularly proud of the automated truck gate at the yard's entrance.





5 A Union Pacific manifest freight led by EMD SD70ACE no. 1995, the Chicago & North Western heritage unit, rolls through Elmhurst while a Metra train picks up passengers. The station is a Kato kit based on the Metra station in Schaumburg, Ill.

Into the prairie

The hole in the wall just west of Wheaton represents 45 miles of unmod-eled distance as the main line transitions from suburban Chicago to rural northern Illinois. Trains head across the Rock River and travel through Rochelle, a small town with tons of railroad action. As the signature location of the layout, Rochelle has a great deal of benchwork devoted to it. The city is 24 feet long and covers close to 30 square feet. It includes an industrial area, lower downtown, the 7th Street overpass, a water tower, power plant, residential area, and a warehouse district, in addition to the area's well-known railroad park.

Rochelle also includes a portion of the BNSF main line with the four-diamond crossing and the BNSF/UP interchange yard. A local BNSF switcher transfers cars to and from the interchange yard and local industries. Two manifest trains a day stop in Rochelle to drop off and pick up cars at the interchange.

One of my favorite sections of the layout is the Global III intermodal yard. Global III is 20 feet long, which is enough room for a locomotive service facility, classification yard, loading area with two cranes, and more than 7 scale acres of paving. During operating sessions, one or two operators work Global III. On the layout, trains don't terminate or originate at Global III. Four trains a

day stop there to drop off and pick up cars, as well as to swap motive power and crews.

I'm especially happy with the automated gate for trucks coming into or leaving the facility. I had a lot of fun researching intermodal gate operations for the Union Pacific and was able to get some useful prototype photos of the facilities.

Just west of Global III is Franklin Grove. Franklin Grove is typical of the many small Midwestern towns across northern Illinois. Included is a small neighborhood and a couple of railroad-served industries, Pitzer & Sons and Consolidated Grain & Barge. One train a day stops in Franklin Grove to drop off and pick up cars. The two industries have opposite facing turnouts on two different mainline tracks, so switching cars there can be a fun challenge, especially when the dispatcher is trying to get mainline traffic through the area at the same time.

Finally, the main line crosses the Mississippi River on a bridge built from scratch based on many pictures and measurements of the prototype. The model was built back in 2010 when the layout was still at our house in Rochelle. The bridge and river made the trip to Georgia in great shape and was quickly reinstalled in its new location.

The westernmost end of the Geneva Subdivision is Clinton, Iowa. In Clinton

a station in Schaumburg, Ill. While not a complete match to the prototype Elmhurst station, it fits the locale and looks at home.

Down the line from Elmhurst is Wheaton. Wheaton contains the last Metra station on the layout, a commercial downtown, a residential area, a couple of industries, and a warehouse district. One manifest train a session stops in Wheaton to switch industries and the warehouse district.

There are three mainline tracks in Wheaton. West of there, the third track runs into a holding track, as this is as far as Metra trains run. The main line heads through yet another hole in the wall west of Wheaton, concealed by a bike path bridge on the Wheaton side and more trees on the other.



6 A manifest freight switches tracks to take the main while an auto rack train holds the other track west of River Forest. The Geneva Sub is fully signaled. Signals can be controlled by the dispatcher or switched to automatic for solo operation.

7 Proviso Yard is the heart of operations on the Geneva Sub. Daryl made numerous research trips to the prototype in order to model it as faithfully as he could. The engine servicing area is a good place to show off the model railroad's diesel roster.





Meet Daryl Kruse

An N scale modeler for more than 50 years, Daryl Kruse's layouts have been featured in *Great Model Railroads*, *Model Railroad Planning*, *Model Railroader*, and other hobby publications. A retired educator, he and his wife, Patti, have four grown children and four grandchildren.

there is a major ADM plant represented along the backdrop, a highway underpass, and an abandoned passenger station. From there, the main heads into the west end of the staging yard.

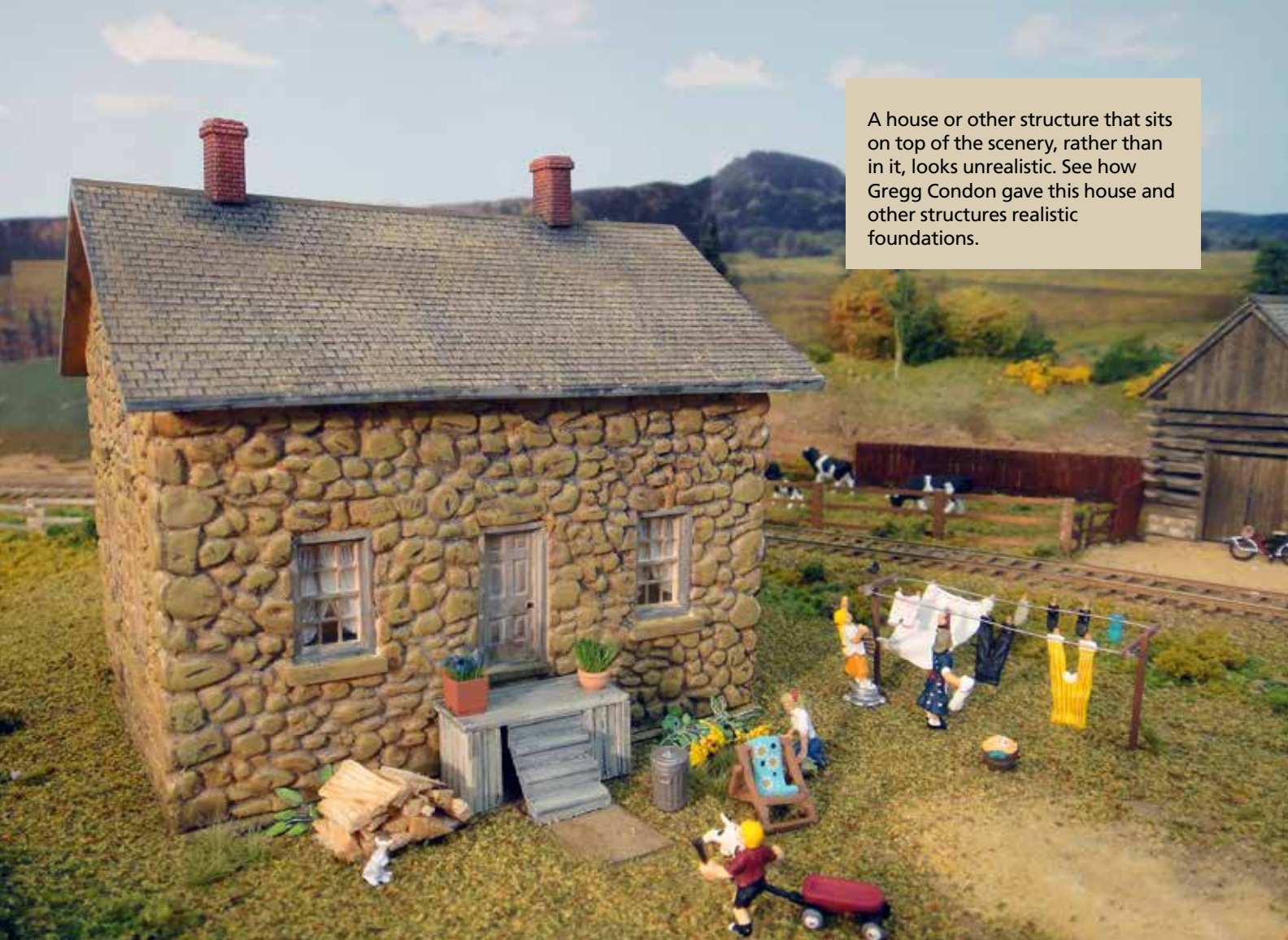
The almost-present day

I am presently 12 years into construction on the Geneva Sub. I planned the railroad to represent "modern" railroading. However, things change rapidly on the prototype. The prototype Geneva Sub has changed quite a bit in the last 12 years. Changes include all new signal bridges in Rochelle and concrete ties on track 1. Global III has been shut down, Proviso Yard operations are almost completely shut down, and new locomotives have been added to the UP roster while older models retired. Rather than try to keep up with all the changes, I've locked the layout to summer 2014, which was when we moved to Atlanta.

This is the last time I'm moving a layout! The original Geneva Sub was built with the idea that it would be moved when I retired. But a sudden job move to Atlanta in 2014 moved up the relocation and has given me the opportunity to continue and expand the N scale layout in a bigger basement. The move and continued construction on the Geneva Sub have gone exceptionally well. However, when we move again in a few years to get closer to our children and grandchildren, I will not be moving the layout again. As I get older and my modeling skills decline, I will most likely just start over with a simpler layout in an easier-to-see scale, like HO or O. [MR](#)



8 Passengers wait on the platform at River Grove for the next Metra train to arrive while a pair of UP freights pass on the main. A stairway in the middle of the platform leads down to a pedestrian tunnel through the retaining wall.



A house or other structure that sits on top of the scenery, rather than in it, looks unrealistic. See how Gregg Condon gave this house and other structures realistic foundations.

FOUNDATIONS FOR STRUCTURES

Methods to help blend your building base into the scenery

By Gregg Condon • Photos by the author

Famed architect Frank Lloyd Wright said: “A house should not be on a hill; it should be *of* the hill.” The same is true of our scale model structures – they should be *of* the scenery, not sitting on its surface. Realism suffers when gaps appear between the base of a structure and the model terrain.

One fix for this problem is to set the structure on the layout, place scenery materials around it, and glue it in place. This isn’t an ideal technique because it locks the structure permanently to the layout. Plus, our scenery-building methods typically entail lots of water, and wooden or cardstock models can’t handle that.

The solution? Build each model structure a solid, flat foundation that will make it look like it is *of* the layout, not upon it – and that goes a long way to establish realism!

A model structure looks best when its base perfectly conforms with a surface that is built into the scenery. Here are four methods, with variations.

TRACING WITH MASONITE

Trace the base of the structure on a sheet of tempered hardboard, cut along the lines, and glue the hardboard base to the layout using a foam-safe structural adhesive such as Liquid Nails for Projects. Some adhesives may cause the hardboard to warp, so it's best to weight it while the adhesive cures. Sidewalks or roadways can be included as part of the structure base. Before the structure is in place, the final layer of scenery is built up around the base. Care must be taken to not glue any scenery materials on top of the hardboard. While tempered hardboard has a good earth-tone color, I usually give the edges a quick burst of tan spray paint.



A piece of tempered hardboard has been cut to match the footprint of the coal shed (temporarily sitting beside it) and glued in place.

LAYING WOOD STRIPS

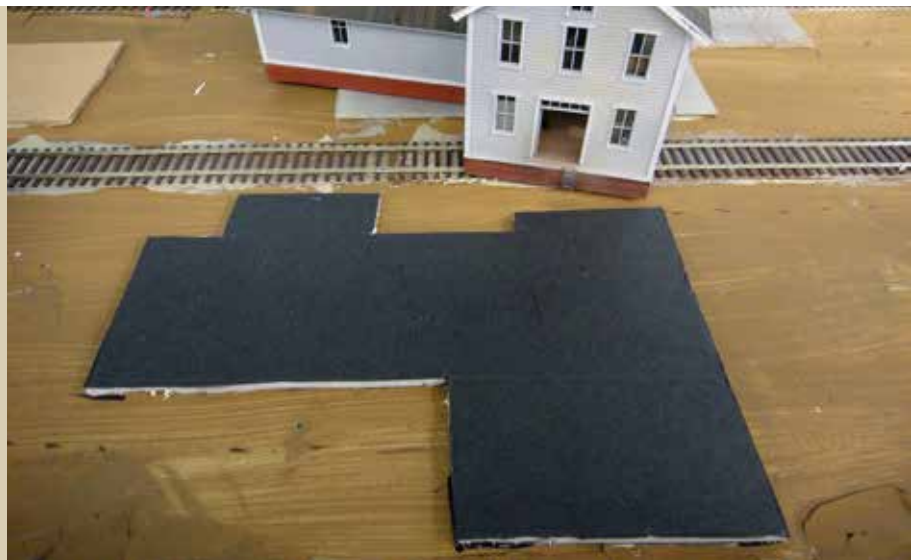
Place the structure on the layout. Trace the perimeter on the surface with a pencil. Then glue wood strips inside the pencil line. I commonly use $\frac{1}{8}$ " square balsa stripwood, but just as often I've used O or S scale ties. HO scale ties wouldn't be thick enough to stand above the ground cover layer. Paint the stripwood an earth tone so that the light wood doesn't show through the final scenery cover.



$\frac{1}{8}$ " square stripwood serves as the foundation of a barn.

