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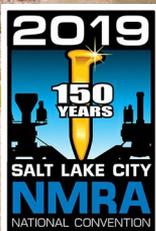
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Model Railroad Hobbyist April 2019 | #110

(Updated 04/07/19)

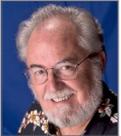
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Joe D. Fugate, Publisher and Editor



Patty Fugate, Pasteup and Layout



Richard Bale, News and events



Jeff Shultz, News and events, Tech Assistant



Joe Brugger, Copy Editing



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## Advertising

Les Halmos, Account Manager

Jean-François Delisle, Marketing Assistant

## Regular contributors

Eric Hansmann, Editor-at-Large

Larry Smith, Narrow Gauge/Shortlines

Jim Six, Limited Modeler column

Ken Patterson, Reporter-at-Large

## Rotating Columnists

Jack Burgess, Getting Real column

Nick Muff, Getting Real column

Mike Rose, Getting Real column

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Model Railroad Hobbyist | April 2019

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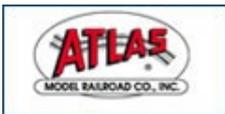
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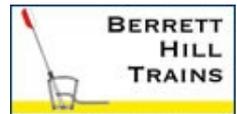
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The screenshot shows the MRH Marketplace website interface. At the top, it says 'MRH MARKETPLACE | 2'. Below this, there are several vendor listings with images and text. On the left, there are ads for 'CANADIAN NATIONAL Flat Car decals to HO', 'MAIN STREET AMERICA HISTORIC ARCHITECTURE', and 'RAILROAD STREET'. In the center, there is a large yellow box with the text 'Your ad could be in this space for just \$112 a month. Click to learn more...'. To the right of this box, there are listings for 'WESTFIELD' (USPS Express Box, NYP Redwood Empire), 'MastpieceModules.com', 'MOUNTAIN JUBILEE DESIGN HOBBIES' (www.modelersupply.com), 'PRECISION DESIGN CO. LASER CUT PARTS - CUSTOM DECALS', and 'PDC.CA'. At the bottom of the screenshot, there are navigation links: 'MRHMAG.COM', 'REGISTER', 'INDEX', and 'TABLE OF CONTENTS'.

Take me there!



## Publisher's Musings: Graphite, styrene glue, ...

*JOE FUGATE*



## MRH QAT: Improve pilot tracking, and lots more ...

*Compiled by JOE BRUGGER*



## MRH Website this month: Perfectly parallel curved yards, ...

*Compiled by JOE FUGATE*



## What's Neat: Rand Hood and lots more ...

*KEN PATTERSON*



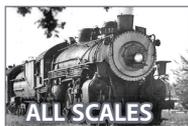
## The Decoder Buddy

*NICK SANTOS*



## Ted York's Santa Fe Cajon Pass

*The MRH STAFF*



## The Los Gatos local

*WILLIAM STARLING*



## First Look: ScaleTrains.com GE Dash 9-44CW

*JEFF SHULTZ*



## Savvy Modeler online: Scratchbuilt concrete grade crossings

*Compiled by the MRH STAFF*



## April 2019 news and events

*RICHARD BALE and JEFF SHULTZ*

In

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EXTRA**

This month ...



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**TABLE OF CONTENTS | RUNNING EXTRA**

April 2019

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More content than ads will pay for ...

**RUNNING  
EXTRA**

Publisher's Welcome: Squeeze bottle needle applicators

JOE FUGATE



ALL SCALES

Limited Modeler: Limitations as an advantage?

JIM SIX



HO

Getting Real: Animate an interlocking

JACK BURGESS



Z-0

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Scene and photography  
by Ken J Johnson  
Production model shown



**HO**  
#87 SCALE

# PUBLISHER'S MUSINGS



Model Railroad Hobbyist | April 2019

**JOE FUGATE:** OF GRAPHITE, STYRENE GLUE, AND COUPLER TRIP PINS ... PLUS MRH NOW HAS MORE ARTICLES



## I USE POWDERED GRAPHITE AS A COUPLER

lubricant, but I take a more economical approach than using the Kadee squeeze tubes or even the hardware squeeze tubes (they sell graphite squeeze tubes for use in locks to lubricate them).

You can get a pound of graphite – that's a lot of graphite, certainly a lifetime supply for modelers – at an amazing price of just \$15 with free Prime shipping on Amazon: [amzn.com/B008CQFMGG](https://www.amazon.com/B008CQFMGG).

I dispense the graphite using a squeeze bottle with a blunt needle tip. I talk all about these squeeze bottles and needles in this month's *Running Extra*.

## A more environmentally-friendly styrene glue

For many years, I've used MEK (Methyl Ethyl Ketone) as a styrene glue. It's fast working and you can get it in quart cans at many of the DIY hardware stores like Home Depot or Lowes.

However, MEK is nasty stuff and it stinks to high heaven. If you read the environmental warnings for MEK, the list is long. I've been looking for a more environmentally friendly glue for styrene and I finally found something I'm quite pleased with: ethyl acetate.

If you don't know what ethyl acetate is, it's a naturally occurring substance in fruit like apples and bananas, and it's what gives wine that fruity taste.

You can get ethyl acetate in quart cans on Amazon for \$20 here: [amzn.com/B06XRKPGD8](https://www.amazon.com/B06XRKPGD8).

Even though ethyl acetate naturally occurs in fruit and wine in small amounts, I don't recommend guzzling it straight from the can – that won't do your liver any good!

I find ethyl acetate is just a tad slower acting than MEK, but only slightly. The more environmentally friendly nature of the stuff more than makes up for it. It's so close to how MEK works for gluing styrene that I'm quite happy with it.

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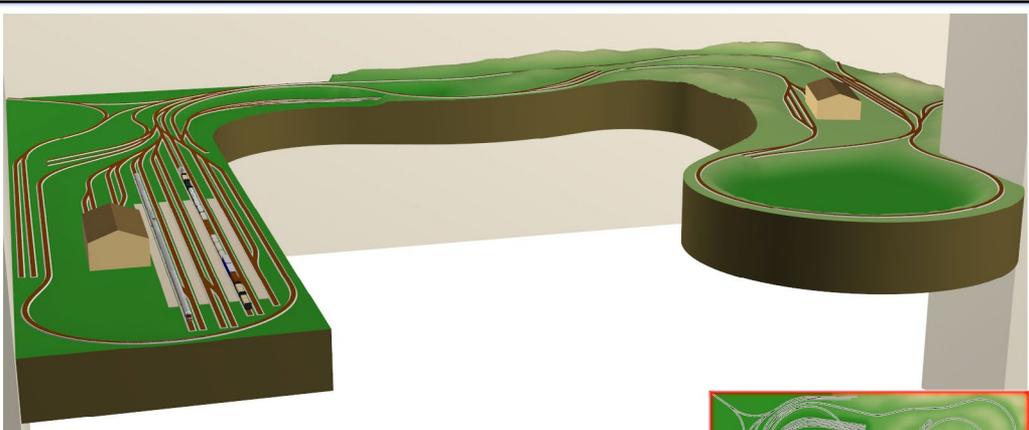


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We love to design and build layouts as much as write software! This is part of a two level N scale plan for a 15x14' room designed in a week with 3rd PlanIt.

## Canadian N scale empire

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## PUBLISHER'S MUSINGS | 3

I use the same plastic squeeze bottles with blunt needles to dispense the EA quickly when I'm building a model with styrene. I find I can move more quickly with the squeeze bottle than I can dipping a brush in an open bottle of styrene glue. Plus the needle bottle limits the fumes. EA fumes are less onerous than MEK, but the straight stuff does have a strong odor.

As I mentioned, I discuss all the squeeze bottle details in the April issue of *Running Extra*.

### Coupler trip pins

In my Run like a Dream book series (see last month's editorial), I cover dozens of simple tips that counteract Murphy and are preventative in nature. In other words, if you do these things, you are less likely to

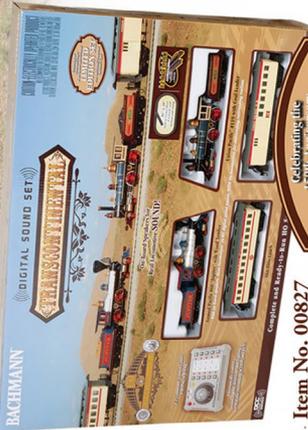
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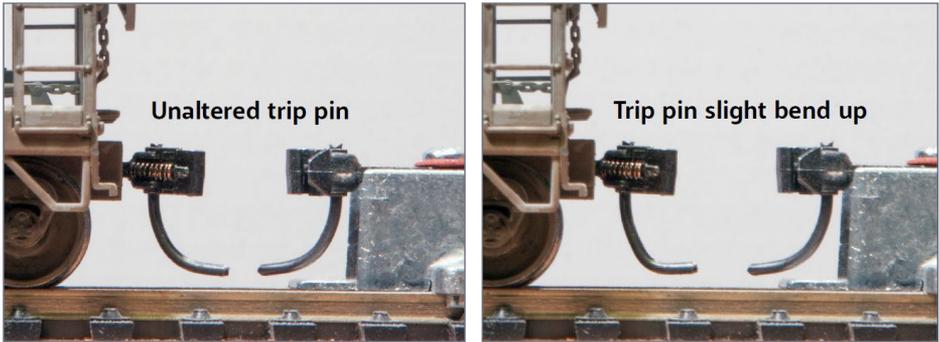


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1. In my Run like a Dream book *Rolling Stock*, I provide this coupler trip pin tip, along with dozens of other preventative tips like this.

encounter problems later. I would have given my eye teeth to have had all these tips available at my fingertips back in my early days in the hobby!

One such tip involves the couple trip pins on Kadee or Micro-Trains couplers [1]. The unaltered pin tends to catch on turnouts, grade crossings, or bridge guard rails. As a preventative measure, take a few moments and bend up the end of the trip pin slightly so it will tend to clear any obstruction if it does encounter one – see [1].

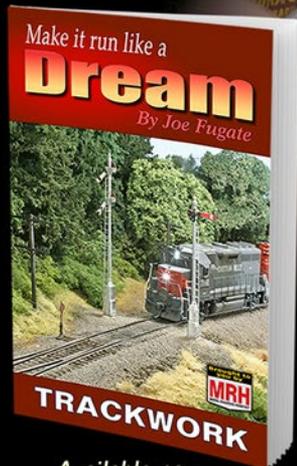
If you're like me and use skewers to uncouple during an op session, I can anticipate your next question: why not just cut the trip pins off?

I don't like to do that for several reasons. First, from the aisle the trip pins actually look like air hoses between cars and I like that look.

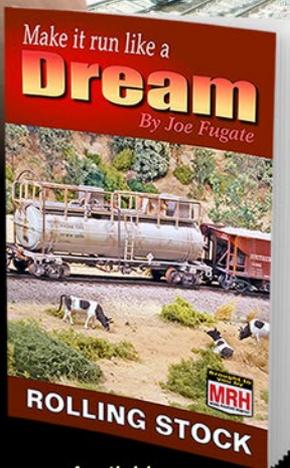
Second, I don't like model air hoses that just hang loose on cars because they don't connect up, they just look wrong. Having both the lose air hoses and the coupler trip pins creates visual clutter, so I remove the lose air hoses and leave the trip pins.

And third, that trip pin actually comes in handy sometimes if the skewer is having trouble separating the couplers. The trip pins form

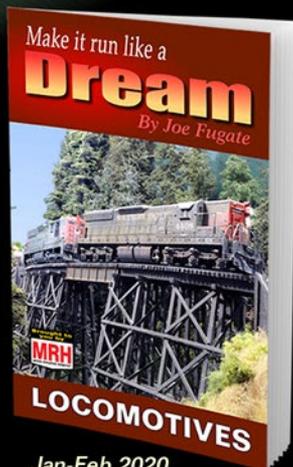
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Make it run like a  
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a backup lever I can tap with the skewer to get the jaw to open, and that's handy. So I prefer the trip pins, actually.

Of course, if you do use magnets, then this tip is even more helpful because it will also ensure the trip pins are less likely to catch on any between-the-rails magnets.

For dozens of more tips like this, check out my [Run like a Dream book series in the MRH Store](#).

### More how-to articles in MRH

With the reduction in MRH page count over the last year to re-align the magazine with a page count that ads will pay for, we have been rethinking some of the content that's been in MRH.

The lowest rated content in MRH is what we call "editorial content." That tends to be opinion or less actual how-to material that you can really sink your teeth into. Some might use another term for the editorial content: *fluff*.

In rethinking how to convert editorial content pages over into something more how-to related, we're retiring two features in MRH: Yes it's a model and Derailments.

In place of Yes, it's a model, we're now doing "The best of the MRH website this month." The MRH website gets some really great threads now and then that are absolutely superb. They're every bit as good as the articles in the magazine.

So we're using this new feature to highlight a few of the best of these threads that have appeared over the last month. Some of this material is excellent, and it's a lot more useful than just some pretty model



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## PUBLISHER'S MUSINGS | 6

photos, as inspiring as those superb images have been.

That all said, there's nothing keeping us from highlighting one of the Weekly Photo Fun threads from our website in this new monthly feature! This weekly recurring thread, by the way, is where we got most of our Yes, it's a model photos.

The other feature we're retiring is Derailments. That humor / bizarre facts feature gets mixed reviews, and is almost always the lowest rated feature in the magazine each month.

