

HAVING FUN WITH TRAINS

JANUARY 2021 | FREE

MRH

MODEL RAILROAD HOBBYIST

ALSO:

- Four ways to make conifers
- Easier Tortoise installs
- Santa Rita mini-layout
- Using a hobby chop saw
- ... and more inside!

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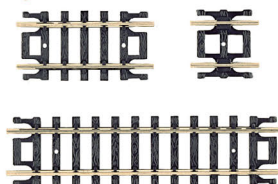
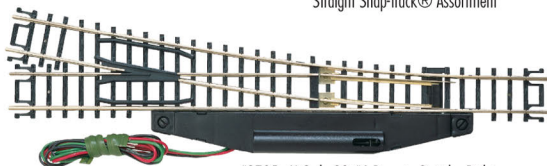
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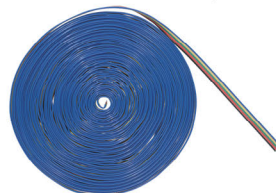
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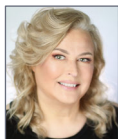
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Editor



Patty Fugate, Pasteup
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Richard Bale, News and
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Les Halmos, Account Manager

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Regular contributors

Eric Hansmann, Contributing editor

Jim Six, Limited Modeler column

Ken Patterson, Reporter-at-Large

Rotating Columnists

Jack Burgess, Getting Real column

Marty McGuirk, Getting Real column

Nick Muff, Getting Real column

Mike Rose, Getting Real column

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Model Railroad Hobbyist | January 2021

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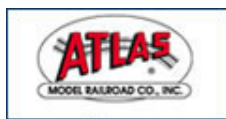
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Take me there!



Publisher's Musings: Exciting new changes at MRH

JOE FUGATE



MRH Website this month: Next level of diesel lighting, ...

Compiled by JOE FUGATE



What's Neat: Four ways to make conifers, ...

KEN PATTERSON



My tortoise drilling template solution

MICHAEL MCGINLEY



Ops for the rest of us: Two lightweight ops examples

DOUG MATHESON



The Santa Rita mini layout

FERNANDO BELLINI



Using a hobby chop saw

JEFF PALMER



Savvy Modeler online: Superdetailed handlaid track

Compiled by the MRH STAFF



January 2021 news and events

RICHARD BALE and JEFF SHULTZ



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January 2021

**RUNNING
EXTRA****Publisher's Welcome: More neat & tidy DCC installs**

JOE FUGATE

**Limited Modeler: Pre-USRA NYC steam locomotives**

JIM SIX

**Scratchbuild an accurate sand house**

TONY THOMPSON

**Modeling UP's new Maintenance-of-way train**

KARL ANDRASCHKO

**Stock cars used for other things**

RAY BREYER

**Ah-Hah Moment: LED lighting strip mounting solutions**

JOE FUGATE

In

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EXTRA****This month ...****Buy December eBook - \$2.99**

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ARRIVING
EARLY 2021

VE
F



HO Scale Preproduction Models Shown
Scene and photography by Ken J Johnson



HO
1:87 SCALE

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TMTV's *NEW* Backshop Clinic is here!



One viewer commented: "I've long used the NMRA gauge, but I never realized all of the different things that were determined by the gauge."

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PUBLISHER'S MUSINGS



Model Railroad Hobbyist | January 2021

JOE FUGATE ANNOUNCES SOME
EXCITING NEW CHANGES ...



I AM DELIGHTED TO ANNOUNCE SOME EXCITING NEW CHANGES AT *MRH MEDIA*.

First, we're bringing on a new Assistant Editor, James Regier. James has been working as a general editing assistant for the last several months, learning the ropes. As of January, we're making him officially my assistant on the magazine.

We're continuing to train James in all the tasks that I typically do, so he can keep growing in his ability to help carry a lot of the monthly load. Let me turn the floor over to James!

Hello from James Regier

Hello, everyone! It is an honor and a privilege to have joined the editorial team at *Model Railroad Hobbyist* magazine.

For as long as I can remember, model railroading has been a part of my life in one way or another.

My dad, who had greatly enjoyed his Lionel sets growing up, decided he would get back into the hobby when he found



out I was on the way, ordering the Lionel Famous Railroads set for 1981, which happened to be Great Northern.

Lionel and Brio became a big part of my early childhood, along with visits to model train shows and to clubs. When it came to clubs, the Wichita and Ark Valley stands out as a fine one.

This club's prototypical representation of the local cities of Hutchinson and Wichita inspired my dad and me as a great example of how to do the hobby. These visits played a role in my switch to HO scale when I was eight – that scale's typical realism and attention to detail appealed to me from early-on.

Returning to the hobby a decade ago, I found myself in a very different world. DCC sound and hyper-detailed locomotives

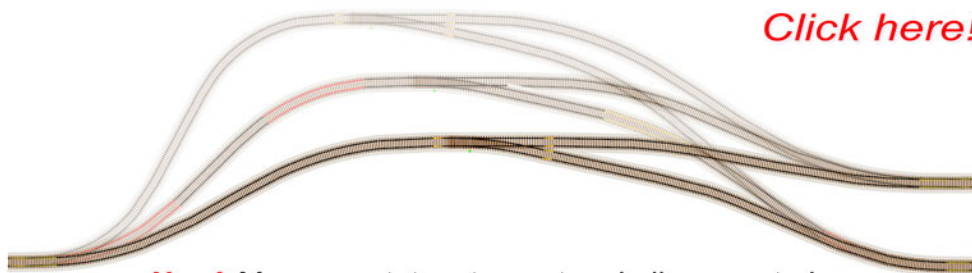
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PUBLISHER'S MUSINGS | 3

had come to dominate the scene, and I had *a lot* of equipment to upgrade! I turned to YouTube to learn about DCC conversions, observing outstanding work from Al Mayo, Dan Cortopassi, John Abatecola, and *MRH's* own Bruce Petrarca.

I had my initial foibles – I managed to utterly destroy a motor in an Atlas/Kato GP7 trying to replace its leads – but I also learned not to fear failure.

I began converting my fleet of Atlas/Kato GP7s and Stewart/Kato F7s to DCC, upgrading them with Tsunami sound and LED lighting. My results gradually started to get better and better.

I looked for local hobby shops around St. Louis and discovered K-10's Model Trains in nearby Maryville, IL (featured in the June 2020 issue of *MRH*).



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WALTHERSPROTO

New H0 Russell Snow Plows Are Here!



Railroad-Ready Road-Specific Details New Roadnames

WALTHERS

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Before long, I became a regular at the Thursday-night operating sessions at K-10's. Folks would bring the latest from the manufacturers, along with their latest projects. This show-and-tell aspect, combined with other hobbyists' constructive criticism and encouragement, challenged me to constantly improve my work.

Shortly after that, The Magic House St. Louis Children's Museum hired me to maintain and manage its Canfield Station layout. Alongside the more mundane aspects of cleaning and maintenance, I had the opportunity to find areas for addition and improvement.

I experimented with adding LED lighting to buildings, adding animated features, and even using Arduino programming to create intelligent features. I wanted to do anything I could to provide the visiting children and their families with the best experience.

A couple of years later I ran into Daniel Coombs at a swap meet, and I visited Ken Patterson and his layout for the first time. I brought a few projects to show Ken and some of the folks in his basement, and eventually became a regular participant on the *What's Neat this Week* video podcast.

I had the opportunity to learn firsthand from Ken Patterson, Mike Budde, and many of the other folks involved, including representatives from many of the manufacturers in our hobby. At some point, Ken invited me to share some of my projects in segments on his monthly "What's Neat" column for *MRH*.

While model railroading certainly has its elements of solitude, it's a hobby that I find to be most enjoyable when shared. We all can learn from each other, and it's a thrill to be part of an online family that facilitates the exchange.



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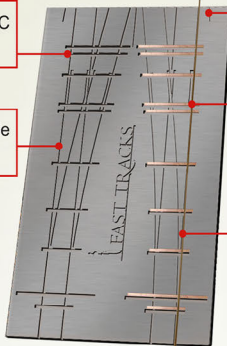


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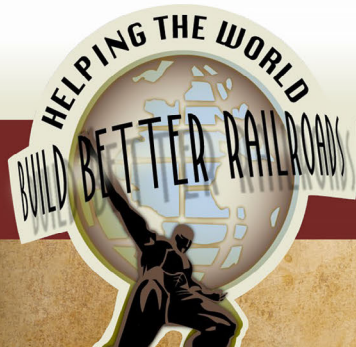
Just insert the rail into the tool and file.



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All Fast Tracks track fixtures and tools are NMRA compliant

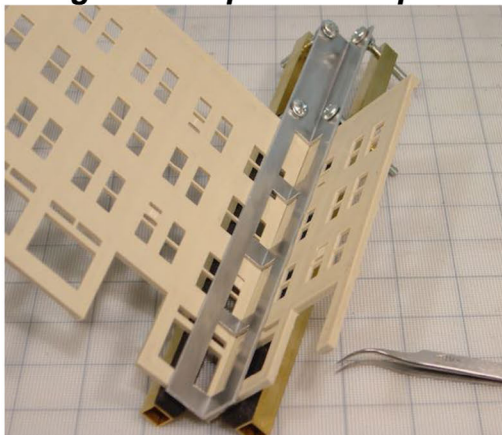
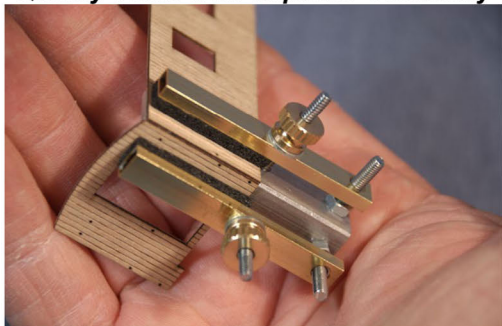
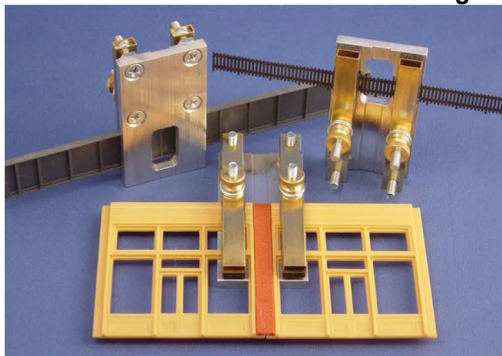


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To borrow a phrase from Ken Patterson, "Model railroading is the best hobby in the world, with the best people in it."

Doing live videos

The end of December, we launched a new live Q&A video segment on TMTV called "MRH QAT: Questions, Answers, and Tips."

We plan to make these live segments available to Train-Masters TV members.

We bring on some *MRH* Staff person, share some tips on video, then open up the floor for questions.

You can ask us anything hobby-related and we'll do our best to give you an answer. In some cases we may need to go off and do some additional research or put together a demo for the next live session to give you the best answer.

Since we're all hunkered down this winter trying to get past the pandemic, we're looking to take advantage of going live online.

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Also doing more TMTV web clinics

We're also now doing more TrainMasters TV web clinics with the host and guest meeting over the web to conduct the video clinic. We've put the first two web-based "New Backshop Clinics" up on TrainMasters TV, so go have a look!

TMTV web clinic 1: All about clearances

The NMRA gauge is a lot more than just wheels, track, and couplers, it's also loaded with ten different clearance dimensions.

On top of that, the classic clearance gauge only covers 1920-1969. If you model outside of this era and rely on the classic gauge, you may have problems. Joe Fugate does a deep-dive into getting optimum clearances for a layout modeling any era.

WEB: trainmasters.tv/programs/all-about-clearances



TMTV web clinic 2: Making your own ballast

Joe Fugate shares his method of making your own ballast for any scale and in any color. Demonstrates the methods on camera that Joe described in the December *Model Railroad Hobbyist* cover story.

WEB: trainmasters.tv/programs/make-your-own-ballast



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THE E8 PROJECT

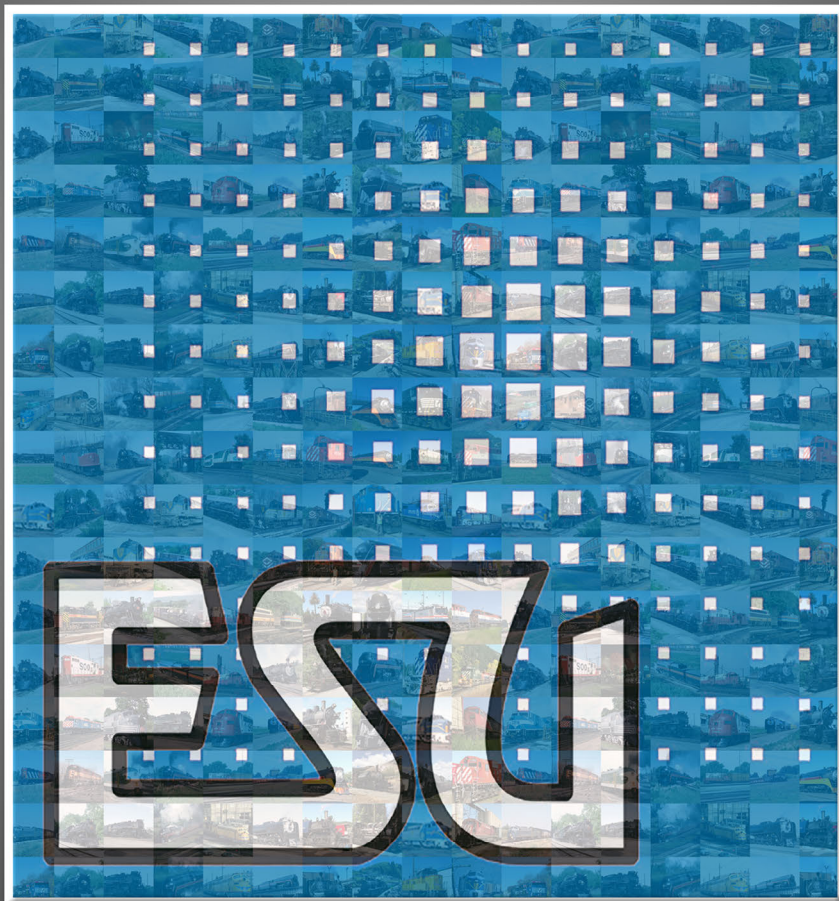


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Still looking for layout stories

Since we can't really travel right now to shoot layout stories, we need modelers to step forward and provide their own layout stories.

We need both articles and layout videos. We are interested in just about any type of scale model train layout of any size and from any era. If you're particularly ambitious, we'll also consider a multipart layout story if you think you have enough to say about your layout.

For more on the technical details of how to shoot layout stories in video form, see the [October issue of MRH](#).

A special note to small layout owners, please, please, please do not write off your layout as not be of interest because it's "too small" – on the contrary!

One of the biggest requests we get is to do more layout stories on *smaller* layouts! Consider: how will we ever do stories on smaller layouts if you smaller layout guys don't step forward and volunteer to do a story on your smaller layout?

If you might be willing to do a story on your layout, just reply using the comment button below. ☒

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LAST ISSUE'S RATINGS

The three top-rated articles in the [December 2020 issue](#) of *Model Railroad Hobbyist* are:

4.8 Making your own ballast

4.8 Savvy Modeler online: Straighten music wire

4.6 Publishers Musings: LED strip layout lighting

Issue overall: **4.9**

Please rate the articles! Click the reader comments button on each article and select the star rating you think each article deserves. We depend on these ratings to help us determine which articles to publish, so your rating matters! ■

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Best of the

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THIS MONTH

Model Railroad Hobbyist | January 2021

Compiled by **JOE FUGATE**



Taking your model lighting to the next level

While this is a *commercial* product being made by MRH forum member **amsnick** (Nick Santo), it's just too cool to not get a mention! Nick operates a small home hobby business, and he's best known for his ground-breaking product, the Decoder Buddy.

"The light fixtures on EMD, GE, and other manufacturers are all very similar. At 1/87 scale there is no visible difference. I have finalized my production parts for the ground lights in HO scale."

Visit the thread to learn more!



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

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



1. Richard Kurschner purchased this PECO N scale turntable kit and then describes his build process on the MRH forum.

PECO turntable build

MRH forum member **lineswestfan** (Richard Kurschner) picked up this PECO N scale turntable kit and has been documenting his build process.

“Got my butt in gear. Starting to build the ‘Peco NB-55 Well Type Turntable.’ Thought I’d document my progress in this thread. By all accounts, it’s supposed to be an easy plastic kit to build, which is good since I’ve never been really happy with any plastic kit I’ve ever built. It is an armstrong model, and I intend to leave it manual. Guess that makes it a ‘fingerstrong’ turntable?”

Check out Richard’s thread to see how it’s coming!

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



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Featured Products

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DR5000 Multi-Bus DCC Command Station

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DR5052 DCC Turntable Controller

LocoNet, RailCom, PC App, USB

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DR5088RC 16 Channel Feedback RailCom Detector

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\$119.94



2. Andrew Vanlaar asked about how to do curved track module joints and Jim Branum posted this example photo.

Finding the perfect home made spray booth

Forum member **arvanlaar** (Andrew Vanlaar) asked about how to best do curved module track joints:

“I plan to have three HO modules that come together to form the completed layout. It seems you can join up two modules with curved track running between the join, but I really haven’t found any info on how to lay, cut, or align curved track between two modules.

Is there anything in particular that I need to know when having curved track between two modules? Is there anything that needs to be done differently than running straight track between them?”

If you’re wondering how to do module joints with curved track, check out the discussion on this thread!

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



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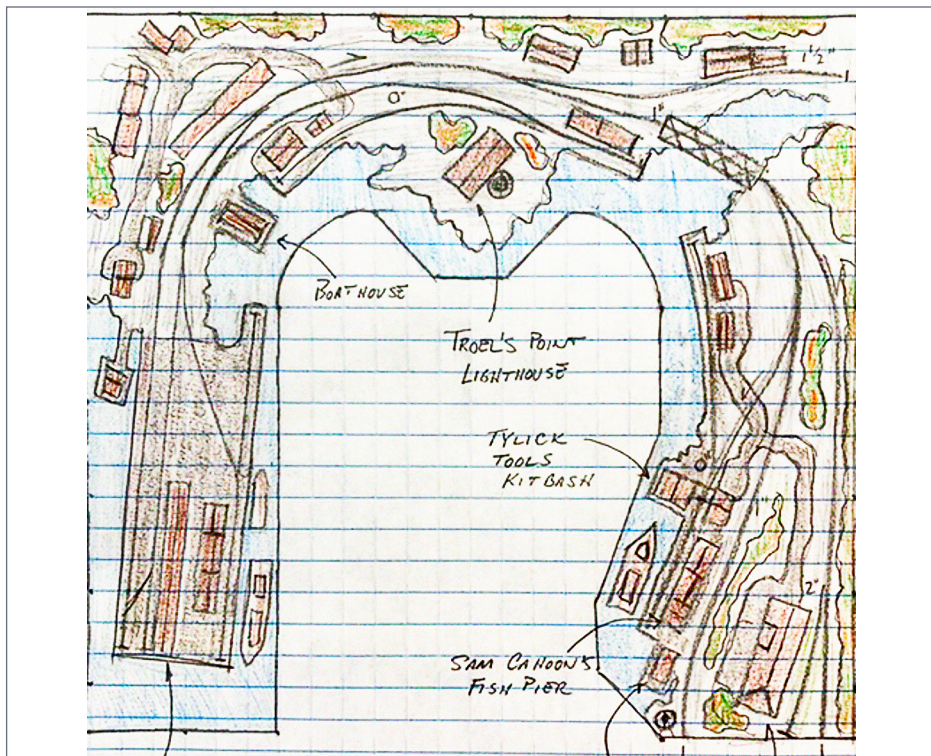


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3. Here's a track plan of a nice small layout being built by new MRH forum member J Emerson.

Developing the Emerson Coast Railroad

MRH forum member **J Emerson** chronicles the process of building the small Emerson Coast layout on his *MRH* blog.

"I've lurked here for a while and have been working on this newest layout since the beginning of the year, albeit with a long layoff due to the basement getting a new floor and the COVID situation affecting work."

