

HAVING FUN WITH TRAINS

AUGUST 2023 | FREE

# MRH

MODEL RAILROAD HOBBYIST

## ALSO:

- Self-actuating DCC coupler
- Signs and posters on buildings
- Painting small scale figures
- Touring a model train factory
- ... and more inside!

Jerry Hoverson's

# Rocky Mountain Central and Colorado Pacific

► **READ NOW**



Hard-coded wide PDF version of MRH magazine

*The facing pages in this PDF have been merged into a single wide page, making them landscape.*

Windows - Mac - Linux: Use the keyboard arrow keys to change pages  
Tablet or phone: Swipe from the page edge to change pages

**WIDE EDITION**  
*Hard-coded facing pages PDF*

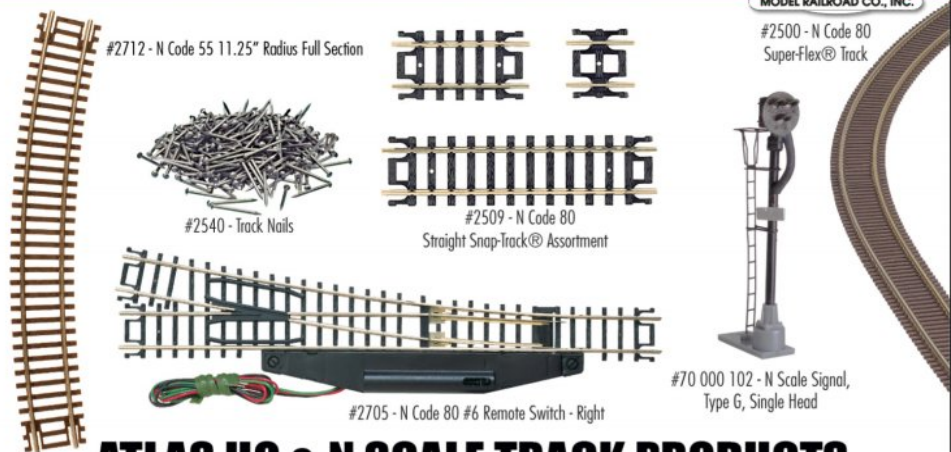


DOWNLOAD

[TABLE OF CONTENTS](#)

[INDEX](#)

# Now Available from



## ATLAS HO & N SCALE TRACK PRODUCTS IN STOCK & AVAILABLE NOW!

**GET ON THE RIGHT TRACK  
WITH ATLAS!**

**CLICK HERE!**

FOR MORE INFORMATION OR TO LOCATE A DEALER, PLEASE VISIT [SHOP.ATLASRR.COM](http://SHOP.ATLASRR.COM).  
ATLAS MODEL RAILROAD CO., INC. • 378 Florence Ave., Hillside, NJ 07205

# STAFF

HAVING FUN WITH TRAINS

# MRH

MODEL RAILROAD HOBBYIST

Model Railroad Hobbyist | August 2023 | #162

Get more issues like this

**GIVE IT A LIKE**



ISSN 2152-7423

V1.3 August 19

### Editorial Staff



Joe D. Fugate, Publisher  
and Editor



James Regier, Assistant  
Editor



Patty Fugate, Pasteup  
and Layout



Richard Bale, News and  
events



Jeff Shultz, News and  
events, Tech Assistant



Mike Dodd, Copy Editing

### Advertising

Les Halmos, Account Manager  
Jean-François Delisle, Marketing Assistant

### Regular contributors

Eric Hansmann, Contributing editor  
Jim Six, Limited Modeler column (RE)  
Ken Patterson, Reporter-at-Large

### Rotating Columnists (RE)

Greg Baker, Getting Real column  
Jeff Johnston, Getting Real column  
Mike Rose, Getting Real column  
Tony Thompson, Getting Real column

Published for the glory of God. [What's this?](#)



REGISTER  
(free)

[INDEX](#)

[TABLE OF CONTENTS](#)

[MRHMAG.COM](#)

[INDEX](#)

[TABLE OF CONTENTS](#)



# MRH SPONSORS



Model Railroad Hobbyist | August 2023

## A - L



[acculites.com](http://acculites.com)



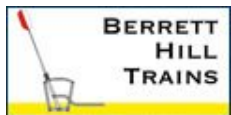
[railroadhobbyshow.com](http://railroadhobbyshow.com)



[www.atlasrr.com](http://www.atlasrr.com)



[bachmanntrains.com](http://bachmanntrains.com)



[berretthill.com/trains](http://berretthill.com/trains)



[blairline.com](http://blairline.com)



[coffmaneng.com](http://coffmaneng.com)



[deluxematerials.co.uk](http://deluxematerials.co.uk)



[www.digitrax.com](http://www.digitrax.com)



[esu.eu/en](http://esu.eu/en)



[handlaidtrack.com](http://handlaidtrack.com)



[iascaled.com](http://iascaled.com)



[litchfieldstation.com](http://litchfieldstation.com)

## MRH SPONSORS | 2

## M - Z



[micro-trains.com](http://micro-trains.com)



[store.mrhmag.com](http://store.mrhmag.com)



[www.modelrectifier.com](http://www.modelrectifier.com)



[handlaidtrack.com/mt-albert-scale-lumber](http://handlaidtrack.com/mt-albert-scale-lumber)



[ncedcc.com](http://ncedcc.com)



[www.pwrs.ca/main.php](http://www.pwrs.ca/main.php)



[rapidotrains.com](http://rapidotrains.com)



[ringengineering.com](http://ringengineering.com)



[rockislandhobby.com](http://rockislandhobby.com)



[scaletrains.com](http://scaletrains.com)



[scottantiquemarket.com](http://scottantiquemarket.com)



[www.siskiyouline.com](http://www.siskiyouline.com)



[soundtraxx.com](http://soundtraxx.com)



[sodigi.com](http://sodigi.com)



[sbs4dcc.com](http://sbs4dcc.com)



[tamvalleydepot.com](http://tamvalleydepot.com)



[train-fest.com](http://train-fest.com)



[walthers.com](http://walthers.com)

Looking for something? Check the MRH Marketplace!



Take me there!

Vendors: Get your clickable logo on these pages ...

REGISTER  
(free)

[INDEX](#)

[TABLE OF CONTENTS](#)

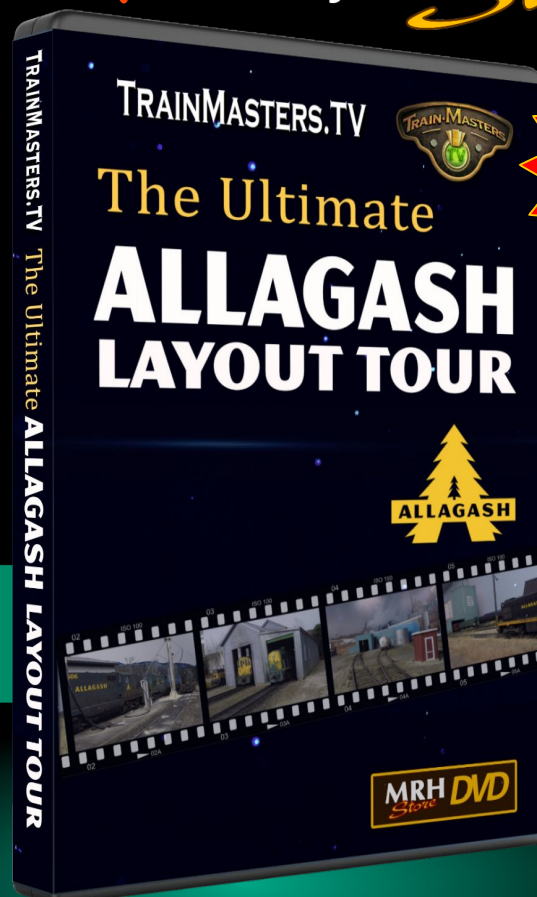
[MRHMAG.COM](#)

[INDEX](#)

[TABLE OF CONTENTS](#)

# NEW from the Model Railroad Hobbyist *Store*

Running time:  
3 hrs 16 min



**NEW!**

Download  
~~\$19.99~~

\$9.99

DVD  
~~\$30.00~~

\$21.77

Available NOW

Get Video  
Download

Download in full 1080 HD

2-disk DVD set Available NOW

Get  
2 DVD Set

DVDs: FREE SHIPPING US  
50% OFF SHIPPING FOREIGN

## TABLE OF CONTENTS | MRH

August 2023



**Publisher's Musings: MRH 2023 reader survey results ...**  
JOE FUGATE



**MRH Website this month: Iowa Central layout journal, ...**  
Compiled by JOE FUGATE



**What's Neat: Touring a model train factory, ...**  
KEN PATTERSON



**Electrical Impulses: Self-actuated DCC coupler**  
BRIAN KRUPICKA



**Jerry Hoverson's Rocky Mountain Central**  
the MRH STAFF



**Signs and posters on buildings**  
MICK MOIGNARD, MMR



**Savvy Modeler online: Painting small scale figures**  
Compiled by the MRH STAFF



**August 2023 news and events**  
RICHARD BALE and JEFF SHULTZ



REGISTER  
(free)

[INDEX](#)

[TABLE OF CONTENTS](#)

[MRHMAG.COM](#)

[INDEX](#)

[TABLE OF CONTENTS](#)





# SCALE TRAINS



WELCOME TO THE FAMILY



We're excited to welcome **ExactRail™** to the **ScaleTrains™** family of brands. We've already announced our first HO & N freight cars which will be available later this summer. We also plan to unveil a new ExactRail model each month for the next several months with deliveries starting in early 2024. Plus, several freight cars that have been out of production for more than a decade will be returning to the line in the future. We have several ExactRail freight cars, bridges, and parts in stock too. Visit the link below or click for all of the details.

[scaletrains.com/exactrail-acquisition](https://scaletrains.com/exactrail-acquisition)



CLICK THIS AD



ScaleTrains.com • 4901 Old Tasso Rd NE, Cleveland, TN 37312 • 844-9TRAINS 844-987-2467 • International 423-299-3689

© 2023 ScaleTrains, ScaleTrains.com, ExactRail, and respective logos are trademarks of ScaleTrains.com, Inc.



REGISTER  
(free)

[INDEX](#)

[TABLE OF CONTENTS](#)

# PUBLISHER'S MUSINGS



Model Railroad Hobbyist | August 2023



VIEW READER  
COMMENTS

JOE FUGATE REVIEWS THE RESULTS OF THE  
MRH 2023 READER SURVEY ...

**EVERY FEW YEARS MRH CONDUCTS A READER SURVEY**, and the just completed 2023 survey is our most recent one. Let's take some time and go over the 2023 survey results in the next few editorials.

## Our audience and survey confidence

First let's look at the general survey response we received compared to our audience size. This gives us the level of confidence we can have that the survey sampling accurately represents the views of our total audience.

As an online magazine, we count heads by looking at total unique website visits. The hobby is seasonal, with our audience size peaking in the winter and dropping off in the summer, bottoming out in the August - September time frame.

We've seen a total audience during a winter peak reaching 90,000, and we've seen a summer low as low as about 48,000. We ran the survey from January through June, so it captured both a peak time and the beginning of our summer drop off.

As for total responses, we received 5548 survey responses, which is a very good number. Statistically speaking, assuming

[MRHMAG.COM](https://mrhmag.com)

[INDEX](#)

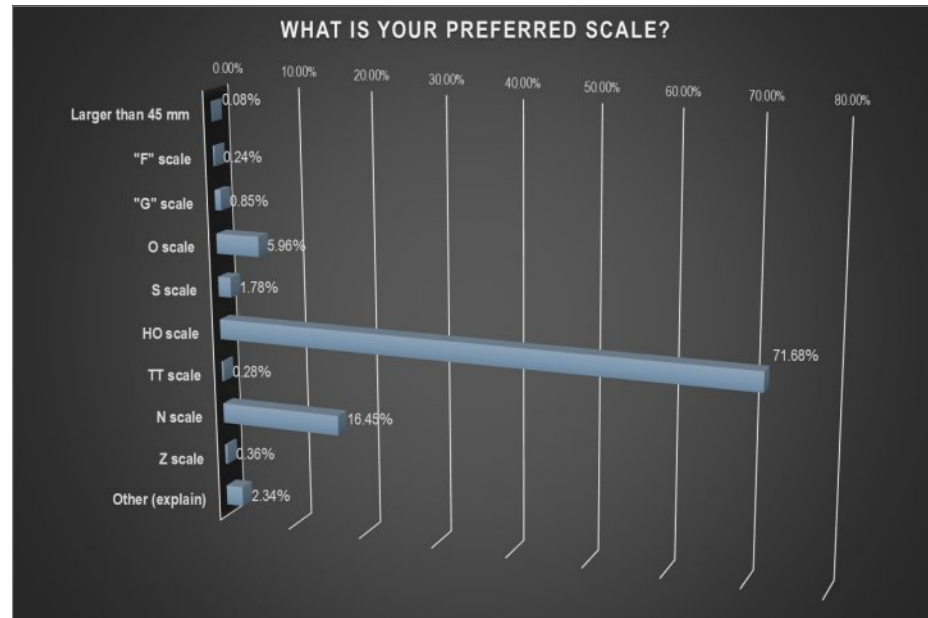
[TABLE OF CONTENTS](#)



the largest possible audience size (90,000) compared to our 5548 responses, we can be confident we have a 99% accuracy, with an error of +/- 2 percent. In other words, our survey sample size is a very good indication of the views of our entire audience of up to 90,000.

## Survey results

First, we asked about your preferred scale.



Note that folks also could choose other and then explain. We had over 1400 other explanations. That's a lot of explanations to wade through and to summarize, so to make it easier to visualize common themes, I did a tag cloud [1] that uses size to indicate relative frequency of various words.

Of course HO and N came up a lot, but also note HOn came up a lot. Compare the size of HOn to scales like O and S and you will see there's more HO narrow gauge comments than O or S comments.

**BACHMANN®**

HO SCALE

New York Central Express Reefer (Item No. 75702) and 80' Pullman Car (Item No. 13904) are available separately.

## POWER AND SPEED

### FOR THE WATER LEVEL ROUTE

The HO Scale 4-6-4 J3a Hudson

As demand for rail travel increased in the 1920s, there was a need for faster, more powerful locomotives to pull express services along New York Central's Water Level Route. The solution was delivered by the American Locomotive Company in 1927, as the 4-6-4 Hudson entered service alongside its namesake Hudson River. The type became a symbol of both the New York Central and fast, luxury rail travel, powering renowned trains such as the 20th Century Limited and the Empire State Express for almost 30 years. Arriving with a diecast metal boiler and a wealth of separately-applied details, the Bachmann HO Scale Hudson is equipped with a TCS WOWSound® CD-quality 16-bit 44,100Hz decoder with Audio Assist™, and a Keep Alive® device for optimal performance. Sound features include user-definable whistle options, numerous mechanical effects, station announcements, and Chuffinity™ technology for appropriate load-based chuff intensity, bringing you closer to experiencing the legendary Hudson in person than ever before.

**NEW YORK CENTRAL #5407**  
(as delivered Roman lettering)  
Item No. 53601

**NEW**

**NEW YORK CENTRAL #5413**  
(as delivered Roman lettering)  
Item No. 53602

**NEW**

**NEW YORK CENTRAL #5432**  
(gothic lettering)  
Item No. 53603

**NEW**

**NEW YORK CENTRAL #5438**  
(gothic lettering)  
Item No. 53604

**NEW**

[Click to learn more](#)

**Features include:**

- DCC On Board® with TCS WOWSound® for true CD-quality audio in 16-bit 44,100Hz sound
- Keep-Alive® device that keeps your engine running during power interruptions due to dirty track or loss of electrical contact
- voice-guided Audio Assist™ programming tool for easy set-up of almost all decoder functionality
- Chuffinity™ technology for authentic load-based chuff intensity
- die-cast metal boiler with separately applied details
- all-metal chassis
- dual-mode NMRA-compliant decoder for DCC and analog operation
- operating directional headlight and reverse light
- working blackened metal side rods
- blackened metal wheels with RP25 contours
- E-Z Mate® Mark II couplers - front and rear

**SHIPPING NOW! • MSRP: \$479.00 each**

Bachmann Industries, Inc. • 1400 East Erie Avenue • Philadelphia, PA 19124 USA • [www.bachmanntrains.com](http://www.bachmanntrains.com)

[Click for more information.](#)

**BACHMANN**  
QUALITY SINCE 1921



[illegible]

## With layout tours, is there a layout size you like best?

A 3D pie chart illustrating the preferences for layout sizes. The chart is divided into eight segments, each representing a different layout size category and its corresponding percentage of the total. The segments are: 'Size doesn't matter as long as it's nicely done' (33.4%, dark blue), 'Medium-sized layouts (100-249 sq ft)' (20.7%, light gray), 'Larger layouts (250-499 sq ft)...' (14.8%, yellow), 'Smaller layouts (50-99 sq ft)' (14.8%, orange), 'Very small layouts (under 50 sq ft)' (8.6%, light blue), 'Very large layouts (500-999 sq ft)' (5.3%, medium blue), 'Huge layouts (1000+ sq ft)' (3.4%, green), and 'Other (explain)' (2.0%, brown). The chart is presented in a 3D perspective, giving it depth.

Layout Size Category	Percentage
Size doesn't matter as long as it's nicely done	33.4%
Medium-sized layouts (100-249 sq ft)	20.7%
Larger layouts (250-499 sq ft)...	14.8%
Smaller layouts (50-99 sq ft)	14.8%
Very small layouts (under 50 sq ft)	8.6%
Very large layouts (500-999 sq ft)	5.3%
Huge layouts (1000+ sq ft)	3.4%
Other (explain)	2.0%

- I don't care about size, I just want to know what they're doing and why.
- I don't read layout articles, I just look at the pictures for ideas.



## TABLE OF CONTENTS



# WEATHERED CAR REVIEW

Grab these and many more incredible weathered cars today!



**MICRO-  
TRAINS®  
LINE**

**CLICK HERE FOR MORE INFO**

**N**  
SCALE 1:160

## PUBLISHER'S MUSINGS | 4

- Just modern diesel-era layouts only, please.
- Transition era, please!
- I like behind the scenes, show me the unfinished areas, staging, etc.
- I prefer layouts with scenery, don't care to see "in progress" layouts.
- I have no time for layout tours.
- Layout tours are an important way we learn the hobby.
- Micro layouts less than 4 sq ft please!
- I am not into switching layouts. I like large well-scenicked layouts.

We also asked folks what the take-away is they get most from layout tours. For that response chart, see [2] a couple pages over. Again, we provided the opportunity to comment. Here's a sampling of the layout tour take-away comments:

- How does it operate?

# No clogged applicators!

**LEARN MORE ►**

- Precise glue application
- No odour
- Non-toxic, non-flammable



Available from your local  
hobby store  
**CLICK TO BUY ►**



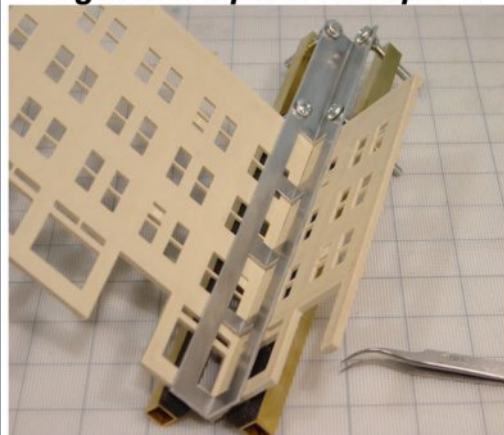
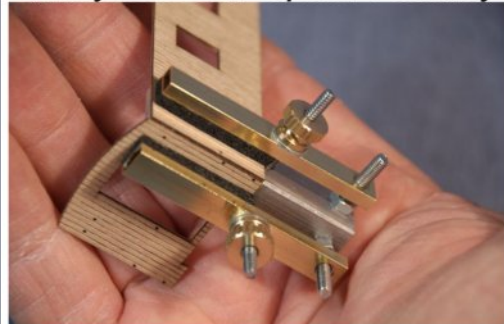
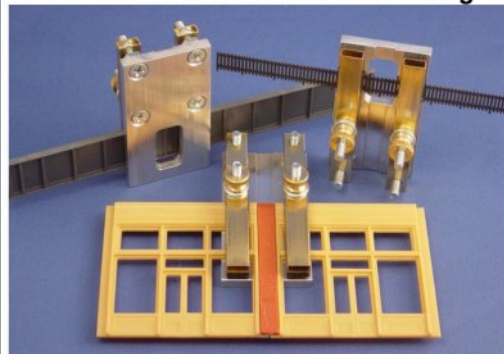
# Write for MRH / Running Extra!

WE'RE LOOKING FOR  
ARTICLES, SO WRITE-UP  
WHAT YOU'VE DONE, AND  
SEND IT IN !

*How to write  
for us*





**"Right and Splice Clamps"™****Quality Tools with Superior Versatility****Essential Tools for Great Modeling**

**Coffman Graphic Solutions**  
1500 River Circle, Richmond KY 40475

[Click Here](#)

Visit our new Website:  
[www.coffmaneng.com](http://www.coffmaneng.com)

**PUBLISHER'S MUSINGS | 5**

- How did they do the structures?
- How did they compose the scenes?
- Not interested in other people's layouts – they're irrelevant.
- I always enjoy seeing what other modelers are doing.
- Best way to keep the hobby strong is to expose people to layouts. Just talking about the hobby can be a snorefest.
- *MRH* layout presentations are ho-hum. *Model Railroader* does much better: better layouts and better presentation.

This last comment is a real "ouch." Permit me to respond to this one.

**MRH layout tours**

We named ourselves *Model Railroad Hobbyist* not out of a whim but because our focus is on the *people* doing the hobby over and above just the stuff of the hobby.

When we do our layout tour stories, that means we want to bring as much of the modeler's own work into the

# FAST TRACKS

Build your own trackwork easily, quickly, and affordably.