So Derailments clearly fits the category of what many might call filler or "fluff".

With a leaner magazine, we need to jetison fluff, so Derailments is being replaced by a new feature we're calling "Savvy Modeler online." This new feature is still only one page just like Derailments was.

However, instead of silly or fluffy content, we're giving you some

# Bowser

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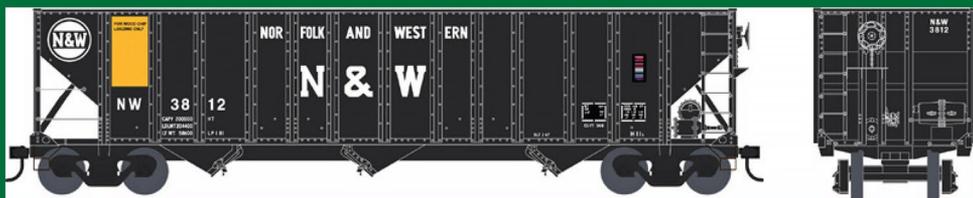
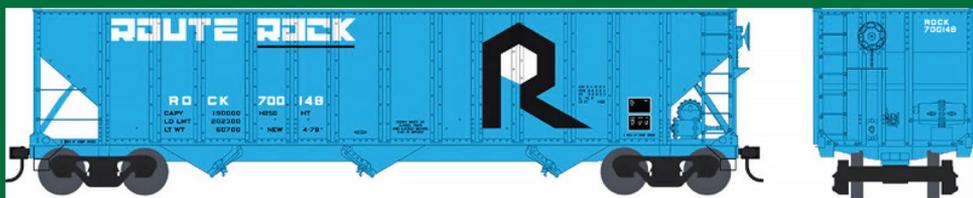
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excellent modeling video we've run across that demonstrates some great modeling technique. We'll be throwing the net far and wide on this one, pulling in videos from military modelers or other disciplines that we feel can benefit model railroaders as well.

With these changes, we're making the leaner but still free MRH magazine into a meaner magazine once again. We're replacing the fluffy stuff with some new low-flab meat that will further our goal of helping you achieve your hobby dreams – just like the MRH motto says.



### THE Ah-HAH MOMENT

Joe Fugate: Tab on cars switching ops aid

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EXTRA



### PUBLISHER'S WELCOME

Joe Fugate: Squeeze bottle needle applicators for every purpose

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## LAST ISSUE'S RATINGS

The three top-rated articles in the [March 2019 issue](#) of *Model Railroad Hobbyist* are:

4.7 Raspberry Pi for model railroaders

4.7 Lee Nicholas' Utah Colorado Western

4.4 Animated rollup door

Issue overall: **4.1**

**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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# MRH ... QUESTIONS, ANSWERS, TIPS



**Conversations from the MRH  
online forums**

Model Railroad Hobbyist | April 2019

compiled by **JOE BRUGGER**



## Pilot truck details

**Q.** I have a Bachmann 2-8-4 steam loco that was a terrible puller. I added weight to it to equalize the weight on the drivers as most of the weight on this loco was on the rear driver. It now pulls quite well.

My problem is that the front pilot wheels weigh practically nothing and need only the tiniest excuse to derail. They will derail where nothing else will (usually on turnouts), and the NMRA gauge does not show any issues. I'm thinking more weight on the pilot would be my friend.

—John C.

**A.** Before we go messing with weight, let's examine a few things. Checking the track and wheel gauge is the first step. Balancing the locomotive's weight over the drivers is another excellent step.

A big steam engine is going to have a long rigid wheelbase – the drivers just aren't going to wrap themselves around a small-radius

► **MRH QUESTIONS, ANSWERS, AND TIPS**

curve. Get down to track level and watch carefully as the engine rolls slowly through the problem spot. Watch to see that the pilot truck has enough side-to-side movement and is not forced to push up and over the outside rail. Be sure the pilot wheels don't hit anything that would cause them to stop rolling.

Sometimes a small rise or dip in the rails will be enough to derail an engine. If the curve is broad enough for the pilot truck to follow the rail correctly but it still derails, then adding weight may help.



1. HVT Dave chose not to reduce weight on the drivers of his engine, so he removed the pilot truck spring, then added a weight directly to this Bachmann 2-6-0 pilot truck. The changes solved his derailment issues instantly. The top view (left) and bottom view (right) show the automotive stick-on wheel weight. *HVT Dave photo*



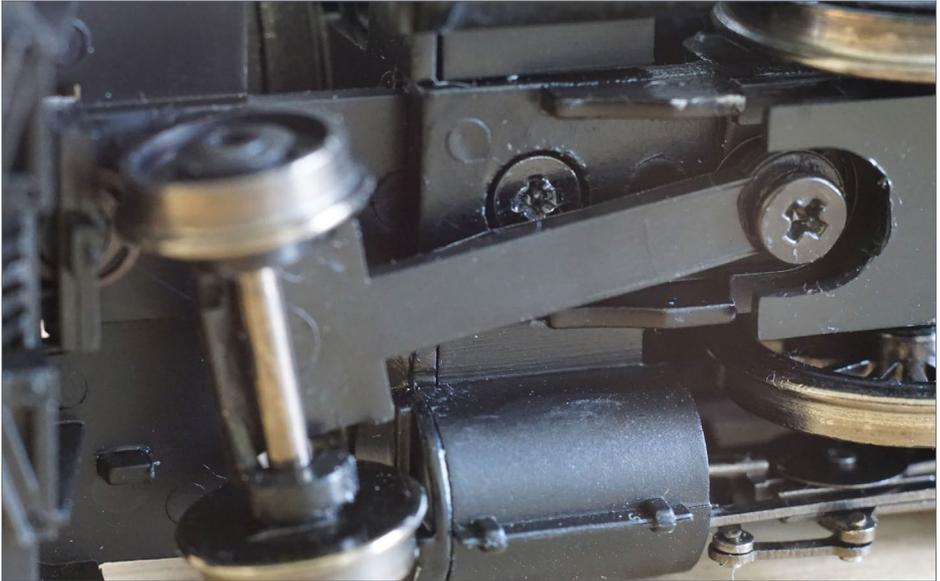
2. Some engines have a coil spring attached to the frame (left) and to the pilot truck (right). A longer spring will reduce down-force and a shorter spring increases it. Other engines will have a coil spring placed vertically to exert pressure. Clipping off one coil could increase pressure. Adding a spacer or stretching the spring will decrease pressure.

**R Meyer:** Depending how much space there is between the pilot axle assembly and the bottom of the loco body you may be able to glue a small piece of lead to the center of the pilot axle assembly. You may also be able to glue a small piece of spring steel to the loco body that will put some downward pressure on the axle assembly. You probably do not need a lot of pressure. Too much would tend to lift the weight on the leading driver axle.

**Geoff Brigham:** I had the opposite problem, where the pilot truck was taking too much weight and my solution was to weaken the spring. Sounds like you could try a stiffer spring.

**Brodie Washburn:** I have an Athearn Genesis MT4 4-8-2. I had the same issue, and stretching the small spring between the frame and pilot helped. R Meyer is correct in noting that too much pressure can lift the front drivers. I do think the Genesis MT4 prefers a track radius broader than 24" even with good easements. It is never happy on curves of less than 28" radius. That pilot just wants to jump.

**Michael Whiteman:** To add weight, I have wound solder around the pilot truck axle. Just make sure it doesn't touch both wheels at once and cause a short circuit. A fiber washer cut and slipped over



3. This plastic pilot truck could be weighted, if necessary. This one, on a small HO Bachmann 2-8-0, functions very well as it is.

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the axle on the insulated wheel side solves this. Or you can glue the solder to the axle.

**John C.:** I've heard about the solder technique. I wonder if that alone will add enough weight. That said, it may be the only way to do it depending on what things are like around the pilot.

**Rob in Texas:** I have added a piece of sheet lead to the front axle and solved similar issues on steam locomotives. It works well.

**Ken K.:** On one N steamer I could not add enough weight to keep the pilot truck on the rails, and any added weight looked bad. So, I dug out some small neodymium magnets and epoxied one magnet on the truck just above the axle. I drilled two holes in the frame for mounting two magnets which applied enough force to the pilot truck to keep it on the rail. I have begun experimenting with using the same technique on larger engines, including one for the garden. The same technique should work with an HO engine. Just make sure the magnet on the truck is mounted to repel the magnets on the frame.

## Switches for Tortoises

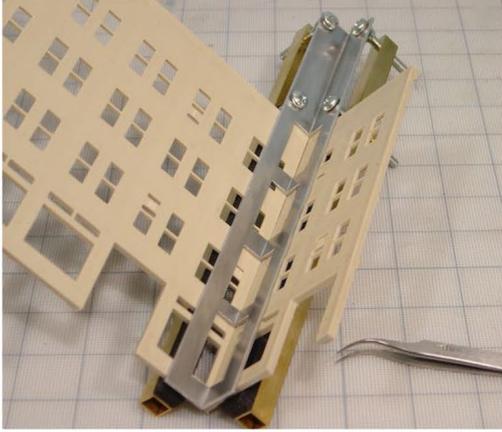
**Q. What activating switches work best with the Tortoise switch motors?**

—John Griffin

**A.** The simplest way to run a Tortoise is to use 9 to 12 volts direct current (DC) switched through a double-pole double-throw (DPDT) switch. Tortoises draw only 15-16 milliamps at full stall, so almost any DPDT mini-switch on the market will work.

DPDT switches are available as toggles, as rocker switches, and in other forms. When wired according to the Circuitron diagram, flipping the switch one way will throw the points to the diverging route; thrown the other way it lines the points for the normal (straight) route.

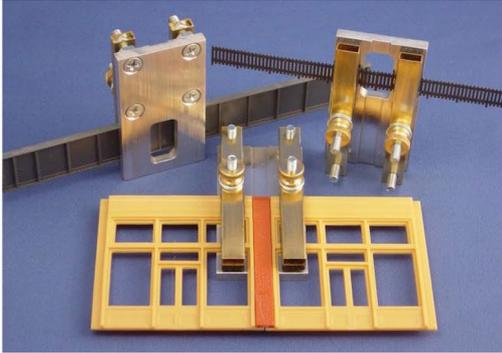
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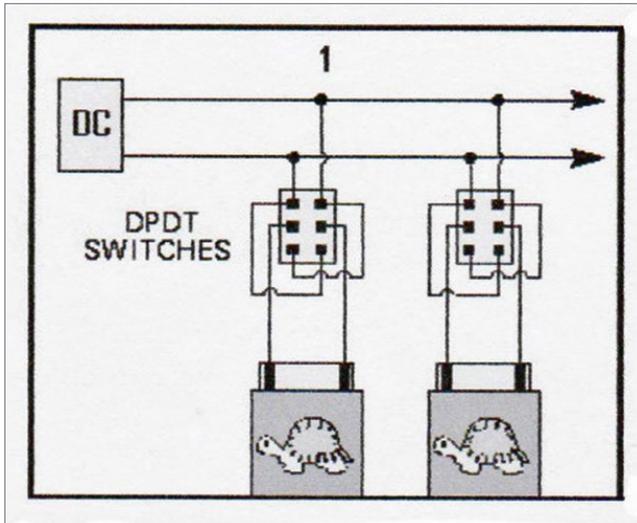


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Circuitron offers three diagrams for wiring its motors: with DC and DPDT switches, with bipolar DC and SPDT switches, and using alternating current with a pair of diodes to steer half-wave-rectified DC to the motors. The diagrams and directions are at

[www.circuitron.com/index\\_files/ins/800-6000ins.pdf](http://www.circuitron.com/index_files/ins/800-6000ins.pdf)



4. Wiring diagram for powering Tortoise switch motors with DC voltage and using a DPDT switch control. *Circuitron*



5. Miniaturonics is one seller of DPDT switches suitable for controlling Tortoises. All Electronics, DigiKey, Mouser, and other sellers also can supply them.

**DrJols:** There are lots of considerations to determine what will work best for you. A partial list:

- Will you control the Tortoise from just one location or do you need more than one control point?
- Do the control switches go on a track diagram?
- Will the control switches be where operators can bang into them as they walk past?
- What kind of power supply will you use?
- How much work are you willing to do to install the controls? There is a gorgeous pushbutton circuit that our club prefers, but it's not a quick install.
- Can you solder wires to lugs on control switches without frying the switches' guts?

Related to frying devices with a soldering iron: there are connectors that slide over the contact fingers on the Tortoise. You solder to the connector instead of to the Tortoise. The connectors are available from [Tonystrains.com](http://Tonystrains.com) and probably elsewhere.

Without considering the above stuff, about the only recommendation to be made is that a double pole switch should not be the momentary contact type. The Tortoise depends on a small but continuous flow of electricity to function.

Catch up with the Tortoise thread at [mrhmag.com/node/32474](http://mrhmag.com/node/32474).