CARVING FROM FOAM CORE

This material is used the same way as tempered hardboard. It's easy to use, as it can be readily cut with a carpenter's knife. I prefer foam core that has a black surface so there's no chance that a light color will peek out along the base of the structure. The center of foam core is white, so these edges should be painted a darker color before the scenery material is applied.



This foam core structure base has been cut to the shape of the factory above it.

Scenery tip

If sidewalks or platforms are part of the foundation, they should be finished before placing other scenery materials.

For concrete, a hobby knife can be used to carve expansion joints. Lighter, squiggly passes of the knife make cracks in the concrete. A quick pass of gray spray paint followed by a light application of weathering solution results in a good concrete appearance. The weathering solution can be made from denatured alcohol with a few brushfuls of black and gray paint. Fine weathering solutions are available from hobby dealers. Apply weathering materials sparingly.
– Gregg Condon



STONEMWORK



This stone foundation features Chooch rubber rocks glued around the perimeter of a foam core base.

Place the structure on the layout and trace the perimeter. Lay scale stones inside the line. The stones, of course, must be perfectly flat on both top and bottom and of uniform thickness. I've used Dr. Ben's Baby Building Blocks, which I've not found recently.

I made a rectangular mold of 1/8" stripwood and cast long rectangles of plaster. When set, I broke the plaster rectangles in half lengthwise. Then I broke these pieces into smaller sections a couple scale feet long to simulate rough-cut stones. I glued these

stones down with their rough edges facing out.

A third method, seen in the photo above, is to make the structure base out of foam core with flexible rubber rock castings from Chooch (now Walthers) glued around the edge. [IMR](#)

2B In Trains

Model Trains for Beginners to Experts
Buy, Sell, Trade, Repair
HO, N, O/027, S, G
Explore the Excitement of Christmas Every Day!
6168 Road 29 • (519) 787-3280
www.2bintrains.com

EngineHouse Services, LLC

www.enginehouseservices.com
Not the biggest...
Just striving to be the best!

Mianne Benchwork

miannebenchwork.com
Fast Track to Layout Construction.

Azatrax

Action!
It starts with smart
infrared train detection.
www.azatrax.com

Evan Designs

Prewired LEDs and Special Lighting Effects
Lamps and Lightning, Mars Light and Headlights
Get your premium guaranteed LEDs today!
www.EvanDesigns.com

Pre-Size Model Specialties

We manufacture urethane cast tunnel portals,
retaining walls, abutments, culverts, bridge piers,
and much more! All scales! Free shipping on US
consumer orders over \$25! Check us out!
www.pre-size.com

BPL Brassworks / Railmodel.com

Providing Fine Scale Brass Train models for over
25 years. Call us at 262-375-1107 or email at info@
railmodel.com to inquire about your next brass model.
We also purchase collections, so let us know
about the models you no longer need.
www.railmodel.com

GoodDealsDCC

The Programmer
We have Programming Test Tracks in all scales
We make Clear Acrylic Inspection cars in HO and N
224-703-0111 • www.GoodDealsDCC.com

STREAMLINED BACKSHOP

SBS4DCC is a full-line, stocking retailer for
ESU LokSound, Digitrax, NCE, SoundTraxx, TCS and ZIMO.
Featuring real-time inventory and competitive pricing
of all of the best DCC products. Open 24-7-365.
www.SBS4DCC.com

Central & Western Homaroad Supply

**Your Go To Source For
Homasote Roadbed!**
www.cwhomaroad.com
210-519-0186 • cwhomaroad@gmail.com

JB Wheelsets

The finest wheelsets you can buy.
We offer the highest quality wheels, axles and resistor
wheels available for the serious HO and G scale modelers.
Precision machine-turned brass for smoother wheel surface.
Made in the USA! Several axle styles available.
www.jbwheelsets.com

TICHY TRAIN GROUP

OVER 1000 ITEMS, ALL IN STOCK
Signs, windows, doors, freight car
parts, decals & kits. All scales.
Catalog call **336-329-9038**
www.tichytraingroup.com

DOWNTOWN DECO

Building kits that have gritty character and
realism that you can't find anywhere else!
Kits available in HO, N & O Scales.
Free shipping (US orders) + surprise bonus with each order this month!
www.downtowndeco.com

Mainline Hobby Supply

Your Model Railroading Headquarters
supplying all scales from the
beginner to expert!
717-794-2860
www.mainlinehobby.com

Train Sets Only

Rolling Stock - Track - Scenery - DCC - Accessories
Athearn, Atlas, Bachmann, MRC, NCE, Soundtraxx,
Walthers, Woodland Scenics, and More!
1000's of products in stock
www.trainsetsonly.com
888-54-TRAIN



YOUR



Model Railroading
Source!

<https://www.trains.com/mrr/subscription-plans/>

Subscribe today
for yourself or give a
gift subscription!



Controlling your Walthers turntable with DCC



Allan Gartner installed this Walthers turntable on his HO scale layout. The turntable is operated with Digital Command Control using the Walthers Advanced Control Module. Allan shares tips this month to get the most from the device. Allan Gartner photos

The Walthers Cornerstone series of turntables with indexing is quite popular. Chances are if you don't have one, you want one. The control panel that comes with it works well, but did you know you have other options, including controlling it with Digital Command Control (DCC)? Digital operation is slick, inexpensive (about \$70), easy to hook up to your existing turntable, and can be implemented in about an hour.

The Advanced Control Module (ACM) from Walthers will work with DCC systems capable of controlling accessories (turnouts). Your system will need at least one throttle that you can set thrown/closed, on/off, 1/2, or whatever your system calls it, as needed. Systems where the throttle only allows you to toggle from the previous state won't give you the flexibility you may need.

Walthers' ACM, part no. 933-2321, can be used on Walthers turntable models 933-2618 (N scale 130 foot),

933-2860 (HO 90 foot), 933-2851 (HO 110 foot), or 933-2859 (HO 130 foot). These are recent models and have a blue control box, 1. If you have the older turntable with a gray controller, you'll have to buy a new turntable. This older model can't be upgraded.

Controlling the turntable with DCC is as simple as lining a turnout. In setting up the ACM, you'll associate turnout addresses with track numbers up to 99. For example, on my layout, address 201 moves the turntable to track 1. A turnout address "1 thrown" moves the head (end with the shack) of the turntable to track 1. A "1 closed" moves the tail of the turntable to track 1. I use 233 to rotate the turntable 180 degrees wherever it is. That's all there is to it! This is also easier and less error-prone than pushing the button on the Walthers turntable controller a bunch of times.

If you have a club layout that's open to the public, you

can hide the Walthers turntable controller and ACM out of the way of probing public fingers while still allowing club members to operate the turntable.

Wiring the ACM couldn't be simpler 2. You connect the ACM to your existing Walthers turntable controller with the supplied cable. Then you connect the ACM to your DCC track bus with two wires. The wiring for DCC control of your turntable is done.

All you need to do now is associate accessory addresses with your tracks. As delivered, the ACM has a jumper on two pins labeled DCC ENABLE. Move it to the pins labeled DCC LEARN.

Using your turntable's controller, move the bridge head end to track 1. Then on your DCC throttle, enter the address you want to use for that track and enter "thrown," "on," or whatever your system uses for accessory commands. In my case, I keyed in 201 and hit "thrown." The

turntable bridge will execute an "alignment jog" to acknowledge receipt of the command. Continue on in this manner with the rest of your tracks.

You also have the option of setting up an accessory address that will make your turntable do a 180 degree turn wherever it happens to be. To do this, move your



1 Blue box. If your turntable controller doesn't look like this one, you'll need to get a new turntable and control box to use the Advanced Control Module.

turntable bridge to an unused position and enter the accessory address you want to use for this.

When done, take the jumper off DCC LEARN and move back to DCC ENABLE. That's essentially it. Test every track and make sure it works the way you intended.

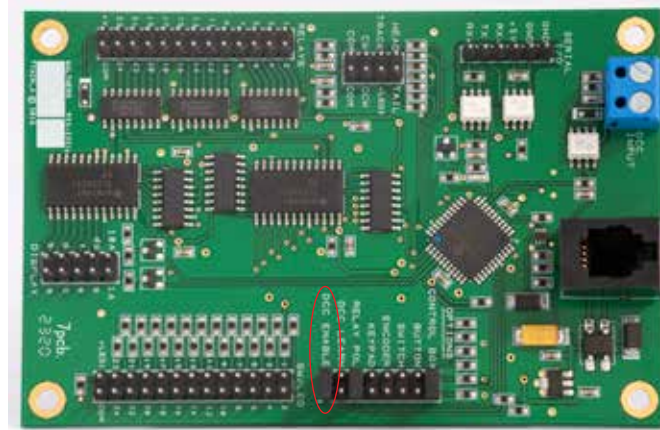
Be sure you don't have any devices on your DCC network that are sending the opposite turnout command like "closed," "off," or "diverging." The ACM uses the opposite turnout command to delete a track association. If you have any devices that do this, disconnect them while you are setting up your ACM.

I initially tried to use addresses 1001 to 1033. I observed the jog I expected for each address, but when I was done, I had several addresses that didn't work. I tried several times. Each time, it appeared to take the address and gave me the jog, but didn't work in the end.

After contacting Walthers, I figured that something was sending a closed command while in learn mode. I tried to figure out where these phantom commands were coming from, but couldn't. I also thought about using a different DCC system to set up the ACM, but figuring most people don't have multiple DCC systems, I tried a different address range. I found 201 to 233 worked just fine.

There are a few other details you should be aware of. Your track numbers don't have to be in order. If you do change things with your turntable such as adding a track, you'll have to cycle the power to your ACM to pick up the new track numbers. You'll also have to teach your ACM the new track.

If you add a new track between an existing track and decide you want all your track numbers to be sequential,



2 The Walthers Advanced Control Module. Just hook up your track bus to the blue terminal block and plug in the cable to the turntable control box. You're done wiring for DCC control. Note the jumpers for DCC ENABLE and DCC LEARN.

you'll have to re-teach your ACM all the changed track numbers.

The ACM has a lot of other non-DCC capabilities. They can be used in conjunction with DCC control or instead of DCC control.

You can control the turntable with an Arduino, a Raspberry Pi, or any computer. You can control the turntable with up to 24 switches – one for each track. Perhaps you have an old turntable that you controlled this way. You can adapt these controls to your Walthers turntable. You can also use rotary switches, encoders, or even a keypad where you key in the track number. Finally, you can make a control panel of your own choosing that mimics the buttons on the Walthers controller.

The ACM can drive up to 24 light-emitting diodes (LEDs) to identify your stall tracks. You can put in a two-digit display to indicate your stall tracks, just like the one that comes with

your turntable controller. You can put the display in your own panel.

The ACM has 24 low-power outputs that can drive relay cards. Each relay provides power to its respective track. I found relay cards with four relays at All Electronics (allelectronics.com). At \$8 each, this was by far the best deal I could find. You'll need a 5V power supply to power the relays. You'll also need to route the signals from the ACM's 26-pin connector to each of the relay cards. Of course, no one supplier had everything I needed. None of this is hard, but there are more details than I can cover

in two pages here. See my website if you are interested in doing this.

If you want to see all the things you can do with the ACM, you can download the instructions from the Walthers website at walthers.com, or check the links on my website as mentioned at the end of the column.

The turntable installation is



3 Take note. Mark your connector so you know which terminals get DCC track power (DCC) and which ones get power to operate the turntable (PWR).

fairly straightforward. I just offer the following tips if you don't already have your turntable installed.

Neither the turntable nor the four-pin green connector is labeled as to which terminals get DCC power and turntable power. This can easily be figured out when the turntable is upside down and you reference the photo in the turntable instructions. Mark your connector right away. **3**

When attaching the DCC track bus to the turntable bridge, there's no way to know the track polarity. If a locomotive shorts leaving the turntable, reverse the wires going to the turntable.

On your layout, mark the circle for the turntable pit, the home sensor location, and – most importantly, before you do any sawing – the locations for the anchor screws around the perimeter. If you don't, you'll lose your center reference point when you cut out the turntable opening.

At this point, you should be all set. Enjoy!

For all the links in this column, as well as wiring turntable tracks, go to my website at: WiringForDCC.com/dcc_currents.htm. **MR**



YOU ALSO HAVE THE OPTION OF SETTING UP AN ACCESSORY ADDRESS THAT WILL MAKE YOUR TURNTABLE DO A 180 DEGREE TURN WHEREVER IT HAPPENS TO BE.
— ALLAN



Bachmann N scale NYC J-3a 4-6-4 Hudson

Bachmann's latest N scale locomotive is a classic. New York Central's J-3a Super Hudson, designed to lead the railroad's top streamlined passenger trains, incorporated all the best steam technology available to the Central's designers.