## TRACK BUILDING SYSTEM

Tim Warris developed the Fast Tracks system in 2003 out of his garage while building his Port Kelsey Railway in HO scale. Striving for a better way to handlay accurate track, he developed a fixture to aid in building trackwork faster and easier.

CELEBRATING  
**20**  
SINCE 2003  
YEARS



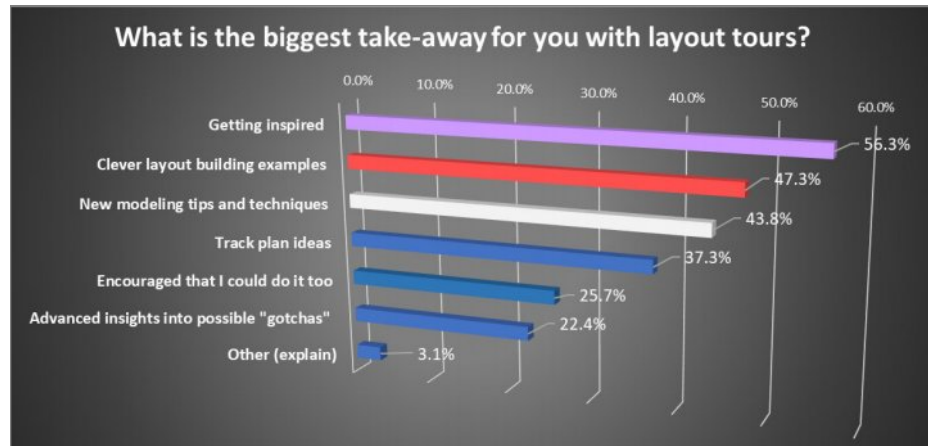
Those first fixtures have since grown to a library of over 5,000 unique products that are focused on helping modelers build better trackwork and layouts around the world.



• Easy ordering •  
shop online 24/7 • [handlaidtrack.com](http://handlaidtrack.com)

1-888-252-3895    [service@fast-tracks.net](mailto:service@fast-tracks.net)





## 2. Layout tour take-away response.

story as much as possible. For example, we will use a layout plan drawn by the modelers' own hand over a slick art department rendering like *Model Railroader* does.

We use an interview style when we do our layout tours asking the layout owner questions and probing for the why behind the what. We aim to get inside the layout owner's head to see exactly what they were thinking and why.

Model Railroader's layout articles are polished, journalistically wonderful pieces that would get you an "A" in journalism class. The track plans are excellent graphic masterpieces.

Our goal is to help you get to know the modeler and what makes them tick. Yes, that means we let the modeler's own voice and mannerisms come through, and show you track plans done by their own hand, often the very plan they used to build the layout from.

We show you the hobbyist, up close and personal. Our goal with layout tours is deliberately different from MR's goals. We agree MR's layout tours are top quality, while our tours are more homespun and organic, and by design, less "polished."

# What's new on TMTV

Some recent shining examples ...



DCC Decoded: Demystifying frog wiring



The Allagash cab ride tour



3D printing: Print out the building design



Touring the Texas Western Club

## Watch now ...

Buy individual episodes or get unlimited access as a member



[www.trainmasters.tv](http://www.trainmasters.tv)

Registered MRH reader?

**SAVE 10%**  
click here



# THE FA-1



**PRE-ORDER DEADLINE:  
SEPTEMBER 15TH, 2023**

**CLICK HERE**



Quality. Style. Spirit.™

rapidotrains.com • youtube.com/RapidoTrains • facebook.com/RapidoTrains

**RAPIDO**



**REGISTER**  
(free)

[INDEX](#)

[TABLE OF CONTENTS](#)

## Announcing the winners

If you took the survey we gave you the option to throw your name in the hat for some prizes. Here's the winners of the prize drawings:

Free 10" Amazon Fire tablet with 64GB of memory:

- Marten Hilberts
- Fred Hunt \*\* *Fred has not yet confirmed\*\**
- David Lutz

And the winner of the lifetime TrainMasters TV + Running Extra subscription:

- Fernando Bellini

Congratulations to the winners! We'll cover still more survey results next month. ☑

### Did you see this article?

in the **AUGUST 2023 MRH RUNNING EXTRA!**



**Bump-proof rocker switches**

**Get full eBook now ▶** ← click here



Each eBook has 80-100 pages

**MRH RUNNING EXTRA**

Get more articles like this

**GIVE IT A LIKE**

## Tell your friends about MRH!

**We depend on word-of-mouth to grow  
... if you don't share us, we don't grow**

[MRHMAG.COM](#)

[INDEX](#)

[TABLE OF CONTENTS](#)

# Every little bit helps!



Registered MRH readers  
get **another** 10% off with  
the coupon code here:

Reveal my  
coupon code now!

click here

That's right, on top of our  
other sales and discounts, use  
this coupon code to get  
**YET ANOTHER 10% off!**



Stay cool this  
summer!



**TMTV sale offers**

click here



**MRH Store sale offers**

click here



## LAST ISSUE LIKES

Most liked articles in [July 2023 issue](#) of MRH are:

- 1st** Mike Armstrong's Rock Island
- 2nd** Publisher's Musings: Selective compression / negative space
- 3rd** Design tips for control panels

Most liked articles in [July 2023 issue](#) of *Running Extra* ...

- 1st** Publisher's Welcome: Inexpensive LED structure lighting
- 2nd** Scratchbuilt roadway signs
- 3rd** Ah-Hah Moment: More cool superglue hacks

**If you want more of this type article, then like the article!**  
Click the *Give us a like* or *comments* button on each article  
and press the like button on the article's forum page if you  
want to see more articles like these. ■

Get the latest Model Railroading News, Tips, Reviews & Opinions



Our iTunes feed has changed search for  
"Crew Call with Mike Rose" to receive the latest episodes!

[www.themodelrailroadpodcast.com](http://www.themodelrailroadpodcast.com)

Host:  
Mike Rose: [www.mrhobby.com](http://www.mrhobby.com)

Don't Miss our Monthly Interviews  
& Product Announcements



REGISTER  
(free)

[INDEX](#)

[TABLE OF CONTENTS](#)

[MRHMAG.COM](http://MRHMAG.COM)

[INDEX](#)

[TABLE OF CONTENTS](#)










# In **MRH** **RUNNING** **EXTRA**

## August issue ...



### TABLE OF CONTENTS | RUNNING EXTRA

August 2023

	<b>Publisher's Welcome: Flat bump-proof rocker switches</b> JOE FUGATE
	<b>Limited Modeler: Time, setting, and season swapping</b> JIM SIX
	<b>Getting Real: Layout re-focus and interlockings</b> GREG BAKER
	<b>DCC sound installation in smaller brass steam</b> JEFF JOHNSTON
	<b>On the move again: modular railroading on-the-go</b> TIMOTHY DUDLEY
	<b>Modeling the Bronx Terminal in N scale</b> ERIC HENSON
	<b>Ah-Hah Moment: Ultra-fine wire strippers</b> JOE FUGATE

**Buy August eBook - \$2.99**  
88 pages

store.mrhmag.com

Also includes  
146-page MRH  
in the back!

# Best of the **MRH** FORUM

Forum  
mrhmag.com  
THIS MONTH

Model Railroad Hobbyist | August 2023

Compiled by **JOE FUGATE**



## Iowa Central layout journal

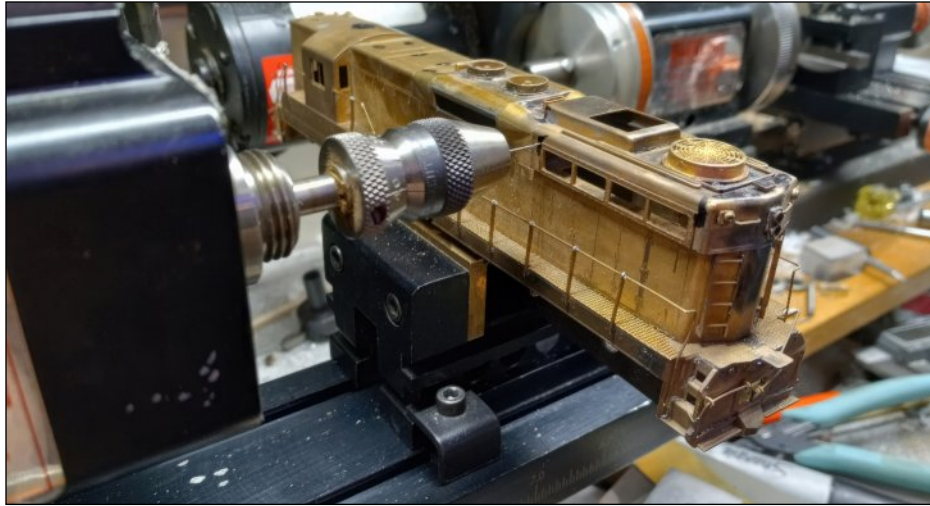
MRH forum member **SJVRR** (Jack M. from France) has a journal thread about his small layout. He's modeling the imaginary Iowa Central short line in O scale. If you like small layouts, here's a great thread you don't want to miss!



View the full thread on the MRH website

► **MRH'S MONTHLY GREAT MODELER POSTS**





1. MRH forum member **thewizard1** has a detailed thread showing how he's upgrading an older brass SD-9 and adding detail to it. If you're curious about how such a project might be done, check out this thread.

## Vintage brass SD-9 makeover

MRH forum member **thewizard1** (Charles D.) has an HO brass Hallmark Models SD-9 diesel built by Kumata in 1973 and he's looking to upgrade the details.

"I opted to replace the drive train with an Atlas GP-38 mechanism and it runs very smooth. That was as far as I got with this project, so after sitting in a box all these years ... it's time to bring it up to today's standards. The detail is crude – the screens, fans, and other detail can be vastly improved."

Charles gets into all the gory details of reworking this brass loco. We find the process to be fascinating, so check out the discussion to see how an advanced project like this works.

[View the full thread on the MRH website](#)

## Shed new light on your railroad

**NEW**

PLATFORM/  
YARD LIGHTS

**NEW**

STADIUM/  
PARKING LOT LIGHTS

Plus a full line of vintage thru modern lighting for model railroad layouts

**RIH**  
Rock Island Hobby

Realistic scale accessories: automobiles, lights, figures, scenery, military actions rail cars and more.

Click for details: [www.rockislandhobby.com/collections/all-scales](http://www.rockislandhobby.com/collections/all-scales)

Second Weekend, Every Month!

## Scott Antique Markets

featuring

## ANTON'S ANTIQUE TOY & TRAIN SHOW

2023 Dates

<del>Feb. 9 - 12</del>	Sep. 7 - 10
<del>Apr. 6 - 8</del>	Nov. 9 - 12

Atlanta Expo Centers  
3650 & 3850 Jonesboro RD SE  
Atlanta, GA 30354

For Full Schedule & Coupons  
Visit our website.  
[www.scottantiquemarkets.com](http://www.scottantiquemarkets.com)

## Siskiyou Line

Professional Grade Railroad Materials

Protect your locomotives & carry them safely.

AVAILABLE IN RED/WHITE/BLUE

1 Box \$39.95  
Free shipping in Continental U.S.

[SiskiyouLine.com](http://SiskiyouLine.com)

HO Loads, Cars and Materials  
Proudly Made In The U.S.A.

Mention that you saw our ad on MRH and NMRA magazine!

## Lasercut structures. Highway, storefront and billboard signs.

Neat ag customer for your railroad:  
Farmers Fertilizer Supply

WHAT'S NEW?

Established 1993...

## Blair Line



BEST OF THE **MRH** FORUM | 3

2. **MRH** forum member **Ken Rice** started a thread about how the prototype marks track clearance points. He posted this photo and is encouraging others to post more photos to show different methods used by real railroads for this.

### Clearance point markers

**MRH** forum member **Ken Rice** started a thread to collect examples of how prototype railroads mark the clearance point on spur tracks, yard tracks, and sidings.

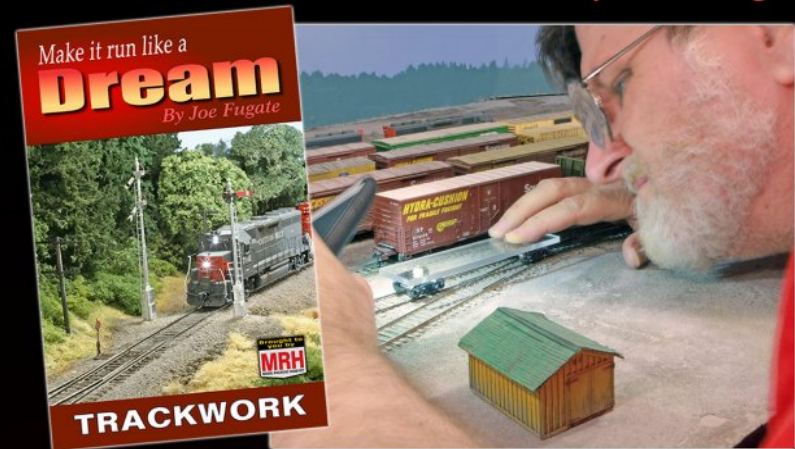
“One of the interesting and useful details on the prototype is how clearance points are marked. Sometimes not at all, sometimes, subtly, and sometimes blatantly obvious. If you’ve got photos of prototype clearance point markers, please post them here. The Grafton & Upton’s Hopedale yard clearance markings [2] fall into the blatantly obvious category.”

Follow this thread for more.

[View the full thread on the \*\*MRH\*\* website](#)

# Make it run like a **Dream** **TRACKWORK BOOK**

104 pages *By Joe Fugate*

SUMMER  
SPECIAL

Available from the **MRH** Store: [store.mrhmag.com](http://store.mrhmag.com)

“The new bible of track laying.” - L.T.

“Chapter 3 alone is worth the cover price.” - B.M.

“A lot of info ... copiously illustrated..” - J.A.

Click me to  
**Get eBook NOW >>**  
~~\$14.99~~ **\$9.49**

Format: Landscape and Portrait  
PDF

Click me to  
**ORDER PAPERBACK >>**  
~~\$31.99~~ **\$27.99**

FREE shipping in US!  
Foreign shipping 50%

Other books in this series: **ROLLING STOCK** (available now) and **LOCOS** (end 2023)





3. *MRH* forum member **NightCopy** (Hagen L.) started a thread about how folks organize their tool storage / workbench. Here is an example from UglyK5 (Jeff L.) that's very appealing.

## Organize your tools

New *MRH* forum member **NightCopy** (Hagen L.) started a forum thread on tool / workbench organization.

"I'm just starting my journey from the armchair modeler to an active modeling life in the basement. I have acquired some (or better: *a lot of*) tools. I got almost anything I read about or I thought could be useful, or even better, that I just 'needed'. How do you categorize, store, and whatever your model railroad tools?"

Check out the full thread – who doesn't like a good workspace organization discussion?

[View the full thread on the \*MRH\* website](#)

## Look how far we've come ...

*MRH* forum member **BATTRAIN** started a thread asking folks to show before and after images of their modeling, so check it out!

[View the full thread on the \*MRH\* website](#)



4. *MRH* forum member **RMM** (Robert M.) posted this impressive before and after example of a scene on his small shelf layout. That's quite a transformation! Robert posted other before/after shots also. And of course, many other folks are posting some equally impressive before and after shots of their modeling progress. Be sure to check out this fun thread!

Get more articles like this

GIVE IT A **LIKE**



# The 2023 Texas Express is around the corner!!!

Come for the HO/HOn3 scale Bear Creek & Bayou Railroad of Leo & Lorrie Palitti and lots of other great layouts, then stay for the huge FreeMoN Operations Roadshow, rail tours, operating sessions, clinics, banquet speaker Spencer Christian, and so much more!!!



**SUPERCHARGED - HIGH SPEED**

**TEXAS EXPRESS**

**AUGUST 20-26**

**Dallas Fort Worth TEXAS**

**CLICK TO REGISTER today!!**

**nmra National Convention 2023TEXASEXPRESS.COM**

## WHAT'S NEAT column



Model Railroad Hobbyist | August 2023

**KEN PATTERSON** COVERS THIS MONTH:



- JENNIFER KIRK TAKES US ON A TOUR OF THE DAPOL FACTORY
- NEW N SCALE LOCOMOTIVES FROM BROADWAY LIMITED
- STEVEN M. CONROY SHOWS TEHACHAPI LOOP FROM ABOVE
- DOUG BLAINE FROM BACHMANN SHOWS WHAT'S NEW WITH THOMAS & FRIENDS



**AUGUST 2023**

Brought to you by  
**MRH**  
MODEL RAILROAD HOBBYIST

**WHAT'S NEAT** with Ken Patterson  
Touring a model train factory

*click to play video*

**PHOTOS AND VIDEO OF SUPERB MODELS**



REGISTER  
(free)

[INDEX](#)

[TABLE OF CONTENTS](#)

[MRHMAG.COM](#)

[INDEX](#)

[TABLE OF CONTENTS](#)



**GREAT BRITAIN'S JENNIFER KIRK TOURS THE BRITISH MODELING COMPANY DAPOL**, and even gets to assemble a car. Ken shows us two new N scale locomotives from Broadway Limited. Steven M. Conroy's drone takes in the view over Tehachapi Loop. Finally, Bachmann's Doug Blaine drops in via Skype to show some upcoming products.

## Touring Dapol



1. Jennifer Kirk shows tooling used for making injection molded plastic models.

Did you see this article?

in the **AUGUST 2023 MRH RUNNING EXTRA!**



Time, setting, and  
season swapping

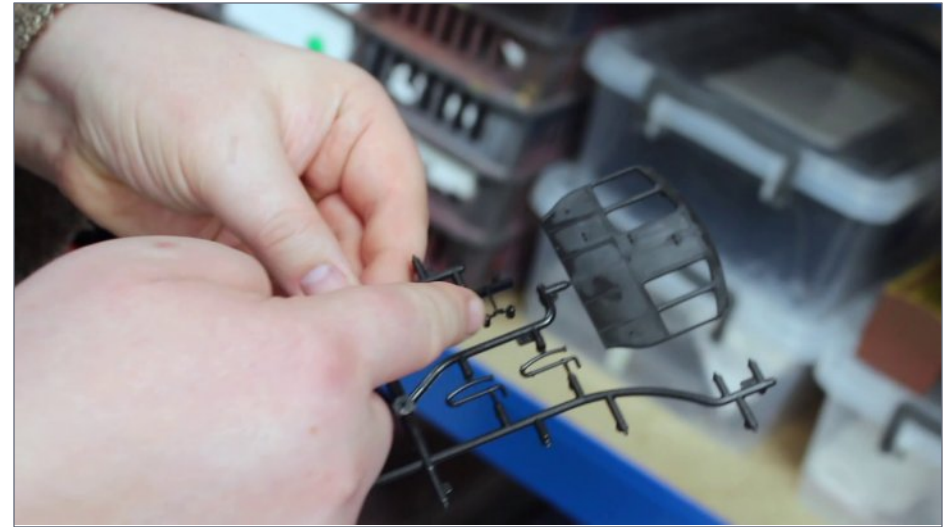
Get full eBook now ▶

*click here*

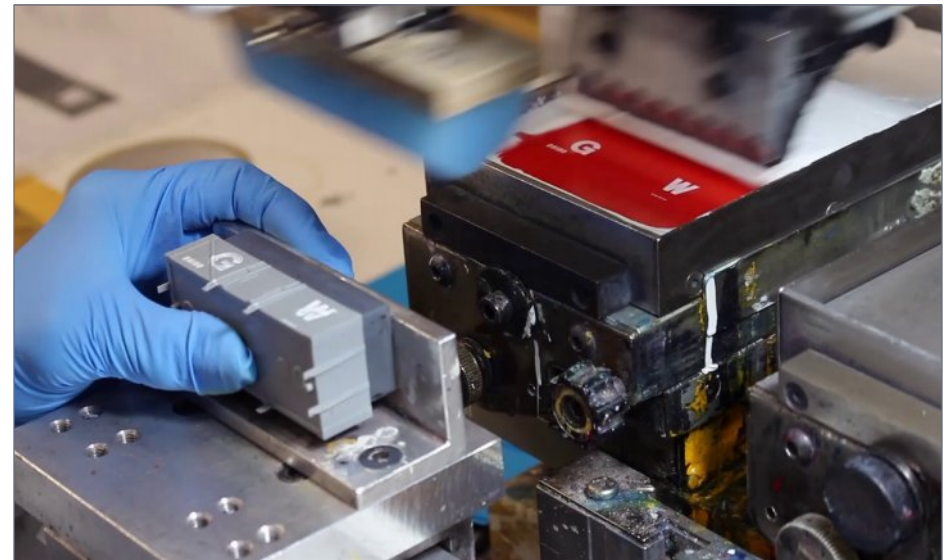


**RUNNING**

**EXTRA**  
Each eBook has 80-100 pages



2. The injected plastic parts come out on sprues, just like the model kits many of us have assembled.



3. Jennifer explains how the lettering master for pad printing is created and shows it in action.



REGISTER  
(free)

[INDEX](#)

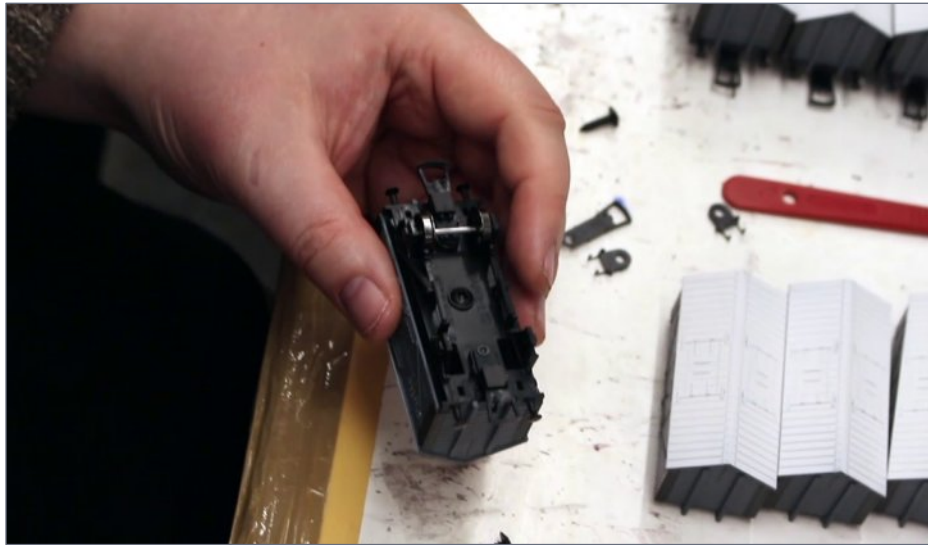
[TABLE OF CONTENTS](#)

[MRHMAG.COM](#)

[INDEX](#)

[TABLE OF CONTENTS](#)





4. While assembling a salt van (boxcar), Jennifer shows there can be more to it than just putting the parts together.

## Tehachapi Loop from above with Steven M. Conroy



5. A Union Pacific mixed manifest train with end-of-train DPUs powers uphill through Tehachapi Loop.



6. Exiting the loop, the Union Pacific train meets a BNSF unit covered hopper train with eight locomotives – three in front, three in the middle, and two bringing up the rear.