## Coupler lever lift bars

**Q.** I'm looking for some coupler lever lift bars to put on my modern rolling stock. The only ones I've been able to find are made by Plano. I was wondering if there are any other bars out there. If I do order from Plano, which ones should I get? They

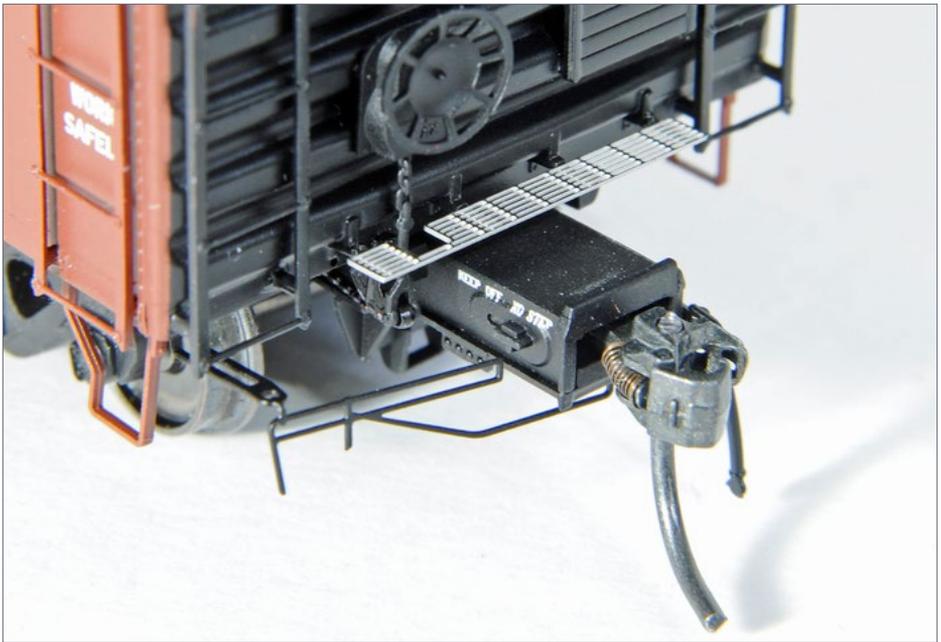
have a few different models. I want to put them on my boxcars and corn syrup cars.

—Patrick Hanz

**A. Dave Branum:** The usual way to get them is to bend them from brass wire, about 0.010" for HO scale. A photo of a prototype car like you are working on is a good guide to how they should be shaped.

**Nick:** A TrainmastersTV video shows how it's done. It's not a hard process and looks great!

Try [mrhmag.com/node/30143?page=8#comment-312440](http://mrhmag.com/node/30143?page=8#comment-312440).



6. The coupler release lever on this Tangent Pullman-Standard PS-1 Mini-Hy cube boxcar telescopes to accommodate movement in the cushioned draft gear.

**Ed:** As you mention, Plano Metal Products makes cut levers. You will need photos of the real thing to match their styles to what is on your prototype car. Tangent Scale Models sells a couple of styles. Also, search with Google for Athearn and BLMA parts.

[www.planomodelproducts.com/coupbar\\_scq.html](http://www.planomodelproducts.com/coupbar_scq.html).

[www.tangentscalemodels.com/product-category/unique-and-useful-parts](http://www.tangentscalemodels.com/product-category/unique-and-useful-parts).

You can find the full discussion at [mrhmag.com/node/32049](http://mrhmag.com/node/32049).



## TIPS: Repetitive rock molds

I have duplicate rock molds that I inadvertently bought over the years, and finally figured out what to do with them.

I cut them into smaller pieces that obscure the larger rock pattern. By cutting them along the narrow axis, the resulting mold can be oriented perpendicular to the normal orientation. Thin mold strips can be oriented at any angle, or inverted, and recombined in different order to mix up the resulting rock face.

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Small, odd-shaped pieces can be used to fill the gaps where molds don't quite mate. Cutting the molds can make them less rigid, so you need to exercise care when filling them with wet plaster.

—Nancy Jean Burkholder



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Model Railroad Hobbyist | April 2019

compiled by JOE FUGATE



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## Staging Moves around the Curves...

Mon, 2019-03-11 22:41 — JLandT Railroad

Today was a productive day as I managed to get the Staging Tracks all the way around curves on the Staging Deck.



1. How do you keep the tracks parallel in a curved yard? In this thread, Jason Miller shows exactly how, along with a lot of other great hints and tips. Make sure you explore the entire thread!

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

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More progress .....foreground scenery in front of tracks

Sat, 2019-03-02 17:47 — Rich S



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Very nice Rich - a convincing

Sat, 2019-03-02 18:26 — Ken Rice

Very nice Rich - a convincing representation of the end of winter.

My blog: <http://rices-rails.blogspot.com/>

2. For some realistic scenery along with how-to's, check out this thread by MRH forum member Rich S. We're talking winter / early spring scenery and if we do say so ourselves, the results are stunning – no kidding!

## Weekly Photo Fun March 17th to 22nd

Sat, 2019-03-16 21:01 — [traintalk](#) [Modeling general discussion](#) [Photo inspiration](#)

A new Shay was put into service pulling logs down to the mill.

This is a brass Shay in Sn3 with a LokSound decoder with customized sounds recorded off of the Dixiana Shay.



## Shay #16 waddles over the high bridge

Sun, 2019-03-17 06:30 — [traintalk](#)

Shay #16 waddles over the high bridge pulling a string of logs.

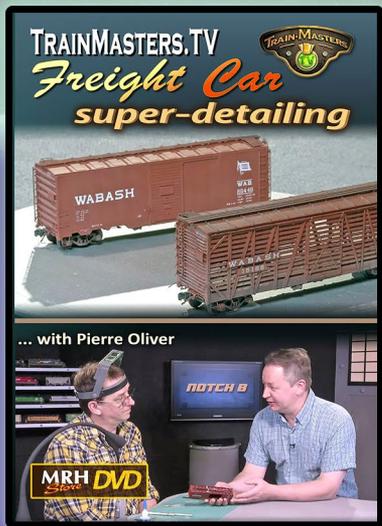


3. The Weekly Photo Fun thread makes for some delightful viewing each week. Forum regular [traintalk](#) kicked things off recently with these gorgeous photos ...



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# WHAT'S NEAT

column



Model Railroad Hobbyist | April 2019

**KEN PATTERSON** THIS MONTH: WE VISIT RAND HOOD AND TALK ABOUT HIS LAYOUT PLANS; MICHELLE KEMPEMA SHARES HER VISIT TO THE CUMBRES & TOLTEC RAILROAD, AND GEORGE BOGATIUK DRESSES UP A DIESEL WITH LED LIGHTING ...



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## THIS MONTH: WE VISIT RAND HOOD AND TALK



about his layout plans; Michelle Kempema shares with us her visit to the Cumbres & Toltec Railroad, and George Bogatiuk installs LED headlights, step lights, truck lights, ditch lights and emergency lights on a locomotive. Steven M. Conroy provides us with some magnificent visuals in "Modeling Ideas from Above," flying his drone over Columbus, OH at sunset, and we interview Andy Edleman, the v.p. of marketing from MTH Electric Trains, in this month's video.

▶ **PHOTOS AND VIDEO OF SUPERB MODELING**

### On the road with Michelle Kempema: The Cumbres & Toltec Scenic Railroad



1-3. (Above, Right top and bottom) The Cumbres & Toltec Scenic Railroad provides a beautiful railroading experience in Northern New Mexico and Southern Colorado. Powered by coal-fired steam locomotives and following parts of the original Rio Grande narrow gauge line (The Chili Line), a ride on the 64-mile narrow gauge is the best way to experience the authentic west of the 1880s. Michelle interviews Corrin Williams in this month's video, discussing the options to experience the railroad as a club or group booking a passenger car or caboose for a day to celebrate your special event on the railroad. They also discuss that the railroad offers fireman and locomotive training that lets the visitor get up close to the equipment and experience railroading as it was before the diesel locomotive was imagined. If you are planning a summer trip, look up the Cumbres & Toltec railroad on line at [cumbrestoltec.com](http://cumbrestoltec.com).

# WHAT'S NEAT | 3



Also see the new "What's neat this week" weekly video podcast!

**WATCH  
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## MTH Electric Trains with Andy



4. This month, Andy Edleman from MTH Electric Trains talks about his more than 30 years serving and working in the model railroad industry. He is always smiling as he describes his recent six shows in the past nine weeks and he always finds the time to work at home after hours on company projects. He says “we provide happiness to consumers” through the products he sells and that in itself makes him the richest man in the industry as he lives his job. The latest big seller for MTH has been the S scale items recently added to the line of products. O, HO, and G scales have always been steady sellers. The recent addition of scale Christmas lights to some O scale models has been a very welcome special effect to modelers and these models sell out before they are even produced. The next time you see Andy at a train show, smile and thank him for helping to promote the best hobby in the world through the products offered by MTH Electric Trains.

## Model Railroad artist Rand Hood



5. In this month's video we get a special treat, with an interview with Rand Hood. Rand is a prolific modeler of the Colorado mountain landscapes that he has shared throughout the model press in the '80s and early '90s in fantastic model photography. After taking a 14-year break from the hobby, Rand is back and better than ever with new ideas on how to model scenes that make the viewer believe they are real.



Also see the new "What's neat this week" weekly video podcast!





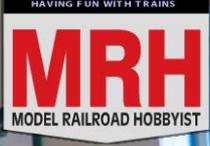
6. (Top) He still has a section of his original layout built from several years ago. This was a rugged landscape with lots of rock castings forming the canyons above the tracks.

7. (Top right) He is planning a new layout and has just about finished the layout room. He will share with us the progress of this latest work of modeling art as it is built over the next few years. When we met Rand, it was snowing heavily and the scenery of the Colorado Rockies was accented with white. Karen, Rand's wife, greeted Auston Allard and me at their house which was designed from the ground up with Rand's ideas on how a house should look, with art built into the architecture. This same magic is always evident in the museum settings Rand designs professionally and the model railroad scenes he creates. After a hot bowl of homemade chili, Rand talked to Auston about his ideas of layout design. With a little coaxing from Rand during the interview, you can watch as Auston forms new ideas for his upcoming layout design and build. This interview will run in May's "What's Neat." With a big smile, welcome back to the hobby Rand Hood!

# WHAT'S NEAT | 7



Watch on



MRH April 2019 issue:  
What's Neat with Ken Patterson

April  
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The complex block features a background image of two men, one in a light jacket and glasses, the other in a dark jacket, standing in front of a large screen displaying a landscape. The screen shows a mountainous area with a river and a bridge. The text "Watch on" is in the top left, followed by the YouTube logo. The MRH logo is in the top right. The main text "MRH April 2019 issue: What's Neat with Ken Patterson" is at the bottom left, and "April 2019" is at the bottom right. A film strip graphic is overlaid on the bottom right.

## George Bogatiuk's ES44 with LEDs



8-10. (Above, right top and bottom) This month, George provides a video about his latest passion. No, it's not the usual Missouri Pacific project he is working on. These days it's a modern ES44 GEVO BNSF in HO scale from Athearn Trains. He added lights on the steps and trucks, ditch lights on the front, headlights, walkway lights, and the red emergency lights in the cab. This month is just a first look at the model and how the effects look with the room lights on and off and shows how the function CVs will control each set of lights. In future segments George is going to get his hands dirty as he shows us the actual process of installing each set of LEDs into a diesel locomotive.

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# WHAT'S NEAT | 9



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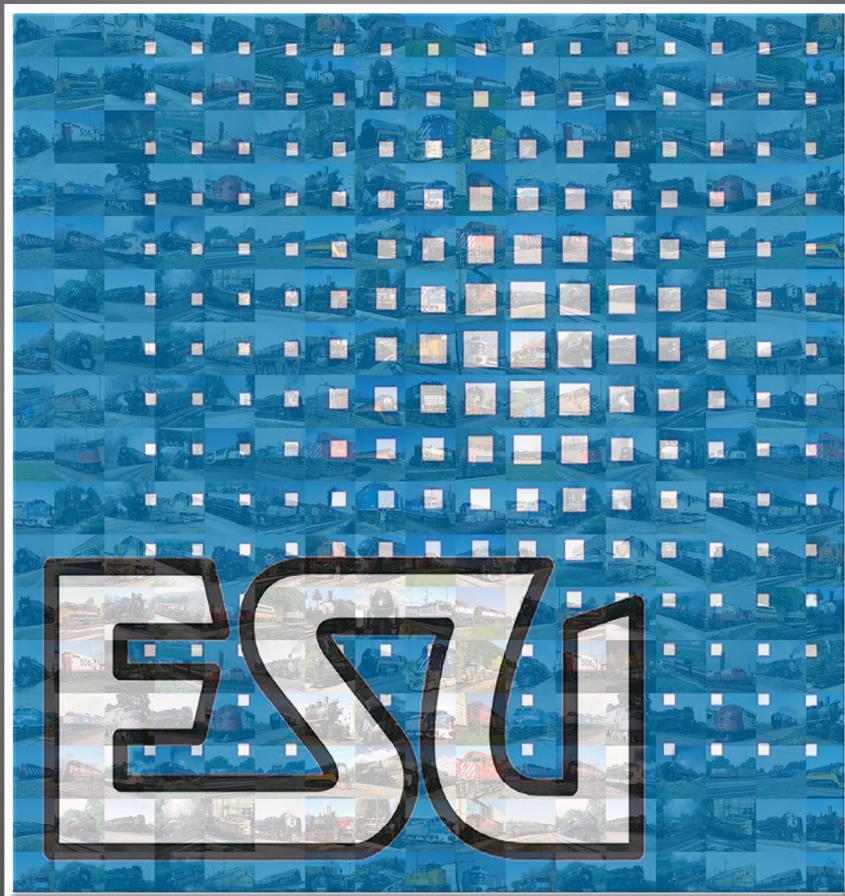
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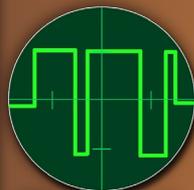
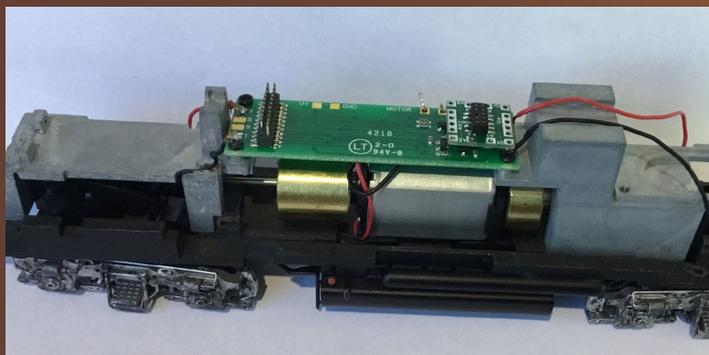
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# The Decoder Buddy



**Electrical  
Impulses**

Model Railroad Hobbyist | April 2019 | #110

**NICK SANTO** shows the board he designed to solve 21-pin decoder install woes ...



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**THIS NEW PRINTED CIRCUIT BOARD I DESIGNED** makes it super-easy to install 21-pin decoders from vendors such as Digitrax, ESU, SoundTraxx, and TCS.