Visit J Emerson's blog and follow his progress!

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Latest *MRH* Weekly photo fun thread

Every week, a new Weekly Photo Fun thread appears. It's frequently loaded with inspiring photos of great modeling ...

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4. The top photo is actually from J Emerson's *Coast Railroad* on the previous page. The latest photo thread also has many other great photos such as this one of #4743 from SD40-Fan.



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WHAT'S NEAT

column



Model Railroad Hobbyist | January 2021

KEN PATTERSON'S COLUMN THIS MONTH ...



VIEW READER
COMMENTS

- Four ways of making evergreen trees
 - ✓ Hogshair furnace filter
 - ✓ Dried caspia blossoms
 - ✓ Bachmann wire foliage branches
 - ✓ Trimmed plastic fern material
- Visiting Dennis Krausman's Santa Fe Layout

WHAT'S NEAT with Ken Patterson
4 ways to make conifers

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JAN 2021

The video thumbnail shows a man with glasses (Ken Patterson) in a workshop, gesturing with his hands. In the background, there are several tall, realistic-looking model evergreen trees.

click to play video

PHOTOS AND VIDEO OF SUPERB MODELS

ON THIS MONTH'S WHAT'S NEAT VIDEO, Ken shows us four different ways of making pine trees, from the tried-and-true furnace filter and caspia methods, to wire armatures and plastic artificial ferns, which he had not used before. After that he visits Dennis Krausman's Santa Fe layout, which features 150 feet of mainline, 75 feet of branchline, plus storage, yards, and sidings for a total of 400 feet of track.

Making pine trees



1. Ken shows the materials he will use for branch structures on four different pine trees.



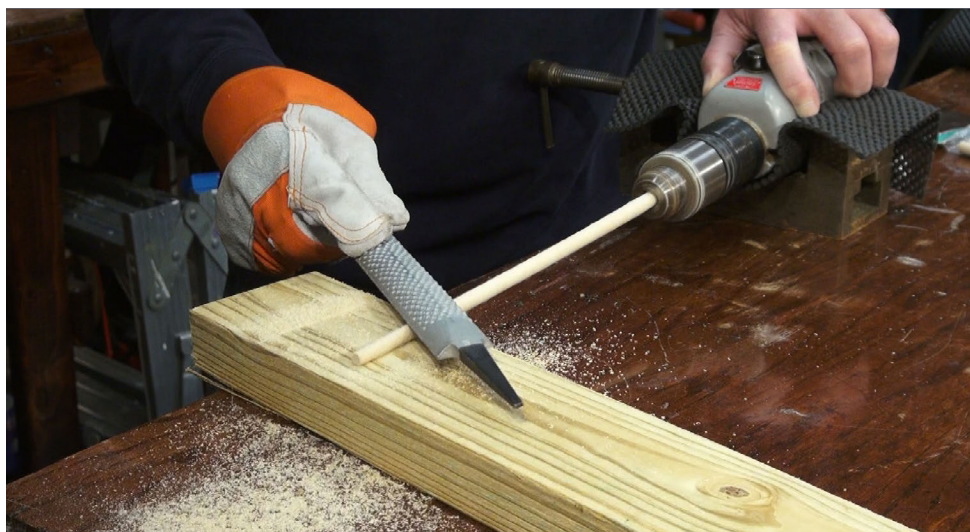
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2. One of several techniques Ken shows for tapering 1/4" and 3/8" dowels into a tree-like shape involves securing a 1/2" drill in a vise and tapering the dowel with a horse rasp as the drill runs at 1000 rpm.

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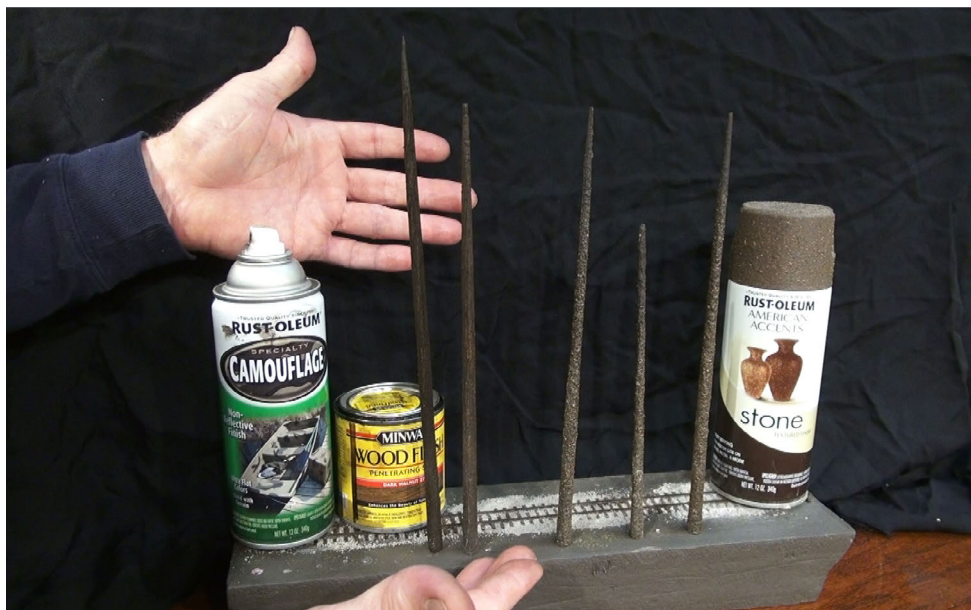
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3. Two methods Ken uses for coloring the tree trunks are Rust-Oleum Stone Texture spray paint and a combination of wood stain and Rust-Oleum camouflage earth spray paint. The two trunks in front of Ken's hand were painted with the wood stain-camouflage earth method, the other three with the stone texture paint.

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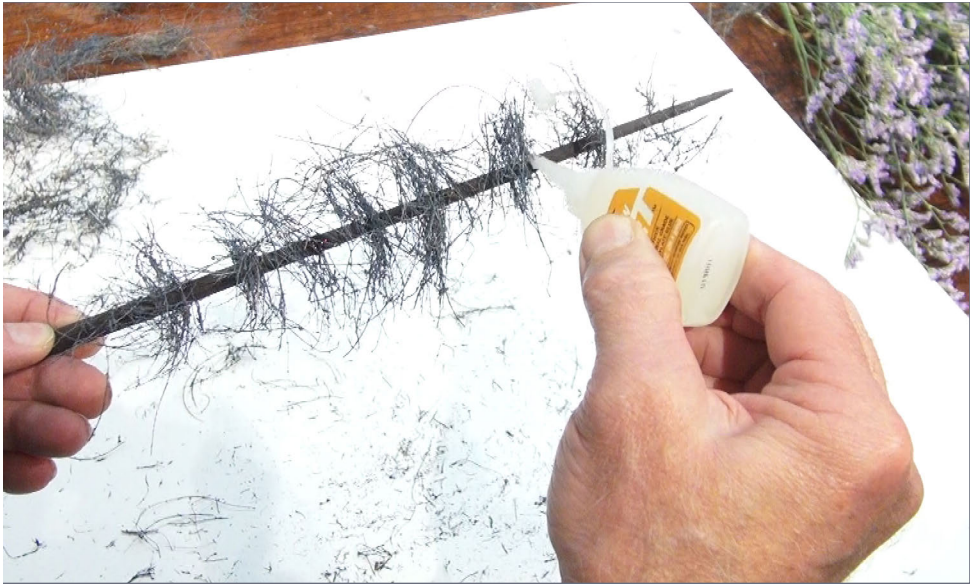
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4. The first technique Ken demonstrates is using hog's hair furnace filter material, which creates trees like these seen on an On30 diorama.



5. Here Ken secures the pulled apart hog's hair furnace filter material to the trunk with super glue/ACC.

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6. Hairspray, ground foam, and static grass complete the tree.

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7. The other three methods require drilling holes in the tree trunk. Here Ken uses a small drill press to do it. A pin vise or any powered tool with a chuck that can accommodate small drill bits will also work.



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8. The second type of tree Ken is making uses caspia that has been dried and cut up for the branches. The branches are glued into the holes on the trunk.

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9. Ken covers the caspia branches with hairspray and ground foam. Here he is brushing ground foam off the trunk with a stiff-bristle paint brush.



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10. This photo shows us the third method Ken is demonstrating, using Bachmann wire foliage branches (shop.bachmanntrains.com/index.php?main_page=index&cPath=264_469_475_476&zenid=jgh223ld5pojo5dhpu9b0108v0) as tree branches. He removes the ground foam they are covered with and glues them to the tree trunk in the same manner as the caspia branches.



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11. Ken flocks the tree with ground foam and hairspray, and then uses a static grass applicator to cover the tree in static grass “needles.” Two applications of hairspray and static grass works best.



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12. Here Ken demonstrates how he glues trimmed plastic fern material he bought at Hobby Lobby into the holes on the tree trunk.

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13. Flocking the plastic fern tree with fine ground foam to add texture, the tree is now complete.

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14. Here are the three “glued branches” types of trees mixed in with a group of Grand Central Gems pine trees. From left to right: Caspia, wire branch, and plastic fern trees.

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15. In the second segment, Ken takes us on a visit to Dennis Krausman's Santa Fe in southern Colorado layout.

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16. The mainline is 150 feet long, with a 75 foot branchline. Total trackage is about 400 feet including yards and sidings.

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comment on the articles
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17. The layout is placed in 1948-49 because Dennis likes both steam and 1st generation power, especially Santa Fe warbonnets.



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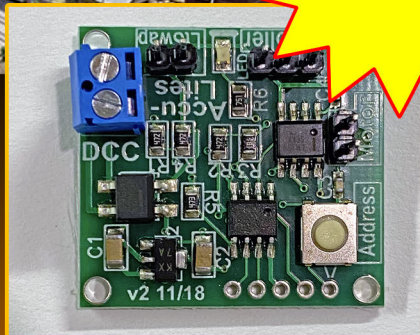


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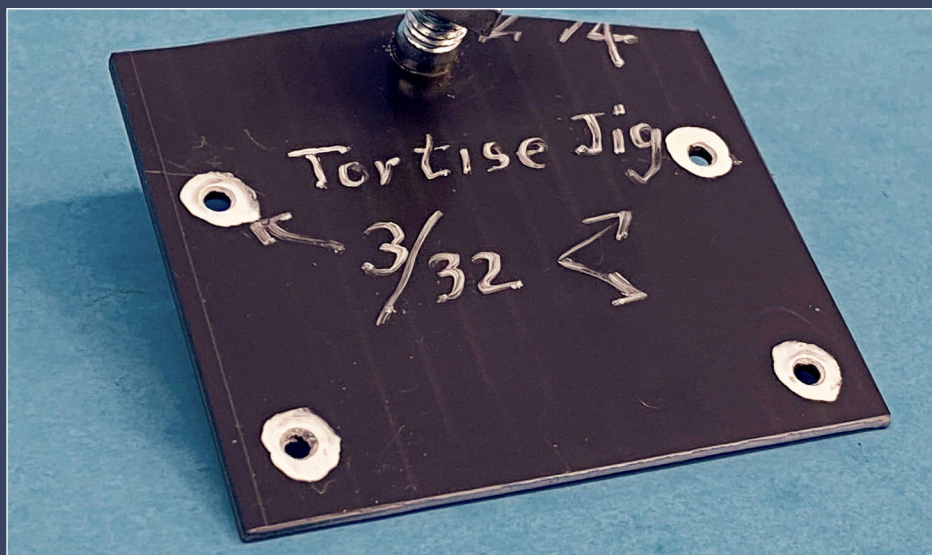


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My Tortoise template



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MICHAEL MCGINLEY SOLVES HIS TORTOISE
MOUNT HOLE PREDRILLING PROBLEM ...

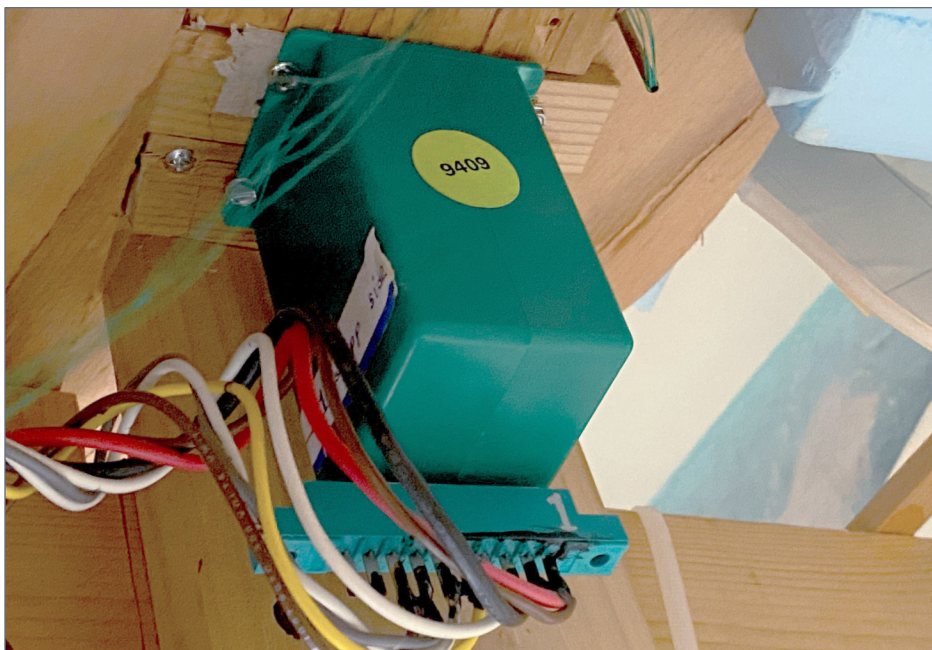
**THE CIRCUITRON "TORTOISE" STALL-MOTOR
SWITCH MACHINE COMES WITH A** template printed on
the instruction sheet to guide the user in installing it up
against the baseboard under the switch points.

Here is an enhancement I made to that template. This article
builds upon the instructions contained in the Circuitron package.

Instead of cutting out the template and using it as a loose piece of paper, I traced it onto paper, then marked the hole centers on a piece of 0.060" styrene sheet. The mounting screw pilot holes are 3/32" for the No. 4 pan-head wood screws and the operating rod hole is 1/4".

Working overhead under the layout is never comfortable, and gets harder with advancing years. It is even more challenging if the scenery is complete. I decided to enhance the template to make it as easy as practicable.

The first modification is to use a bolt to secure the template in place before drilling the mounting screw pilot holes. I drilled the 1/4" hole for the operating rod at the center line of the track at the point of switch, then used a hex-head 1/4" x 1-1/2" machine screw to locate the template.



1. Typical Tortoise habitat; hard to reach. Some locations have more feeder and signal wires.

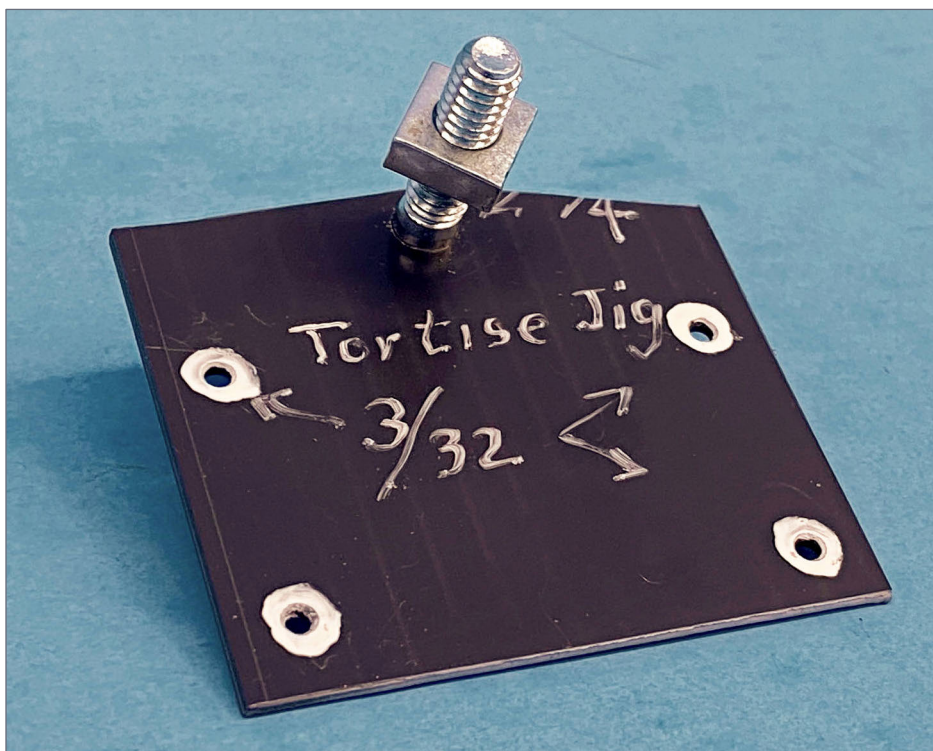


MY TORTOISE TEMPLATE | 3

I inserted the bolt into the hole from the top, then got under the layout and held the bolt steady while lining up the template with the $\frac{1}{4}$ " hole, then pushing it up to the base board.

Then I threaded the nut onto the bolt and ran it up to keep the template in place. I put a lock washer under the head of the bolt to help it resist turning while I installed the nut.

Now it was easy to drill the four pilot holes for the mounting screws without worrying whether they would be in proper alignment for the mounting notches on the Tortoise.



2. My styrene Tortoise template with alignment bolt. Holes can be chamfered with an oversized drill or a countersink bit, but with styrene you have to very gently make that cut.

My first attempt got hampered by the awkward working position and dim light; getting the drill bit into the template guide hole was harder than it had to be.

So my second modification was to cut a slight chamfer into the holes for the mounting screws and to paint them white so they are easy to see.

After the four holes were drilled, I removed the bolt and template, and ran two screws on one side up until they were about $\frac{1}{4}$ " from the base board. Then I lined up the switch operating wire to the $\frac{1}{4}$ " diameter hole and was able to guide the notches on one side of the Tortoise against the two screws.

I used one hand to hold the machine up while starting a third screw through the notch and hole and ran it up tight, then I added the fourth screw and tightened the first two.

My photos show only the finished template and not the actual installation work because I don't have enough hands to hold a camera, a drill, and a template at once. But I hope these little adjustments to the Tortoise template will help you in your future layout work. ☑



3. Closeup of the chamfered holes to guide the pilot hole drill for mounting screws.



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MICHAEL E. MCGINLEY P. E.



Michael is a registered professional engineer (civil) engaged in railroad engineering, maintenance, and operations from 1966 to present. His employment includes 21 years with Southern Pacific (including three-year military leave), five years consulting engineering with Daniel, Mann, Johnson, & Mendenhall, 14 years with SCRRA (Metrolink), and part-time on-call consulting work through

2018 for various firms engaged in freight, commuter, transit, and high-speed passenger planning and design.

Positions held includes Roadmaster, Division Engineer, Director of Engineering & Construction for operating railroads, Senior Rail Engineer, Senior Track Engineer, and Manager, Rail Engineering for consulting companies.

Through all years and tasks, the end operations goals, budgets, and customer expectations effect on engineering has been the guidance for work products and responsibilities.

He has a BS in Civil Engineering, University of California. He is a member of the ASCE, AREMA.

He is married with one son. ■



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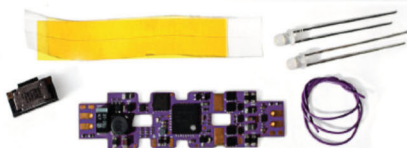
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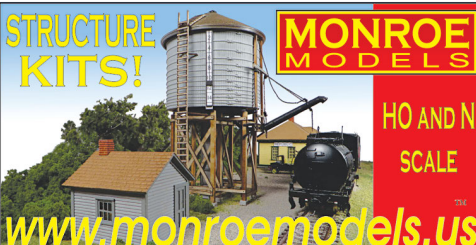
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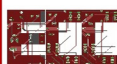
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Floquil/PollyScale stash running out?



