

# **GAUGE™** **RAIL- ROADING**

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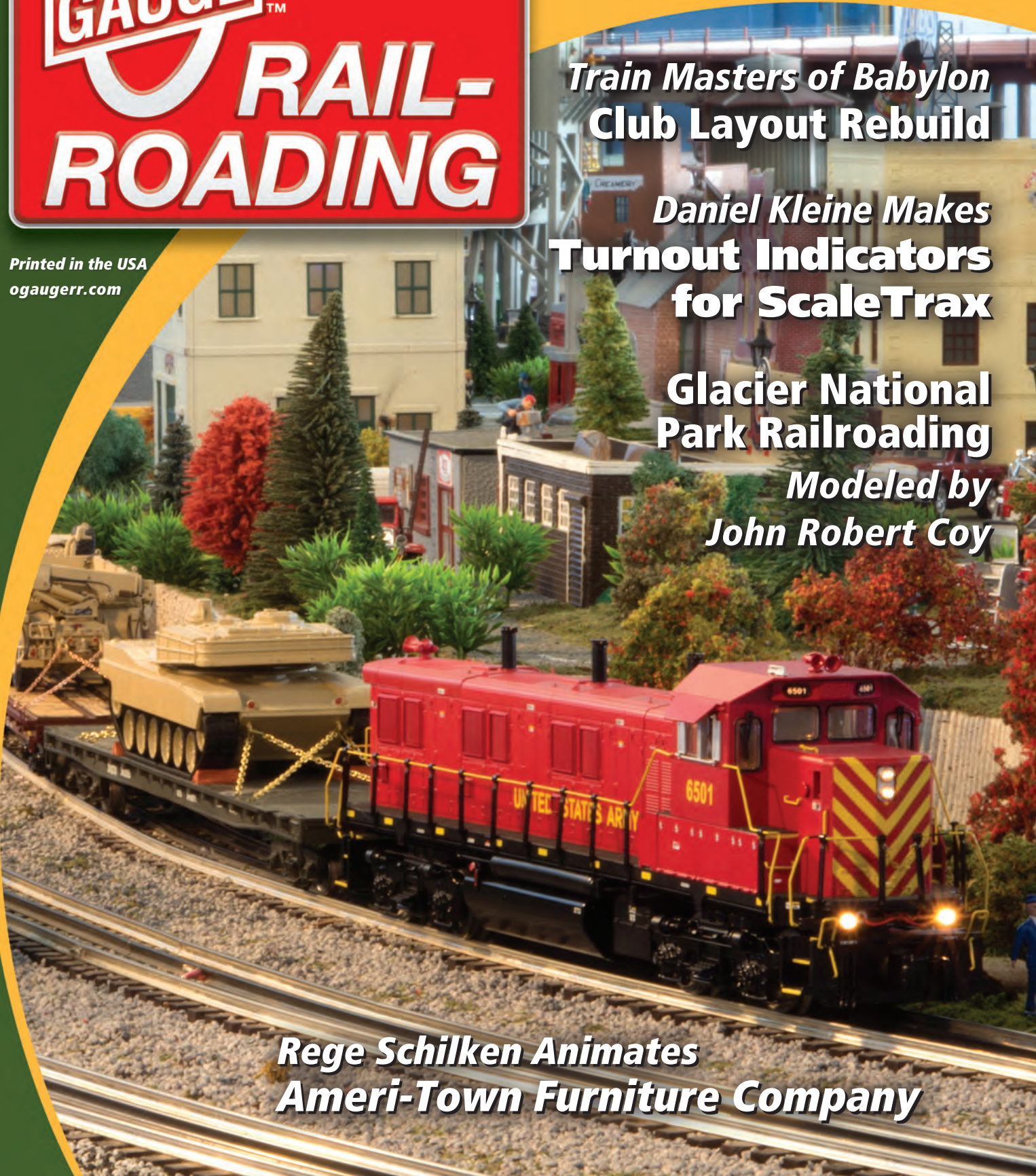
*Train Masters of Babylon  
Club Layout Rebuild*

*Daniel Kleine Makes  
Turnout Indicators  
for ScaleTrax*

*Glacier National  
Park Railroading*

*Modeled by  
John Robert Coy*

*Rege Schilken Animates  
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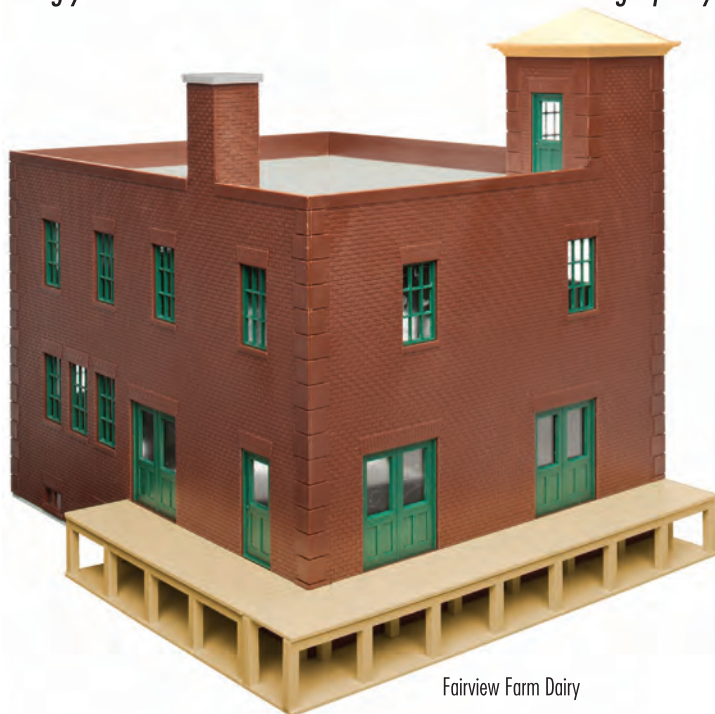




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Riverton Station



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# Why Made in America STILL Works

Those of you who read our open letter published in the various magazines in the past may be skeptical of why products made in America are a better idea. While many of you know that our main competitor, Atlas, has been having little success getting track and switches from their Chinese suppliers over the last year and a half (as of Feb 2015) there are other reasons as well. Here at Ross Custom we had a price increase on Jan 1st 2015, our first increase in nearly five years. I noticed that even though Atlas hasn't been available the prices in their online store keep going up and up. I thought I'd show you a comparison of regular retail prices as I write this today, of Ross Custom made in America versus Atlas made in China. Note we use switch machines made by Z-Stuff for Trains on our remotes that are made in Taiwan.

## ROSS MADE IN AMERICA

031 REMOTE.....	\$89.95
042 REMOTE.....	\$89.95
054 REMOTE.....	\$89.95
064 REMOTE.....	\$89.95
072 REMOTE.....	\$89.95
080 REMOTE.....	\$94.95
096 REMOTE.....	\$99.95
054/031 CURVED REMOTE.....	\$99.95
072/054 CURVED REMOTE.....	\$89.95
096/072 CURVED REMOTE.....	\$114.95
0120/096 CURVED REMOTE .....	\$134.95
031 WYE REMOTE .....	\$94.95
042 WYE REMOTE .....	\$94.95
054 WYE REMOTE .....	\$94.95
072 WYE REMOTE .....	\$94.95
11 DEGREE WYE REMOTE.....	\$94.95
22 DEGREE WYE REMOTE.....	\$94.95
#4 REMOTE.....	\$89.95
#5 REMOTE.....	\$89.95
#6 REMOTE.....	\$99.95
#8 REMOTE.....	\$114.95
#10 REMOTE.....	\$144.95
THREE WAY REMOTE .....	\$299.95
FOUR WAY REMOTE .....	\$274.95
DOUBLE SLIP SWITCH .....	\$249.95
#5 DOUBLE CROSSOVER.....	\$479.95
#8 DOUBLE CROSSOVER.....	\$679.95
#4 YARD CROSSOVER.....	\$209.95

## TRACK

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042 .....	\$7.99
054 .....	\$6.99
064 .....	\$6.99
072 .....	\$6.99
080 .....	\$7.49
084 .....	\$7.99
092 .....	\$7.99
096 .....	\$8.49
0100 .....	\$8.99
0104 .....	\$8.99
0112 .....	\$9.49
0120 .....	\$9.99
0128 .....	\$10.99
10 INCH STRAIGHT .....	\$5.99
29" STRAIGHT .....	\$12.99
GARGRAVES FLEX TRACK 37"....	\$8.95

## ATLAS MADE IN CHINA

036 REMOTE.....	\$104.95
045 REMOTE.....	\$104.95
054 REMOTE.....	\$104.95
NOT MADE	
072 REMOTE.....	\$104.95
NOT MADE	
NOT MADE	
NOT MADE	
072/054 CURVED REMOTE.....	\$132.95 WOW!
NOT MADE	
NOT MADE	
NOT MADE	
NOT MADE	
072 REMOTE.....	\$104.95
NOT MADE	
NOT MADE	
NOT MADE	
#5 REMOTE.....	\$129.95 WOW!
NOT MADE	
#8 REMOTE.....	\$132.95
NOT MADE	
NOT MADE	
NOT MADE	
DOUBLE SLIP SWITCH....	\$264.95
NOT MADE	
NOT MADE	
NOT MADE	

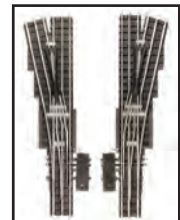
027.....	\$7.95
036.....	\$6.75
045.....	\$7.95
054.....	\$6.75
063.....	\$8.95
072.....	\$9.95 WOW!
081.....	\$11.95 WOW!
NOT MADE	
090.....	\$14.50 WOW!
099.....	\$15.95 WOW!
NOT MADE	
NOT MADE	
0108.....	\$18.95 WOW!
NOT MADE	
NOT MADE	
10 INCH STRAIGHT....	\$6.75
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40" FLEX TRACK....	\$26.50 WOW REALLY?? YEP!!



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# Contents



## PRODUCT REVIEWS

23 **LionChief Plus  
EMD FTs**



33 **Williams by Bachmann  
Western Pacific NW2**



## FEATURES

40 **New Lease on Life—TMB Train Club**  
Stephen Scagnelli



50 **Simple and Reliable Route Indicators for  
ScaleTrax Turnouts**  
Daniel Kleine



57 **Along the 0 Gauge Glacier Line**  
John Robert Coy

65 **Create an Active Business**  
Rege Schilken



# DIVISIONS

<b>Editor's Corner</b>	Pride and Inspiration	6
<b>Announcements</b>	News and Press Releases	11
<b>Product Showcase</b>	New Item Announcements	13
<b>Readers' Rails</b>	Your Trains and Layouts	18
<b>Collector's Gallery</b>	The Century Club 726 Berkshire: A Swing and a Miss	73
<b>Backshop</b>	Building a Layout: Reliable Remote Uncoupling	83
<b>The Helper Engine</b>	Most Modeled	92
<b>Scheduled Meets</b>	Shows to Attend	95
<b>Dealer Roundhouse</b>	O Gauge Shops	96
<b>End of Track</b>	Cartoon	98
<b>Advertiser Index</b>	Advertisers in This Issue	98



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Photo by Stephen Scagnelli

## ON THE COVER

When members of the Train Masters of Babylon (TMB) Model Train Club of Long Island received notice early in 2012 that the lease on their rented space would not be renewed, they could easily have thrown up their hands in despair and simply disbanded. Instead, after learning that they were going to be displaced from their 3,000-square-foot facility, they scoured the area for new quarters and eventually signed a lease for a larger 4,400-square-foot space in Farmingdale, New York. In the three or so years that have elapsed, the 70-member group has accomplished a whole lot, as you'll see in this issue.





## Pride and Inspiration



Photo courtesy of Edward R. Emanuel Collection

Back in the mid to late 1990s, in what now seems like a lifetime ago, I wrote a regularly appearing series of features about toy trains and model railroading for just about every issue of *Vintage Rails* magazine. *Vintage Rails* was a quarterly publication from 1995 to 1999 that focused primarily on the historical aspects of prototype railroading. I still regard it as the finest publication of its type produced to date. The magazine was published by Pentrex, Inc., perhaps best known for its extensive line of excellent railroad-related

videos, and the editor was John Gruber, a founder of the Center for Railroad Photography & Art and past editor of its journal, *Railroad Heritage*.

In an article written by John for the spring 1997 issue of *Vintage Rails*—the topic was railroad company photography—a photo appeared with the following caption:

“Lionel contributed to the company [The Milwaukee Road] photography legacy. The toy train manufacturer posed Edward

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R. Emanuel, then a small boy, with a Milwaukee Road locomotive engineer at the railroad's Tacoma, Washington, roundhouse about 1930."

That image, which appears with this column, features a prototype Milwaukee Road bipolar electric and a diminutive Lionel O gauge model of a roughly similar electric, has remained a personal favorite of mine because it so closely resembles, in concept at least, Lionel's 1935 consumer catalog cover.

Although the 1935 Lionel cover featured a streamlined steam locomotive prototype (a Milwaukee Road class A Hiawatha) and Lionel's model of the same engine, it, like the company photo with Mr. Emanuel, also depicts an adult engineer admiring the Lionel model as it is being held by the boy. And as a capper and perhaps not just coincidentally, both Mr. Emanuel's photo and the Lionel cover image are examples related to the same Class One railroad.

Shortly after its original publication in *Vintage Rails*, I received a large flat envelope from John Gruber containing an original 8x10 black-and-white glossy print of the photo along with a letter from Mr. Emanuel (quoted here in part).

"Thanks very much for including my picture in the summer issue of *Vintage Rails*. It is really neat to realize that now in my dotage, I have actually made the pages of a national magazine. My family is very much impressed.


"Your mention of a check in payment for the picture is somewhat embarrassing for me, while I am not unappreciative. It was never my intention to expect payment for it.

"Under the circumstances, please accept the copies of the picture for you and Mr. Miller with my compliments."



Photo courtesy of John Holtmann, HSL Ltd.

Also in the envelope were several of Mr. Emanuel's business cards, which amply demonstrate that his interest in trains and railroading was not confined to his boyhood years and his Lionel model. In his adult career he served as an agent and general agent with The Milwaukee Road and also as a general freight agent with the Seattle & North Coast Railroad.

I'm not certain of Mr. Emanuel's current status or whereabouts (he would likely be in his 90s today), but when this issue of *OGR* appears, I do plan to send a copy of the magazine to the address listed in the letterhead of his correspondence. And if that fails to reach his hands, an Internet search I conducted revealed two relatives of his who may still be reachable. I believe he or his heirs would be proud and impressed once again. 



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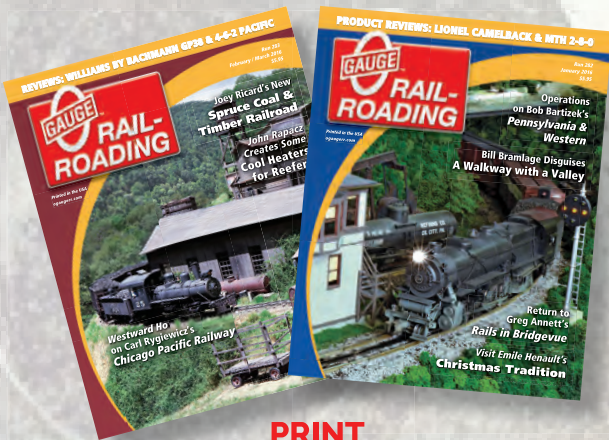
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Larry Harrington

## Bachmann Trains Promotes Larry Harrington to Vice President of Product Development

Larry Harrington, a well-known and popular figure in the O gauge community, has been promoted to the post of vice president of Product Development at Bachmann Trains. Before becoming Bachmann's general manager of Product Development in 2014, Larry served as Bachmann's general manager of the firm's O Gauge Division, starting in 2007. Prior to working with Bachmann Trains, Larry was general manager at Williams Electric Trains in Columbia, Maryland. Larry has worked continuously in the model railroad industry since 1990 and has been an O gauge 3-rail hobbyist since the mid-1970s. Regarding his promotion, Larry noted, "I am thankful for the opportunity to take on new responsibilities within the company. I will use my experience and love of trains to continue designing and making the quality products for which Bachmann Trains is known."

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- |  |  |
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| ◆ Reading Terminal Market & 30th Street Station. | ◆ Merchants Square Model Train Exhibit.  |
| ◆ Valley Forge National Historic Park.           | ◆ Mack Trucks Historical Museum.         |
| ◆ Yuengling Brewery Tour and Roadside America.   | ◆ American Treasure Tour.                |
| ◆ Simeone Foundation Racing Car Museum.          | ◆ Visits to 11 Home Layouts in the area. |

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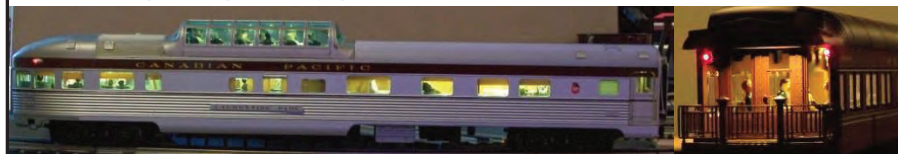
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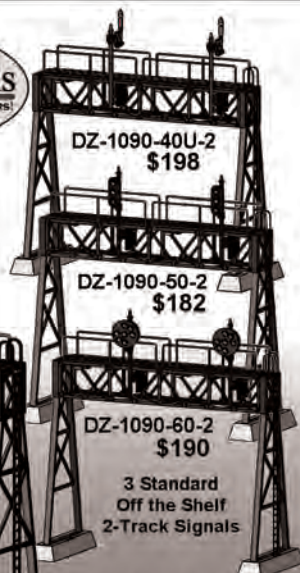


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# Product Showcase



## Steam Killer

In the 3-rail O gauge train world, the F3 has been the dominant model of the four-axle carbody diesel. Only during the past few years have models of the original four-axle carbody freight diesel come into the picture from Lionel: the Electro-Motive FT. In real railroading, the FTs proved that diesels could do an equal or better job than steam at hauling freight trains on the main lines of America, and at less cost. The new LionChief Plus models of the FTs are offered in A-A powered and dummy pairs at \$499.99 with matching powered B units also available at \$279.99. Road names in this release are Atlantic Coast Line (shown), Erie, Santa Fe, and Rio Grande. Our review of the Rio Grande FTs is also in this issue.



## Tanker Sports a Bow Tie

The Canadian Toy Train Association has announced that Atlas O, LLC is manufacturing a prototypical single-dome 8,000-gallon tank car in British American Oil Company livery with the “bow tie” logo. This limited-production O gauge tank car comes in four numbers in both 2-rail and 3-rail. Production is scheduled for summer 2016. This is the third car in the CTTA Canadian tank car series; the first two cars are sold out. For ordering information, e-mail [mlhorne@shaw.ca](mailto:mlhorne@shaw.ca) or call 604-560-4028.



## Enjoy a Pasta Feast at Emilio's

New to the Woodland Scenics Built-&-Ready Landmark Structures line is Emilio's Italian Restaurant. Architecturally accurate and hand painted, O gauge modelers will appreciate every aspect of this gussied-up brick building, which features windows accented with red stained glass, an outdoor menu board and seating, and a printed interior. Also includes four Just Plug LED lights (two warm whites for a lighted interior and two warm yellows for the exterior entryway). Approximate footprint is 7-1/2" wide x 8-1/4" deep x 7-3/4" high. MSRP is \$149.99. Item JP5855, Emilio's Italian Restaurant, and more Built-&-Ready Landmark Structures are available at your local hobby shop. For more information and for other products, visit [www.WoodlandScenics.com](http://www.WoodlandScenics.com), contact Sales and Customer Service at 573-346-5555, or send an e-mail to [sales@woodlandscenics.com](mailto:sales@woodlandscenics.com).



### Three Types of "Buses"

*For the traveler:* American Heritage Models (AHM) is filling the void in the market of highly detailed O gauge appropriate buses with a 1:50 scale 1948 ACF-Brill IC-41 Southeastern Greyhound Lines intercity coach. This bus features finely detailed photo-etched parts; jewel headlights, taillights, and marker lights; chrome accents; individual mirrors; and authentic tampon-printed graphics. With each bus, AHM also includes a full-size replica of a 1949 Southeastern Greyhound Lines bus timetable re-created from an original timetable. The 1948 ACF-Brill IC-41 Southeastern Greyhound Lines coach with a destination of Atlanta (AHM-ACF-01) is available now. Priced at \$119.95 plus shipping and handling, these finely detailed replicas can be found at Diecast Direct, 3005 Old Lawrenceburg Rd., Frankfort, KY 40601. Phone 800-718-1866 or order online at [www.diecastdirect.com](http://www.diecastdirect.com).

*For the not so fortunate:* O gauge hobbyists have long expressed interest in seeing a realistic ambulance model that isn't in the \$100 price range. Diecast Direct took this to heart and has developed two different ambulances and three different hearse variations based on a 1937 Studebaker prototype. With an eye toward period-correct realism, research from multiple sources yielded photos and information depicting the colors and markings of similar era-appropriate vehicles. The hearse model also comes complete with full side glass, which also allowed for designs to be printed that create the effect of etched glass. One ambulance is all white (pictured), and the second sports a red and white color combination. The hearses, with opening rear door, are available in solid silver (pictured), maroon, or white. These vehicles are part of Diecast Direct's American Heritage Series and are expected to be available by the cover date of this issue. The 1937 Studebaker hearses are \$29.95 each, and the 1937 Studebaker ambulances are \$31.95 each. Order direct at [www.diecastdirect.com](http://www.diecastdirect.com).



### Pennsy Icon

The iconic GG1 scale electric returns to the Williams by Bachmann O gauge 3-rail lineup complete with the exclusive True Blast Plus sound package including electric locomotive sounds, horn, and bell. Measuring over 20" long, this detailed model is packed with features including six-wheel power trucks with traction tires, dual motors with flywheel coasting action, all-metal gears, and twin operating pantographs. The GG1 is available in four classic PRR paint schemes: Green 5 Stripe #4859 (No. 41850), Tuscan 5 Stripe #4909 (No. 41851), Green Single Stripe #4885 (No. 41852), and Silver Single Stripe #4866 (No. 41853). MSRP is \$699.95. Available at your Williams by Bachmann dealer or at [www.bachmanntrains.com](http://www.bachmanntrains.com).

### Art Deco on the Air

This is the Radio City, a radio station building that evokes the Art Deco style so prevalent during the 1930s and 1940s. This O scale structure from River Leaf Models has a very convenient footprint that measures 5" wide, 5" deep, and 8" tall. It comes complete with two signs that can be customized by the hobbyist. Cost is \$74.95 plus shipping. To order, contact Andre Garcia at 561-374 4847 or visit the River Leaf Models website at [www.riverleafmodels.us](http://www.riverleafmodels.us).



## New DVDs from TM



TM is proud to announce the first in a series of instructional videos covering the new electronic control systems that have raised the bar for operating model trains. In Part 1, we show how easy Lionel's TMCC and LEGACY are to install and use and how they take you to an entirely new dimension of fun and realism. 60 min  
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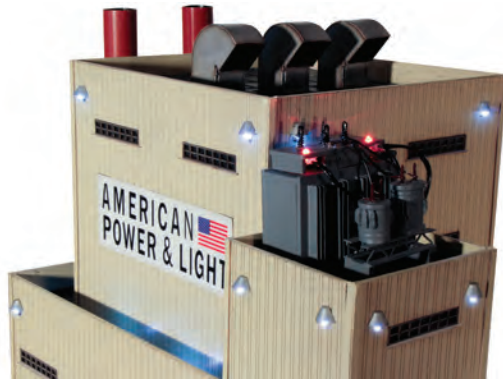
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## Imposing Power

Standing nearly 15" tall, the American Power & Light building from Menards makes an impressive addition to any O gauge layout. Specifically designed to overlap O gauge tracks with ease, this lit and assembled model actually offers a modest footprint measuring 9-1/2" wide x 14-1/2" long x 14-3/4" high. A built-in tunnel adds plenty of play value, allowing a train to pass through to get to its next destination or to stop and unload coal inside the building. The structure is outfitted with over 20 brightly glowing lights with each side of the building illuminated from top to bottom. Also includes an animated American Power & Light sign featuring numerous lighting patterns. Other features include a transformer with two red LED lights, realistic-looking roof vents, and a handful of safety signs. Can be powered via a 4.5-volt AC adaptor (sold separately). The full line of Menards O gauge items can be seen at [www.menards.com](http://www.menards.com), and select items are available at Menards stores.



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20-98975 New Haven O Scale Crane.....	59.95
20-3360c Erie 2-Bay Offset Hopper.....	39.95

### MTH 'RAILKING' STEAM

30-1143-0 NYC Empire Hudson-whistle.....	175.00
30-1166-1 NY&OW 4-8-2 L3 Mohawk.....	295.00
30-1168-1 PA 4-8-2 M1A Mountain w/2.0.....	295.00
30-1202-1 Jersey Central 0-6-0 B6 2.0.....	250.00
30-1314-1 Erie 2-8-4 Berkshire w/2.0.....	349.95
30-1379-1 Jersey Central 0-6-0 w/2.0.....	275.00
30-1381-1 PA 0-6-0 Imperial 2.0.....	295.00
30-1384-1 Southern Imperial 0-6-0 (LN).....	275.00
30-1611-1 New Haven 0-8-0 w/P-3.0.....	319.95
30-1653-1 NY&OW L3 Mohawk w/3.0.....	374.95
30-1659-1 PA Imperial 0-6-0 w/P-3.0.....	374.95
30-1684-1 U.P. Big Boy Imperial w/3.0.....	674.95
<b>MTH 'RAILKING' DIESEL</b>	
30-2139-0 C&NW NW-2 Switcher whom.....	99.95
30-2182-0 NYC Budd Cars w/whom.....	125.00
30-2210-1 PA Aero Train Set w/P-2.0.....	395.00
30-2242-1 /3NYC Alco PA ABA's w/2.0.....	295.00
30-2244-1 PA Alco 'AA' w/2.0 (oper).....	245.00
30-2251-3 Union Pacific RS-27 (Non-Pwd).....	109.95
30-2254-1 Penna RS-27 w/2.0 (oper).....	199.95
30-2272-0 ACL E-8 'AA' w/Loco Sounds.....	219.95
30-2284-3 Atlantic Coast Line E-3 B-unit.....	59.95
30-2312-1 Penna F-3 ABA's w/2.0.....	439.95
30-2322-3 B&O SD-9 Non-Powered.....	109.95
30-2384-1 NYC F-3 ABA's w/Proto 2.0.....	439.95
30-2428-3 Illinois Central GP-9 (NP).....	129.95
30-2464-1 Penna SD-9 w/P-2.0 (oper).....	165.00
30-2464-3 Penna SD-9 Non-Powered (used).....	85.00
30-2528-1 NYC E-33 Rectifier w/P-2.0.....	195.00
30-2540-1 PA Tuscan GG-1 2.0 (LN).....	245.00
30-2617-1 PRR FM Trainmaster 2.0 (u).....	165.00
30-2647-3 Lacka MU 2-Car Non-Powered.....	145.00
30-2884-1 /3 Frisco SW-9 & Calf Unit.....	295.00
<b>RAILKING PASSENGER CARS</b>	
30-6020 -24 NYC Dreyfuss SL 4/Cars.....	149.95
30-6030 to 34 UP SL 6-Car Set.....	195.00
30-6091 Milw Road SL Combine/Diner.....	65.00
30-6098 D&H Steamlined 4-Car Set.....	144.95
30-6104 Penna. SL 4-Car Set (used).....	125.00
30-6105 Santa Fe SL Combine/Diner.....	65.00
30-6107 /08 U.P. 49ers SL 6/Car Set.....	199.95
30-6113 NYC Empire State SL 4/Cars.....	149.95
30-6120 Santa Fe SL 4/Car Set.....	149.95
30-6131 New Haven SL 4/Car Set.....	129.95
30-6256 MTH Madison 4/Car Set.....	129.95
30-6258 J.C. Madison 4/Cars (used).....	129.95
30-6269 B&O Madison Combine/Diner.....	59.95
30-6415 Penna Overton 3-Car Set.....	109.95
30-6789 Penna 60' Streamlined Coach.....	39.95
30-67033 /34 Penna 60' SL 6/Car Set (LN).....	199.95
30-67035 60' Streamlined Coach.....	39.95
30-67063 N&W 60' Streamlined Coach.....	39.95
30-67157 Penna 60' SL Full Vista Dome.....	44.95
30-6726 South Pacific 60' Full Vista Dome.....	44.95
30-6730 Canadian Pacific 60' SL 4/Cars.....	159.95
30-6732 Canadian Pacific 60' SL Coach.....	44.95
30-6741 /42/43 EL 60' SL 7/Car Set.....	245.00
30-67368 UP 60' SL 6-Car Set (LN).....	159.95
30-67583 UP 60' SL Full Vista Dome.....	47.95
30-69081 Pullman 60' Madison Coach.....	39.95
30-6954 N&W 60' Madison Coach.....	39.95
30-6966 Penna 60' Madison Coach.....	39.95
30-6979 Milw. Road 60' Madison 4/Car.....	175.00

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30-2123	D&RG Rotary Snow Plow.....	44.95
30-4225c	Union Pacific B/W Caboose.....	44.95
30-7077	BNSF 3-Car Set F/C w/trailers.....	99.95
30-7078	UP 3 Car Set F/C w/trailers.....	99.95
30-7016b	Penna or 30-7577 PA Hop.....	29.95
30-7016a	or 30-7448 PA Modern 50' b/c.....	29.95
30-7213	B&O or 7214 C&O Gondola w/Junk.....	29.95
30-7217	/18 NYC or PA Heavy Duty Plow.....	30.95
30-72106	RFP& Gondola w/cover.....	34.95
30-72108	NYC Gondola w/cover.....	34.95
30-72109	US Army Gondola w/cover.....	34.95
30-72219	Caterpillar Caboose.....	39.95
30-7249	UP Gondola w/LCL containers.....	30.95
30-7264	Chessie Gon w/LCL containers.....	32.95
30-7324	Baker Chocolate Tank Car.....	30.00
30-7401	Nabisco Oreo Cookie Boxcar.....	49.95
30-74014	Window B/c w/2VW Bugs.....	44.95
30-74016	Window B/c '57 Chevy Nomads.....	44.95
30-74030	North. Pacific 50' Modern B/C.....	34.95
30-74067	BNSF 50' Modern Boxcar.....	34.95
30-74155	PA Round Roof B/C w/Generator.....	34.95
30-74159	Harley Davidson Boxcar.....	39.95
30-7438	Reading Crusader Boxcar.....	34.95
30-74412	Western Maryland Boxcar.....	24.95
30-74428	Pennsylvania Hi-Cube Boxcar.....	39.95
30-74704	PH&D 50' Modern Boxcar.....	34.95
30-74747	Conrail NS Her 40'Hi-Cube B/C.....	34.95
30-7507	C&O or 30-7509 UP Hopper.....	24.95
30-7501	NS or 35-7512 NP Hopper.....	24.95
30-7513	or 30-7517 NYC Hopper.....	29.95
30-75130	Maryland & Penna Hopper.....	29.95
30-75145	Southern Hopper.....	39.95
30-7522	Pennsylvania Ore Car.....	30.95
30-7532	UP Airslide Hopper Car.....	29.95
30-7539	Dad's Dog Food Hopper Car.....	34.95
30-7541	C&NW Cylindrical Hopper Car.....	34.95
30-7544	or 30-75111 Virginian Hopper.....	29.95
30-75449	Grand Truck Cylindrical Hopper.....	34.95
30-75451	Trona 4-Bay Cylindrical Hopper.....	34.95
30-75452	C&O 4-Bay Hopper.....	34.95
30-75430	Lacka Phoebe Snow Ore Car.....	30.95
30-7711	Norfolk Southern B/W Caboose.....	29.95
30-7715	Pennsylvania Woodside Caboose.....	29.95
30-7726	NYC Work Caboose.....	34.95
30-7735	NASA B/W Caboose.....	44.95
30-7626	Penna Flat Car w/Trailer.....	29.95
30-7627	Florida East Coast FC w/trailer.....	29.95
30-7678	Speedway Flatcar w/trailer.....	29.95
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30-78053	Playmate Premium Beer Reefer.....	29.95
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30-79007	Erie Heavy Duty Snowplow.....	30.95
30-79351	New Haven Crane Tender.....	24.95
30-79400	Lynn Island Engineering Car.....	34.95

### How would you like to show your trains and layout to your fellow O gauge railroaders?

You can take your photos using a digital camera capable of at least 3.3 megapixels set to the best JPEG image. Please send only original, unedited JPEG files. Color prints of 4"x 6" or larger are also fine. Be sure to include brief notes about the trains in the photos and any other information you'd like to share, such as the size of your layout, unique scenery, make of track, power supply or control system, and so forth.