I created this new 21-pin-friendly board to replace the standard DCC 8-pin loco motherboard, and to take full advantage of all the functions and features of the latest feature-rich decoders. Modelers can purchase it from my website ([nixtrainz.com](http://nixtrainz.com)), and selected dealers so you too can enjoy hassle-free installs.

The benefits of the new Decoder Buddy (DB) board include:

- It uses 21-pin decoders – ESU, SoundTraxx, TCS and Digitrax.
- 10-pin socket & plug with wire-outs for all 21-pin decoder functions.
- 10-pin plug is removable for easy separation of loco shell & chassis.

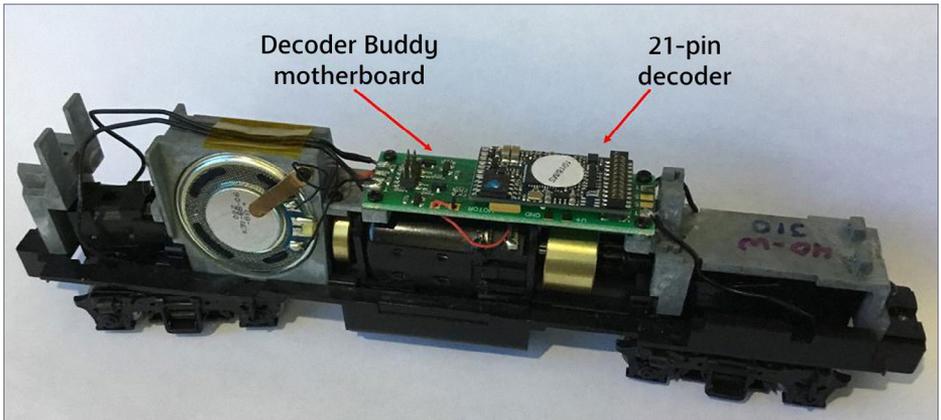
- On-board soldering pads for a stay-alive device of your choice.
- On-board resistors for LED lighting.
- Older 8-pin loco motherboard weaknesses solved.

## Installing the board

Installation instructions may be found on my website at [nixtrainz.com](http://nixtrainz.com). Dealers and decoder installers are also listed there.

There are three standard methods of physically installing a Decoder Buddy. It is a direct replacement for most QSI decoders. Two, three, or four screws are sufficient to hold the Decoder Buddy in place. If there is any question about electrical isolation between the decoder and the locomotive frame, I recommend insulating with Kapton tape.

The eight-tab decoder replacement can be glued onto the connecting tabs with rubber cement or GOO. Two-sided foam mounting tape is acceptable also.



1. This is a completely installed and wired Decoder Buddy motherboard and a 21-pin decoder in an Atlas GP38 or GP40 frame.



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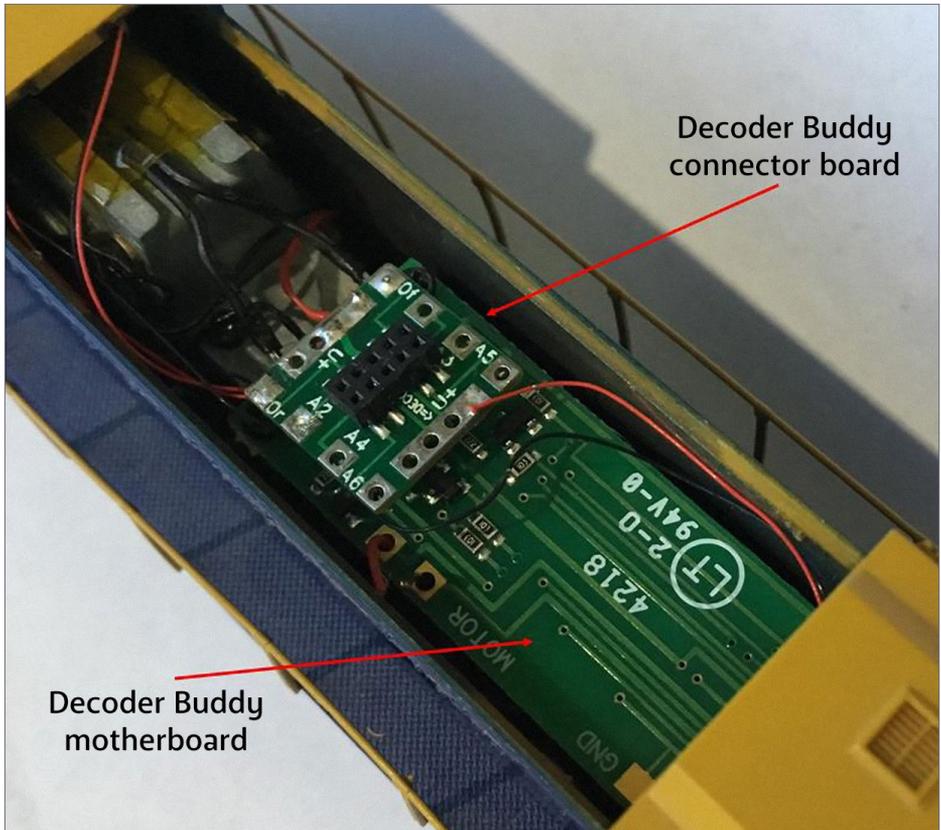
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## THE DECODER BUDDY | 3

A DC conversion like a Blue Box would require a piece of Kapton tape placed on the bottom of the Decoder Buddy to assure electrical isolation.

A second piece of Kapton tape would be used to secure the decoder to the motor. A piece of two-sided foam mounting tape is an alternative if height is available.



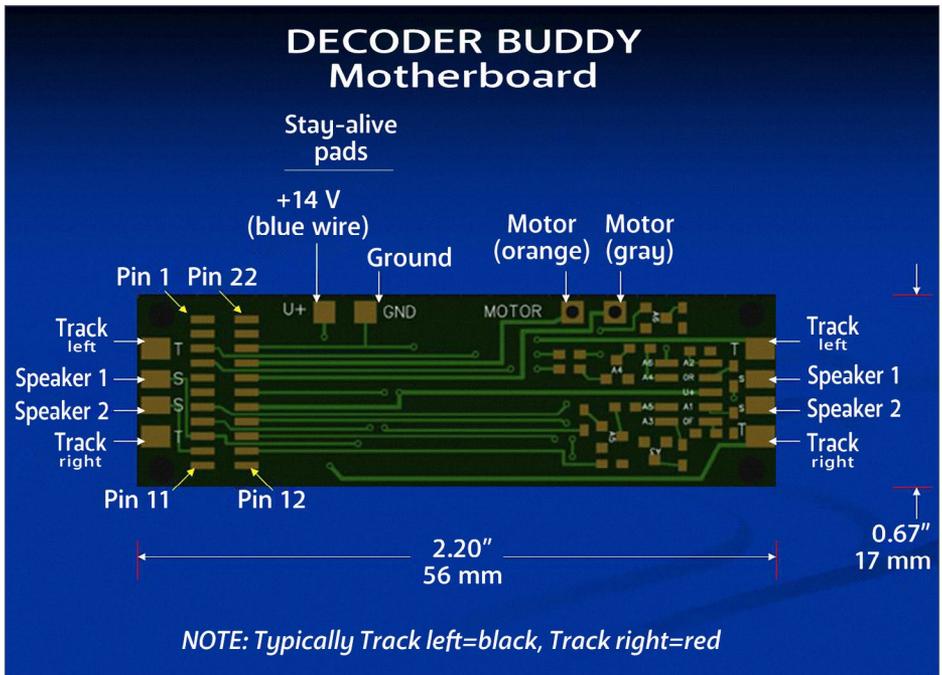
2. This shows the Decoder Buddy connector board installed with wiring to the LEDs attached. The 21-pin decoder is not installed for clarity. The shell is an Atlas GP38 of the dual-mode era.



## THOUGHTS ON DECODER INSTALLATION

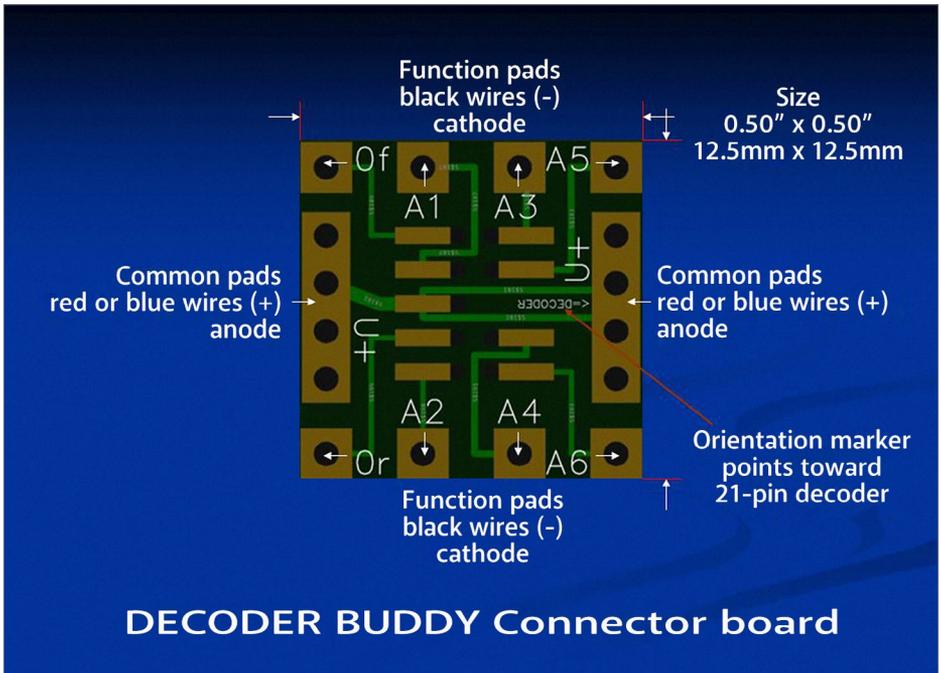
Here are some things to think about if you've never installed DCC decoders.

Motor wires, motor wire colors, and decoder boards have given me fits and wrong-way starts more than once. Thanks to this new board, I can solder the track wires and speaker wires to the Decoder Buddy, but just clamp the motor wires to the board.

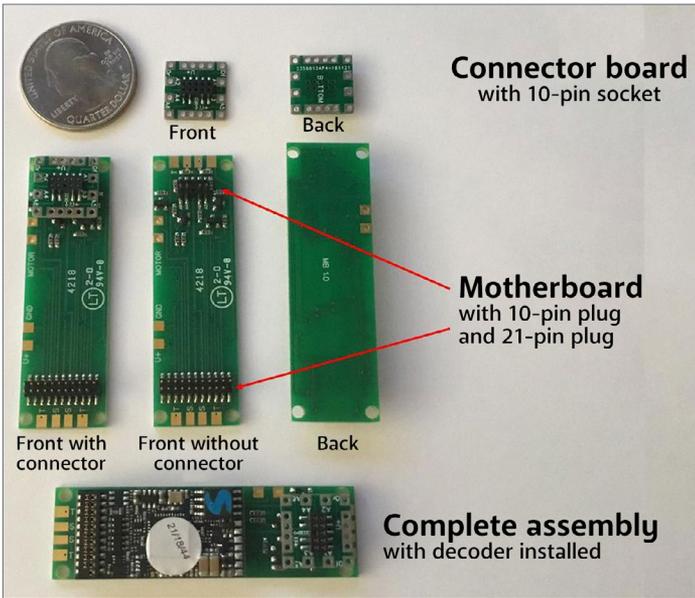


3. (Above left) Shows the connections on the motherboard, the 21-pin connector position, and the dimensions.

4. (Right) Shows the connections on the connector board and the dimensions. Pad labels appear on the board for



attaching function leads. With all function leads attached on this connector board, it allows for easily disconnecting the function leads when removing the loco shell for maintenance.



**Connector board**  
with 10-pin socket

**Motherboard**  
with 10-pin plug  
and 21-pin plug

**Complete assembly**  
with decoder installed

5. This picture shows both sides of the connector board and motherboard, all the associated plugs and sockets, and an installed decoder.