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



Floquil/PollySack	Color Name(s)	Model Mark	Tulip / Moniston	MOSE/Se	Notes
Primer Gray		MRH 4763	VMA 71.020	16-01	
Engine Black		MRH 4884	IKL 20008 VMA 71.021	16-02	
Storm Power Black		MRH 4795	VMA 71.027	16-46B	
Oil Black		MRH 4797	VMA 71.021	16-44*	
Weathered (Weathered Black)		MRH 4750	IKL 20023 VMA 71.024	16-05	
Reef Gray		MRH 4887*	MRH 4888	VMA 71.045	16-04
Reef White		MRH 4871	IKL 20006 VMA 71.020	16-02	
Grass Black		MRH 4887	IKL 20005 VMA 71.020	16-03	
Columbus Red		MRH 4889* MRH 41511	MRH IKL VMA 71.045 VMA 71.032	16-08	MRH 41512 is the equivalent for the previous red name equivalent

* Indicates a close but not exact match. All ModelMaster paint is a semigloss finish. Valleys Model Air/Game Air, Modelux, and Model Master paints flat finish unless marked: † Gloss finish, ‡ Semigloss finish. 1 Model Master's new ReelR Gray is a shade darker than the old PolyScale ReelR Gray. Color K961 Dark Ghost Gray is a closer match to the old PolyScale color. 2 Model Master's new Caboose Red is a shade lighter than the old PolyScale Caboose Red. Color 4633 Sun Light Red (also finish) is a closer match to the old PolyScale color. Add 20% flat medium to get semi-gloss.

Paint / PolyScale	Color (approx.)	Model Series	Yafco - Model	Model Series	Notes
Tuscan		MS 4682*	YMS 70.036	MS 16	
Reef Orange		MS 4682*	YMS 71.083	MS 09	
Reef Yellow		MS 4679	YMS 71.078	MS 10	
Reef Brown		MS 4684	MS 29029 YMS 71.280	MS 16	
Railroad Tie Brown		MS 4685	MS 29023 YMS 71.610	MS 09*	Clear match - for 16, 18, 24* for 16-24
Rail Brown		MS 4708*	MS 29021 YMS 71.130	MS 16	
Rust		MS 4675	MS 29025 YMS 71.037	MS 16	
Concrete		MS 4676	YMS 70.047* YMS 71.133 YMS 71.222	MS 09	Clear match - for 16, 18, 24*
Agard Concrete		MS 4675	MS 29067 YMS 71.143	MS 09*	Clear match - for 16, 18, 24*

* Indicates a close but not exact match. All MOOREflex paint is a semigloss finish.
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Ops for the rest of us

Part 2



DOUG MATHESON SHOWS TWO MODEL RAILROADS THAT EMBODY AN OPERATIONS LIGHT PHILOSOPHY ...



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FOR INSPIRATION IN THINKING ABOUT AN OPERATIONS LIGHT APPROACH, *let's ride along on two different railroads. They are wildly different in character and scale, yet both capture the essence of an enjoyable but realistic operation in a relatively paper-free way.*

BRUCE CHANDLER'S JACKSON AND BURKE RR

Bruce Chandler, the proprietor of the Jackson and Burke, is a well-known large-scale modeler. In addition to scratchbuilding numerous models that have been featured in the model press, he has constructed a modest-sized, but well-thought-out, F_n3 garden railroad at his home in the Northern Virginia suburbs of Washington, DC.

The Jackson and Burke resulted from a reimagined history where the Carolina and Northwestern was not standard-gauged and made part of the Southern. It remained narrow gauge, and allowed a narrow-gauge partnership to continue in the back woods of Virginia and North Carolina. The J&B has connections with a narrow-gauge system that extends far enough south to include the iconic Tweetsie, the East Tennessee and Western North Carolina (ET&WNC).

Let's follow along as Bruce works through a run in his own words and pictures:

The J&B is designed for a single two-man crew (preferably engineer/conductor) operation. In my world, the J&B runs one train in each direction each day. Since it is just me and a visitor, I take the time for things like water stops and connecting glad hands [with rare earth magnets].



Today we are running a westbound out of Green Springs headed for Jackson. I use JMRI switch lists (more on switch lists in Part 4). Today's work looks like this:

- Depart Green Springs with J&B hopper 10, a Shell tank, J&B box 105 and Caboose 503.
- At Occoquan, drop J&B box 105 at the mill and pull J&B box 110 from the mill and Northland box 3 from the Interchange.
- At Jackson, a local move of EBT hopper 805 to Miracle Chair and pull J&B box 121 from the textile mill.

All in all, it looks pretty easy, let's see how it goes.



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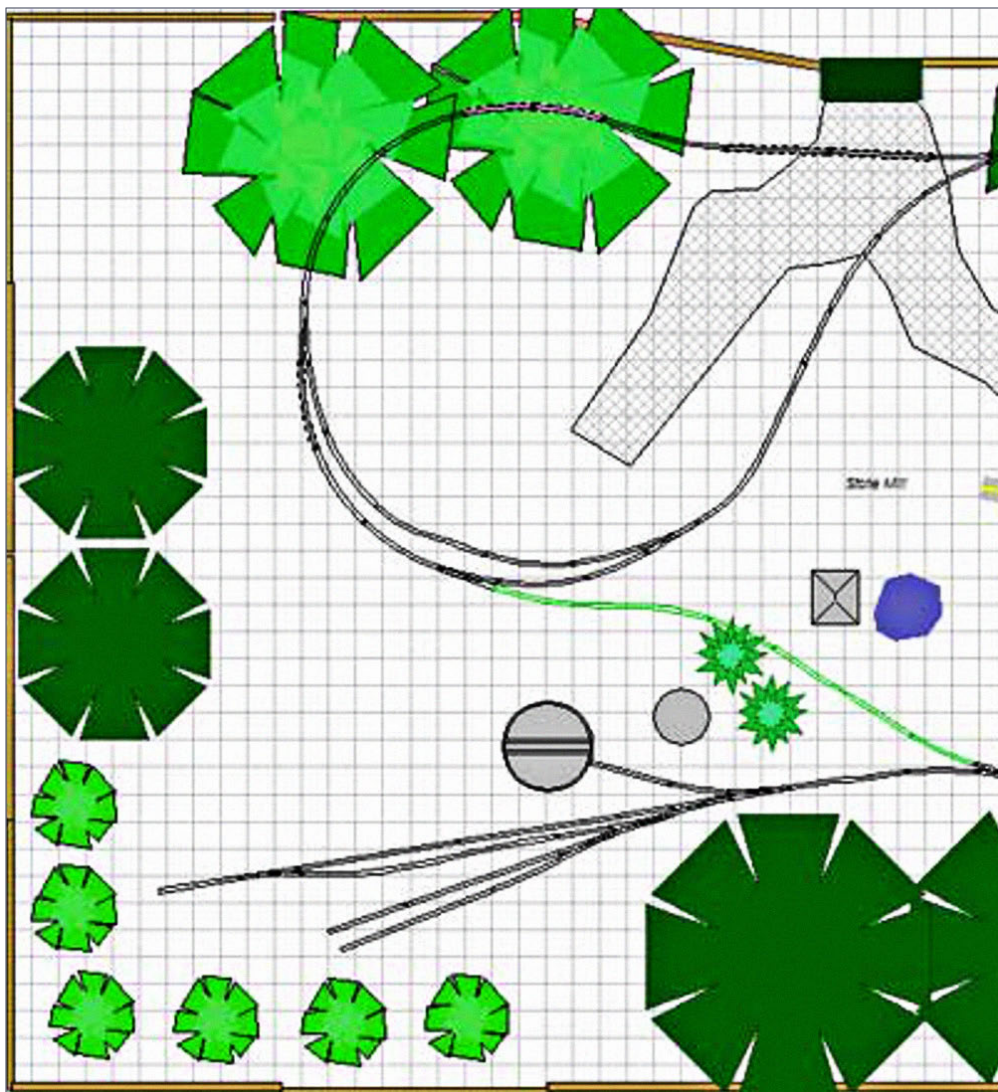
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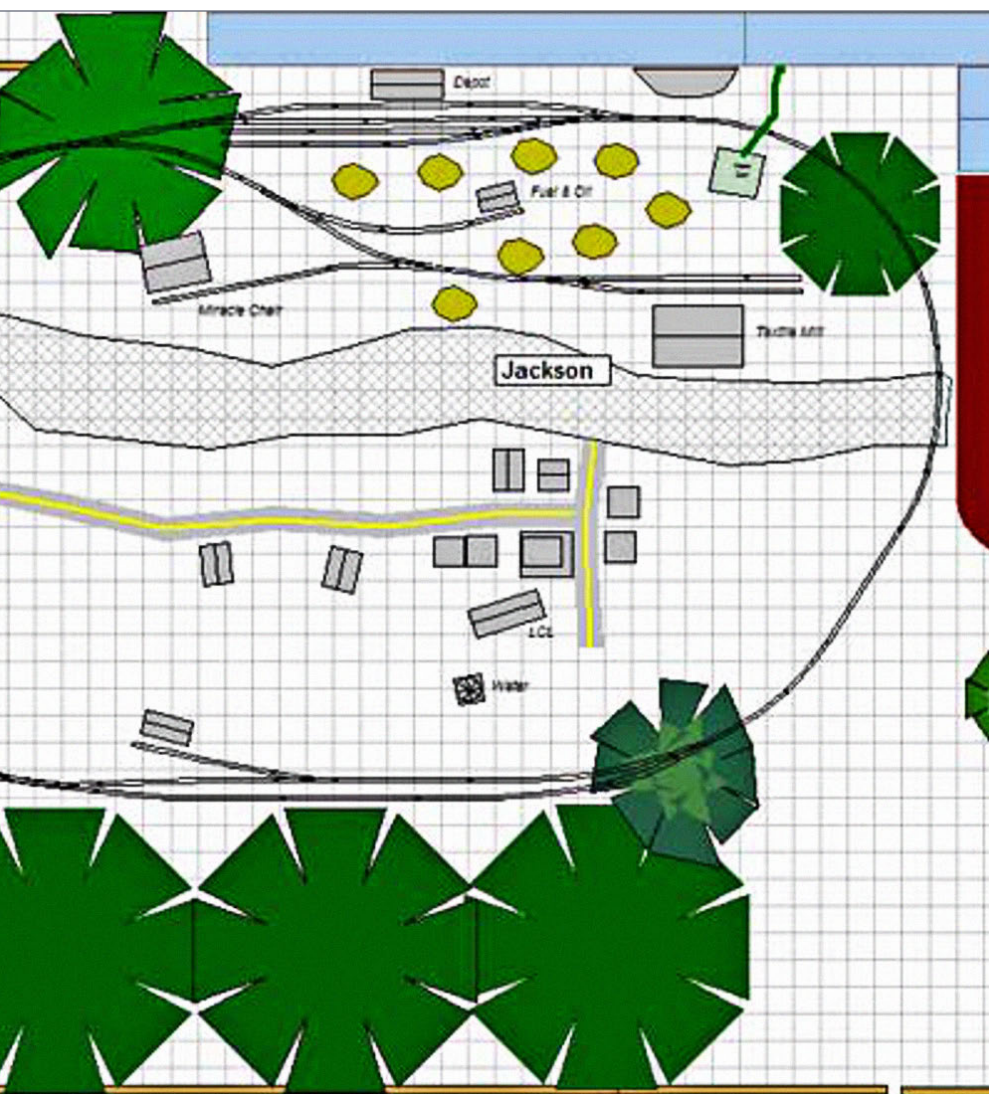
1. The Jackson and Burke occupies a space approximately 60' by 40' in the Chandler family back yard. The green line in the track plan is a connection to allow for a continuous loop, but during a normal ops session, it is an Interchange track with narrow-gauge lines to the south.



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COMMENTS



2. The loco starts on a service track, and must first be turned.



3. Next, I pull the caboose from the caboose track. Note that I want caboose 503, but the 501 is in front of it. I will have to couple my locomotive to 501, pull both cabooses to the departure track, drop 503, and return 501 to the caboose track.



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4. I'll build my train in front of caboose 503 on the departure track. I pull J&B hopper 10 and box 105 plus the Shell tank, and am ready to depart Green Springs.



5. At Occoquan, I've got to drop box 103 at the mill – I break the train and back 103 up the siding to the mill. The only wrinkle is that I also have to pick up the boxcar at the mill, as well as the boxcar on the Interchange. I couple box 103 to 110 and pull forward, dropping 110 on the Interchange with Northland 5 ready to be pulled. Now I can set out 103 at the mill before retrieving the two boxcars on the Interchange track.



6. I reassemble the train and head toward Jackson as I think of the next move. The hopper is on a trailing-point siding at Mills Fuels and has to be moved to the facing point siding at Miracle Chair. I'll break the train and leave it on the

main; fouling the main is not a problem on my backwoods line. The main does have a problem though – it's on a steep grade. I keep a big spike handy to simulate setting brakes.



7. With just the loco, I back down the siding and pull the hopper, coupling it to the front of the train.



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8. Then, using the passing siding, I run around the train to place the loco on the rear.



9. I push the train forward so the hopper clears the switch of the runaround. I pull the train back, then run around it to pick up the hopper.



10. I back down the spur to Miracle Chair. There is a boxcar at the chair company so it is pulled, the hopper spotted behind it and then the boxcar is replaced on the siding.



11. My last pickup is at the textile mill. This one is easy – I just back up and couple to J&B box 121.



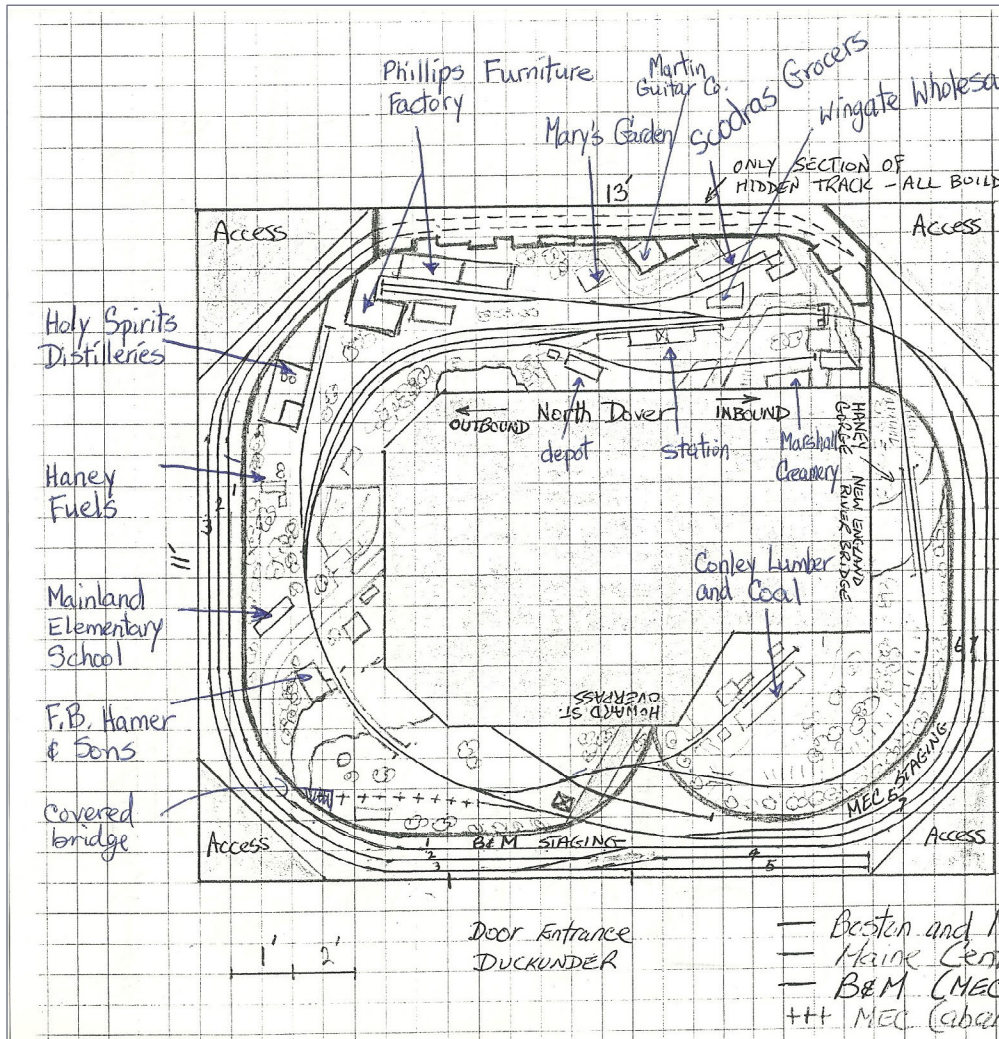


12. My switching is finished. I head up the grade and reassemble my train, making a water stop.



13. I depart Jackson across the bridge and into west-end staging.

That completes the run for Train #2 as it enters the staging loop. This simple run servicing the towns of Jackson and Occoquan took about an hour to complete in a relaxed way characteristic of narrow-gauge operations everywhere. The train will return as #1 to complete the ops session.



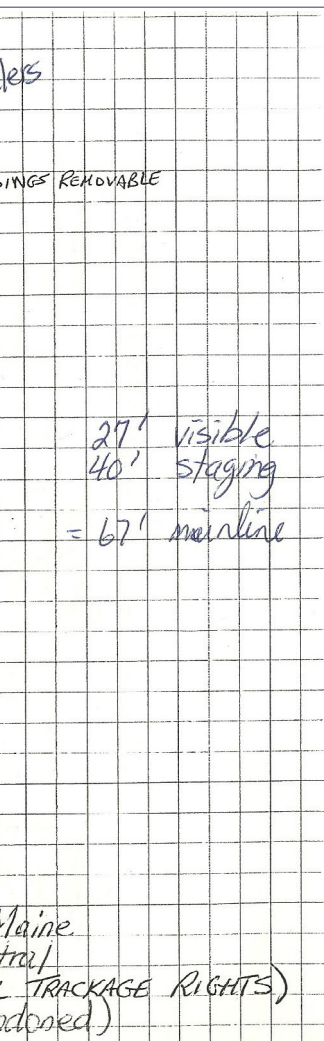
MIKE HAMER'S BOSTON AND MAINE

Mike Hamer's layout captures the 1950s Boston and Maine in HO scale in a 13x11 foot space. This layout has a unique approach to staging – the staging encircles the viewed layout area, and is concealed by scenery. Mike stages several trains to provide a wide variety of switching tasks in the fictitious town of North Dover, NH, the only town on the layout.

North Dover is located on the B&M main, but is also a junction with the Maine Central. The layout can be seen on a series of Youtube videos created by Chris Lyon at lyonvalleynorthern.blogspot.com/2012/02.

Mike puts together an ops session by sequencing the runs of several different trains that call on North Dover for switching. North Dover has a local switch engine. Typically, a two-man crew will be given the switch list for a through train that originates in staging. First, they marshal any required cars in North Dover and then bring the train into town for its pulls and setouts.

Let's follow along as Mike takes us through the operation of the 40-car Newsboy. The switch list (Mike uses handwritten switch lists – more on this in Part 4) for the Newsboy shows that it will set out four cars in North Dover and pull five[15 a, b].



14. A map of Mike Hamer's 13x11' layout, a 1950's rendition of the Boston and Maine that is delightful to view and very enjoyable to operate.

2a



THE BOSTON AND MAINE RAILWAY COMPANY

SWITCHING ORDERS

Location: N. Dover

Date: May 27/58

Car Initials/Number	Track Number and Destination
Block traffic for inbound BM train N2 to inbound end of North Siding	
CN 486977	40' Box
PFE 47497	Reefer
CB&Q 82059	Gondola
ERIE 21203	Covered Hopper
NKP 91067	Covered Hopper

15a, b. There are two switch lists for the Newsboy, B&M train N2. The first is for the North Dover switcher, while the second is for train N2 itself.



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THE BOSTON AND MAINE RAILWAY COMPANY

26

TRAIN ORDERS

Location:

Rigby Yard

Train:

N2 "The Newsboy"

Date:

May 27/58

Drops	Lifts
Slow Order	Restriction
MP 43	
New England	River Bridge
Marshall	Cut
<u>Set-Outs</u>	<u>LIFTS</u>
BM 75161	CN 486 977
HTCX 1739	PFE 47 497
SHPX 8769	CB&Q 82 059
PM 18881	ERIE 21203
	NKP 91067



16. The first order of business is to use the North Dover switcher #1223 to prepare the cut of cars to be pulled by the Newsboy.