We are looking for quality photography with good lighting and clear images; however, on-camera flash photos are generally not acceptable. Send your photo, CD, or prints to Readers' Rails, 33 Sheridan Road, Poland, Ohio 44514-1680. Or you can e-mail your image and text files to [editor@ogaugerr.com](mailto:editor@ogaugerr.com).



### *Traffic Through Imogene*

There's a good mix of transportation modes present in this scene of downtown Imogene on Sam Dillon's Pittsburgh & West Virginia railroad. Traversing the newly constructed Furmont Avenue, a vintage Brill car on the municipal streetcar line is seen rounding a curve just in time for riders to view the N&W freight with a Y6b at its head end. At left, a driver who may have been distracted by the railroad activity or the new traffic signal swerved off the boulevard unfortunately knocking down Imogene's oldest tree, which dated back to the town's founding in 1854. But Ernie's Towing, Plowing, Lawn Care & Pet Boarding will have that car out of the ditch in no time.





### ***Sweeping Perspective***

Gary Figi shot this panoramic view of his O gauge shelf layout. The layout is 24' along his man cave wall. Gary took this photo with a Samsung Galaxy 6 smartphone. The camera in this phone, like those in many smartphones, will take a series of images and put them together into one jpeg file. It also has the capability of providing a fisheye perspective. Most iPhones and smart devices have these features, so grab your smart device and give it a try.

### ***Packed with Power***

An impressive pool of motive power is lined up for assignment on Patrick Whitehead's Freestate Junction 3-rail O gauge railroad. This scene is outside Patsburg, the fictitious town that is the railroad's headquarters. His friend Randolph Harrison took this photo. We plan to publish an extensive visual and descriptive tour of Pat's layout in a future issue.



### ***Morning Run***

This Pennsy passenger train departed the city seen in the background promptly at 7 a.m., and if the 7:12 time showing on that advertising sign is correct, the streamlined consist has just about completed its run through the outer suburbs as it heads for new destinations on the 3-rail O gauge layout built by Michael Matus.



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20-20429-1	Electro Motive SD70ACe Diesel w/3.0 (yellow) .....	\$449.95
20-20483-1	P&LE GP38-2 Diesel #2057 .....	\$429.95
20-20485-1	Conrail GP38-2 Diesel #7776 .....	\$429.95
20-20486-1	P&LE GP38-2 Diesel #2057 .....	\$429.95
20-20488-1	Missouri Pacific GP38-2 Diesel #2131 .....	\$429.95
20-20490-1	B&O GP-30 Diesel w/3.0 #6934 .....	\$429.95
20-20496-1	Gulf Mobile & Ohio GP-30 w/3.0 #519 .....	\$439.95
20-20497-1	Gulf Mobile & Ohio GP-30 w/3.0 #521 .....	\$439.95
20-20498-1	EMD Demo GP-30 Diesel w/3.0 #1962 .....	\$429.95
20-20499-1	Canadian National ES44AC Diesel #2805 .....	\$429.95
20-20501-1	Florida East Coast ES44AC Diesel #803 .....	\$439.95
20-20503-1	Norfolk Southern ES44AC Diesel #8046 .....	\$439.95
20-20505-1	Pennsylvania ES44AC Diesel #8102 .....	\$439.95
20-20507-1	GE Hybrid Evolution ES44AC Diesel #2015 .....	\$479.95
20-20508-1	GE Next Fuel ES44AC Diesel #3000 .....	\$439.95
20-20510-1	BNSF ES44AC Diesel #7695 .....	\$439.95
20-20512-1	Iowa Interstate ES44AC Diesel #516 .....	\$439.95
20-20532-1	SOOLine GP40 Diesel w/3.0 #735 .....	\$439.95
20-20533-1	SOOLine GP40 Diesel w/3.0 #733 .....	\$439.95
20-20534-1	Ohio Central GP40 Diesel w/3.0 #3262 .....	\$439.95
20-20535-1	Ohio Central GP40 Diesel w/3.0 #3253 .....	\$439.95
20-20558-1/3&59-3	Santa Fe F-7 ABBA Diesel w/3.0 .....	\$1,100.00
20-3564-1	Pennsylvania Reading Seashore 2-8-0 H10s w/3.0 .....	\$799.95
20-3598-1	Pennsylvania 0-4-0 A5 Switcher w/3.0 #94 .....	\$629.95
20-3599-1	B&O 0-4-0 A5 Switcher w/3.0 #99 .....	\$629.95
20-3600-1	Union Pacific 0-4-0 A5 Switcher w/3.0 #289 .....	\$629.95
20-3601-1	Great Northern 0-4-0 A5 Switcher w/3.0 #192 .....	\$629.95
20-3602-1	Milwaukee Rd 4-6-2 USRA Hvy Steam w/3.0 (Chippewa) .....	\$999.95
20-3603-1	C&O 4-6-2 USRA Heavy Steam w/3.0 #407 .....	\$999.95
20-3615-1	N&W 2-6-6-4 Class A Steam Engine w/3.0 #1238 .....	\$1,399.95
20-3616-1	N&W 2-6-6-4 Class A Steam Engine w/3.0 #1240 .....	\$1,399.95
20-3617-1	N&W 2-6-6-4 Class A Steam Engine w/3.0 #1218 .....	\$1,399.95
20-3618-1	N&W 2-6-6-4 Class A Steam Engine w/3.0 #1225 .....	\$1,399.95

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L81021	Boston & Maine Paul Revere GP-9 Set		374.95
L81023	Jersey Central Yard Boss 0-4-0 Set		374.95
L81025	Pocono Berkshire Set	Ltd Qty	359.95
L81030	Union Pacific Gold Coast 0-8-0 Flyer Set		324.95

### VISION LINE GG1 (BTO)

L83165	Pennsy GG1 #4899 - Riveted	(BTO)	\$1189.95
L83166	Pennsy GG1 #4800 - Riveted	(BTO)	1189.95
L82749	Pennsy GG1 #4935	(BTO)	1189.95
L82751	Pennsy GG1 #4913	(BTO)	1189.95
L82755	Amtrak® GG1 #926	(BTO)	1189.95

### VISION LINE REEFERS (BTO)

L83545	PFE Reefers 3-Pack (1 Operating)		\$224.95
L83549	SFRD Reefer 3-Pack (1 Operating)		224.95

### LIONELMASTER STEAM LOCOMOTIVES (BTO)

L82695	UP Challenger #3977 (Grey)	Ltd Qty (BTO)	\$839.95
L82697	Rio Grande Challenger #3803	Ltd Qty (BTO)	839.95
L82698	WM Challenger #1201	Ltd Qty (BTO)	839.95
L82206	N&W #1218 Class A	(BTO)	839.95
L82245	B&O #7620 Class A	(BTO)	839.95
L82247	Santa Fe #1798 Class A	(BTO)	839.95

### LEGACY STEAM LOCOMOTIVES

L81184	P&WV Heavy Mikado #1152 (L)	SALE	\$939.95
L81186	Frisco 2-8-2 Heavy Mikado #4126 (L)	SALE	939.95
L81188	NYC 2-8-2 Heavy Mikado #9506 (L)	SALE	939.95
L81191	Erie Heavy Mikado #3207 (L)	(BTO)	1099.95
L82180	Nickel Plate 2-8-0 #458 (L)	(BTO)	669.95
L82181	Western Maryland 2-8-0 #734 (L)	(BTO)	669.95
L82534	NYC Streamlined J3a #5429 (L) Ltd Qty	(BTO)	1259.95
L82536	NYC Streamlined J3a #5429 (PT Tender)	(BTO)	1259.95
L82537	NYC Streamlined J3a #5426 (J3 Tender)	(BTO)	1259.95
L82311	Polar Railroad 0-6-0 #2515 (L) Ltd Qty	(BTO)	589.95
L82806	Union Pacific FEF-3 #844 (L)	(BTO)	1429.95
L82807	Union Pacific FEF-3 #844 Greyhound (L)	(BTO)	1429.95
L82808	Union Pacific FEF-3 #8444 (L)	(BTO)	1429.95
L82810	Union Pacific FEF-3 #835 Greyhound (L)	(BTO)	1429.95
L82767	C&O #1601 Allegheny (L)	(BTO)	1849.95
L82770	Virginian #906 Allegheny (L)	(BTO)	1849.95
L83193	SP Lines #4449 GS-4 (L)	(BTO)	1429.95
Small lettering on Tender			
L83194	SP Lines #4449 GS-4 (L)	(BTO)	1429.95
Large lettering on Tender			

L83197	American Freedom Train #4449 GS-4 (L)	(BTO)	1429.95
L83198	Reading #2100 T1 (L)	(BTO)	1429.95
L83202	American Freedom Train #1 T1 (L)	(BTO)	1429.95
L83204	B&O #1695 0-8-0 (L)	(BTO)	749.95
L83205	Grand Trunk Western #8380 0-8-0 (L)	(BTO)	749.95

### LEGACY DIESEL LOCOMOTIVES

L82116	CP #7020 S2 (L)	Very Ltd Qty (BTO)	\$469.95
L82122	Pennsylvania #5648 S2 (L)	Very Ltd Qty (BTO)	469.95
L82123	Pennsylvania #5652 S2 (L)	Very Ltd Qty (BTO)	469.95
L82134	GM&O #501 GP30 (L)	Very Ltd Qty (BTO)	469.95
L82135	GM&O #521 GP30 (L)	Very Ltd Qty (BTO)	469.95
L82137	N&W #542 (Blue) GP30 (L)	Very Ltd Qty (BTO)	469.95
L82214	KCS "Southern Belle" ES44AC	Ltd Qty (BTO)	544.95
L82223	Rio Grande Alco PA AA Set (L)	Ltd Qty (BTO)	839.95
L82232	NP Alco PA AA Set (L)	Ltd Qty (BTO)	839.95
L82235	Pennsy Alco PA AA Set (L)	Ltd Qty (BTO)	839.95
L82274	B&O Chessie SD40 #7500 (L)	Ltd Qty (BTO)	544.95
L82275	B&O Chessie SD40 #7593 (L)	Ltd Qty (BTO)	544.95
L82276	BN SD40 #6314 (L)	Very Ltd Qty (BTO)	544.95
L82277	BN SD40 #6320 (L)	Very Ltd Qty (BTO)	544.95
L82278	Grand Trunk SD40 #5922 (L)	Ltd Qty (BTO)	544.95
L82279	Grand Trunk SD40 #5927 (L)	Ltd Qty (BTO)	544.95
L82280	Mopac SD40 #3007 (L)	Very Ltd Qty (BTO)	544.95
L82282	Conrail SD40 #6308 (L)	Very Ltd Qty (BTO)	544.95
L82283	Conrail SD40 #6350 (L)	Very Ltd Qty (BTO)	544.95
L82285	SP SD40 #8402 (L)	Very Ltd Qty (BTO)	544.95
L82288	Clinchfield SD40 #3000 (L)	Very Ltd Qty (BTO)	544.95
L82784	BN GP9 #1706 (L)	Ltd Qty (BTO)	459.95
L82787	Chessie GP9 #6240 (L)	Ltd Qty (BTO)	459.95
L82788	Rio Grande GP9 #5911 (L)	Ltd Qty (BTO)	459.95
L82791	NYC GP9 #5948 (L)	Ltd Qty (BTO)	459.95
L82794	Southern GP9 #6256 (L)	Ltd Qty (BTO)	459.95
L82796	Conrail SD38 #6935 (L)	Ltd Qty (BTO)	544.95
L82798	DM&JR SD38 #221	(BTO)	544.95

Continued next column

(BTO) = Built-To-Order - Limited Quantities  
(L) = Legacy (C) = Conventional (CC) = Command Control (RS) = RailSounds

### LEGACY DIESEL LOCOMOTIVES (Continued)

L82829	B&O E7 AA #1422, #1428	(BTO)	\$839.95
L82830	CB&Q E7 AA #9917A, #9917B	(BTO)	839.95
L82831	GN E7 AA #501A, #501B	(BTO)	839.95
L82833	Pere Marquette E7 AA #101, 102	(BTO)	839.95
L83420	Norfolk Southern SD60E #6920 Veterans	(BTO)	544.95
L83421	Norfolk Southern SD60E #1 6963 GO Rail	(BTO)	544.95
L83422	NS SD60E 911 First Responders	(BTO)	544.95
L83423	Norfolk Southern SD60E #6900	(BTO)	544.95
L83424	Norfolk Southern SD60E #6916	(BTO)	544.95
L82455	Amtrak® #364 Ph III F40PH	(BTO)	459.95
L82456	Amtrak® #388 Ph III F40PH	(BTO)	459.95
L82457	Amtrak® Cabbage Ph III F40PH N/Pwd.	(BTO)	334.95
L82458	Amtrak® Cabbage Ph III F40PH N/Pwd.	(BTO)	334.95
L82761	Union Pacific #8130 SD90Mac	(BTO)	544.95
L82764	Union Pacific #8055 SD90Mac	(BTO)	544.95
L82757	Canadian Pacific #9116 SD90Mac	(BTO)	544.95
L82759	Norfolk Southern #7230 SD90Mac	(BTO)	544.95
L82765	Indiana #9003 SD90Mac	(BTO)	544.95

### POSTWAR CONVENTIONAL CLASSICS

L27710	#6484 Variation Boxcar (2 Pk) Set #2 (09)	Ltd Qty	\$79.95
L27791	Archive M&STL Boxcar	Ltd Qty	39.95
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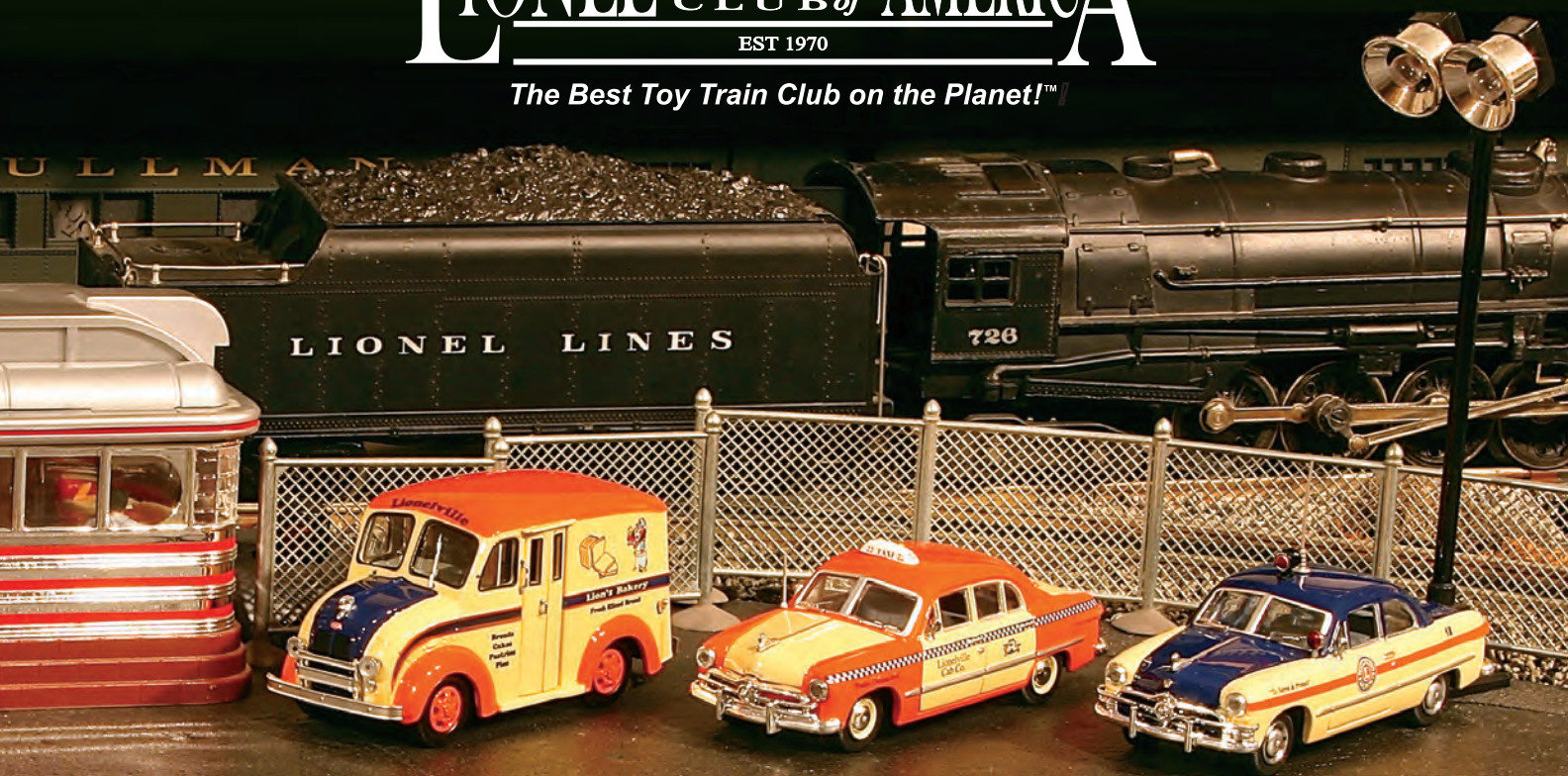


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# Product Reviews



## LionChief Plus EMD FTs

Review and Photos by George Brown

Joining the moderate-cost line of LionChief Plus locomotives from Lionel is the FT four-axle carbody freight diesel. These diesels are available as a powered and dummy A-A set plus a matching add-on powered B unit, which is sold separately. For this review, I had the pleasure to evaluate two A-A sets plus their matching B units in Rio Grande and Atlantic Coast Line liveries. Although I photographed only the Rio Grande units for these pages, I observed consistent performance across the tested units in both liveries. To see photos of the Atlantic Coast Line A-A and B units, flip to a few pages earlier in this issue and check out the “Product Showcase” section.

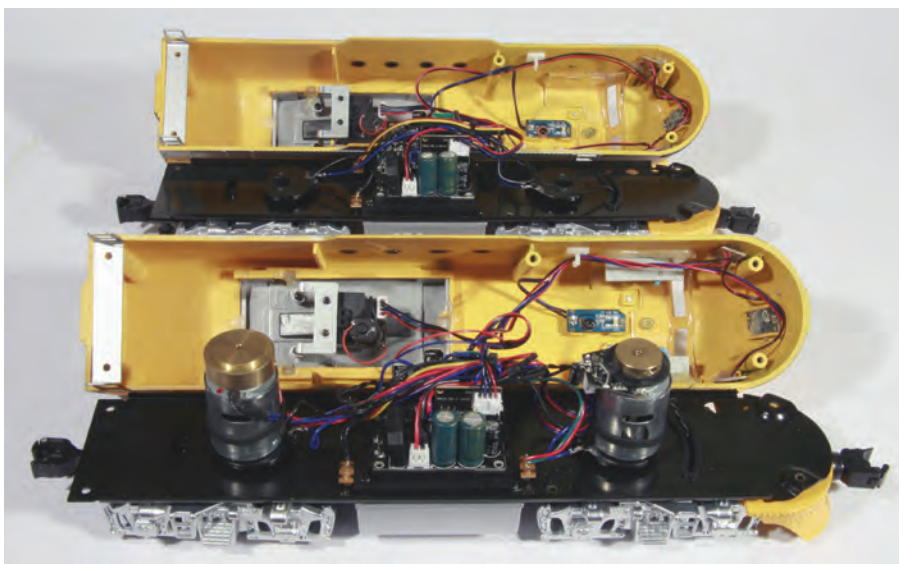


### Prototype Notes

They were the beginning of the end for steam on North American railroads. Developed through the mid to late 1930s, the four-axle carbody FT diesels from Electro-Motive started a demonstration tour on American railroads in May of 1939. During their 11-month tour through 20 states, the A-B-B-A consist of coupled-together two-unit sets traveled nearly 84,000 miles to demonstrate and prove to railroad management that diesel-electric locomotives could move heavy main line freight trains more economically and with vastly superior reliability and availability rates than steam.

Initially an FT set was a 1350-hp cab or A unit and a 1350-hp booster or B unit semi-permanently coupled together for a total of 2700 hp. In fact, the name FT stood for freight, twenty-seven-hundred horsepower. In each unit was Electro-Motive's





then-new 12-cylinder 567 prime mover with the company-developed generator, traction motors, dynamic braking system, and electrical control equipment. An FT developed 40,000 pounds of continuous tractive effort with a starting effort of 55,000 pounds.

Obviously the demonstration tour was immensely successful. The first railroad to order FTs was the Santa Fe with 155 A and 165 B units, and other railroads soon followed. For the Santa Fe and other western roads, the FTs eliminated the

problem of poor or no water for steam locomotives in arid locales. The Denver & Rio Grande Western took delivery of six four-unit sets of FTs in 1942–43.

The bullnose carbody that became the hallmark for the successor F-series diesel locomotives from EMD was an immediate success with not only the railroads but also the general public. During the FT's production years of 1939 through 1945, over 1,000 units were built even with the production restrictions from the U.S. War Production Board.

## LionChief Plus FT Features and Details

### *Powered and Dummy Units*

- Molded plastic bodies on stamped steel frames
- Stamped steel steps
- Die-cast pilots, trucks, side frames, and fuel tanks
- Remote-controlled ElectroCoupler (A unit pilots only)
- Die-cast thumbtack couplers between units
- Fan-driven smoke units with on/off switch
- Transformer or remote selection switch
- Die-cast horns
- Die-cast dynamic brake grids
- Plastic grab irons (A unit only)
- Directional LED headlights (A unit only)
- Illuminated cab interior and number boards (A unit only)
- Molded clear plastic windows and portholes
- O31 minimum 3-rail curve

### *Powered Units Only*

- Transformer or remote-controlled operation
- LionChief Plus remote controller
- Constant-speed cruise control
- RailSounds RC sound system with adjustable volume
- RPM sounds on/off switch (A unit only)
- Dual DC can motors with flywheels
- All wheels powered
- Four traction tires
- Metal worm and plastic idler gears
- Painted figures in cab (A unit only)



## Construction and Features

The features and details sidebar lists and the photos show most of the FT's salient points. What is not shown is the RailSounds RC sound system that is only in the powered A unit. Also present only in the powered A unit are the two figures representing the crew.

However, both the powered and dummy A units and the add-on powered B unit have smoke units. Each smoke unit is mounted to a metal casting, which represents the dynamic brake grid of the real FTs, and has a manifold that distributes the white vapor out of all four of the models' exhaust stacks.

As to the dynamic brake grid castings, they are affixed using hot glue to a molded-in channel in the plastic body shell. I was surprised that these castings are metal, but in retrospect the metal can act as a heat sink for the smoke unit heater, which is mounted on the casting with a bracket and screws.

LEDs provide all illumination. At each attach point for the headlights as well as for the number boards and cab interior light is a small printed circuit driver board. These boards control the constant brightness of their associated LEDs.

On the lead motor of each powered unit is the electronic tach for the constant-speed cruise control. This tach consists of an LED and sensor circuit that reads a slotted timing disk mounted on the flywheel. What impresses me with this mechanism is the cast metal bracket rather than a plastic one that holds the LED and sensor rigidly in place around the timing disk.

Except for the dynamic brake grid casting and also the A unit nose grab irons and horns, all of the details are molded into the body shells or cast into truck side frames and pilots. The molded-in rivets, screens, grilles, handrails, porthole hinges, and so forth are all sharp and clear with good visual relief. My only criticism of the FT is what appears to be oversize rivets cast into the A unit pilots.

Overall dimensions of the A and B units are reasonably close to 1:48 scale, except for the oversized tinplate couplers. Regarding the length of coupled together FT units, the A-A pair is 25" between the pilots and 25-1/2" over the couplers with the knuckles closed. With the B unit added into the consist, the length between the A unit pilots increases to an impressive 37-1/2", with 39" over the closed couplers.

On both the Rio Grande and Atlantic Coast Line sets, the paint and decoration are outstanding as I've come to expect from Lionel. I'm continually amazed at the results from the materials and techniques used in manufacturing today's models—the LionChief Plus FTs included. And I especially liked the brilliant Rio Grande livery with its yellow and silver primary colors and the black stripes, lettering, and ends of each unit. Fabulous!

## At Trackside

Running the FTs either as an A-A pair or as an A-B-A consist using the throttle handle on my ZW-L was fun, but the real operating treat came with the LionChief remote control. For the uninitiated to remote control operation, it is a simple matter of checking or setting the transformer/remote selection switch to remote on each FT unit, setting the transformer throttle for up to 18 volts, and then using the remote for the rest of the operating session.



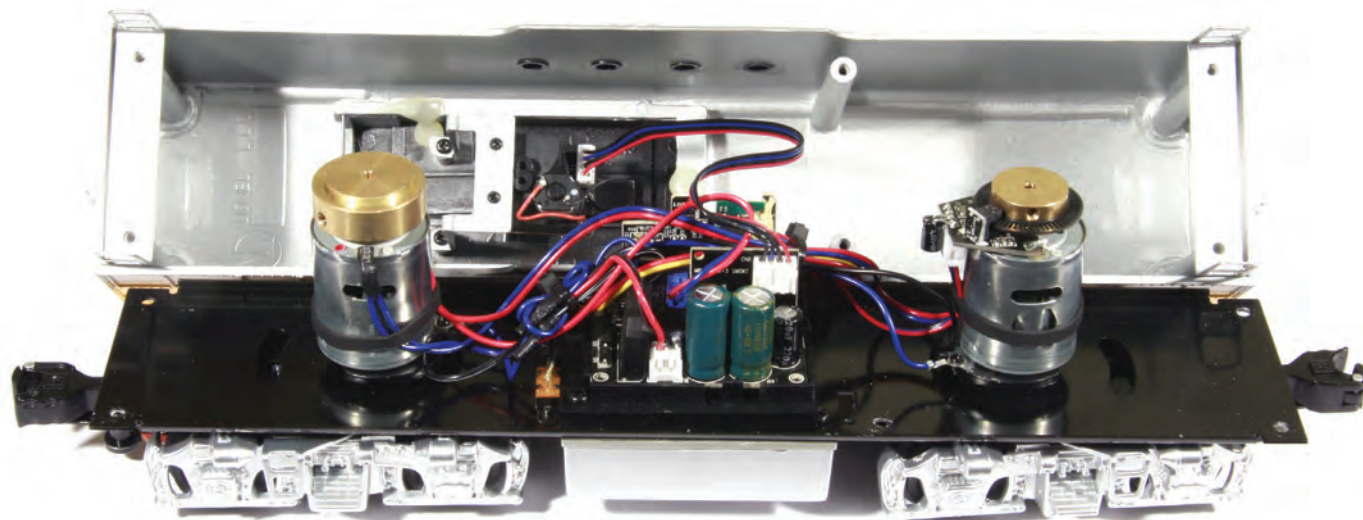
## LionChief Plus Controller Overview

LionChief Plus locomotives can be run under either conventional transformer control or by remote control using the hand-held controller included with the locomotive. Each controller is dedicated to a specific locomotive type, road name, cab number, and Lionel product number, such as the 6-82299 Rio Grande FT #5471. This controller will also run any other 6-82299 LionChief Plus Rio Grande FT. In the case of the FTs, the controller also runs pertinent functions in the dummy A unit and also the matching powered B unit. However, the controller for the Rio Grande #5471 will not run the 6-82293 Atlantic Coast Line FTs or any other not identical LionChief Plus locomotive.