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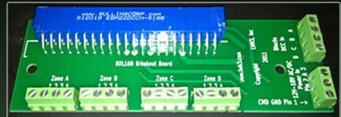
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Here are some tips for installing the Decoder Buddy:

1. The large motherboard is single-sided, but to be conservative, place a piece of insulating tape (Kapton preferred) on the bottom of the Decoder Buddy before mounting it to any metal surface.
2. When mounting with double-sided foam tape the extra insulating tape is not required.
3. I prefer to cut the connectors off any of the wires from the track, motor, speakers, lights, or stay-alive device, noting polarities that are relevant.
4. Before soldering the wires onto the Decoder Buddy pads, I cut them so there is about ¼” extra. The extra ¼” of wire keeps the installation neat, and leaves a little play for contraction or routing.

Pin #	Decoder Buddy	ESU		Train Control Systems
		LokSound LokPilot	SoundTraxx T2 & E2	
3	A6	A6		F6*
4	A4	A4	Fx6	F4
7	F0r	F0r	F0r	F0r
8	F0f	F0f	F0f	F0f
13	A3	A3	Fx5	F3
14	A2	A2	Fx4	F2
15	A1	A1	Fx3	F1
17	A5	A5		F5*

Table: Decoder manufacturer’s function nomenclature mapping

\* Note: TCS functions 5 and 6 are not programmable, and only output constant bright lights.

Input 1	1	22	Track right (red)
Input 2	2	21	Track left (black)
Aux 6	3	20	GND (ground)
Aux 4	4	19	Motor 1 orange
TB clock	5	18	Motor 2 gray
TB data	6	17	Aux 5
F0r yellow	7	16	(+) Plus (blue)
F0f white	8	15	Aux 1
Speaker	9	14	Aux 2
Speaker	10	13	Aux 3
Input 1	11	12	Vcc

6. Standard NEM 21-pin decoder pin configuration used by decoder manufacturers.

*Please note that using this printed circuit board makes the locomotive usable for DCC only. It is not for DC operations.*

5. Exception: I prefer to leave the motor wire long, and tuck it out of the way if possible.
6. I also keep the leftover wire for later use.

## Installation examples

There are three common ways to install the motherboard in the post-Roco Atlas GP 38 and GP40 locomotives. These examples should give you a basis for installing your own decoders in other locomotives.

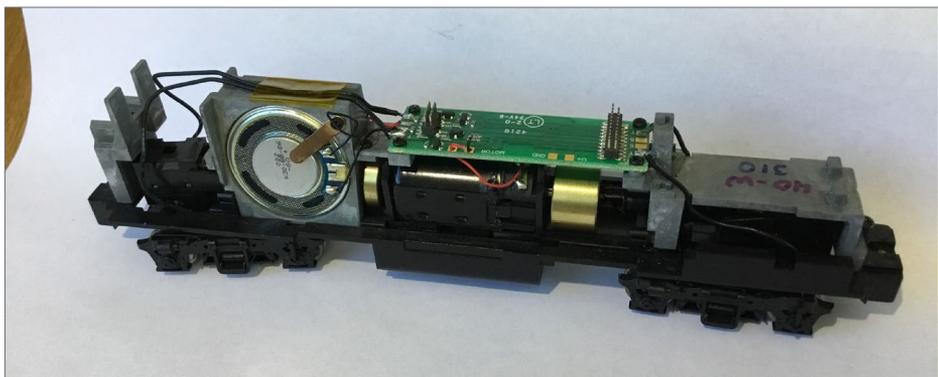
Some locomotives will still need to have their interiors modified to accept a decoder. I encourage everyone who installs a Decoder Buddy to send me pictures. I will post them on the website to help other people with their installations.

Blue-box locomotives, steam locomotives, and other pre-decoder-era locomotives are also good candidates for Decoder Buddy, because the board is compact.

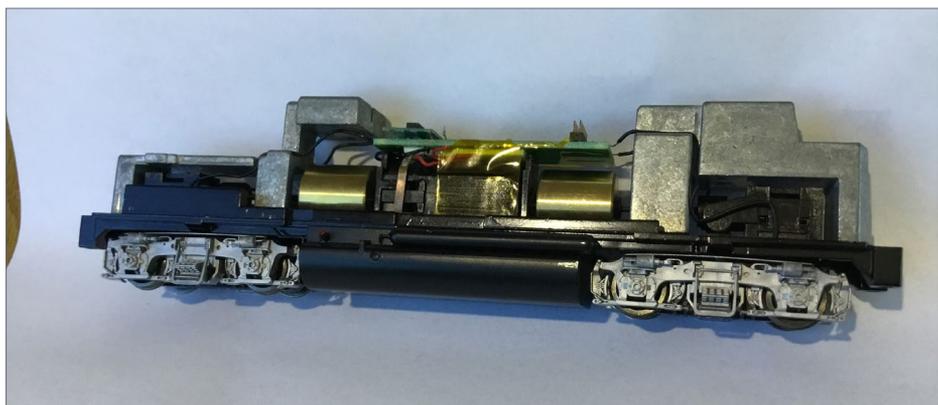
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7. This is a new Atlas Silver DC decoder replacement. The Decoder Buddy installs in both directions and screws-in directly. In this locomotive the connector board should be accessible through the hatch on top.



8. This is a mid-run Atlas Gold GP40 QSI replacement. There are eight wires to solder to the motherboard pads, or 10 if you include a stay-alive device.



9. This is an Atlas dual-mode decoder replacement. First, place Kapton tape on the bottom of the Decoder Buddy. Then attach it to the motor with a piece of Kapton tape from one side of the motor to the other. For a little more room and a little neater installation, the clips that held the old decoder can be cut flush with the decoder support before attaching the decoder with the Kapton tape.



10. Two of Jim Moe's Proto1000 RSC2s before (top) and after (bottom) installing the Decoder Buddy. Sugar cube speakers might now fit in the extra space.

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*Brian Miller photo*



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## GENESIS OF THE DECODER BUDDY

I have seen many articles and videos showing how to install LEDs into locomotives. These often recommend three-millimeter LEDs and surface-mount LEDs (with or without wire leads).

LEDs are used for headlights, ditch lights, number boards, cab lights, ground lights, and so on. They may be purchased with or without resistors.

Decoders come in many styles, and there are many decoder mounting schemes. The lists go on.

My frustration peaked when I wanted to have different decoder functions turn on and turn off selected locomotive lights. There was no provision to add separately controllable ditch lights to existing sound decoders. This was particularly obvious in QSI decoders.

Other manufacturers eventually came along and offered sound decoders that had six programmable lighting functions. This was a good development. The next problem was fitting these decoders into the space provided for QSI decoders. I had to cut off the front two track tabs and the two headlight tabs to make them fit.

Wiring the decoder became significantly more difficult after cutting off the four tabs. Soldering headlight wires to the available areas on the modified decoder board was difficult. A job for an expert!

After reading Dr. Geoff Bunza's and Peter Elsea's posts on the *MRH* website, I realized that designing circuits and making printed circuit boards was an interesting proposition.

I designed and produced a printed circuit board that is mountable in most HO locomotives. It accepts four major manufacturers' 21-pin decoders: Digitrax, ESU, SoundTraxx and TCS. The main printed circuit board (motherboard) is correctly sized to fit in place of a QSI decoder.

It is easy to replace the universal board-style decoders and motherboards also. Kapton tape can be used to insulate and mount the printed circuit board into blue-box and similarly configured locomotives. The motherboard also has a pair of pads to connect a stay-alive device of your choice.

The small square printed circuit board makes LED wiring much easier. It has discrete pads to connect each of the eight lighting functions negative lead, and two large four-position pads to connect the common positive leads.

The eight discrete lighting functions include resistors so I only have to solder the correct LED leads to the pads on the small connector board. Using the small square printed circuit board as a connector allows separating the locomotive shell from the metal frame when it's been wired with headlights and other functions.

This has been more of an evolution than a project for me. It's more like a hobby than a job. I hope it helps people achieve a little more realism in their modeling and happiness in their model railroading too. ■



## NICK SANTO



Nick Santo was an environmental analytical chemist and a flight instructor and flight school co-owner in his working life. Later he was briefly a student conductor and student engineer on GP38 and GP40 locomotives. He is now “retired.”

He works-out most days in a gym or on his bicycle. Electronics and photography are his major hobbies. In the winter, Nick and his wife of 42 years,

enjoy traveling the warmer parts of the United States in their motor home.

Travel and meeting people on the road is his favorite winter pastime, especially when it involves trains. Real trains and model trains have been a lifelong passion.

A Marx figure-eight layout on plywood at age 4 and living on Depot Street listening to steam locomotive whistles were undoubtedly the seeds of Nick’s interest in trains. ■

*See Nick’s website if you would like to get the Decoder Buddy shown in this article. Nick made some extra boards in case anyone would like to buy some:*

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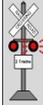
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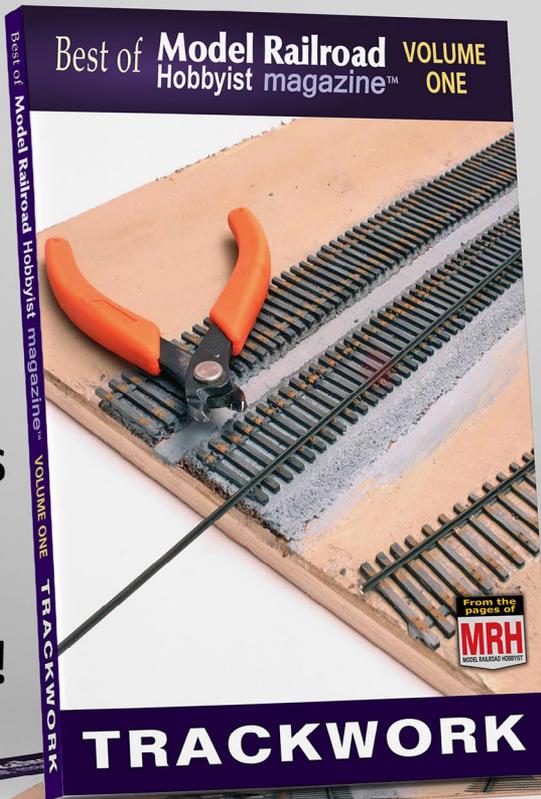
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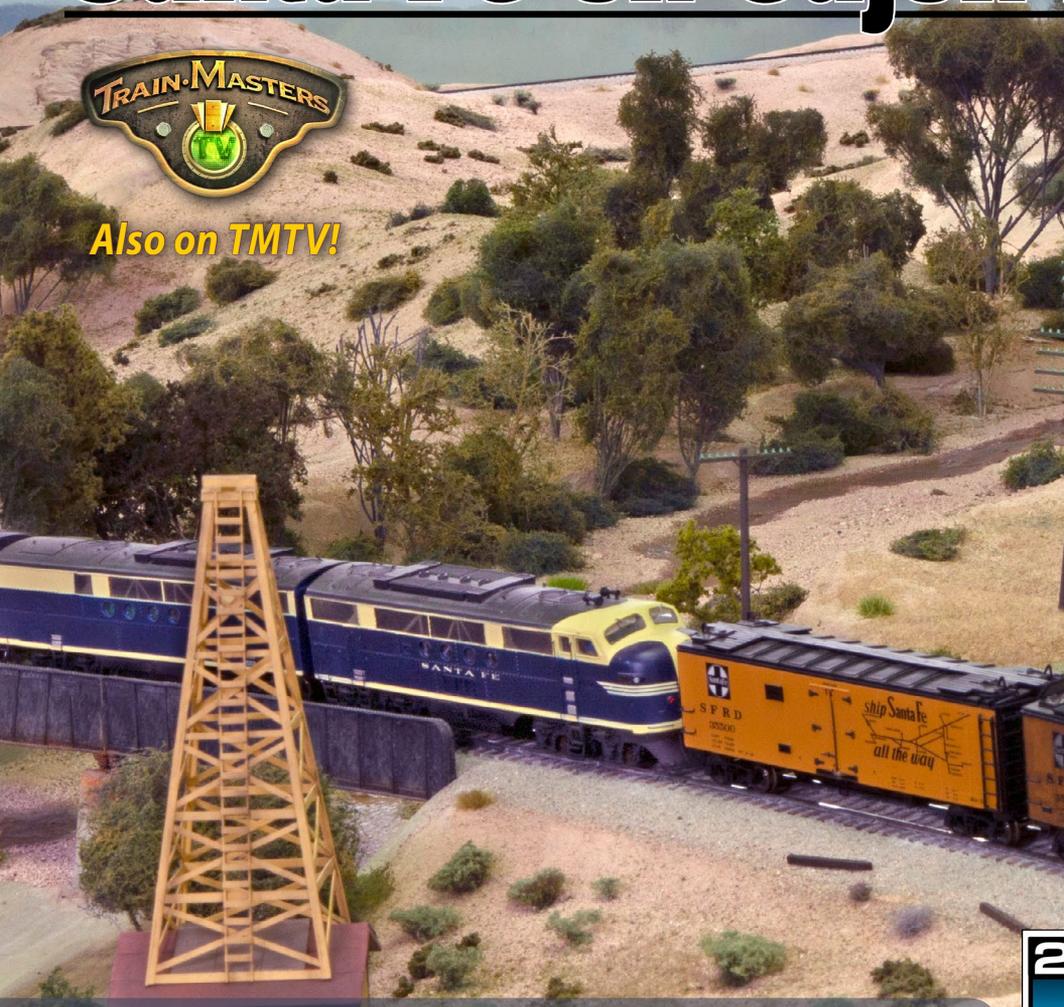
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# Ted York's Santa Fe on Cajon



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# Pass





**RATE THIS ARTICLE**

**MRH:** HELLO, TED. LET'S START AT THE BEGINNING – how did you first get into the hobby?

**Ted York:** I've been in the hobby for as long as I've been alive. I was born on Christmas Eve, and the story is that my dad was home playing with my Lionel train set under the tree on Christmas day. We stuck with the Lionel for many years but finally moved into HO.