17. These cars are on the north and south service tracks, with the main running between them. They need to be placed in a single cut of cars in the order shown on the switch list.



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18. Mike found some of the cars he pulled in a string on the north siding.



19. Some of the cars on the switch list came from the string on the south siding.



20. Mike placed the final cut on the inbound end of the north track, in the order indicated on the switch list. The cut is now ready for the arrival of the inbound manifest freight, the Newsboy.



21. The next step was to reposition the switcher on the south track. In effect, Mike's mainline track, combined with the two sidings, acts as a small classification yard, allowing the crew of the North Dover switcher to assemble its block of cars.





22. Now Mike is ready to bring in the Newsboy – a 40-car train headed by a three unit lashup on its trip from Portland to Boston. Here the lead units emerge onto the bridge over the New England River.



23. The Newsboy arrives in North Dover. Mike cuts the train in front of the four cars it is dropping there.



24. Next, he couples his switcher onto the four cars The Newsboy is dropping, and pulls them forward to clear the switch for the north track. He then backs the cut onto the string of cars he prepared earlier for the Newsboy.



25. Mike pulls the entire string forward off the north siding, then backs it up to couple it to the Newsboy. He then uncouples the Newsboy's cars, and marshals the four dropped cars back to the north track. You can see Mike's arm reaching in with the uncoupling pick.



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26. Finally, Mike reassembles the train on the main, and clears it for departure from North Dover for points south. In actuality this lengthy train heads back into staging.

This whole sequence takes almost half an hour, since the movements are made in an unhurried manner. Mike has staged seven trains, so the ops session could go on for a few hours to run through a full sequence of trains (the construction of a plan for an ops session is covered in Part 3). When the local North Dover crew is not busy blocking traffic for inbound and outbound trains, they are kept busy shunting cars to and from local industries. ✓



RATE THIS ARTICLE

DOUG MATHESON



Doug authored a chapter in the OpSIG (Operations Special Interest Group) publication, *A Compendium of Model Railroad Operations*.

Doug has been participating in ops sessions for decades. He has also presented NMRA clinics on ops, organized ops sessions for a number of owners of large model railroads, and served on a model railroad as a dispatcher using Timetable and Train Orders, and on another layout using the Occupancy Control System (Canada's version of Track Warrants). These all fit into the more heavyweight category of prototype-based operations.

At the same time, Doug has built and operates a very modest HO scale layout. He has also long modeled in Fn3 in the garden, including running live steam.

Doug thanks Bruce Chandler for his help in allowing his Jackson and Burke RR to be used as an example and inspiration for this article. N scale modeler Mike Dawson provided insightful comments on operations in a scale where reporting marks are difficult to read. A big thanks also to a number of Doug's fellow members of the NMRA (Niagara Frontier – St Lawrence Division) who offered many suggestions and edits along the way. These include Alex Binkley, Mike Hamer, Chris Lyon, and Peter Nesbitt. In particular, Mike Hamer also allowed his Boston and Maine RR to serve as an example.

Besides operations, Doug's other railroading interests include the history of passenger travel by rail, and the historical development of signaling systems.

Doug retired from Canada's federal public service and lives in a rural area south of Ottawa, Ontario. ■



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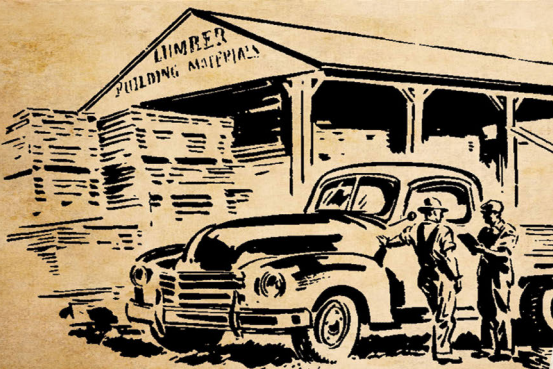
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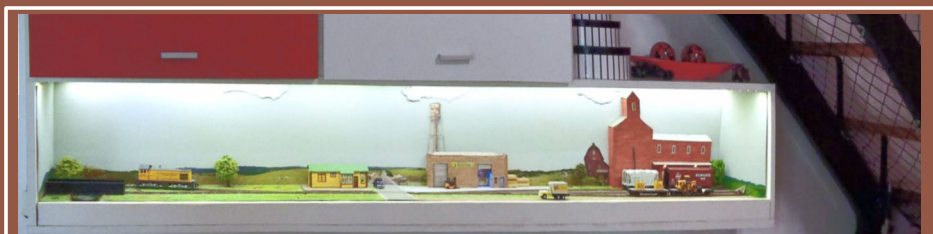
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The Santa Rita mini layout



Model Railroad Hobbyist | January 2021



FERNANDO BELLINI BUILDS A SMALL LAYOUT AS PART OF A STORAGE CABINET SYSTEM ...

I LIVE WITH MY FAMILY IN A SMALL HOUSE IN Buenos Aires, Argentina. Lack of space is a constant challenge, even more so as the kids grow. I love model trains, but this lack of space is a real constraint.

After years of armchair modeling and planning, I finally built a 5'-5" x 3' island-style layout that I could store behind a bookshelf in the dining room. I kept the structures, trees, and vehicles stored in boxes. When I wanted to operate, I would place the layout base on the living room table, set up everything, and play the whole weekend.

I was quite happy operating the layout this way for a couple of years, but then we needed to make changes to the house. We got rid of the bookshelf and, unfortunately, the layout had to go, too. Fortunately, I was able to sell the layout and save the money for the next.



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Since I did not have a dedicated space for a layout or a place to store it, I thought about putting a small layout inside a piece of furniture that would fit with the decor of our house. I found a wall in the dining room where with space for a hanging shelf up to 6'-8" wide.

My wife and I also needed more household storage space, so we came up with a design for a new set of wall cabinets. Our design added storage and fit the decor of the dining room. Most importantly, a shadow-box layout was part of it [1].

CONSTRUCTION

The furniture and walls in the room are red and white, so I decided to build the new cabinets with white $\frac{3}{4}$ "-thick melamine boards. I had them cut to size in the Argentinean version of Home Depot.

I wanted the layout to be on the lowest shelf, and this required some planning. I wanted it to be relatively high and out of the way, but I did not want the top shelf to be out of reach. I decided that the lowest shelf would be five feet from the floor [2].

I made the shelf 6'-8" long by 8" wide for the base of the layout and set the next shelf 10" above it [3]. I spaced each of the other shelves at 8" up [4]. I patterned the length of each successive shelf to match the rise of the staircase [5].

Once I completed the basic shelf structure, I added the doors. I chose a vertical design, with the hinges on top [6]. I used a pneumatic shock system to hold the doors open.



1. Our dining room layout. I chose colors and materials that blended with existing trim.

THE SANTA RITA MINI LAYOUT | 3

2. At 5' off the ground, this lowest shelf will hold the layout.



3. I set the second shelf 10" above the first, which provided me with 2" for the layout benchwork and an 8" ceiling for the layout.



4. I made the remaining two shelves each 8" high. I set the length of the successive shelves to match the rise of the staircase behind them. I used screws to assemble, and drilled pilot holes, which made assembly easy.



5. The completed shelf structure. It matches the rise of the stairway, and the top shelf is reachable.



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6. The doors are in place. I painted them brick-red and white to match the rest of the room.

With shelves and doors in place, it was time to start the benchwork. I used 1" x 1.5" pinewood strips to frame the sides, back, and joists, and a 1"x2" strip for the front to serve as a fascia. I glued them together and reinforced with small screws. The final step was to carve channels into the tops of the joists to accommodate cables [7].

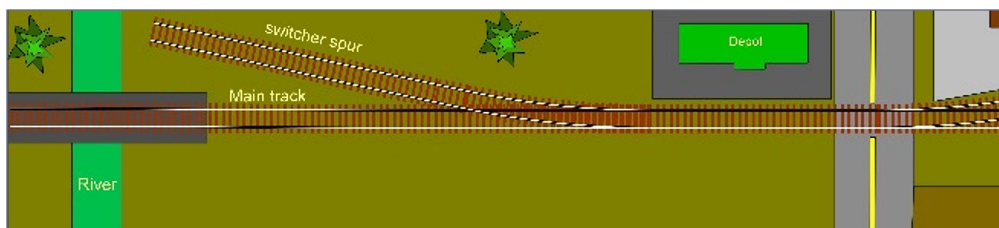
I cut a 1/8" thick sheet of MDF to size for a baseboard. and glued it to the frame, reinforcing it with nails. Once the board was in place, I tested the layout's level with a piece of flextrack and a boxcar [8].

Once I had confirmed that the baseboard was level, I laid 1/4"-thick white foamboard to serve as the layout surface. I used foam-friendly glue, weighted the foam with books, and allowed it to dry overnight [9].

LAYOUT DESIGN AND CONSTRUCTION

With an available space of only 6'-7" x 8", I had to come up with a simple design. Initially, I thought about doing a small switching layout with a runaround but set that idea aside because it would have consumed too much space.

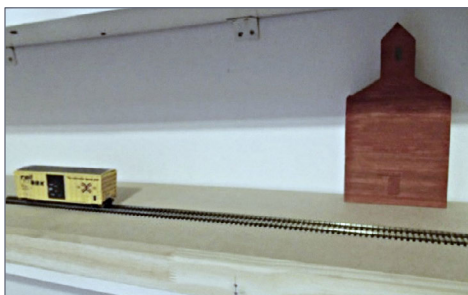
An inglenook design looked like a good option, with one variation. Because there was no space for a runaround, I added a spur at the opposite end of the inglenook to allow a switcher



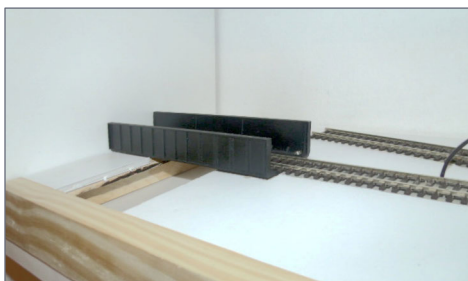
7. The completed benchwork framing. Note the grooves I carved into the joist tops for wiring.

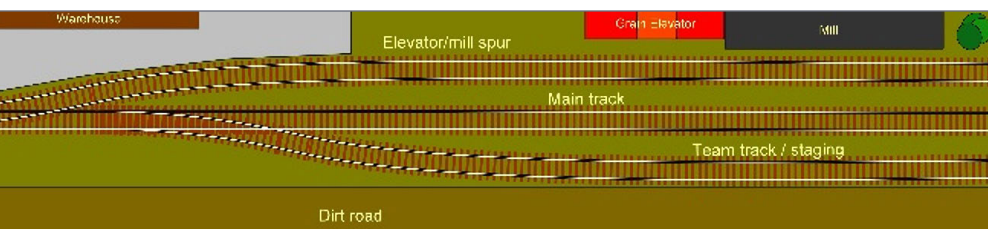


8. With the MDF board added, the project began to take shape. I tested the level using a couple of flex tracks and a box car. The boxcar didn't move, so the board was level.



9. I laid 1/4" foamboard over the 1/8" MDF sheet. I chose these thin materials so the layout surface would be below the top of the fascia. I made the cut shown here to model a river under the bridge.





10. The final design. My goal was to create something simple to make switching moves in a prototypical fashion. This turnout configuration gives more room than the traditional ladder, and allows the main track to be in the center.

to negotiate the job if the incoming train is approaching the turnouts facing the points [10].

“Santa Rita” is the chosen name for my layout and the town it serves. First it is the name of my neighborhood here in Buenos Aires. Second makes a nice fictional town in Southern California.

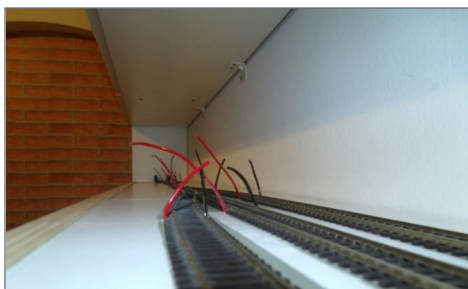
I chose Peco Streamline code 100 track, since it is readily available locally. I needed only four flex tracks and three turnouts. I used a Dremel rotary tool to cut the flex track to size.

After testing with a discarded piece of flex track and foamboard, I found that gluing the track with white glue and then ballasting was enough to hold it. Laying track is probably the most critical step, so I gave it my best effort. After all, if trains don’t run smoothly, the rest is useless [11].

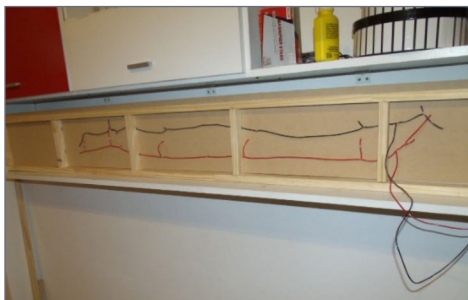
With the track laid, I was ready to wire the layout. I decided to add feeders to each segment of track to maximize continuity. I attached the feeders and ran them through holes to the underside of the layout.

Tilting the layout onto its side, I added two bus wires running the length of the layout, through the grooves in the tops of the joists. It was not difficult to access the underside of the layout; I simply had to tilt the benchwork on its side in the shelf and get to work. With the last feeder soldered, I had an operational layout [12].

11. Track glued to the foamboard and about to be wired.



12. The shelf was tall enough to allow me to set the layout on its edge for easy access to the wiring. Shown here are the rail power buses. Lighting power buses will come later.



13. I cut cardboard the thickness of the ties to size and laid it on the foam. This created the image of buried track.



14. A little ground foam finishes the look of a lightly used, nearly buried branch line.



15. The Santa Rita depot.



16. The interior of Santa Rita Depot. The furniture are printings from Wentworth model. The rest are real pictures scaled down.



The beauty of my benchwork design is ease of access to the underside. I could add more busses—to light structures, for example—simply by tilting the layout on its side and feeding the wires through the groves. With each pair of buses on plugin connectors, the layout is entirely self-contained and easily movable.

I wanted to model a lightly trafficked branch line with tracks nearly buried in the weeds. I cut pieces of cardboard the same thickness of the ties and laid them over the foam to achieve this look [13]. A coat of light earth-colored paint on the cardboard, plus some ground foam, and the effect was complete [14].

I scratchbuilt all the structures, including a variation of the Southern Pacific depot Tony Thompson presented in the November 2012 *MRH* [15]. It was impossible for me to get the exact windows and doors Thompson used, but a local manufacturer had some that worked nicely. I used wood strips instead of styrene for the construction [15].

I wanted to light the building interiors. As discussed, I laid a second set of bus lines under the layout to power the buildings. To make the buildings readily removable, I used a plug for each set of wires.

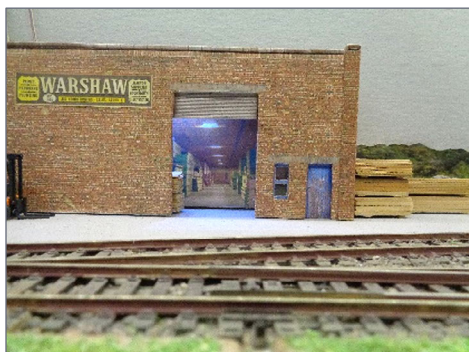
Lighting the buildings meant adding detail and highlights to the interiors. I accomplished this using furniture created from scaled-down photos on card stock. For the station, I accented the walls with photos I scaled and printed [16].

I wanted my main industry to be a grain elevator and a flour mill. I used photos found online and in magazines to create

17. The mill has a lighted interior with printed images. As in real life, not all windows are illuminated. The mill and elevator's corrugated roofs are made of painted and weathered styrene.



18. This warehouse from Scalescenes was the final building. Note the interior and other surrounding detail.



generic, low-relief models of these buildings using wood strips [17].

The elevator, mill, and station were my first attempts at scratchbuilding. Although they are not perfect, I learned a lot, and am satisfied with the results. I'm already dreaming up future projects.

I completed the layout structures with a low-relief warehouse built of cardboard from Scalescenes, and a bridge over a creek [18]. This was plenty. Living in a crowded city, I liked the idea of looking at an open landscape.

BACKDROP

For the backdrop, I began with cardboard. I cut to size to fit the three back sides of the shelf. I painted it a light bluish-gray and overlaid it with landscape images I found on Google.

I wanted to model a small town in wide-open space, so I looked through quite a few photos to find elements I could use to create forced perspective and the illusion of depth [19]. Once I had the photos, I processed them with Photoshop to stretch the images and adjust their lighting so they blended together.

Finally, to hide the wall brackets, I printed cloud images on cardboard, glued small magnets on the back, and placed them in position.

LIGHTING

Lighting presented another issue to resolve. The top of the layout casts a shadow from the room's lighting. My solution was to light the layout with LED strips [21].

I placed three strips – two warm-white on the front and back for daylight, and one blue in the middle to simulate night lighting. I designed a device to independently control each strip, and added another switch to illuminate the structures [22].

THE SANTA RITA MINI LAYOUT | 11

My original idea with the two warm-white strips was to get an even light and avoid shadows in the background. I discovered that by combining the lights that I had different options to represent different times of day.

19. The road crosses the railroad tracks and passes through Santa Rita, eventually disappearing into the plains in the distance. Forced perspective in different places gives depth to the layout, which is only about 8" deep.



20. To give the illusion that Santa Rita was only one small town on a long branch line, I used the perspective function on Photoshop. It took some effort and several attempts to achieve the right angles for the illusion.



21. I used three LED strips for lighting, two warm-white and one blue. Each strip has an independent switch, giving six different lighting configurations.



22. Night at the mill. Originally the blue LED strip was too intense, so instead of replacing it, I attached white duct tape over it, giving it a soft quality. Operating at night with this lighting is fantastic!



OPERATIONS

Due to the lighting configuration, I decided the front of the layout would be east and the back west. The trains would run north-south. Trains coming from the north are oriented to do the switching themselves. Those coming from the south need the help of the switcher. There are no hidden tracks or staging, so I have to build the trains on the main track. Generally, trains have a maximum of three cars, sometimes with one or two in transit [23].

Instead of operating randomly, I think it's more interesting to have a work routine. Having a team track is great, since any type of car can be spotted there. I have routines that cover about a week of work. Each "mini session" involves dropping one or two cars and pulling or respotting another one or two. Working at a slow pace takes between 15 to 20 minutes, which is great for my needs. The cars stay in position till the next "day" of operations.

CONCLUSION

For those of us who do not have the luxury of a devoted room, it can be a challenge to design a layout that does not look like an intrusion in the room. A shadow-box layout like mine offers the opportunity to integrate a layout with the aesthetics of the house. This allows me to have and enjoy a layout for now, rather than just dream about a future layout I can't have yet. ☑



23. A typical train arrives with a single engine and three cars, ready to do some switching.



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FERNANDO BELLINI



Fernando started in the hobby at the age of four when he received an AC Märklin train set. Later in his childhood, he switched to DC with an eclectic mix of European and American trains.

Fernando left the hobby at age 14 but resumed 11 years ago, aiming to play with his kids. Soon he got hooked again and decided to take it seriously, modeling only American trains.