Powered by three owner-supplied AAA batteries, each controller employs an encoder-transceiver that sends coded radio signals directly to a decoder-transceiver inside the locomotive. Unlike the other remote control command systems for O gauge that use the track to distribute signals to the train equipment, the LionChief remote sends control signals directly to the locomotive through the air, much like controlling R/C model airplanes, quadcopters, motor vehicles, or boats. As a result, no command base or interface unit is required.

Each LionChief remote has a knob for locomotive direction and speed plus buttons for the horn or whistle, bell, coupler opening, crew announcements, and sound volume. Full operating instructions are in the owner's manual included with each locomotive.

At the time of this writing, a universal remote is to be available soon from Lionel that can be easily set to run any three LionChief Plus locomotives or LionChief sets at the same time.



As a side note, if the locomotives are powered up without the remote being turned on, the powered A unit will flash its cab light and emit audible beeps at half-second intervals. As soon as the remote is turned on, the cab light illuminates solidly and the beeping ceases.

The speed knob on the controller has 20 speed steps or clicks in either direction, forward or reverse. By the way, don't get upset when nothing happens when first rotating the speed knob from its home position of 12 o'clock to the first speed step in either direction. That first step is what I call a no-op, or idle step. The second speed step puts the locomotive in motion at a dead-slow crawl, one that takes 28 seconds to travel across two 10" sections of track. Between each of speed steps 2 through 10, the FT's speed increments slightly from one step to the next. Beginning with step 11, the speed delta gets progressively and noticeably wider with each step. And yes, the behavior is the same when slowing down the FTs. With 18 volts on the rails, I didn't run the FTs any faster than step 14 on the O72 main line of the editorial Carpet Central Railroad. Of course, significantly reducing the track voltage let me

run the FTs through all 20 speed steps without them launching off my O72 or tighter curves.

Both A units and the B unit generate varying density of white smoke depending on the FTs' speed. When they are stopped, a light amount of smoke exits the exhaust stacks. When moving, the smoke density increases as the speed increases. At higher speeds, the smoke density will likely please O gauge railroaders who like to see lots of smoke from their locomotives. A slide switch located underneath the frame turns the engine's smoke unit on or off. Except to briefly test and confirm smoke unit operation, I ran our evaluation FTs in their nonpolluting mode—smoke units shut off.


Although the RailSounds RC system does not have the fidelity or repertoire of sounds that the Legacy or preceding-release RailSounds systems produce, the audible representation of the early EMD prime mover is reasonable and, to be candid, better than I expected from a low-cost sound system. Overall volume is controlled using the hand-held remote, and a switch underneath the powered A unit's frame turns just the prime mover rev sounds on or off.



In operation, my adding the B unit to the A-A pair made no discernable difference other than increasing the consist's pulling power and also the current draw, which is to be expected with two more motors. Also note that the performance sidebar quotes the worst-case current draw and the best-case tractive effort with the A-B-A trio rather than the A-A pair. On both of our evaluation sets, the ElectroCouplers on the A unit pilots opened on cue and closed gently as I eased the FTs on their first speed step into an awaiting train.

With the A-B-A FTs at the head of a long train of 1:48 scale steam-era freight cars, I found the visual effect to be downright exciting, especially with the Rio Grande units.

## At the End of the Run

When it comes to diesel locomotives, I get a large charge out of matching multiunit consists, such as the LionChief Plus FT twin A-A diesels, especially when they look and run great as these engines do. Multiple powered units such as the A-B-A trio are even better. My time spent with both colorful sets of the LionChief Plus FTs running either as A-A or A-B-A units was enjoyable to say the least. 

### 6-82299 LionChief Plus Rio Grande FT A-A Set

Retail price: \$499.99 at authorized Lionel dealers

### 6-82305 LionChief Plus Rio Grande FT B Unit

Retail price: \$279.99 at authorized Lionel dealers

Lionel LLC; [www.lionel.com](http://www.lionel.com)

## LionChief Plus FT A-B-A Remote-Controlled Performance

(smoke unit: off; sound: on)

**A Unit Length:** 13-3/8" over closed couplers

11-7/8" between pilots

**B Unit Length:** 12-3/4" over closed couplers

11-3/8" between ends

**Distance Between Pickup Rollers:**

A Unit: 5-3/8"

B Unit: 5-5/8"

**Weight on A Unit Driving Wheels:** 3 lbs, 4 oz

**Weight on B Unit Driving Wheels:** 3 lbs, 1 oz

**Weight of Dummy Unit:** 2 lbs, 12 oz

**Power Consumption at Idle @ 18 VAC:** 0.2 A, 3.6 W

**Tractive Effort @ 18 VAC:** 1 lb, 15 oz @ 1.6 A, 29 W

**Minimum Sustained Speed @ 18 VAC:** 1 scale mph @ 0.5 A, 8 W

**Maximum Tested Speed @ 18 VAC:** 60 scale mph @ 1.4 A, 25 W

**Track and Switches:** Atlas 21st Century 072, 054, and 036

**Power Transformer:** Lionel ZW-L

**Control System:** LionChief Plus remote control, transformer-controlled conventional operation

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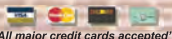
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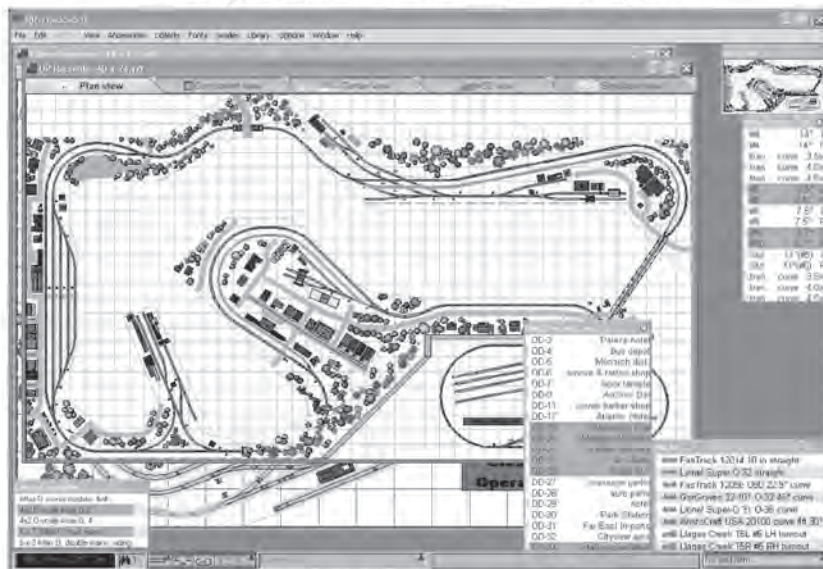
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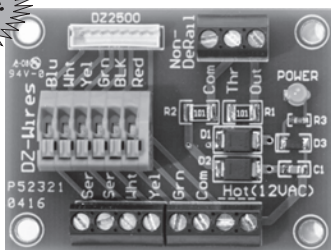
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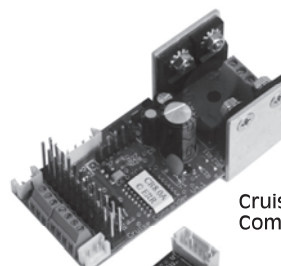
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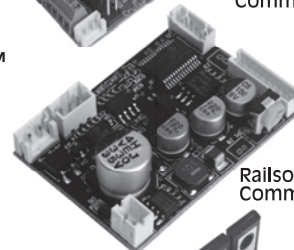
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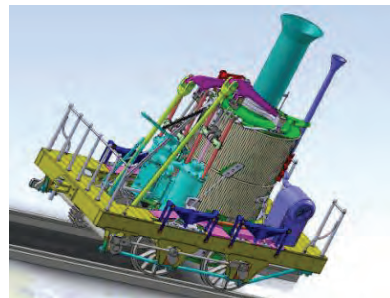


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# Williams by Bachmann Western Pacific NW2

Review and Photos by George Brown

When I first saw the scale-sized Western Pacific orange and black NW2 showing through the window of its decorative Williams by Bachmann box, I was reasonably certain that a fun review was eminent. One reason was my pleasant experiences with Williams and Williams by Bachmann (WbB) locomotives that I currently own or have reviewed in prior issues. Another was because the colorful switcher was mechanically and technically simple, as are all WbB products, I anticipated zero problems with it during this review. But before I get into the model, let's take a brief look at the real NW2 and specifically the Western Pacific #608.

## Prototype Notes

The year 1937 saw the introduction of a new series of diesel switchers from Electro-Motive. Powered by the company's new 12-cylinder 567 prime mover, the 900-hp, welded frame NW1 was built until 1939, the year when production of the 1000-hp NW2 began. Along with the NW2's higher horsepower V-12 prime mover came the generators, traction motors, blowers, and control equipment developed and built by Electro-Motive. Its locomotives built prior to the NW2 used electrical equipment from General Electric and Westinghouse. With an operating weight of 128 tons, the NW2's short-burst top speed was 30 mph, yet its maximum continuous speed was a sedate 11 mph.

Our evaluation model is a respectable replica of Western Pacific #608, which survives today at the Western Pacific Railroad Museum in Portola, California. As to the real WP #608, it was



built in 1940 for the Union Pacific Railroad and was also the 1000th locomotive produced by Electro-Motive. The Western Pacific acquired #608 as a worn-out, breakdown-prone junker from the nearby Stockton Terminal and Eastern Railroad in the late 1960s. Completely rebuilt to 1200 hp by the WP's Stockton shops and painted in the road's orange and black pumpkin paint scheme, #608 worked daily switching duties primarily in the area around Stockton, California. In 1984, the retired #608 was donated to the museum in Portola.

## Construction and Features

For those of y'all who are acquainted with the early postwar Lionel NW2, such as the 622 or 624, yes, the WbB model is a classy reproduction of that famed 3-rail O gauge switcher. Visible on our evaluation unit's crisply molded plastic body shell are the familiar and separate headlight lenses, clear classification lamps, radio antenna, bell, exhaust stacks, metal horn, and full-length wire handrails supported by small cotter pins. Inside the cab is a molded clear plastic window insert, which was not present on the postwar Lionel switchers.

On each end of the massive die-cast frame are the also-familiar wire handrails and stanchions plus the same solid pilot and metal footboards of the postwar NW2. On the walkway is a cast-in nonslip tread pattern that is as crisp as the molded-in details on the body shell. Coupler cut levers are also cast into the frame and highlighted by silver paint. But underneath this reproduction exterior, the WbB NW2 is as contemporary as Facebook.

A DC can motor with a momentum flywheel drives all four wheels on each of the die-cast trucks via bronze worm and spur gears. All axles and worm gear shafts turn in steel bushings, giving the power train a characteristic that I classify as bulletproof; that is, with proper lubrication the NW2's running gear should give countless hours of reliable service. A pair of Phillips screws holds each die-cast side frame to its truck so removal of the side frame for a repair task such as replacing a traction tire is easy. As to the requisite traction tires for 3-rail operation, one is on each wheel next to the fuel tank.

Underneath the frame is the cast representing the fuel tank and air reservoirs. This single casting houses the speaker for the locomotive's sounds and also provides additional weight for wheel adhesion with the rails. A thumbtack style of die-cast operating coupler at each end of the NW2 has a stamped steel armature—no plastic here!

Removing the body shell to access the drive mechanism or electronics is a simple task using a #1 Phillips screwdriver. Four easily accessible screws hold the body to the frame. Inside the body shell are two printed circuit boards: the 6-amp electronic reverse unit and the True Blast Plus 16-bit digital sound generator board. Among the reverse unit's functions is rectification of AC power from the track to DC power for the motors along with direction control in the traditional Williams sequence of forward, neutral, reverse, neutral, and back to forward. A slide switch underneath the frame locks whatever direction is wanted.

Voltage-controlled sounds of the EMD prime mover in addition to the bell and single-chime horn originate on the sound board. Increasing the track voltage increases the prime mover rev sounds and vice versa. In what is obviously a concession to hold down the build cost, no sound volume control is accessible to the operator, which I've mentioned in my previous reviews of WbB locomotives equipped with True Blast Plus sound generator boards.

Lighting consists of two miniature incandescent bulbs running on track power. Both bulbs are illuminated during operation of the NW2. Oh, a spare bulb and a pair of traction tires are included with the engine.

On our evaluation sample, the satin-finish paint, lettering, and graphics are excellent. Under close examination, the model's finish is free of buildups or orange peel, and the masking between colors is flawless. I especially liked the crisp Western Pacific logo



with its readable Feather River Route. In addition to the Western Pacific, the current release of the NW2 also includes Boston & Maine, Pennsylvania, and Union Pacific liveries.

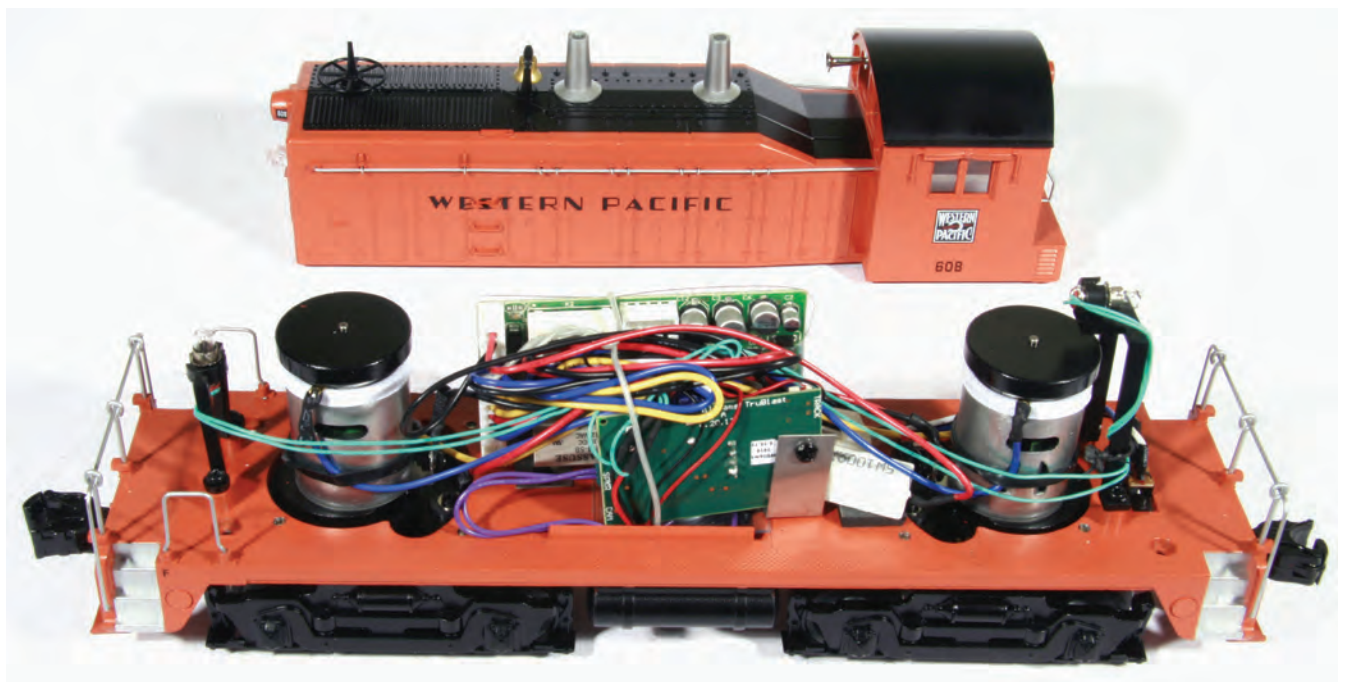
Because I do all of my own repairs if they become necessary, I especially appreciate the illustrated parts lists that WbB supplies with its current releases of locomotives, including the NW2. No one else in the industry does this.



## At Trackside

All locomotives from WbB run under conventional transformer control, and the NW2 is no exception. And as with all WbB diesel and electric locomotives, and also those from the former Williams Electric Trains, powering up the NW2 immediately puts it into motion and at a rather rapid rate, even at low track voltage. As to the NW2's top speed at 18 volts, I didn't explore its operating envelope past 12 volts of track power on my O72 loop. Let's just leave it as the switcher can be run extremely fast, and I doubt it would stay on most tinplate curves at its top speed.

Speaking of track curve diameter, WbB advertises a minimum curve of O27 for the NW2, which I believe is accurate. On the editorial Carpet Central Railroad, the switcher was quite at home running through my Atlas O36 turnouts and siding curves as well as on my O54 and O72 main lines. When running on the CCRR, the NW2 was an attractive and smooth-running little engine with no mechanical vices. In other words, it didn't give any trouble at all.





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Regarding the minimum scale speed I noted in the performance sidebar, it was achieved with our standard test train in tow, which is a respectable load on the NW2. With a light load of three or four free-rolling, scale-sized plastic freight cars, the switcher's low-speed was in the scale 18 mph range.

The sound of the prime mover discernably emulates an EMD unit. Sounds of both the horn and bell are also believable and worked every time on cue from the transformer controls. In agreement with my reviews of recently released WbB locomotives, my single criticism of the really nice model of Western Pacific #608 is the absence of an operator-accessible sound volume control. The sound board does have a volume potentiometer on it, but a major disassembly of the model is required just to adjust the sound level. On a positive note, the sound volume on our evaluation sample was factory-set to a low level that I enjoyed.

Even with a pair of constantly lit incandescent bulbs, electrically the model proved to be a current miser under normal operating conditions. In fact, even when the motors were stalled during the full-pull test, the current

draw was remarkably low. After over an hour of continuous running with a more-or-less normal length train for a switcher, the NW2's 3rd-rail pickup rollers were still room temperature to the touch—that's cool!

## At the End of the Run

For the conventional 3-rail O gauge hobbyist and operator, the Williams by Bachmann NW2 is probably as solid and simple as an O gauge model of a locomotive can be. In a quick search on the Internet, I spotted prices for the engine ranging down to approximately \$280 from large mail-order dealers. 

### #21653 Western Pacific #608 NW2

**Retail price: \$449.95 at Bachmann dealers**

**Bachmann Industries;  
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## Williams by Bachmann NW2 Conventional Performance

(sound: on)

**Length:** 11-3/4" over closed couplers

10-5/8" between end sills

**Distance Between Locomotive Pickup Rollers:** 6-1/8"

**Weight on Driving Wheels:** 3 lbs, 10 oz

**Power Consumption at Idle @ 6.7 VAC:** 0.4 A, 2.7 W

**Tractive Effort @ 7.6 VAC:** 1 lb, 1 oz @ 3.1 A, 23.6 W

**Minimum Sustained Speed @ 6.7 VAC:** 12 scale mph @ 1.8 A, 11.5 W

**Maximum Tested Speed @ 8.4 VAC:** 30 scale mph @ 2.2 A, 18.5 W

**Track and Switches:** Atlas 21st Century 072, 054, 036

**Power Transformer:** Lionel ZW

**Control System:** Transformer-controlled conventional operation

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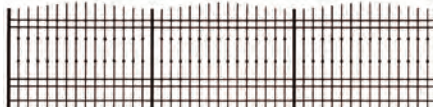
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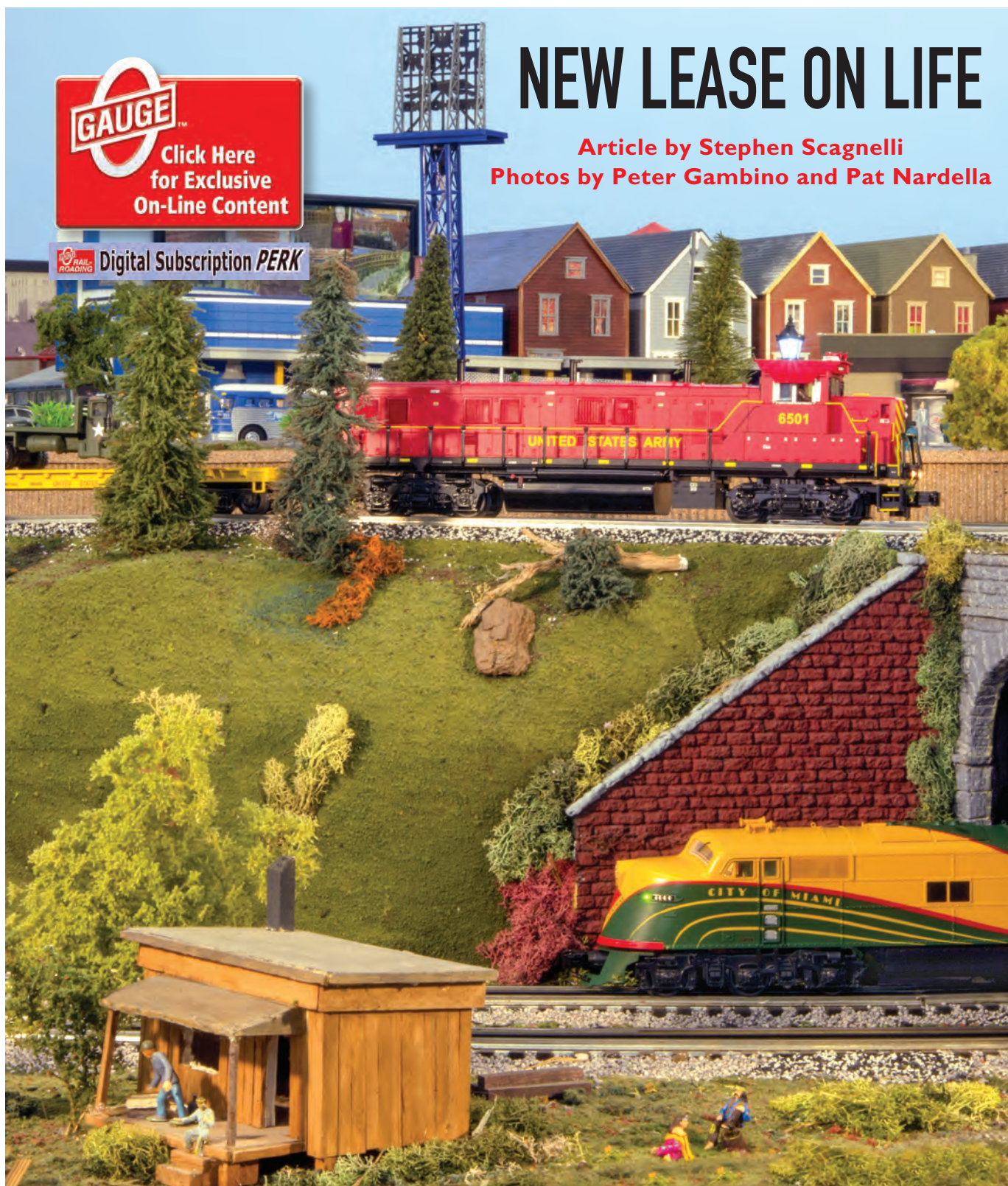


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# NEW LEASE ON LIFE

Article by Stephen Scagnelli

Photos by Peter Gambino and Pat Nardella



The Illinois Central *City of Miami* traverses the main line on the lower level of the TMB club layout while a contemporary U.S. Army Transportation Corps Genset hauls a consist of military equipment on the upper level.





Hmm...a hot summer day beach scene is interrupted by, of all things, a seemingly out-of-its-territory Alaska Railroad train.



Motive power employed on the TMB covers the full range of eras and road names.

There is no worse correspondence a model train club can receive than “Your lease is up and will not be renewed.” That was the message the TMB (Train Masters of Babylon) Model Train Club of Long Island received in 2012. The club had rented 3,000 square feet of space in Lindenhurst, New York, since May 2003, but was about to be displaced. Fortunately, our landlord provided a full year’s time to vacate. Luckily, too, industrial space is readily available on Long Island. We signed a five-year lease for a

4,400-square-foot space in Farmingdale, New York, and our 70-member club embarked on a new adventure.

As the old saying goes, “A model railroad is never complete.” However, over the course of 10 years, TMB and our members had achieved a high degree of completion with our 3-rail O gauge layout. Unfortunately—or ultimately fortunately—our new location and new train room dimensions required some rethinking about what the layout would be. Membership wanted a change in

layout design, so “lift and shift” was not an option, and demolition commenced in February 2012. Layouts of this magnitude are costly, so great care was taken in dismantling the track and scenery to ensure those items could be used on the new layout. Buildings, structures, and scenic items were carefully boxed for transport and storage. Most of the existing track was salvaged, although some of the securely ballasted track had to be scrapped.

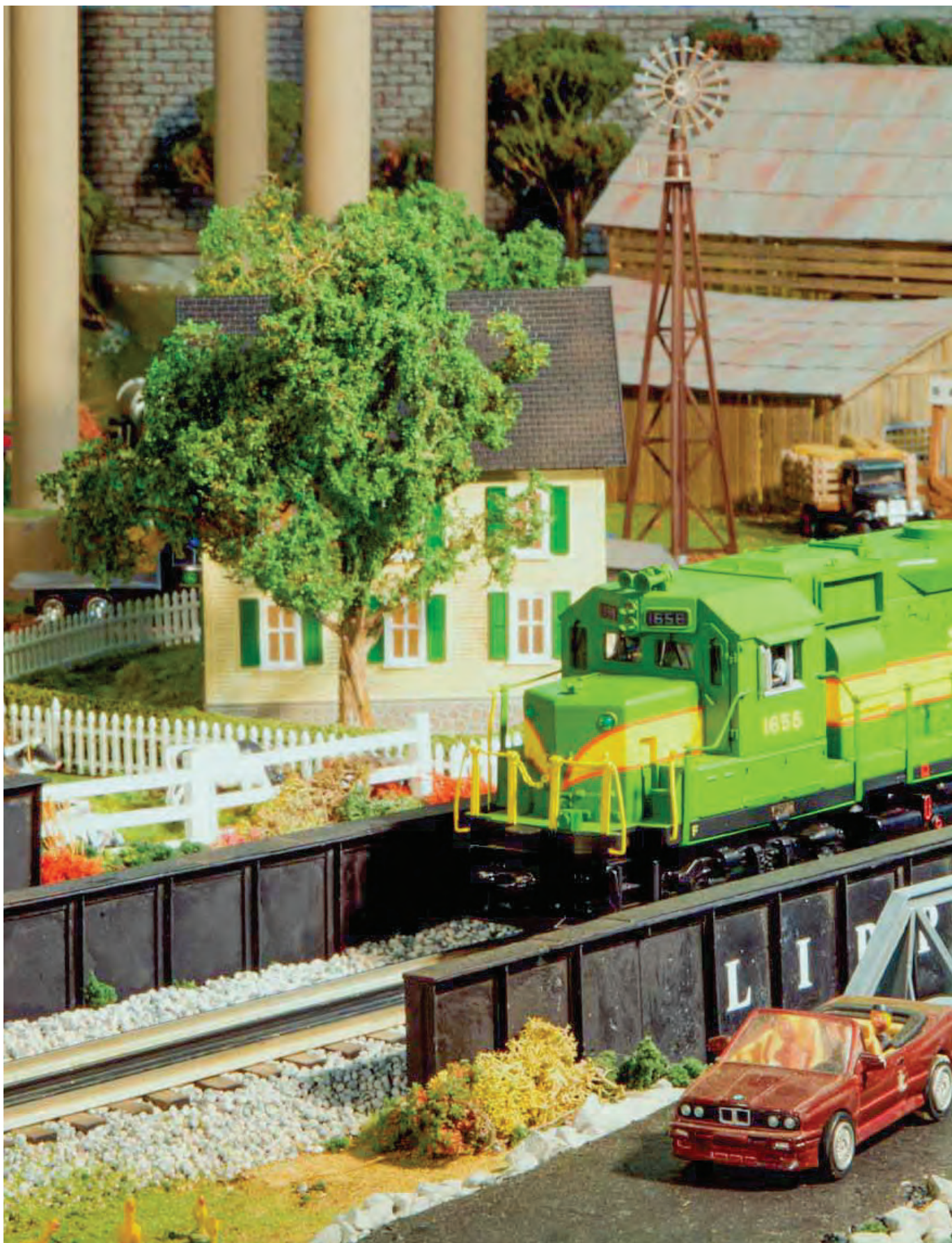
Rarely is an O gauge layout built to this size, so I would like to share a bit of what went into the early stages of layout development. A transition of this magnitude is complex and requires a phased and logically planned approach. The accompanying photos include an example from the early stage of benchwork construction along with a number of images that depict what the layout is today, some three-plus years later.

## Design

Working in a truly democratic manner, a notice went out to TMB members asking for conceptual designs. Three members’ submissions were displayed and tweaked for two months with group input. We voted and opted for a walkaround layout, a stark difference from our former wall-hugging design. Although around-the-wall designs maximize the use of space, walkarounds substantially increase train visibility for both operators and visitors.