## SANTA FE ON CAJON PASS | 4

**MRH:** Tell us more about your journey in the hobby.

**Ted:** My dad was in the military. Of course, we moved from place to place over the years. When we got into HO, he built a 4 x 8 layout with sides, kind of a sandbox, and with a lid. We took that with us everywhere we went until my teens when he was stationed in Guam.

I remember the Christmas before we left Guam, I got an N scale train set – it was when N scale was brand new. So, I got into N

1. Ted York's Cajon Pass faithfully reproduces several prototype locations, such as this modeled scene of Sullivan's Curve, named after the famed railroad photographer Herb Sullivan.



## SANTA FE ON CAJON PASS | 5

scale and I stuck with that pretty much until I left high school and went off to college – after which I gave up the hobby for a number of years.

After I got married and my first son was born, that was my excuse to head back to the hobby shop! I started with a small 4 x 8 that I messed around with for a number of years. When we finally settled down into this house, I went crazy and filled my basement with a layout that I had dreamed about forever.

Even growing up as a kid, one of the things that I would do is sit and draw train layouts. I learned drafting that way and just dreamed of things that I wanted to model.



2. Santa Fe helper 3841 pushes the train past Ted's model of Mormon Rocks, a famous rock formation along the Cajon Pass route. Compare to the prototype photo [3].

**MRH:** If someone comes down here to your basement, what are they going to find?

**Ted:** You will find a model of Cajon Pass during the late '40s to early '50s. When I began this layout, I decided to model Cajon Pass for various reasons. I chose an era rather than a specific date because I didn't want to restrict myself too much on equipment.

I've always enjoyed steam, I like early diesel's and that kind of thing, so that's what I decided to model.

I hand-laid the track on this layout. It's a big dog bone except the dog bone is twisted all around the basement. The two ends of the



3. Photo of Mormon Rocks on the Cajon Pass route. *Photo courtesy of Wikipedia.*

## SANTA FE ON CAJON PASS | 7

dog bone end up on top of each other, which is where our staging areas are.

The trains come out of San Bernardino yard and make the climb up to the summit. We've compressed 24-25 miles into about four miles scale wise. We skip every other depot because I wanted long enough trains to at least look like they needed helper service.

That's one of the big things about our layout, about the operations that we do: helper service. .



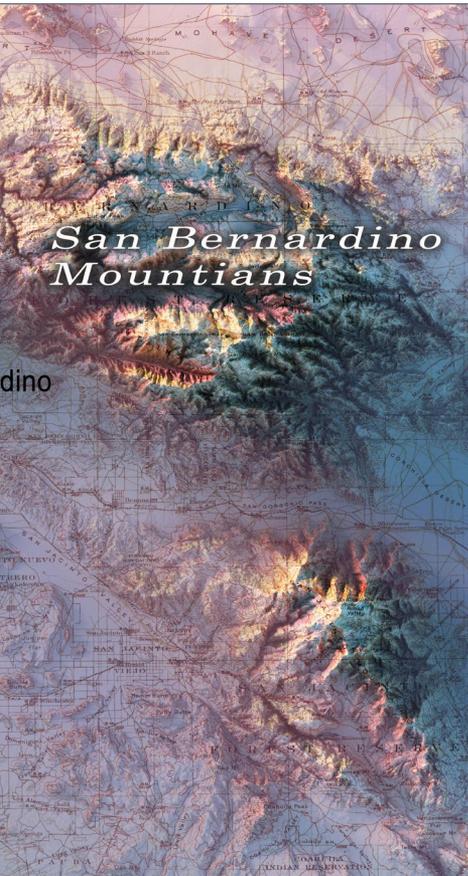
**MRH:** Did you design the passing sidings for a particular length of train?

**Ted:** If I recall right, they're about 18 feet long. We run on average 23-24 car trains. Then you add to that an A-B-B-A lash-up of F-units and then one or two helpers and a caboose. I'd like to double that but obviously it's impractical, so that was my compromise.

**MRH:** Why did you pick Cajon Pass?

**Ted:** I picked Cajon Pass mainly because I had been collecting western railway equipment. I had a lot of Santa Fe, Union Pacific, and Southern Pacific equipment, and on Cajon Pass the tracks there were owned by the Santa Fe. Union Pacific had trackage rights and they ran about as many trains, and then Southern Pacific occasionally detoured over Cajon Pass.

That was the initial part of my decision. The next time I was down in southern California, I went up to the pass to pay a visit



4. Using this USGS 3D topographical map of the Los Angeles basin, it's easy to see why Cajon Pass made sense for railroads to get through the mountains encircling the LA area.



5. Railroads of the southern California region circa 1970. The Santa Fe shared trackage rights with the UP from San Bernardino to Barstow through Cajon Pass. In 1967, the SP opened the Palmdale cutoff, which included a route from Palmdale to San Bernardino through Cajon Pass, roughly paralleling the Santa Fe.

and just fell in love with it. The amount of traffic that was coming down the pass was just incredible and it was a beautiful area.

That was my decision and I just never looked back.

**MRH: Why this era?**

**Ted:** I model the late '40s to early '50s era because I like the steam diesel mix. I'm the typical old guy who loves that particular era!

**MRH: How did you develop the track plan and did you go through a lot of iterations?**

**Ted:** In developing my track plan, the biggest mistake I made was not doing a track plan before I built the house. I might have made some modifications, but to tell you the truth when we were building the house I really wasn't thinking quite as big as the layout I ended up building.

I designed it using a CAD program. I just started creating a bunch of circles for minimum radius of 36 inches that I chose. I just started moving them around the basement trying to determine where some of the best locations for modeling the various things that I wanted to model.

I was glad I did it on a CAD program because I was well past 64 iterations before I settled on what I have. It took a while to come up with the completed plan. It evolved as I learned things during the process.

**MRH: Any big surprises getting the track plan to fit?**

**Ted:** Yes. When I started the layout construction, I had done measurements and put them into a CAD program. I started my railroad at San Bernardino and worked up the hill.

# SANTA FE ON CAJON PASS | 11





When I got to the staging yard I ran into a problem. The yard sits in a section of the basement underneath the front porch. I had planned to make a U-turn up there, but somewhere I had made about a one foot mistake in my drawings. I could not do what I planned.

I fretted over it for a while, then I called a concrete cutting company had them come in and put a hole in a concrete wall for me. My in-laws were visiting and I think they thought their daughter had really married a wacko!

But we took out a big section of concrete in the basement because the railroad had to go through! I guess that was the biggest surprise.

**MRH: If the railroad won't fit, then make more room!**

6. Detailed map of the railroads that run through Cajon pass, circa 1970. Originally the Santa Fe (blue) had one route through the pass with a grueling 3% grade – but in 1913 they opened a slightly longer route from Cajon to Summit with only a 2.2% grade. The longer route became the uphill grade, while the steeper original route got repurposed as the downhill grade. In 1967, the SP (red) opened the Palmdale cutoff through the canyon, connecting Palmdale with San Bernardino. *Map terrain by Google Maps.*

**Ted:** Yes, I “made” the space bigger. I wasn’t about to go tear the railroad down and start over again!

**MRH:** That’s great! When did construction start?

**Ted:** We moved into this house in 1994. I think it was about a year and a half after we moved in that I began construction. There was a lot of planning that went into it.

**MRH:** Has construction gone like you expected? And did it go as fast as you would have liked?

**Ted:** People ask me how many years I have into this, and I tell them maybe 11 or 12 years. Even though in reality we’ve been in



the house about 24 years, and the layout's been in existence to some degree for at least 22 years.

I made a lot of progress initially. I used L-girder construction for the most part, except in a few places where we have a little bit of double decking. There we used grid construction to maintain a thinner benchwork profile.

I used to have a couple of fellows that would come and help me with the construction. The building of the layout foundation went quickly. As I got into the track, that was another story. I decided to handlay the track.



7. Ted added San Bernardino station as mostly a flat against the backdrop in San Bernardino. This area isn't quite finished yet and the foreground still shows a bit of bare plywood.

I also decided to use spline roadbed and that took me awhile as I learned the process. If I was building the railroad today, I would lay the track on Homabed. But I used pine lath for my sub roadbed at the time because I could spike into it.

Laying the track took me awhile – I had to kerf the pine out on the curves. It probably took me a year and a half to complete the mainline. Then another year and a half or so to put in the sidings and spurs. So, it was a long drawn-out process. Once the scenery started it was not too bad.

**MRH:** Oh? What made the scenery go faster?

**Ted:** We went through and did cardboard strip webbing and covered that with cheesecloth, then plaster of paris. The plaster of paris sealed the cheesecloth. We did the entire first plaster layer on the layout in about a day, day and a half's worth of time.



8. The San Bernardino roundhouse is Ted's latest project. The impressive structure is not finished, but he's making great progress!



**9. Ted has faithfully modeled the upgrade and downgrade routes between Summit and Cajon. The left route is the upgrade one, while the right route is the downgrade one.**

I had one of my kids mixing plaster, and another kid cleaning out the tubs we were using, and I would just paint it on. When I was just about done with one tub, I'd tell one of the kids to start mixing another batch while the other kid cleaned out the old tub. We just went like that. Like I said, we did the complete layout in about a day and a half..

**MRH: Wow, that's amazing! Back on the track again – what code of track did you use?**

**Ted:** I hand-laid the track using code 83 on the mainlines and the sidings we did code 70. The San Bernardino yard is done in code 70, and we have a little bit of code 55 in a couple of the spurs.

When I started out I was not able to get the rail I wanted, so I took old Atlas code 83 track and pulled all the ties off – and that got me started. Eventually the rail finally came that I had ordered, and I just pressed on.

**MRH:** What have been your greatest challenges to doing this layout?

**Ted:** Probably the immensity of the layout. Fortunately, being out on the desert it's fairly simplistic, there are not a lot of structures. Still, the biggest hold-up on the layout remains some of the structures.

I'm just now finishing up the roundhouse after I don't know how many years of construction. I've got a lot of structures in San Bernardino and some of the online industries that I need to do.

Part of the problem is they all have to be scratchbuilt. I don't have plans for any of them really, although on the roundhouse I've got some plans that somebody had done.



10. Ted has captured the parched desert look of Cajon with its many bridges across dry washes. Here, helper 2-10-2 number 3841 pushes a long train upgrade.



11. Local railroad artist Gil Bennett painted this Cajon prototype scene for Ted. Gil also painted Ted's superb layout backdrops – it doesn't get any better than that!

For most structures, I need to find pictures, then I have to put together drawings so I have something to build from.

I enjoy having a finished scratchbuilt structure that I've done. There is a lot of satisfaction to that, but when it comes to getting started it's hard sometimes for me to find the motivation to do it. So that's been one of most difficult things for me.

I enjoyed laying the track. It took a lot of time, but I just did 12-15 feet at a time and eventually we got things done. The thing about a large layout is everything takes a lot longer than you think it's going to take.

For example, when I started the layout, I envisioned myself casting all the piers for all the bridges. Then I soon realized they're all different.

I didn't really want to make forms and cast them all – too time consuming. So, I eventually took pieces of pine and cut them out on the table saw. Then I covered each one with Durham's Water Putty and put some cracks in it.

I've done a lot of them out of styrene also, and they look just fine. I'm not sure I could tell the difference!

**MRH: Interesting solution. Any other challenges with this layout?**

**Ted:** Let's see, no other really big challenges. Actually, a lot of things came together. In other words, if I was to tear this down and rebuild it, things would come out just about the same.

For instance, I had gone down to the actual Cajon Pass and collected dirt to use for my railroad. One of the problems was that when you put it out on the layout, it's too dark. That's because we don't have the same amount of light in here that you have outdoors.

I was standing out at my fence line watching a tractor do work on my neighbor's house and he hit a section of what out in the sun looked like white dirt.

I grabbed a little bit, threw it on the layout and it was perfect color! So, I took my wheelbarrow over that night after they were done and filled it up with that dirt. To be able to find that again – I don't know if I would find that again.

Another thing that happened was Digital Command Control. The NMRA had just standardized things and it was in its infancy.



12. As the track climbs up toward Summit on Ted's layout, it gets high enough off the floor that Ted added a raised floor so crews can see the trains better.

I was up at the Portland 1994 convention talking to people at Digitrax, and at the same time I was reading Bruce Chubb's book on automatic block selection.

As I read that, suddenly the light came on. I asked myself, why am I doing this when I can do Digital Command Control?

DCC allows us to operate like we do. When we're having an operating session, in San Bernardino there's the hostlers running locomotives in and out to put onto trains, and there's three guys running switchers, switching cars in and out. The only thing they have to worry about is not running switches and not running

into each other. They don't have to worry about selecting blocks – it just makes operating much more pleasurable.

Then when we run a train up the hill with a helper, we don't need to consist the helpers. So, every train going up the hill with a helper has a two man crew with the second operator running the helper engine. You can't really do that with block selection and you wouldn't enjoy it anyway.