Fernando lives in Buenos Aires, Argentina with his wife, two kids, and a rescued greyhound. He teaches mathematics and physics. He also plays bass with his country music band, No Bull. ■

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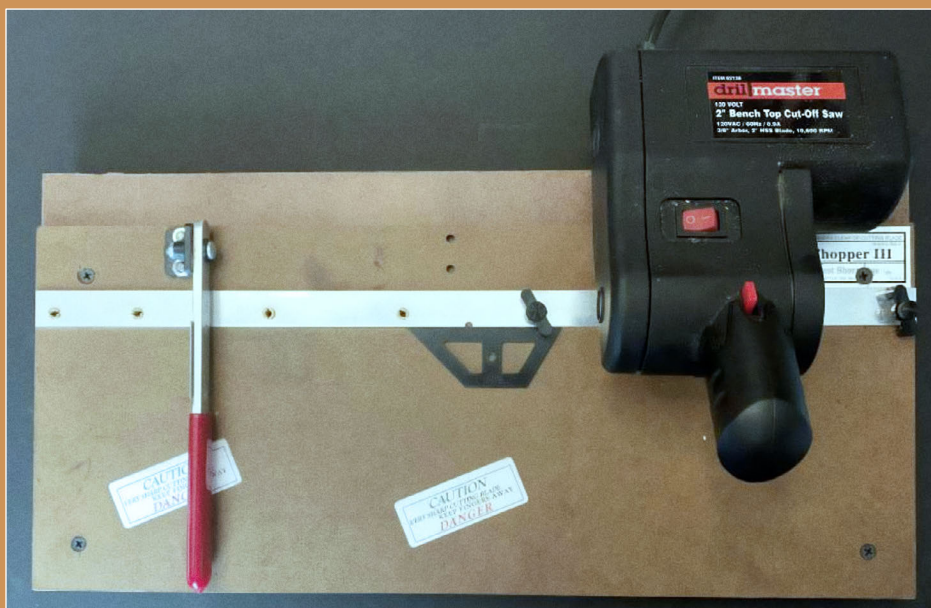


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Hobby chop saw



Model Railroad Hobbyist | January 2021

JEFF PALMER BUILDS A DESKTOP HOBBY CHOP SAW...



THERE ARE VERY FEW TOOLS I USE MORE THAN THE NWSL Chopper. For repetitive cuts, it's my tool of choice [1]. As a tool junkie, I have all three versions.

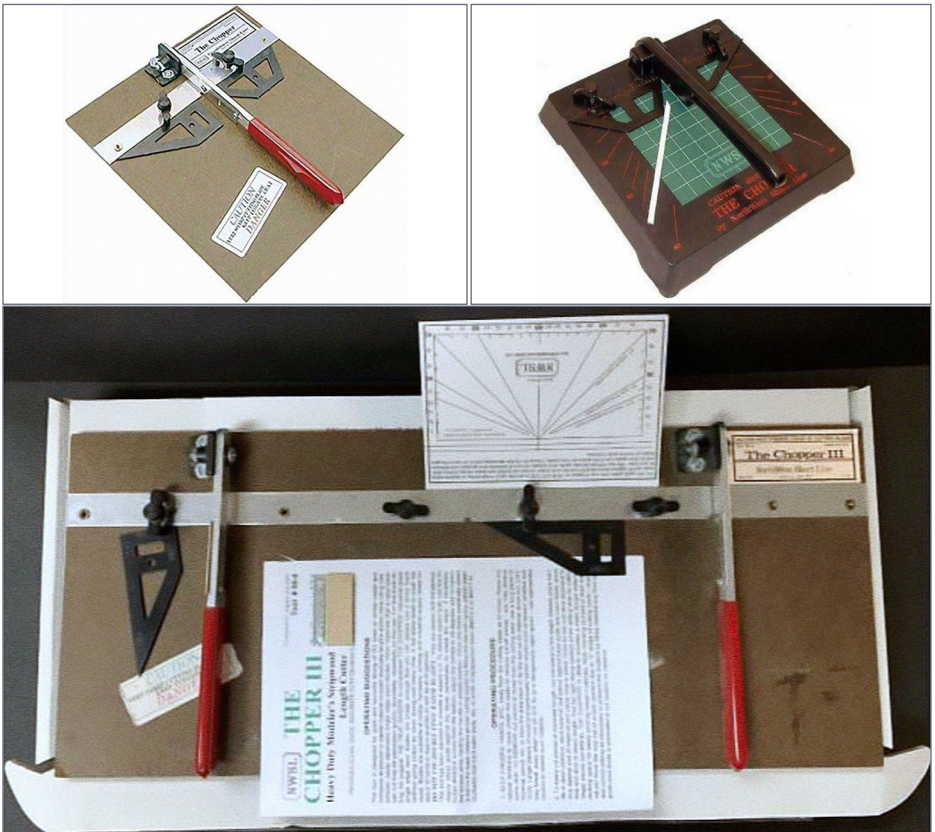
While my Choppers have cut thousands of pieces of scale lumber over the years, they have all had the same deficiency: blade deflection. As long as I was cutting 1" and 2" scale lumber, they did a perfect job. However, when I needed to cut 4x4s,

HOBBY CHOP SAW | 2

6x6s, and the dreaded 8x8s and 12x12s, the thin razor blade would deflect, ruining the square cut.

At first, I didn't notice my cuts were slightly off, but when I built my first trestle bridge, the pilings did not mate properly. The posts did not match flush to the cap. That started me looking for what I was doing wrong.

As I looked closer at the cut, I noticed the cut was not a true 90°. It was at a slight angle, and even curved a little. The blade was deflecting, as it cut through heavier material.



1. Clockwise from top: NWSL's The Chopper, The Chopper II, and The Chopper III.



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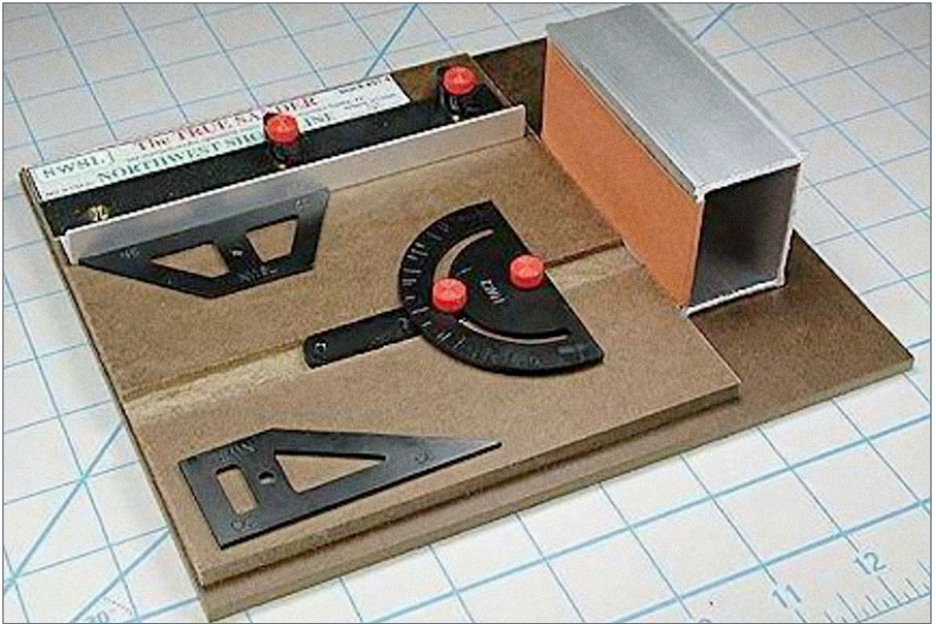
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As I researched the issue, I found that blade deflection was a known issue, primarily due to the thinness of the razor blade. The solution was either to use a guillotine Chopper or to replace the razor blade with a heavier knife-type blade.

Each of those solutions had its problems. Since I wasn't into re-engineering the Chopper, and it wasn't off by much, I opted for a different solution, the NWSL True Sander [2].

I used the True Sander to square-up the cut just made by the Chopper. It worked well. With a couple of quick swipes on the freshly cut end, it was square.

I happened to be browsing the power tool section of Harbor Freight when a small device captured my imagination. The Drill Master bench-top cut-off saw had a 2" blade, and was designed to make precision cuts in wood, metal, and plastic. In theory, this could be just the solution I was looking for [3].



2. The NWSL True Sander cleans up the mess the Choppers leave behind.

I examined a display model of this tool more closely. As I turned it over in my hand, it felt solid, but it was designed to cut one thing at a time (notice the vise) and not very quickly. I like the convenience of the Chopper, where I can set a stop and make repetitive cuts quickly, and though the saw would not have the same deflection issues, I did not want to sacrifice the convenience.

Still, I was trying to mentally turn this cut-off saw into a mini chop saw. The chop saw in my garage is one of my favorite tools for home repairs and projects. I had seen a hobby chop saw in Micro Mark's catalog that looked very similar, but at twice the price. I decided to gamble that I could somehow marry the cut-off saw to my Chopper III to create a hobby chop saw.

A few notes before we get into the project:

- Be sure to use furniture-grade plywood. Its smooth surface will make precision adjustments easier than rougher wood.



3. Could this bench-top cut-off saw be a chop saw?



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- Have all tools and materials you'll need before starting the project. Mid-project runs to the hardware store are distracting and time-consuming, and for a tool junkie like me, they also can be expensive.
- Read and familiarize yourself with the operating safety rules and instructions for the cut-off saw.

Open the cut-off saw box to find two plastic bags and a set of instructions. Put the smaller bag containing the bench clamp and Allen wrench back into the box. You'll need the Allen wrench and the instructions later on, especially when you need to replace the saw blade.

First step is to remove the vise. To do that, flip over the saw and locate the adjustment nut [5]. Holding your hand underneath the nut, and turn the adjustment knob counterclockwise until the nut drops into your hand.



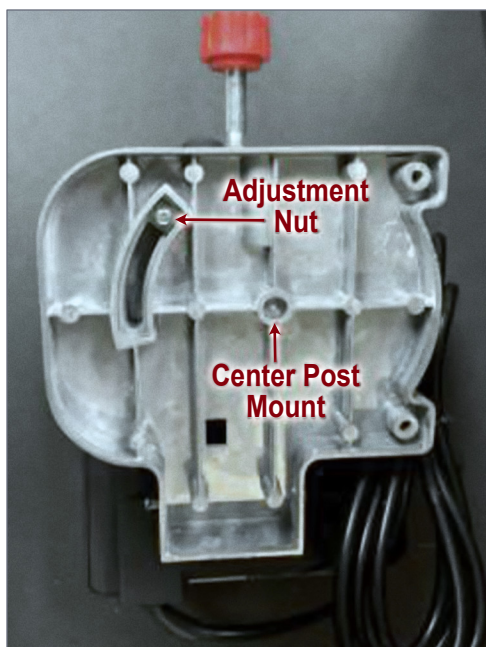
4. The cut-off saw is fresh from the package.



Set the cut-off saw on your workbench and pull the adjustment knob straight up to remove it from the vise. Thread the nut back onto the adjustment knob screw so nothing gets lost, and set it aside. At this point, the vise is loose, so lift it straight up and set it aside [6].

Next, we need to turn our attention to the NWSL Chopper III, which will supply the table for our project. The first step is to remove the Chopper arm. While it is possible to place the saw such that removing the arm is unnecessary, I found the razor blade's existing notch and groove helpful in lining up the saw blade[7].

Flip the Chopper over and unscrew the arm's two mounting screws [8]. I removed the Chopper arm, rethreaded the screws into its base, and set it aside.

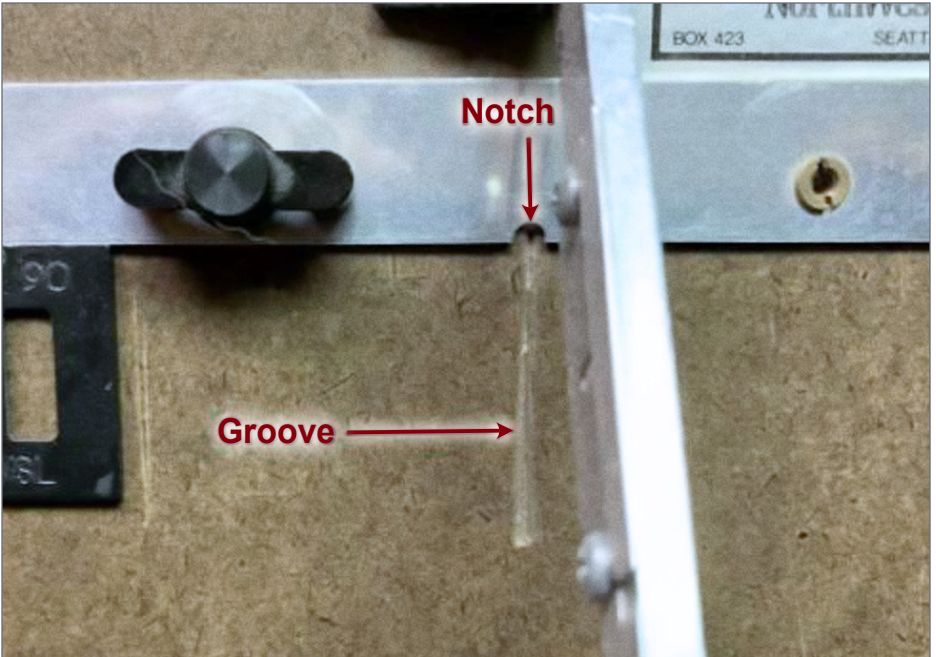


5. The underside of the cut-off saw.





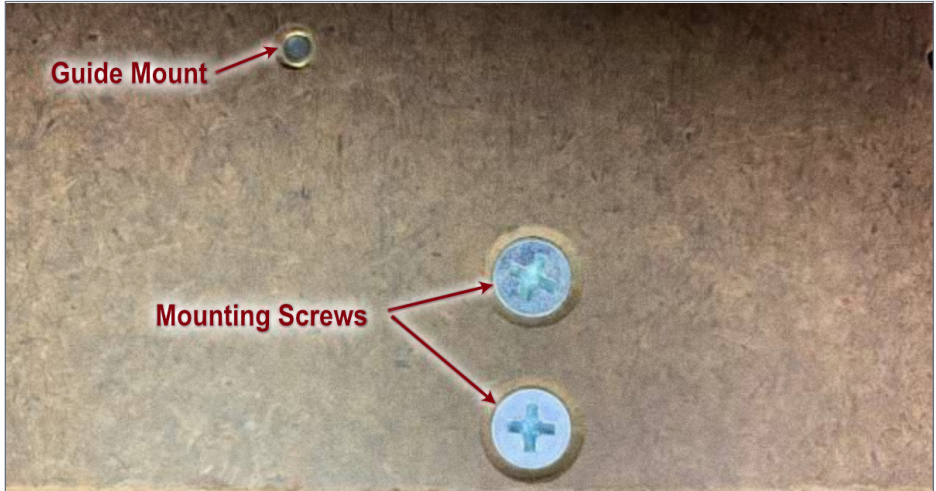
6. Cut-off saw with the adjustment knob and vise knob removed.



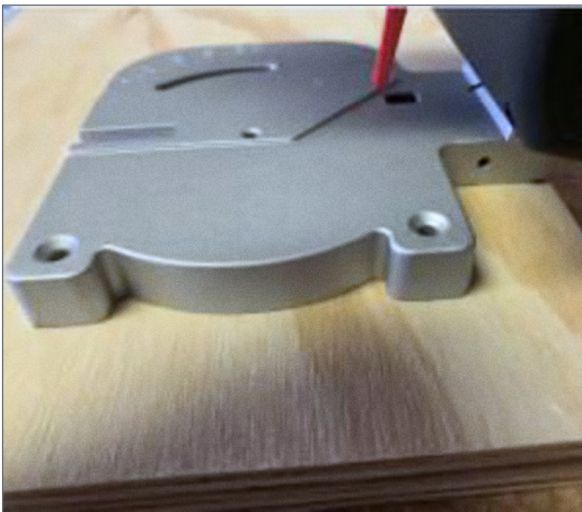
7. The notch and groove for the Chopper III.

MEASURING THE PROJECT

The Chopper III table will form the tabletop for our project, which will consist of three layers. The middle layer – I call it the cradle –



8. These are the mounting screws on the bottom of the Chopper III that need to be removed.



9. I aligned the cut-off saw's back with the rear edge of the plywood base.



will be a piece of $\frac{3}{4}$ " plywood with a cutout to house the base of the cut-off saw. The bottom layer will be a piece of $\frac{1}{2}$ " plywood. My goal was to align the cut-off saw so the saw blade would use the same notch and groove as the Chopper's razor blade.

To accomplish this, I needed to determine the throw (distance from pivot point to blade) I would need for the cut-off saw vs. the Chopper III. Since both the Chopper III and the cut-off saw had their respective pivots on their back edges, the throw is the determining variable between the two.

I found that the throw of the cut-off saw is $1-1/16$ " longer than the throw of the Chopper blade. If the Chopper III table's dimensions are $18" \times 7-5/8"$, then the plywood for the base and cradle for the chop saw project should be $18" \times 8-11/16"$.

The next step is to position the cut-off saw along the back of the base so that its blade, when lowered, will match the groove of the Chopper. The measurement from the groove to the edge of the cutting surface is $3\frac{1}{2}"$. Using these measurements, I cut a piece of $\frac{1}{2}"$ plywood to $18" \times 8-11/16"$ and maneuvered the cut-off saw along the back edge until I had the blade $3\frac{1}{2}"$ from the edge [9].

To make this measurement, I used a machinist's square butted up to the side of the plywood base, and a ruler – a good tape measure will do the trick, too – to find where to place the face of the cut-off saw blade. Make sure that the back of the saw is aligned to the back edge of the plywood base. Once everything is aligned, use a pencil to outline the cut-off saw's position on the baseboard, but do not mount it yet.

CREATING THE CRADLE

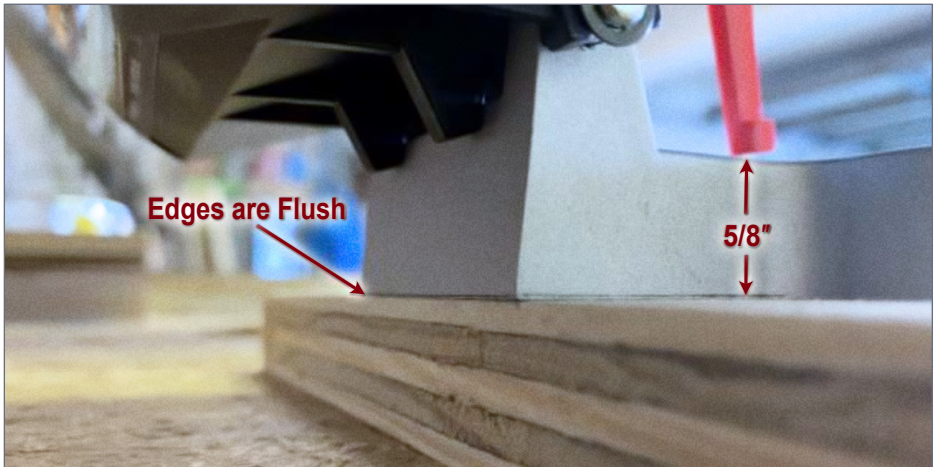
The metal base of the cut-off saw is $5/8"$ thick [10]. My local Home Depot does not carry $5/8"$ plywood, so I used $\frac{3}{4}"$ plywood, and I cut an $18" \times 8-11/16"$ piece for the cradle. Next, repeat the process used for the base, position the cut-off saw,

moving it along the back of the board so that the blade is $3\frac{1}{2}$ " from the edge. Draw the saw's outline on the cradle [11].

This time, we're going to cut out the outline with a saber saw. I used a $\frac{1}{2}$ " drill bit to drill four holes close to the corners where the jigsaw would have to make a turn. I opened up the 2" cut using my radial arm saw. I wanted this cut to be a little more precise, to help secure the cut-off saw.

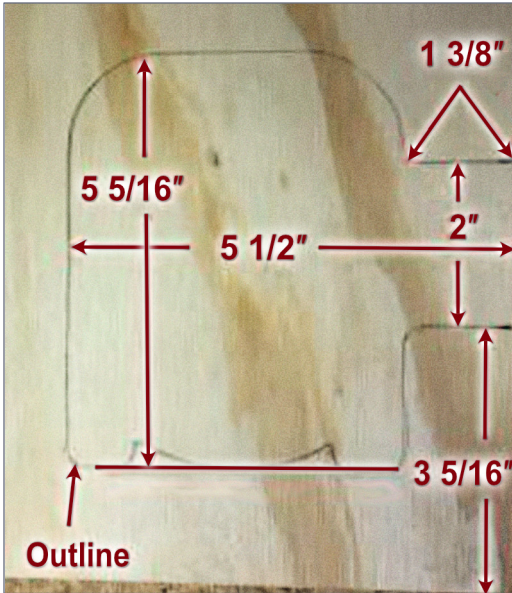
After establishing the precise 2" opening with the initial chop saw cuts, clamp the board to the work surface and cut the rest of the outline with the saber saw. I found it more effective to square off some of the edges, rather than attempt to follow every curve[12]. So long that the 2" opening is precisely cut, it will be sufficient to hold the cut-off saw's base snugly.