With a conceptual design agreed upon, creation of a technical drawing was next. This drawing was done by hand on graph paper using 3/4" scale. We chose 3/4" scale because it has a linear three-boxes-to-one-foot ratio, or nine boxes equal one square foot. Track spacing is 4" on center for the straights, which transitions out to 5-1/2" on the curves. Mainline curves range from 6' to 7-1/2' radius, or O144 to O180 as seen in the more traditional O gauge diameter-in-inches measure. With such a large curve, we virtually eliminate overhang from scale-size articulated engines and 21" passenger cars. The smallest curve resides in our main storage yard and has a radius of 5' 9". Establishing reference points from the walls allowed placement of the benchwork and track to an exact location in the room.





A Seaboard diesel crosses a Long Island Railroad plate girder bridge near the farm scene.





The train room following completion of wall construction in July 2012.



Measure twice, cut once is always good advice, as is making use of two sets of eyes to make sure things are perfectly level.



An overview of part of the expansive benchwork.



A view of the under-construction yard area.



Grades are kept to a maximum 1 percent change in elevation.

## Room Construction

TMB's new location was undeveloped and required the build out of walls, electric service, lighting, restroom, and control tower. The diversity of member abilities in this club runs deep, with carpentry, electrical, plumbing, drywall, and painting being among the many skills practiced. All these skills, and more, were used to expedite the renovation project and to keep it financially feasible.

## Benchwork and Track

With the room completed, work crews were reorganized into two new teams. One team was dedicated to benchwork and subroadbed while the second focused on cork roadbed and track. These two crews remained in constant communication.

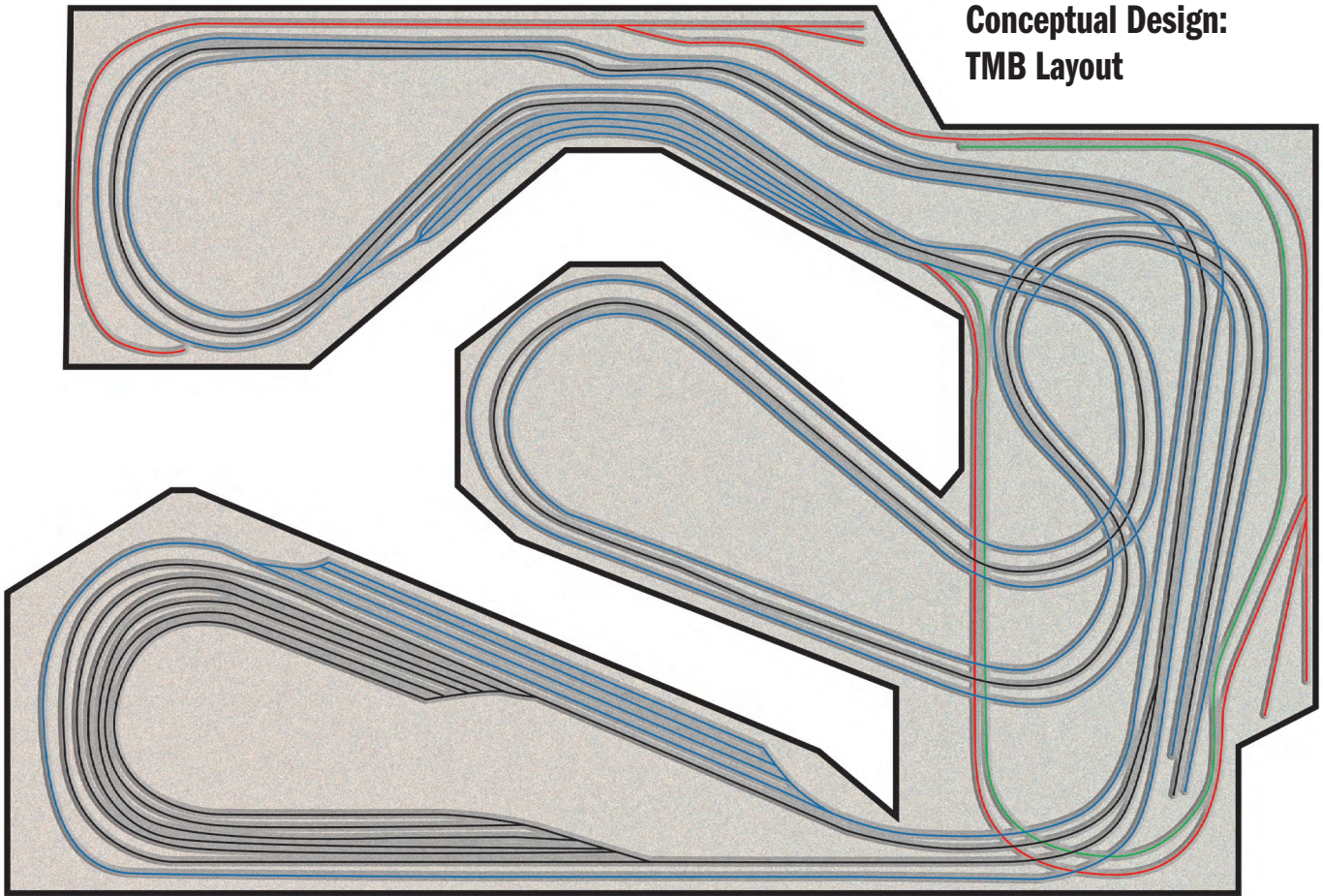
The club opted to use L-girder construction for its inherent strength and flexibility. As the subroadbed is secured from the bottom up, our motto is We Screw Up. This gives us the ability to reposition L-girders at a later stage. For example, should a turnout get placed over a support, you can easily undo the L-girder and relocate it without disrupting the track work or scenery already in place on the layout.

The subroadbed was cut from 1/2" plywood. Several large compasses were constructed from 8' x 1" x 2" lumber, which allowed us to scribe center and cutting lines directly onto the plywood. Each compass had pencil holes drilled for each curve radius and cutting line.

In constructing the layout, we used GarGraves flexible track with Ross switches. GarGraves track allows us to conform to varying nonstandard curves and also provides a realistic track appearance at a reasonable cost. Although a fair amount of track was salvaged from the old layout, the club still purchased 10 new cases of track, with new track reserved for the main lines.



## Conceptual Design: TMB Layout



### Up and Running

The layout today consists of two 250' long branch lines, which are simple loops traversing 75 percent of the room. We kept the lines simple because some members were, and still are, interested in conventional operation. The inner loop has no switches, and this facilitates the operation of the pickup shoes used on postwar trains. The outer loop has switches that feed various industrial sidings.

Main lines are simpler than they appear in the accompanying diagram. The concept is a dog bone within a circle. We stretched out and twisted the track plan around the room. We also added rail yards for train storage and sidings for passing. The main lines are 650' long, and sidings range from 25' to 60'. The result is a 4,000-square-foot model railroad with 10 trains running on 19 scale miles of track, plus a separate underground subway system.

The track does cross over itself in several spots, requiring multiple elevations. One advantage in having such a long main line is that it allows for very gradual grade increases (we kept ours to 1 percent). Gradual grades mitigate the impact on engines pulling long consists. An added benefit of our mainline design is that this design enhances the impression of trains moving about from place to place with a sense of purpose. Viewers are never left with the impression that the layout is a Christmas tree loop where an engine appears to be chasing its caboose.

### The Sopranos

A genuine cooperative and congenial friendship exists among New York train clubs and New Jersey clubs. Our club was able to acquire one of the HBO "The Sopranos" series layouts from the NJ Hi-Railers. When reassembling "The Sopranos" layout, we installed several

push-button controls to operate its many accessories. We felt that children would very much enjoy actually interacting with the layout.

### Let the People Come

Ambitiously, the club staged an open house event in January 2014, which provided a showing of an in-progress layout. With the help of a feature article in *Newsday*, Long Island's newspaper, we attracted 2,130 guests over the January 4–5 weekend. Visitors were amazed at what really goes on underneath all the scenery and they were left chomping at the bit to see the layout's continued development. The room stood up to large crowds extremely well. "The Sopranos" layout was a *huge* hit. For most of the day, crowds were two and three deep. Everyone was waiting for their chance to operate an accessory or two. The children didn't seem to mind that "The Sopranos"





A U.S. Army Genset locomotive hauls a string of hoppers loaded with coal to the coaling tower. Those black diamonds will be consumed by the steam power on the adjacent tracks.



Visually effective farm scenes don't necessarily require a whole lot of space on a layout.





Any self-respecting New York club layout needs a subway.

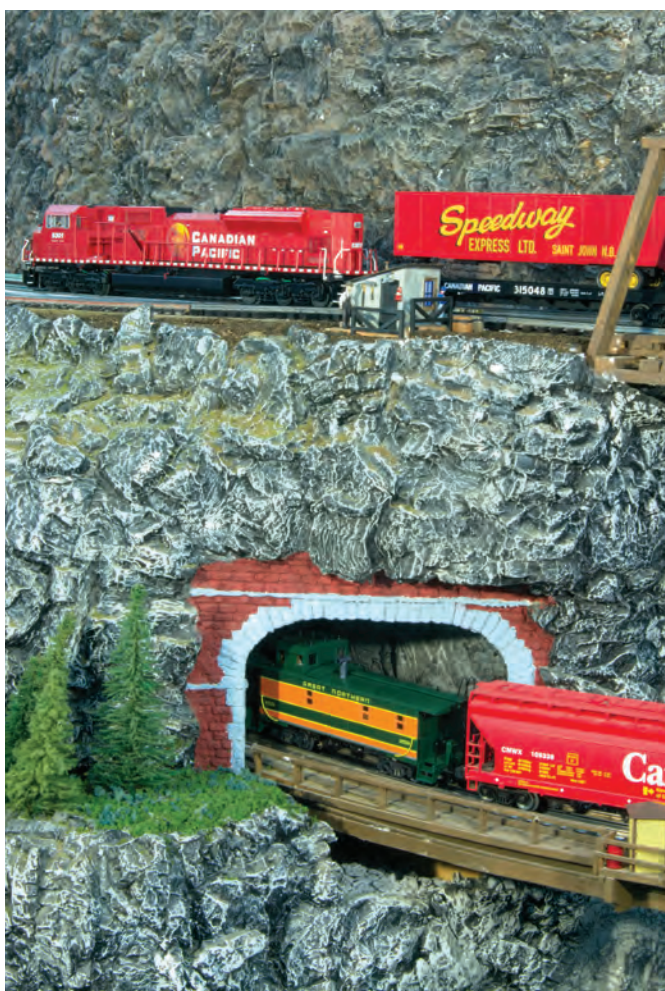


Another view of the subway line.

layout was the place Bobby Baccala succumbed to a fellow mobster's spray of bullets during what was dubbed "The Blue Comet" episode.

## What's Next

The future holds many challenges and promises. A subway, a logging line, and scenery need to be integrated. In keeping up with the technological boom of the hobby, the membership insisted on the ability to operate the entire layout in conventional mode as well as via Lionel Legacy and MTH DCS. Our most demanding task is wiring the layout and control panels. To be continued....



Just a nice Pacific Northwest mountain railroading scene.





Although diesel power tends to dominate on the layout, a well-supplied coaling facility is available to handle the needs of steamers large and small.





A U.S. Army Genset transports a short consist of military hardware past the station in route to a nearby military base.



Generation gap: A vintage NYC Baldwin switcher meets a current-generation Genset road switcher.

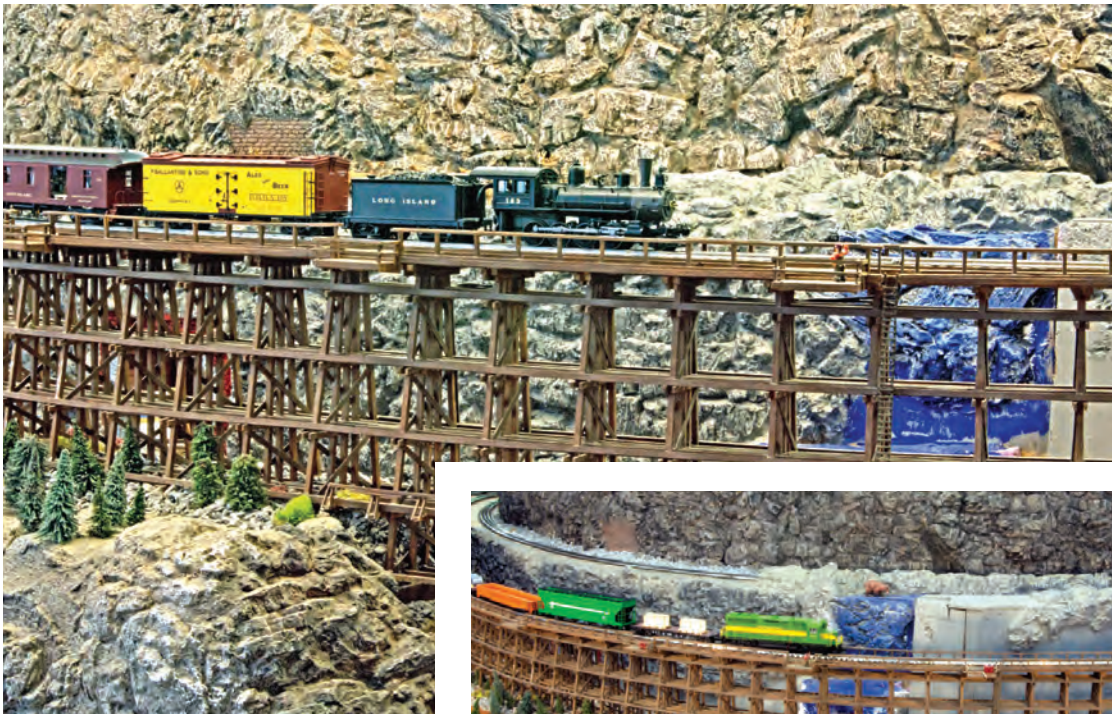


In the early 1950s, Patrick B. McGinnis spent a whole lot of money on a flashy new image for the New Haven Railroad. The resulting black, red-orange, and white livery, known thereafter as the McGinnis colors, replaced the road's far more sedate green with gold trim.

## About the Club

The TMB Model Train Club's main purpose is to build and operate an O gauge hi-rail model train layout while promoting and maintaining a fellowship of model railroad enthusiasts. Remaining growth oriented, the club has now grown to 70 members. In addition to a club-based layout, the group also operates a modular layout, affectionately dubbed LIMO (Long Island Mobile O). This layout is transported to various venues to promote the club and the hobby. The modular layout also travels to nursing homes and schools to help spread the joy of model railroading to shut-ins and others who are unable to pay a personal visit to the club. For more information, visit [www.tmbmodeltrainclub.com](http://www.tmbmodeltrainclub.com).





Vintage steam on the trestle at Whitaker Crossing.



This impressive curved trestle is a main attraction on the expansive layout.



This Seaboard train is serving the Farmers Union Creamery.



## About the Author

Stephen Scagnelli is an accountant and project manager for a global finance company. His interest in model railroading dates back to 1961 when he received a Lionel 2379 Rio Grande F3 set for Christmas. He remains active in the TMB Model Train Club and currently serves as club secretary. Stephen also maintains a 9' x 22' modular layout at home. His current interest is in operating the premier engines from MTH, Lionel, and Williams.



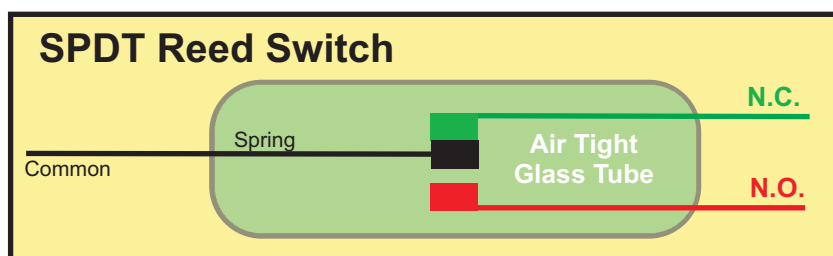
# Simple and Reliable Route Indicators for ScaleTrax Turnouts

Article, Photos, and Diagrams by Daniel Kleine

This article is about using easily available low-cost components to make switches that can be used to control lights to indicate the position of the points on MTH ScaleTrax turnouts. It requires a basic understanding of low-voltage electricity and basic soldering skills. The signals that these switches control will be covered in a future article.

Now that most of my layout is built and the scenery pretty much completed, I am starting the final phase: turnout/route indicator signals. I use two-color signals for route indicators, but this system could also be used for control panel lights or for both purposes. It could also be integrated into a block signal system. To avoid confusion, in this article a turnout is track, and a switch is an electrical device. Also, for clarity, green means a “normal” state, and red or yellow means a “non-normal” state. You

Diagram 1



may want to read through “Definitions for This Project” before continuing.

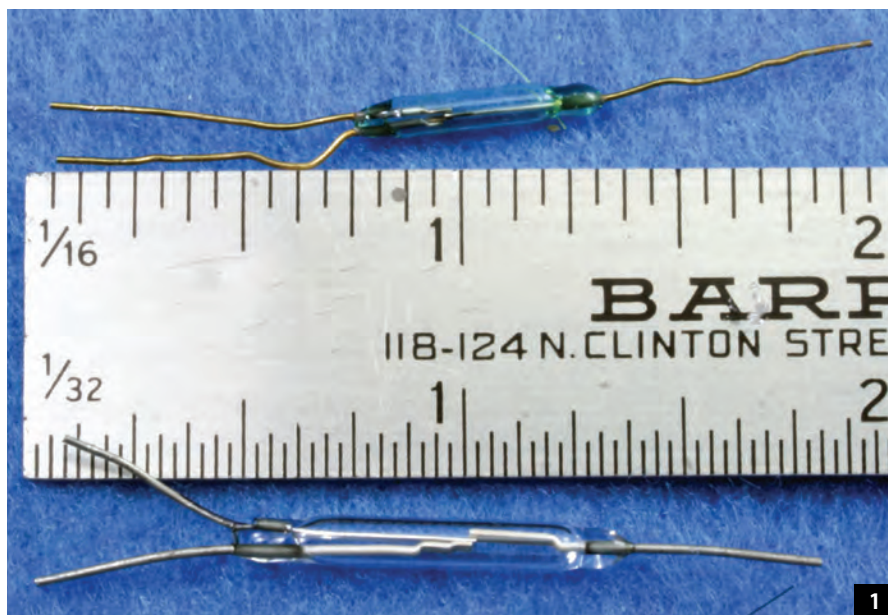
I have 12 ScaleTrax turnouts to connect to signals. My general requirements were that whatever I used be low cost, unobtrusive, and easy to retrofit to turnouts already on my layout. I also wanted the signals to show the correct indication whether the turnout was operated manually or remotely. After thinking about various

ways to accomplish this and examining the turnouts, I decided that SPDT reed switches would work (Diagram 1).

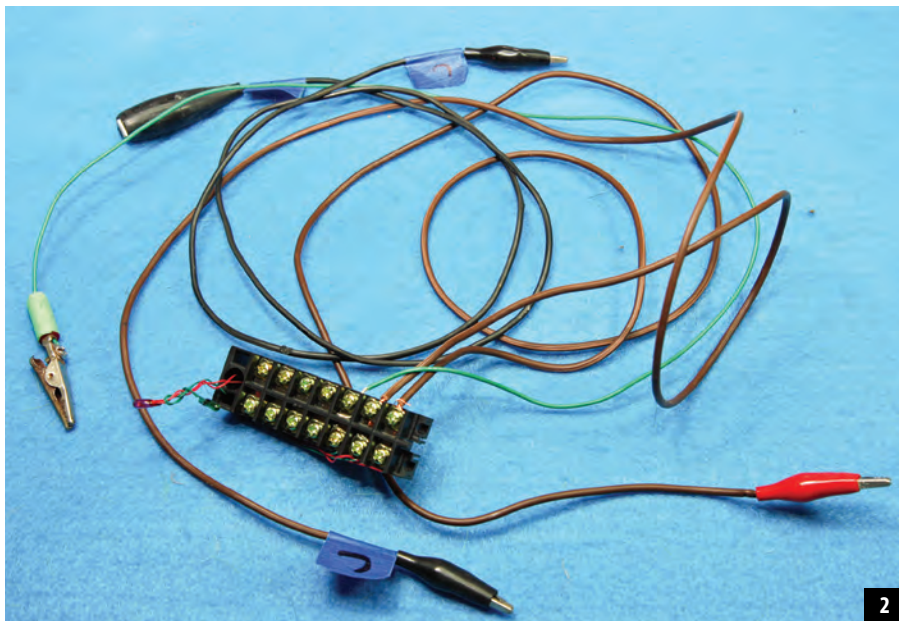
ScaleTrax turnouts have embedded magnets in their throwbars, which are part of their non-derailing feature. The turnout motor is connected to the throwbar with two magnets that will release if wheels pass through the points in the wrong direction, thereby avoiding a derailment. A ScaleTrax switch can be flipped remotely with the controller provided or manually by moving the lever on the top of the switch-motor cover. A spring in the motor housing keeps the points in place. The motor can be used on either side of the turnout, leaving the other magnet available to control a reed switch.

## Reed Switches

I needed to find a reed switch that would work with the existing ScaleTrax magnet. An engineer could calculate the exact specifications of a switch based on the strength of the embedded magnet’s pull. Since I am not an engineer, I simply guessed and experimented. I purchased and tested a few different types of SPDT reed switches. I found that the 2.5 mm x 14 mm and 3 mm x 20 mm work (Photo 1). I preferred the



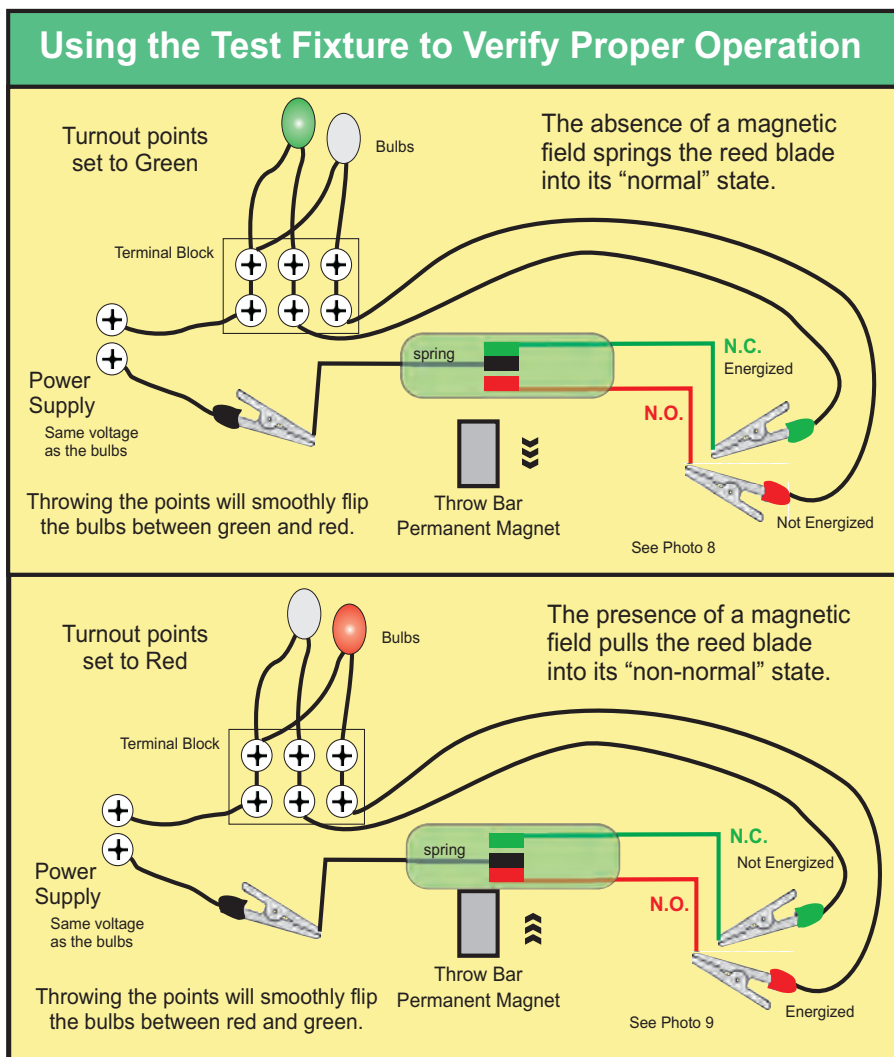




smaller of the two; it has brass wire leads that are easy to bend and solder. A small reed will fit in close quarters and can be easily camouflaged. Other sizes might work as well.

Reed switches are somewhat fragile and must remain airtight to work properly. They cannot take hard knocks. If you crack the glass or chip the glass around the leads, the switch will not work. You probably should not run more than .250 amps through these small components; however, that should not be a problem as long as you use LEDs. You should also keep them away from strong magnetic fields and extreme heat. You may want to buy a few extra; I have actually found that a few are DOA (dead on arrival). They are robust after they are installed, but handle them carefully while working with them. SPDT reed switches can be purchased as NOS (new old stock) on the Internet.

**Diagram 2**



## Test Fixture

Several reed assemblies would be required, so I felt a test fixture would be a good investment. I wanted to make sure that each reed worked properly before it was installed on the layout and hooked up to the signals. I put together a test fixture using spare parts (Photo 2). A terminal block, some test leads with alligator clips, and a couple of old 16-volt grain-of-wheat bulbs worked fine. You will also need a way to supply power for testing. Make sure the voltage is matched to the bulbs you are using. I used an old AC toy transformer set at 12 volts. Test each reed at least three times: first, as a component part to make sure it is good to start with; second, to test again after it is mounted on the perfboard and/or wired; and third, when installing it permanently alongside its turnout (Diagram 2). If you are only using one or two reeds, you may want to skip building the test fixture and just use a multimeter.

## Magnet Wire

You can use regular hook-up wire for this project, but I prefer magnet wire. Magnet wire is typically a solid copper or wire coated with a very thin layer of polymer film insulation. It is used in the construction of transformers, motors, and other applications that require tight coils



of insulated wire. You can purchase low-temperature-grade magnet wire that has insulation, which can be removed by the heat of soldering so that the insulation does not need to be stripped.

Luckily, modern LEDs consume very little power; therefore, they do not require heavy wire. A vast untapped source of free wire is available from old motors and power supplies (Photo 3). The only disadvantage of using scavenged magnet wire is that you have to unwind it from the rotor or field, and it doesn't have colored insulation. The bigger the AWG number is, the thinner the wire and, therefore, the lower its capacity. I use 26-gauge wire. The average LED draws about .020 amps. To determine the maximum amp load for a wire, measure the diameter (Photo 4). Consult the AWG Table.

I have tried various chemical and mechanical ways to remove insulation from magnet wire ends. So far, the best way I have found is to draw the wire between two pieces of emery board (nail files). Break a file in half and tape the broken ends together forming a hinge. Just pinch the wire ends between two boards and repeatedly turn and draw the wire through until you see clean copper (Photo 5). Wipe off the white powder with a rag moistened with alcohol. The powder will contaminate your solder joints. Since the wire is virtually free, use long lengths to minimize the amount of splicing you will need to do later.



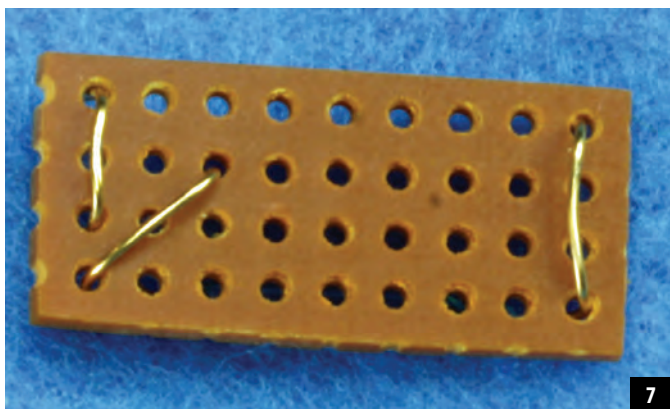
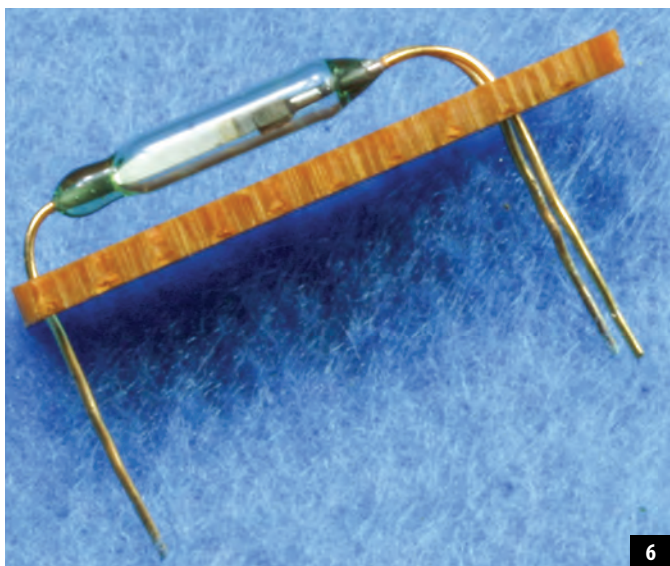
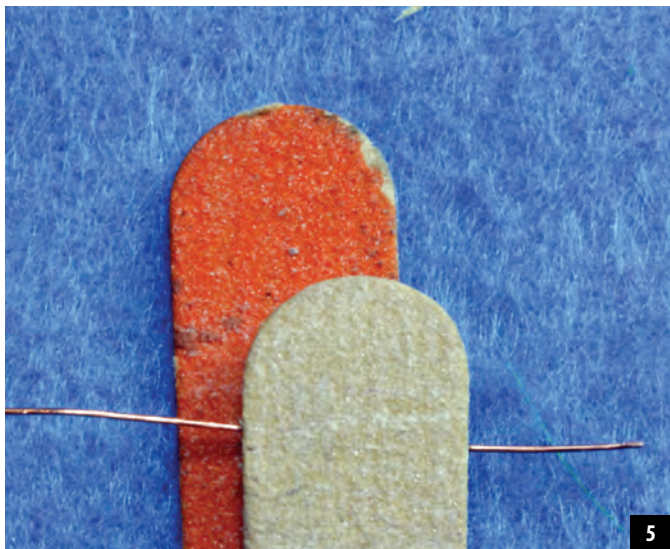
AWG Table (American Wire Gauge)			
AWG	bare diameter		max amps
	inch	mm	
22	.025	.64	.92
23	.023	.57	.73
24	.020	.51	.58
25	.018	.46	.46
26	.016	.41	.36
27	.014	.36	.29
28	.013	.32	.23
29	.011	.29	.18
30	.010	.26	.14

## Making the Reed Switch Assemblies

Look carefully at a reed switch and determine which leads are the common, normally closed (N.C.), and normally open (N.O.). A magnifying glass and a multimeter can help. You may want to mark the leads with a felt marker: black, green, and red. Keep one switch as a sample. On the 2.5 mm x 14 mm reeds I use, the common is the single lead. The blades work best if they are perpendicular to the magnet. There is also a right and wrong side to the reed; one side works and the other side does not. When you test your first reed, identify the "right side" and be sure to place that side close to where the magnet will be. Treat the other reeds the same way.