The result was an iconic locomotive that would epitomize the idea of steam power for generations to come. Bachmann's N scale replica of the locomotive is likewise impressive, with accurate dimensions, wire details, Digital Command Control (DCC) sound, directional light-emitting-diode (LED) lighting, a smooth-running drivetrain, and many separately applied details.

A thoroughbred. The New York Central's class J-3a 4-6-4 Super Hudsons, a batch of 50 ordered in 1935 and numbered 5405-5454, were built by Alco in 1937 and 1938. The order was unusual in that it came in the midst of the Great Depression, when passenger traffic on the NYC was in decline and revenue for large capital outlays was scarce.

There was a reason for the madness, though: NYC brass had seen the future, in the form of streamlined lightweight cars being rolled out on the Chicago,

Burlington & Quincy's *Zephyrs* and the Union Pacific's name trains. Although there wasn't a need for newer and better passenger power on the NYC at the time, management knew that when it did replace its aging heavyweight passenger car fleet, it wanted equally impressive power up front.

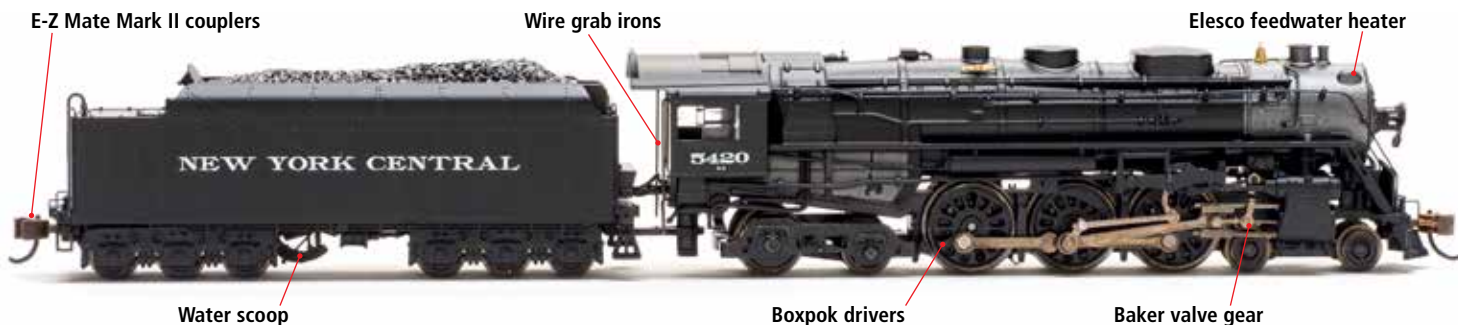
Buying Hudsons right away meant older locomotives could be demoted to branch line and freight service, where there was a need, allowing older engines to be scrapped. And NYC could afford to do so because of the generosity of Uncle Sam, who provided assistance through the Reconstruction Finance Corporation, a government stimulus program.

The order was also unusual in that all 50 locomotives were ordered at once, rather than a single demonstrator followed by small batches. The reason boiled down to three words: testing, testing, testing. The railroad had run plenty of tests on its class J-1 and J-2 Hudsons and applied to the class J-3's design all the latest technology: all roller-bearing wheels; a bigger combustion chamber; a conical boiler; and small, high-pressure cylinders. The result was an improvement to 4,275hp at 75 mph over the class

J-1's 3,900 hp at 67 mph. (In fact, the cylinders produced so much force that in some cases it bent the side rods, so working boiler pressure was reduced from 275 psi to 265.) Coal usage actually decreased compared to the J-1, also.

One place designers did skimp, though, was in equipping the J-3a with Elesco feedwater heaters, sometimes derided as "the poor man's feedwater heater." Starting in 1943, all 50 of the NYC's Hudsons were refitted with Worthington feedwater heaters. Bachmann's models bear Elescos, seen as a cylindrical bump-out on either side of the top of the smokebox. This places Bachmann's models roughly between 1937, when the first J-3a was delivered, and 1943. If you want to model a later version J-3a, Detail Associates makes a white metal Worthington unit in N scale.

Class J-3a Hudsons led the NYC's crack name trains, including the *20th Century Limited*, the *Empire State Express*, and the *Commodore Vanderbilt*. Some were demoted to less prestigious duties after World War II, when the lessons learned with the Super Hudsons was applied to a 4-8-4 design that would be dubbed the Niagara. But the J-3a



Bachmann's N scale New York Central class J-3a Super Hudson bristles with authentic details, including a water scoop under the tender. Our sample represents an as-delivered locomotive, with an Elesco feedwater heater and Boxpok drivers.

soldiered on through the end of steam, finally being replaced by first-generation diesels and retired in the mid-1950s. None survived the scrapper's torch.

A handsome model. In the subtitle of their book *Thoroughbreds*, railroad authors Alvin F. Stauffer and Edward L. May call the NYC's Hudsons "the most famous class of locomotive in the world." While that point is arguable, the most famous Hudsons are the Dreyfus-styled streamlined versions that epitomize Art Deco locomotive design.

Bachmann's models are of the more common, workaday, unstreamlined version more likely to be seen on the typical model railroad. It may not be the one you see in movies, cartoons, and Art Deco posters, but to a steam connoisseur, it's still a handsome locomotive.

The molding on the die-cast metal boiler is impeccable, with fine rivets and boiler bands, separately applied piping and other details, and wire grab irons. The satin black paint is smoothly and evenly applied, and the white lettering on the cab and tender is crisp and opaque. I would have preferred for the cylinder fronts to have matched the prototype's shiny aluminum covers, and for the front handrails to be painted white like the full-sized locomotive's, but both are easily remedied with a bit of paint.

I found detailed, dimensioned drawings of the J-3A in the 1938 edition of *Locomotive Cyclopedia of American Practice* (Simmons-Boardman). All the dimensions I checked on the model matched the dimensions of the drawing,



The fine lettering on the locomotive's front number plate and herald was crisp and legible under magnification.

| PERFORMANCE CHARTS | |
|---------------------|---------------------------------------|
| DRAWBAR PULL | .8 ounces 9 N scale passenger cars |
| SCALE SPEED (DC) | |
| VOLTS | SCALE MPH |
| 8.5 (start) | <1 |
| 9 | 5.7 |
| 10 | 8.8 |
| 11 | 13 |
| 12 | 19 |
| 14.5 (max) | 40 |
| SCALE SPEED (DCC) | |
| SPEED STEP | SCALE MPH |
| 1 | 5.5 |
| 7 | 72 |
| 14 | 124 |
| 21 | 154 |
| 28 | 156 |

from the overall length, width, and height to the driver wheelbase – the latter being quite a feat in N scale. The model is equipped with as-delivered Boxpok drivers; over the years, some on the prototype were replaced with Scullin disc drivers.

Operation. As the N scale locomotive is equipped with a dual-mode Digital Command Control sound decoder, I tested it under both direct current (DC) and DCC. Under DC control, sounds came on at just over 5V. It started to roll at 8.5V, creeping along at a barely measurable .1 scale mph. Just as it had started slowly, it stayed in the low end of the speed curve throughout the voltage range, topping out at 40 scale mph at our power pack's maximum output of 14.5V. In addition to the steam chuffs, which followed the expected four chuffs per drive wheel revolution, a bell sounded when starting under DC. When I reduced the throttle, a wheel squeal could be heard under the steam sounds.

The speed curve bent the other way under Digital Command Control. It started out at a workable 5.5 scale mph in speed step 1, but exceeded the prototype's maximum allowed speed of 75 mph by speed step 8. This would make the majority of the throttle range useless, so I put our NCE ProCab DCC system into programming mode and experimented with various settings for Configuration Variable 5 (CV5, also known as Vmax). I found that a setting of 64 gave the model a starting speed of 2.7 scale mph in step 1 and a top speed of 76 scale mph in step 28, with a nice, smooth distribution in between. I also programmed the locomotive's decoder address to the cab number, a simple task.

Facts & features

Price: \$439

Manufacturer

Bachmann Trains
1400 E. Erie Ave.
Philadelphia, PA 19124
bachmanntrains.com

Era: 1937-1943

Road numbers: As delivered, 5420 and 5426; later Gothic lettering, 5405 and 5445

Features

- Blackened metal wheelsets, in gauge
- E-Z Mate Mark II knuckle couplers, mounted at correct height
- Minimum recommended radius: 11.25"
- Reversing light-emitting-diode lighting
- Separately applied plastic piping
- SoundTraxx Econami Digital Command Control sound decoder
- Weight: 3.6 ounces (engine only), 5.1 ounces (engine and tender)
- Wire grab irons and uncoupling levers

Under DCC, I had a lot more control of the locomotive's sound effects. Function key 1 (F1) triggered the bell, while F2 played a toggled horn blast and F3 a short toot. While I could play a long-long-short-long grade-crossing signal with these two keys, I found that one was already programmed into key F9.

There were also some automatic sounds in DCC. I could hear the generator spin up when I pressed F0 to turn on the headlight, and rapidly decreasing the throttle played a rod-clank sound.

I tested the Hudson on our N scale Canadian Canyons layout. Pulling six heavyweight passenger cars, the Hudson handled the layout's Peco medium-radius turnouts, 13" curves, and 1.9 percent grade with nary a complaint.

A must-have for NYC modelers. If you're modeling the New York Central in the last two decades of steam, you just have to have a 4-6-4 or two. There's no getting around it. And if you don't model the NYC in N scale, Bachmann's N scale class J-3a Super Hudson might be enough to make you consider doing so. It's not only a faithful representation of the prototype, it's a good looking, smooth running, great sounding model. – Steven Otte, associate editor



Rapido Trains HO scale MLW M420 diesel

Rapido Trains is bringing the comfort, Canadian style. We recently received a sample of the company's new Montreal Locomotive Works (MLW) M420 locomotive, and it's a beauty, eh?

The prototype. When Alco locomotive production ceased in Schenectady, N.Y., in 1969, locomotives continued to be built in Canada by former subsidiary Montreal Locomotive Works until 1985. While MLW never offered its own version of the Century-series C-420, it did develop a 420 for its "M" line of Montreal-designed power.

The M420 used a 2,000-horsepower 12-cylinder 251 series diesel engine and AC traction. It also introduced the wide-nose Canadian cab (also known as the comfort or safety cab) to North American rails. One of the main features of this cab was a reinforced nose section to protect the crew in the event of a collision.

The model. Our sample from Rapido is painted in the CN zebra-stripe scheme and captures the look of the prototype well. As usual, there are hundreds of detail parts on the shell and underframe. There's also a detailed interior and a new feature – a replaceable nose door.

After carefully releasing the closed door from the model with the tip of a hobby knife, I installed an open door in its place. I had to scrape paint from the pins that hold the door in place so it would fit the holes molded in the body. If you enlarge the holes in the body, the closed door won't stay in place.

A feature I really appreciate is Rapido's wire and plastic handrails. The plastic

stanchions are well detailed, and the wire railings are sturdy and scale sized.

The model measured within scale inches of drawings in the *Car and Locomotive Cyclopedia Centennial Edition* (1974) from Simmons-Boardman. All of the paint was opaque and smoothly applied with sharp color separations. Lettering was likewise sharp, opaque, and legible down to the smallest type.

Because of all the detail parts on the model, I didn't try to remove the shell. An exploded-view drawing shows the model has a center-mounted motor with flywheels. The motor is concealed in a horizontally split die-cast metal frame. A motherboard is screwed to the top half of the frame, and an ESU LokSound V5 decoder plugs into that. A pair of downward-facing sugar cube speakers are in an enclosure mounted just ahead of the rear truck.

On the test track. I tested the locomotive on the MR staff's Milwaukee, Racine & Troy layout. The Rapido M420 put its 1-pound, 2.4-ounce weight to use, pulling 15 cars up the 3 percent grade. The burble of an Alco 251C is always popular, and the LokSound version sounds as good as expected.

Back in the workshop I measured a barely perceptible .5 scale mph speed at speed step 1 using our NCE PowerCab DCC system. Top speed was 61 scale mph, just a little below the prototype's 65 mph top speed.