7. The long BNSF train with its all-GE/Wabtec power snakes its way downhill through the loop.



## New N scale locomotives from BLI



8. Ken shows off N scale BLI Norfolk and Western Y6b 2-8-8-2 locomotives in multiple prototype and fantasy paint schemes.



9. Also new in N scale, Alco RSD-15s come in three variations, including this special PRR high-hood with road name-specific horn and bell mounts.



10. The low-nose variation of the RSD-15 comes in several schemes, including two Santa Fe schemes, Southern Pacific, and LS&I.

## Bachmann interview with Doug Blaine



11. A&B This month Bachmann has Thomas & Friends from large scale to N scale, beginning with this large-scale Toby's Museum Coach and matching brake coach.





12. In HO scale, Beau is an 4-4-0 American that appeared in a Thomas movie and is equipped with a hook-and-loop coupler like other Thomas & Friends products. There will be minor paint changes in the production version.

Get more articles like this

GIVE IT A LIKE



13. British prototype HO narrow-gauge cars, that run on N scale track, will be available in both red and blue. There are both normal van and brake van types and they will carry several names.



14a, 14b. In N scale, Doug has a pre-production sample of Emily to show, based on a Stirling Single 4-2-2 type locomotive. In addition, two coaches that are commonly connected to Emily are coming.



15a, 15b. Also in N scale, Doug showed three newly available box vans, including an Ice Cream van, a Great Western van, and (not pictured) a Sodor Fruit and Vegetable Co. van.



REGISTER  
(free)

[INDEX](#)

[TABLE OF CONTENTS](#)

[MRHMAG.COM](#)

[INDEX](#)

[TABLE OF CONTENTS](#)



16. Doug also showed off samples of the upcoming OO (1/76) scale Hatt family figures, including children Stephen and Bridget, Mrs. Hatt and Dowager Hatt, and Sir Topham Hatt, seen here.



17. Debuting on What's Neat is the first painted sample of Gordon in N scale.

To see Jennifer's full factory tour of Dapol, the complete Tehachapi Loop footage, more of the BLI N scale locomotives, and the entire set of upcoming and newly available Thomas & Friends products from Bachmann, click on the video link at the beginning of the article. ☑





# From first train set to railroad empire...

*Our complete line of DCC products grows with you. Discover the fun!*

- Designed and manufactured in the U.S.A.
- Preferred for ease of use and ergonomic design
- Unlimited scalability for any size model railroad
- Plug-and-play means more time running trains
- Great customer service and excellent support



## Visit our new and improved web site for all your DCC needs!

- Get the latest new product announcements
- Watch our detailed how-to videos
- Browse the all-new Information Station
- Enjoy secure online sales, day or night!



## See your dealer

## Visit **ncedcc.com**



# Litchfield

## STATION

*We carry your favorite DCC products!*

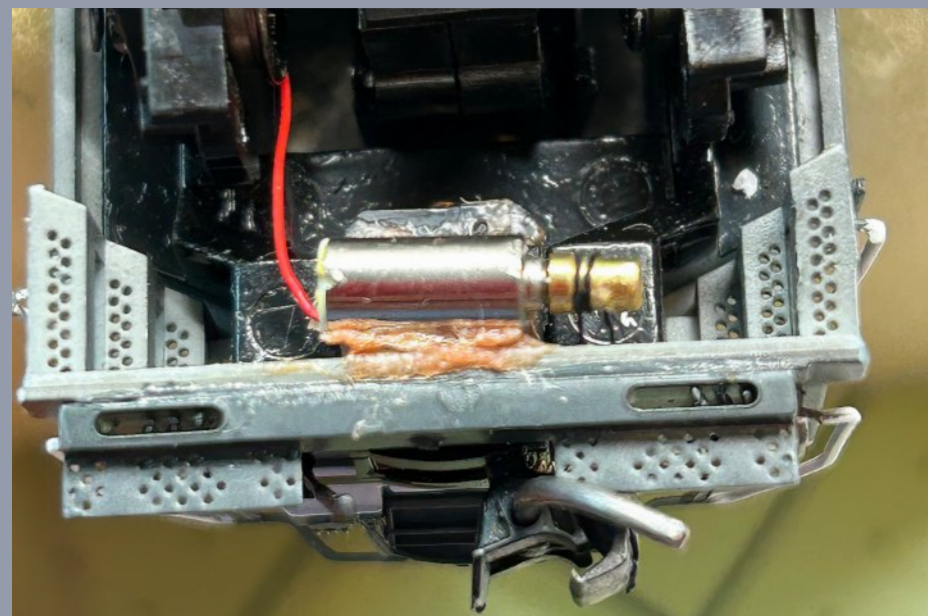
NCE | Digitrax | Speakers | RailPro

SoundTraxx | Train Control Systems

ESU LokSound | Tam Valley Depot

**www.LitchfieldStation.com**  
**sales@litchfieldstation.com**  
**623-298-7355**

## A self-actuated coupler



Model Railroad Hobbyist | August 2023



**BRIAN KRUPICKA** SHOWS US HIS MOTORIZED UNCOUPLING DEVICE...

**MY FRIEND GLEN YOUNG AND I WERE REVIEWING OPTIONS FOR** uncoupling trains in yards, or making deliveries at customers. Using skewers or other small insertion tools to uncouple cars works, but what if reaching the locomotives is inconvenient?

Uncoupler magnets mounted between or underneath the tracks are a common alternative. They get the job done, but if you stop the train in just the wrong place, they can uncouple cars unexpectedly.



## A SELF-ACTUATED COUPLER | 2

Then we thought about uncoupling cars electronically. The scheme we developed involved mounting a tiny motor in the locomotive to open the locomotive's coupler knuckle, using embroidery thread as an actuator.

The idea was that the motor would wind the string around its shaft when powered, pulling the knuckle open. Without power, the coupler's centering and closing springs would be sufficient to unwind the shaft and pull the coupler closed.

This is how the project came together:

### FINDING A MOTOR

First, I needed a tiny motor to operate the knuckle. I selected a 4mm by 8mm coreless motor, operating at 4.5VDC with rated current draw of 0.12A. Often used in cell phone vibrators, they are an inexpensive part on eBay [1].

The motor's size was perfect for the project. It was small enough to mount behind a locomotive's pilot and between the steps. This left the loco's trucks ample room for movement.

My idea was to use the motor and a string actuator to open the coupler knuckle. Unfortunately, the motor's 0.7mm-diameter shaft was too small to wind thread effectively, so I used K&S 1.577 mm round brass tubing as a bushing.



1. 4x8mm coreless motor.

ADVERTISEMENT

Make tortoise wiring more modular!

**ACCU-LITES, inc**

Your DCC Center!

Dealer Inquiries Accepted

**TORTOISE**  
edge card connector



Our Edge Connector redesigned for a SNUG fit!

[CLICK TO LEARN MORE ...](#)

ADVERTISEMENT

**TamValleyDepot.com**



Home of the  
Frog Juicer

**Dual  
Frog Juicer**

Automatic DCC Polarity  
Reverser can be used to:

Power Two Frogs

Crossovers

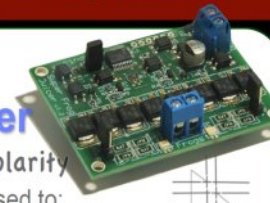
Crossings

Automatic Reverser for  
Turntables

Wyes, Loops

Circuit Breaker

Use with 2-10 Amp Systems



ADVERTISEMENT

**SQUEALER**  
Motion Activated Flange Squeal System

*Sshhhhhhtttttt!!*

Experience a **revolution** in  
trackside sound!



Iowa Scaled Engineering  
[iascaled.com](http://iascaled.com)





Close enough, is no longer good enough

**LOK SOUND**  
EST. 1999

- High Fidelity Sound Quality
- Superior Motor Control
- Overflowing with Lighting Outputs
- Ultimate Variety of Sounds

[www.loksound.com](http://www.loksound.com)

## A SELF-ACTUATED COUPLER | 3

I cut a piece of tubing to match the motor's 3mm shaft length, and secured it with CA. I used the glue sparingly and kept it way from where the shaft enters the motor housing [2].

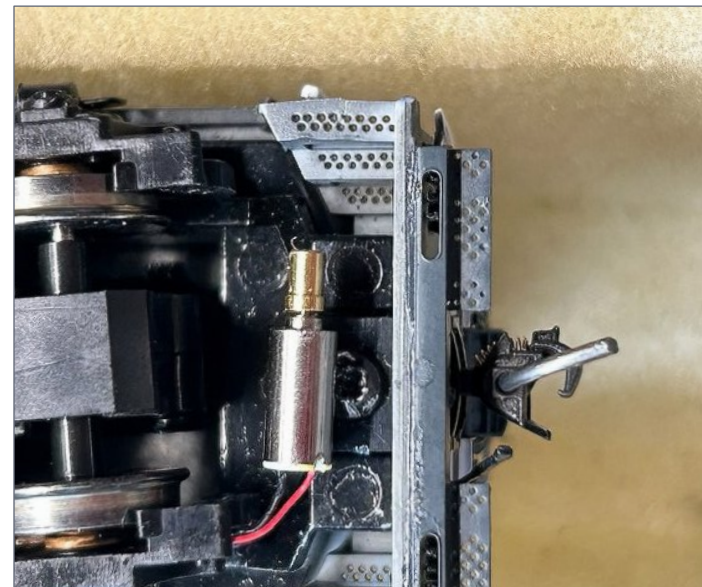
### ACTUATING THE UNCOUPLER

I had the motor; now I needed the actuator. My wife Diane showed me some embroidery thread, which is thin but strong.

I selected Isacord 40 thread in black because it blended in with my locomotive's colors.

To get the thread from the coupler knuckle to the motor inside the shell, I drilled a no. 60 hole through the locomotive pilot to left of the coupler housing [3].

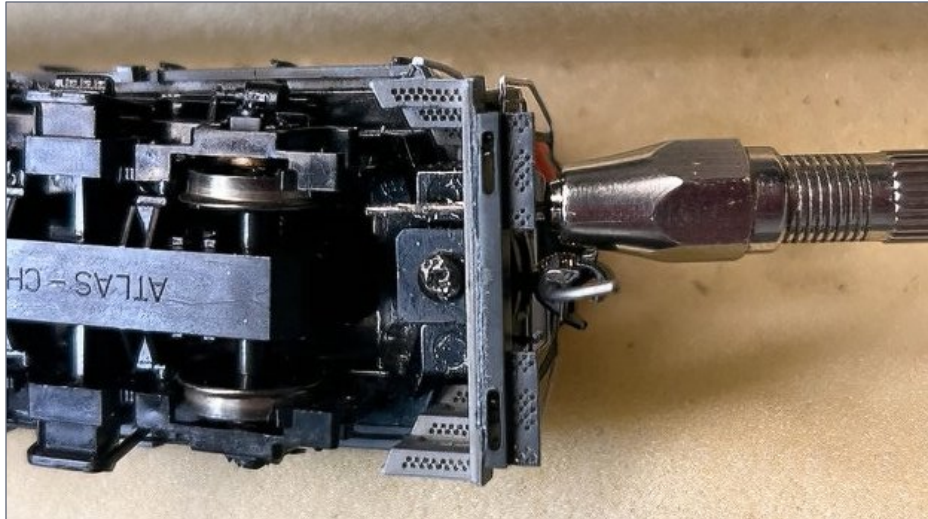
I secured the thread in place to the outside of the knuckle with a tiny drop of CA, taking care to avoid any moving parts. I then passed the thread through the hole, into the shell of the locomotive [4]. I mounted the other end of the string to the motor shaft's brass bushing with a dab of CA.



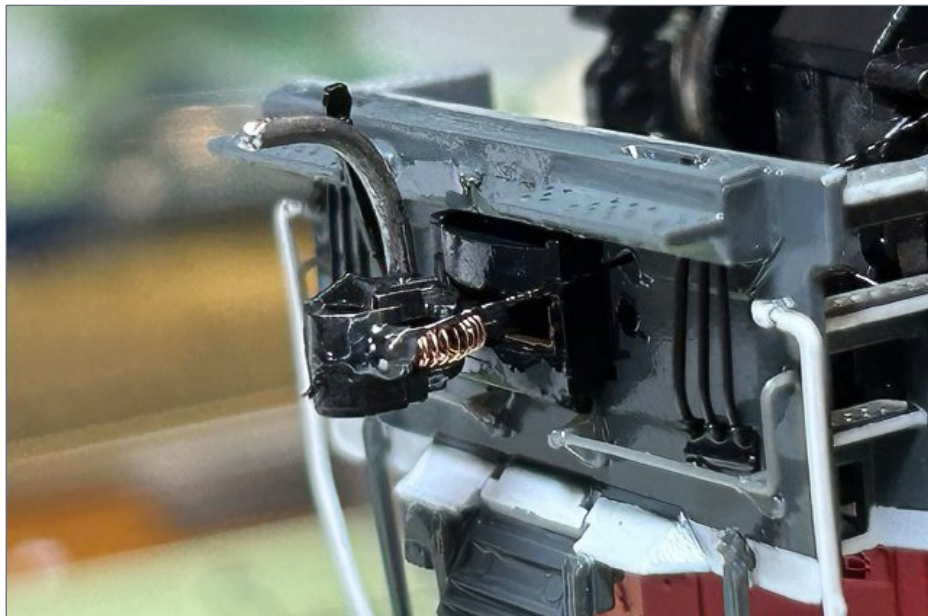
2. A test fit of the motor with bushing in place.



## A SELF-ACTUATED COUPLER | 4



3. Drilling a hole for the actuation thread.



4. The actuator string is in place.

ADVERTISEMENT

## STREAMLINED BACKSHOP

Sales ... Service ... Solutions ...



# Tsunami 2 ?

Learn more ...



WWW.SBS4DCC.COM



ADVERTISEMENT

## Great control in a tiny package



Original  
Touch Toggles

- Touch Toggle™ plug in controls
- Bright clear indication
- Easy setup
- Flexible system

Stall Motors, Twin-coils,  
Power, and Servos

Now for Tam Valley Depot  
and MRservo too!



Made in the USA

What will they think of next?

www.berretthillshop.com



REGISTER  
(free)

[INDEX](#)

[TABLE OF CONTENTS](#)

[MRHMAG.COM](#)

[INDEX](#)

[TABLE OF CONTENTS](#)





# Southern Digital

**WWW.SODIGI.COM**

*Celebrating 28 Years serving you*

## Over 180 Decoders to pick from!

We have all sizes and shaped decoders from Z-Scale to G-Scale, motor only, sound only, motor+sound plus stationary decoders.



**Digitrax**



**Soundtraxx**



**TCS**



**NCE**



86 N-Scale Mobil Decoders to pick from  
17 N-Scale Sound + Motor to pick from  
7 Stationary Decoders to pick from

22 HO Mobile decoders to pick from  
56 HO Sound + Motor to pick from  
2 O/G Scale Motor + Sound to pick from

## DCC Conversions, Service & Support

E-mail: [sales@sodigi.com](mailto:sales@sodigi.com) (770) 929-1888



REGISTER  
(free)

[INDEX](#)

[TABLE OF CONTENTS](#)

## A SELF-ACTUATED COUPLER | 5

### MOUNTING THE UNCOUPLER MOTOR

With the motor and actuator settled, I needed to figure out a mount for the motor. For my test subject, an Atlas GP40, it worked well to secure the uncoupling motor to the draft gear mounting screw with G00. The G00 hardened after a couple of days, but provided an ample working period that allowed us to correct errors [5].

I tried installing the coupler in several other locomotives, but found no universal standard. The mounting solution varied for each locomotive, depending on available space. Some required custom mounts [6].

I found a solution for every locomotive I tried, however. The key was to mount the uncoupler motor securely, and route the string such that they would not interfere with the locomotive trucks or drive mechanism.

### ACTIVATING THE UNCOUPLER

The next piece of the puzzle was finding the best way to activate the uncoupler motor. I tried three approaches. Each supplied 12-14VDC to the motor, well beyond its 4.5VDC capacity. To make it work, I wired a 100-ohm, 1 watt resistor in line with the motor to reduce the voltage.

One of the locos has a separately controlled cab light. For my first approach, I connected the motor to that decoder function. This allowed for direct control of the uncoupler motor; with the cab light on, the motor ran.

This proved problematic, because as soon as the coupler knuckle is open, the motor can't turn anymore, so it stalls. Stalling can burn out motors, especially coreless, in a hurry. I had to turn the motor (and cab light) off as soon as the uncoupling operation was complete.

For the second approach, I installed a Digitrax TL-1 decoder in the loco and gave it a separate address. This also allowed for direct DCC control, though the separate address added complication.

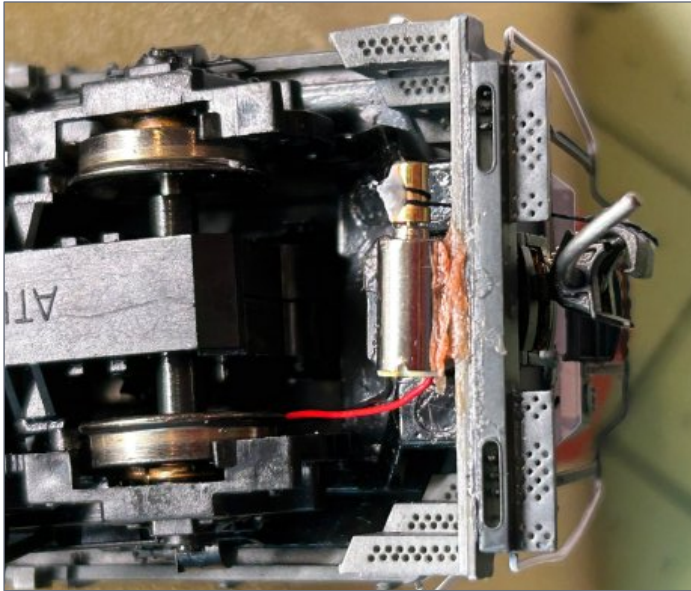
[MRHMAG.COM](http://MRHMAG.COM)

[INDEX](#)

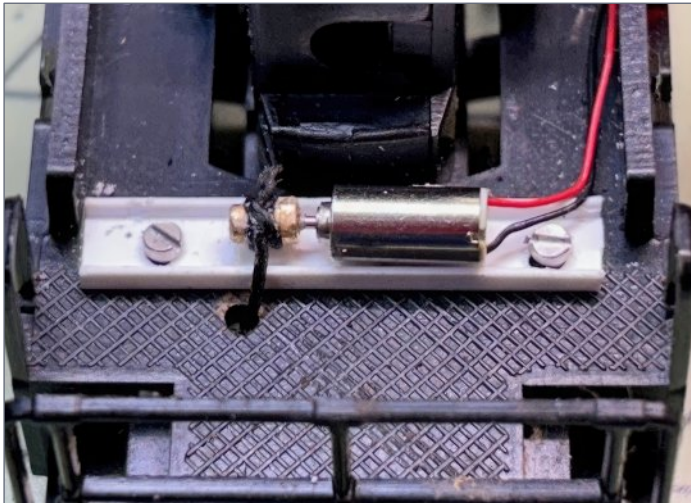
[TABLE OF CONTENTS](#)



## A SELF-ACTUATED COUPLER | 6



5. The uncoupler motor, mounted to the draft gear mounting screw of an Atlas GP40 with GOO.



2mm-long M1.0 machine screws.

6. This end-cab switcher had space inside the motor shell, under the battery box. I fabricated the mount from Evergreen 3/16-inch U-Channel (no. 266), and mounted it to the frame with

ADVERTISEMENT

## BRINGING YOUR LAYOUT TO LIFE!



You have worked so hard to create a perfect little world and given your attention to every little detail. Now is the time to bring it to life with the power of sound! And not just any sound. Get the industry's most realistic sounds and operational features for your model trains, backed by our downright famous support! SoundTraxx decoders make your models sound great and put you in the engineer's seat – no matter how you run your trains! It's your layout, but we have your sound solution!

LAYOUT CREDIT: MIKE MAY

**SOUNDTRAXX**  
www.soundtraxx.com

ADVERTISEMENT



## Introducing THE LUMBER STORE





# Dependable **Wireless** Radio Control!



... and **so** much more!

**GET THE DETAILS ►**

*click here*

**RE RING**  
ENGINEERING



REGISTER  
(free)

[INDEX](#)

[TABLE OF CONTENTS](#)

## A SELF-ACTUATED COUPLER | 7

Finally, I tried to use DCC track power via full-wave diode bridge, with motor activation via reed switch installed in the roof of the loco. This worked for operating the knuckle coupler, but had the disadvantage of needing to be able to reach the locomotive with a magnet to operate the reed switch.