Test the individual reed switches with a ScaleTrax turnout at the bench. Hook up the reed to the test fixture, and one bulb should light up. This is the normal (non-magnetized) state. Now place the reed close to the embedded magnet on the throwbar. Move the reed back and forth until the N.C. light goes out and the N.O. light comes on. You may have to try different positions. Test it a few more times switching between the two lights by moving the reed or the throwbar. Note the position of the reed and mark the glass with a felt marker at the point where the magnet contacts the glass. This will save time when you get to the final installation. If the reed refuses to go to the N.O. position, you may have to trim a little plastic off the ties to get the glass closer to the magnet or reposition the reed. If the reed is working properly and positioned correctly, it



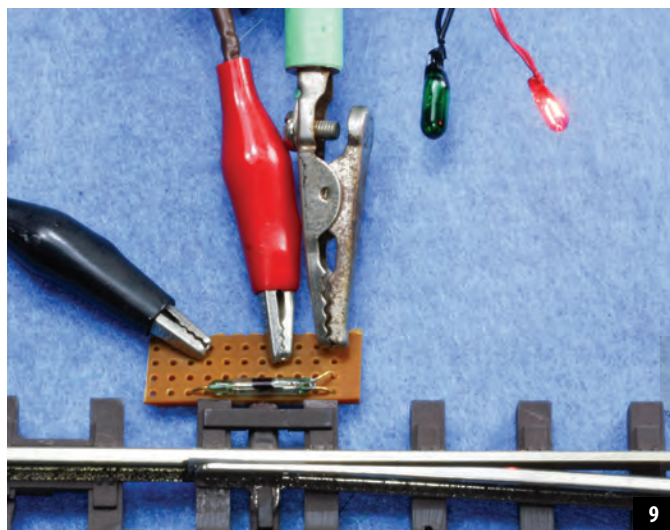
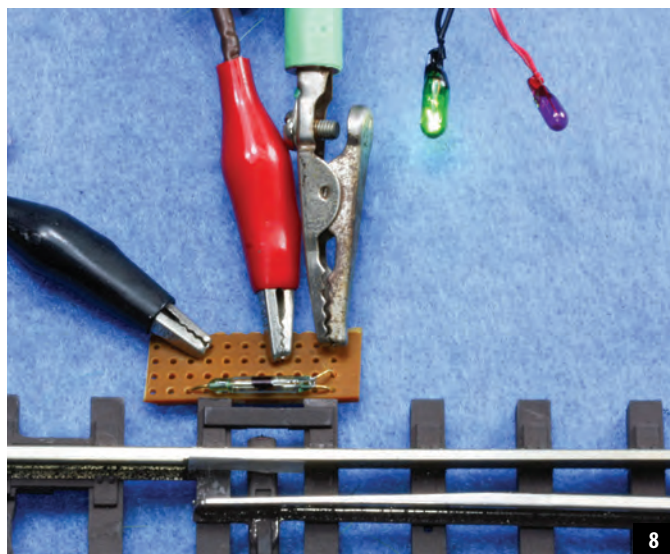


will flip between the two test bulbs when the throwbar is moved between straight and curve.

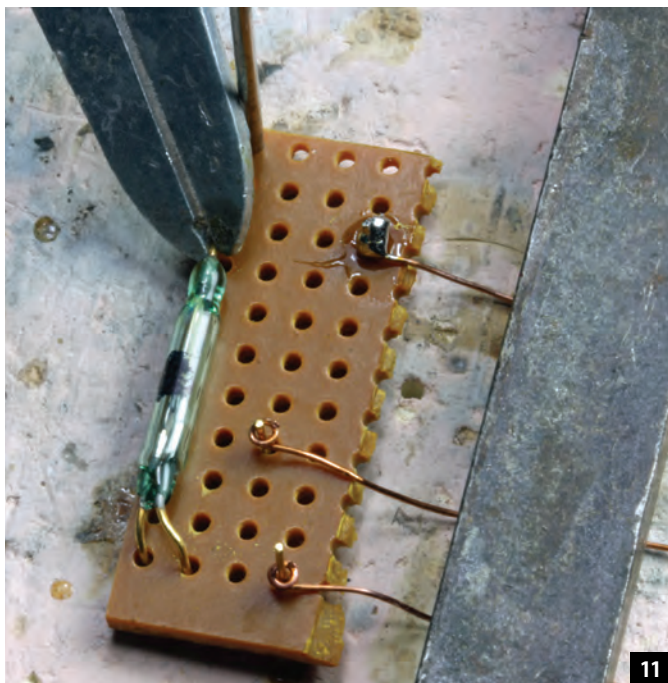
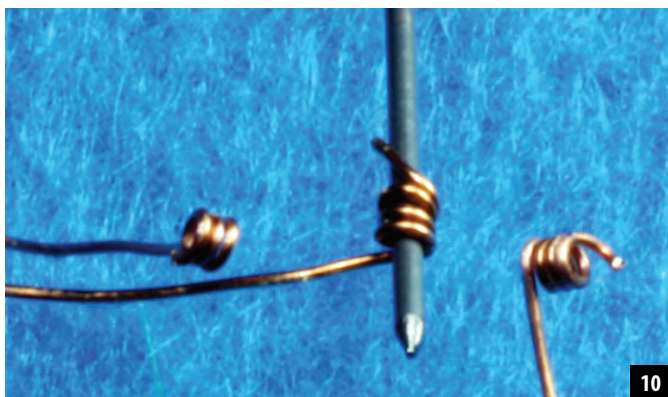
Mounting the reed on a perfboard makes it easy to handle and install. Cut a piece of perfboard that will fit your reed switch. Install the reed by putting 90-degree bends in the leads. Make sure you have positioned the blades perpendicular to the

magnet (Photo 6). Also make sure the “right side” will end up close to the magnet along the long edge of the perfboard. Stitch the leads back up to the top of the perfboard to make soldering easy and to secure the reed to the board (Photo 7). In some situations there is not enough room between the turnout and the adjoining track. In these situations just use the reed tube alone. Test the assembly using the test fixture (Photos 8 and 9). Note the position of the points and the color of the bulbs.

To prepare the wire for connection to the switch leads, wrap the stripped wire around an .033” steel rod or music wire (Photo 10). Make four tight wraps, tighten the curls with needle-nose pliers, pull it off the rod, and trim any excess. Slip the curls over the leads, attach a heat sink between the joint and the reed switch, and solder the connection (Photo 11). Move the heat sink to the next lead and repeat. Trim off any excess wire. It is a good idea to mark the wires at this point. I used black, green, and red felt pens to mark the common, N.C., and N.O. wires. Put shrink tube over the wire to bundle them together. A reed without a perfboard base is even easier to build. Just solder the wire to the leads, put shrink tube over the connections, and mark the wires (Photo 12). Test the completed assembly again using the test fixture. If everything is







connected and positioned correctly, the test bulbs will flip when the throwbar is moved. You now have a working reed switch assembly ready to install on your layout.

## Joining the Reeds to the Layout Turnouts

Position the assembly where you think it will work and drill a hole in the tabletop for the wires. Now hook up the test fixture; you should get an N.C. light. Put the throwbar to the side closest to the assembly and tweak its position until you get an N.O. light (Photos 13 and 14). This is where marking the reed tube earlier will help. When you have verified the position that works best, you can install the perfboard permanently with a dab of silicone and a couple of thin nails or pins. A couple of T-pins can be used to temporarily hold everything in place until the silicone dries. Verify the switching action a few times with your test fixture before disconnecting it. If you wish, you can glue scenery material over it.

Photo 15 shows an assembly placed in a tight-fitting situation. I had to scrape away the ballast to position the prewired reed.

## Definitions for This Project

**ROUTE SIGNALING:** On my layout is used to signal the engine crew (me) the position of the points of turnouts to avoid embarrassing collisions, shorts, derailments, or misdirected trains. It is a two-color system: green-red or green-yellow.

**TURNOUT:** A mechanical installation enabling rolling railroad equipment to be guided between two tracks, also commonly called a switch.

**POINTS:** The movable rails on a turnout. Moving the throwbar moves the points.

**THROWBAR:** A bar that links the point rails and moves them back and forth. ScaleTrax has bar magnets embedded in both ends of the throwbar, which is part of its non-derailing design.

**TURNOUT MOTOR:** Device with two electromagnets that moves the throwbar and point rails side to side. It is usually activated remotely. It also contains a spring that holds the points in place.

**SPDT SWITCH:** Simple single-pole double-throw switch that can route a circuit to one of two paths, depending on its actuation. It is also called a changeover switch.

**MAGNETIC REED SWITCH:** For this project I used an SPDT reed switch for each turnout. It contains metal contacts that are hermetically sealed in a glass tube. It has three blades: one common and two others that contend for connection to the common. Externally, three leads are attached. They are referred to as common, normally closed (N.C.), and normally open (N.O.). The reed switch flips the common between two blades, depending on the presence or absence of a magnetic field (Diagram 1).

**NORMALLY CLOSED (N.C.):** Means a contact is closed or in a conductive state (on) when the reed is in a normal (non-magnetized) state.

**NORMALLY OPEN (N.O.):** Means a contact is open or in a non-conductive state (off) when the reed is in a normal (non-magnetized) state.

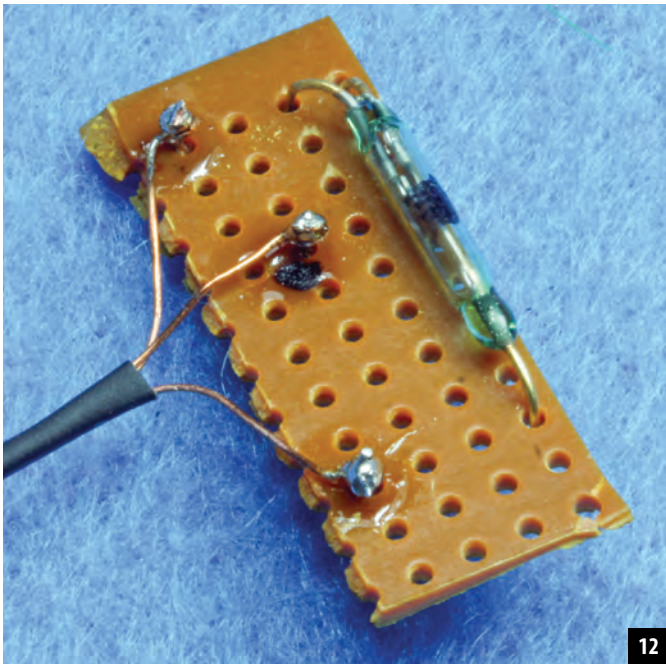
**ACTUATION:** A physical action. For this project it is the movement of the turnout throwbar connected to the rail points, thereby moving an embedded magnet. The position of the magnet controls the contacts in the tube, flipping the circuit's direction. If the magnet is not close to the reed switch, it is in its normal state. A magnet close to the reed switch reverses the connections.

**SIGNAL COLORS:** On my layout, green means normal, straight, through, or mainline routing of the turnout points. Yellow means non-normal, curve, or diverging routing. Red means non-normal; the points are set against the approaching train and will cause a derailment if entered. Even non-derailing turnouts sometimes cause an electrical short when set wrong.

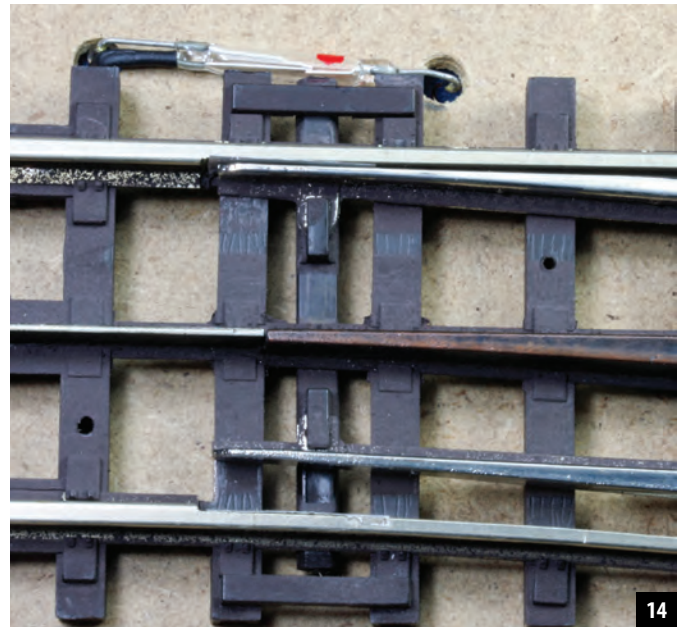
**PERFBOARD:** A thin, insulated, rigid sheet with holes predrilled at standard intervals for mounting electronic components.

**LED:** Preferable to incandescent bulbs because they use less power and therefore lighter wire and components. They also have a much longer life and run cooler than incandescent bulbs. Typically, red and yellow LEDs are about 2 volts DC, and green LEDs are about 3 volts DC; they consume about .020 amps per bulb. They must be wired with DC current of the correct polarity to work.

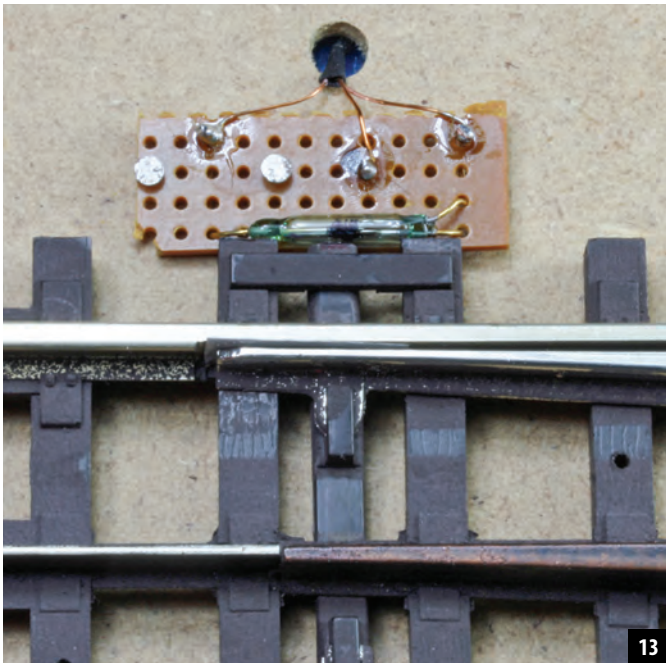




12



14



13

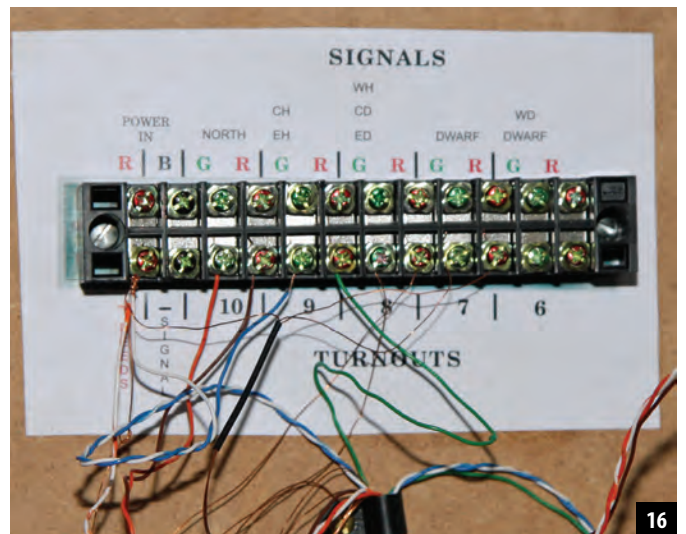


15

A hole on either side of the reed allows the wires to pass through the table. Use the same procedure for locating the tube as you did for the perfboard above. A glob of silicone holds the reed in place. You can hide the tube by gluing ballast and ground foam over it.

## Connecting the Reeds to the Signals

The signals and panel lights are beyond the scope of this article, but I am planning a future article on that subject. The size and voltage of the DC power supply for your signals and panel lights will depend on the number and voltage of the LEDs you are using. The reed switches are oblivious to polarity and voltage, but the LEDs do require proper DC polarity and voltage to work.




16





17

A terminal block helps organize the reed-to-signal wire connections. Terminal blocks provide a convenient way to interface the reed to its signal. If a connection is wrong, it is easy to fix by simply moving the wires, eliminating any cutting and resoldering. I did this in two phases. Complete the reed connections first and then test the red-to-green action on each turnout with the test fixture. Later, connect the signal wires. On my layout, the signals and turnouts tend to be in clusters, so I have a terminal block at each of these clusters. Photo 16 shows a terminal block for five turnouts and nine two-color signals. The signal wires will be hooked up later.

In my yard area, reed switches control LED dwarf signals (Photo 17). On other parts of the layout I use bridge units and dwarfs. I have a total of 12 reeds controlling 20 signals. I have used this technique with ScaleTrax O72, #4, and #6 turnouts. Some have been in use for about a year with no problems. 

## Parts, Supplies, and Tools:

### Parts:

- MTH ScaleTrax turnouts
- Magnet or insulated wire, 22-28 AWG
- Reed switches, SPDT
- IC-spacing perfboard
- Power supply for test fixture
- Test leads with alligator clips
- Bulbs for test fixture
- Terminal blocks

### Supplies:

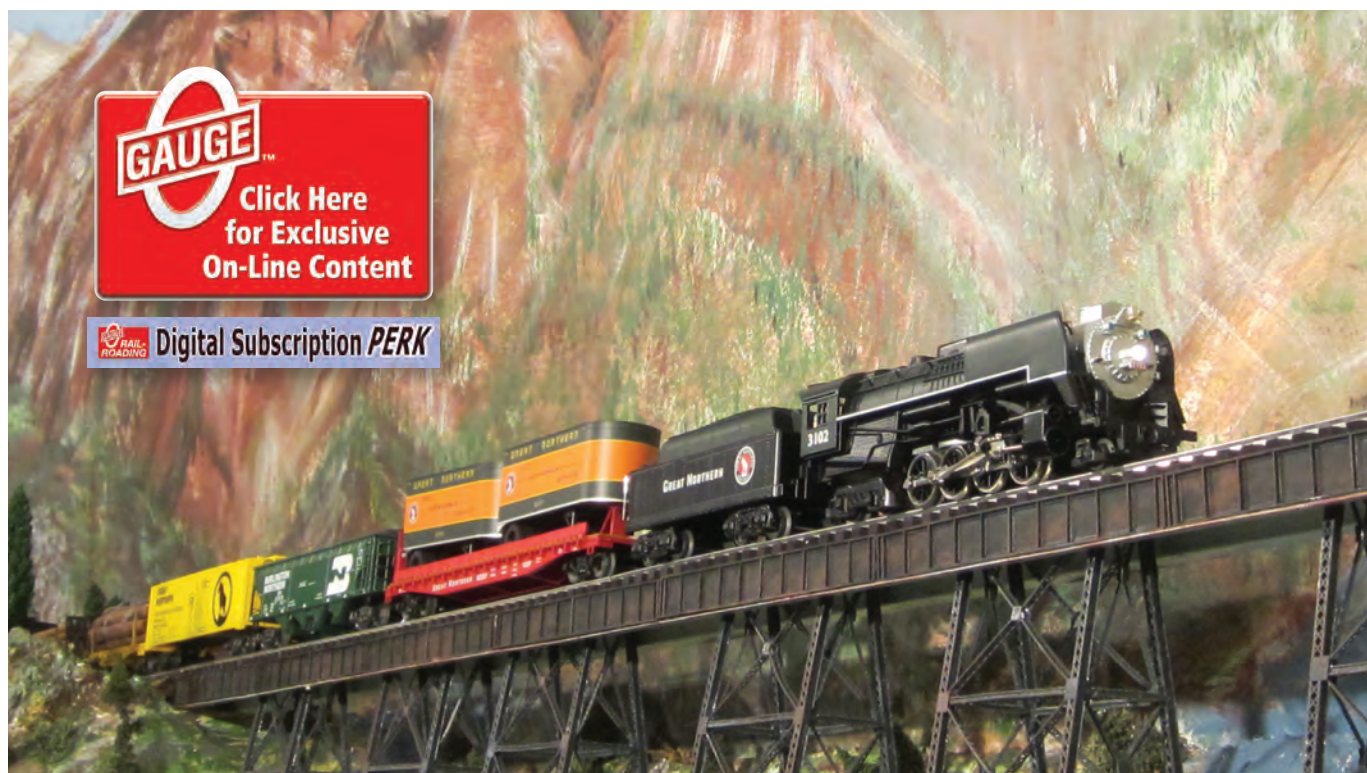
- Solder
- Flux
- Silicone and glue
- Stick pins or thin nails
- T-pins
- Shrink tube 1 mm

### Tools:

- Soldering iron, pencil type
- Heat sink for soldering
- Wire cutters
- Saw for perfboard
- Needle-nose pliers
- Hobby knife
- Multimeter
- Magnesia block (optional)
- Magnifying glass (optional)
- Micrometer
- Felt pens, different colors



## Welcome to Glacier National Park and Marias Pass



The Great Northern operating through one of this nation's great parks.

# Along the O Gauge Glacier Line

Article and Photos by John Robert Coy

My day had finally come in June of 2005. There I was standing in the center of the 1300-square-foot empty basement in our recently purchased house. It was the proverbial blank slate. I gave much thought as to how I would design my dream HO scale Great Northern Railway (GN) layout. That's right, I said HO scale.

In fact, it took many years to even start the layout because I had to finish the basement, including the ceiling, perimeter lights, electrical hardware, and so forth, and then do a plan. The only thing I knew for certain back in June 2005 was the layout would be based on the former GN main line that follows the southern boundary of Glacier National Park (GNP) through Marias Pass and the layout would be done as realistically as possible.

In the interim, I had hopes of getting my son interested in model railroading, and I constructed a 12' x 10' O scale layout for him. That decision evolved into getting me to begin dreaming of an O scale empire.

My eyesight isn't what it used to be. I would look over my son's layout and even without glasses could see the O scale cars' markings. That prompted me to get out my largest HO railcar and place it alongside an O railcar. One look was all it took. I wanted O scale in this huge basement.

That epiphany led me to a major hurdle: my wife. Connie is a model railroader. She really enjoys the trains along with painting and model building. However, I was hesitant and didn't expect a positive response from her when I shared my vision of changing scales. After all, we had a sizable investment in HO trains. Connie really surprised me when she agreed without much objection. Connie said her eyesight wasn't what it used to be either.

Our layout is quite unique in that it is a historical miniature tour of GNP and the Marias Pass area. The reason for modeling this area is because I wrote a book, *Montana's Marias Pass; Early GN Mileposts*, which includes information about how



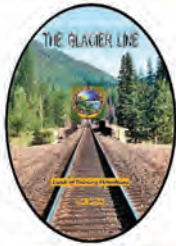


Great Northern freights are an ever-present sight on Glacier Line rails.



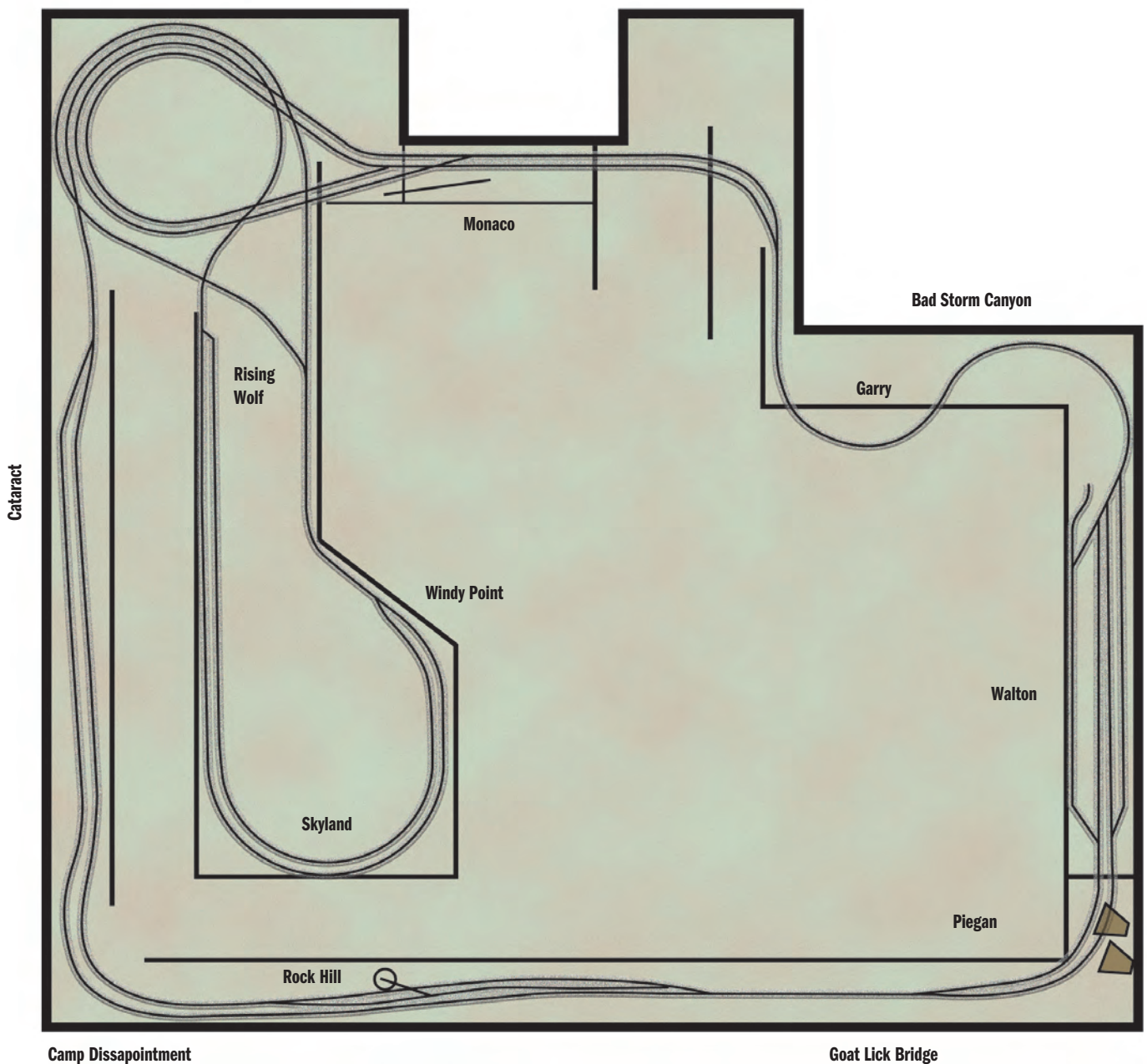
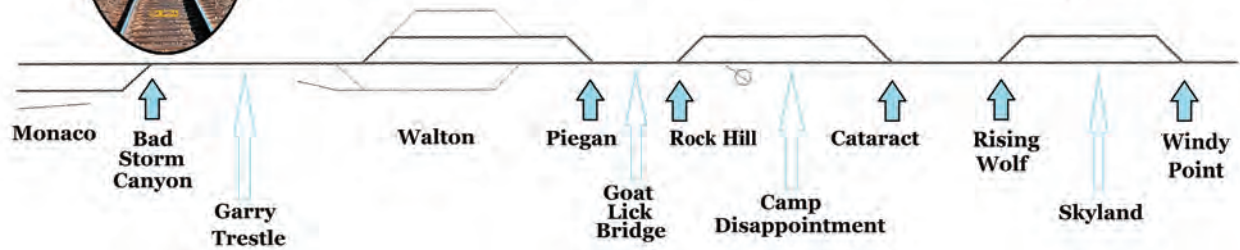
Goat Lick Bridge is one of several impressive bridges and trestles on the line.





# THE GLACIER LINE

## SYSTEM MAP







After arriving at the park by train, visitors can hop aboard a vintage 1937 Red Jammer open-top bus for a narrated tour of the area's many attractions.



Humans may visit the park, but four-legged critters are the permanent residents.



Bears are another of the park's year-round residents.

the GN had a huge influence in the creation of GNP. Thanks to Louis W. Hill, son of the famed "Empire Builder" James Jerome Hill, who assisted in getting GNP designated as a national park.

Since 1993, I have been a proud member of the Great Northern Railway Historical Society (GNRHS), which can be explored in a virtual manner on the Internet at [www.gnrhs.org](http://www.gnrhs.org). Outstanding resources were available to plan a GN layout. On the fascia of the Glacier Line are photographs of actual historical markers

placed near our scale version of the marker's description.