Using direct-current from an Atlas train set power pack, it took 8.5V for the sound package to start up. At 10V, the locomotive started to move at .7 scale

Facts & features

Price: \$335 (DCC, sound), \$225 (DC, no sound)

Manufacturer

Rapido Trains Inc.
500 Alden Rd, Unit 21
Markham, ON
L3R5H5 Canada
rapidotrains.com

Era: 1973-1997

Road names: Canadian National stripes (8 numbers), CN red-orange cab and stripes (2 numbers)

Features

- Detailed cab interior with optional open front door
- Die-cast metal chassis
- Macdonald-Cartier knuckle couplers mounted at the correct height
- Metal handrails with plastic stanchions
- Operating headlights, rear lights, tri-color class lights, and illuminated cab control stand
- Weight: 1 pound, 2.4 ounces

mph, and hit 31 scale mph at 12V. The power pack's maximum voltage, 14V, produced 80 scale mph.

This is another well-detailed model from Rapido. The innovative handrails appear to be the company's new standard. The optional open door adds another feature that boosts realism without being a gimmick. Canadian National modelers hit the jackpot with this one. – *Eric White, senior editor*

Walthers HO scale Railgon gondola



A Railgon 53-foot gondola has joined the growing lineup of freight cars in the HO scale WalthersMainline product range. The plastic model, based on a Thrall prototype, features a mix of molded and separate, factory-applied parts; 36" metal wheels mounted on plastic axles; and body-mounted Proto-Max metal couplers.

The prototype. Railgon Co., a nationwide gondola pool, was formed as a subsidiary of Trailer Train in 1979. Its initial fleet of 4,000 cars was constructed by five builders: Thrall (310000-310999), Berwick Forge & Fabricating (320000-320499), Greenville (330000-330499), Bethlehem Steel Car (340000-340499), and Pullman-Standard (350000-351499). The gondolas were built between July 1980 and October 1981.

The WalthersMainline sample we received is decorated as GONX

no. 310502. The 1,000 Thrall cars have the class designation TSG10. Other classes are WSG10 (Berwick Forge & Fabricating), GSG10 (Greenville), BSG10 (Bethlehem), and PSG10 (PS).

Between 1984 and 1987, more than 600 cars from the TSG10 class were leased by the Seaboard System (500), Denver & Rio Grande Western (93), and Kansas City Southern (17). According to the January 2019 *Official Railway Equipment Register*, 364 gondolas from the GONX 310000-310999 series were still in service.

For additional information on Railgon, read *The TTX Story, Vol. 2* by James D. Panza, Richard W. Dawson, and Ronald P. Sellberg (Pennsylvania RR Technical & Historical Society, 2018).

The model. The gondola is part of the budget-friendly WalthersMainline series. The model has a one-piece plastic body

with a molded brakewheel platform, grab irons, and roping staples. The brake wheel is a separate, factory-applied part.

The car's interior has seams for the floor panels, beaver tail connection plates (these connect the bottom of the exterior posts to the crossmembers), bolster blocks, and body bolsters. The upper corners accurately feature the pin connection between the side and end top chords.

Underneath, the car has a one-piece plastic casting consisting of the draft-gear boxes, crosssties and crossbearers, center sills, and body bolsters. The draft-gear boxes have separate, screw-mounted covers. The air reservoir, brake cylinder, and control valve are separate pieces tethered by molded pipes. A painted 1³/₁₆" x 4⁵/₈" steel weight is secured to the underbody with glue.

Measuring up. I compared the model to prototype drawings published in the



Digitrax Starter sets for Complete Train Control®



\$235 MSRP

3.0 Amp LocoNet Command Station, Booster, & Throttle
Color 2.4" LCD Screen
Large Backlit Keypad

Runs up to 20 Loco addresses and throttles
Integrated USB Computer Interface



\$460 MSRP

Evolution Express Includes:
DCS210+ Command Station/Booster
DT602 LocoNet Throttle w/Color Screen
UP5 LocoNet Universal Panel
PS615 Power Supply

View all features on our website!



\$645 MSRP

Evolution Express Duplex Includes:
DCS210+ Command Station/Booster
DT602D LocoNet Throttle w/Color Screen
UR93 Duplex Radio Transceiver w/PS14
PS615 Power Supply

View all features on our website!

Find out more @ www.digitrax.com/startersets/



The gondola rides on screw-mounted trucks and has Proto-Max metal couplers.

August 25, 1980, issue of *Railway Age*. The majority of the dimensions are spot on. The inside length and width are both off about a scale 6". This is typical on most open-top models.

The black and yellow paint is smooth and evenly applied, and the printing is legible. There was some minor yellow overspray at the outside corners where the side and end top chords meet.

The gondola weighs 3 ounces, which 1.7 ounces too light based on National Model Railroad Association Recommended Practice 20.1. Weights could be concealed under the car between the crossmembers and sills. The 36" metal wheels are correctly gauged, and the Proto-Max metal couplers are at the correct height.

I put the empty gondola in a train on our HO scale Milwaukee, Racine & Troy staff layout, which has nos. 4 and 6 turnouts and 36" minimum radius curves. The car ran without incident while being pushed and pulled.

A rugged hauler. I'm a big fan of the WalthersMainline series. The Railgon gondola, like other cars in the product range, has a nice blend of molded and separately applied parts that will stand up to regular handling. If you want to further enhance the gondola, you can add consolidated stencils and Thrall builder's logos using waterslide decals available from Microscale and other companies. – *Cody Grivno, group technical editor*

Facts & features

Price: \$27.98

Manufacturer

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

Era: 1980 to present

Road names: Railgon (as delivered, eight road numbers); Baltimore & Ohio (Railgon patchout); Chicago & North Western (Railgon patchout); Delaware & Hudson; Denver & Rio Grande Western (Railgon patchout); Elgin, Joliet & Eastern; and Soo Line. Four numbers per scheme unless noted. Also available undecorated.

Features

- 36" metal wheelsets, in gauge
- 100-ton roller-bearing trucks
- Proto-Max metal couplers, at correct height
- Weight: 3 ounces, 1.7 ounces too light per NMRA Recommended Practice 20.1

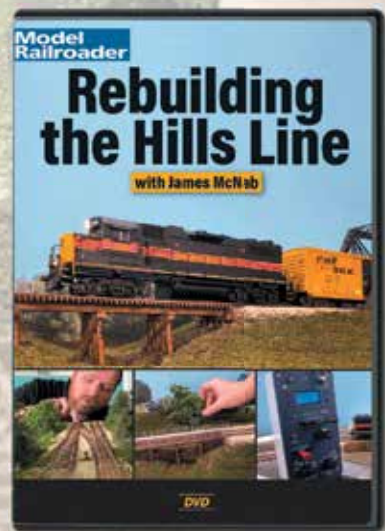
Expert Modeling Tips and Tricks!

In this *Model Railroader* exclusive DVD, follow ace modeler James McNab as he builds an all-new, highly detailed, prototypically operated HO scale layout. When a basement plumbing disaster forced the demolition of his established Grimes Lines, James seized the opportunity to create something new - and share his expert planning, construction, wiring, track laying, scenery making, and modeling tips and tricks.

You won't want to miss the helpful insights James reveals when building the mid-sized Hills Line...the second time around!



Model Railroader Exclusive!



Order Your Copy Now at
KalmbachHobbyStore.com/HillsLine
Sales tax where applicable.

DR.DUINO

>>>>>>>>>

A COMPLETE
ARDUINO
COMPATIBLE
MODEL
RAILROAD
KIT>>>

EASILY ADD ELECTRONIC CONTROL TO YOUR LAYOUT!

WITH THE DR.DUINO EXPLORER
MODEL RAIL ROAD EDITION

As Featured In

Model
Railroader

Magazine (Jan 2021)

Visit www.DrDuino.com/MRR for more details.

DEMO CODE INCLUDED TO CONTROL

SIGNALS

TURNOUTS

BLOCK
DETECTION

SERVOS

LIGHTING

MUSIC & SFX

From first train set to railroad empire...

NCE PRO CAB #5240010

Our deluxe Pro Cab™ provides the most user-friendly access to all DCC system features. You'll spend less time pushing buttons and more time running trains! Simple menus on the easy-to-read backlit LCD display will guide you through the most advanced operations with no fuss. Carefully placed controls make controlling speed and functions feel like second nature. Rediscover the fun with a Pro Cab from NCE!

Our complete line of DCC products grows with you!

NCE

The Power of DCC

See your dealer or visit ncedcc.com

NCE CORPORATION • 82 EAST MAIN ST. • WEBSTER, NY 14580 • 585.265.0230

Need more Model Railroader?

Check out
Model Railroader Channel
on YouTube!

Model Railroader Channel

www.youtube.com

The unexpected rewards of one-man crews

It's more than a year since the pandemic upended our world, forcing many of us to find different ways to enjoy our hobby. Regional prototype modeling meets started using Zoom, and railroad historical society meetings went online. Virtual operating sessions emerged, as I described here last November. But there's nothing like running a train on your own layout. Do we do this enough?

Richard Morrison, chair of the Toronto chapter of the Canadian Association of Railway Modellers, described his own one-man operating session to me. His 10 x 25-foot layout is a folded dog-bone design that hosts almost 30 industries. The layout has a return loop that allows continuous running. Like so many others, he hasn't run an in-person operating session in more than a year.

Working as a one-man crew kept him operating. Richard arranged a through freight to run continuously, lapping the dogbone loop every five or so minutes. He then serves the industries with a switch job, ducking in and out of industry tracks, always clearing the main for the through freight when it comes around. The exercise forces him to plan efficient moves. "It's more challenging than I expected," he said.

I started my own one-man crew long before the concept dawned on railroad executives and Wall Street, way back when I ran the Lionel set Dad built on a couple of plywood sheets. There was one town on the oval, which featured a



Richard Morrison works a one-man crew on his Northeastern Guildwood layout, loosely patterned on Union Pacific, his childhood favorite. Richard Morrison photo

log loader, a forklift lumber platform, and another accessory I don't remember clearly. I operated as if each accessory was its own town. I'd work the log loader and simulate distance between towns by making four or five loops before stopping to work the forklift platform.

Richard's description also reminds me of a local working a busy main line. I was a commuter on a former Reading double-track main near Philadelphia for many years. Though well past their prime, the number of businesses once served by rail was startling. Only a few were left when I rode 30 years ago, but I'd often see a local freight tucked away, waiting for my train to pass.

I commuted to Philadelphia on Amtrak's ex-Pennsylvania four-track main, too. It had long running tracks along the main that allowed locals to switch without

interfering with mainline movements. Richard's design includes both: many of his industries are served by a running track and others can only be switched from the main.


Want an eye-opener? Work a one-man crew on your own layout. Mine serves a rural area in which creameries in almost every town generate plenty of fresh milk traffic. All but one of the creameries are easy to serve because they're trailing-point sidings. The one facing-point siding usually makes the train late because it requires a time-consuming runaround. Guess who was perplexed by these delays until he caught the job during one short-handed operating session? Me.

Puzzling over this stirred memory of a long-time veteran's description of the moves a railroad designed to spot cars delivered by an express. A local freight working nearby was assigned to assist, positioning itself and waiting at the scheduled time. When the express arrived, its engine cut away so the local's power

could couple to the setouts and pull them into the clear quickly. The local spotted the cars after the express left. Aha! Typically, a freight meets my milk train at the station with the facing-point pickup. From now on, I'll assign it to pull the load and place it in the milk train.

I ask my crew to report derailment-prone hot spots and other mechanical or electrical issues, and I log this info to see if they repeat themselves. However, many little headaches like the delays caused by the facing-point switch don't reach me. Working a one-man crew between sessions, undisturbed by the demands of hosting, can draw my attention to them.

No doubt online events will find a place in our post-virus world. So might virtual operating sessions. These changes may increase interest in the hobby, expanding participation without the time and expense of travel. As for me, I'll certainly make it a habit to run some trains between sessions so I can put myself in my crews' shoes. **MR**



WANT AN EYE-OPENER? WORK A ONE-MAN CREW ON YOUR OWN LAYOUT. — JERRY



trains.com

UNLIMITED

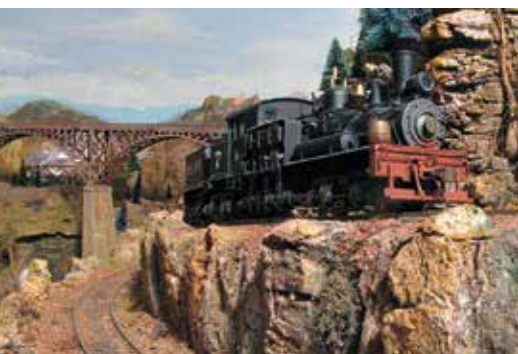
Experience premium access to the best in modeling and railroad content with the trains.com Unlimited Membership.

Become an Unlimited Member to unlock exclusive videos, layouts, how-tos and expert tips. You will get premium content from all of the best train brands - in one convenient location. PLUS, you will also receive an exclusive Trains.com Unlimited Membership t-shirt, free upon payment.