With the cradle in place, it's time to align the cut-off saw blade, but first a slight modification is needed to the Chopper III table. Cut a slot at least $\frac{1}{4}$ " wide in the top (above the guide rail), 4-3/8" from the right-hand edge to accommodate the cut-off saw's safety lever [13].

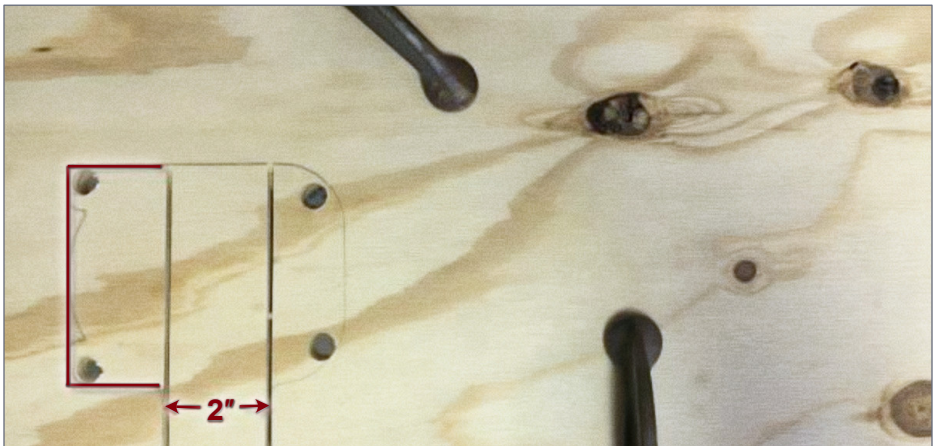


10. The cradle layer must be deep enough to house the $\frac{5}{8}$ " base of the cut-off saw.





11. The cut-off side is outlined on the cradle board, ready for cutting.



12. I used a chop saw to precisely cut the 2"-wide opening for the cut-off saw. It was not critical to follow the rest of the cut-off saw's outline exactly, and I found it worked better to square-off some curves, as outlined in red.



13. A 1/4"-wide slot cut about 4-3/8" from the right edge of the tabletop.

PUTTING IT ALL TOGETHER

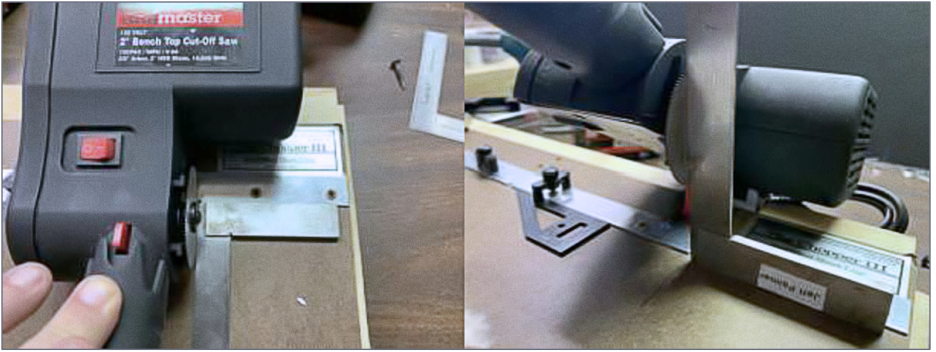
With that, it's time to do a test assembly – without screwing or gluing together – and align the blade. Take your time and align the base, the cradle, and the Chopper surface so that all the edges line up. Any issues will likely require adjustment to the cradle.

With everything in proper alignment, remove the blade shield. To do that, put your thumbs on the bottom of the shield, front and rear, and push up. The shield should slide right off, but be careful not to apply too much force [14].

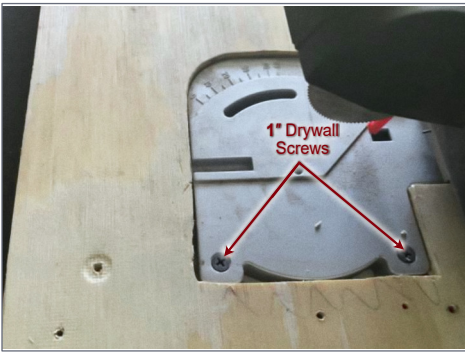
“Trim and try” by trimming the cradle. Use a file or rasp until the saw is correctly positioned. Once the blade is square, remove the Chopper table and use 1" drywall screws to mount cut-off saw to the base. Drywall screws are self-tapping and hold well [15].

Early testing revealed that in order to make a clean cut, I was cutting through the 1/4"-thick Chopper III table. To provide extra protection and clearance, I added an extra 3/8" Masonite board between the cradle and the Chopper III table [16].

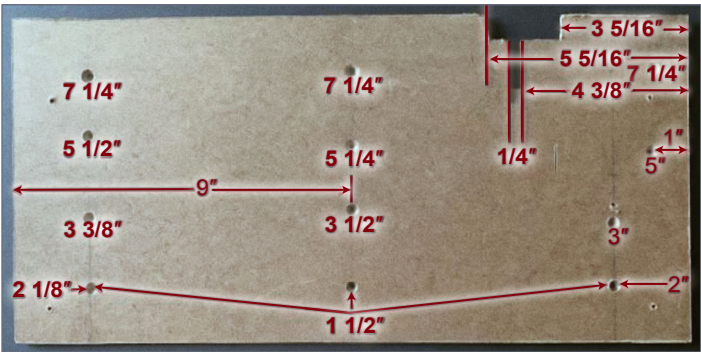




14. Checking the table and saw blade alignment.



15. Mount the cut-off saw to the base with drywall screws.



16. A supplementary Masonite spacer board between the Chopper board and the cradle reinforces the Chopper board and provides a hideaway for screws. Note the drilling pattern.

I also found this “spacer” board useful for holding the main assembly together. I clamped the boards together and used a 5/64 drill bit with a #5 countersink to drill pilot holes in the pattern shown in [16]. I installed a dozen 1-1/4” drywall screws to connect all three layers.

While I might have gotten away with fewer screws, it was minimal effort and cost to over-build. Note that if you should change the pattern, there are three critical screws on the right-hand column. Remember that the steel foot of the cut-off saw is just underneath that top layer of Masonite, and it will not drill well.

It is critical that all screws are flush or even slightly below the surface of the Masonite. You should not feel a screw head if you run your hand across the top of the spacer board. Adjust your screws and countersinks as needed [17].

Once the spacer layer is secure, slide the Chopper III table onto the assembly and secure it. Using the same countersink and drill bit used on the spacer, drill four holes 1-1/8” from each



17. The dozen screws must be flush with or below the surface of the spacer layer to accommodate the Chopper III table properly.

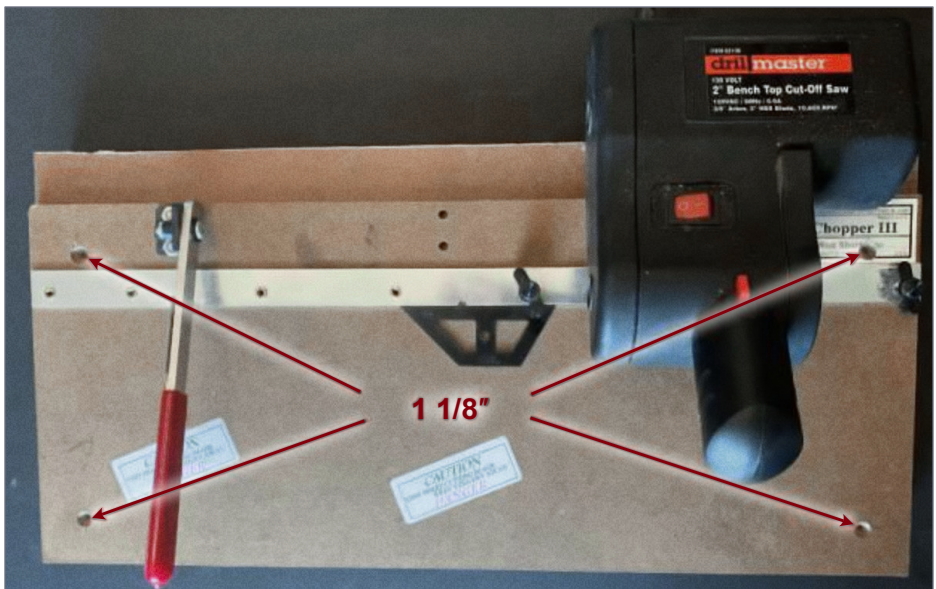


edge, as shown in [18]. Complete the assembly with 1" Drywall screws.

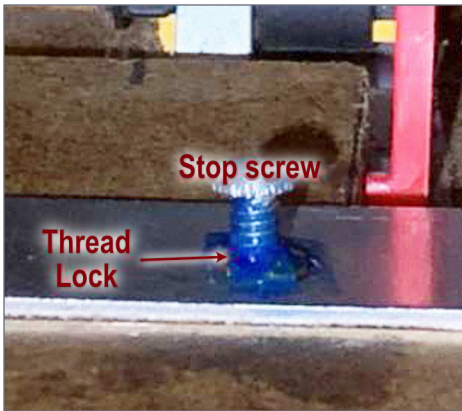
One more feature I added to my new hobby chop saw was a stop screw to prevent the saw cutting too deeply into the table or hitting the metal guide rail on the Chopper III. Use a ½" #6-32 machine screw. Screw the machine screw into the brass guide holder and turn to adjust the height. Once properly adjusted, use Thread Lock to prevent further movement [19, 20].

This saw has come in handy while building several dozen structures. It has been friend tested. I hope yours will serve you as well. I'm looking at the Micro Mark version, which has a blade guard. I'll keep you informed. ☒

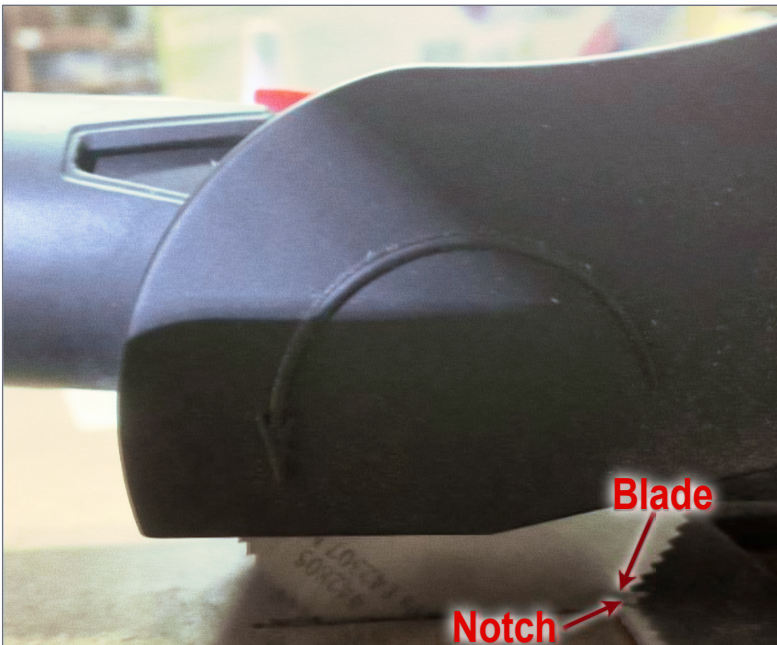
See the following pictures on the next page ...



18. The four assembly screws should be 1-1/8" from each side, in the corners. Note that the second NWSL Chopper arm remains intact, so this tool offers the best of both worlds.



19. The stop screw is in place, with Thread Lock cementing its position.



20. The saw blade should lower far enough for a complete cut, but not so far that it makes contact with the guide rail on the Chopper III base or the saw's own metal base.



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21. This completed chop saw will make repeating cuts a cinch.



RATE THIS ARTICLE

JEFF PALMER



Until Jeff retired, he spent 50 years developing software, and 25 years as a college professor.

His interest is in logging and mining with narrow gauge.

About two years ago, he earned his MMR (Master Model Railroader) certificate from the NMRA. During that journey, he had the privilege of meeting many of the modelers he looked up to. His goal is to be recognized in this group someday. ■



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SAVVY MODELER *Online*



RATE THIS ARTICLE

Model Railroad Hobbyist | January 2021



A scratchbuilders approach to tracklaying

Youtube model railroader **Michael Eldridge** shows the steps he follows to handlay his track, complete with tie plates and spikes on every tie! If you want to treat laying your track similar to how you scratchbuild any other model, then this is how you do it.

While this tedious approach to hand laying your track may not be for everybody, Michael notes he particularly enjoys this part of the hobby. ■



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JANUARY NEWS

column



Model Railroad Hobbyist | January 2021

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



IN MEMORIAM

John Arthur Glaab 1940—2020

John Glaab, internationally recognized expert on brass railroad models, passed away from Covid 19 on December 1. Following his retirement from NASA as a space flight project manager, John established Peach Creek Hobbies in Silver Springs, MD. He developed the shop into one of the largest brass dealerships on the Eastern Seaboard. In addition to brass, Peach Creek specialized in steel mill modeling, a reflection of John's heritage in the steel mill country of Western Pennsylvania. John wrote numerous articles about brass models. He co-founded *Brass Modeler & Collector* magazine with Jack LaRussa, and in 1994 authored the second edition *The Brown Book of Brass Locomotives*. During the late 1990s John wrote a monthly column about brass in *Rail Line News*. John was also an expert on the Chesapeake & Ohio Railroad and was a former president of

THE LATEST MODEL RAILROAD PRODUCTS, NEWS & EVENTS

the C&O Historical Society. John and his late wife, Christine, were both railroad buffs. They maintained a vacation home near the Cass Scenic Railroad State Park in West Virginia, the home of several operating Shay locomotives. They became involved in the local community and established a scholarship fund for the master's library science program at the University of Maryland.

CLUB CARS



The **Burlington Route Historical Society** is selling both HO and N scale versions of CB&Q 40' PS-1 boxcar No. 37000. The prototype was

built by Pullman-Standard in 1948. The N scale ready-to-run model was produced for BRHS by Micro-Trains. The HO scale model is an Accurail kit. For additional information visit burlingtonroute.org/store.



The **Soo Line Historical and Technical Society** has an HO scale kit for an 11-panel 41' 5" steel gondola with three different

decorating schemes. The model represents cars built by American Car & Foundry in 1953. The kit, produced for SLH&TS by Accurail, is available in the original Duluth South Shore & Atlantic scheme (above).





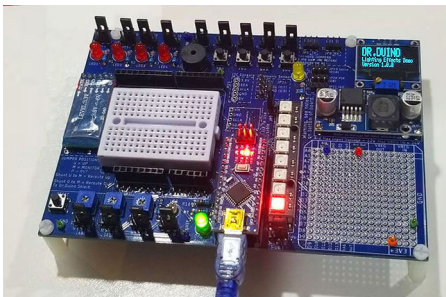
Soo inherited the gondolas in 1961 and repainted them as their own while retaining the car number.



In the mid-1970s some of the aging gondolas were given COTS panels and repainted with bolder reporting marks. For additional information

visit <https://www.sooline.org/Models>.

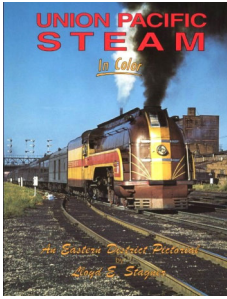
NEW PRODUCTS FOR ALL SCALES



Innovative Electronic Solutions has introduced the Dr.Duino Explorer – Model Railroad Edition. Tailored for model railroaders, the Dr.Duino enables testing and automating model railroad accessories in one Arduino

uno and nano compatible kit. Hardware and software is included to build turnout controllers, perform block detection, and create lighting and sound effects. Membership to Dr.Duino's Labs is included with purchase. For more information visit www.DrDuino.com/MRH.

Morning Sun is selling a digital reprint of *Union Pacific Steam in Color*, by Lloyd Stagner. The on-line PDF publication focuses on steam power from 0-6-0s to Big Boys on the historic



Eastern District of the Union Pacific. Steam expert Lloyd Stagner narrates the story of a steam stronghold from class to class, taking the reader through more than 200 in-service photos in yards and on the road. For additional information visit morningsunbooks.com.



Motrak Models is selling a kit for a wall mounted rack with shelves sized for Vallejo 1.35 oz. paint bottles. Construction is pre-cut 1/8" thick Masonite hardwood. The assembled rack measures 10.75" wide x 12.75" tall x 2" deep. It will hold 21 Vallejo bottles.



Motrak is also producing a spray can paint rack, designed for 3oz spray cans. Holding up to 12 spray cans, the rack is made of 1/8" Masonite hardboard and measures 10.25" x 12" x 4". For additional information visit motrakmodelsusa.com.



O SCALE PRODUCT NEWS

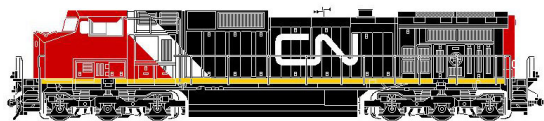


Image Copyright 2002 by R. Ruessli, Engine Shop

3rd Rail Division of Sunset Models has started taking reservations for a General Electric Dash-

9 for delivery in 2021. Roadnames announced include Santa Fe Warbonnet, BNSF, CNW, Canadian National, Norfolk Southern, Southern Pacific, UP, and GE Demonstrator. The models will come with ABS bodies with fixed pilots, full cab interior, 5-pole can motor, and ball bearing axle journals. Both two- and three-rail versions will be built, with the two-rail version featuring ESU Loksound 5 DCC with dual speakers and the three-rail model equipped with ERR Cruise, TMCC, and Dash-9 specific Railsounds. Models will be built to reservations only. For more information visit www.3rdrail.com.



Atlas O has released a group of PS-2 triple-bay covered hopper cars. The Atlas Trainman series model is based on a prototype introduced by Pullman-

Standard in 1952. The O scale model features roller-bearing trucks with rotating bearing caps, separately applied ladders, and brake line detail.



Road names are Chicago & North Western, Illinois Central, Burlington Northern, Penn Central, Chessie System, and

Jack Frost. An undecorated version is also available. All Atlas

0 models are available for either 3-rail or 2-rail operation. For additional information contact a dealer or visit shop.atlasrr.com.



Dwarvin has introduced an O scale RR Crossing Signal designed to be used with the Lamplighter FL animation unit. With a single flashing face, it comes with 5' of 1.5mm fiber optic attached to it. The crossing signal is 6 5/8" tall. For more information visit www.dwarvin.com.

S SCALE PRODUCT NEWS



BPH Enterprises has introduced SceniKing® Roll Outs for S scale. Roll Outs are digitally-printed, inter-connectable photo backdrops. Fifteen different scenes, 6' long by 16 1/2" in height, have been designed exclusively for S scale. The scenes are printed on glare-free 24-pount paper using long-life inks. Trackside structures are S scale with some including loading docks as trackside industries. All scenes connect with a 1/4"



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seamless overlap. The Roll Outs are available from sceniking.com.

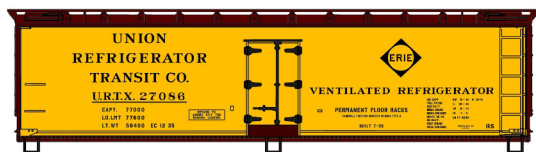


Monster Modelworks has released a new S scale kit named Machine Works. The craftsman kit is based on a brick building constructed in 1850 in Enfield, CT. It was occupied for over 60 years by the Hazard Powder Company. The kit includes a stencil to achieve the sign shown

above, however, the structure can be adapted to a variety of enterprises.