Then radio control came out and going from plug-in throttles to radio throttles was almost as a big a jump as going from DC to



DCC. Now you don't even have to look for sockets and a place to plug in as you go along. You just watch a train!

I haven't signaled the railroad yet but seems to me the signaling systems are getting easier and easier. So, the longer I wait, perhaps the easier it will get!.

### **MRH:** What do you like most about this layout?

**Ted:** I think for one thing it's the first one that I might get finished. There're a lot of things I love about this particular model railroad. One of them is the fact that I modeled a prototype. That's done a lot of great things – for one it's taught me to be a better modeler.



I have to come up with solutions. If I was doing something generic, I guarantee you I wouldn't scratchbuild. But I have to on this railroad because there's recognizable structures and a lot of the structures you just can't buy.

So, I've been forced to scratchbuild. A lot of the bridges on the layout are kitbashed or scratchbuilt to fit the actual bridges at the location. I've had to do a lot of research to figure those out.

The other thing I enjoy is the friends that I've met. The late Andy Sperandeo was a good

**13. Pine Lodge, partway up the pass, hosts the Big Pines Lime plant that's served by the railroad.**

friend of mine because we had a similar interest in the Cajon Pass. We visited each other's layouts.

I also got to know a fellow in the '80s by the name of Chard Walker who had worked the railroad. He took photographs the entire time he was there. He was a railfan as well as a railroad employee. We would just go through hundreds of slides of finding little. But his friendship meant a lot more to me than any of that.

To this day, I have friends all over the world now just because of this model railroad. So that's been one of the fun parts.

My children never really took much interest in the trains – they claim they were slave labor having to put ties into the jigs and things like that! But for my grandchildren it's another story.

I have a granddaughter now who insists on coming down and seeing the railroad. So that's a lot of fun.

**MRH: Yes, interest in the hobby can skip a generation. We've heard that before.**

**Ted:** I had one boy that took an interest in trains until girls and paintball came along and that was the end of that. I had a daughter who would come down and crew call. So, that was kind of fun, but that was it.

**MRH: What do you like least about this layout?**

**Ted:** Perhaps the one disadvantage to a prototypical railroad is that there might be something that you would like to model, but you really can't model it because it doesn't fit on the railroad.

It depends I guess on how true you want to be to the original. I love truss bridges: there's a railroad line that runs out of Idaho Falls up to West Yellowstone, and there's a set of truss bridges I can remember seeing when I was a kid. They cross the Snake



14. Ted's layout is essentially a big dog bone, with loop staging at each end. Here is the upper staging, representing Victorville and beyond. The lower staging just barely visible in the lower right represents the Santa Fe tracks beyond San Bernardino.

River and I've always wanted to model those, but I decided to remain true to what I'm doing. So, I don't model those, although I have stretched some things a tiny bit here and there.

Sometimes we run into maintenance problems that I have to spend time on when I'd rather be doing something else. It has been pretty good though. One of the things that I said in the beginning: if this became a maintenance headache, I was out of here!

It's been pretty good, we do occasionally have to fix a switch or a locomotive – something may go bad and we have to work on

that, like a problem decoder. But I have to say that for the most part it's run very well.

I've been highly satisfied with Digitrax and I've been very satisfied with their products and how they work for us.

We hand-laid the track, and I was pretty careful about putting the track in. To me if, the trains don't run the railroad's no fun!

I put a lot of time into good trackwork. Derailments are pretty minimal, and they're usually because it's a new piece of equipment or due to operator error most of the time.

**MRH: That's the sign of a well-done layout – issues come mostly from new equipment or operator error. If you had to do it over again, what would you do differently?**

**Ted:** There are a few things I would do differently.

One of them is that I considered using engineered trusses under the railroad. Then for whatever reason, I backed off. It wasn't until I visited Lee Nicholas where he had done that that I wished I had gone ahead with it because the benchwork would have gone a lot faster. Just put in some trusses, run the joists.

The other thing on the island that we have from Cajon all the way around and back up to Alray, I would probably frame the center section as a wall in the house and then I would bring a layout out on either side from that wall.

Scenery-wise I'm pretty satisfied. Actually, I'm at the reiteration stage now – starting to go back and detail it a little more, fixing things and improving things. Everything else I'm generally pretty happy with.

**MRH: Sounds good. Who did your backdrops?**

**Ted:** Gil Bennett did my backdrops. He's a good friend, he's a railroad artist well known in that area, and he's been a part of the layout construction. He volunteered to do it, so that's how it got done.

**MRH:** **Can't ask for much more than that! How did you set the layout height?**

**Ted:** The layout height was a tough decision. I prefer, if the layout was flat, a fairly high level, somewhere up around my chest height. That's just how I enjoy looking at the trains. But I'm tall and my perfect height doesn't jibe with somebody else's perfect height.

Gary Coleman used to come down here and he was about as short as it gets – and he would walk around with a paint can and would stand up on that to operate..

The layout is on a grade, you start out at San Bernardino, which is the bottom of the layout and we run up the grade all the way up to the summit.

The entire railroad is that climb up Cajon Pass. So, I had to start the layout lower than I would like to have put it. Then go up a little higher. I eventually put in a raised floor up near Summit so we could see the railroad a little better, make it easier for operators.

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I tell people if we had modeled all 25 miles of the Cajon Pass, we would have had about 37 feet of climb! We would have been through the floor!

You have to manage that – in the station areas like Devore and Cajon we actually leveled the climb. For one thing, so we could store cars on spurs without them rolling.

The other thing we did – unlike the real railroad, we wanted the steep climb, the hardest most difficult climb, for the uphill trains. We wanted to justify helper service. So, the more difficult it was to get a train up the climb made it all that more interesting.

Steep grades on the way down create mechanical problems for locomotives. You have to fine tune to keep them from lurching and jerking about as they come down the hill. So, reducing that grade a little bit helps.

Like I said, it's a little bit different for our layout because of the constant grade from the start to the finish. If I was doing a level granger type railroad out in the Midwest, I would have picked probably about chest height.

**MRH: This layout has a lot of uphill grades. What grades, specifically?**

**Ted:** I think my steepest grade is about 2.5%. My ruling grade is Sullivan's Curve up to Pine Lodge – it takes a lot of effort for trains to get up there.

I can't run a train by myself if I don't put a helper on the train. I have these A-B-B-A units and I take the motors out of the B units. Particularly the passenger trains are heavy.

**MRH: Tell us about the helper operation. How has it gone?**

**Ted:** One of the chief operating schemes that makes this railroad fun are the helper operations. The hostler pulls the helper locomotives out of the roundhouse and he pre-positions them depending on whether it's a freight train – where they go on the rear – or a passenger train, where they go on the front.

An eastbound train comes into the San Bernardino yard out of the lower staging and they work the train and then they pre-position the helper with the train. And we don't consist the helper to lead locomotives, we call a specific helper engineer.

So, it's a two-man crew going up the hill. They start out of San Bernardino and they go all the way to the other end of the railroad which is Summit. At Summit, they cut off the helper engine.

The helper turns on a wye and comes back to San Bernardino light, while the main train leaves Summit and heads to the upper staging yard, which is east. Whether it's Victorville or Chicago, it doesn't really matter.

That's been a lot of fun, sometimes it's a challenge just getting the helpers back to San Bernardino! Often during operations, we shut down one of the tracks – we have two main lines, so we'll shut one down while the station operators are coordinating traffic between the two stations.

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I look at operations as kind of the social end of the hobby. When you have two guys working together to take a train up the hill, it makes it a lot more fun, I think.

**MRH:** Have any disasters with the helper service?

**Ted:** No, helper operations have gone really well for us. I can't think of any big problems that we've ever had. Generally, the guys will monitor the couplers and we teach new guys to look about mid-train where you go from pulling on the couplers to pushing on the couplers.



Some guys are better at it than others, but we haven't really had any problem.

It's a bit of a challenge because our grade is not constant, it changes so you have to keep track. The lead locomotive might hit a level spot and start to speed up and they have to deal with maintaining the same speed. Anyway, like I said, it's just a lot of fun for us.

**MRH:** Well, that's pretty cool. Tell us about the DCC system you use and why?

**Ted:** I use Digitrax DCC – I always hate to talk about DCC systems – it's kind of like talking about religion. People ask me what digital command control system I think is the best and I tell them buy the one your friends are using so you have tech support, have extra throttles, and things like that.

When I was looking around, the DCC systems were fairly new at that time and one thing I wanted was four-digit addressing. I knew I did not want two-digit addressing, which was the norm at the time. I believe in simplicity and it's so simple to look at an engine number and plug that whole number in.

The only system at the time that had four-digit addressing was Wangrow, but they were more than I wanted to spend at the time – I think close to \$1000 to get into a basic system.

15. A hefty Santa Fe 2-10-2 pusher rounds a curve as it helps push a train the pass.



While I was in the middle of trying to make that decision, Digitrax announced the Chief which had four-digit addressing and they were right around \$400. There was a fellow by the name of Lloyd Sperlock who sold digital products and I ordered through him. I think it was probably at least two months before they finally got it out and got it to me.

That's the system I've always used. I'm not a technical guy, but Digitrax is peer to peer, it's like a computer so everything is pretty much instantaneous.

I think in the beginning their original throttle was a little hard to understand if you weren't the owner. It was difficult to teach



16. This train exits tunnel #1, the last tunnel before reaching Summit.

operators how to use the throttle safely without doing something we didn't want them to do.

I approached Digitrax about building what is now the UT 4, which has been a fantastic throttle for us. You can just hand that to an operator say, here's what you do and send them on their way. To me simplicity is the key.

Like I said, I tell people to go with the system that their friends are using because it makes it a lot easier. When they came out with the UT 4, I bought 20 throttles.

I can remember Lloyd Sperlock calling me up and wondering if that many throttles were going to cause some problems. He was wondering if we would need to put in some more radio receivers with a different frequency or whatever. But we've never had to do that, we've never had a problem. So, I can't complain.

#### **MRH: What kind of decoders do you use and why?**

**Ted:** I've got a myriad of decoders. Initially, I was pretty price sensitive, because there's a lot of locomotives on this thing. I had a lot of Digitrax decoders just because that's the system I'm using and it was just a natural to buy those.

I've got some TCS and now we're starting to put in SoundTraxx sound decoders and of course the new stay-alives, obviously various names depending on the manufacturer, but that system is just been great for us.

You can hit a piece of dirty track and it doesn't affect the operation of the sound because you have that stored power in the capacitors. I think that's the greatest thing since sliced bread

I like the SoundTraxx decoders. They've been pretty good for us, and I use the Econamis – I just love 'em. They're just what I need, I don't need to go overboard with five million different sounds and functions. With a good horn and dynamic brakes, I'm happy.

**MRH:** Sound decoders are great. What's your least favorite part of doing a layout and how do you motivate yourself to do it anyway?

**Ted:** I think my least favorite thing is scratchbuilding buildings. That's why it's the last thing that I've gotten to. I've scratchbuilt a lot of small depots and things like that, but now I'm to the big stuff.

It's taken me years to get the roundhouse ready to paint. That's my next project and I finally started construction on the pre-cooler and got the ice loading docks all done. Now I have to build the actual building that goes with it – the building where they actually created the ice.

Wiring is not my favorite thing either, but I get motivated to do that because I want to run the trains. So, when I was laying track, building turnout after turnout – it still took me about an hour for each one. It's tedious work because it has to be done right or you'll run into problems.

**MRH:** Speaking of turnouts, do you build them at the workbench or in place?



**Ted:** I built all my turnouts in place. I just put down a template and generally followed that. Although some of my turnouts curve a little bit, which is kind of the fun. You can go to one end of the yard, stick your head over the railroad and look down the track – and you could just see how smooth it rolls into curves and out of curves.

I'm not saying you can't do that with prefab, it just seems to be easier to make it flow using hand-laid track.

I think it looks good. I've seen people argue about hand-laid versus prefab track and I don't really care. I didn't hand-lay the track on this railroad because it was the thing to do. It was just one of those things on my bucket list, so I did it. I've been glad, it's been pretty reliable for me..

**MRH: What are your thoughts on this layout and its size – and layout size in general?**

17. Panoramic view of Summit. In the center is a wye for turning helper locos. On the right, a helper has turned and it's ready to run light back down the hill.



**Ted:** There are a lot of things to consider when you're designing a layout, in terms of the size of the layout. I can remember David Barrow saying the word money when he heard about what I wanted to do for my layout.

The larger your layout, the more money you will invest in that layout. Whether it's rolling stock, track, whatever it is. You will just spend more money.

There's also the investment of time. That's really important to consider, your ability to provide the time to get it all done. I don't think it's something you need to hurry and get it all done right away.

To me it's a hobby, it's a lifetime pursuit. When you finish a layout, it's not as fun anymore, I don't ever really want to be finished. I want to have something to improve on always.

Another thing that can eat you alive is maintenance. If you don't build it well, if you don't do a good job, you will run into maintenance problems. As I've said, if the trains don't run it isn't any fun. You must be really be careful of that.

It's amazing how long some maintenance problems can take you to solve. If you have a many problems going on, then it will take the fun out of the hobby right away. People don't want to come operate on a railroad that doesn't run!

**MRH: Speaking of operating, do you host regular operating sessions?**

**Ted:** Right now, I'm not hosting regular operating sessions. I'm pretty busy with my business. It's not so much the operating session, but it's getting enough operators down here.