J. Regier

### DECODER CONSIDERATIONS

Assigning the motor to its own separate lighting function, set for momentary activation is a viable solution. This would offer remote control of the coupler independent of other lighting functions, but without needing a separate DCC address.

The motor's rated current draw of 0.12A, or 120mA, is beyond the 100mA rating of many decoders' lighting function outputs. Although the voltage-drop resistor brings the motor within limits for normal operation, as soon as the coupler is open, the motor will stall, spiking the amperage.

Be sure to measure the motor's amp spike in a stall before wiring it to your decoder. Once installed, we recommend completing the uncoupling action as quickly as possible upon activation, and turning the motor off again immediately thereafter.

Brian has designed his coupler actuation system for use with only the rear end of the locomotive. Those considering this system for prototypical operations may want to equip both couplers. Be sure to wire each circuit to its own lighting function output.

If you only have one function output at your disposal, then be sure to wire the two motors in series. With a greater resistance between the two motors, the current draw should go down correspondingly.

Get more articles like this

GIVE IT A

LIKE



[MRHMAG.COM](#)

[INDEX](#)

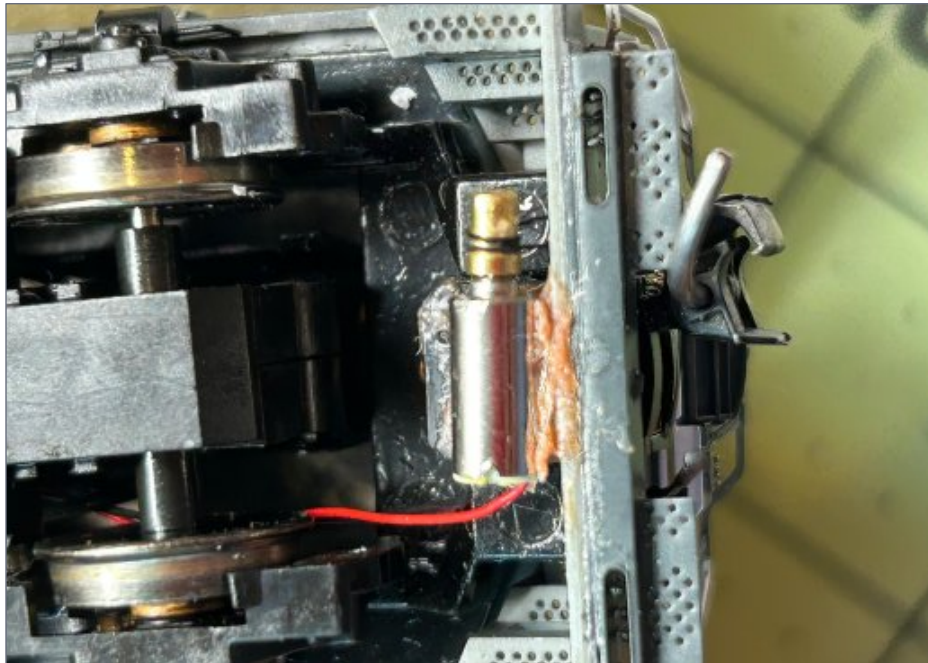
[TABLE OF CONTENTS](#)



For the locomotive shown in this article, I chose the Digitrax TL-1 decoder. To allow for easy disassembly, I used a 1.25 mm JST 2-pin connector plug set.

The operation worked well with the first test. The coupler opened as expected with power application. With power off, the coupler's centering and closing springs unwound the thread as expected, closing and centering the coupler [7].

Finally, I put the locomotive on the layout for testing, and it worked well. See: [www.youtube.com/watch?v=AErkdpGuQg4](https://www.youtube.com/watch?v=AErkdpGuQg4) and [www.youtube.com/watch?v=eMjcwI9vORs](https://www.youtube.com/watch?v=eMjcwI9vORs). Hopefully this self-actuating coupler system will help you in your operations. ☑



7. The uncoupler mechanism is activated. Check this YouTube video of the first test here: [youtube.com/shorts/tTcW9QamRfk](https://youtube.com/shorts/tTcW9QamRfk)

### BRIAN KRUPICKA

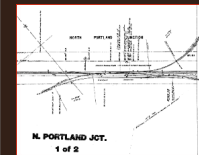


Brian and his wife live in Yorkville, Illinois and travel the country in an RV. They have several children, nine grandchildren and one great-grandchild.

Brian has provided clinics at NMRA conventions and other gathering. He also belongs to three model railroad clubs. His primary HO interests are in 1970 and 1980 operations. He has over 30 animation and automation features on his layout. ■

**Did you see this article?**

in the **AUGUST 2023 MRH RUNNING EXTRA!**



Layout refocus:  
interlockings

**Get full eBook now ▶**

*click here*

**MRH RUNNING EXTRA**  
Each eBook has 80-100 pages



**Please click on the ads to  
support  
Model Railroad Hobbyist!**





## Introducing the UT6 & UT6D Utility Throttles for Digitrax Complete Train Control!



- Compact size for easy one-handed operation
- Color 1.5" LCD Screen
- Full numeric keys for easy Locomotive selection
- Fine speed control with a large encoder knob
- Removeable LocoNet® cord
- Forward/Reverse toggle switch with Braking
- Off/On switch, uses AA or BP600MH batteries

**UT6**  
Utility Throttle  
**\$105.00 MSRP**

**UT6D**  
Duplex Utility Throttle  
**\$170.00 MSRP**

**View all features and *more*  
on our website!**

Find out more @ [www.digitrax.com/throttles/](http://www.digitrax.com/throttles/)



# MRH MARKETPLACE



THE N-SCALE DIVISION Since 1992

Top Quality **N-SCALE** Discount Prices

American - European - Japanese - DCC/Sound

**KATO**  
PRECISION RAILROAD MODELS

**MICRO-TRAINS**  
LINE

**Fleischmann**

**TRIX**



**SOUNDTRAXX**



**DECODER BLOWOUT - DIGITRAX - NCE - LENZ**  
**MOST NOW 35% OFF MSRP - STOCK UP!**

**[nscaledivision.com](http://nscaledivision.com)**

## REAL TRACK SCALED DOWN!

Home of the only prototypically accurate  
Turnout Kits, Fixtures and Track Parts for HO  
and Proto:87.

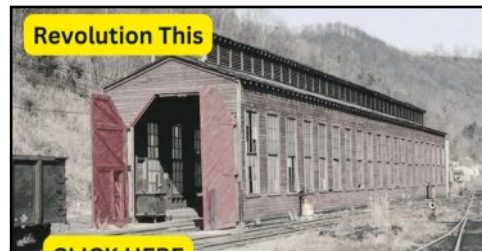
Scale Spikes, Tie Plates, Real Wood Ties and  
Bulk Rail in codes 83, 70, 55 and 40

**[PROTO87.COM](http://PROTO87.COM)**

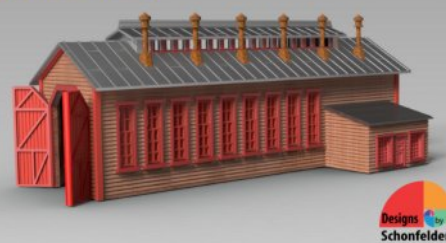


# MRH MARKETPLACE | 2

Revolution This



CLICK HERE



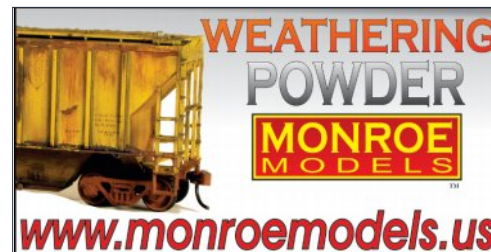
## INTER-ACTION Conservatory Greenhouse



**Conservatory Building**  
HO-3019  
S-3019  
O-3019

**Greenhouse Details**  
HO-5510  
S-5510  
O-5510

**[www.interactionhobbies.com](http://www.interactionhobbies.com)**



click to learn more!

**East Coast Circuits**  
Innovating Your Model Railroad Layout

**ECU**

P.O. Box 25412  
Providence, RI 02905

Lighting Circuits For Your Layout

Random Lighting Circuit - Burning Fire Circuit  
Traffic Light Circuit - Crossing Signal Circuit

Custom Lighted Vehicles  
HO & O Scale Emergency Vehicles  
HO & O Scale Trucks & Cars

[Eastcoastcircuits.com](http://Eastcoastcircuits.com) [Eastcoastcircuits@gmail.com](mailto:Eastcoastcircuits@gmail.com)

**Squeaky's Trains**

10% Off Sitewide! Use Coupon  
Code MRHQ223 at Check Out!  
(Certain items & S/H excluded)

Let's play with trains!

Offering:  
Walthers, SoundTraxx, NixTrainz,  
RailPro, Woodland Scenics, Bar Mills,  
and many more Railroading Supplies!

**[SqueakysTrains.com](http://SqueakysTrains.com)**

Come visit our booth in Grapevine, TX at  
the National Train Show (Aug 25-27)

Product demos and show discount!

Please visit our website and online store!

**LOGIC RAIL™**  
TECHNOLOGIES  
[info@logicrailtech.com](mailto:info@logicrailtech.com) (281) 251-5813 [www.logicrailtech.com](http://www.logicrailtech.com)

**PRECISION DESIGN CO.**

CUSTOM DECALS FROM  
YOUR OWN ART IN JUST ONE DAY

**PDC.CA**

FULL COLOR & SOLID WHITE

**GOLDEN AGE LINE**

**WESTERFIELD**  
MODELS, LLC

**NEW KIT: 11001 N&W  
BATTLESHIP GON**

**ALSO X23/R7 LADDERS**

**[westerfieldmodels.com](http://westerfieldmodels.com)**

REGISTER  
(free)

[INDEX](#)

[TABLE OF CONTENTS](#)

[MRHMAG.COM](http://MRHMAG.COM)

[INDEX](#)

[TABLE OF CONTENTS](#)



# MRH MARKETPLACE | 3

**LOOK**  
at what's new at  
Black Cat this month

Click here for  
our website


**CPR 3 D printed  
CPR 36' DS box car kits**  
by twenty Models includes  
castings, etchings & decals




**Black Cat Publishing**  
(204)489-5005  
ajfergus@mymts.net  
blackcatdecals.com

**BackdropsOnly.com**  
At Checkout Enter code **MRH-20**  
To Get **20% Off All Backdrops**

**CLICK HERE FOR BACKDROPS**



**BackdropsOnly@gmail.com**  
or Call 800-320-5057



**Model Railroad Control Systems**

Geoff Bunza Project Boards  
DCC Occupancy Detectors  
CMRinet Compatible Nodes  
Layout Telephone Systems  
RFID Switchlist Generator  
Switch Machines and Drivers

**Click Here**

**Hobby Marketplace  
Ads are Economical  
and Effective.**

*Click to learn more ...*

**PRE-SIZE  
MODEL SPECIALTIES**

P.O. Box 6 Paonia, CO 81428  
Ph. 970 527 4586  
Made in The USA

Cast resin items for All Scales.  
Tunnel portals, bridge piers, abutments,  
culverts, and retaining walls.  
Trackside details and sage brush tree  
armatures.  
**"FREE SHIPPING see website for details"**

**WE'RE BEHIND YOU ALL THE WAY**

**SceniKing®**  
...nothing compares...  
*Click to learn why!*

**Great Decals!™**  
FEC, Interstate, Virginian  
Railway, & L&N Titles  
After Hours Graphics Line  
Coupler Gages and More  
In O, S, HO, and N Scales

**MONASHEE  
LASER  
ENGINEERING**

**CLICK HERE**

**MANUFACTURING  
STRUCTURES. FALL SALE. STOCK MODEL KITS**

## Floquil/PollyScale stash running out?



**MRH has mapped the old familiar colors  
to new readily-available acrylic paints.**

**THE Model Railroad Hobbyist's  
Guide to acrylic painting  
... in a post-Floquil world**

By Joe Fugate PDF LANDSCAPE EDITION

**MRH's Floquil / PollyScale Paint Equivalents Conversion Chart - 1**

Floquil / PollyScale Color Name	MRH Color	Floquil / PollyScale Color Name	MRH Color
Primer Grey	MRH 4002	White	MRH 4001
Engine Black	MRH 4004	Black	MRH 4003
Stream Bed	MRH 4005	Light Grey	MRH 4006
Grey	MRH 4006	Dark Grey	MRH 4007
Weathered	MRH 4007	Light Brown	MRH 4008
Charcoal	MRH 4008	Dark Brown	MRH 4009
Rust	MRH 4009	Light Green	MRH 4010
Rust White	MRH 4010	Dark Green	MRH 4011
Green	MRH 4011	Light Blue	MRH 4012
Calumet	MRH 4012	Dark Blue	MRH 4013

**MRH's Floquil / PollyScale Paint Equivalents Conversion Chart - 2**

Floquil / PollyScale Color Name	MRH Color	Floquil / PollyScale Color Name	MRH Color
Track	MRH 4014	Light Yellow	MRH 4015
Rustier Orange	MRH 4015	Dark Yellow	MRH 4016
Rustier Yellow	MRH 4016	Light Green	MRH 4017
Rustier Green	MRH 4017	Dark Green	MRH 4018
Rustier Blue	MRH 4018	Light Blue	MRH 4019
Rustier Brown	MRH 4019	Dark Blue	MRH 4020
Rustier Red	MRH 4020	Light Red	MRH 4021
Rustier Purple	MRH 4021	Dark Red	MRH 4022
Rustier Grey	MRH 4022	Light Grey	MRH 4023
Rustier Black	MRH 4023	Dark Grey	MRH 4024

**MRH's Floquil / PollyScale Paint Equivalents Conversion Chart - 3**

Floquil / PollyScale Color Name	MRH Color	Floquil / PollyScale Color Name	MRH Color
Light Green	MRH 4025	Dark Green	MRH 4026
Light Blue	MRH 4026	Dark Blue	MRH 4027
Light Yellow	MRH 4027	Dark Yellow	MRH 4028
Light Red	MRH 4028	Dark Red	MRH 4029
Light Grey	MRH 4029	Dark Grey	MRH 4030
Light Brown	MRH 4030	Dark Brown	MRH 4031
Light Purple	MRH 4031	Dark Purple	MRH 4032
Light Orange	MRH 4032	Dark Orange	MRH 4033
Light Pink	MRH 4033	Dark Pink	MRH 4034
Light Tan	MRH 4034	Dark Tan	MRH 4035
Light Olive	MRH 4035	Dark Olive	MRH 4036
Light Lavender	MRH 4036	Dark Lavender	MRH 4037
Light Magenta	MRH 4037	Dark Magenta	MRH 4038
Light Cyan	MRH 4038	Dark Cyan	MRH 4039
Light Teal	MRH 4039	Dark Teal	MRH 4040
Light Mint	MRH 4040	Dark Mint	MRH 4041
Light Peach	MRH 4041	Dark Peach	MRH 4042
Light Plum	MRH 4042	Dark Plum	MRH 4043
Light Violet	MRH 4043	Dark Violet	MRH 4044
Light Indigo	MRH 4044	Dark Indigo	MRH 4045
Light Ultramarine	MRH 4045	Dark Ultramarine	MRH 4046
Light Cobalt	MRH 4046	Dark Cobalt	MRH 4047
Light Cerulean	MRH 4047	Dark Cerulean	MRH 4048
Light Sapphire	MRH 4048	Dark Sapphire	MRH 4049
Light Emerald	MRH 4049	Dark Emerald	MRH 4050
Light Jade	MRH 4050	Dark Jade	MRH 4051
Light Onyx	MRH 4051	Dark Onyx	MRH 4052
Light Opal	MRH 4052	Dark Opal	MRH 4053
Light Amethyst	MRH 4053	Dark Amethyst	MRH 4054
Light Topaz	MRH 4054	Dark Topaz	MRH 4055
Light Zircon	MRH 4055	Dark Zircon	MRH 4056
Light Spinel	MRH 4056	Dark Spinel	MRH 4057
Light Garnet	MRH 4057	Dark Garnet	MRH 4058
Light Ruby	MRH 4058	Dark Ruby	MRH 4059
Light Sapphire	MRH 4059	Dark Sapphire	MRH 4060
Light Emerald	MRH 4060	Dark Emerald	MRH 4061
Light Jade	MRH 4061	Dark Jade	MRH 4062
Light Onyx	MRH 4062	Dark Onyx	MRH 4063
Light Opal	MRH 4063	Dark Opal	MRH 4064
Light Amethyst	MRH 4064	Dark Amethyst	MRH 4065
Light Topaz	MRH 4065	Dark Topaz	MRH 4066
Light Zircon	MRH 4066	Dark Zircon	MRH 4067
Light Spinel	MRH 4067	Dark Spinel	MRH 4068
Light Garnet	MRH 4068	Dark Garnet	MRH 4069
Light Ruby	MRH 4069	Dark Ruby	MRH 4070
Light Sapphire	MRH 4070	Dark Sapphire	MRH 4071
Light Emerald	MRH 4071	Dark Emerald	MRH 4072
Light Jade	MRH 4072	Dark Jade	MRH 4073
Light Onyx	MRH 4073	Dark Onyx	MRH 4074
Light Opal	MRH 4074	Dark Opal	MRH 4075
Light Amethyst	MRH 4075	Dark Amethyst	MRH 4076
Light Topaz	MRH 4076	Dark Topaz	MRH 4077
Light Zircon	MRH 4077	Dark Zircon	MRH 4078
Light Spinel	MRH 4078	Dark Spinel	MRH 4079
Light Garnet	MRH 4079	Dark Garnet	MRH 4080
Light Ruby	MRH 4080	Dark Ruby	MRH 4081
Light Sapphire	MRH 4081	Dark Sapphire	MRH 4082
Light Emerald	MRH 4082	Dark Emerald	MRH 4083
Light Jade	MRH 4083	Dark Jade	MRH 4084
Light Onyx	MRH 4084	Dark Onyx	MRH 4085
Light Opal	MRH 4085	Dark Opal	MRH 4086
Light Amethyst	MRH 4086	Dark Amethyst	MRH 4087
Light Topaz	MRH 4087	Dark Topaz	MRH 4088
Light Zircon	MRH 4088	Dark Zircon	MRH 4089
Light Spinel	MRH 4089	Dark Spinel	MRH 4090
Light Garnet	MRH 4090	Dark Garnet	MRH 4091
Light Ruby	MRH 4091	Dark Ruby	MRH 4092
Light Sapphire	MRH 4092	Dark Sapphire	MRH 4093
Light Emerald	MRH 4093	Dark Emerald	MRH 4094
Light Jade	MRH 4094	Dark Jade	MRH 4095
Light Onyx	MRH 4095	Dark Onyx	MRH 4096
Light Opal	MRH 4096	Dark Opal	MRH 4097
Light Amethyst	MRH 4097	Dark Amethyst	MRH 4098
Light Topaz	MRH 4098	Dark Topaz	MRH 4099
Light Zircon	MRH 4099	Dark Zircon	MRH 4100

**MRH Registered Readers: Download your  
FREE Post-Floquil acrylic painting eBook**

**Want a hardcopy version?  
Post-Floquil acrylic painting guide: \$18.99 (MRH Store)**



# Jerry Hoverson's Rocky Mountain Central

This layout can be viewed at the  
2023 Texas Express  
NMRA National Convention  
August 20 - 26, 2023



JOE FUGATE VISITS THIS UNIQUE DALLAS-AREA  
HO/HON3 LAYOUT ...

1. When you first walk into Jerry's layout room, you see this yard at Grand Junction. The photo backdrop does a good job of immediately putting you into the layout's Rocky Mountain setting.



REGISTER  
(free)

[INDEX](#)

[TABLE OF CONTENTS](#)

[MRHMAG.COM](#)

[INDEX](#)

[TABLE OF CONTENTS](#)





**JERRY HOVERSON'S LAYOUT IN THE GREATER DALLAS / FORT WORTH** area will be open for tours during August 2023 as part of the 2023 Texas Express NMRA National Convention. To learn more about this convention and/or to register, please visit this website: [2023texasexpress.com](https://2023texasexpress.com)

**MRH: Jerry, tell us a bit about yourself – how did you ever get into model trains?**

**Jerry Hoverson:** I got into model trains like most of us did as a kid with a train set from the folks. I played with that for quite a bit, then mixed it with slot cars for a while. When I got into my teenage years, girls and cars took priority, and model trains went by the wayside.

After I went into the military, I met a few others who were into the hobby, so I got back into it – and I've been in it ever since.

**MRH: Tell us a bit about your journey in the hobby. Did you build any other layouts than just this one?**

**Jerry:** This is not my first railroad – I started way back when as a kid with that four-by-eight my dad helped me build, as I said. When I got back into the hobby years later, I built another four-by-eight by myself – then probably three other layouts before I got to this layout.

The most complete layout just before this one was in my McKinney house. After that, I started this layout, and it is pretty much complete now. I'm planning on expanding the building and adding to this layout after the convention's over (see [31]).



2. When you enter Jerry's layout room, you step up onto a raised floor into the layout space [3]. To the left, you can sit on a rolling stool and get under the layout to comfortably work on it [4].



3. Stepping up into the layout room, this is the first view you see. That's Grand Junction (standard gauge) on the left and Durango (3-foot narrow gauge) along the back wall. The room is roughly 25' x 25'.



**MRH: Tell us about this latest layout.**

**Jerry:** This layout is J-shaped, with both standard gauge and a significant 3-foot narrow gauge branch that's roughly half the railroad.

The layout is a point-to-point operation with an interchange between the standard gauge and the narrow gauge. Each has their own yard at one end of the railroad, and staging at the other end, so there is no continuous running.