Get started today with a 30-day free trial membership!

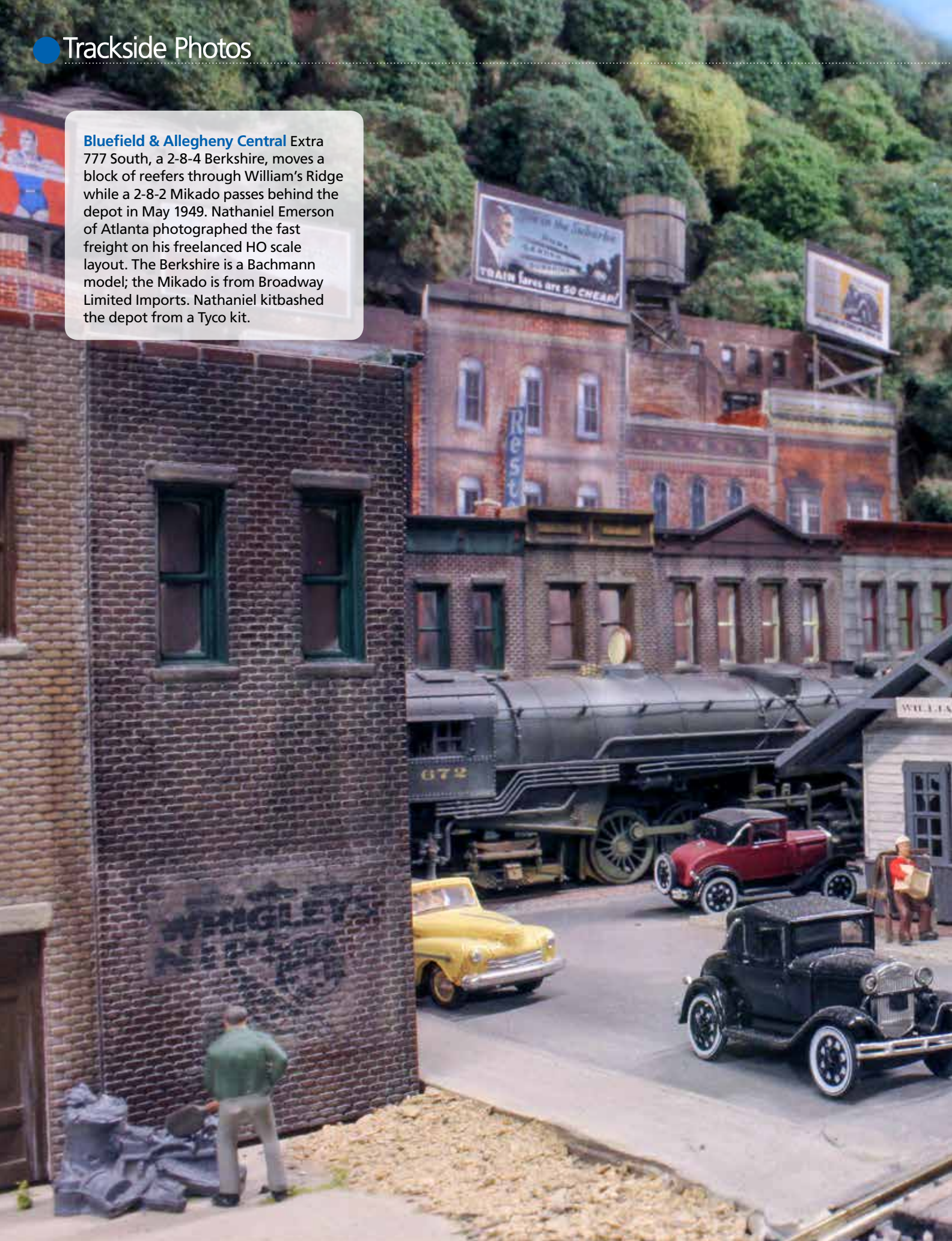
Visit us online at: trains.com/membership

*After 30-day free trial, Unlimited Membership is just \$6.99/month, billed annually in one installment of \$83.88.



THE BEST IN MODELING & RAILROADS • ALL IN ONE STOP!

Bluefield & Allegheny Central Extra 777 South, a 2-8-4 Berkshire, moves a block of reefers through William's Ridge while a 2-8-2 Mikado passes behind the depot in May 1949. Nathaniel Emerson of Atlanta photographed the fast freight on his freelanced HO scale layout. The Berkshire is a Bachmann model; the Mikado is from Broadway Limited Imports. Nathaniel kitbashed the depot from a Tyco kit.



Send us your photos

Trackside Photos is a showcase for the work of *Model Railroader* readers. Send your photos (digital images 5 megapixels or larger) to: *Model Railroader*, Trackside Photos, P.O. Box 1612, Waukesha, WI 53187-1612; or upload them to fileupload.kalmbach.com/contribute. For our photo submission guidelines, contact associate editor Steven Otte at sotte@mrmag.com.





Mr. and Mrs. Thaddeus J. Ott (of the Philadelphia Otts) wait for the company photographer to emerge with his equipment and shoot their portrait as they “rough it” on their Western excursion. Ron Foreman of Glendale, Calif., took the picture on his HO_{N3} Devil’s Gulch & Helengon RR. Ron modified the former Denver & Rio Grande locomotive and scratchbuilt the shorty tender to fit on the railroad’s 51-foot turntable. He also kitbashed the Model Die Casting combine.

The eastbound *San Diegan* rolls through a grade crossing in San Juan Capistrano, Calif., on its two-hour journey from Los Angeles Union Station to San Diego. Alain Kap’s HO scale layout depicts the Atchison, Topeka & Santa Fe’s 4th District, also known as the Surf Line, in the 1940s. The Electro-Motive Division E1 is a Broadway Limited model and the passenger cars are from Wm. K. Walthers. Alain shot the photo.



MORE ON THE WEB

Paul Kahne’s photo of Lee Gasparik’s O scale layout, seen above, is this month’s free wallpaper. Get it from Trains.com

Two Pennsylvania RR class J1’s pass in the early evening, one laboring up grade with a manifest freight and the other drifting with a train of empty hoppers. The action takes place on Lee Gasparik’s O scale PRR/New York Central layout, which was featured in *Great Model Railroads 2020*. The layout runs on battery power and radio control. Paul Kahne photo

HO SCALE



Newest!
40-Ton
ARA Trucks
Tahoe Model Works

TEL: 775-600-9992 Send SASE for flyers
PO Box 3935 • Carson City, NV 89702
www.resincarworks.com/tahoe.htm

ALLEGHENY SCALE MODELS
LOCOMOTIVES AND ROLLING STOCK
HO, O, S, N, and Large Scale Out of Production Models
Sales, Consignments, Estates, Appraisals

www.alleghenyscale.com

phone: 908-684-2070
oscale@alleghenyscale.com

470 Schooley's Mtn. Rd.
Suite 8-117
Hackettstown, NJ 07840

HO/N/O signs, billboards,
laser-cut structures
and much more from:

Blair Line, LLC
PO Box 1136, Carthage, MO 64836
www.blairline.com



Are you missing out on our 2nd
generation signaling circuits?

Signal Animator/2
Block Animator/2
Grade Crossing Pro/2

New features, improved detection!

LOGIC RAIL™ https://www.logicrailtech.com
TECHNOLOGIES info@logicrailtech.com

Artisan Home Railroads
Building Quality since 1988

ALL PROJECT TYPES FROM BENCHWORK TO SCENERY

drbozanovs@gmail.com
artisanhomerrailroads.com

1970's Taco Bell in HO!
(337) 436-8481

www.summit-customcuts.com



American Limited

New run of GATC Tank Cars
HO, N scale Passenger car Diaphragms and other details
www.Americanlimitedmodels.com
Phone 303-284-5072 Tuesday thru Thursday 11:00-2:30 MST

CITY CLASSICS Structures, details, signs and more!

www.cityclassics.biz

railroadbooks.biz has 1,900+ new titles, all at discount!

Domestic shipping FREE over \$63

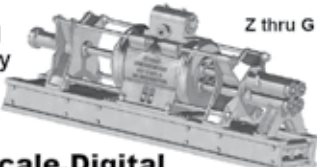
E-mail for free printable PDF list. chuck@railroadbooks.biz www.railroadbooks.biz

ORDERS: U.S. (800) 554-7463
BUSINESS & INTERNATIONAL: +01 (812) 391-2664

SEND: \$2 for paper book list.

PO Box 4, Bloomington, IN, 47402-0004 U.S.A.

Detailed Industrial Machinery Models



Z thru G

Multiscale.Digital

Rail Scale Models

Your Source For:

- Craftsman Kits
- Laser-Cut Detail Items
- Custom Scale Structures
- Laser-Cutting Services

Items in All Scales

www.Rail-Scale-Models.com

Model Scenery & Structure Call anytime 24/7
WHISTON SALEM, NC 845-797-9533

custom layouts design build install

www.modelsceneryandstructure.com

Ore Bins – HO & O scale



Berkshire Valley Models.com
314-401-4005
Laser cut wood kit
Easy assembly

Touch Toggles Elegant

Run track circuits, Tortoises, twin-coils, servo motors, and more with a touch!

See our website for a video introduction

Made in the USA

www.berretthillshop.com

ALL ELECTRONICS CORPORATION

Electronic Parts and Supplies for Your Project.

www.allelectronics.com

GRANDT LINE PRODUCTS

Are now online as San Juan Details.

Same great products as always
N,HO,S and Large Scale Part and Kits

WWW.SANJUANDetails.COM
303-284-5072 TUE-THUR 11-2:30 MST

After You've Looked at the Others...

Progressive pmd Model Design MUSEUM QUALITY - CUSTOM LAYOUT MODELING SERVICE

WHAT CAN WE BUILD FOR YOU?

www.PROGRESSIVEMODELDESIGN.COM
211 RocBaar Drive, Romeoville, IL 60446
(815) 886-9010 FAX: (815) 886-9076

ULTIMATE MODEL MAGIC™

CUSTOM ROADS RAIL MODEL by Dan

Custom Model Railroads by Dan
PROFESSIONAL FRIENDLY & AFFORDABLE
ON-SITE OR IN-SHOP SERVICE AVAILABLE
PRO LAYOUT BUILDS AND MAINTENANCE OF ANY SCALE!
DansRailRoads.com 561-899-7837

BACKDROPS
HO, O, N Scales
WWW.TRAINJUNKIES.COM

←---- up to 100 Feet Long ----→

NEW ROADS
Photo-Realistic Roads and Streets
Cut - Peel - Stick N-HO-O
WWW.TRAINJUNKIES.COM

Say you saw their ad in **Model Railroader** magazine!

Subscribe to **Model Railroader!**
Go to **Trains.com**

Pursuing Excellence

THE TRAINMASTER, INC.
Detailed Craftsman Kits
www.TheTrainMaster.com

ONLINE 24/7 MTC HOBBIES & COLLECTIBLES
Our collection lines

What we offer!