Our layout depicts certain structures, objects, and features that faithfully or very closely resemble their real-life counterparts. Even the freehand-painted backdrops are patterned after actual photographs. The names of the towns and places on the Glacier Line actually existed at one time or are a close match. Our goal was and is to capture the essence of GNP and Marias Pass.

The Glacier Line is designed in a linear fashion. Each train runs from a hidden yard or staging area (or fiddle yard) across over 230' of visible main line to another hidden staging area. The trains do not chase their tails in an endless circle, never changing direction, track, or consist. The GL simulates the prototype. It is a single line with long passing sidings, and about 90 percent of the engines and rolling stock are representations of prototypes.

Connie freehand painted a likeness of the historic Isaac Walton Inn directly onto the backdrop. Near the inn (both prototype and model) is a former GN F45 locomotive that is now used as accommodations. Nearby is a scale replica of a world famous 1937 Red Jammer tour bus that takes people along one of America's most famous scenic drives: the Going-To-The-Sun Road.

In prototype and model, there are several cabooses near the Isaac Walton Inn for lodging. The prototype and Glacier Line both pass by the historical site of Camp Disappointment, which is marked by an obelisk on a hillside. Camp Disappointment is the site of the only armed conflict of the Lewis and Clark Expedition.

At close to the highest point on the Glacier Line (and its prototype), the trains pass by the statues near Summit. Three monuments are located there.





Steam is no stranger on the Glacier Line.



Amtrak is seen in the higher elevations where there is almost always some snow on the ground in every season.

One is a small rock with a plaque commemorating William “Slippery Bill” Morrison, who donated many acres of the land at Summit. The second commemorative feature, an obelisk, is dedicated to former President Theodore Roosevelt. The final statue is John Frank Stevens of Panama Canal fame. He discovered MP on a subzero night in December 1889.

The nuts and bolts of the Glacier Line include GarGraves track and switches, supplemented by Ross switches. The minimum main line diameter is O72, and all of the main line turnouts are O100. Rolling stock is mostly MTH and Lionel with some K-Line and kits. The majority of engines are MTH PS2 or PS3. One MTH Z-4000 powers the track, and another small Lionel transformer powers the turnout machines. Yet another is devoted exclusively to buildings and street lighting.

The layout was originally planned to be operated conventionally. I used the 40-4000 wireless walkaround remotes. In September 2015, my friend Chris Toncheff came over to see the layout for the first time. He was completely hooked. He had



Amtrak 212 and its consist of bi-levels make the curve on Garry Trestle.





A horseback ride is a great way to enjoy nature's wonders.



Scott Dombrosky built this snow shed.

trains in his childhood, but none since. It is ironic that it was this man who pushed me over the edge to installing DCS on the Glacier Line because, by his own admission, he is "technologically challenged."

It all started innocently enough. Chris wanted to purchase a Yard Boss switcher engine because he had actually operated a real one at Inland Steel many years ago. When the Yard Boss arrived, Chris discovered that he could not access all the features of the MTH PS3 without DCS, so he purchased the DCS components. I hooked it up on a simple oval. In a word: awesome! I wanted it on the Glacier Line but was worn out thinking about a conversion to DCS.

My friend Gregg Burks came to the rescue. Gregg wires professionally, and he offered to assist me wiring the Glacier Line with DCS. I'm grateful because now my son enjoys running the Glacier Line thanks to the simplicity of operation. Gregg also wired the entire turntable area.

Large numbers of visitors are impressed by the freehand-painted backdrops and scenery. They have asked how this was done. I can answer that in one word: Connie. She is gifted. Connie's painting, modeling, and weathering skills have been invaluable. Her ability to paint stunning renditions of actual photos onto the backdrops is simply amazing.

Connie also went about the tedious and time-consuming task of assembling nine Micro Engineering Steel Trestle kits for a 99" long bridge. These trestles are virtually identical to the prototype. Her trestle bridge is a scenic highlight of the layout. Also, some of the earth and rocks were taken from the prototype and placed onto the Glacier Line. It doesn't get more realistic than that.

When people see our layout, they believe that it is my railroad. In fact, along with painting all the backdrops, Connie has purchased many of her own engines and railcars and has also assembled, weathered, and constructed all kinds of other items including buildings and loads for the rolling stock.

We are a team. The Glacier Line is truly ours. That includes friends and fellow GL crew members Chris Toncheff, Gregg Burks, Rod Weinschenk, and Joseph Coy. A special thanks to lifelong friend Scott Dombrosky for building a





Great Northern train in Big Sky Blue rounds a gentle and graceful curve.



Monuments at Summit near the highest point on the line pay tribute to three important figures in the park's history: William Morrison, President Theodore Roosevelt, and John Frank Stevens.

snow shed for the line. It was Scott who turned me into a model railroader in the early 1970s. Also, my thanks go to Bill Davis for assisting in the maintenance and care of engines.

My goal at the beginning of actual construction in June 2011 was to have this layout done in five years. There were many times I believed we would never make it. The one that stands out is back

when Connie broke her leg so badly she needed surgery, a metal plate, and nine screws to put everything back together. This was shortly before the Lionel Collectors Club of America (LCCA) was holding its National Convention in Indianapolis. Connie wanted everything to be perfect for the LCCA Board of Directors visit. She literally crawled down the stairs and painted the emblem of the Great Northern Railway—a large version—on the landing between the main floor and basement. Our visitors inquired as to where we got the stencil for this logo.

We are exceptionally proud of what we have accomplished thus far. June 2016 was our five-year mark. We plan to continue to share this layout with others. We have lots of additions, details, and updates planned for the future. For additional pictures and information, visit our Facebook page for the Glacier Line at [www.facebook.com/glacierline](http://www.facebook.com/glacierline).

It is a pleasure and a privilege to share the story of the Glacier Line. I hope to see you along the line in Marias Pass at Glacier National Park sometime either in Montana or an Indiana basement.





A Great Northern freight moves through Walton.



A tiny turntable is available for turning maintenance-of-way and snow removal equipment.



The crew in front row: Joseph Coy and Chris Toncheff; back row: Connie Coy, John Coy, and Gregg Burks.







# Create an Active Business

**Article and Photos by Rege Schilken**

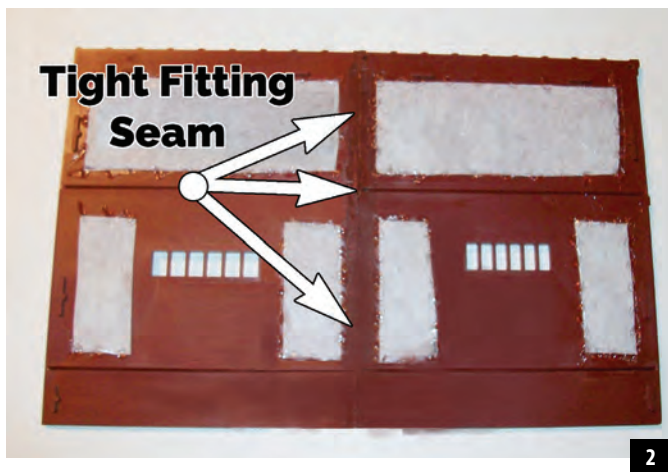
Here is a simple way to turn what would otherwise be a static structure into a building with animation. I chose the OGR Homestead Furniture Factory building for this project (Photo 1). Each of the side pieces has a large garage-like door in it, and only one side, the front piece, does not. Instead, it has wide steps that simulate a busy factory entrance. As noted in the kit's assembly instructions, all trim painting or mortar whitewashing should

be done before moving on to any of the following steps.

Cut the kit's cellophane and tissue paper into strips and hot-glue them into place behind all the doors and windows, as shown in Photo 2. The tissue disperses light nicely so you do not stare into an empty building when finished (Photo 3).

After examining all the side pieces, select two that have the same large doors and carefully glue them together. Trim off any





2



3



4

excess molding that would keep the sides from fitting tightly together (Photo 4). You will also notice that my doors do not match in height, but it was too late once the glue had bonded. Nevertheless, the project worked.

Photo 4 also includes a thick black marker line. The entire area below this line should be cut out with a jigsaw. This will

allow the floor inside the building to run out through both doors and under the joined wall pieces to become the outside loading dock. Save this wall piece because later it will be trimmed and glued as the stone wall upon which the large dock sits, as seen in Photo 5.

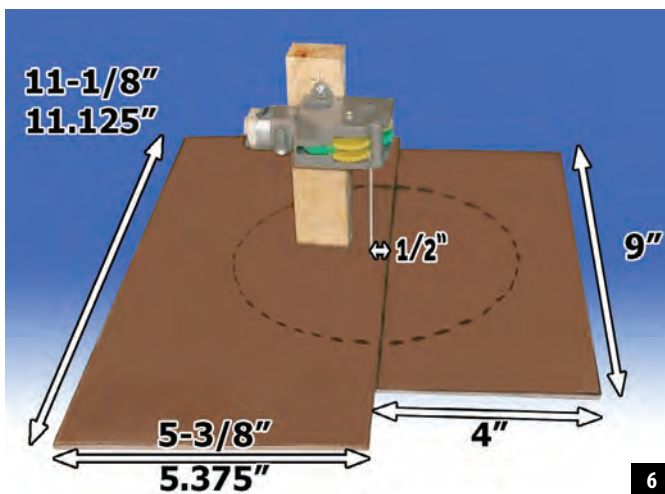
Now examine Photo 6 and the other photos until you have a clear understanding of how a small Tamiya motor will be mounted sideways onto a block of wood (Photo 7). A long motor shaft will extend down through the 1/8" beaverboard floor to turn a magnetic foot. In turn, this will cause a magnetized forklift on the floor above to move around in a circle and in and out through the two dock doors.

The magnets I use for such projects are very powerful, although their size is only 1/4" wide and 1/16" thick. If you search on eBay or elsewhere on the Internet for powerful miniature magnets, you will find a host of suppliers. They are usually sold with several in a package (Photo 8).

To make the floor or dock, cut a piece of 1/8" beaverboard according to the measurements in Photo 9. Notice that on the left side of my front dock, there is more space than on the right. I left this so that when finished I could cement the OGR kit's steps into place. Also, make the hole shown in Photo 9. It should sit about 1/2" away from the midpoint where the



5



6



## Assemble for Lowest Speed



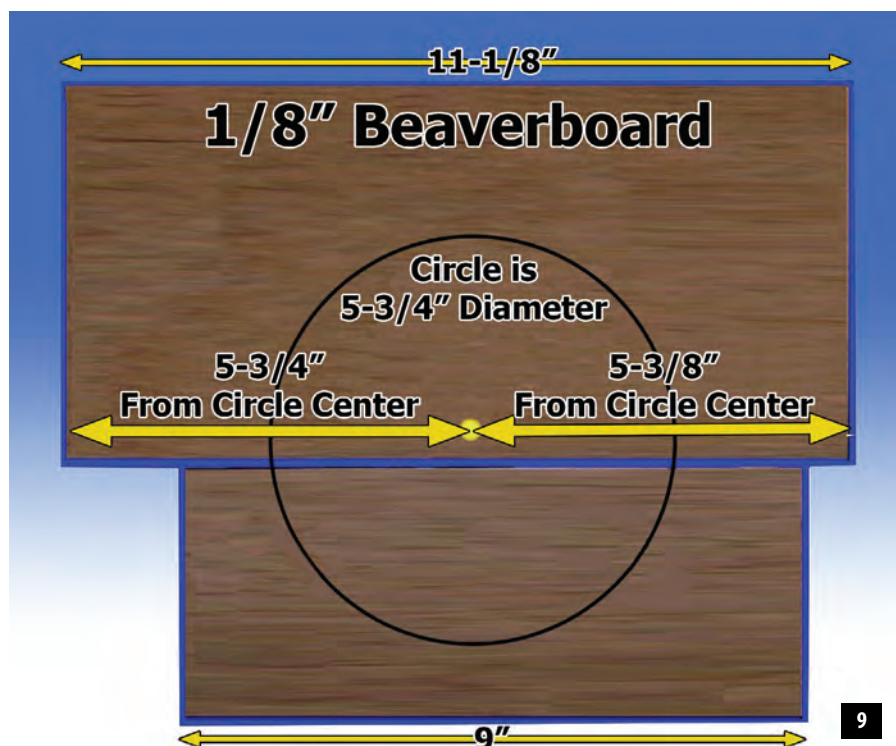
two glued-together wall pieces will eventually sit.

Cut out a block of wood like the one in Photo 10. Then assemble the 4-speed motor following directions provided on a foldout sheet from Tamiya. Insert the gears to get the lowest speed on the motor shaft (refer back to Photo 7). Screw the motor to the block of wood, as depicted earlier in Photo 6, so the motor's shaft extends down and out through the hole about 1/2" or so.

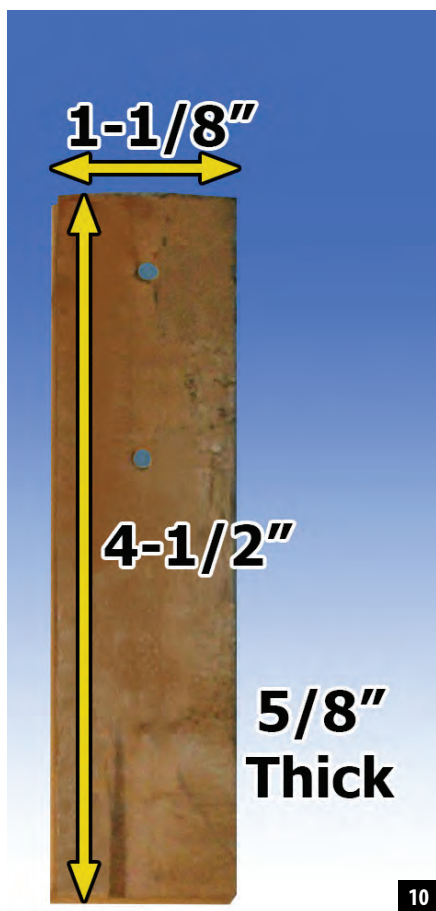
Now anchor the block of wood to the beaverboard floor. I found that gluing it in place until the glue set and then drilling and adding the screws worked best.

Cut out and build the magnetic foot as shown in Photo 11. Notice how one of the gray plastic pieces from the Tamiya motor kit gets attached to one end of the magnetic foot. Photos 12 and 13 show how the magnet is embedded and glued down into the other end. There you will have to add a small piece of beaverboard about 1" long, making it double thick. Only drill the magnet hole down through the top beaverboard

**7**





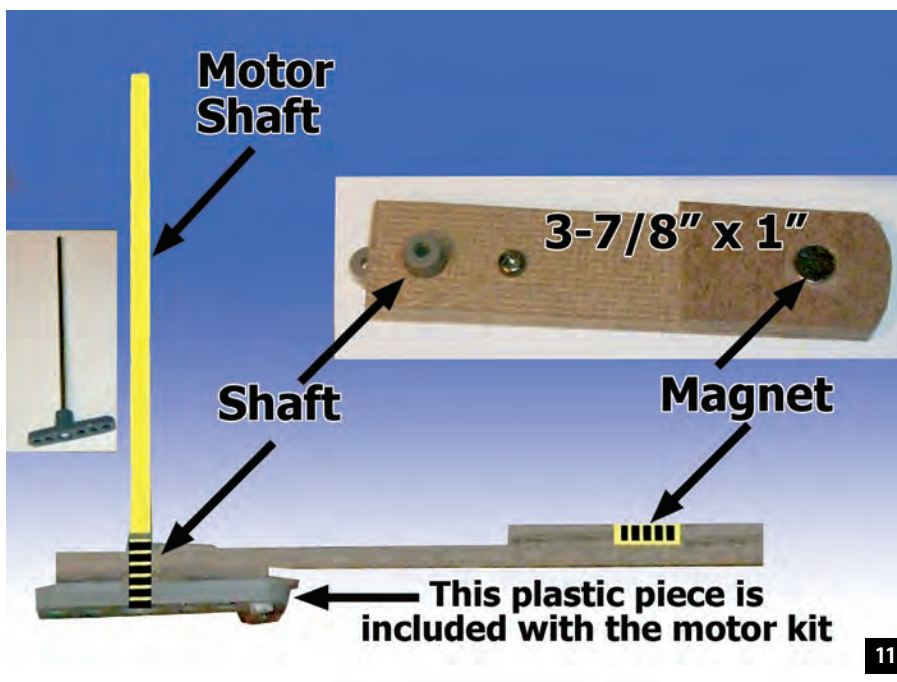


10

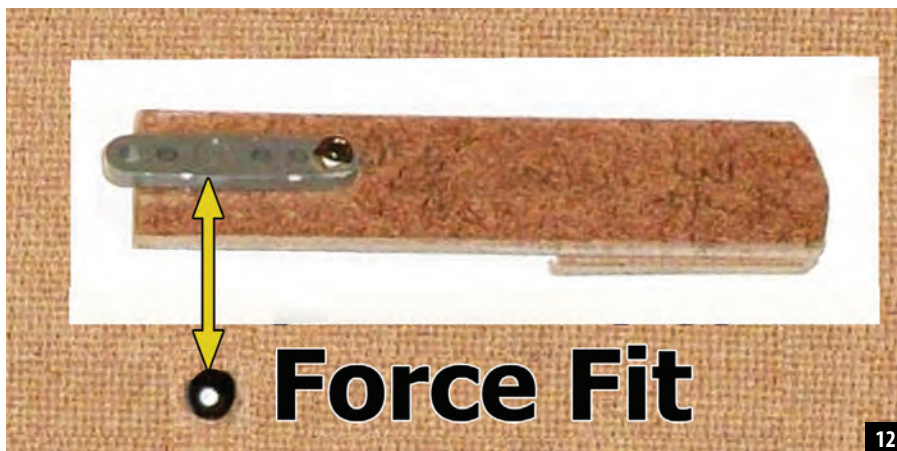
layer. When you examine the figures carefully, you can see how the foot will get forced up onto the motor shaft from beneath the floor.

Now assemble the rest of the building. Because some of the pieces may not be completely flat, it is best to glue first the bottom halves of two pieces together first. Then after the glue has firmly set, glue together the top halves, clamping them flush with one another. The Tenax glue I used is best applied with a small artist's brush. It sets quickly but takes an hour or so to cure completely. For good-looking joints, it is critical that the pieces are flush and that glue doesn't smear onto your fingers.

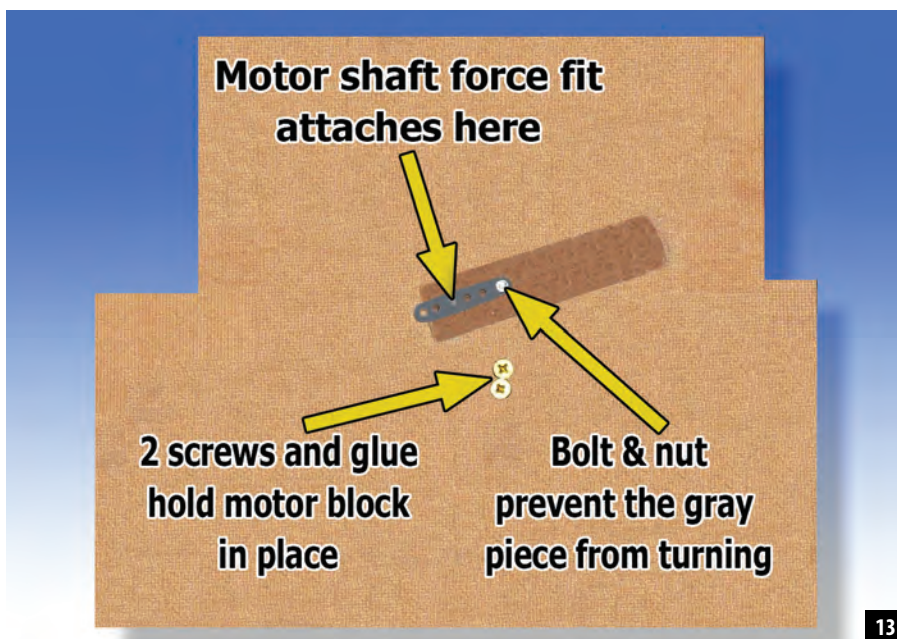
When you are satisfied that everything will fit together properly and the motor and magnetic foot are turning smoothly, lay the building on its back and slide the floor up inside the building. Glue short pieces of wood cut to length to hold it in place (Photo 14). Here I used hot glue because it hardens and bonds very quickly. Any place where the floor actually touches the side walls, you might also add a bead of glue.



11



12

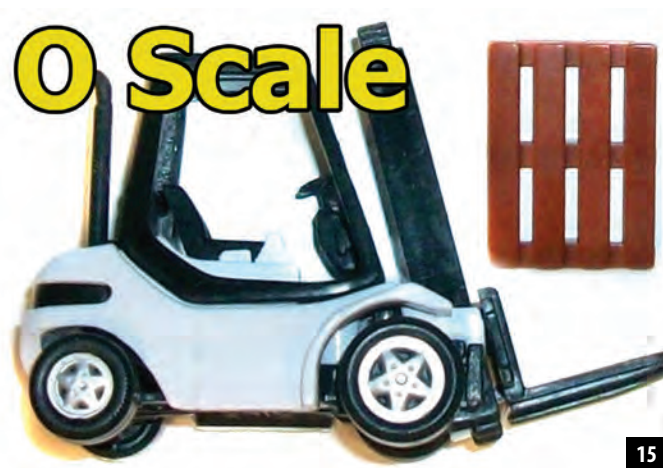


13

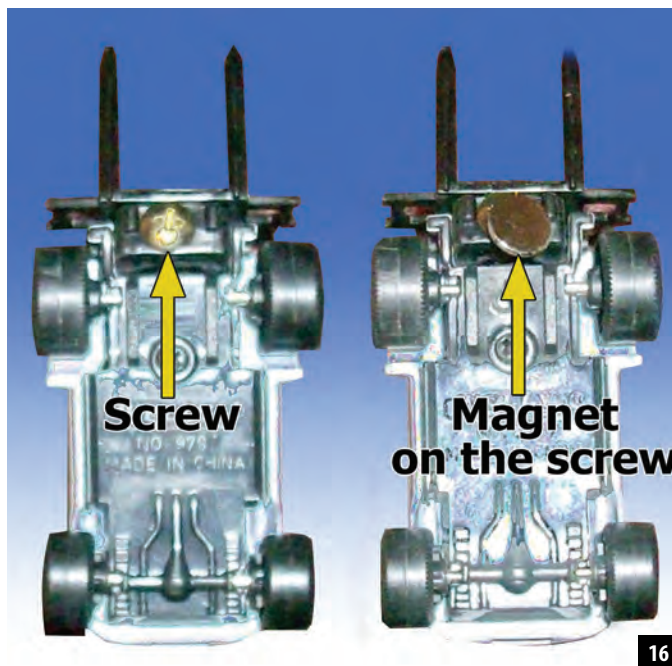




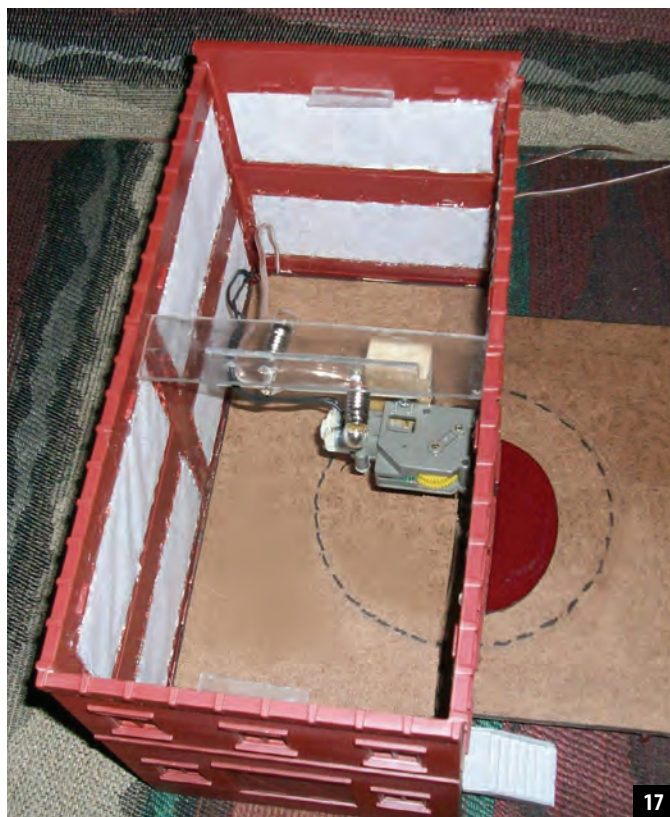
14



15



16



17

The O scale forklift came from eBay (Photo 15). It is a Lionel/K-Line forklift #22307, which came as a threesome with pallets. After drilling a small hole up through the bottom of the plastic forklift mechanism, insert a very short screw with a wide head to which the magnet will stick (Photo 16). There is no need to glue it in place.

How you add your lights, if you choose to do so, is up to you. Photo 17 shows how I used Plexiglas pieces to add two bulbs, one going in each direction. It is always best to have some light so model structures do not appear dull, dim, and spooky looking. The AA holder for my two batteries came from Radio Shack. It already had a tiny toggle switch attached. Just make sure you run the motor/battery wires and the two wires from your lights down through one of the factory's rear corners so they don't interfere with the moving forklift.

In Photo 17 you will also see a red crescent-shaped piece directly in front of the two glued-together wall pieces. I added it as a wheel guide because I accidentally glued wall pieces together

where one door is slightly narrower than the other. You probably won't need this if both your doors are of equal size.

Finally, trim the horizontal piece cut out earlier from under the doors so it fits under the dock front and then glue it in place. After seeing how easy making this animated structure can be, hopefully you can dream up other projects using a similar system. Each will add additional interest to your already fascinating train display. 🚂



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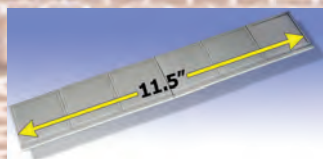
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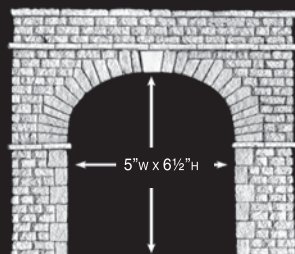
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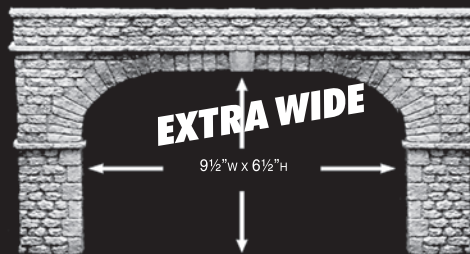
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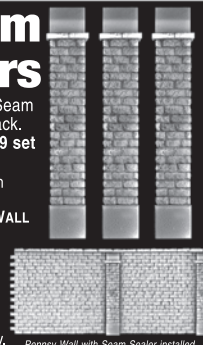
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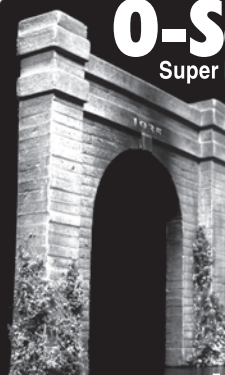


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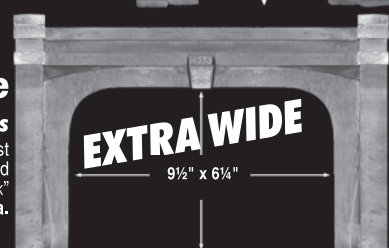
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# Collector's Gallery

Ed Boyle



## The Century Club 726 Berkshire: A Swing and a Miss

I had forgotten all about the original Lionel Century Club of 1996. After all, 20 years is a long time, and the notion of having to pay \$100 to join the Century Club for the privilege of being able to order a postwar replica locomotive at full retail seemed beyond “quaint” in today’s over-saturated marketplace.

Then I ran across the Lionel Century Club promotional brochure, and the impeccable Art Deco cover illustration almost instantly rekindled the excitement and anticipation of the run-up to the 100th anniversary of Lionel (Photo 1). There against a

dramatic searchlight-swept Gotham City-style night scene stood five iconic postwar Lionel locomotives: the 773 Hudson, 726 Berkshire, GG1 electric, New York Central 2333 F3 diesel, and the 671 Turbine.