Monster Modelworks uses laser technology to create highly realistic components. This includes 3D laser-engraved aged brick walls, and 3D laser-engraved brick overlays for the pilasters and sills. Laser-cut peel & stick parts include asphalt shingles, roof cap, windows and glazing, and sign stencils. The assembled kit has a footprint of 5.75" long x 5.5" wide. The structure is 4.7" tall. For additional information including ordering instructions visit www.larkspurlaserart.com.

HO SCALE PRODUCT NEWS



New HO scale freight car kits from **Accurail** include this Union Refrigerator Transit Co/Erie/URTX 40'

ventilated wood refrigerator car. The U.R.T.X. decorating

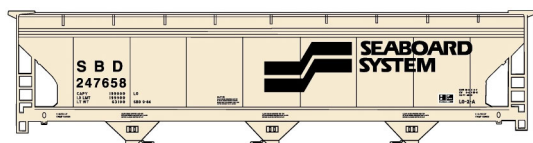
scheme is based on a prototype that went into service in July 1925.



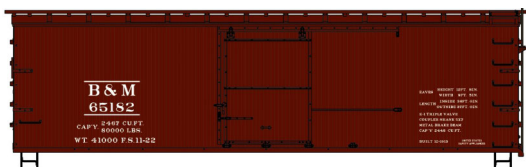
Accurail has released a 3-car set of 40' AAR boxcars decorated for the Baltimore & Ohio Railroad. The cars were built in the late 1940s with 6' Youngstown sliding doors. The second illustration is the model with the 8' door and Time Saver Service Slogan.



with the 8' door and Time Saver Service Slogan.



This Seaboard ACF triple-bay covered hopper is based on a prototype built in 1984.



Accurail's HO scale kit for this Boston & Maine 36' boxcar represents a double-sheathed car built in 1913 with wood ends and National sliding doors.



The prototype version of this Vermont Railway 50' welded steel class XL boxcar was completed in February 1956.



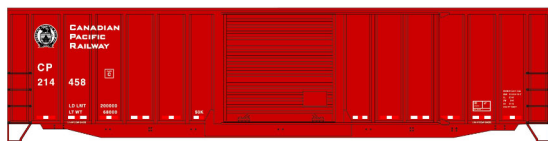
Accurail's HO kit for this Agri-Grain Processors car is based on a Pullman-Standard 4750 cu. ft. prototype.



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Canadian Pacific applied conspicuity marks to their 50' plate C exterior-post welded boxcar. All Accurail HO

scale kits include Accumate knuckle couplers and appropriate trucks with Delrin wheelsets. For additional information contact a dealer or visit www accurail.com.



R. Bale

EMD GP9 DIESEL

In 1954 EMD boosted the horsepower of its GP7 from 1,500 to 1,750. Dubbed GP9, the appearance of the new locomotive was the same as its predecessor. Later production units had variations in the arrangement of the louvers, and fans. The GP7 and GP9 were both reliable workhorses and many railroads found it more economical to upgrade them rather than purchase new locomotives.



Athearn is working on a group of HO scale Genesis Series GP9s for release in

December 2021. Leading the list of road names is a Canadian Pacific GP9 equipped for passenger service with a large water tank to supply a steam generator, high mounted air tanks, and full footboards.



A Santa Fe unit dressed in a modified Yellow Bonnet scheme is

fitted with a spark arrestor and can-type radio antenna.

JANUARY NEWS HO SCALE | 10



1960s and 70s with roof mounted air tanks.

Athearn's Toronto, Hamilton & Buffalo GP9 represents equipment from the



gyralights. In later years the rear gyralight was removed. Athearn will include a blanking plate with the L&N unit for hobbyist who want to model this variation.

Athearn's HO scale version of this Louisville & Nashville GP9 includes



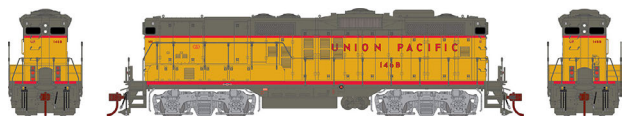
on the pilot and footboards and dual air horns.

This 1970s-era Boston & Maine GP9 features grab irons



dynamic brakes, a roof mounted cab vent, and a winterization hatch.

Athearn's Union Pacific GP9 is based on a Phase III cab unit with



75 Phase I GP9B units were built in the spring of 1954 and remained in service until the mid-1970's.

A Union Pacific Phase I B-unit will be included in this run. UP's fleet of

Athearn's next production of the Veranda Gas Turbine engine with a tender will be equipped with additional lighting over previous releases. A separately controlled Mars light, an



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emergency stop "big hole" light, classification lights, number boards, and backup light will all be included in the December 2021 run. The HO scale Genesis model will have a Soundtraxx Tsunami2 gas turbine sound decoder with two speakers installed.



Athearn is upgrading its HO scale Pullman-Standard 2893 cu. ft. covered hopper and

will release it as a Genesis model next December. Details will include separately applied round roof hatches, a photo-etched metal roof walk, wire grab irons, individually applied brake appliances including wire brake plumbing, detailed discharge fixtures, and rubber trainline hoses. Depending on the practice of the specific prototype being modeled, the cars will have either solid or roller-bearing trucks with 33" nickel silver wheels.



In addition to Santa Fe, road names will be Baltimore & Ohio, Central of Georgia,

Chicago & North Western, Great Northern, Pittsburgh & Lake Erie, and Southern Railway.



Athearn's Southern Pacific SD40R represents a group of aging

diesels rebuilt in the 1980s. Upgrades included an L-window cab, a large EMD plow, additional dynamic brake vents, and a ratchet brake in the nose. The gyalights were removed and blanked out. Athearn plans to have two road numbers of the SD40R ready by late 2021.

Two similar Morrison Knudsen rebuilds designated SD40M-2 are also in this release. The MK units will have alternating front ditch lights, vapor type air conditioning units, a large EMD-style plow, and MK trucks with Timken roller bearings.



Spotting details of the Santa Fe's rebuilt SD40 diesels include a nose

mounted headlight, a Prime air conditioning unit on the cab roof, and ATSF-style roof mounted antennas.



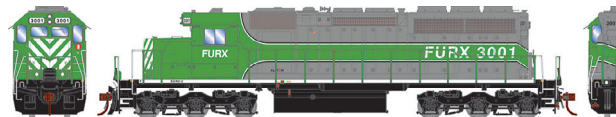
SD40 locomotives upgraded to the SD40-2 standard by CSX will be

available in four road numbers.



Athearn will include three Utah road numbers in this production

run. The ex-C&O and MW SD40M-2 units rebuilt by Morrison Knudsen for the Utah Railway had small EMD pilot-plows, ditch lights in the front only, and a brake wheel mounted at the rear of the locomotive.

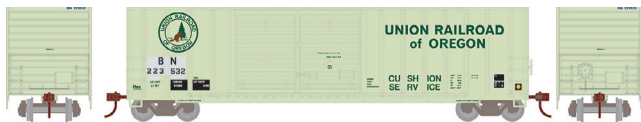


The three FURX (First Union Rail) SD40-2s in this release are based

on SD40 rebuilds with mixed heritages. FURX No. 3001 is an ex-SOO unit with a smaller 3600 gallon fuel tank, a large EMD plow, and deck mounted front ditch lights. FURX No. 3025 is an ex-MP locomotive with a large 4000 gallon fuel tank, a small EMD plow, pilot-mounted front ditch lights, and MP-style jacking pads. Ex-NDM No. 3005 also has a large 4000 gallon fuel tank and pilot mounted front ditch lights. It will have a Canadian-style pilot/plow.



All versions of Athearn's SD40 models will have bi-directional LED lighting, photo-etched windshield wipers, wire grab irons, uncoupling levers, rubber MU hoses, see-through dynamic brake and radiator fans, and Flexicoil-C trucks. Sound equipped SD40s will come with an Econami sound decoder by Soundtraxx. Non-sound versions will have a 21-pin NEM DCC-ready plug.



Athearn has included an FMC (Food Machinery Corporation) 50'

boxcar in its December 2021 production schedule. The Ready-to-Roll model is based on prototypes built in the 1970s with outside posts and non-terminating ends. Athearn's HO scale version has double doors offset from the center of the car.



Some of the models will be decorated in Athearn's Primed

for Grime schemes and will show their heritage. Road names in this run will be Burlington Northern (ex-Galveston Wharves), Burlington Northern (ex-Union Railroad of Oregon), Burlington Northern (ex-East St. Louis Junction Railroad), Arcata & Mad River, Sierra Railroad, Yreka Western, and three schemes for Northern California shortlines. The models feature a separately applied brake wheel, grab irons, and end ladders; photoetched cross-over platforms, and machined metal wheelsets.



A group of bathtub gondolas with

removable coal loads is included in Athearn's December 2021 production schedule. Road names for the HO scale Ready-to-Roll models will be OWTX-Oneida Western, CP Rail, Union Pacific, Sullivan Scrap, Utility Fuels, CarMath Inc., and three schemes for David J Joseph Co.



Athearn is including a Roundhouse Brand 40' high-cube outside braced boxcar in its December

2021 production schedule. The economy priced models will have appropriate trucks with machined metal wheels. Road names will be SSW Cotton Belt, Arizona Eastern Railway, Burlington Northern, Penn Central, Southern Pacific, Southern Pacific/GVSR, and Golden West Service. For additional information on Athearn or Roundhouse products contact a dealer or visit

www.athearn.com.



Atlas has released its Master Line GP40-2 diesel locomotive to dealers. The new HO scale model is available decorated for Burlington Northern, Canadian Pacific, Boston & Maine, Conrail, Florida East Coast, Norfolk Southern, and CSX.



Features include directional lighting with golden-white LEDs, detailed cab interior with crew, individual windshield wipers, metal grab irons and handrails, movable drop steps, walkway

safety tread, uncoupling bars, trainline and MU hoses, and a snowplow pilot. Where appropriate to the prototype road being modeled additional details include etched metal radiator and dynamic brake fans.

Atlas Gold series DCC locomotives come with a factory installed LokSound Select Dual-Mode decoder. Atlas Silver series locomotives are for standard DC operation. They have



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an NMRA compliant socket for installation of an aftermarket DCC decoder.



Also new from Atlas is an economy priced EMD GP38-2 diesel locomotive. The HO scale Trainman model has the same drive mechanism as the Atlas

Master series locomotives. Features include separately applied hand rails and end railings. The body has locating dimples to assist hobbyists wanting to add individual grab irons.



Road names are Norfolk Southern First Responders, Bangor & Aroostook, Conrail, Conrail Bi-Centennial, Norfolk Southern, and RJ Corman.



This Atlas GP38-2 is a DC model with an NMRA 8-pin plug for installation of an aftermarket DCC decoder. For additional information contact a dealer or visit

www.atlasrr.com.

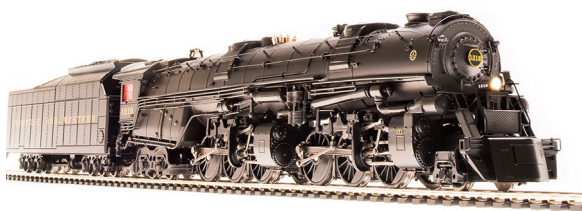




R. Bale

N&W CLASS A 2-6-6-4 ARTICULATED LOCOMOTIVE

The Norfolk & Western occupied a challenging landscape and by the mid-1930s, it became apparent that the road needed a miracle locomotive that could handle fast freight at 60 mph, deal handily with the N&W's mountain division, and eliminate double heading of passenger trains. N&W designers thought the answer would be a high-drivered articulated with a huge firebox. In 1936 two experimental 2-6-6-4 articulated locomotives with 70" drivers were built, tested, and deemed a success. Eight more were immediately erected in 1936 and 1937. Twenty-five more were built during WWII followed by eight in 1949-50. Five of that final group (1238-1242) were equipped with lightweight Timken roller-bearing side and main rods, a feature found on no other articulated locomotive. The men who operated N&W's Class A 2-6-6-4s rated them as the finest steam locomotives ever built. Sole survivor of the class, N&W 1218 is on display at the Virginia Museum of Transportation in Roanoke, Virginia.



Broadway Limited has released several HO scale versions of the Norfolk & Western Class A 2-6-6-4 articulated steam

locomotives. Four locomotive numbers are available painted in service black, including No. 1218 which is also available painted in a glossy museum finish. Five locomotive numbers are available with N&W class 22i tenders and roller-bearing side and drive rods. The 2-6-6-4 model requires a minimum track radius of 22".



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Broadway Limited's HO scale locomotives feature Paragon3 sound with Rolling Thunder that functions in both DC and DCC environments. For additional information contact a dealer or visit www.broadway-limited.com.



back of the structure. The HO scale model is 19.125" wide x 7.75" deep x 9.625" high.



The HO scale multi-level station model can be used as a stand-alone structure or combined with CMR's city station concourse kit. The concourse has four platforms and can accommodate up to six tracks. The concourse model is 19.125" deep x 20" wide x 6.625" high. For additional information visit www.custommodelrailroads.com.

Custom Model Railroads

(CMR) has a kit for a large stone railroad station. The beaux-arts design is typical of early 20th century train stations where passengers entered at street level and descended to trains at the

The HO scale multi-level station model can be used as a stand-alone structure or combined with CMR's city station concourse kit. The concourse has four platforms and can accommodate up to six tracks. The concourse





R. Bale

OPERA WINDOW CENTER-BEAM FLAT CARS

With input from the Union Pacific and Burlington Northern railroads, Thrall developed the center-beam bulkhead flat car in 1977. Aggressive loading methods often ripped the corners of the large weight-saving cutouts in the sheet metal center-beam of early cars. The problem was solved by replacing the angular openings with large ovals that were quickly dubbed 'opera windows'. The full height center-beam, which is the structural backbone of the car, places the center of gravity much higher than conventional flatcars. The cars must be loaded and unloaded evenly on each side since they will tip under a significantly lopsided load. The high center of gravity also makes the center-beam cars prone to stringlining when empty. Empty center-beam cars are subject to speed restrictions since they tend to flex which can result in dangerous harmonic rocking. Despite these issues, the unique center-beam design proved popular with the lumber and sheetrock industries and the railroads. Loading and unloading time was significantly reduced and damage to the lading was all but eliminated.



ExactRail has completed another release of its highly-rated Thrall opera window center-beam bulkhead flat

car. ExactRail's HO scale version of the 63' prototype is a hybrid model that combines more than 100 brass and plastic parts. Features include a photo-etched brass center-beam, wire grab irons, brake rods, and uncoupling levers; etched metal Morton crossover walks, individual air hoses, Kadee couplers, and ASF 100-ton Ride-Control roller-bearing trucks with machined metal wheelsets.



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Road names are Burlington Northern, BNSF, Milwaukee Road, and two Union Pacific schemes.



'Protector' style shields are included in this production run.



Decorating schemes for the HO scale model include Conrail in the 1993 as-delivered livery as well as in the same scheme with a repainted hood.



Additional road names include Norfolk Southern (ex-Conrail) with a patched hood, and Conrail in as delivered 1993 paint

as well as with a repainted CSX hood. A 1992 Norfolk Southern car in the as-delivered scheme with the unique Protector shield completes this run.



Features on these exceptional models include wire grab irons and brake rods, uncoupling levers, and

separately applied air hoses. The HO scale models come with Kadee couplers and ASF 100-ton Ride-Control trucks with 36" machined metal wheelsets. A minimum track radius of 22" is recommended.

For additional information visit www.exactrail.com.



The Great Northern Railway Historical Society has an HO scale craftsman-style kit for a standard GN combination passenger and freight station. Designers of the kit utilized authentic 1899 architectural plans from an early Great

Northern station. Features include laser-cut interior and exterior walls, flooring, and roof; and peel-and-stick doors, windows and glazing. Details include a roof access ladder, a basswood chimney, and window and door plugs for modifying the depot. The assembled structure has a footprint of 6.56" wide x 3.75" deep including the bay. The overall height is 3.0". The platform in the photo is not included. Hidden River Manufacturing produced the kit exclusively for GNRHS.



Newly available is a 50,000-gallon wooden water tank with pump house, custom made by Monroe Models from official 1915 Great Northern drawings. The bottom of GN tanks was 16' until 1930, when it was changed to 20'. The model represents the shorter tank. For additional information

visit gnrhs.myshopify.com.



Inter-Action Hobbies is selling Schaake Machine Works: an HO scale craftsman kits based on a machine shop opened in New Westminster, British Columbia, by Henry Schaake in 1898. The high-quality kit features numerous laser-cut and engraved components including walls, windows, doors,



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skylights, and glazing. The mattboard foundations and flooring are also laser-cut. The doors and windows are molded styrene.

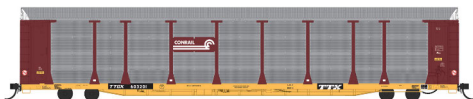
Additional parts include basswood platform decking, strip wood stock, birch dowels, roofing paper, a 3D printed chimney spark arrestor, power meters, and oil tank details. Sign stencils and detailed assembly instructions complete the kit. When assembled as shown the HO scale structure has a footprint of 6.2" x 4.8". The Schaafe Machine Works is just over 4" high. For additional information visit www.interactionhobbies.com.



Intermountain Railway is booking reservations through the end of January for HO scale bi-level auto racks and two styles of Gunderson FMC exterior-post woodchip gondolas. Standard woodchip gondolas will be available in six road numbers each for BNSF with a cross-circle logo, and two schemes each for Montana Rail Link, and Burlington Northern.



Rotary Gunderson FMC exterior-post woodchip gondolas will be available for Apache Railway, Willamette & Pacific, and Southern Pacific.



InterMountain's HO scale bi-level autorack cars feature etched metal see-through panels. Additional details include operating end doors, metal knuckle couplers, and 33" metal wheelsets.



Auto racks mounted on TTGX flat cars will be available for Union Pacific, TFM-Transportación Ferroviaria Mexicana, Conrail, Norfolk Southern, BNSF, and CSX.



Southern Railway and Western Pacific auto racks come mounted on TTX flat cars. A CP Rail rack comes on a CPAA flat car, and a GTW auto rack rides on a GTW flat car. For additional

information contact a dealer or visit www.intermountain-railway.com.



Kadee's latest release is an insulated tank car decorated for SMCX-Sturtevant Mill Co. The HO scale ready-to-run model is based on an 11,000 gallon car ACF built

in 1948. All Kadee models come with Kadee metal couplers and two-piece self-centering trucks. For additional information contact a dealer or visit www.kadee.com.



Kato has announced plans to expand its selection of HO Amtrak Phase VI Superliner cars. In addition to the previously announced diner,

baggage car, and transition sleeper, Kato is adding a coach (top), lounge car (below) and sleeper (next page) to its lineup of Phase VI Superliner equipment.



The cars have complete upper and lower level interior detailing, and tinted flush mounted windows. An optional interior light kit is

available as a separate purchase.





The new cars are scheduled for release in May. For additional information including advance reservations contact a dealer

or visit www.katousa.com.



Menards is selling Cripple Creek Lumber Co., a fully assembled and pre-weathered HO scale structure.

The model has both interior and exterior lighting for use with Menards Plug & Play 4.5 volt power

supply, which is available as a separate purchase. The structure is 6.75" wide x 6.25" deep x 3.88" high. For additional information visit www.menards.com/trains.



R. Bale

WHALEBELLY COVERED HOPPER

In 1965 General American Transportation Corporation (GATX) introduced a new, unusual looking covered hopper for handling cement and other dry bulk lading. At just 38' 7" in length, the 2,800 cubic foot single compartment car had a rated capacity of 100 tons. The car featured a complex low pressure (50–80 psi) air duct system called "Pressure-Slide" that expedited unloading. It successfully sped discharging cement and other dry lading that tended to cake. The unique shape of the body led to the nickname whalebelly hoppers. GATX delivered 50 whalebellies to Seaboard Air Line (SAL) in 1966. The following year Chicago, Burlington & Quincy took delivery of 50 cars with slightly different brake rigging.



affectionately as Whalebelly Hoppers. The HO scale kit is prototypically correct for either the original 1965 SAL (later SCL, SBD and CSXT) version or the 1967 CB&Q (later BN and Dragon Products) version.