- T-Shirt
- Mugs
- Pillows
- Hoodies
- Artwork

SHOP NOW www.traincollectibles.com
VISIT US ON PINTEREST AND FACEBOOK FOR DAILY BLOGS

DON BLACK **WE BUY & SELL BRASS**

VISIT US ONLINE
WWW.DONBLACK.COM
HUNDREDS OF PICTURED
MODELS TO CHOOSE FROM
Don Black 119A Bernhurst Rd New Bern NC 28560
Toll Free 1-866 HO BRASS

FIFER HOBBY SUPPLY LLC
Your Local Internet N Scale Hobby Shop
WWW.FIFERHOBBY.COM

Rix Products **Pikestuff**

Web site: www.rixproducts.com
Send LSASE for new 20 page catalog.
3747 Hogue Rd. Evansville In. 47712
Phone (812)426-1RIX FAX (812)423-3174
Model Railroad Structures & Accessories

GOODDEALSdcc
www.gooddealsdcc.com

HOME OF THE PROGRAMMER TEST TRACK SYSTEMS

All Scales Available Custom Orders
Clear Acrylic Inspection Cars
224-703-0111

Gary Cohn
106 Center Street
Fox River Grove, IL 60021
gary@gooddealsdcc.com

LIGHTING WITHOUT WIRING
Dwarvin.shop/no-wiring

FREIGHT CAR PARTS
80 + PARTS (HO)
300 + DECALS (ALL SCALES)
200 + HO WINDOWS & DOORS
Catalog call 336-329-9038
www.TICHYTRAINGROUP.com

Train Installations LLC

MODEL RAILROADS FOR HOME OR BUSINESS

See Our New Online Store!
(770) 597-0038 ~ Since 2001~
dave@traininstallations.com
www.traininstallations.com

MODEL DECAL DEPOT

Trains, Planes, Automobiles,
Boats, Rockets & Buildings
All Scales and more

PayPal or Cheques
(for more information see website)

CUSTOM WATER SLIDE & VINYL DECALS

"Big Jon"
T. 604-279-9866
modeldecaldepot.ca F. 604-279-9856

TK TRAIN HOBBY Phone 740-633-6607

HO, N, O & G Trains, Track, Scenery,
Accessories and Much More!
We have Walthers, Athearn, Spectrum,
Branchline and many others!
Visit us on line for great savings!
www.tandkhobby.com

BackdropStation.com Now On-Line

NOW On-Line With Over 100 Backdrops
More Coming Each Month
Order Now, Introductory Prices Won't Last Much Longer
BackdropStation@gmail.com (833) 287-2467

SAVE: All In-Stock Models & Accessories

HO Model Shown
HO & N Scales
www.rps-vehicles.myshopify.com

PNP TRAINS

MODEL TRAINS & ACCESSORIES
www.pnptrains.com
425-496-8844
Facebook: PNP Trains
eBay: Ombra

We're behind you all the way

Sceniking.com
...nothing compares...
N - HO - S - O since 2005

S Scale Trains
22 steam & diesel engines,
25 freight cars, passenger and
caboose. The most realistic
track made. 36 year reputation.
Send \$10 for 68 pg catalog.
www.americanmodels.com
Phone 734-449-1100
AMERICAN MODELS
11770 Green Oak Industrial Dr.
Whitmore Lake, MI 48189

NORTHLANDZ
THE WORLD'S LARGEST MINIATURE WONDERLAND

2 POSITIONS AVAILABLE

- 1 LAYOUT CARETAKER
- 2 OUTDOOR TRAIN OPERATOR

HELP WANTED

Flemington, New Jersey

• +1 (347) 234-3908 info@northlandz.com
WWW.NORTHLANDZ.COM

Ron's Books

The largest railroad book seller with
over **6,000** titles and over **475** DVDs!
Free shipping on orders over \$25 in the
U.S. Send \$3 for a catalog.

P.O. Box 714
Harrison, NY 10528
914-967-7541
ronsbooks@aol.com
Online catalog at
ronsbooks.com

What can *Model Railroader* magazine do for you?

To advertise, call
888-558-1544 ext. 643

Custom Layout Building

Layout Design
By Lance Mindheim
www.shelflayouts.com
301-404-8164

Classified Advertising

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

Send your submissions to: Model Railroader — Classifieds, P.O. Box 1612 Waukesha, WI 53187-1612. Toll-free (888) 558-1544 Ext. 551 Fax: 1-262-796-0126. E-mail: classads@kalmbach.com
All ads must be prepaid and pertain to the subject of model railroading.

Schedule of Events

AZ, PRESCOTT AREA: Beat the Heat Model Trains Swap Meet. Liberty Traditional School, 3300 N. Lake Valley Rd., Prescott Valley, Saturday, August 21, 2021, 9:00am-1:00pm. Adults \$5.00, children 12 and under free. Presented by: The Central Arizona Model Railroad Club. Contact: Doug Gilliatt, 480-390-0320. Face masks are required in the hall.

FL, TALLAHASSEE: 30th Annual Tallahassee Model Railroad Show and Sale! 2-DAYS! Leon County Fair Grounds, 441 Paul Russell Rd., Bldg. 2 & 4. June 26-27, 2021. Saturday, 9:00am-5:00pm & Sunday, 10:00am-4:00pm. Admission: Adults/Children 13 & over, \$10 BOTH DAYS! Scouts in uniform/children 12 & under FREE! SCALES Z-G! FOOD! Contact: Andy Zimmerman, 850-524-4399. Email: GNTrainman@comcast.net

IL, GALESBURG: Galesburg Railroad Days Train & Toy Show. Knox College, T. Fleming Fieldhouse, 199 East Knox Street., Galesburg, IL 61401. June 26-27, 2021, Saturday 9:00am-4:00pm and Sunday 10:00am-3:00pm. Admission \$5, kids under 12 free. Free parking and shuttle service from parking to entrance. Food & drinks available. Info: 309-343-6700 Email: barrywainer@yahoo.com or visit www.GalesburgTrainAndToyShow.com

IL, GREENVILLE: American Heritage Railroad Train Show @ American Farm Heritage Museum 1-70 @ IL Rt. 127 (Exit #45). Saturday, June 12, 2021, 10:00am-4:00pm. Admission: \$5.00, under 12 FREE. Train ride with paid admission. Operating layouts. Dealers welcome, \$15.00 per table. Contact Jim @ 217-825-6230.

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

IL, ST. CHARLES: 45th Annual Kane County Railroadiana and Model Train Show. Kane County Fairgrounds, 525 South Randall Rd. Sunday, June 13, 2021, 10:00am-3:00pm. Admission: \$6.00 w/tax. Tables \$60.00. Please visit our website for latest Covid updates. For information: 847-358-1185, RussFierce@aol.com or www.RRShows.com

NE, DESHLER: Train Show & Open House, July 24-25, 2021. Thayer County Activity Center, 4th & Race St. Hours: Saturday, 9:00am-5:00pm, Sunday 10:00am-4:00pm. Clinics, custom vendors, layouts, and manufacturers. Admission \$6.00, under 12 FREE. Extended hours at Spring Creek Model Trains. 304 E. Bryson Ave. Details: www.springcreekmodeltrains.com

NE, SPRINGFIELD: NE-IA Railroaders Train and Toy Show. July 17-18, 2021. Saturday 9am-4pm, Sunday 9am-2pm. Admission: \$8.00, 12 and under FREE. Sarpy County Fairgrounds, 100 Main St., Ag. Bldg., Zip: 68059. 20,000 sq.ft. of train and toy items for sale, plus parts/repair vendors. Free parking. Information: Mark Nelson 402-731-1349; Bob Schaffer 402-990-0085; Jeff Carper 402-960-7824 www.NebraskaIowaRailroaders.com

OH, FOSTORIA: 19th Fostoria Rail Festival, 1001 Park Avenue, Zip 44830. New larger school building. Saturday, September 25, 2021, 10:00am-4:00pm. Admission: \$5.00, children 10 and under free w/adult. Information: Fostoria Rail Preservation Society, 419-435-1781, EllenGatrell@gmail.com, www.FostoriaIronTriangle.com, Fostoria Rail Park Facebook

OK, EDMOND: Train Show — Steaming into Summer Fun. July 16-17, 2021. Friday, 5pm-8pm. Saturday, 9am-3pm. Admission: \$5.00. Edmond Community Center, 28 E. Main St., in the heart of downtown Edmond, OK 73034. Sponsored by the TTOS Sooner Division. For further information visit: www.ttos-soonerdiv.org

TX, AUSTIN: Austin Train Show. New location! Over 25,000 sq.ft. of railroading fun for the whole family! Palmer Events Center, 900 Barton Springs Road, Austin, TX. August 28-29, 2021. Saturday 10am-6pm, Sunday 10am-4pm. Admission \$8 (includes both days, children 12 and under FREE). Vendors, model and Lego railroads, home layout tour included. For more information, visit austintrainshow.org

TX, HOUSTON: Greater Houston Train Show presented by the San Jacinto Model Railroad Club. Saturday, August 14, 2021, 10:00am-4:30pm. Stafford Centre, 10505 Cash Rd. (at Murphy Rd.), Stafford, TX 77477. Instructive classes, vendors, operating layouts, contests. \$5 admission, under 12 free, \$10 family. Concessions and free parking. Subject to mandates surrounding Covid. More info at: http://sanjacmodeltrains.org/

Classified

Wanted-N Scale

#1 ESTATE BUYER OF N SCALE COLLECTIONS! We buy all makes and types - including Brass & European! Even Nn3! Call us TOLL FREE: 1-866-462-7277. Don Black 119 Bernhurst Road, New Bern, NC 28560. E-mail: don@donblack.com

BUYING N SCALE train collections, large or small. Call Tom 630-443-9137.

CANADIAN TRAIN COLLECTIONS AND ESTATES: Buying entire collections anywhere in Canada or the USA. Brass, plastic, engines, cars, buildings, memorabilia - everything! Call Don 403-585-2772. E-mail: modeltrains@shaw.ca

Wanted-HO Scale

#1 A+ ESTATE BUYER OF ALL TRAIN ESTATES- Brass Pieces & Collections wants your material. Including all types of Brass, old trains, kits, plastic, diecast, buildings, etc., we buy it all. Buildings and estates included. We seek better items for personal collections. Call us before you sell for our offer as we pay the highest prices. Call Don Black toll free 1-866-462-7277. Don Black, 119 Bernhurst Road, New Bern, NC 28560. E-mail don@donblack.com

CLOSING DATES:

September 2021 closes June 21, October closes July 26, November closes August 20, December closes September 21.

\$1,000,000 CASH AVAILABLE- For your collection! Brass, Plastic, Memorabilia, we buy it all. Call us 352-292-4116 or mail your list to: BRASSTRAINS.COM, 10515 SE 115th Ave., Ocala, FL 34472. E-mail: collections@brasstrains.com

BRASS PASSENGER CARS; Craftsman's kits; LIRR brass and plastic. Challenger Broadway Limited; Coach Yard PRR. Please call Bob at 212-874-6569 or e-mail grandt7@yahoo.com

BUYING HO TRAIN COLLECTIONS, large or small. Also brass. Call Tom 630-443-9137.

CASH PAID FOR HO AND N SCALE TRAINS. No collection is too big or too small. 414-377-1255

CANADIAN TRAIN COLLECTIONS AND ESTATES: Buying entire collections anywhere in Canada or the USA. Brass, plastic, engines, cars, buildings, memorabilia - everything! Call Don 403-585-2772. E-mail: modeltrains@shaw.ca

Wanted-Large Scale

BUYING G SCALE, and Large Scale train collection. Call Tom 630-443-9137.

For Sale - Miscellaneous

COAT RACKS, SHELF BRACKETS and other items fabricated from recycled railroad spikes. Go to WhittakerWelding on ETSY.

Wanted - Miscellaneous

ALL SLOT CARS WANTED. Any kind, any condition. Top dollar paid. PAUL at 248-760-6960. E-mail: slotcarguy@slotcarguy.com

ALL TRAIN COLLECTORS & MODELERS- We need more trains to supply our ever expanding group of interested buyers. We buy HO & N Scale Trains - Brass, Marklin, Rivarossi, Atlas, Kato, MicroTrains, etc. as well as better trains in all scales. We also purchase store inventories. We also can auction your trains with rates starting as low as 15%. We travel extensively all over the US and Canada. Send us your list today or for more information see www.trainz.com/ sell Trainz, 2740 Faith Industrial Dr., Buford, GA 30518. 866-285-5840, Scott@trainz.com Fax: 866-935-9504

LOOKING TO ACQUIRE model train collections, all scales, plastic to brass. No collection too big or too small, will travel. Please call or text Tim @ 817-991-5420 or email: karrstrains@aol.com. Located in the Dallas/Fort Worth area.

MODEL AUTOMOBILE AND TRUCK KITS WANTED- unbuilt or built, any size collection. Fred Sterns, 48 Standish, Buffalo, NY 14216. 716-838-6797. email: fsterns@aol.com

WANTED - BOULDER VALLEY MODELS On30 15 foot single bay steel hopper kits. Assembled or still in the box. 860-460-2716 or email: mkvrev@aol.com

Custom Painting & Building

CUSTOM BUILDING & PAINTING, kit building, kit-bashing & scratchbuilding. Locomotives, rolling stock, structures & more. 12 Penny Lane, Newark, DE 19702, 302-229-6010, www.tmbcustommodels.com

CUSTOM LAYOUT BUILDING & LAYOUT DESIGN. Specializing in fine scale and prototype based projects. The Shelf Layouts Company, Inc. www.shelflayouts.com 301-404-8164

KIT BUILDING-SCRATCH BUILDING: Engines, structures, rolling stock, quality work. Reasonable. 585-319-5530 or email: valhow4@aol.com

Employment

HELP WANTED: NORTHLANDZ in Flemington, NJ is HIRING for 2 positions: 1) LAYOUT CARETAKER and 2) OUTDOOR TRAIN OPERATOR. info@northlandz.com 347-234-3908 www.Northlandz.com

For more, check out Trains.com

Questions About Your Account? We're Online 24/7!

It's easy to manage your subscription online:

- Pay your bill
- Renew your subscription
- Change your address
- and much more!