I built it with view blocks so that when you walk in, all you see is the first town. Then as you walk around the corner, there's more. When you walk around the next corner, hey look, there's even more!



4. Here Jerry sits on a rolling stool and works on wiring under the layout. By building his layout base level higher and adding lighting under the benchwork, this gets the layout high enough that you can easily get under it and see to work on the underside, as Jerry shows here. Jerry added a raised floor for normal viewing and operation of the layout. Very clever!

I used a serpentine aisle configuration. I did that on purpose so you're always finding more to see as you walk around the layout.

**MRH: Why did you pick your particular layout subject? What's your rationale?**

**Jerry:** I chose this railroad and the prototype I'm basing it on after a tour in Colorado Springs at the Air Force Academy. I was an instructor there for four years, and fell in love with Colorado railroading. And of course, that eventually led to narrow gauge as well.

That's the theme I'm using: Colorado cities. I'm using Rio Grande and Rio Grande Southern prototypes I've renamed for my own Colorado Pacific railroad. If you look around my crew lounge, you'll notice my paint scheme pretty much matches the Rio Grande scheme.

So I prototype-freelance, as I call it. I can get away with things that you couldn't if you were a rivet counter. And I prefer it that way.

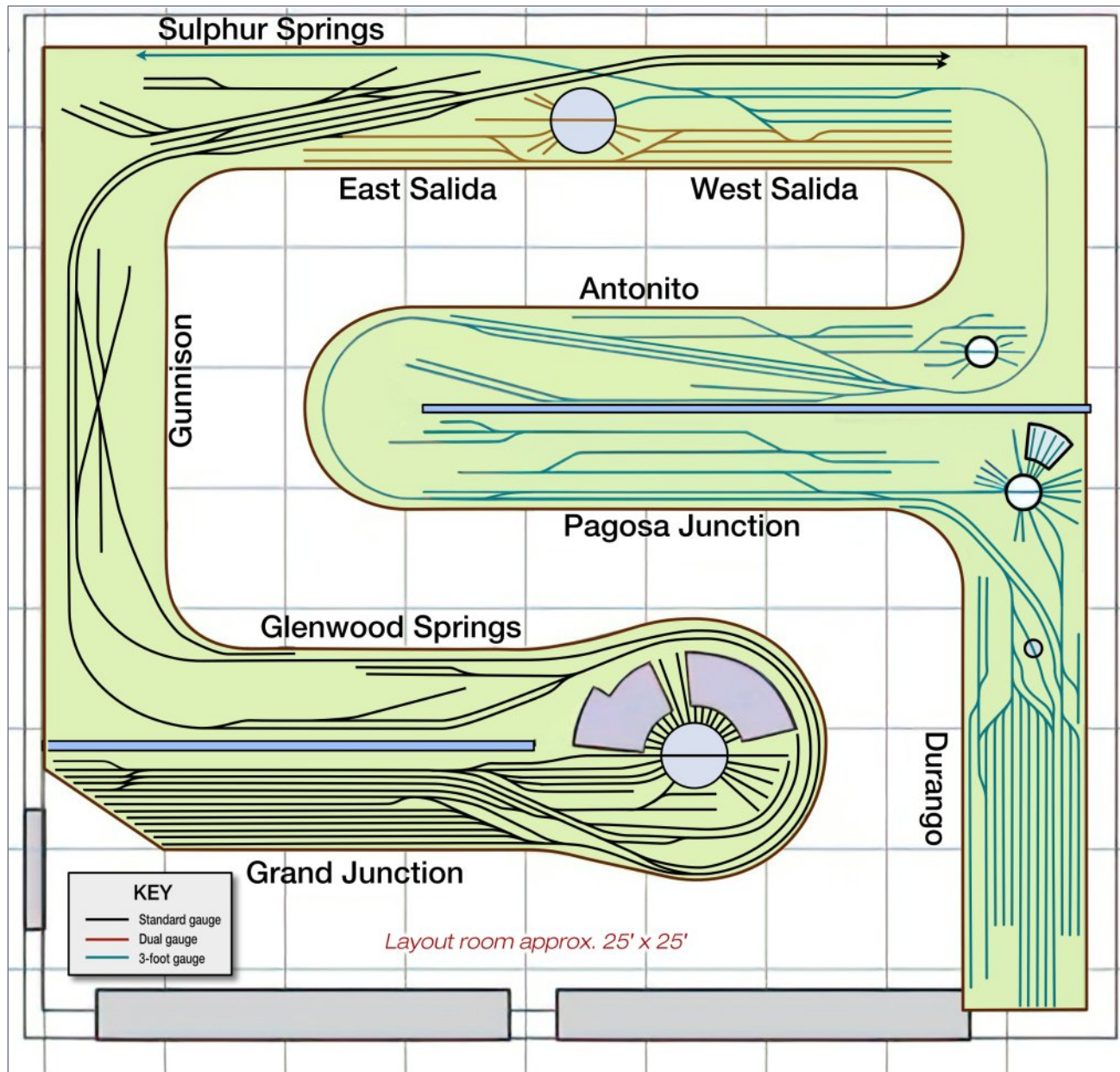
I model the early fifties. Nothing on the railroad is later than 1954. This limits not only rolling stock and automobiles, plus I'm still a steam guy.

I know in reality, steam was mostly gone by then, and we had diesels. You do find a few early covered-wagon diesels on the railroad, but it's mainly steam.

My philosophy is this is August, 1954, and on the Rocky Mountain Central, the leadership of the company were very headstrong. They are not real fond of diesels; therefore, they're still maintaining steam. And their subsidiary, the Colorado Pacific narrow gauge, follows suit. That way, I can still model steam.

**MRH: How did you develop the track plan? Was it easy or did you go through a lot of iterations?**





5. Main level track plan of the Rocky Mountain Central and the Colorado Pacific narrow gauge. Also see [6].

**Jerry:** The track plan came through several different iterations. When we were looking at moving to this area, I started planning a couple of different railroads.

I knew with the previous layout I had, there were things I didn't want to do again. I wanted bigger aisles. I wanted to go single level, not double-decked.

So I started drawing, planning to put the layout in a separate building. I did a huge layout plan, but then reality struck. We had found property that had this outbuilding already here, so I had to redesign the layout based on the size of the space I had.

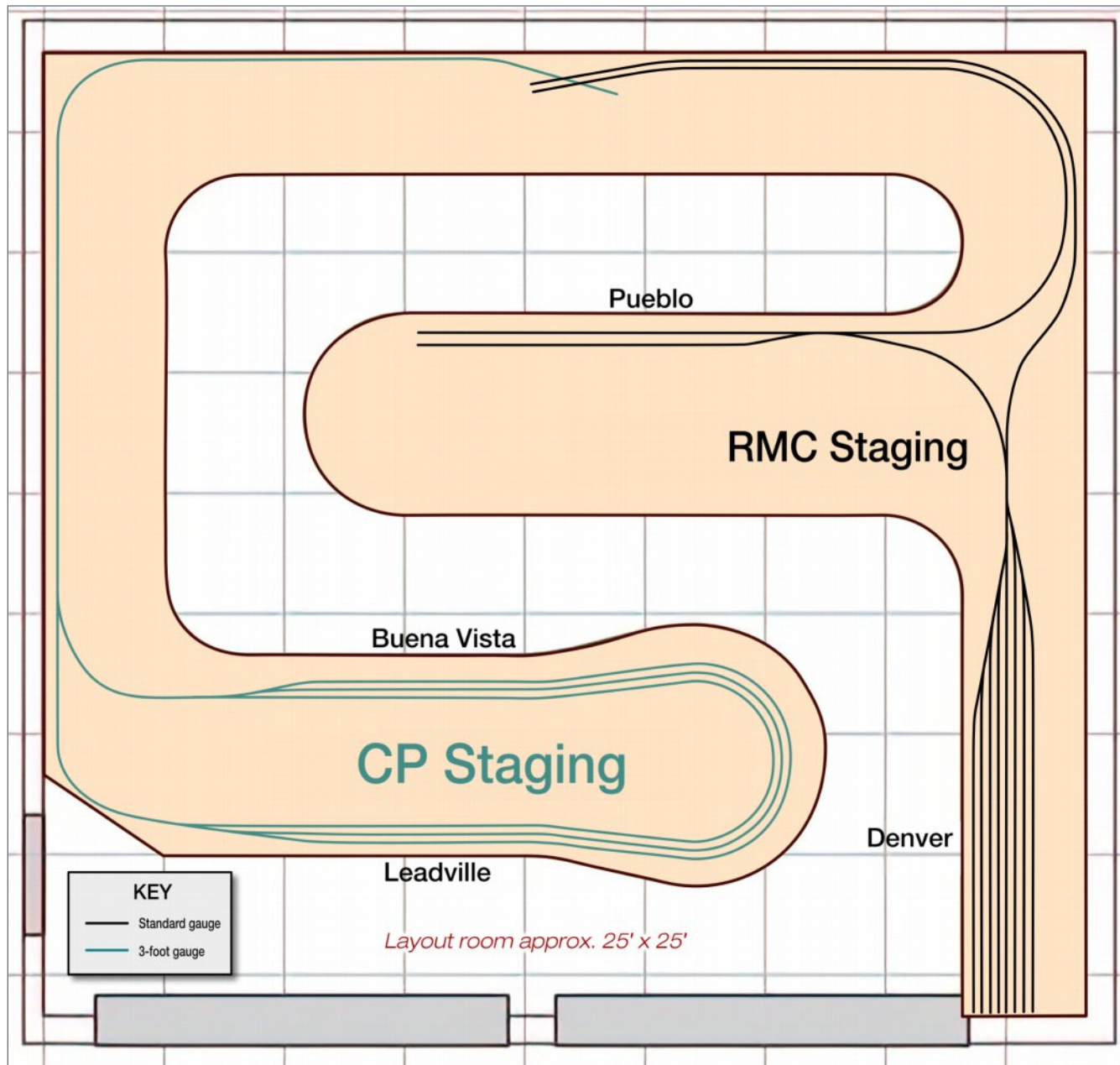
The layout room itself is about 25' x 25'. The building is 35' by 25', including the crew lounge. I did the design with some things in mind: the wider aisles, the view blocks, the curve radius minimums and so on.

I drew probably four or five different footprints of how I wanted things to fit. I finally chose this one through the process of elimination.

**MRH:** You have kind of an unusual design with your benchwork, giving you the ability to easily get under the layout to work on it.

**Jerry:** For the new railroad, I wanted to raise it. I didn't want to crawl around on the floor anymore. I'm getting older and I've had a hip replacement, making it harder to get down and up off the floor.





6. Staging level below the layout main level [5].

At first, I was looking for a space that had a 12-foot-high ceiling. With that, I could build benchwork up high enough so I could walk underneath it. Obviously, I would have to raise the aisleway floor so it appears normal when you're running the trains and viewing the layout.

But I didn't find that – this room has a 10-foot ceiling instead of a 12'. So I wondered, can I make that work?

First thing I tried was I bought a little roll-around stool, sat on it, backed myself up to the wall and put a mark over the top of my head. I used that as the base level, then put a 2x4 on top, and put joists on top of that.

I wanted 2x4 benchwork assembled with a nail gun because I want this to be permanent and solid. This approach gave me a couple advantages: one, it gave me a place to store stuff that you don't see, and it gave a nice, finished appearance below the layout where it's now just a wall.

I also put electrical outlets all the way around the layout in this wall, giving me power wherever I need it. This all evolved from determining I could use a roll-around stool to navigate the space under the layout.

**MRH: When did you start construction?**

**Jerry:** I did a small area, the width of the layout right where you come in the door.



I did an eight-foot-long test section of benchwork and raised floor as a test to judge height, how I could roll under it, and so on. That was August of 2014.

It's been eight years now to get it completed. Now I'm concentrating on more of the little stuff I've been postponing, like repainting the cabooses and locomotives to my road name.

A lot of the structures came from a previous layout. All the benchwork and scenery is new, but a lot of the rolling stock and locos came from a previous layout. Having holdovers from a prior layout helped speed things along.



7. A Colorado Pacific narrow gauge train rolls around a tight curve between Pagosa Junction and Antonio. Also see [8, 9].

I've also had several people help off and on. We typically meet once a week – who those people are has changed over time. I typically have a crew of two besides myself, working once a week on the layout.

I told myself while I was still working, that I would spend a bit of each evening out here. Once I retired, I said, this is my job now, so I can come out here and spend eight hours a day if I want.

**MRH: When you started building the layout, did you have any nasty surprises?**

**Jerry:** I have been doing layouts for a lot of years and this is probably layout number five. From having built several other layouts, I found things that I didn't like. That's why I built this layout raised, and that's why the aisles are four feet wide. And that's why it's single deck instead of double deck.

All those things in the past have caused me problems. So I set out with this layout to not have those problems. Of course, new problems do crop up, but they've been solvable.

For instance, the entrance on the mountain that comes apart [8-11], I knew I wanted that as a scenic highlight. I had to figure out where I would put

this entrance and how to do that scenic element with scenery to the floor.





8, 9. Here's a birds-eye view of the end of the peninsula between Pagosa Junction and Antonio [7]. All is not as it seems – also see [10, 11].



10, 11. Believe it or not, the entire end of this peninsula [8, 9] can be removed to allow access under the layout! Jerry has removed the peninsula in [10] and he sat down on a rolling stool [11] so he can move around under the layout to work there. We also see storage space down there too – great use of floor space!





At the end of this peninsula, I formed a removable rock mountain all the way to the floor. I first remove the short little track sections on each end and put them out of the way. I then take the rigging for the lumbering operation, pull it out of the ground, and stick it up to above the layout where there are magnets to hold it. Then I simply reach in and grab some of the rocks on the base of the hill.

I lift it up, move it out partway, then reach in and unplug an electrical plug that feeds electricity to the track, then set then entire mountain section aside. Now I can go up and down the stairs all I want to work on anything that has to be done underneath the layout.

**MRH:** Jerry, that's really cool how you've made this secret entrance down under the layout. Tell us about the structures on this layout. Are they kitbashed, scratchbuilt, or what?



12. Two trains pass each other in Sulphur Springs. Note the working signals in the distance on the tower. Jerry uses JMRI to drive the signals.



13. Rocky Mountain Central 0-6-0 #63 switches a meat packing plant in Sulphur Springs.

**Jerry:** Most of the structures on this layout have been around for a long time. I've had them on a couple of previous layouts. They moved with me.

I have a variety of structures. Some came out of the box just as you see them. There are one or two already pre-built available from Woodland Scenics.

I also have a lot of kitbashed ones where I modified things heavily. And I have a bunch of scratchbuilt buildings on here too. Several of them I built as the structures part of what I did for my MMR. So there's a variety of structures using a variety of different techniques.

**MRH:** Do you host regular operating sessions?

**Jerry:** Yes, we operate this railroad once a month. We try to, anyhow. There's been times where, due to Covid or because I've been doing some construction, I've had to shut down for a



couple months and then get started back with the monthly sessions again.

It takes eight operators plus a dispatcher to run the layout. However, I can run with fewer than that if need be, or I can also run with more. I can run extras or I can cut a job or two fairly easily. I've got it set up to be adaptable that way.

I have times when I've done two op sessions – a morning session and an afternoon session. And when one session completes the layout is essentially prestaged for the second session. We do half a day for each session.

However, all the times we've operated, we've never totally completed all the work in a session. Trains get left partway done somewhere along the line. We've never gotten all the trains completely done.

To set up the layout for hosting op sessions, I start by running a train all by myself, and timing myself. I realize I know the railroad and I'm all by myself and with nothing else in the way, so I multiply the time.

I use the time it takes me, then multiply by one-and-a-half – and that's the time I use in planning the movement of the trains. I have drawn a typical chart of what trains go where and when. And the dispatcher uses that.

The dispatcher has a CTC board to control the standard gauge on top, the Rocky Mountain Central. The Colorado Pacific narrow gauge runs along the bottom. Dispatch can throw turnouts, and he can change signals. The panel shows which tracks are occupied because the line color changes.

Dispatch can also control the smash gates [14, 15] to allow the narrow gauge to cross the Rocky Mountain Central (RMC) main. At Stockard Crossing it's primarily set for the RMC standard gauge, because that's the primary railroad, with the narrow gauge being the subsidiary.



14. This is Stockard Crossing where the Colorado Pacific crosses the Rocky Mountain Central (RMC) main in Sulphur Springs via this smash gate crossing. Jerry has the gates on servos, and can just flip a switch to change the gates and signals from one route to the other. Also see [15].

The dispatch panel uses JMRI. There's logic in JMRI to manage the signals, so as you pass a signal, the signal behind you will turn red until you clear the block. Then it'll turn yellow until you clear the next block, and then turn green again.

I do car forwarding with car cards. There are spots for the cards at the various yards. To get a train, you visit the dispatcher. He gives you a train and you're off and running.

Every industry has a car card box. I print my own cards on the computer using Corel. I also use Excel quite a bit for keeping track of everything.

**MRH: Would you ever consider doing something in a different scale?**



**Jerry:** I like HO, so I don't think I'd consider doing anything else. I work on a friend's layout that's N scale, but most everybody else is HO.

Now I'm also into live steam. I'm a member of the Southwest Live Steamers, and we have meets every so often. It's a lot of fun to actually ride your train, to switch it, and so forth. I've got a buddy north of me who's building a live-steam layout, and I help on that as well.

**MRH:** What's your philosophy on doing a layout well? For example, how do you narrow the focus?

**Jerry:** Actually I've given a clinic on this in my division – I say you have to set some parameters first. First, make a list of everything you want on the railroad, how you want it to look, and what you want it to do.

On the list put must-haves, things you'd like to have that maybe you'll get to do and maybe you won't. Then prioritize the list.



15. A narrow gauge train on the Colorado Pacific rolls through Stockard Crossing across the RMC in [14].



16. A Colorado Pacific Consolidation idles on a turntable garden track in Sulphur Springs.

You must also set standards and stick with them. Things like minimum radius, maximum grade, for example. How close to the edge of the layout do you allow? How close to the wall do you allow? How far apart are your tracks?

You set those standards before you ever put pencil to paper, and use them while you're doing any track plan. Oh, one other thing many forget: aisle space. You need to leave room for the people who operate the layout.

That's one of the things I made sure I did correctly with this railroad: I made nice large four-foot-wide aisles so operators can get around each other. Modelers tend to get wider over time, not taller – so it gets harder to pass each when operating the railroad.



**MRH:** What advice would you give to someone who's just starting out in the hobby?

**Jerry:** Do your railroad to satisfy you. You do not have to do things to satisfy anybody else. It's your railroad. Do it your way.

Take your time. Do the benchwork slowly. Make sure things are level and done properly, and not warped or off-kilter.

And do the track work slowly. Do not get in a hurry and slap the track down so you can move to scenery and buildings, and so on. Take it a step at a time.

Also break your railroad up into smaller sections. Do the benchwork here, and when you're satisfied with it, go over there and do that benchwork. Then you can come back and lay track. Do it in stages as you go. You don't have to do everything in one stage all at the same time.



17. This turntable and roundhouse in Grand Junction clearly illustrates the term "roundhouse," with more than two dozen garden tracks off the table. Note the short "over-run" tracks along the foreground edge of the turntable pit.



18. One of the distinctive features of Jerry's layout is the way he details things in all three dimensions, namely above the layout as well as on the layout. Look carefully and you can see three WWII era fighters buzzing the Grand Junction roundhouse area below.



19. Continuing the "detailing in all three dimensions" idea, Jerry has modeled a hot air balloon in flight high over East Salida as a circus parade rolls through town below.



**MRH:** Give us some stats on your layout. Do you know about how much mainline you have?

**Jerry:** The railroad has approximately 160 feet of standard gauge mainline and about 80 feet of narrow gauge mainline. Adding those two together gives about 240 feet of mainline.

**MRH:** What about turnouts?

**Jerry:** The layout has in the neighborhood of 150 turnouts. OK. The reason I say that is my previous layout had 200 turnouts and I still have some Tortoise machines left over in a box!

**MRH:** What's the minimum radius on the standard gauge and the minimum radius on the narrow gauge?

**Jerry:** On my standard gauge portion, I have set the minimum radius to 36 inches. The narrow-gauge minimum is 24 inches. Yes, I could go smaller, but some of the bigger steam locomotives don't run that well on tighter curves.



20. The switchback at Pagosa Junction goes up to a logging operation. Shay #13 climbs the switchback to pick up the logging loads above.



21. Shay #13 leaves the switchback at Pagosa Junction, having retrieved the logging loads seen in [20].



22. Birds-eye view of a train loaded with silver ore rolling through Antonito on its way to Durango.





23. Look closely at this scene along the far end wall at Durango. See the mirror? One of the best examples of using a mirror to expand the apparent size of a yard we've seen.



24. Here's another view of the yard at Durango farther back.



25. Jerry used JMRI to build a CTC panel for his railroad. The standard-gauge main runs along the top, and the narrow-gauge line runs along the bottom. JMRI also controls the signals and gives the dispatcher control of turnouts on the main.



26. At various towns and yards, Jerry provides this box of car markers. I (Joe Fugate) find this to be especially handy for marking cars when switching, and I use this myself. Siskiyou Line 2 will have one of these boxes at every town.







27. Jerry has a lot of turntables on this layout. Here in Durango is a turntable for cabooses!



28. What narrow-gauge layout would be complete without some mines? Here is a silver mine just above Antonito.



29. Here's another silver mine that sits high in the hills between Durango and Pagosa Junction.



30. Jerry's layout is loaded with scenic vignettes such as this one in Glenwood Springs.



**MRH: You're open for tours at the convention, right?**

**Jerry:** Yes. We're open for the convention – the bus tours and I'm doing operating sessions. I'm on a bus tour for one day and I'll be open for self-drive tours later as well and I believe the Layout Design SIG group is also coming to see the layout.