### The First Century Club Engine: 6-18053, 726 Berkshire

The first Century Club release was the 726 Berkshire, and the price for the 6-18053 was \$895 on top of the \$100 you paid





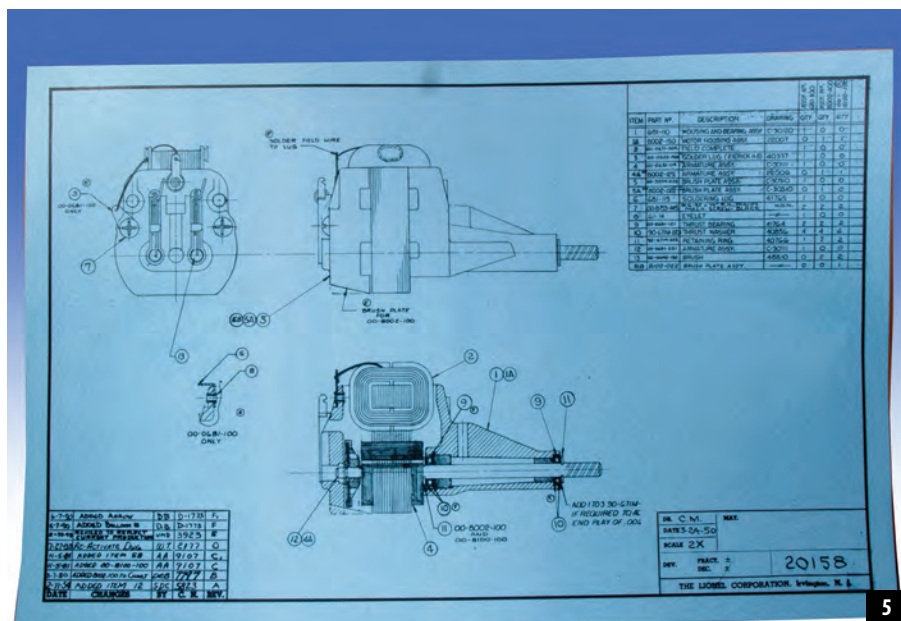
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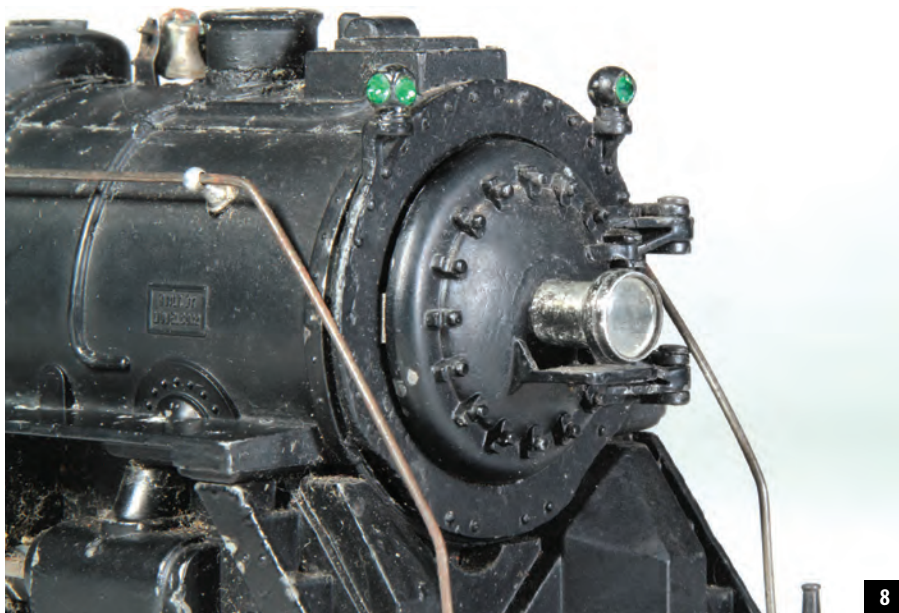
to join the Century Club, which gave you the right to buy any or all five of the Century Club approximations of the postwar originals.

After you opened the utilitarian packing box seen in Photo 2, you were greeted with an elegantly understated purplish-blue set box with Lionel Century Club 726 Berkshire printed on the top in silver (Photo 3). The 6-18053 engine and tender were nestled in two shiny, orange-coated cardboard boxes with Lionel logos (Photo 4). Underneath these boxes, in addition to the usual owner's manual and certificate of authenticity, was a large white envelope with three vintage blueprints depicting portions of the original 726 (Photo 5). The one depicted here shows the open-frame motor.

Unwrapping the packaging revealed a handsome locomotive in semi-flat black with a prominent 726 red sign with white numbers below the headlight (Photo 6). It looked good, but the front of the engine did not look very much like the front of the original 1946, 726 (Photo 7).

We are going to compare the 1996, 6-18053 with a 1946 model 726, and the differences in appearance are instructive because they point out the limitations product planners are up against when they try to create replicas using existing tooling that is no longer representative of the original. To be totally fair to the Lionel product people of the time, the 1946 version of the 2-8-4 Berkshire was different in significant respects than the 1947 to 1949 Berks that were produced, but the basic appearance of the 2426W 12-wheel tender, the nickel-rimmed 8-wheel Baldwin disc drivers, and the





nickel-plated drive and connecting rods was the same. More importantly from an appearance standpoint, all the 726 Berkshires used the exact same smokebox front with its distinctive headlight shape, which helped give the engines their signature look as Lionel Berks (Photo 8).

## Tenders and Boilers

The tender body for the Century Club Berk appears to use the same tooling as the postwar 2426W (Photo 9). It is a good-looking model in its own right, despite the prominent umbilical cord, which we will discuss later. Both tenders have ElectroCouplers and contain sound systems (Photos 10 and 11). The 1946, 2426W has a whistle, while the tender for the 6-18053 has the boards for an early version of the digital RailSounds system (Photo 12).

The die-cast 12-wheel trucks on the 6-18053 tender look similar to their plastic-sided postwar 12-wheel predecessors riding under the 2426W (Photos 13 and 14).

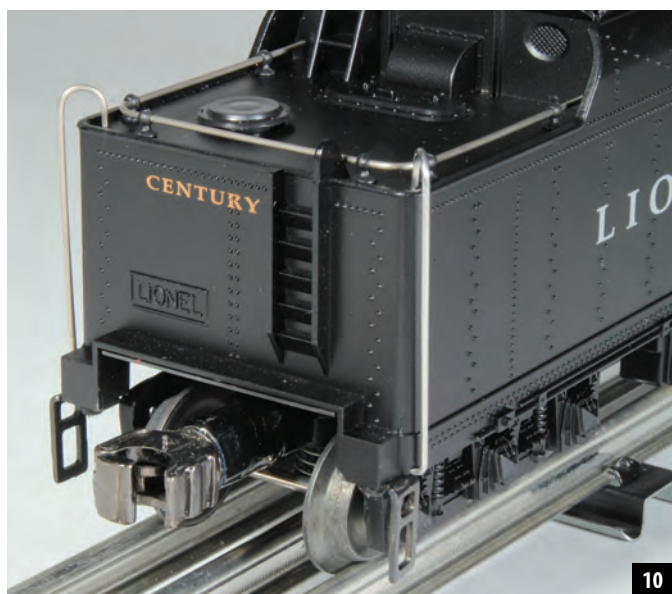
The backstory on the die-cast modern-era trucks is interesting. They were designed to be used on the 1978 Blue Comet Baby Madison cars, and according to a story related in *LIONEL A Collector's Guide and History* Volume IV: 1970-1980 by Tom McComas and James Touhy on page 96, the total cost to switch from the plastic 4-wheel trucks under the previous Baby Madison cars to the die-cast 6-wheel trucks for the Blue Comet cars was \$70,000, which was a lot of money in those days. Fortunately for Lionel, the initial investment has paid off many times over; the trucks have been used on passenger cars, steam locomotive tenders, and cranes, to name just a few of their applications, and they are still being specified for the current crop of Baby Madison cars Lionel is offering.

The 1946, 726 boiler uses modified tooling from the prewar 226, 2-6-4. All postwar 726 and 736 Lionel Berkshires had the same basic boiler shape for the rest of the postwar period, with one cosmetic exception. The 1946, 726 carried over the prewar sand dome from the 226 (Photo 15), but Lionel enlarged the sand dome from 1947 on to make it look more like the real Berkshire locomotive. The 6-18053 Berkshire sports the larger sand dome along with the gold Century Club bell and whistle (Photo 16).

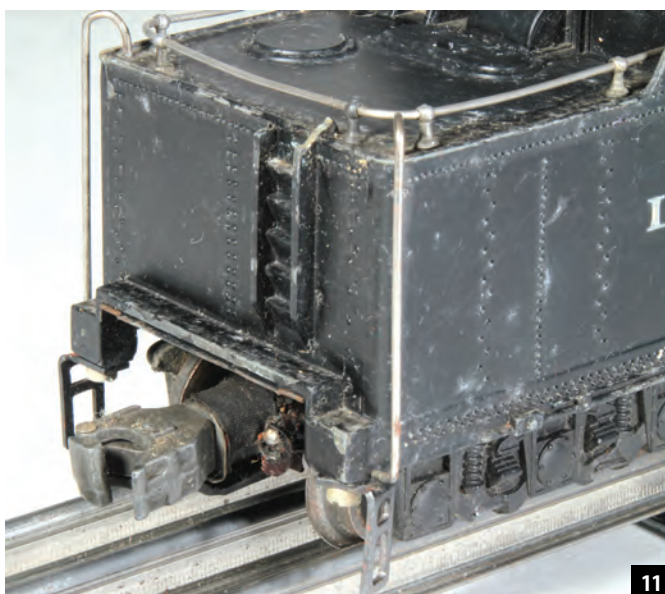




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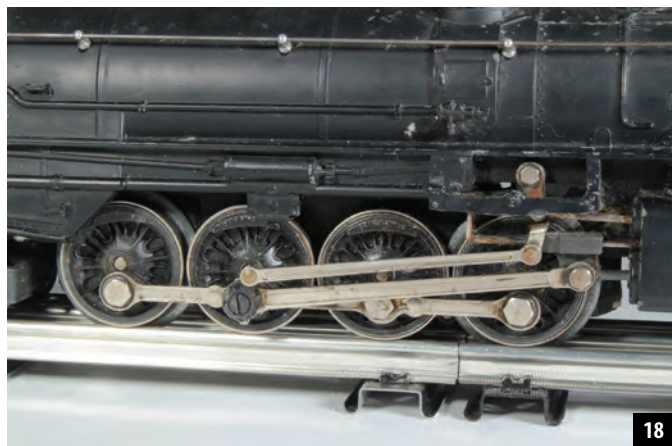
Both locomotives have similar-looking nickel-rimmed 8-wheel Baldwin drivers and bright nickel-plated valve gear, which significantly enhance the resemblance of the Century Club Berk to the original 726 (Photos 17 and 18). The white 726 number under the cab of the 6-18053, as seen in Photo 19, is a pretty good stand-in for the original pictured in Photo 20, even though it does not use the same font.

Then there is the umbilical cord for the 6-18053, which is big, obtrusive, and clumsy-looking, as you can see in Photos 21 and 22. Photo 21 shows the bright red protectors for the connectors between the engine and tender. They are needed, too, because the connectors are in the form of long, thin, straight pins that look like refugees from hypodermic needles. They are also tough to join as we found out when we tried to put them together for the photo





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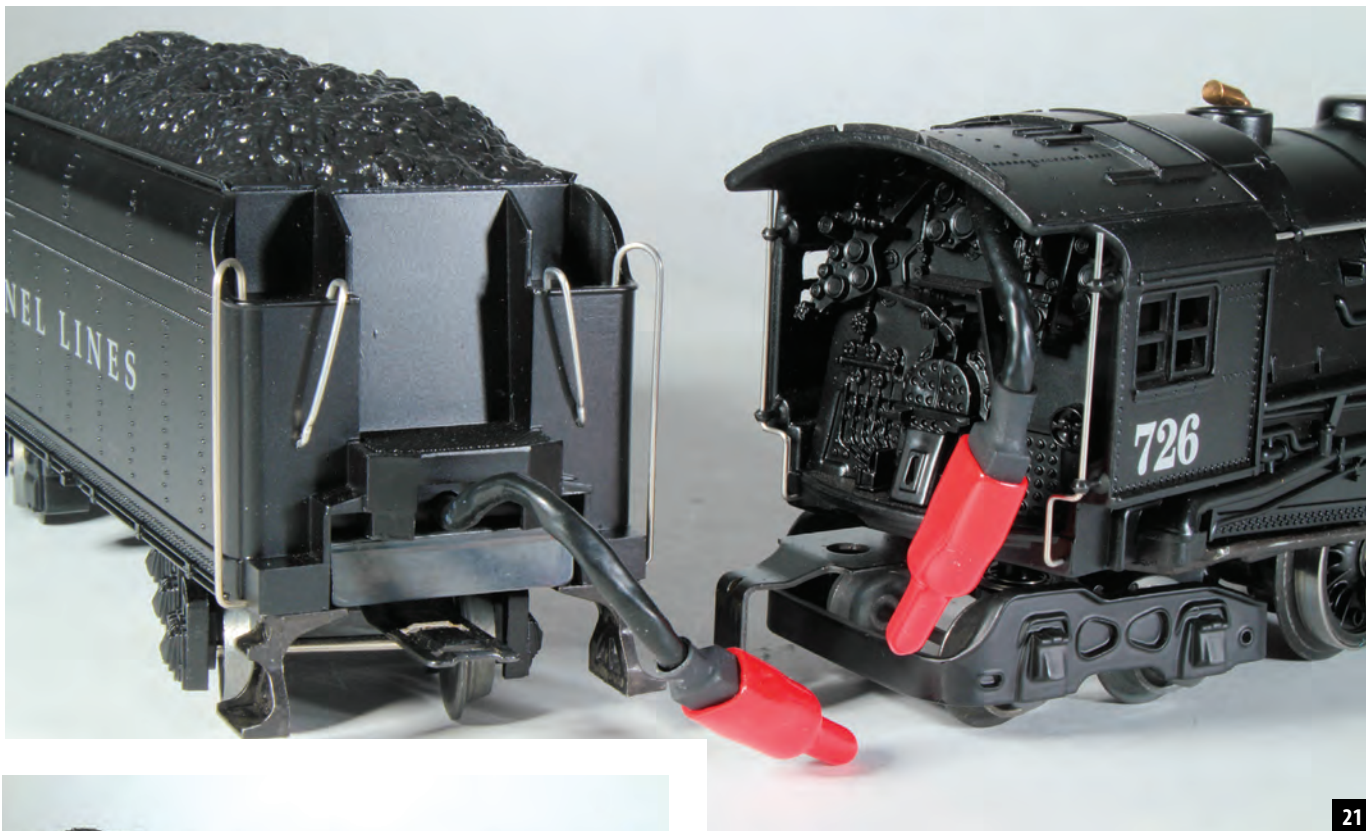
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shoot. The clunky umbilical cord arrangement did not help the appearance of the Century Club Berkshire, but it was still the early period for TMCC and RailSounds together in steam engines—TMCC had been introduced barely a year earlier in 1995. Later, Lionel found much better ways to make umbilical cords for steamers and eventually to do away with them altogether.

## Summing Up

When you add up the pluses and minuses of the Century Club Berkshire and put the locomotive and tender on the track together, you get the handsome hodgepodge of the locomotive seen in Photo 23 that still does not quite convincingly portray the original 726. It may well be just me, but I could not get past the bright red 726 sign on the modified 646/2046 smokebox front door of the 6-18053 (Photo 24).





21



22

For \$895 in 1996 dollars, Lionel could have done better because the correct parts were readily available, especially since the engine was being produced by Lionel right here in Michigan, U.S.A. The reason the Century Club Berkshire had to use the smokebox cover of the less desirable 646 and 2046 small Hudsons, in the view of the product planners, was apparent in the arresting image of the Century Club promotional brochure. Even a cursory look indicated that the smokebox door of the upcoming 773 Hudson replica, 6-18058, would use the same front as the postwar 726/736, and the product planners felt



23





24

that it would make the two upscale Century Club engines look too much alike. As a result, the Century Club Berkshire was the loser in the appearance contest. Current values of Century Club Berkshires may partly reflect this. Pristine versions that have not been run and have all their packaging can be had on a regular basis for \$450, but C8 versions, with all their boxes and papers that have been run, can be found for as little as \$300 with some looking around.

### Some Heretical Thoughts for a Collector

Even with its red nose, the 6-18053 is still a good-looking locomotive and it runs pretty well. Hmm, what would happen if the gussied-up 646/2046 smokebox door was replaced with a 726 smokebox door? It would be easy enough to match the semigloss finish of the Lionel paint, and the umbilical cord could be replaced with a newer, less clunky model. I might even want to upgrade the RailSounds. The end result, even without Magne-Traction, would look great pulling a decent-size consist of 6464 replicas that were produced at approximately the same time. Heck, now that my Century Club Berk is only worth about \$300, I might as well use it on my new layout. After all, I never did buy the display case that went with the Berk.



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20-20557-1	NORFOLK SOUTHERN F-7 A-UNIT DIESEL W/PS3 (HRW) M15V2\$359.00	

20-20557-3	NORFOLK SOUTHERN F-7 B-UNIT DIESEL N/P M15V2	\$135.00
20-20557-4	NORFOLK SOUTHERN F-7 A-UNIT DIESEL N/P M15V2	\$135.00
20-3133-1	NORFOLK & WESTERN 4-8-4 J W/PS2	\$799.00
20-3298-1	CHICAGO NORTHWESTERN 4-6-4 E-4 W/PS2.0 (HRW)	\$669.00
20-3367-1	BRITISH RW DUCHESS CLASS STEAM W/PS2 (HRW) M12V2	\$899.00
20-3369-1	BRITISH RW DUCHESS CLASS STEAM WPS2 (HRW) M12V2	\$899.00
20-3370-1	BRITISH RW DUCHESS CLASS STEAM WPS2 (HRW) M12V2	\$899.00
20-20371-1	MARYLAND MIDLAND GP38-2 DIESEL W/PS3 M14V1	\$349.00
20-3386-1	NYC 4-4-0 EMPIRE STATE EXPRESS W/PS2 (70" HRW) M9V2	\$525.00
20-3444-1	HILLCREST LUMBER CO CLIMAX LOGGING W/PS3 (HRW) M11V1	\$729.00
20-3469-1	PA 4-6-2 K-4S STM ENGINE W/PS3 (HRW) M11V2	\$719.00
20-3479-1	CLINCHFIELD 4-6-6-4 CHALLENGER W/PS3 (HRW) M11V2	\$999.00
20-3483-1	SOUTHERN PACIFIC 4-8-4 GS-4 STEAM W/PS3 (HRW) M13V2	\$899.00
20-3483-2	SOUTHERN PACIFIC 4-8-4 GS-4 STEAM W/PS3 (SW) M13V2	\$899.00
20-3484-2	SOUTHERN PACIFIC 4-8-4 GS-4 STEAM W/PS3 (SW) M13V2	\$899.00
20-3485-1	SOUTHERN PACIFIC 4-8-4 GS-4 STEAM W/PS3 (HRW) M13V2	\$899.00
20-3518-1	PA 4-4-4-4 T-1 DUPLEX WPS3 M15V1	\$1,199.00
20-3520-1E	PA #6111 T-1 DUPLEX WPS3-FROM M20-3520-1 SET M15V1	\$1,199.00
20-3527-1	NYC DREYFUSS HUDSON STM W/PT TENDER W/PS3 (HRW) M14V1	\$787.00
20-3532-1	UP FEF 4-8-4 NORTHERN W/PS3 (HRW) M14V2	\$949.00
20-3546-1	CHESSIE 4-8-4 STEAM ENG. W/PS3 M15V1	\$1,049.00
20-3558	UNION PACIFIC AUXILIARY WATER TENDER (HRW) M15V1	\$221.00
20-3559	UNION PACIFIC AUXILIARY WATER TENDER (HRW) M15V1	\$221.00
20-3560	UNION PACIFIC AUXILIARY WATER TENDER (HRW) M15V1	\$221.00
20-3575-1	UP 4-8-8-4 BIG BOY (OIL BURNER) W/PS3 M15V2	\$1,349.00
20-3577-1	UP FEF 4-8-4 BIG BOY W/PS3 M15V2	\$1,349.00
20-3578-1E	UP #4000 4-8-8-4 BIG BOY W/PS3 - FROM M20-3578-1 SET M15V1	\$1,399.00
20-3581-1	NEW YORK CENTRAL J-1E PT HUDSON 4-6-4 W/PS3 (HRW) M15V2	\$929.00
20-3582-1	NEW YORK CENTRAL J-1E PT HUDSON 4-6-4 W/PS3 (HRW) M15V2	\$929.00
20-3599-1	B&O 0-4-0 STEAM SWITCHER W/PS3 (HRW) M15V2	\$589.00
20-3602-1	MILWAUKEE ROAD 4-6-2 USRA HEAVY PACIFIC W/PS3 M15V2	\$899.00
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20-3615-1	N&W 2-6-4 CLASS A W/TIMKIN SIDE RODS W/PS3 HRW M15V2	\$1,349.00
20-5556-1	CAN NAT'L EP-3 ELECTRIC ENGINE W/PS2 (HRW)	\$512.00
20-5558-1	NEW HAVEN EP-3 ELECTRIC ENGINE W/PS2 (HRW)	\$512.00
20-5637-2	TUSCAN CROCODILE ENGINE W/PS3 (SCW) M12V2	\$692.00
20-5641-1	PENNSYLVANIA GG-1 ELECTRIC W/PS3 M13V1	\$588.00
20-5643-1	PENNSYLVANIA GG-1 ELECTRIC W/PS3 M13V1	\$588.00
20-5682-1	PENNSYLVANIA E44 ELECTRIC ENGINE W/PS3 M14V1	\$331.00

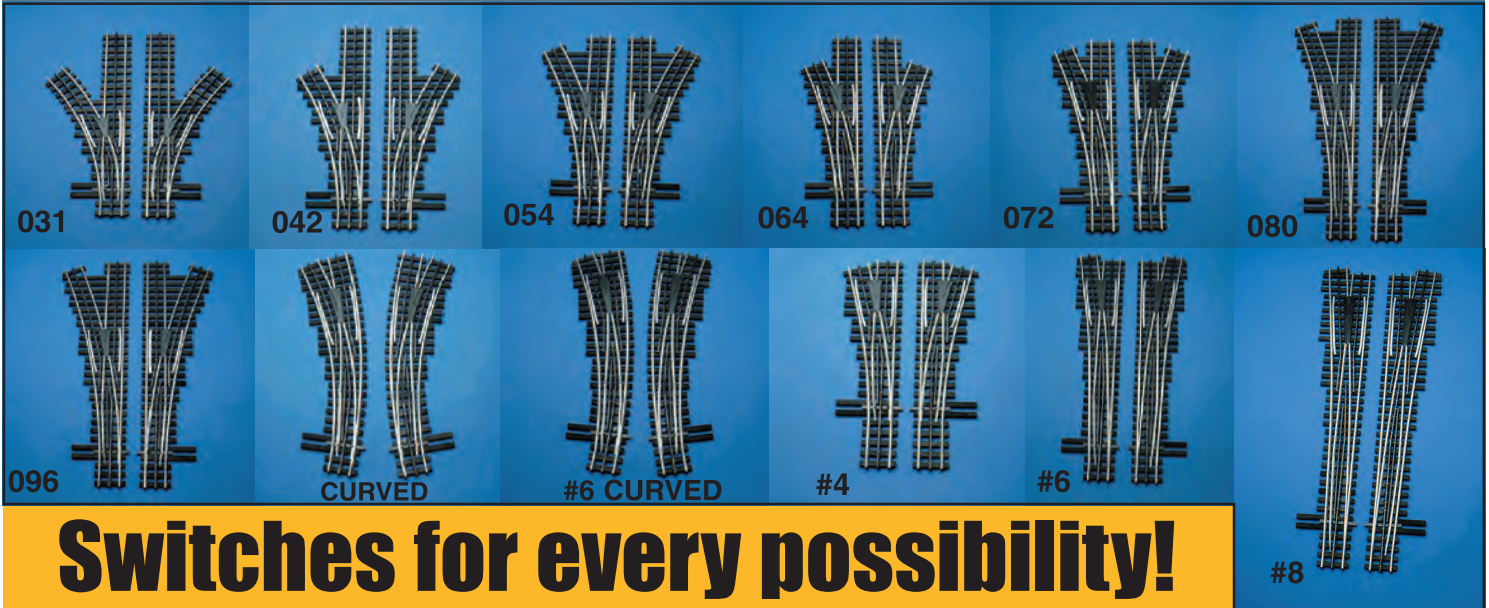
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30-1160-1	DENVER RIO GRANDE 4-6-0 STEAM W/QSI	\$229.00
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30-1586-1	PA 4-6-0 TEN WHEELER STEAM W/PS3 M12V2	\$299.00
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30-1591-1	ABRAHAM LINCOLN 4-6-0 TEN WHEELER W/PS3	\$299.00
30-1616-1	NYC 4-6-4 IMPERIAL DREYFUSS STEAM W/PS3 M13V2	\$339.00
30-1621-1	SOUTHERN PACIFIC 4-8-4 IMPERIAL GS-4 STEAM W/PS3 M13V2	\$349.00
30-1633-1	N & W 4-8-4 IMPERIAL "J" NORTHERN STEAM W/PS3 M14V1	\$359.00
30-1635-1	JERSEY CENTRAL 4-6-0 IMPERIAL CAMELBACK STM W/PS3 M14V1	\$349.00
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30-1684-1	UP 4-8-8-4 IMPERIAL BIG BOY STEAM W/PS3 M15V2	\$629.00
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30-20104-1	SOUTHERN E-3 AA DIESEL ENGINES W/PS3 - SLIGHTLY USED	\$252.00
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30-20161-1	ALASKA GALLOPING GOOSE DIESEL W/PS3 M13V1	\$199.00
30-20183-1	ALASKA MP1SDC DIESEL W/PS3 M13V2	\$229.00
30-20222-1	NORFOLK SOUTHERN F-3 ABA DIESEL W/PS3 M14V1	\$399.00
30-20235-1	CSX DIESEL ENGINE W/PS3 M14V2	\$269.00
30-20279-1	SANTA FE F-3 ABA DIESEL W/PS3 M15V1	\$429.00
30-20284-3	CSX SW-9 DIESEL SWITCHER W/PS3 M15V1	\$125.00
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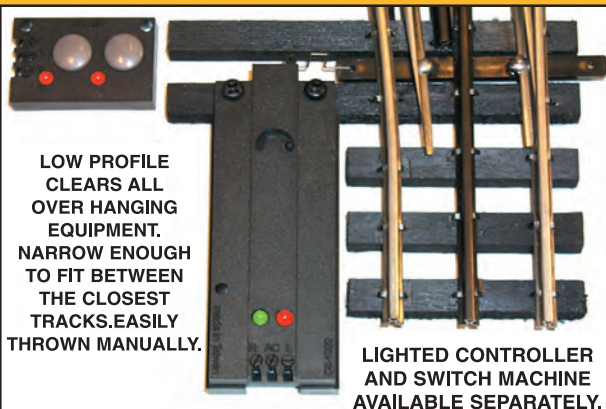
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20-3495-1 NORFOLK & WESTERN  
20-3497-1 CANADIAN NATIONAL  
20-3501-1 GREAT NORTHERN  
20-3502-1 PENNSYLVANIA  
20-3504-1 CHESAPEAKE & OHIO  
20-3510-1 NORFOLK & WESTERN  
20-3552-1 PITTSBURGH & LAKE ERIE  
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30-1613-1 VIRGINIAN

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30-1644-1 ERIE

30-1645-1 ERIE

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## Building a Layout: Reliable Remote Uncoupling

In the 1940s and 1950s, Lionel came up with a perfectly clever way to have fun performing freight operations just like the real railroads did. The operator could press a button on a remote control box and energize a magnet built into a special section of track called the UCS (uncoupling section). The magnet would pull down a steel plate on the bottom of the railroad car coupler, causing the coupler's knuckle to open. That would let you uncouple a train to add or remove cars anywhere within the train. With a UCS track section, the train operator could uncouple where he needed or wanted to in order to “set out” a freight car or to add one into the train.

This system worked relatively well until later manufacturing economy measures replaced the metal plate with nothing more than a metal thumbtack on the end of a plastic arm that held the coupler pin. That resulted in an appalling drop in reliability and

couple performance. Then along came several new manufacturers of couplers and uncoupling track sections, supposedly compatible with the original operating coupler system Lionel came up with. But there was, of course, no standard established among the different manufacturers, and there still isn't. The result is couplers that look like they should work, but they simply don't. How awful!

The recent alternative was to make the coupler on the back of the engine work by pressing a button on the remote. Trouble is all the rest of the couplers on the train were sort of left in the dust of modern technology. I wanted a way to be able to open couplers anywhere in the train and to do it reliably by remote control, just like we do with the coupler on the back of the engine. I found the way to do that using the MTH DCS and some magnets salvaged from old Lionel O27 remote track sections, but more about that shortly.





The biggest problem is getting couplers to work like they should to begin with. It doesn't make any difference how much work the modeler puts into making couplers work by remote control. If they physically don't perform reliably, then all the bells and whistles don't make a bit of difference. I researched many different makes of couplers available today. Some are good, and most are just plain junk.

I found that the two most reliable operating couplers currently available are the MTH RailKing freight trucks with the hinged plate on the bottom that opens the coupler and the sometimes-available original Lionel postwar coupler design from the 1950s, which used a metal plate as well. Lionel still uses that original design truck and coupler on all operating cars that need an accessory slide shoe.

The trucks and couplers of both the postwar Lionel style and the modern MTH style open easily using a magnet in the track. Also, both of these manufacturers very compatibly coupled up with each other. But equally important, when they coupled, they stayed coupled!

Since the RailKing truck operates with needle-point bearings on the axles, it makes them far preferable to the old postwar Lionel-style trucks of the 1940s and 1950s. They are also far more available. The coupler arm of the RailKing truck also swivels at its base where it attaches to the frame of the freight truck, making the arms more functionally flexible when they need to be. In addition, there is a manual "nub" on the coupler shaft that allows the operator to open the coupler easily with a finger if all else fails.

With that in mind, I have set about converting every car with a known coupling problem to one or the other of these two types of trucks and couplers to make them work flawlessly. It really isn't the scary job I thought it was going to be. RailKing trucks and couplers are readily available from MTH (#30-89001). Of course, not all manufacturers' freight cars are alike, so some modifications to the undercarriage of certain cars might need to be made. But where there's a will, there's a way. It required a few trips to the hardware store to get the right size (and the right thread) of miniature screws, washers, and bolts to do the job, but it was well worth the effort.





Keep a goal in mind to mount the new truck as high as you can into the underside of the car in order to keep the center of gravity as low as possible. Sometimes, when converting trucks and couplers on manufacturers other than Lionel and MTH, it may mean that you need to cut out the plastic bolster on the underside of the car body itself if that's how it was made.