Go to subscribe.modelrailroader.com/help



OHIO • Columbus
Exclusively trains.
LGB, Lionel, O, HO, N scales.
Books, Thomas, videos.
Mon - Thur 10-6, Fri 10-8, Sat 10-6, Sun 12-5
www.trainstationohio.com
THE TRAIN STATION
4430 Indianola Ave. 614-262-9056

OREGON • Beaverton
Complete full line hobby shop.
Z, N, HO, O, Lionel, and LGB.
Open Mon - Fri 10-6, Sat 10-5, Sun 12-5.
TAMMIES HOBBIES
12024 SW Canyon Rd. 503-644-4535

OREGON • Portland
HO, N, Z, Lionel, DCC, brass.
Reservation discounts, new used,
Consignments, 16 minutes from Airport
www.hobbysmith.com
THE HOBBY SMITH
1809 NE Cesar Chavez Blvd. 503-284-1912

OREGON • Portland
Your complete model railroad store.
Gauges Z through G.
Mon-Sat 10am-4pm, Closed Sunday
www.wsor.com
WHISTLE STOP TRAINS
11724 SE Division St. 503-761-1822

PENNSYLVANIA • Blue Ridge Summit
The Exclusive model railroad store.
From N to G, we stock it all.
OPEN 7 days a week
Only minutes from Frederick, MD.
www.mainlinehobby.com
MAINLINE HOBBY SUPPLY
15066 Buchanan Trail E. 717-794-2860

PENNSYLVANIA • Broomall
Lionel, American Flyer, LGB, Atlas & MTH
HO, N, ON30, Standard, O & S gauges
bought, sold & traded. Auth. service station.
www.nstrains.com
NICHOLAS SMITH TRAINS
2343 West Chester Pike 610-353-8585

PENNSYLVANIA • Hatboro
Lionel, American Flyer, LGB, MTH, Märklin,
Bachmann, Williams, HO, N & Z. We buy,
sell & repair. Mon-Fri 12-8; Sat 10-5
www.JoesTrainStation.com
JOE'S TRAIN STATION
283 E. County Line Rd. 215-322-5182

PENNSYLVANIA • Jeannette
Trains exclusively. Lionel, MTH, HO & N.
Supplies and accessories at discount prices.
Open daily 9:30-5, Fri 9:30-7, Sat 9-4.
Closed Tues & Sun. Expanded hours
Nov & Dec. www.needztrains.com
NIEDZALKOSKI'S TRAIN SHOP
214 South 4th Street 724-523-8035

PENNSYLVANIA • Montoursville
Mon - Fri 9-5:30, Sat 9-4.
Extended weekday & Sun hours in Nov. & Dec.
E-mail: englishmodel@gmail.com
www.englishmodelrailroad.com
ENGLISH'S MODEL RAILROAD SUPPLY
201 Streibigh Lane 570-368-2516

PENNSYLVANIA • Strasburg
From trains to diacast to scenery, everything
for the layout builder. Open 7 days a week.
N, HO, O, Lionel, LGB.
Buy, sell, trade used trains. Located adjacent
to the Choo Choo Barn. www.etrainshop.com
STRASBURG TRAIN SHOP
226 Gap Road 717-687-0464

RHODE ISLAND • Warwick
HO trains & acces., detail parts, plastic &
craftsperson kits. Hobby supplies, tools.
Tues - Fri noon-6pm, Sat 10am-5pm
1/2 mile west of airport
E-mail: aahobbies@gmail.com
A. A. HOBBIES, INC.
655 Jefferson Blvd. 401-737-7111

SOUTH CAROLINA • Greenville
Model Trains Only - ALL AT DISCOUNT
PRICES! 140,000+ items in all scales available
online 24/7 at: www.BlueRidgeHobbies.com
Retail Store features HO-N-O
See Website for Hours.
BLUE RIDGE HOBBIES
2327 N. Pleasantburg Dr., Ste. H 800-988-2125

SOUTH CAROLINA • West Columbia
All scales, all major brands of
model railroad equipment.
We buy & sell used Lionel trains.
Open daily 10-6. Closed Sun.
NEW BROOKLAND RR & HOBBY SHOP
405 State Street 803-791-3958

TENNESSEE • Knoxville
Located in Knoxville's premier shopping
destination. We are the area's most diverse
hobby store with a large selection of HO, N,
and O. Open 7 days a week.
Turkey Creek Area.
HOBBYTOWN USA
11145 Turkey Dr. 865-675-1975

TEXAS • Athens
Specializing in HO, HO-N3 & Brass. Blackstone
Isunani • InterMountain • Decoder installs
Kadee • Digitrax Dealer • Walthers • MTH
----WE BUY HO-N3----
jack@harrishobbies.com www.harrishobbies.com
HARRIS HOBBIES
9323 County Rd 1127 903-489-2646

TEXAS • Dallas
Official Lionel Layout Builder Since 2001
Trains, accessories, and more!
Custom Layouts, Modulars, Model Stations,
Bridges, Kits...come see...there's always
something new!! www.TWTrainWorxStore.com
TW TRAINWORX
2808 McGowan St. 877-881-4997

TEXAS • Dallas (Addison)
Great discounts on thousands of
G to Z scale items. NCE & Digitrax dealer.
Monday - Saturday 10-6
Model Railroader's '19 & '20 Readers Choice
"Favorite Retail Storefront in the Southwest"
DISCOUNT MODEL TRAINS
4641 Ratliff Lane 972-931-8135

TEXAS • Houston
HO & N, Lionel trains. Complete line of
plastic kits, military, architectural supplies,
paints and tools. Open Mon-Fri 11am-6pm,
Sat 10am-5pm, Sun 12pm-5pm.
www.gandgmodelshop.com
G & G MODEL SHOP
2029 Southwest Fwy 713-529-7752

TEXAS • Houston
All trains, all scales. Magazines, Books, Videos, Re-
pairs, Brass, Consignments. Discount program, will
ship. papabens trains@gmail.com M, Tu, Th & F 10-6;
W 10-7; Sat 10-5. Closed Sun. Open Sunday's Oct,
Nov & Dec. (more...) www.papabens.com
PAPA BEN'S TRAIN PLACE
4007-E Bellaire Blvd. 713-523-5600

TEXAS • San Antonio
Model railroading our specialty.
Märklin, G, HO, N, O, Z.
Superdetailing parts galore.
Books, structures, figures and tools.
Tue-Sat 10am-6pm www.dibbleshobbies.com
DIBBLE'S HOBBIES
1029 Donaldson Ave. 210-735-7721

UTAH • Orem
Where it's always cheaper than therapy.
Trains all scales, LGB, Broadway Limited,
Atlas, Lionel, Micro-Trains, Athearn.
Just north of the other Arby's by Maceys.
HOBBY STOP
934 N. State St. #101 801-226-7947

VERMONT • Rutland
Exclusively Model Railroading. Most major
lines. Brass, custom painted models.
Atlas, Lionel, Micro-Trains, Athearn.
Open by appt. Eves 6-10, Sat 10-10.
THE STEAM SHACK
14 Engrem Avenue 802-775-2736

VIRGINIA • Ashland (Richmond)
OPEN 7 DAYS: Mon-Sat 10-6; Sun 11-4
Personal service/repairs/layout ideas. We ship.
Gauge G, O, HO, N, Thomas Woodens, & more.
I-95, EXIT 92, ONLY 1.2 Miles West to tracks.
www.trainandtoystore.com
TINY TIM'S TRAINS & TOYS
104 S. Railroad Ave. 804-368-0063

VIRGINIA/MARYLAND • Chantilly, VA
Full service storefront & online store. All makes
& scales. New/used trains sales, service, repair
& upgrades. All scales & Digitrax dealer.
Online Sales Visit www.traindepot.biz
TRAIN DEPOT
13944 Willard Rd., Suite 1 703-953-3767

WASHINGTON • Burien (Seattle)
Close to SEA-TAC airport - short drive from
downtown Seattle. New & vintage electric
trains in all scales. Tues - Sat 11-6
www.electrictrainshop.com
THE ELECTRIC TRAIN SHOP
625 SW 152nd St. 206-244-7077

WASHINGTON • Kirkland
Lionel, American Flyer, LGB, HO, N.
Buy, sell, and repair.
Supplying all your railroading needs.
Open Mon-Sat.
www.eastside trains.com
EASTSIDE TRAINS, INC.
217 Central Way 425-828-4098

WISCONSIN • Bay View (Milwaukee)
Specializing in HO, N, Books, DVD's, DCC.
Special Orders Welcome. Discount Prices.
Thurs & Fri 11-5, Sat 9-3. Other days by appt.
www.southsidetrains.com
SOUTH SIDE TRAINS
3979 S. Howell Ave. 414-482-1566

WISCONSIN • Green Bay
Exclusively trains, specializing in DCC, N,
G, & HO. DCC installation and award winning
custom painting and building available.
WWW.ENGINEHOUSESERVICES.COM
ENGINEHOUSE SERVICES, LLC
2737 N. Packerland Dr. 2H 920-490-4839

WISCONSIN • Milwaukee
Exclusively Model Railroading since 1932.
One-stop shopping from Z to G.
800-487-2467 walthers.com
WALTHERS SHOWROOM
5619 W. Florist Avenue 414-461-1050

WISCONSIN • Monroe
N & HO scale trains & accessories, plastic
kits, Books, videos & tools. Summer hours:
Tue-Fri 10-5, Sat 10-4, Sun 12-4 Winters only.
Always closed on Monday!
Call ahead to be sure we're open!
THE HOBBY DEPOT
835 17th St. 608-325-5107

WISCONSIN • Waukesha (Pewaukee)
Märklin • Lionel • MTH • AF • LGB • Z to G
• buildings • scenery • detail parts • books
• scratchbuilding supplies • special orders •
NMRA discounts • Mon - Fri 11-8 • Sat 10-5
Sun 12-5. www.hiawathahobbies.com
JETCO'S HIAWATHA HOBBIES
2026 Silvernail Rd. 262-544-4131

CANADA-BC • Savona
Model trains in G, O, S, HO, N, Z. Old toy
trains, railway antiques, art, books, DVDs,
souvenirs and Thomas too. Canadian road
names a specialty. 20 min. west of Kamloops.
www.kellyskaboose.ca
KELLY'S KABOOSE, THE RAILWAY STORE
6648 Savona Access Rd. 250-377-8510

CANADA-BC • Summerland
Specializing in European Model Trains,
Märklin, Trix, Roco, LGB, Brawa, Fleischmann
& many more. Huge selection of trains,
kits, & access. HO-N-Z-1-O-G Scales.
www.EuroRailHobbies.com
EURO RAIL HOBBIES & MORE INC
9901 Main St. 866-799-6098

CANADA-BC • Vancouver
Large selection of model RR supplies includ-
ing Min. by Eric, Athearn/MDC, Atlas, Peco,
Digitrax, Rapido, SoundTraxx, brass, etc.
Special orders. www.central-hobbies.com
Mon-Fri 11-5, Sat 10:30-5. Closed Sundays.
CENTRAL HOBBIES
2825 Grandview Hwy. 604-431-0771

CANADA-ON • Dundas
Your full line hobby shop. Open 7 days a
week. N, HO, AF, Lionel, LGB. Scenery and
scratchbuilding supplies. Walthers dealer, Kato
products. Special orders welcome!
E-mail us at: sales@dundasvalleyhobby.ca
DUNDAS VALLEY HOBBY
15 Cootes Dr. 905-628-9156

CANADA-ON • Mississauga
6,000 sq. ft. All Trains!
Premier Selection & Service!
In store clinics and layouts!
Railfan Headquarters! Quick special orders!
www.cvrco.com
CREDIT VALLEY RAILWAY COMPANY, LTD
2900 Argentea Rd. Unit #24 1-800-464-1730

CANADA-ON • Toronto (Markham)
North American Train Specialists since 1962
HO, N, O, G and DCC
Railfanning beside CNR Mainline
Closed Mondays www.georgestains.com
GEORGE'S TRAINS LTD.
550 Alden Rd., Unit 101 905-470-6200

GERMANY • Kaarst
Europe's best known address for US Railroads.
We carry N, HO & G scale for all road names.
Atlas to Walthers.
Mon - Fri 10-6:30, Sat 10-2
Overseas orders with VS & MC
ALL AMERICAN TRAINS
www.aat-net.de E-mail: info@aat-net.de

ITALY • Melazzo (AL)
Kits & American trains importer since 1992.
Large HO/N in stock assortment.
Books, T-shirts, Structures, Vehicles.
Bienvenue aux clients francophones
www.bkit.it info@bkit.it
BRADICICH KORPS
via Annunziata 25/C 39-0144-596007

Say you saw their
directory ad in
Model Railroader.