**MRH: What do you hope those convention goers get out of your layout when they come visit?**

**Jerry:** I hope they enjoy what they see. I hope those operating the layout have a good time running trains.

I hope they leave saying, "You know what? I'd like to do this," or maybe saying "I don't want do this on my layout."

That's what you go to see other layouts for: what they did good, what you like, what you don't like, and how you can apply those lessons to *your* layout.

**MRH:** Thanks for letting us come visit, Jerry. It's been a real treat to see your layout. ☑



## Did you see this article?

in the **AUGUST 2023 MRH RUNNING EXTRA!**



**Sound install in  
small brass steamer**

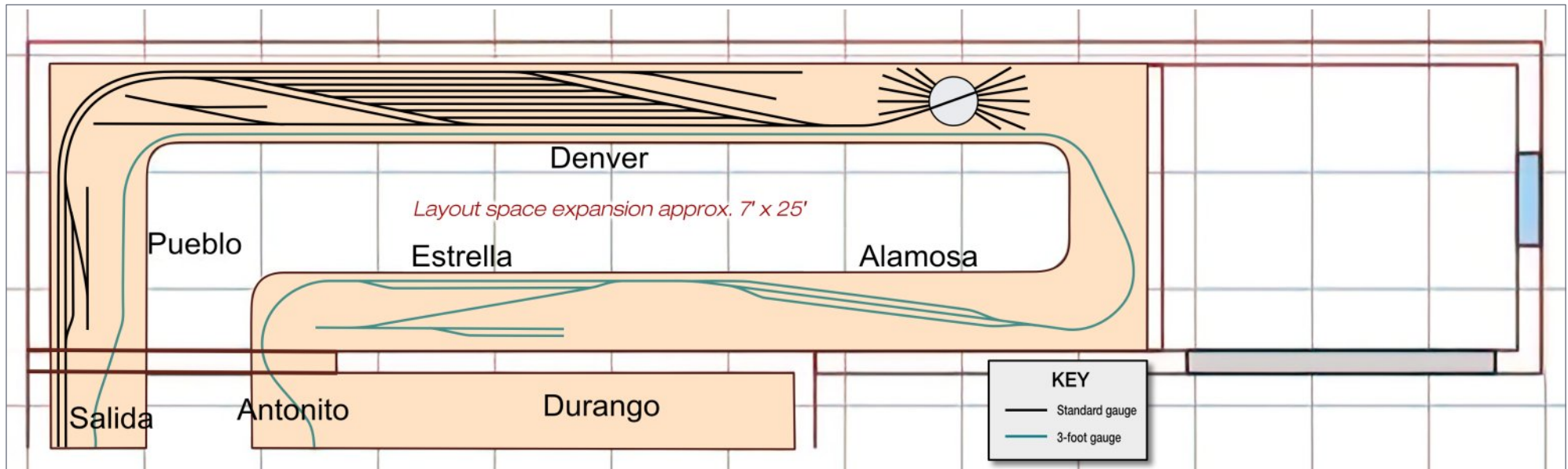
**Get full eBook now ▶**

← click  
here



Each eBook has 80-100 pages

**MRH  
RUNNING  
EXTRA**



31. Jerry is planning to expand the layout after the Dallas / Ft Worth convention. Here's his expansion track plan.



# 43rd National Narrow Gauge Convention



Tim Bain photo

## A Mile High & Three-Foot Wide

### AUGUST 30 - SEPTEMBER 2, 2023

### IN DENVER, COLORADO

**LEARN MORE ►**

## Signs and posters on buildings



Model Railroad Hobbyist | August 2023

1. This completed sign for Aitken Stores looks painted on, but it's a paper print that I embossed on the storefront to achieve that look.



MICK MOIGNARD, MMR OFFERS AN ALTERNATIVE TO DECALS ...

### WET-TRANSFER DECALS CAN BE GREAT FOR

**REPRESENTING PAINTED-ON** signage on model buildings.

However, commercially available decals are limited in the variety they offer. Signage for small, local businesses or fantasy businesses that exist only in your miniature world are difficult, even impossible, to source.

Computer graphics programs and word processors make designing your own signs at home easy, and many hobby shops offer decal paper for printing them. Aside from the obvious problems with using an



REGISTER  
(free)

[INDEX](#)

[TABLE OF CONTENTS](#)

[MRHMAG.COM](#)

[INDEX](#)

[TABLE OF CONTENTS](#)



inkjet to print wet-transfer decals, most home printers do not print in white at all. This makes white lettering and backgrounds impossible.

I've developed a method for making posters and signs using my printer and ordinary white paper, and applying them to model buildings. The resulting signage looks painted or pasted on, conforming to the underlying wall texture.

### FINDING OR MAKING THE SIGN

The first step is to find or make the sign on your computer. This stage is very similar to making your own decals.

You can find a vast selection of advertising imagery and signage online using your favorite search engine. 1920s and '30s railway timetables, destination advertising posters, or long-gone products are among many examples.

If you can't find what you're looking for online, you can design your own sign using a word processor or graphics program. Fonts are available online to match signs from many eras, and you can download the .ttf (True Type Format) files to install them.

If you don't know which font, try an app called "WhatTheFont" (*may not work with all phones -ed.*). It uses your phone's camera to analyze text and provide recommendations for the best font match. You can then search for the specific fonts and download them, often for free.

I mostly use Microsoft Word to create my artwork. Just type the text, import the image, and resize as required. Word makes formatting the signs for print easy.

Sometimes, a table will help to format and place the text. Here, you should make sure the borders on the table are turned off, unless you want them, of course.

If you need a color background, or want to pre-weather your sign as part of the print, you can easily do that with Word using background colors or watermark images.

### PRINT THE ARTWORK

Print with the best quality setting in black and white or color as desired. I recommend photocopy paper, rather than photo paper. I almost always use white paper, with any color added during printing, but colored paper would also be a good option to provide a colored background if you are using a black-and-white printer.

Once printed, spray the lettering side of the paper with matte varnish and allow it to dry completely. Use the sniff test to check – if you can still smell the varnish, it's not dry. This step adds protection to the ink layer [2].



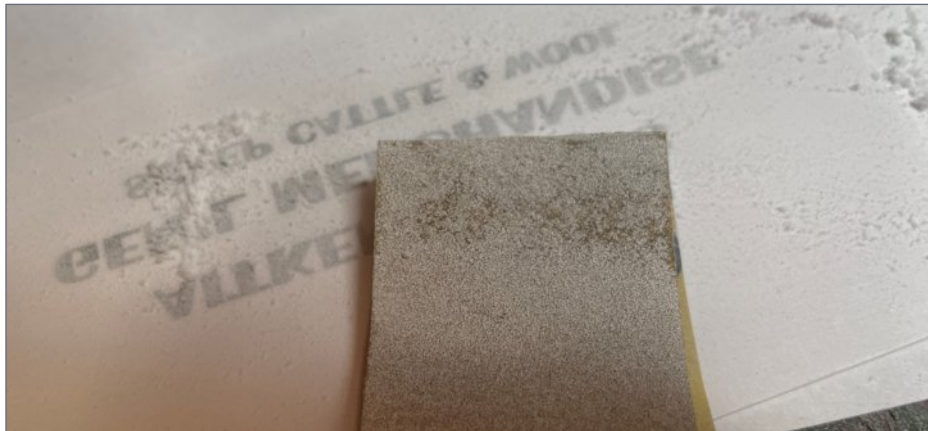
2. The printed shop sign for Aitken Stores. The original sign is at top.



## THINNING THE PAPER

Ordinary paper is too thick and rigid to conform to building textures. The next step is to place the printed sign face down and gently sand the back of it with 220-grit sandpaper. Working only from the center to the edges, sand the back of the sign evenly [3].

Keep going evenly until the lettering showing through the back of the paper starts to darken. At this point, most of the paper has been sanded away, leaving only a very thin layer [4].



3. Sanding the back of the sign.



4. This paper has been almost completely sanded through. Here, I'm holding it up to a light source.

When I'm making these painted-on signs and posters, I print several extra copies on the same sheet in case of tears while sanding. You will have some failures, so just swear a bit and start again. Sanding from center to edges helps reduce the risk of crinkling and tearing.

For an old poster with tattered edges, cut it out at this stage, and sand the back of the edges just a little more to distress it [5]. At this stage it is very delicate, so be careful.

## APPLYING THE SIGNAGE

This method works best on slightly porous surfaces such as wood or MDF. It also works with painted plastic or metal surfaces, but not so well on unpainted hard surfaces.



5. Valley Feed & Seed is an example of a tattered poster.



Carefully cut out the signs with a new blade so that the edges are clean. Apply a thin layer of full-strength white glue to the rear of the sign, then pick it up with tweezers and place it on the model. Take care that the location is right, as there is not a second chance [6].

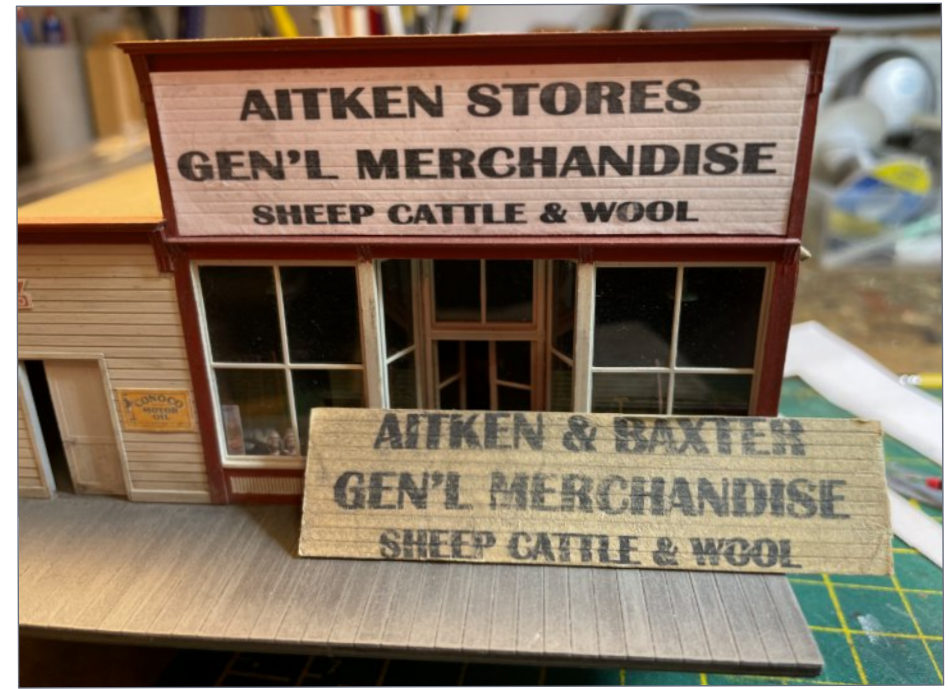
With the sign in place, carefully use hard, but not sharp tools like your fingers, a cocktail stick, or the back of a hobby knife blade to press the paper layer down into the underlying wall texture [7]. Press, but do not rub, as rubbing can tear the sign. Be sure to remove any glue that squeezes out.



6. Gluing down the Aitken Stores sign to painted styrene. In this demo, I was working with a removable sign, so I could cut it out afterward. This is not a typical situation, however.



7. The sign has been pressed into the wall texture.



8. Here, I have fitted the sign to the building.



Please click on the ads to support  
*Model Railroad Hobbyist!*





J. Regier

## A TISSUE PAPER ALTERNATIVE

In a video from about four years ago, “Build & Animate an Ultra Realistic Drama – Realistic Scenery Vol. 16,” ([www.youtube.com/watch?v=M4EOT1XXc\\_Y&t=611s](http://www.youtube.com/watch?v=M4EOT1XXc_Y&t=611s))

Luke Towan undertook a similar sign project with the Roscoe Store kit from Branchline Trains.

Towan created the sign in Photoshop, which allowed him to set the precise dimensions he needed for the sign. I have done similar with a vector-based drawing program, though even a word processor should work, as long as you can set precise dimensions for your graphic.

Instead of printing to regular paper and sanding it to the correct thickness, Towan printed his sign to tissue paper. He first cut an oversized piece of tissue paper about 7-1/2” wide – enough to stretch across the printable width of a piece of printer paper – and long enough to accommodate the sign he was making with generous margins.

To get the tissue paper through his inkjet printer, he taped it to a piece of standard 8-1/2 x 11 printer paper using invisible tape along the left and right edges, long enough to extend beyond the top and bottom of the tissue paper. This kept the tape within the margins, and well away from any print.

I tested this with my color laser printer, using its auxiliary paper feed. I found it helpful to put a piece of tape along the top edge of the tissue paper to prevent tears. Again, I made sure that the tape was well away from any printed areas, and smoothed down the edges of the tape to minimize risk of anything catching in the mechanism.

Since tissue paper is much thinner than regular paper and lacks its rigidity, this method allowed Towan to skip the sanding step entirely.

Instead of white glue, he used 3M Super77 spray adhesive. Super77 has several advantages over white glue. It does not seem to affect ink as much, it has ample work time, but dries quickly, and it is waterproof when dry.

## WEATHERING

Only start weathering after the glue has dried completely. Avoid water-based acrylics, as they can soften the white glue, and cause unprotected printer ink to run. The finished Aitken Stores model is in [1].

## OTHER SAMPLES

So far, I’ve shown this technique applied to wood, but it works on other surfaces also, as the following photos show [9-12]. Using this technique, you can achieve the painted-on look of decals [13]. Hopefully this method helps you find the proper signage for any business you need. ☑



9. Eye of the Needle has a tattered poster on cast plaster brick.





10. This advertising poster is on plastic clapboard siding.



11. The sign for Smale & Jewitt takes on a painted-on look.

Please click on the ads to support  
*Model Railroad Hobbyist!*



12. Kasprowicz mining supply.



13. Palmer & Bedford Accountants is an example of a home-printed decal, here on a resin clapboard storefront. Compare to the other photos of signs I made using standard printing paper.



## MICK MOIGNARD, MMR



Mick has been a railway modeler since childhood. He got into scratchbuilding in his teens, and into narrow gauge soon after. Mick built a couple of OO9 layouts (OO9 is roughly the UK equivalent of HOn30, using 4mm scale on 9mm track) before moving to Colorado in HOn3.

After some years, marriage, children and house moves, modeling activity was limited to evenings making rolling stock on the dining table. Finally a last house move enabled him to start a layout. His layout is still unfinished, but it has been in operation with DCC and sound for over 20 years.

There have been some side trips into On30 on the UK Exhibition scene, such as Camp 93 and involvement in Risborough & District MRC club projects. Mick is a strong advocate of DCC, regarding it as the best thing to hit the hobby. Mick also has a small business in DCC decoder installations in the UK.

Mick lives in Buckinghamshire in the UK, and has recently retired from a long information technology and software development career. He's married with two grown children. He enjoys reading and socializing with railroading friends when not working on railway projects, or volunteering in his local community and Pendon Museum. ■

Get more articles like this

GIVE IT A LIKE



REGISTER  
(free)

[INDEX](#)

[TABLE OF CONTENTS](#)



It's all about trains



*All things train related,  
whenever, wherever.*

TRY  
24TRAINS.TV  
2 WEEKS  
FOR FREE



**WWW.24TRAINS.TV**



**On 24TRAINS.TV you can find:**

videos | travel reports | magazines | vlogs  
model railways | workshops | documentaires | holidays

[MRHMAG.COM](#)

[INDEX](#)

[TABLE OF CONTENTS](#)





**SPECIAL DEAL:**  
Subscribe now and get  
the next 12 issues plus  
**ALL 55 BACK ISSUES!**  
**\$29.99**

**WAIT!**  
**MRH helps**  
**you avoid**  
**breaking the**  
**bank!**



**2.99 per 240+ pgs**

**Get**  
**MRH**  
**Running Extra**

[click here](#)

# SAVVY MODELER *Online*



Get more articles like this

GIVE IT A **LIKE**

Model Railroad Hobbyist | August 2023



## Painting small scale figures

In this 15-minute video, YouTuber **Bunters Yard** shows step-by-step how he paints a small scale figure, in this case one in HO.

**Bunters** uses a rather novel technique of painting black and white coats first to establish realistic shadows, which otherwise don't show very well on smaller scale figures. He then "stains" the figure to provide color to the clothes and skin. It's a fascinating video how-to. ☒

**VIEW READER  
COMMENTS**

**▶ GREAT MODELER VIDEOS ON THE WORLD WIDE WEB**



# One of the largest!



## The Amherst Railway Society Railroad Hobby Show January 27 & 28, 2024

Save the dates!

Click  
to learn  
more ...



REGISTER  
(free)

[INDEX](#)

[TABLE OF CONTENTS](#)

# AUGUST NEWS column



Model Railroad Hobbyist | August 2023

RICHARD BALE AND JEFF SHULTZ  
REPORT THE LATEST HOBBY  
INDUSTRY NEWS ...



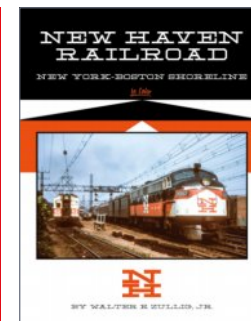
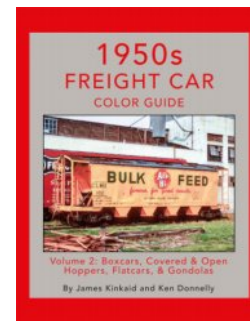
## NEW CLUB CARS



**Mount Rainier N Scale Club** is selling a Great Northern fluted coach named Mount Rainier. The car is decorated in a Big Sky Blue paint scheme. The N scale ready-to-run model was produced for the club by Rail Smith Models.

Info: [www.mrns.org/30Anniv.html](http://www.mrns.org/30Anniv.html)

## NEW PRODUCTS FOR ALL SCALES



New hardbound publications coming from **Morning Sun Books** in November include volume two of *1950s Freight Car Color Guide: Boxcars, Covered & Open Hoppers, Flatcars, and Gondolas* by

THE LATEST MODEL RAILROAD PRODUCTS, NEWS & EVENTS

[MRHMAG.COM](http://MRHMAG.COM)

[INDEX](#)

[TABLE OF CONTENTS](#)

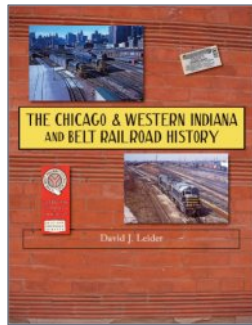


## AUGUST NEW PRODUCTS FOR ALL SCALES | 2

James Kinkaid and Ken Donnelly. The study covers an immense variety of mid-20th Century freight equipment.

A second book scheduled for release in November is *New Haven Railroad New York - Boston Shoreline*. Author Walter Zullig, Jr. presents the story of the New York-Boston Shore Line of the former New York, New Haven & Hartford Railroad up to the present day. The book starts at New York City's Grand Central Terminal and Penn Station and finishes at Boston's South Station  
Info: [www.morningsunbooks.com](http://www.morningsunbooks.com)

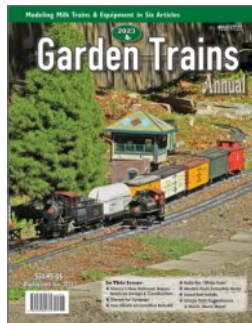
---



New from **Sooauthor Publishing** is *Chicago & Western Indiana and Belt Railroad History*. Written by David J. Leider, the book follows the history of the C&WI from before its creation until it was sold to the Missouri Pacific Railroad in 1981, as well as the development of the Belt Railway of Chicago until the present time. 304 pages in length the book includes 238 black & white photographs, 72 color photos, 118 maps, and 92 drawings and illustrations.

Info: [cwibook.dhke.com](http://cwibook.dhke.com)

---



**White River Publications** has released the *2023 Garden Trains Annual*. Edited by Chris Lane, the 116 page soft bound book presents a broad summary of outdoor modeling, layout tours and a photo gallery of large scale modeling.

Info: [shop.whiteriverproductions.com](http://shop.whiteriverproductions.com)

---

## AUGUST O SCALE PRODUCT NEWS | 3

### O SCALE PRODUCT NEWS



**Bachmann Trains** has announced two new On30 products. The first is a gondola style excursion car, as seen on many tourist railroads across

the country. Featuring scale seating, slatted flooring, and separately applied railings and brake wheel, the car is available decorated for the Cumbres & Toltec, Durango & Silverton, East Broad Top, and White Pass & Yukon railroads.



The second On30 product from Bachmann is a wood side door caboose. Based on a prototype found on the Durango & Silverton Railroad, the caboose features opening sliding doors

and a furnished interior including a potbelly stove and wood grain-effect flooring. The model is available decorated for the Sandy River & Rangely Lakes, Bellevue & Cascade, unlettered in red, and unlettered in gray.

Info: [www.bachmanntrains.com/home-usa](http://www.bachmanntrains.com/home-usa)

---



R. Bale

### FOWLER BOXCARS

Canadian Pacific master car builder, W.E. Fowler, patented his single-sheathed boxcar in 1911. The

Fowler design featured a steel underframe with single-sheathed wood sides and ends. There were three panels on each side of the door with diagonal steel braces applied only on the two inner side panels. Between 1912 and the early 1920s nearly 80,000 cars of Fowler design were manufactured by various North American car builders. Canadian versions of Fowler cars were sometimes called Dominion cars.



## HO SCALE PRODUCT NEWS



Accurail has released HO scale kits for 36' Fowler boxcars decorated for Canadian National. The kits are available separately and in 3-packs with different car numbers. The models come with Andrews trucks.



A data only version of the Fowler car that includes a build date of 9-23 and a shop date of 3-45, is also available.



Accurail has also released undecorated kits for a 50' welded steel boxcar with a choice of Youngstown, plug or Superior door. All versions of the model have Bettendorf-type plain-bearing trucks, Dreadnaught ends, and running boards on the roof. The ladders and brake wheel are mounted high on the car.

All Accurail HO scale car kits come with appropriate trucks with Delrin wheelsets and Accumate knuckle couplers.