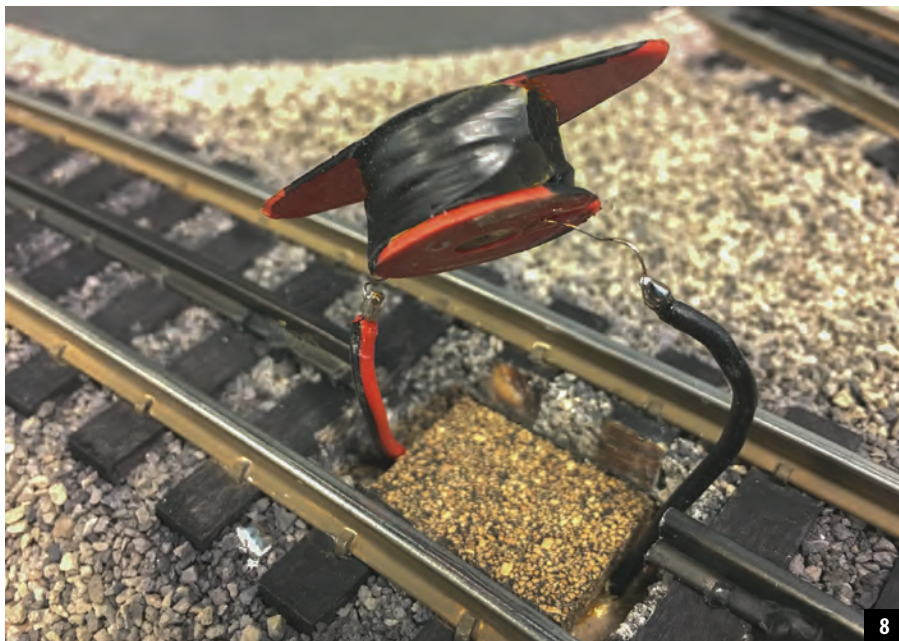
Here's another very important consideration: When you're finished, weigh the car using something like a kitchen food scale. Why is this important? Because evenly weighted cars couple much more smoothly. When each car has actual mass, coupling works much better. In fact, there is a published guideline for the recommended weight of freight cars. For O gauge, the National Model Railroad Association (NMRA) has recommended a guideline of 5 ounces per freight car plus 1 additional ounce for every inch of car length. Therefore, a 10" O gauge boxcar should weigh right around 15 ounces. If you follow this guideline, you will be amazed at how well cars will couple with all other cars.

You can get very creative about where and how you add weight to some cars. Some of my flatcars now carry farm tractors, some gondolas have scrap in them, and some boxcars carry other forms of freight glued down to their floors in the ends. A good source for lead to add weight is any Bass Pro Shop. They sell a variety of lead weights in the fishing department. One of my favorites is lead ingots (weighing 5 oz. each). These can be easily cut up to make smaller weights, but most importantly, they are flat and can be attached to cars with glue (I used Walther's Goo, and it worked very well). These ingots are great for flatcars and other exposed areas of freight cars. You can get a bag of 16 of these 5 oz. bars for about 27 bucks.

Also available is something called Reusable Split Shot that comes in a packet of 20 for about four bucks. They are loose and somewhat round lead balls. Those are good for hopper bays. Some Goo in each hopper bay, and the lead shot will stay put for good. Now every car I have "plays well" (couples and uncouples well) with every other car. *That* makes model railroading *so* much more fun!

Another critical part of the equation is what you use to uncouple the cars.





Even though I have Ross and GarGraves track, I was bound and determined to make my layout truly “coupler functional.” The essence of my solution is pictured in Photo 1.

As I have reported here in the past, making use of scrap Lionel O27 uncoupling track magnets is the key. These track sections can be found all rusted up under sellers’ tables at train shows and can be bought for as little as 50 cents to a buck apiece. They look like what you see in Photo 2. Remember, you don’t care what they *look* like...nine times out of ten the all-important magnet still works. What you want are magnets like the ones shown in Photo 3. Check the plastic covering on the top of the magnet to make sure it isn’t deformed from overheating. Those magnets aren’t reliable.

Here’s something to think about: As soon as you evenly weight your freight cars, you can couple on curves just as easily as you can on straights. The system I’m going to show you lets you plant your uncoupling magnets into a curve just as easily as in a straight track. If you are coupling on a curve, all you need to do is to open both couplers before you attempt to couple up the train.

A Lionel O27 uncoupling magnet is a simple device. It is a short steel rod about 1/4” in diameter and only 7/16” long, wound with hundreds of turns of a fine lacquer-coated wire. The lacquer coating serves as insulation on the fine copper wire so it won’t short out within the coils. When you press a button and allow about 14 volts of electrical current to pass through the wire from one end to the other, it makes a very powerful magnet out of the little steel rod it is wrapped around. That will attract the metal plate on the bottom of the coupler, and “ta-da” the coupler opens.

Every magnet has two wires (or more accurately, two ends of the same wire). One must connect to any AC common going back to the transformer, and the other must connect to AC+. To control the magnet, you need to be able to activate the AC+ connection for only a short spurt. In the old days we used a button for each uncoupling magnet. My method uses the MTH DCS. Since one TIU (Track Interface Unit) can operate up to five AIUs, that amounts to up to 50 accessory devices that can be operated from a single remote control handle.





Remember when I wrote that the wire wound around the magnet's core was coated with lacquer to insulate the copper from each other in the windings? It also means that the copper wire won't solder to anything. That's not good! You need to be able to solder to both wire ends. To do that, you need to scrape some of the lacquer off the wire ends.

Carefully straighten the two ends of the wire coming off the bottom of the magnet. Gently scrape the two wire ends on all sides as depicted in Photo 4. Do that ever so gently until you see the bright copper color of the wire with the lacquer scraped off. It is very easy to accidentally cut the copper wire when doing this, so be careful to only gently scrape the wire and don't push down on the knife blade and cut it off. With a soldering gun, heat each wire end and coat the copper with solder (this is called "tinning" the wire). That will also help strengthen the wire from the scraping action.

Hold the magnet up to the center rail where you want it to be mounted, and you will notice that the plastic top of the magnet spans just about perfectly from the edge of one tie, past two more ties, and to the edge of the third tie. Use that as a guide to show how much center rail you need to cut out. In any case, be sure that you do not remove more center rail than needed for the magnet plastic to fill back in when you're done. Using a Dremel rotary tool and a fiber-cutting disk, cut the center rail at those two locations and cut the ties near the inside edge of the outer two rails, allowing you to remove the center rail piece with its two tie chunks attached. If you already have added ballast, that's no problem. Cut through the cork as well and remove the cork roadbed, too. The result should look like Photo 5.

Cut up some short lengths (8" or so) of 20 or 22-gauge wire and drill a hole (slightly larger than the diameter of the wire you're using) through the table at each end of the opening you've made in the track (Photos 5 and 6). Strip one end of each wire and tin with solder. Poke the unstripped end of each wire through the holes as shown in Photo 6. If in the process of making the cut in the track you also cut into the cork roadbed, cut a piece of cork and replace it in the opening between the wires as shown in Photo 7.

Soldering the super-thin wires of the magnet to the ends of the two bigger wires



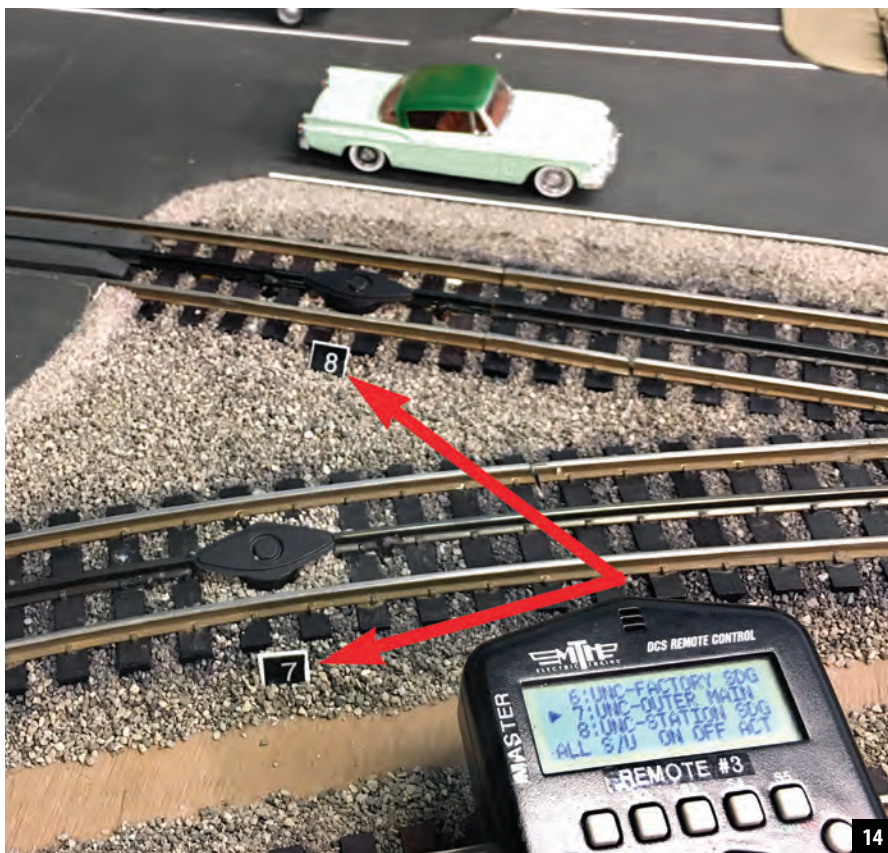
My system will use two TIUs, each with three AIUs connected. That will result in up to 60 uncoupling magnets (or other accessories), all controlled by a single remote control handle. Oh yes, and it will be able to control up to 60 track switches as well. In addition, any and all of what you put onto one remote can be easily "cloned" onto as many

other remotes as you like. That enables anyone in the operating session to control any uncoupling magnet, any switch, or any engine. The fun thing about this is you can pair up crews of engineers and switchmen to work together. One person operates the locomotive while the other operates the uncoupling action and freight operations.





13



14

is somewhat delicate. Until the magnet is mounted and glued in, it is easy to break off the small wires of the magnet. For this reason, I've settled on this method to minimize that happening. Hold the magnet by the body and position the thin wire of

one end of the magnet against the end of one of the large wires sticking up from the table. It makes no difference which magnet wire goes to which table wire. Apply heat from a soldering gun until the solder melts and merges together. Hold it still until the

solder has set and repeat the procedure for the other wire from the magnet. The finished result should look like Photo 8.

Position the magnet, carefully guiding the wires down through the holes, and glue it in place as shown in Photo 9. Use Walther's Goo since you may need some adjustment time before the glue sets up. Center the magnet in the opening, making sure that there is no gap between the center rail and the plastic on top of the magnet. Fill in the open area with some ballast and brush it in place (Photos 10 and 11). It doesn't hurt to leave the ballast loose around the magnet. You may have to replace the magnet someday, and it is a lot easier to do if you don't re-glue the ballast back in place.

Remember that you actually broke (electrically) the center rail to put this magnet in, so you need to reconnect the center rail electrically. I use a Dremel tool bit with a rotary grinding ball on the end to clean the plating off the center rail at two locations close to the uncoupling magnet. Using a soldering gun, heat the center rail at the cleaned spots and allow solder to flow to and join with the rail. This is called "tinning" the rail. At that point, drill two more holes down through the table right beside the cleaned off spots you just made on the center rail. Make the holes slightly larger than a piece of 16 or 18-gauge wire.

Cut a piece of 16 or 18-gauge wire about a foot long and then strip and tin both ends of the wire with solder. Poke one end of the wire down through one of the holes. Slide the tinned end of the wire down to the bottom of the center rail and solder it to the rail. Push the other end of the wire up through the other hole and solder that end to the center rail on the other side of the uncoupling magnet. When you are done, touch up the top of the magnet and all solder spots on the center rail with black paint. If you look closely at Photo 12, you can see where the red insulation of the end of the wire is peeking up through the ballast.

Connect one of the wires from the magnet to the nearest AC common under the table. Connect the other end to a wire that will go to your AIU and attach it to position #1 of one of the accessory ports on the side of the AIU (Photo 13). The brown wires in the photo are all going from the AIU to various uncoupling magnets on the layout. The "IN" port at all 10 of these accessory posts is where you will attach the constant voltage that you are feeding to




each of your uncoupling magnets. A word to the wise: If you have done all your other work as described, you will not need more than 14 volts for the uncoupling magnets to work perfectly. In fact, more voltage than that, or even long presses on the momentary button with that voltage, will result in the magnet overheating and melting the plastic on the top of the magnet. When that happens, you will need to dig the deformed magnet out and replace it with another one.

Another note: Don't attempt to use wire larger than 20 gauge for the AIU ports. Also, tin the ends of the wire *before* you insert them in the hole at the port of the AIU. When you tighten the screw to attach the wire to the AIU, if the wire isn't tinned

little strands of wire can venture over and touch other contacts, thereby driving you crazy. Follow the directions from MTH about adding in accessories to the remote. The system actually lets you label each accessory in addition to the system applying a number. Take a good look at Photo 14. For uncoupling spots 7 and 8 on the layout, I've added some signs glued into the ballast to let me know what number they are and where they are. In the remote I've typed in abbreviated descriptions for where they are as well. Look carefully at the remote in the bottom of the photo and you will notice that there are five keys at the top of the remote. The one on the far right has "ACT" over it, which means that button will

"actuate" or act like a momentary button for accessory #7 in the window. Pressing that button will energize the magnet labeled #7 in the photo.

To recap, here's your project for the next two months:

1. Get all your couplers working correctly (at 14 volts or less).
2. Salvage a bunch of old O27 uncoupling magnets.
3. Mount them in the track where you want them to be located.
4. Hook them up to your AIU(s).
5. Weight your freight cars correctly.
6. Have more fun than you've ever had with switching operations! 

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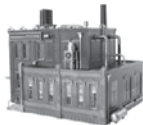
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## Most Modeled



Earlier this week I was perusing recent MTH catalogs to locate product data for an upcoming review. Immediately evident were multiple attractive promotions for the latest MTH releases of the omnipresent New York Central 4-6-4 Hudsons. As a result, what was initially a simple hunt for facts about a particular locomotive, which by the way was not a Hudson, quickly became an expedition of curiosity into the past and present realm of 3-rail O gauge NYC J-series Hudsons.

The reason I used the term omnipresent a moment ago is the NYC Hudsons were and still are arguably the most popular and definitely the most modeled single type of 3-rail O gauge steam locomotive. My impulsive quest to ascertain many of the 3-rail NYC J-series models released over the past decades proved to be a fascinating one, to say the least.

Either the J1e or the J3a was the usual prototype for highly detailed 1:48 scale die-cast or brass models as well as those scale models made with limited details. Then there are the NYC-style 4-6-4s built in what I call traditional size from several manufacturers. Traditional size locomotives are smaller than 1:48 scale, with physical reproportioning that more or less suggests their prototypes.

The index model for die-cast 3-rail O scale NYC Hudsons is widely considered to be the trendsetting Lionel 700E, initially

released in 1937. The engine featured scale wheel flanges and would run only on track with a realistic T shape. I understand that in 1939 Lionel also released the 700E as a series of six 700K kits, each at a retail price that helped the purchaser spread out the significant expense of the model over the course of multiple kit purchases. Now that would have been a fun model to build!

A lesser detailed scale Hudson, the Lionel 763E, was also released in the late 1930s with wheel flanges for tubular tinplate track. This model likewise set a standard—one for the less expensive scale Hudsons released after WWII. With its minimalist details and undersized tender, the first postwar scale Hudson was the Lionel 773 of 1950 and subsequent years. Lionel built this engine again in the 1980s as the 783, 784, and 785 and also at the millennium as part of the company's offering to its Century Club members.

Beginning in the 1990s, manufacturers responding to the pent-up demand for realistic 3-rail O gauge models opened their new product gates, releasing torrents of newly tooled trains onto the market. A surprising number of those products were models of the J-series Hudsons.

Lionel again offered several detailed 1:48 scale models in the tradition of its 700E. The most recent was the 2011 Vision Line J1e with Legacy Command and RailSounds, which we reviewed in Run

252, October/November 2011. Additional 3-rail scale Lionel Hudsons from this period also included the streamlined Commodore Vanderbilt, Dreyfuss, and Empire State Express.

Although Williams manufactured 1:48 scale brass models of the standard NYC J3a and also the streamlined Empire State Express J3a in the 1980s, the company's bread-and-butter line of O scale Hudsons was its die-cast reproduction of the postwar Lionel 773. Initially released in the late 1990s, these engines have been produced several more times by Williams and its successor, Williams by Bachmann, in a variety of road names and colorful liveries. All the die-cast scale Williams 4-6-4s featured smooth-running can motors plus electronic reverse units and whistles. They were also more detailed than the postwar 773 and included a scale size NYC style of tender. We reviewed these engines in Run 165, April 1999.

The early 1990s also saw entry into the market of what became the high-volume producer of scale and traditional O gauge trains—MTH. Today, its cataloged releases of the J-series Hudsons include the J1e with either the standard 12-wheel tender or the lengthy 14-wheel PT tender, the Dreyfuss J3a in several variations of driver types and either the standard or PT tender, plus the Empire State Express J3a. Although these recent engines feature the latest





Proto-Sound 3.0 digital control and sound package, all were previously produced. The 1990s-vintage editions, which were the inaugural MTH scale Hudsons, featured the QSI-developed Proto-Sound control and sound electronics. Postmillennial NYC J-series models from MTH had the company-developed Proto-Sound 2.0 electronics package.

In the early 2000s, K-Line joined the other makers of die-cast 1:48 scale Hudsons with its highly detailed yet moderate-cost model of the J1e. These engines were offered with either Lionel-licensed TMCC and RailSounds or an electronic reverse unit and whistle. With my investment in two of the Hudsons with command and sound, numbered 5343 and 5344, I enthusiastically joined the ever-growing legion of scale Hudson owners. Because of K-Line's inclusion of a tinplate coupler with each engine, I mounted one on the pilot of my 5344. Double-headed 1:48 scale 4-6-4s are awesome performers!

Limited-production, hand-built brass Hudsons added to the type's most-modeled status. Releases from 3rd Rail over the past couple of decades include several iterations of prototypes, specifically the J1e, J1d, Empire State Express J3a, and the J3a Super Hudson with its Selkirk boiler front, disk drivers, and PT tender. In the late 1980s, Weaver Models built its brass editions of the streamlined Dreyfuss Hudson and the Empire State Express J3a.

Numerous models of traditional size NYC 4-6-4s have also plied 3-rail tracks dating back to the years following WWII. Released in 1950 was the Lionel 2046 Hudson with its boiler casting that debuted with the prewar 226E, which was a 2-6-4. However, the initial releases of the 2046 plus its identical 646 sibling had a PRR-style streamlined tender wearing Lionel Lines

lettering. This engine began appearing again in the 1980s with several editions including the NYC style of tender and again in the mid-1990s as the premier release for the Century Club. In the late 1990s, Lionel created a new, traditional size NYC Hudson, which we reviewed in Run 170, January 2000. Today, the LionChief Plus line features a traditional size 4-6-4 that reasonably resembles an NYC J-series Hudson.

By the mid-1990s, MTH entered the market for traditional size 3-rail O gauge trains with its RailKing line. The second locomotive released in that new line was the NYC J1e. Closely following the J1e were RailKing models of the streamlined Commodore Vanderbilt, Dreyfuss, and Empire State Express Hudsons equipped with either Proto-Sound or an electronic reverse unit. These traditional size NYC Hudsons were also subsequently released with Proto-Sound 2.0 and again, later, with 3.0 electronics packages.

Also jumping onto the streamlined Hudson bandwagon in the mid-2000s with traditional size engines was K-Line with its handsomely proportioned die-cast Dreyfuss and Empire State Express models, both featuring TMCC and RailSounds.

Last but certainly not least are the smooth-running reproductions of the postwar Lionel 2046 initially from Williams and later from Williams by Bachmann. Improvements over the original 2046 included a die-cast frame, flywheel-equipped can motor, electronic reverse unit, and electronic whistle and bell. Over the past several years, the Williams model of this traditional size Hudson has been rereleased in a large number of road names and color schemes in addition to New York Central.

Yup, the 3-rail NYC J-series Hudsons are truly the most modeled 3-rail O gauge steam locomotives. 🚂

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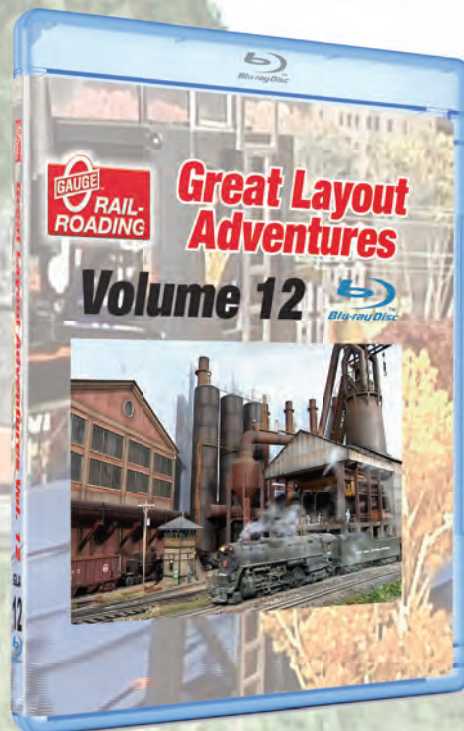
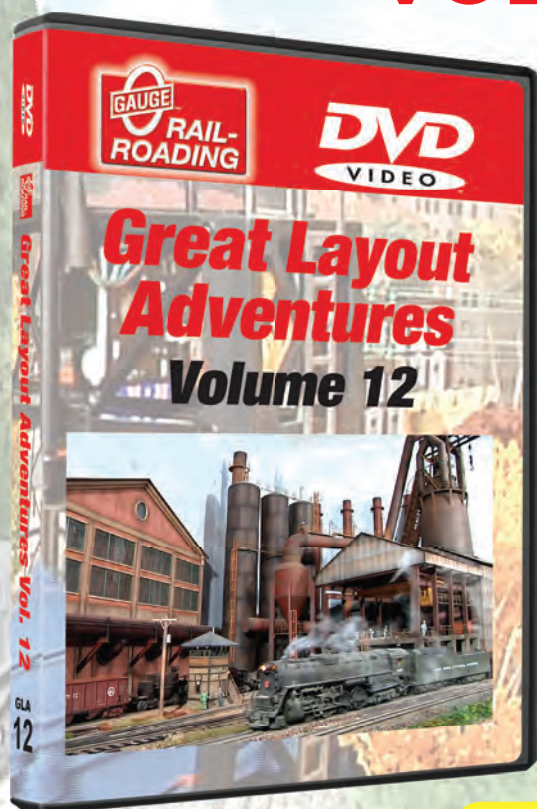
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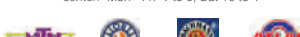
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# End of Track

by A. Clive Ellis

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Angela Trotta Thomas.....	32	Grand Central Ltd. ....	32	Nicholas Smith Trains ..... 71	
Arkansas Traveler Hobbies .....	27	Grzybowski's Train Store.....	17	Norm's O Scale Trains.....	28
Atlas O, LLC.....	2,39	Harrison Trains.....	38	OGR Publishing, Inc. . 9,28,29,39,70,94	
Bachmann/Williams.....	99	Henning's Trains .....	32	OGRE Modeling, LLC .....	38
Barr's Pneumatics Corp.....	38	Hikel Layouts & Trains .....	89	Patrick's Trains .....	28
BDR Supply/National Railroad Worx..	16	J & A Hobbies .....	16	R & S Enterprises.....	29
Birdhouse Holdings/Choo Choo Bob	15	J and W Electronics.....	38	R. Bishop Model Crafters.....	90
Brasseur Electric Trains, Inc. ....	38	J R Junction Train and Hobby.....	90	Ready to Roll, Inc. ....	91
Brennan's Model Railroad Products ...	38	J&R Trains .....	15	River Leaf Models .....	93
Bridge Boss .....	28	Jamestown Enterprises, LLC .....	37	Ross Custom Switches.....	3,81
C T McCormick Hardware.....	38	JD's Trains, Inc.....	90	Roundhouse South.....	37
Caboose Industries .....	27	Just Trains.....	16	Royz Trains, LLC.....	12
Carl's Toy Trains .....	38	K & P Brick & Building Company....	28	S & W Parts Supply .....	90
Charles Ro Supply Company .....	21	Korber Models, LLC.....	90	Scenic Express .....	70
Classy Woods LLC.....	27	L.O.T.S.....	11	Schneider Model Railroading, Inc. ....	32
Dallee Electronics.....	79	Lantz Hobby Shop, Inc. ....	37	Side Track Hobbies.....	80
DHS Die-Cast .....	20	Legacy Station.....	20	Stockyard Express.....	20
Die Cast Direct, Inc. ....	37	Lionel Collectors Club of America ....	22	Sunset Models - 3rd Rail .....	100
Dixie Union Station.....	16	Lionel, LLC .....	8,72	Tiny Tim's Trains and Toys.....	16
Dunham Studios .....	10	Mario's Trains.....	16	TM Books & Video .....	14
East Coast Enterprises .....	16	Mega-Steam/Smoke Fluid .....	90	Todd Arch Models and Layouts .....	15
Eastern Depot .....	79	Menards .....	10	Train City .....	30
Eastside Trains, Inc. ....	89	Mercer Junction Train Shoppe.....	32	Train Installations .....	38
Electric Railroad Company .....	30	Mianne-Foley Woodworking Co.....	20	Train World.....	82
Evan Designs.....	11	Miller Engineering .....	12	Trainz.com.....	95
Everything O Scale/Harry Hieke.....	16	Millhouse River Studios .....	93	Tru Scale Models .....	32
Flexxbed - Hobby Innovations.....	38	Model Building Services.....	38	Western Depot.....	36
Gardner The Train Doctor.....	90	Model Structures for Model Railroads..	90	Z Stuff.....	12
Gargraves Trackage Corporation.....	20	ModelRailroadBenchwork.com.....	38		
		Mr. Muffin's Trains .....	36		





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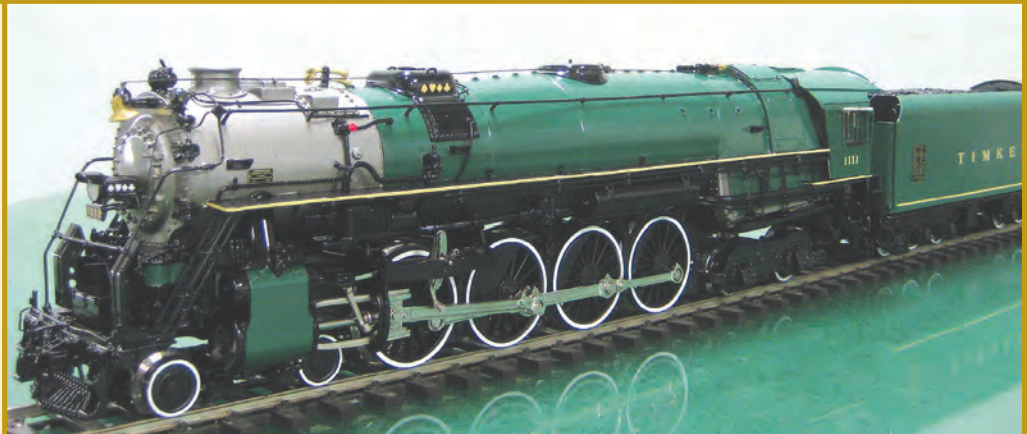
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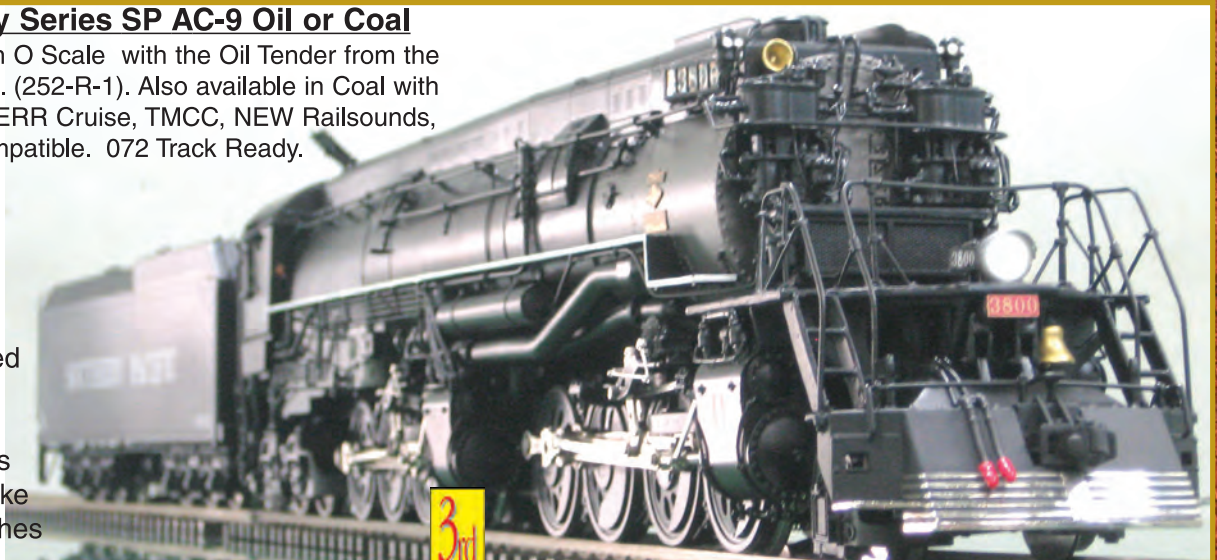


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