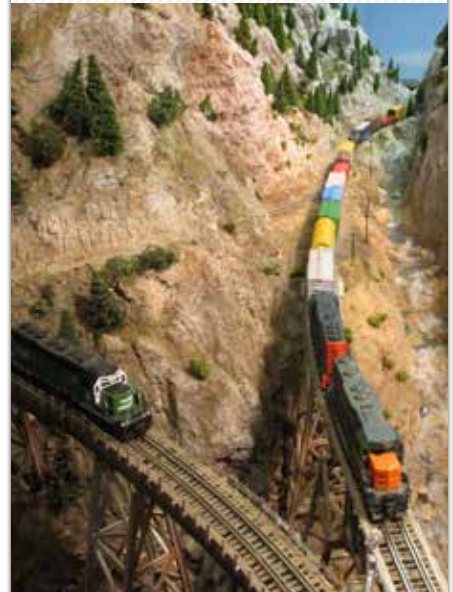


Like us on Facebook!

Model MAGAZINE
Railroader



www.facebook.com/ModelRailroader



Coming Up

Really digging into an N scale model railroad

When David Savage built a layout in his crawlspace, he really dug into the project, excavating mountains and canyons from the dirt there.

Kitbashing Conrail's signature locomotive

The General Electric C30-7A was a necessity for Dave Abeles' HO scale Onandaga Cutoff. Read how he built one from an Atlas C30-7.

Plus more:

- Planting trees to create a view block and set a mood
- Rehab My Railroad: Part 2 of scratchbuilding Cargill Salt
- Expanding the capabilities of an entry-level DCC system
- When roof walks were banned, and other prototype milestones

Subscribe today!

1-877-246-4879

www.Trains.com

Display Ad Index

We believe that our readers are as important as our advertisers. If you do not receive your merchandise or a reply from an advertiser within a reasonable period, please contact us. Provide details about what you ordered and the amount you paid. If no action is obtained after we forward your complaint to the advertiser, we will not accept further advertising from them. *Model Railroader* magazine, 21027 Crossroads Circle, Waukesha, WI 53187

| | | | |
|--|-------|-------------------------------------|--------------|
| 2B In Trains | 45 | Mainline Hobby Supply | 45 |
| Albion Software | 9 | Mianne Benchworks | 45 |
| Atlas Model Railroad Co., Inc. | 5 | Mario's Trains | 14 |
| Axian Technology | 20 | Menard, Inc. | 21 |
| Azatrax | 45 | Micro-Mark | 14 |
| Bachmann Industries, Inc. | 68 | Modelers Marketplace | 60-61 |
| BPL | 45 | Model Train Technology | 9 |
| Central & Western Homaroad Supply .. | 45 | NCE Corp. | 53 |
| Circuitron | 20 | Nicholas Smith Trains | 17 |
| CTI Electronics | 25 | PECO Products | 19 |
| Custom Model Railroads | 17 | Pre-Size Model Specialties | 45 |
| Digitrax | 51 | Rapido Trains | 2 |
| Downtown Deco | 45 | Ready to Roll, Inc. | 25 |
| Enginehouse Services | 45 | Rebuilding the Hills Line DVD | 52 |
| Evergreen Scale Models | 9 | Right on Track Models | 9 |
| Evan Designs | 45 | SBS4DCC.com | 45 |
| Factory Direct Hobbies | 9 | Showcase Express | 17 |
| Good Deals DDC | 45 | Sievers Benchwork | 25 |
| Great Midwest Train Show | 17 | SoundTraxx | 14 |
| Great Train Expo | 17 | Spring Creek Model Trains | 17 |
| Greenberg Show | 17 | Tichy Train Group | 45 |
| Great Model Railroads 2022 | 25 | Train Collector's Association | 14 |
| Halfpricehobby.com | 20 | Train Sets Only | 45 |
| Hattons Model Railways, Ltd. | 10-11 | Train World | 17 |
| Innovative Electronic Solutions LLC .. | 53 | Trains.com | 55 |
| JB Wheel Sets | 45 | Trainz.com | 25 |
| Kato USA, Inc. | 67 | Trix Trains | 16 |
| KR Models Ltd. | 7 | Wm. K. Walthers | 3 |
| LGB | 27 | Woodland Scenics | 15 |
| Loco-Boose Hobbies | 9 | Yankee Dabber | 20 |

The Display Advertiser Index is provided as a service to *Model Railroader* magazine readers. The magazine is not responsible for omissions or for typographical errors in names or page numbers.

Seven milestones in model railroading



Ordinary models such as well-detailed but plain-painted Athearn F7s rolling through lichen-covered ridges nonetheless added up to an authentic view of 1960s central Appalachian railroading on Allen McClelland's original HO Virginian & Ohio. Jim Boyd photo

Thinking back over the decades of our hobby, many of which I have had the pleasure of witnessing firsthand, I can think of more than a few key junctures where something significant happened. A few that come to mind are the founding of the National Model Railroad Association and the resulting standards and recommended practices; John Allen's gift for adding texture, hence realism, to models; the Globe (later Athearn) plastic F7; Kadee's magnetic coupler; flex track; command control – you get the idea.

Too often we wait too long to thank those who made such key contributions to scale model railroading to thank them publicly. So at the risk of ignoring other important contributors for the moment, I am going to cite one man who understood what the hobby needed to advance beyond building and operating scale models and instead *seeing them as railroads* that, for purely

practical reasons, needed to be smaller than their full-size counterparts. And he did something about it and shared his ideas with the rest of us. That man is W. Allen McClelland.

I met Allen at a National Model Railroad Association regional convention in September 1970. I had been editing *Railroad Model Craftsman* for just over a year by then and had already figured out that he was doing something extraordinary. We became instant “old friends.”

Jim Boyd joined me at Carstens Publications in 1971, and he shared my view that Allen was on to something. Allen's Virginian & Ohio was more realistic than any model railroad we could recall, yet he was using those same Athearn plastic F7s with a “dip blue” paint scheme – very much like what the Baltimore & Ohio was using, in fact. Clearly, he was striving for *plausibility over showmanship*.

By this time, I had enjoyed an operating session on the V&O and was aware of other huge advances that Allen had assembled, even invented, into one package that was essential to make the V&O a railroad rather than merely another attractive model. First, it was a *walkaround layout*. I'm not going to posit that he invented the concept. But he made it the bedrock of the entire point-to-point track plan with hidden staging at either end. It became known by his *beyond the basement* concept, where the goal was to convince crews that their trains were actually going from Here to There. In other words, seeing a model railroad as part of a continental rail network.

But for a walk-around plan to work, he needed walkaround

throttles. Moreover, while it's possible to use direct-current control with a workaround design, it's more realistic to use command control. When the V&O was starting to roll in the early 1960s, the only command control system was General Electric's Astrac. Its designers assumed one person would run up to five trains.

Allen installed each controller in a 120-volt outlet box attached to a heavy-duty coiled cable that plugged into a receptacle on the fascia. Presto: *Walkaround command control* was born. Model railroading leaped into the future in that instant!

The idea that trains went beyond the basement led to his increasingly sophisticated use of *staging yards*. He didn't knock it out of the park during his first at bat, as the west end terminated in a hidden staging loop with perhaps three tracks, and the east end terminated at visible Afton yard. But as the railroad was extended westward, it included a stub-ended staging yard in the dispatcher's office.

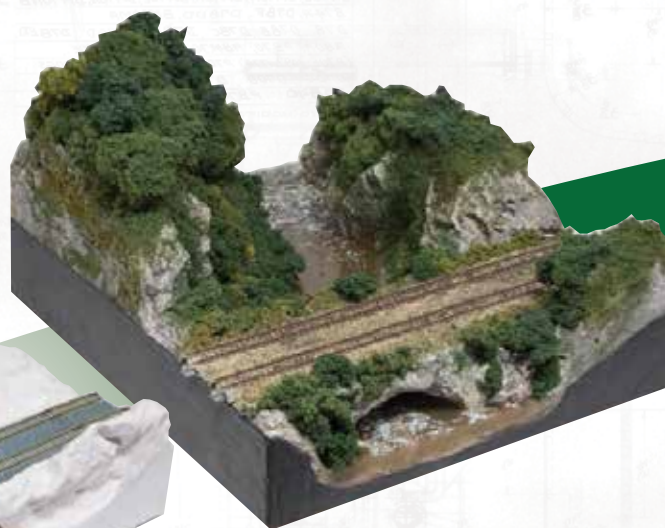
He also taught us about setting a benchmark, which he called *good enough*. We're free to set the bar at any height we're comfortable with, but then everything

from detailing to paperwork should reach that same level of quality and authenticity.

Those are seven remarkable contributions to the art and technique of scale model railroading. Allen's too modest to stake claim to those advances, so I'll do it for him here. **MR**



ALLEN'S VIRGINIAN & OHIO WAS MORE REALISTIC THAN ANY MODEL RAILROAD WE COULD RECALL.
— TONY



Module Building made easy thanks to Kato USA and Woodland!

Kato and Woodland® have teamed up to make it easier than ever for modelers to get into scenery and layout building, with SubTerrain T-Trak Kits!

Each SubTerrain T-Trak kit is made from lightweight, sculpt-able foam with wooden reinforcements that make them easy to assemble, transport, and shape into your desired form! Included in each set are a variety of sculpting aides, like a Woodland Shaper Sheet® and sculpting plaster, as well as all the tools you need to assemble the completed module kit – even glue, and of course, Kato UNITRACK!



Contents of K28885 Straight Track Kit (Unitrack not shown)

Modules are available in “Straight” and “Corner” variations, and are designed to T-Trak standards to allow multiple modules to “snap” together using the power of Kato’s Uni-Joiners. Thanks to the standardized dimensions, these kits can be connected to any existing or future T-Trak modules, whether they’re built using these kits or not!

... For more information, visit www.ntrak.org/T-TRAK

FIND THESE T-TRAK MODULE KITS AT YOUR LOCAL HOBBY SHOP

Item #K28885 SubTerrain Lightweight Layout System® T-Trak™ Straight Kit \$60 MSRP

Includes:

- SubTerrain Module Kit
- UNITRACK Concrete Tie Double Track 248mm (9 3/4") Straight Track Section
- UNITRACK Concrete Tie Double Track 62mm (2 7/16") Feeder Track
- 2 x Feeder Wires for T-Trak Specifications
- Instruction Booklet

Item #K28886 SubTerrain Lightweight Layout System® T-Trak™ Corner Kit \$60 MSRP

Includes:

- SubTerrain Module Kit
- UNITRACK Concrete Tie Double Track Superelevated Curve (12 3/8", 11") 45° Section
- UNITRACK Concrete Tie Double Track Easement Tracks (Right and Left) (12 3/8", 11")
- Instruction Booklet

See How-To's, product spotlights, and more at our youtube channel!
youtube.com/KatoUSAInc

Stay updated on all of the latest Kato News - Follow us on Twitter and Facebook!

@KatoUSAInc

/officialkatousainc

KATO
 PRECISION RAILROAD MODELS

100 Remington Road
 Schaumburg, IL 60173

www.katousa.com

BACHMANN®



1971 – 2021

The future rides with us

Announcing the Amtrak® Charger ALC-42 in HO Scale

Limited-Edition #301 Arriving This Fall



WOWSound®

AMTRAK #301
("Day 1" livery; illustration shown)
Item No. 68303



Amtrak has announced the much-anticipated 50th Anniversary paint schemes celebrating the inauguration of service in 1971. The brand-new ALC-42 Charger #301, currently under construction and expected to enter service later in 2021, will wear a celebratory "Day 1" livery.

Bachmann is pleased to announce the upcoming release of the ALC-42 Charger in HO scale. ***This highly detailed, limited-production model will feature the Day 1 livery and will be available in limited quantities.*** Features will include a robust DCC WOWSound® audio package from TCS that accurately reproduces all the prototype's sounds. Every sound feature was field recorded by TCS and Bachmann.

Charge into your local hobby retailer to check out their preorder options today!

Additional features include:

- DCC sound-equipped for sound, speed, direction, and lighting control
- TCS true CD-quality audio in 16-bit 44,100Hz sound
- Keep-Alive® device that keeps your engine running during power interruptions due to dirty track or loss of electrical contact
- voice-guided Audio Assist® programming tool for easy set-up of almost all decoder functionality
- dual-mode NMRA-compliant decoder
- directional headlights
- interior corridor work lights
- marker lights
- steady/alternate flashing ditch lights
- die-cast frame
- separately applied windshield wipers, grab irons and detail parts
- performs best on 22" radius curves or greater



Arriving Fall 2021
MSRP \$469.00 each
Visit shop.bachmanntrains.com for more information

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