Info: [www.accurail.com](http://www.accurail.com)



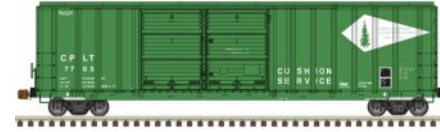
Atlas has released an HO scale model of a Trinity 3230 cu. ft. covered hopper car. This small version of a PD (Pressure Differential) hopper was introduced by Thrall in the late 1990s.



The ready-to-run injection molded plastic model has separately applied wire grab irons, wire uncoupling levers, and etched metal roof walks.

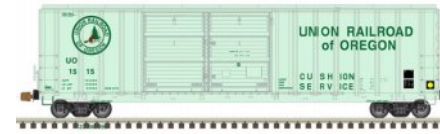
Road names include BNBX-Greenbrier Management Services, GACX-General American, CBFX-CIT Group, LAFX-Lafarge North

America, and CLSX-Cargill Salt. Some road names are sold out at the factory however dealers may still have some available.



A new FMC 5077 cu. ft. Plate C boxcar with double 10' sliding doors has been announced by Atlas. The HO scale Master

series model is based on a prototype car-builder FMC introduced in the mid-1970s. The model features an X-panel roof and wire grab irons.



Road names are Camino, Placerville & Lake Tahoe; Seattle & North Coast, Union Pacific, Union Railway of

Oregon, and undecorated. Contact a dealer for availability.



Also new from Atlas is an HO scale model of a PS-2 twin-bay covered hopper.



Road names for the Atlas Trainman model include TB&M (Guilford), Penn Central, and Central of Georgia. All Atlas rolling stock mentioned in this

report come with Accumate couplers.

Info: [shop.atlasrr.com](http://shop.atlasrr.com)







R. Bale

## GE ES44 DIESEL LOCOMOTIVE

In 2002, GE introduced its GEVO series of modern diesel locomotives. The first two units were the ES44DC (Evolution Series 4400hp DC traction motors) and ES44AC. The ES44C4, with one idler axle per truck, followed a few years later. The GEVO series was designed to replace earlier AC4400CW and Dash 9-44CW units, while complying with new emission standards imposed by the Environmental Protection Agency (EPA). The EPA established allowable emission levels, or tiers, based on a locomotive's date of manufacture. Tier 2 took effect in 2005 followed by Tier 3 in 2010. Although EPA Tier 4 standards went into effect in 2015, ES44s continued to be built. This is due to a complicated government formula that allows sharing and redistribution of emission credits between GE and the operating railroad. The external appearance of ES44 locomotives is similar to the AC4400CW with the most significant visual difference being the larger wing structure over the radiator end. The thicker radiators and related equipment work to cool the exhaust, which reduces emissions. The ES44 has become the best-selling diesel locomotive of all time.



Broadway Limited has scheduled a new production run of HO scale ES44AC diesel locomotives for delivery in 2024. This release will include a variety of paint schemes never before produced by BLI.



BLI's ES44AC models will have headlights, rear lights, cab lights, number board lights, front ditch lights, and all-wheel electrical pickup.

Separately applied details will include handrails, grab irons, horn, bell, windshield wipers and etched metal grilles.

Decorating schemes include BNSF, CN (Website scheme), CP, CP-Saint John Express-orange, and two Union Pacific schemes.



Heritage schemes include Wisconsin Central, CN-BC Rail, Baltimore & Ohio, Rock Island, Conrail and Nickel Plate.

Fantasy paint jobs will be created for NP in a Lowey North Coast Limited scheme, and CB&Q Burlington. The ES44AC models will be available for DC operation without sound, and with

Paragon4 Sound & Control System with Rolling Thunder.



To alleviate an acute shortage of motive power during World War II, Santa Fe and Southern Pacific purchased a combined total of 17 class T1a 2-8-4 Berkshire locomotives from the Boston & Maine Railroad. After announcing that it planned to produce an HO scale version of a Boston & Maine T1a/b 2-8-4 Berkshire, Broadway Limited Imports heard from numerous modelers requesting Santa Fe and Southern Pacific versions of the B&M locomotive. In a positive response to customer requests BLI has added four Santa Fe and four SP versions of the B&M Berkshire to its production schedule.



## AUGUST HO SCALE PRODUCT NEWS | 8



The seven T1a Berkshires Santa Fe acquired from B&M became the only Lima-built locomotives on the AT&SF's roster. BLI will offer Santa Fe No. 4193 with a prototypically correct spoked main driver. AT&SF Nos. 4194, 4195, and 4196 will have disk main drivers.



Southern Pacific purchased ten T1a Berkshires from B&M in 1945. They were renumbered and became SP numbers 3500-3509. They remained coal burners until 1950 when SP converted the ex-B&M 2-8-4s to oil and equipped them with whaleback tenders. For additional information about the T1a Berkshires see the July issue of *Model Railroad Hobbyist*.  
Info: [www.broadway-limited.com](http://www.broadway-limited.com)



**InterMountain** is booking reservations through September 30, 2023 for an upgraded version of an HO scale Trinity triple-bay rib-side covered hopper car. The model is based on a prototype Trinity introduced in the 1980s.



The model features etched metal roof walks, operating knuckle couplers and appropriate trucks with machined metal wheelsets.

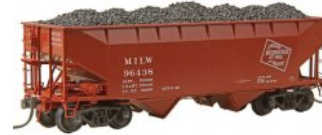


The following decorating schemes will be available in six numbers. CSX-CSXT, Reading Blue Mountain & Northern, ITEL

Leasing, Farmland Industries Co-Op, ALEX-AGRI-Industries, Denver & Rio Grande Western availability is TBA.

Info: [www.intermountain-railway.com](http://www.intermountain-railway.com)

## AUGUST HO SCALE PRODUCT NEWS | 9



**Kadee's** latest release is a 50 ton AAR twin-bay hopper car decorated for Milwaukee Road.



The HO scale model accurately represents a prototype built with offset sides in 6-48. The model is equipped with Kadee couplers and

Bettendorf-type plain-bearing trucks. It comes with a removable load of lump coal.

Info: [www.kadee.com](http://www.kadee.com)



**Kaslo Shops** is selling a craftsman-style resin kit for an HO scale 52' 8" British Columbia Railway bulkhead flatcar. The model is based on a prototype Marine Industries Ltd design built in the mid-1970s by Railwest in Squamish, BC.



The kit includes a one-piece cast resin body and various metal and 3-D printed detail parts. Trucks, couplers, weight and decals are not included. An appropriate HO scale decal set is available from Highball Graphics at [highballgraphics.com](http://highballgraphics.com).

Info: [www.kasloshops.com](http://www.kasloshops.com)



**KatoUSA** continues to expand its selection of HO scale Amtrak Superliner cars. Built by Pullman-Standard in 1979, the prototype cars closely followed

the revolutionary hi-level cars Budd created for Santa Fe's El Capitan all-coach train. The latest addition to Kato's selection of Amtrak Superliner Phase VI car includes a coach (above), coach-baggage,

diner, sleeper, and lounge car (below).



Kato's HO scale Superliner cars feature full interior detailing, flush tinted windows, detailed trucks with rotating bearing caps. Optional Kinematic

couplers are included which allow close coupling while still navigating tight track radii.

Info: [katousa.com/ho-superliner](http://katousa.com/ho-superliner)



**National Scale Car** has reissued its popular Minikits for converting an HO scale InterMountain model into an accurate replica of Great Northern and Spokane, Portland & Seattle 12-

panel boxcars. A total of 3500 prototype cars were built at GN's St. Cloud shops between 1948 and 1951. The cars featured 12 panel sides, 10' interior height and welded underframes.



The Improved Dreadnaught ends had seven major ribs and a small straight rib at the top. The top and bottom stampings of the end were welded rather than riveted together.



The GN cars used both Superior 7-panel doors with a narrow top panel and Youngstown doors with a 4-6-6 pattern. The SPS cars used Youngstown doors. The Minikits

include correct resin ends, laser-cut plywood placard boards and route card holders, slack adjuster, instructions and decals. The modeler will need to supply an InterMountain 12-panel boxcar. Photos and completed models are courtesy of Ryan Mendell.

Info: [www.nationalscalecar.com](http://www.nationalscalecar.com)

**Rapido Trains** has announced plans to produce HO scale models of Southern Pacific's three-quarter Dome Lounge cars. Rapido intends to prepare tooling for two versions of the SP prototype. Because of the complexity of the project, actual production is conditional. If sufficient reservations are



received by October 16, 2023, the project will proceed. As an added incentive, Rapido is offering a 5% discount on orders received before the October 16 deadline.



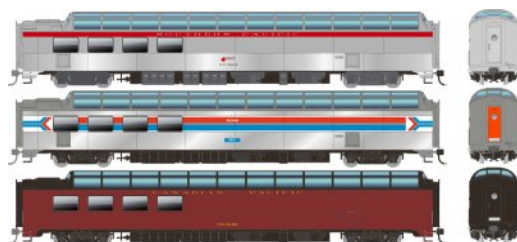
Tooling will be prepared for two fully-detailed interior configurations and two underbody arrangements. The cars will be flicker-free with track-powered interior lighting including special lighting for the dome roof.

The prototype cars were placed in service on the San Joaquin and Shasta Daylights and the Overland, but they later saw wider service. Originally built with corrugated side panels, SP refitted the cars with slab sides in the 1960s. Of the seven cars SP built in the mid-1950s, at least four lasted into the Amtrak era.



Decorating schemes will include SP Daylight, Overland and General Service with fluted sides.





Cars with flat sides will be available for SP General Service scheme, Amtrak, Amtrak with blanked top windows, and Canadian Pacific Selkirk scheme.

Rapido has offered Hobbytyme Distributors exclusive distribution of three uniquely decorated HO scale General Electric Phase IV 44-ton diesel light switchers. Dealers may order directly from Hobbytyme.



For background and technical details on Rapido's 44-ton locomotive see the

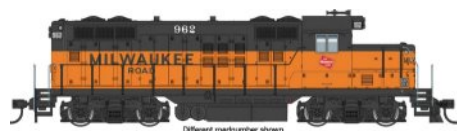
February 2023 issue of MRH.



Road names available from Hobbytyme will be Arcade & Attica #111, Hoboken Shore Railroad #700 and #701, and

Sacramento Northern #142 and #146. The order deadline is October 16, 2023 with delivery planned for 2024.

Info: [www.rapidotrains.com](http://www.rapidotrains.com)



**Walther's** plans to release a GP9 in several new road names this fall. The HO scale Mainline model will represent

a Phase II version of the EMD road switcher as rebuilt in the 1960s with a chopped nose. The body shell will have drill starter points to simplify installing grab irons using Walther's GP9 Detail Kit (item 910-258) available as a separate purchase. This Mainline series model features the same power trucks and drive system as Walther's more expensive Proto series models.



An unlettered model painted black with yellow side sills and zebra ends will be included in this release. Fully decorated GP9s will be available for Canadian National, Canadian Pacific, Milwaukee Road, Illinois Central, Chicago & North Western, and U.S. Army. The Walther's Mainline GP9 will be available with ESU Sound and DCC for DCC or DC layouts.

Additional new HO scale models coming from Walther's this fall include an all-new 72' refrigerated boxcar. The Mainline series model is based on a modern prototype introduced in



2019. Spotting features of the ready-to-run model include a refrigeration unit mounted on the end of the car. Road names will be BNSF, ARMN-UP (four

versions), Cedar Grove Logistics, CIT Group and Trinity Industries Leasing

Also scheduled for release this fall is a classic 40' AAR 1944 steel boxcar with an interior height of 10' 6". Features on the Mainline series model include 4/4 Improved Dreadnaught ends, a Murphy panel roof, a see-through Apex steel running board, and 6' Youngstown sliding doors.



Road names on this release will be Erie, Gulf, Mobile & Ohio; NC&StL- Nashville, Chattanooga & St. Louis; Pacific Great Eastern, Illinois Terminal, and CMO- Chicago, St Paul, Minneapolis & Omaha. The model will have Bettendorf-type plain-bearing trucks with 33" metal wheels.

A 37' 2980 cu. ft. twin-bay covered hopper is scheduled for release next month. The Walther's Mainline model is based on a prototype introduced in the late 1980s. In addition to

Burlington Northern, road names on this release will include GATX, CSX, GE Rail Services, Union Pacific, and Dakota, Minnesota & Eastern.

Walthers 2024 winter production schedule includes a group of Mainline Tri-Level auto racks. Walthers HO scale version is



based on a common open rack used for hauling new automobiles from the mid-1960s until the late 1970s.



Racks decorated for CB&Q, Pennsylvania, and Great Northern will be mounted on brown TTX flatcars. Frisco and DRG&W racks will be mounted on yellow TTX flatcars. An SSW flatcar will have a Cotton Belt auto rack. All Walthers rolling stock mentioned in this report will be equipped with Magne-Matic knuckle couplers.



Walthers has an LED lighting kit specifically designed for its Proto series PRR Creek 12-4 sleeping cars. The kit (Item 920-1070) includes all the parts needed to convert one car.

Info: [www.walthers.com](http://www.walthers.com)

## Did you see this article?

in the **AUGUST 2023 MRH RUNNING EXTRA!**



**Modular railroading on the go**

**Get full eBook now ▶**

← click here

**MRH**

Each eBook has 80-100 pages

**RUNNING**  
**EXTRA**



**VIEW READER  
COMMENTS**



R. Bale

## UNION PACIFIC CHALLENGER

The Union Pacific's search for a powerful freight locomotive that could handle the mountain grades of Utah and Wyoming at high speed without the need of helpers, was finally fulfilled in 1936 with the development of the 4-6-6-4 Challenger. Unlike a Mallet compound locomotive that recycles the exhaust of one set of high-pressure cylinders into larger low-pressure cylinders, the Challenger 4-6-6-4s built by the American Locomotive Company were simple articulated locomotives with both front and rear engines using high-pressure steam directly from the boiler. Although built for freight service, the Challengers had 69" drivers, a large size usually reserved for high-speed passenger locomotives. While unheard of on other railroads, operating articulated steam locomotives at speeds of 60 to 80 mph was routine on the Union Pacific.

## N SCALE PRODUCT NEWS

**Broadway Limited** is developing an N scale version of a Union Pacific 4-6-6-4 Challenger steam locomotive. Availability is planned for spring 2024.



The UP Challenger will be available in black and graphite

with a coal tender and with wind wings and an oil tender. UP Locomotives in two tone gray will also have an oil tender and wings. Additional road names include Clinchfield and Denver & Rio Grande Western.



BLI's first production run of N scale

Challengers will feature Paragon4 Sound & Control System with



**REGISTER**  
(free)

[INDEX](#)

[TABLE OF CONTENTS](#)

[MRHMAG.COM](http://MRHMAG.COM)

[INDEX](#)

[TABLE OF CONTENTS](#)



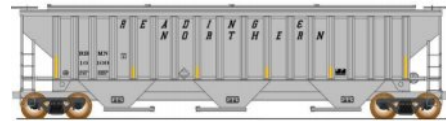
Rolling Thunder; integral Dual-Mode decoder with back EMF, operating smoke unit, all-wheel electric pickup, GoPak capacitors, functioning headlight and rear light and separately controlled cab light.

Both the chassis and superstructure are diecast metal. Two drivers are fitted with rubber tires for added tractive effort. The N scale model will negotiate a track radius of 8.75" however broader curves present a more realistic appearance. In addition to Paragon4 DCC Sound, BLI will offer the Challenger as a Stealth series DC model.

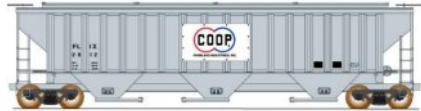
Info: [www.broadway-limited.com](http://www.broadway-limited.com)



hopper car. The N scale ready-to-run model is based on prototype cars Trinity built in the 1980s.



machined metal wheelsets.



ITEL Leasing, Farmland Industries Co-Op, ALEX-AGRI-Industries, Denver & Rio Grande Western

Availability is TBA.

Info: [www.intermountain-railway.com](http://www.intermountain-railway.com)

**Kato USA** has several versions of GE ES44 GEVO diesel locomotives. The N scale model is based on General Electric's

**InterMountain** is booking reservations through September 30, 2023 for a Trinity triple-bay rib-side covered

The model features etched metal roof walks, operating knuckle couplers and appropriate trucks with

The following decorating schemes will be available in six numbers. CSX-CSXT, Reading Blue Mountain & Northern,



AC4400CW, but with fewer emissions. The prototype ES44AC introduced a redesigned air-to-air dual-fan heat exchanger that gave the locomotive its distinct oversized radiator.



Kato's N scale ES44AC are available decorated for Canadian National, Canadian Pacific, Union Pacific and the Swoosh BNSF scheme.



Although the AC version is the most popular, some railroads, including CSX, preferred the ES44DC with DC motors.



The C4 version of the ES44 was ordered by a few roads including the Florida East Coast. The C4 has an A1A-A1A arrangement with an idler axle in the center of each truck. This gives the engines the

stability of three-axle trucks while reducing the number of traction motors from six to four.

Kato's ES44 series is available for DC operation and with a factory installed Digitrax DCC decoder. Units with DCC and sound are available on special order.

Info: [www.katousa.com](http://www.katousa.com)



New N scale models from **Micro-Trains** include this 56' 25,000 gallon tank car. The prototype was



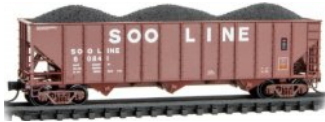
built in 2007 for GATX which leased it to the Renewable Energy Group for biodiesel transportation.



This 50' 15-panel steel gondola was built in the late 1970s for the Illinois Central Gulf Railway. The car became the property of Canadian National following the 1999 merger of ICG and CN. The model is equipped with Barber roller-bearing trucks.



This 50' boxcar with double sliding Youngstown doors is based on a prototype built in 1963 by ACF for the Denver & Rio Grande Western Railroad



Micro-Trains N scale version of this Soo Line coal hopper represents a triple-bay 100-ton car built in the early 1970s. It is equipped with Barber roller-bearing trucks.

Info: Contact a dealer

## NEW STRUCTURES & SCENIC SUPPLIES



panels can be assembled in two different ways. The walls and ceiling are separate resin castings. Details including tools, crates, barrels and trash cans are also cast in resin. The fire escape at the rear of the building is from Tichy. Assembly and

**Frenchman River Model Works** has released an O/On30 scale kit for a two-story retail store. Spade Hardware is a rundown brick building covered in crumbling stucco. The storefront

painting are required. The assembled structure measures 4.125" x 7" x 7" tall.

Info: [www.frenchmanriver.com](http://www.frenchmanriver.com)



**Mine Mount Models** has announced a new HO scale background kit, Vealtown Mfg. Co. With an assembled footprint of 8" x 8.25" x 2.5" deep, Vealtown is created with Mt. Albert Scale Lumber,

Tichy doors, and laser-cut windows. 3-D printed resin details are also included.

Info: [minemountmodels.com](http://minemountmodels.com)



**Monster Modelworks** has a laser-cut kit for a small brick Utility Building. The basic design allows the building to be detailed and signed for a

variety of businesses. Components include 3-D laser-engraved brick walls, corners and overlays, 3-D laser-engraved terra cotta coping, acrylic block glass windows, and laser-cut peel & stick doors and glazing. Assembly and painting is required. The kit is available in HO, S and O scale.



Also new from Monster Modelworks is an S scale kit for auto repair shop named Gibson Body Co. The model is based on the Gibson Body Co. located in Oshkosh, WI.

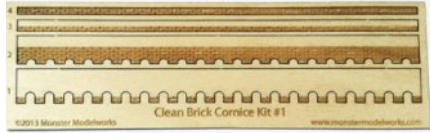
Building components include exterior walls, corner columns and Terra Cotta coping of 3-D engraved aged American Bond brick, laser-cut windows and garage doors with Peel & Stick material, and sign stencils.



The completed model measures 11.375" x 3.5" x 5.8" high. Assembly and painting are required.



Additional new items from Monster Modelworks include concrete sheets poured in forms, brick sheets, and cornices. All items are laser-etched on lightweight material and are available in various scales.



Info: [www.larkspurlaserart.com](http://www.larkspurlaserart.com)



New HO scale vehicles from **Oxford Diecast** include this 1959 Pontiac Bonneville Coupe with a white roof over a Seaspray Green body.



Oxford has also released a model of a 1961 Chevrolet Impala Convertible. The HO scale model is painted in what Chevy's 1961 sales brochure dubbed Jewel Blue.

Note the thin white wall tires highlighted with a red stripe.  
Info: [www.walthers.com](http://www.walthers.com)



**Walthers** has set a fall 2023 release date for a group of delivery trucks. The HO scale models are based on prototype step vans built by Morgan Olson Co. Models with rollup rear doors will be available decorated for UPS.

Step vans decorated for FedEx and US Postal service will have a pair of hinged rear doors. Vans with a roof top air conditioner and a non-working emergency light will be



available decorated for Police, Fire Rescue, and Utility Power Company.



Completing this release is a group of food vans selling Ice Cream, Pizza, Tacos and Doughnuts. They will be equipped with roof top AC unit, a cyclone vent, propane tank, and non-functioning side panels.



A kit that includes five railroad trackside buildings will be available from Walthers this fall. The HO structures include a blacksmith shop with coal

box, a small shed, a pump house, an outhouse and a small engineering office. Although marketed as railroad buildings, the structures can be readily adapted for use around mines, logging camps and other remote industrial sites.



Walthers has scheduled a 2024 winter release for this N scale modern concrete warehouse kit. Details of the injection

molded plastic kit include roof vents, four rooftop air conditioning units, and printed signs. The assembled model measures 12" x 6.75" x 3.17" high.