Q Connection has made another release of its resin kit for an HO scale 1965 GATX pressure slide hopper. Introduced in 1965, the prototype cars became known

Components in the craftsman kit include a one-piece cast resin tank body, two end caps, and underframe castings by Westerfield; photo-etched ladders and walkways; truck mounting screws and wire for brake rods and brake air lines. Commercial parts in the kit include Hi-Tech Details brake hoses, Kadee #58 couplers, and Athearn A-3 Ride-Control roller-bearing trucks with metal wheelsets. Appropriate Microscale decals are available from Q Connection as a separate purchase. For additional information including ordering instructions visit www.QConnection.biz.

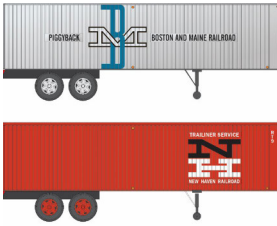


Rapido Trains is in the final stage of developing three styles of Fruehauf

trailers: 35' integral-post trailer with rounded corners, 40' exterior-post trailer, and 40' fluted-side trailer. The new 1:87 scale trailers represent the piggy-back era from the mid-1950s through the 1970s. Side door and refrigeration units will be included in the mix.

The 35' Fruehauf integral-post trailers will feature a detailed bogie with 23" wheels (plus the tire) and molded tie down chains to mate with Rapido's F30D flat car. Road names will be





Boston & Maine, Lackawanna, New Haven, Nickel Plate Road, and Union Pacific. A 35' Pennsylvania trailer will have a right side curb door.

Decorating schemes for Rapido's 40' Fruehauf trailers with exterior-post construction will be Erie, Penn Central, Republic Carloading, Lehigh Valley, Western Maryland, and the Pennsylvania Railroad.



Fruehauf 40' trailers with fluted sides and side doors options will be available decorated for Santa Fe, Great Northern, Navajo Freight, NPT, Pacific

Intermountain Express, and Southern Pacific.



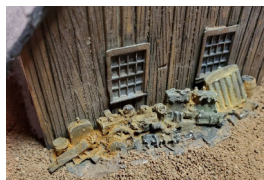
Bogies on Rapido's HO scale 40' trailers will have 20" wheel rims and two versions of landing gear that differ from 35' trailers. Optional right side curb doors will be available and

reefer versions will have a Thermo King refrigeration unit and belly-mounted fuel tank. For additional information contact a dealer or visit www.rapidotrains.com.



Rusty Rail has three new HO scale unpainted resin castings including a small crawler tractor. Additional new items

are a 1927 Chevrolet cabriolet sports coupe and a junk pile designed to lean against the side of a fence or building.



For more information visit www.rustyrail.com.



name details is also available.

ScaleTrains.com has released four versions of its Rivet Counter GE Dash 9-44CW diesel locomotive. An undecorated, unassembled kit with road



Heritage I and, as shown here, BNSF Heritage II.

HO scale models with numerous road and road number variations in detail include Southern Pacific, Norfolk Southern, BNSF



The models are available for DCC operation with an ESU LokSound decoder, and dual cube speakers. DC units are DCC ready with a 21-pin connector to simplify installation of an aftermarket decoder. For additional information visit www.scalettrains.com.

The models are available for DCC operation with an ESU LokSound decoder, and dual cube speakers. DC units are DCC ready with a 21-pin connector



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Smoky Mountain Model Works has announced plans to produce one final production run of an HO scale Southern/NS/N&W GS50/G82 woodchip hopper car. The prototypically

accurate kit will consist of a one-piece cast urethane body, brass weight, etched brass crossover platforms, Kadee shelf couplers, 36" code 88 wheelsets, Intermountain truck side frames, and detail parts including brakes, stirrup steps, wire, styrene strip, etc.) Assembly instructions, prototype photos, and decals complete the kit. Reservations are scheduled to close in early January. For additional information visit smokymountainmodelworks.com/HO_rolling_stock.html.



Pre orders are being solicited for a limited production run of **Sylvan Scale Models** HO scale resin kits for 52' 8" exterior post boxcars with double doors. The prototypically accurate model is

based on cars built by National Steel Car for British Columbia Railway and Northern Alberta Railways.



If sufficient interest is received to justify production, the kits will be available with appropriate decals for either BC Rail or NAR. Trucks and couplers

will not be included. If interested contact Marc Simpson at mesagkits@gmail.com for further details including pricing and expected availability. Production is contingent on receiving sufficient orders to proceed.



R. Bale

HI-CUBE AUTO PARTS BOXCAR

In the early 1960s freight car builders and automobile manufacturers began sharing ideas about delivering auto subassemblies from parts suppliers to final assembly plants in dedicated, high volume boxcars. The result was a series of high-cube, high-roofed, Plate G cars with 20' door openings for rapid loading and unloading. Although several car builders produced exceptionally large auto parts cars of up to 10,000 cubic foot capacity, the most prolific builder was Greenville Steel Car Company of Greenville PA. Greenville delivered more than 4,000 auto parts cars to a variety of railroads. While conceived to handle auto parts, the cars were also utilized to haul other bulky lightweight products ranging from home appliances to toilet paper.



Tangent Scale Models has completed another release of its prototypically accurate HO scale model of a Greenville 86' high-cube

double plug-door boxcar. The HO scale ready-to-run model is available in several different configurations including three body variations, four brake system arrangements, four draft gear combinations, and three underframe styles.



Road name variants include Ajax, Universal, Equipco, Miner 6600, Champion-Peacock, Elcon-National, or Peacock brake

gear boxes and wheels; and 70-ton Barber S-2A or 100-ton low-profile Barber S-2-C trucks with machined metal wheelsets fitted with either Timken, Hyatt, or Brenco roller-



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bearing caps. All versions come with Kadee couplers, flexible rubber air hoses, brake system details, and etched metal cross-over platforms.



Decorating schemes include a CSX car in an early 1990s repaint and a similar scheme with conspicuity striping from the 2005-era.

Both cars have 100-ton low profile trucks with Timken roller-bearing caps. Additional road names include a GTW car from 1977 and an L&N car in the original 1965 scheme.



Cars decorated for NW class B-108 are included in this release along with former PRR cars repainted in 1969 for Penn Central.



Completing this release is a Western Pacific car after having its brake wheel and ladders lowered and running board removed in 1965.



A minimum track radius of 24" is recommended. Undecorated kits are also available.



Tangent has also announced the immediate availability of two additional decorating schemes for its GATC 8,000 gallon radial course tank cars. (Visit

online.fliphtml5.com/buups/nyiq/index.html#p=143 for information on the earlier release). Although insulated, the



the courses, and their recessed ends.



prototype cars were readily identifiable by their circumferential rivets that surrounded the tank body, the notably different heights between

An undecorated black car equipped with the AB brake system is also available in this release, along with an unpainted kit. Tangent's HO scale 8,000

gallon insulated tank car models come with Kadee couplers and appropriate solid-bearing trucks with machined metal wheelsets. For additional information visit

www.tangentscalemodels.com.



passenger cars. An ACF dome coach with smooth sides and a Budd 10-6 sleeper with fluted sides are available in Union Pacific's Heritage Fleet livery. The UP dome car is available with the names Columbine and Challenger.



decorated for Delaware & Hudson and in the Daylight scheme of Southern Pacific. The Budd cars include a baggage/RPO, a baggage/lounge, a diner, round end observation, and a dome coach.



The HO scale cars are available with and without interior lights. The models ride on appropriate four-wheel passenger trucks

Walthers has released seven different Proto series 85' lightweight

Five additional 85' Budd lightweight cars with fluted sides are available

The HO scale cars are available with and without interior lights.



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with 36" machined metal wheelsets. Passenger car exterior detail kits and LED interior lighting kits are available as separate purchases. For additional information contact a dealer or visit www.walthers.com.



Woodland Scenics has teamed up with Electric Wallpaper to sell DPM/Roomettes Combos, including Mongillo Jewelers, The Paint Pros, Signal Brewery, Bradley Fire Hall, Stewart's Hobby Shop, Ohio Shipping, Banfield Street #1, Banfield Street #, Banfield Street Flats, Atlas Taxi & Delivery, Ashby Auto Parts, Sporto's Outdoor & Athletic, The Bookworm, Arlington Hotel, Eastown Cycle, Borgo Auto Loans, Millie's House, Grafton Hotel, and a Storefront Assortment combo. For more information visit woodlandscenics.woodlandscenics.com.

N SCALE PRODUCT NEWS



Athearn has included an N scale model of an FMC (Food Machinery

Corporation) 50' boxcar in its December 2021 production schedule. The model is based on prototypes built in the 1970s with outside posts and non-terminating ends. Athearn's N scale version has double doors offset from the center of the car.



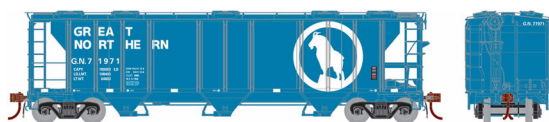
Some of the models will be decorated in Athearn's Primed for Grime schemes and

will show their heritage. Road names in this run will be Burlington Northern (ex-Galveston Wharves), Burlington Northern (ex-Union Railroad of Oregon), Burlington Northern (ex-East St. Louis Junction Railroad), Arcata & Mad River, Sierra Railroad, Yreka Western, and three schemes for Northern California Shortlines.



The models will have screw mounted roller-bearing trucks

with machined metal wheels.



Also coming from Athearn late this year is a well-detailed N scale model of a Pullman-

Standard 2893 cu. ft. covered hopper. Road names will be Santa Fe, Baltimore & Ohio, Central of Georgia, Chicago & North Western, Great Northern, Pittsburgh & Lake Erie, and Southern Railway. Details on the N scale model include separately applied round roof hatches, discharge outlet, and brake appliances; photo-etched roof walk, separately applied wire grab irons, and screw mounted trucks with machined metal wheels. For additional information contact a dealer or visit www.athearn.com.



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Dwarvin has introduced N scale crossing signals. Designed to be used with the Lamplighter FL animation unit, the crossing signal comes with 4' of 0.75mm fiber optic attached to it. The signal is 2" in height. For more information visit www.dwarvin.com.



New N scale containers from **Jacksonville Terminal Company** include eleven carrier

names applied to four types of 40' standard height containers. Standard corrugated containers are available for OOCL, Capital, MSC, and TEX.



Containers with wave-type corrugations are available for CMA, Hyundai, ONE, and TAL.



A container with corrugated sides and end side panels is available decorated for Hanjin.



Forty foot 2-P-44-P-2 containers with square shaped corrugations and end side panels are

available for K-Line and Evergreen. The containers are sold in 2-packs and all versions feature JTC's magnetic mounting system. For additional information visit www.jtcmodeltrains.com.



R. Bale

BURLINGTON E5 DIESEL LOCOMOTIVES

The stunning E5 diesels produced by Electro Motive Division in 1940-41 were 2,000-horsepower A1A-A1A passenger locomotives. They were built exclusively for the Chicago, Burlington & Quincy Railroad. Although similar to EMD's E3, E4, and E6 units, the exterior of the E5s was distinguished by polished stainless steel side panels that matched the Burlington's lightweight Zephyr trains. Additional spotting features were the small windows mounted low on the side panels, and the small screened ornamentalations on each side of the upper headlight. EMD built a total of eleven E5A units and five E5B units for CB&Q.



KatoUSA plans to release a second run of its CB&Q Silver Streak Zephyr in March. The N scale train set will consist of an EMD E5A locomotive and five lightweight passenger cars. They

include a baggage/RPO, a baggage car, two coaches, and a round end observation. The cars are based on Budd-built prototypes with fluted sides.



The set will be available with and without interior lighting. DCC options include a choice of factory installed Digitrax or ESU LokSound.

Kato is also taking reservations for Amtrak's Viewliner II baggage car in N scale. Designed for use throughout the



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Eastern United States on single-level trains, they are also used on Superliner trains in the Western US. The 55 baggage cars now in service wear a Phase III heritage paint scheme featuring three equal width red, white, and blue stripes along with the modern Amtrak logo. For additional information contact a dealer or visit www.katousa.com.



Micro-Trains has released several new cars including this 80' Denver & Rio Grande Western diner. The

N scale model represents a typical heavyweight steel prototype built in 1920s.



The 80' diner is also available in Tuscan red with a black roof and buff lettering for the Pennsylvania Railroad.



This N scale triple-dome aluminum tank car represents a prototype built by ACF in the late 1930s. It was owned by Shippers Car Line Corporation

and leased to Northern California Wineries.



This 50' CB&Q boxcar with 10' sliding Youngstown doors represents a car built in the mid-1960s. To meet changing safety

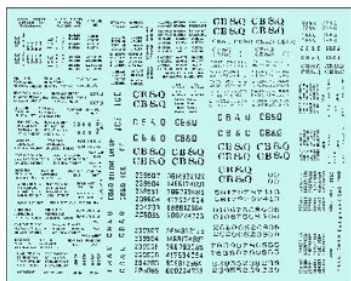
standards, the car later went through a rebuild that removed the running boards, shortened the ladders and lowered the brake wheel.



Micro-Trains 36' steel caboose with an offset cupola comes with Bettendorf-type swing motion caboose trucks. The N scale model represents a car built in the early 1930s that continued

in service to the end of the caboose-era. Contact a dealer for additional information on Micro-Trains models.

NEW DECALS, SIGNS AND FINISHING PRODUCTS



The **Burlington Route Historical Society** is selling HO scale water slide decals for CB&Q Maintenance of Way equipment. Both white and black lettering are included in the 2-sheet MOW set. For additional information visit

burlingtonroute.org/store.

Dave's Decals has a wide selection of vintage decals for gasoline, oil, filling station, automotive logos and advertising images. The decals are available printed on a choice of white transfer film or clear decal transfer film. They are also available printed on cardstock, and on peel-and-stick self-adhesive stock. For additional information visit www.davart.net/?product_cat=4000-gas-oil&v=7516fd43adaa.

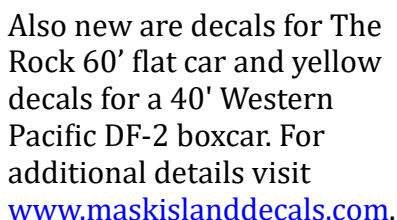
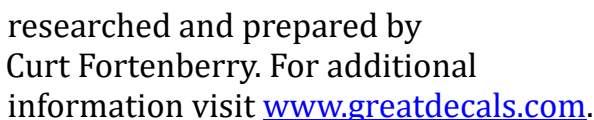
Great Decals has re-issued water-slide Dulux gold decals for Louisville & Nashville dormitory, RPO, REA, and baggage cars. The HO scale lettering set includes L&N road names in two fonts, plus car labels and road numbers. The art work was



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BRIEFLY NOTED AT PRESS TIME ...

Bachmann has released a starter set for an HO scale Acela high-speed passenger train. The boxed set includes three passenger cars, two locomotives (one dummy), a circle of track and a DC power pack. Additional passenger cars are also available ...

New items coming next month from **Broadway Limited** include HO scale Norfolk & Western Y6b 2-8-8-2 articulated steam locomotive, cryogenic tank cars, and N scale P70 passenger coaches ...

GHB International has released HO scale models of PRR/LIRR DD-1 electric locomotives. Both DCC and DCC-ready versions are available ...

Horizon Hobby of Champaign, IL, is seeking an experienced product manager for its **Athearn** division. The product manager will be responsible for bringing new Athearn model train products to market. For additional information visit recruiting.ultipro.com/HOR1005/JobBoard/1e0e1ed9-90e0-3f93-f7ee-8b0a223db196/?q=&o=postedDateDesc ...

Intermountain is now shipping seven roadnames for its 4750 cu. ft. triple-bay hoppers. Roadnames include Farmrail "I Care," Farmers Elevator, Grain Handling Corp., Goodseed & Grain, Pomeroy Co-Op Grain, Evergreen Fish Hatchery, and Union Pacific. See www.intermountain-railway.com for more information ...

Effective January 1st, NTRAK is being renamed **NRail**. Due to the expanding list of standards and activities that NTRAK, Inc. maintains and supports, the Board of NTRAK, Inc. has decided to rename the organization NRail, Inc. to reflect that. NRail will primarily focus on NTRAK and T-TRAK, but will also be supporting Free-moN, Clubs, and home layouts. NRail's new website can be found at nrail.org although ntrak.org and t-trak.org can still be used ...

A GP9 Phase II with high hood is among new HO scale items coming from **Walthers** in the next 45 days. Additional new items include a wide-vision steel caboose, 100-ton 34' open hopper cars, and flexible self-adhesive paved roadway. ■



SELECTED EVENTS



Model Railroad Hobbyist | January 2021

JANUARY 2021

Due to COVID-19 restrictions, please check with any organization hosting an in-person event for the latest status of the event.

Ongoing 2020

ONLINE, Zoom, dates vary, see website. Operation Special Interest Group Meetups – limited attendance available. For more information visit www.opsig.org/Virtual Past meets are available online at www.opsig.org/Virtual/Past.

ONLINE, Zoom & YouTube, dates vary, see Facebook page. “New Tracks” Meetup, hosted by Jim Kellow, MMR. See www.facebook.com/groups/544983829687669/user/100012440913008 for more information.

ONLINE, Facebook & YouTube, dates vary, see Facebook page. “NMRax” organized by Gordy Robinson, Martyn Jenkins, Gert Muller, Jordan Kramer. See www.facebook.com/groups/nmragroup for announcements.

ONLINE, YouTube, every other Saturday. 4th Division, Pacific Northwest Region, NMRA hosts online layout tours and clinics. Archive available at www.youtube.com/c/4DPNRMovies.

ONLINE, Zoom, Second Tuesdays, 8pm EST. "Off the Beaten Track" featuring Narrow Gauge layouts and manufacturers. For more information visit groups.io/g/NNG.

January 2021

ONLINE, Zoom, January 9th, Hindsight 20/20 6.0 – A Virtual RPM. Registration required and will open approximately 2 weeks prior to the event. For more information visit speed-witchmedia.com at that time.

TEXAS, PLANO, January 16-17, Dallas Area Train Show, hosted by the North Texas Council of Railroad Clubs, Plano Event Center, 2000 E. Spring Creek Pkwy. For more information see dfwtrainshows.com/#clients.

ONLINE, Zoom and Slack, January 30-31. 2021 Bay Area Virtual PCR/LDSIG Meet. Sponsored by the Pacific Coast Region NMRA and the Layout Design SIG. Clinics, Layout ops consultations, track planning consultations, virtual layout visits. For more information visit www.pcrnmra.org/sigs/index2021DEV.html.

INDIANA, NOBELSVILLE, January 31, Noblesville Train Show, presented by the Central Indiana Division of the NMRA. 2003 Pleasant Street. For more information visit www.cidnmra.org/services.

February 2021

KANSAS, WICHITA, February 6-7, The Wichita Train Show and Meet. Sponsored in part by the Chisholm Trail Division NMRA, Masks required. Cessna Activity Center, 2744 George Washington Blvd. For more information visit www.besttrainshow.com.

Future 2021-2022

CALIFORNIA, SANTA CLARA, July 4-11, 2021, Rails By the Bay, 2021 NMRA National Convention and National Train Show. Santa Clara Marriott Hotel. For more information visit www.nmra2021.com.



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CONNECTICUT, WEST SPRINGFIELD, Cancelled – 2021 Railroad Hobby Show. For more information visit www.railroadhobbyshow.com.

INDIANA, FRANKLIN, May 15, Franklin Train Show, presented by the Central Indiana Division of the NMRA. Johnson County Fairgrounds. For more information visit www.cidnmra.org/services.

MISSOURI, St. LOUIS, tentatively September 2022, NMRA National Convention and National Train Show.

NEW ZEALAND, DUNEDIN, May 8-9, Dunedin Model Train Show, Taieri Bowling Club 12 Wickliffe Street, Mosgiel. For more information contact Trevor Buchanan at <mailto:dunedinmodeltrainshow@gmail.com>.

Cancellations

CALIFORNIA, SAN DIEGO, TTTO sessions on the Tehachapi Pass layout of the La Mesa Model Railroad Club have been cancelled due to COVID restrictions. Normal days of operation for the Museum are Fridays, Saturdays, and Sundays. Check in advance for changes. Trains will be running, but no operating sessions will be held. ■



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