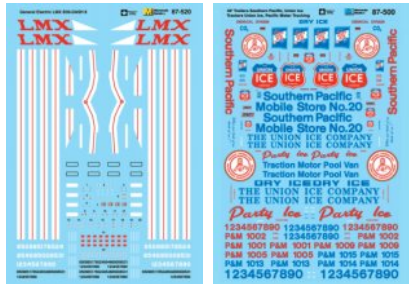


New Walthers scenic items scheduled for release this summer include a lumber load kit and a kit that assembles into three pallet load racks.



Walther's plans to release this HO scale residential backyard detail kit this winter. Details include an AC unit, clothes lines, a doghouse, gas grill, a sand box, swing set and a picket fence. Info: [www.walthers.com](http://www.walthers.com)

## NEW DECALS, SIGNS AND FINISHING PRODUCTS



New water slide decals from **Microscale** include lettering sets for LMX (GE leasing subsidiary) B39-Dash 8 locomotives. Also available from Microscale is a sheet of decals for 40' trailers operated by Southern Pacific, Union Ice and Pacific Motor Trucking.

Info: [www.microscale.com](http://www.microscale.com)

### DISCLAIMER .....

The opinions expressed in this column are those of the writer and do not necessarily reflect the opinion of Model Railroad Hobbyist or its sponsors. Every effort is made to provide our readers with accurate and responsible news and information, however, neither Model Railroad Hobbyist or the writer of this column can be held responsible for any inaccuracies or typographical errors that may inadvertently appear in this column.

## ! BRIEFLY NOTED AT PRESS TIME ...

New HO scale models coming from **Athearn** late next month include F59PHI, MP15AC and GP18 locomotives ...

**Broadway Limited** has released a video detailing its N scale PRR T1 locomotive. It is available at [www.youtube.com/watch?v=ENBEKh69i6U&t=3s](http://www.youtube.com/watch?v=ENBEKh69i6U&t=3s) ...

New N scale Alaska Railroad passenger equipment announced by **Lowell Smith** includes Centennial coach Nenana and a pair of dome coaches ...

New **Walther's** HO scale items just released to dealers include Mainline series EMD F40PH diesels in three Amtrak schemes, and Proto series Superliner coaches in Phase III, Phase VI, California and Surfliner schemes. New Amfleet coaches and an Amfleet I club/dinette car are scheduled for release next spring. Coming this winter is an LLV USPS mail truck ... ■

### Did you see this article?

in the **AUGUST 2023 MRH RUNNING EXTRA!**



**Modeling Bronx Terminal in N**

**Get full eBook now ▶**

*click here*



**RUNNING EXTRA**

Each eBook has 80-100 pages

Get more articles like this

**GIVE IT A LIKE**





# SELECTED EVENTS



Model Railroad Hobbyist | August 2023

## AUGUST

***Please check with any organization hosting an in-person event for the latest status of the event.***

## Ongoing 2023

**ONLINE, Zoom**, dates vary, see website. Operation Special Interest Group Meetups – limited attendance available.

Info: [www.opsig.org/Virtual](http://www.opsig.org/Virtual)

Archive: [www.opsig.org/Virtual/Past](http://www.opsig.org/Virtual/Past)

**ONLINE, Zoom & YouTube**, Wednesday & Saturday, see Facebook page. “New Tracks” Meetup, hosted by Jim Kellow, MMR.

Info: [newtracksmodeling.com](http://newtracksmodeling.com)

YouTube: [www.youtube.com/channel/UCMA\\_VhPb5pjdkAYTdXLceJA](http://www.youtube.com/channel/UCMA_VhPb5pjdkAYTdXLceJA)

**ONLINE, Facebook & YouTube**, dates vary, see Facebook page. “NMRax” organized by Gordy Robinson, Martyn Jenkins, Gert Muller, Jordan Kramer.

Info: [www.facebook.com/groups/nmragroup](http://www.facebook.com/groups/nmragroup)

**ONLINE, YouTube**, every other Saturday. 4th Division, Pacific Northwest Region, NMRA hosts online layout tours and clinics.

Archive: [www.youtube.com/c/4DPNRMovies](http://www.youtube.com/c/4DPNRMovies)

## SELECTED EVENTS | 25

**ONLINE, Zoom, Second Tuesdays**, 8pm Eastern. “Off the Beaten Track” featuring Narrow Gauge layouts, clinics, and manufacturers.

Info: [groups.io/g/NNG](https://groups.io/g/NNG)

**AROUND THE USA, IN-PERSON**, Various dates. ScaleTrains.com Road Trip.

Info: [www.scalettrains.com/roadtrip](http://www.scalettrains.com/roadtrip)

## August-September 2023

**CANADA, ONTARIO, BRESLAU**, September 24, 2023. 2023 Breslau Model Train Show, sponsored by Western Ontario Division-NMRA Canada. Breslau Community Centre, 100 Andover Drive.

Info: [trainshow@WOD-NMRA.ca](mailto:trainshow@WOD-NMRA.ca)

**CALIFORNIA, CROCKETT**, August 26-27, September 10, October 14-15, December 9-10, 2023. Carquinez Model Railroad Society Open House. 645 Loring Avenue.

Info: [cmrstrainclub.org](http://cmrstrainclub.org)

**COLORADO, DENVER**, August 30-September 2, 2023. 2023 National Narrow-Gauge Convention. Crowne Plaza Denver Airport Convention Center, 15500 E 40th Ave.

Info: [www.43nngcdenver.com](http://www.43nngcdenver.com)

**GEORGIA, ATLANTA**, September 7-10, November 9-12, 2023. Anton’s Antique Toy & Train Show. Atlanta Expo Centers, 3650 & 3850 Jonesboro Rd SE

Info: [www.scottantiquemarket.com](http://www.scottantiquemarket.com)

**GEORGIA, CARTERSVILLE**, September 14-17, 2023. Cartersville Express, 2023 South East Region Convention. Clarence Brown Conference Center, 5450 Ga-20.

Info: [2023serconvention.org](http://2023serconvention.org)

**MARYLAND, HUNT VALLEY**, September 13-16, 2023. Mid-Atlantic RPM, Delta Hotels Baltimore Hunt Valley, 245 Shawan Road.

Info: [www.marpm.org](http://www.marpm.org)



REGISTER  
(free)

[INDEX](#)

[TABLE OF CONTENTS](#)

[MRHMAG.COM](http://MRHMAG.COM)

[INDEX](#)

[TABLE OF CONTENTS](#)

**MASSACHUSETTS, ORLEANS**, July-August 2023, Wednesday Evenings. Nauset Model Railroad Club Annual Summer Open House. Rear of Hilltop Plaza, 180 Rte 6A.

Info: [nausetmodelrrclub.com](http://nausetmodelrrclub.com)

**MASSACHUSETTS, TAUNTON**, September 17, 2023. 20th Annual Old Colony Model Railroad Club Model Railroad Show and Sale. Taunton Holiday Inn, Myles Standish Blvd, Myles Standish Industrial Park. Exit 9 from Route 495.

Info: [oldcolonyrailroadclub.com](http://oldcolonyrailroadclub.com)

**PENNSYLVANIA, HAMBURG**, September 15-17, 2023. Anthracite Railroad Modelers Meet XI. Reading Railroad Heritage Museum, 500 S. Third St.

Info: [readingrrmm.com](http://readingrrmm.com)

**TEXAS, GRAPEVINE (Dallas Area)**, August 20-26, 2023. NMRA National Convention, Gaylord Texan Resort & Convention Center, 1501 Gaylord Trail.

Info: [www.2023texasexpress.com](http://www.2023texasexpress.com)

**TEXAS, GRAPEVINE (Dallas Area)**, August 25-27, 2023. National Train Show, Gaylord Texan Resort & Convention Center, 1501 Gaylord Trail.

Info: [www.nationaltrainshow.org/2023/ntsdfw.html](http://www.nationaltrainshow.org/2023/ntsdfw.html)

## Future 2023 by location

**CALIFORNIA, CROCKETT**, August 26-27, September 10, October 14-15, December 9-10, 2023. Carquinez Model Railroad Society Open House. 645 Loring Avenue.

Info: [cmrstrainclub.org](http://cmrstrainclub.org)

**CONNECTICUT, VERNON**, October 29, 2023, Vernon Train Show, sponsored by the Amherst Railway Society. Vernon Center Middle School, 777 Hartford Pike.

**ILLINOIS, NAPERVILLE**, October 27-28, 2023. Naperville RPM. Northern Illinois University Conference Center, 1120 E Diehl Rd.

Info: [www.rpmconference.com](http://www.rpmconference.com)

**INDIANA, DANVILLE**, November 18, 2023. 16th annual Danville Indiana Train Show. Hendricks County Fairgrounds, Old US 36 (E Main St), 12 miles west of I-465

Info: [www.cidnmra.org/services](http://www.cidnmra.org/services)

**INDIANA, FT. WAYNE**, October 19-22, Fort Wayne Rails, 2023 North Central Region Convention. Holiday Inn Purdue Fort Wayne, 4111 Paul Shaffer Dr.

Info: [div3.ncrnmra.org/fort-wayne-rails-2023](http://div3.ncrnmra.org/fort-wayne-rails-2023)

**MASSACHUSETTS, WEST SPRINGFIELD**, January 27-28, 2024. Amherst Railway Society Railway Hobby Show. The Eastern States Exposition Fairgrounds, 1305 Memorial Avenue.

Info: [www.railroadhobbyshow.com](http://www.railroadhobbyshow.com)

**MICHIGAN, EAST LANSING**, November 5, 2023. Lansing Model Railroad Club Show and Sale. Michigan State University Pavilion.

Info: [lmrc.org](http://lmrc.org)

**MINNESOTA, WOODBURY**, October 14, 2023. Newport Model RR Train Flea Market. Woodbury High School, 2665 Woodlane Dr.

Info: [newportclub.us](http://newportclub.us)

**MISSOURI, KIRKWOOD**, October 14-15, 2023. 32nd Annual Greater St. Louis Metro Area Train Show. Meramec Community College Gym, Geyer Road & Big Bend.

Info: [mvns.railfan.net/ShowFlyer.htm](http://mvns.railfan.net/ShowFlyer.htm)

**MISSOURI, SEDALIA**, November 4, 2023. 12th Annual Sedalia Rails Train Show in Liberty Park.

Info: [www.facebook.com/funtrains](http://www.facebook.com/funtrains)

**NEW MEXICO, ALBUQUERQUE**, November 9-12, 2023. Rails along the Rio Grande, Rocky Mountain Region Convention.

Info: [rmr-nmra.org](http://rmr-nmra.org)

**NEW YORK, ALBANY**, December 3, 2023. Great Train Extravaganza, sponsored by the Hudson-Berkshire Division of the NMRA. Underneath The Egg, Empire State Convention Center.

Info: [gtealbany.com](http://gtealbany.com)



## SELECTED EVENTS | 28

**OHIO, CAMBRIDGE**, October 22, 2023. Fifth Annual NMRA Buckeye Division Train Show. Pritchard Laughlin Center, 7033 Glenn Hwy.

Info: [div6-mcr-nmra.org/trainshow.html](http://div6-mcr-nmra.org/trainshow.html)

**OHIO, WEST CHESTER (Cincinnati)**, October 14-15, 2023. 55th Annual Div 7 NMRA Fall Train Show. Lakota West High School, 8940 Union Centre Blvd.

Info: [www.cincy-div7.org](http://www.cincy-div7.org)

**OHIO, MARION**, October 12-14, 2023. Central Ohio RPM. Marion Union Station, 532 West Center Street.

Info: [www.facebook.com/groups/438383252883060](https://www.facebook.com/groups/438383252883060)

**OHIO, MARION**, December 2, 2023. 37th Annual Model Train Show. 220 E Fairgrounds Rd.

Info: [mariontrainshow@outlook.com](mailto:mariontrainshow@outlook.com)

**OREGON, PORTLAND**, October 7, 2023. Bridgetown Railroad Prototype Modelers Meet, Airport Shilo Inn, 11707 NE Airport Way.

Info: [www.brpmm.com](http://www.brpmm.com)

**PENNSYLVANIA, ALTOONA**, October 19-22, 2023, Round the Curve to Altoona, 2023 Mid-Eastern Region Convention. Altoona Grand Hotel, 1 Sheraton Drive.

Info: [mer2023.org/index.html](http://mer2023.org/index.html)

**TENNESSEE, CROSSVILLE**, October 6-7, 2023. Miami Valley Modular Railroad 50x85 foot HO modular layout and swap meet. Oaklawn Baptist Church, 3977 US 70 East.

Info: [crossvilletrains.org/Welcome](http://crossvilletrains.org/Welcome)

**UTAH, WEST LAYTON**, November 3-5, 2023. The Inter-Mountain Train Expo. Davis Convention Center, 1651 North 700.

Info: [intermountaintrainexpo.com](http://intermountaintrainexpo.com)

**WASHINGTON, PORT ANGELES**, November 11-12, 2023. North Olympic Peninsula Railroaders' 20th Annual Swap Meet/Train Show. Red Lion Hotel Port Angeles Harbor, 221 N. Lincoln St.

Info: [geoted@wavecable.com](mailto:geoted@wavecable.com) ■

Get more articles like this

GIVE IT A LIKE



# WEATHER

*like a pro.*

(No airbrush required!)

Go from this ...



To this ...



Volume 1:  
Freight cars

Volume 2:  
Diesel locomotives

Click me to  
**LEARN MORE ...**

“Simple, effective, and a lot quicker than an airbrush ...” - *Koos F.*

DVD or Digital download - From the MRH Store: [store.mrhmag.com](http://store.mrhmag.com)



REGISTER  
(free)

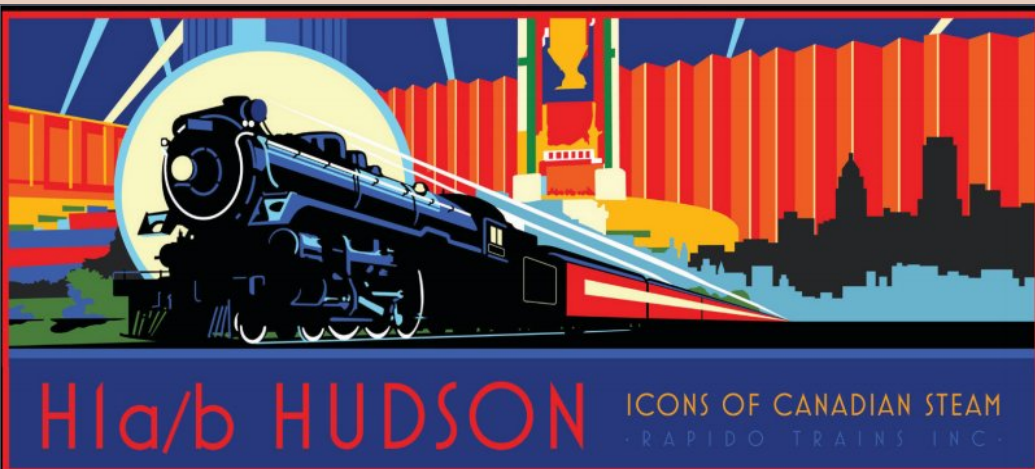
[INDEX](#)

[TABLE OF CONTENTS](#)

[MRHMAG.COM](http://MRHMAG.COM)

[INDEX](#)

[TABLE OF CONTENTS](#)



**H1a/b HUDSON** ICONS OF CANADIAN STEAM  
RAPIDO TRAINS INC.



**PRE-ORDER DEADLINE:  
SEPTEMBER 15TH, 2023**

**CLICK HERE**



Quality. Style. Spirit.

rapidotrains.com • youtube.com/RapidoTrains • facebook.com/RapidoTrains

**RAPIDO**



REGISTER  
(free)

[INDEX](#)

[TABLE OF CONTENTS](#)

## CLICKABLE ADVERTISER INDEX

[Accu-Lites](#)  
[Amherst Railway Society](#)  
[Atlas Model Railroad Co.](#)  
[Bachmann](#)  
[BackdropsOnly.com](#)  
[Berrett Hill Trains](#)  
[Black Cat Publishing](#)  
[Blair Line](#)  
[Coffman Graphics](#)  
[Crew Call with Mike Rose](#)  
[Deluxe Materials](#)  
[Designs by Schonfelder](#)  
[Digitrax \(2 page spread\)](#)  
[East Coast Circuits](#)  
[ESU LokSound](#)  
[Fast Tracks](#)  
[Great Decals](#)  
[Inter-Action Hobbies](#)  
[Iowa Scale Engineering](#)  
[Litchfield Station](#)  
[Logic Rail Technologies](#)  
[Micro-Trains Line](#)  
[miniprints](#)  
[Model Railroad Control System](#)  
[Monashee Laser Engineering](#)  
[Monroe Models](#)  
[MRH Store \(1\)](#)  
[MRH Store \(2\)](#)  
[MRH Store \(3\)](#)  
[MRH Store \(4\)](#)  
[Mt. Albert Scale Lumber](#)  
[National Narrow Gauge Convention](#)  
[NMRA National Convention](#)  
[NCE \(2 page spread\)](#)  
[North American Railcars \(PWRS\)](#)  
[The N-Scale Division](#)  
[Pre-Size Model Specialities](#)  
[Precision Design Co.](#)  
[Proto87.com](#)

[Rapido \(1\)](#)  
[Rapido \(2\)](#)  
[Ring Engineering](#)  
[Rock Island Hobby](#)  
[Roomettes](#)  
[Scale Trains](#)  
[Sceniking.com](#)  
[Scott Antique Markets](#)  
[SiskiyounLine.com](#)  
[SoundTraxx](#)  
[Southern Digital](#)  
[Squeaky's Trains](#)  
[Streamlined Backshop](#)  
[TAM Valley Depot](#)  
[24 Trains TV](#)  
[TrainMasters TV](#)  
[Westerfield](#)

**Did you see this article?**

in the **AUGUST 2023 MRH RUNNING EXTRA!**



**Ultra-fine wire  
strippers**

**Get full eBook now ►**

*click here*



**RUNNING  
EXTRA**

Each eBook has 80-100 pages

Clickable "other" index

[Other – Contents](#)

[Other – Cover](#)

[Other – MRH Marketplace](#)

[Other – MRH Sponsors](#)

[MRHMAG.COM](#)

[INDEX](#)

[TABLE OF CONTENTS](#)

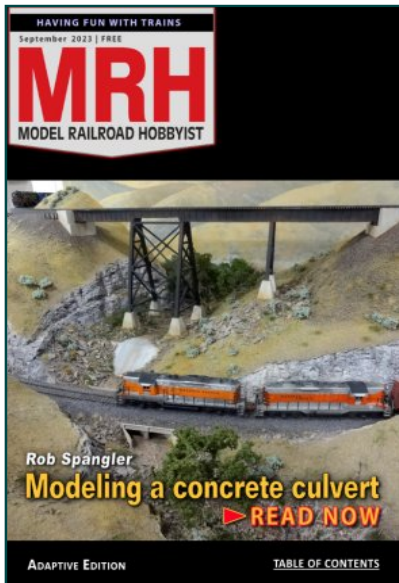
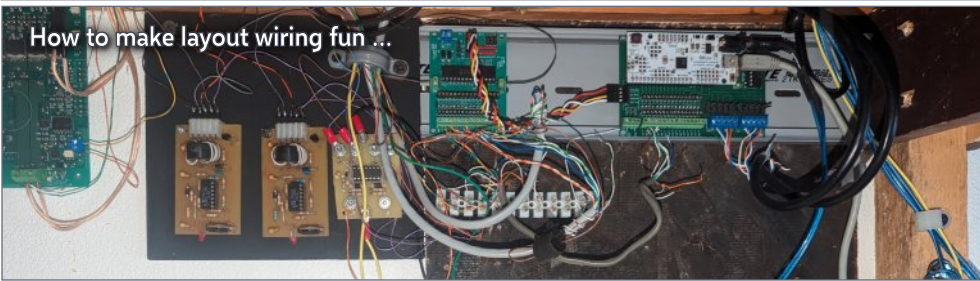


## Coming next month in MRH ...

Rob Spangler on modeling concrete culverts ...



How to make layout wiring fun ...



Roofing from old Cheez-it boxes ...

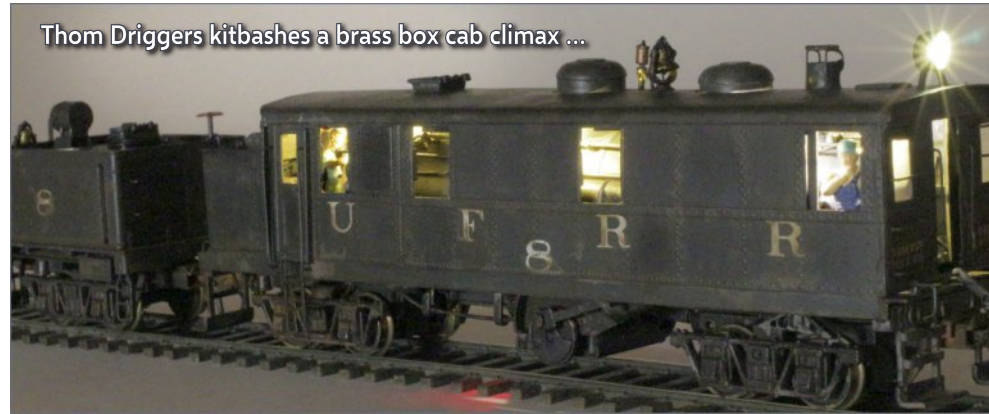


... coming September 15<sup>th</sup> in the  
September MRH

## Coming next month in Running Extra ...

... all the MRH articles and ads, PLUS:

Thom Driggers kitbashes a brass box cab climax ...



Modeling believable industries ...



How to make a realistic rock face ...

... all this and much more!

SUBSCRIBE AND SAVE UP TO 80%



REGISTER  
(free)

[INDEX](#)

[TABLE OF CONTENTS](#)

[MRHMAG.COM](#)

[INDEX](#)

[TABLE OF CONTENTS](#)