It takes at least 20 guys to operate this railroad to make it work the way we envisioned it. That's a lot of guys to have to invite and get down here and get organized.

I do every couple of years, though – we hold what we call the Great Basin Getaway. It's a Utah operating thing, we've got maybe three to five layouts involved. I don't really manage that, but we'll have three teams in here over the course of three days.

They come in and operate and it's a blast because most of these guys are really into operations. They really do a great job of bringing the diorama to life, and I enjoy that.

We had ProRail guys came in here, I don't know, maybe a year and a half ago.

Anyway, I meet a lot of great guys from out of state and I really enjoy that. We got the NMRA National coming up this year and I'm really looking forward to that. We've got several operating sessions planned for that, so there will be a lot going on.

**MRH: Sounds like it. How well do you like HO scale and would you ever consider doing a layout in a different scale or gauge?**

**Ted:** I love HO, I mean it's the common average. It's what most people like, what most people work with.

I have had experience in other gauges. I like big gauges like O scale and G scale and just because of the massiveness. When I set up the G scale train upstairs at Christmas time, you can hear it running from down in the basement and you can feel that massiveness and that's fun.

But I think it's restrictive because of the size and the cost. If I had everything including all the time in the world, I would build a huge layout in O scale. In N scale, I like the track to scenery ratio.



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I often wonder what this layout would be like if I did it in N scale. But again, they have their issues. I wouldn't have easy access to Santa Fe 2-10-2s, which is a staple down here. So, there's pros and cons.

And in N scale, you have to be a really good modeler to make N scale photographs look nice, let's put it that way. I have a good friend down in California who does beautiful work in N scale.

Overall, I think HO scale has just the right compromise. It's easy



18. In this close-up of the buildings at Summit, you can see Ted has posted instructions for the Summit station operator. Ted's layout will be on tours at the 2019 NMRA Convention in Salt Lake City, and he will be hosting operating sessions. If you have any interest in operating trains up Cajon Pass, here's your chance!

to photograph, it runs well, and you can still see it easy enough during operating sessions. And there's a wide variety of products available.

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

**Ted:** In just about anything I do, I try to do it to the best of my ability. In the case of a model railroad, I want it to look realistic; that's important to me. I tell people I'm not a rivet counter, but if I can make you think I'm a rivet counter I've done my job.

When I look at a prototype layout, it's not a reproduction of the prototype, it's a facsimile. It's an art piece to give you the feeling of that prototype railroad. You do that in several ways – the scenery's an important part.

I tell people the scenery is so important to a prototype railroad that if somebody ran a New York Central passenger train for instance down my railroad, people wouldn't ask me how long that I've been modeling the New York Central.

They would ask, "Hey, what's that New York Central doing on Cajon Pass?" And that's what I want.

Your model railroad is always compressed. I've got four miles that should be 25 miles. So, I've made a gazillion compromises.

For example, I have a story about somebody that bought the Life-Like Proto2000 PAs. He had an A-B-B-A PAs, and he contacted Life-Like to get the parts to motorize the B units. I asked him why did you do that? The two A units will pull your house down!

He looked at me and he said, when the Union Pacific orders dummies, I'll order dummies. So, I asked him can you show me where you put the diesel fuel? Life is a compromise.

**MRH:** That's a great answer. So, how do you narrow the focus?

**Ted:** Well, prototype model railroading does that for you..

**MRH:** Can you elaborate?

**Ted:** Narrowing the focus can be hard to do. First, modeling a prototype narrows things for you as it is. Since you're compressing the distance, you must decide on what you will model.

I tell people just pick scenes that you like about the railroad. If they have a tunnel that you like and you've always wanted to model, put that tunnel on your model railroad. Find a way to do it if you can.



19. Santa Fe 2-10-2 number 3841 has turned on the wye at Summit and is ready to run light back down the hill for assignment to another uphill train.

But you will encounter issues. I'm thinking about signaling at some point and I have a signal that is well known, well photographed, but it's not in a place I would put it on my model.

You know, you put it there because it looks right there, but it's not really a place where you would put a signal if prototype matched your model. So, the question is, do you put it there? Or do you not put it there?

You just must pick what you like and make it work for you. I remember one guy online I was conversing with who was in a tizzy fit: how do I select what to put in, what not to put in? Always being the devil's advocate that I am, I said, well it doesn't sound like a hobby. He asked, well how do you do it?

I started out saying, frankly, I quit worrying about it – I just don't care. Then I went on to explain that my philosophy is not an exact reproduction of the prototype. It's a feeling, it's a painting. If I had the skill to scratchbuild a locomotive, I might pay more attention to the details, but within certain limits.

If you get carried away on the model railroad, you start asking some vexing questions such as was this plant here in 1940 but not in 1941? To me it takes the fun out of the hobby. I just enjoy creating a painting. The more things I can do to make it bring out the feel of the prototype, that makes it that much better.

But, the things where I can't, I don't worry about. In fact, the late Andy Sperandio said he would encounter places where he couldn't do exactly what he wanted to do, so he said he just tried not to think about it. It's a hobby, so have fun!

**MRH:** Okay, last question. What advice would you give to someone just starting out in the hobby?

**Ted:** It's kind of hard to say what I would tell somebody new in the hobby. It depends on a lot of things. If we're talking about an adult who has a source of income, I would tell him to buy some quality products. I would tell him to go out and read some books and visit other people's layouts to get an idea of what he wants to do.

Get on an operating crew and operate on layouts to look around and see what he likes. Whether it's a specific railroad or just doing something generic. There's a million ways to enjoy the hobby.

I think when he starts buying equipment, I would ask him ... I would advise him to buy good stuff. Stuff that's going to run well so you don't have that worry like you do with a cheap train set.

Again, it's different than buying something for a kid, but buy quality equipment. Quite honestly, the majority what you see any more in the hobby is pretty good stuff.

It's phenomenal the quality of locomotives and rolling stock and other hobby items we have. I would just tell him to ease into it and take his time. Don't try to do something like I've got until he really knows what he wants to do.

**MRH: Good advice!**



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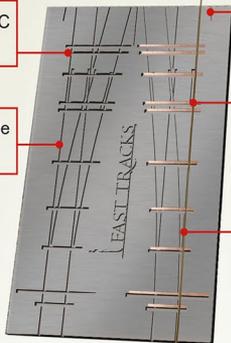
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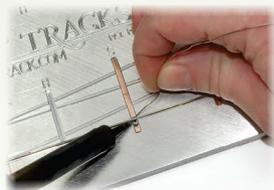
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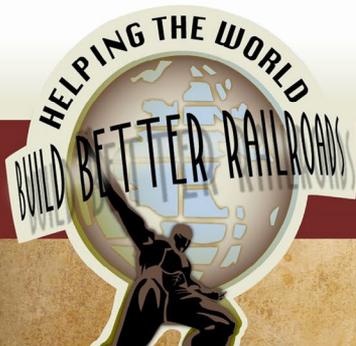


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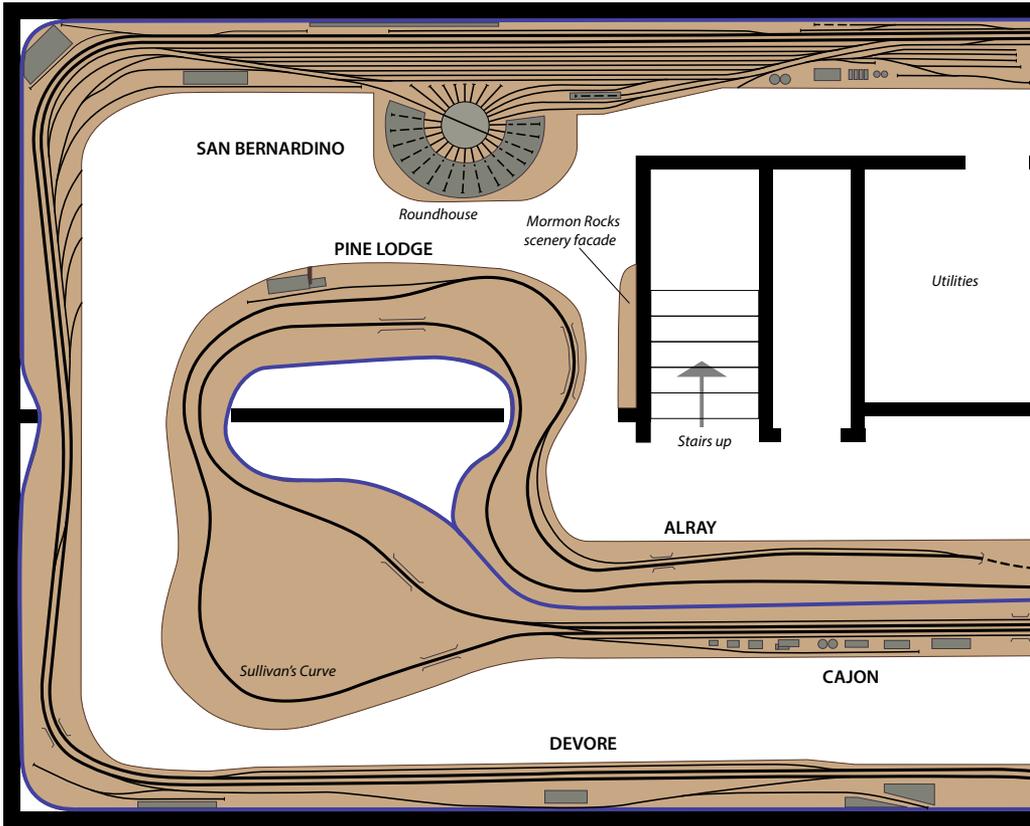
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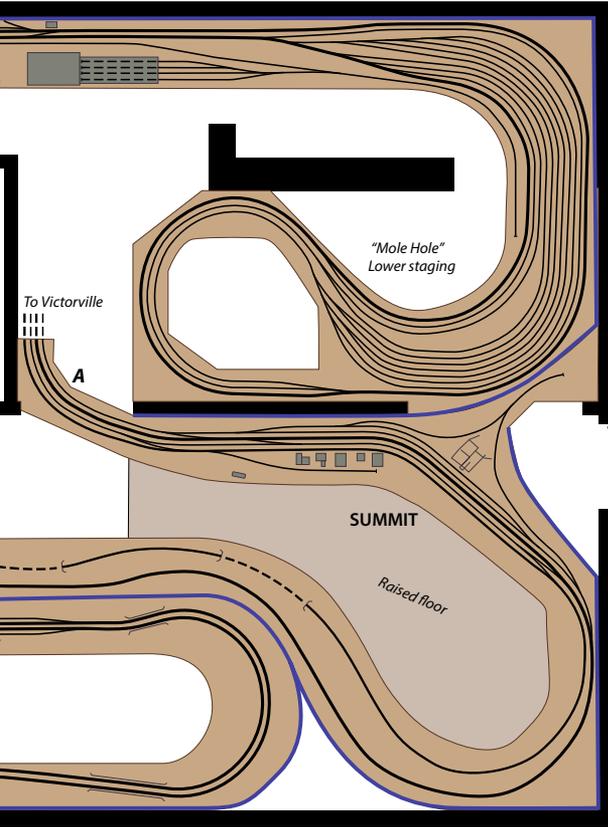


## Ted York's **CAJON PASS**

HO Scale    Approx. 57' x 38'

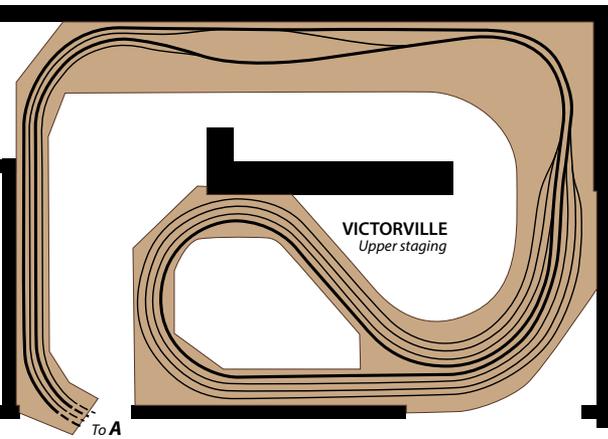
Era: circa 1945-1955

You can also download a zoomable PDF of this track plan in [this month's bonus extras ...](#)



★★★★★  
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## Ted York's **SANTA FE ON CAJON PASS**



Also on **TMTV!**



# *THE LOS GATOS LOCAL*

Model Railroad Hobbyist | April 2019

**WILLIAM SPARLING** SHARES THE STORIES OF  
PHOTOGRAPHER FRED STOES AND THE LATE RICK HAMMAN ...

**I'VE ALWAYS BEEN FASCINATED WITH BIG THINGS;** ships, boats, and especially trains. My Dad worked nights when I was little. He would come home, have a cup or two of coffee, then load me into our old 1936 Buick and we would go to watch trains. A favorite spot was the Bird Avenue over-crossing in San Jose. Hearing and watching the Morning Daylight storm over the bridge were burned into memory.

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

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1. Fred Stoes caught Southern Pacific commuter train #132 pulling into Los Gatos with 4-6-2 #2476 in the lead. His 1955 photo was taken on the Mayfield Cutoff, a quicker route from San Francisco to Los Gatos and Santa Cruz that bypassed San Jose. Today the tracks are gone, train service is a memory, and the right-of-way is an expressway.



**RATE THIS ARTICLE**

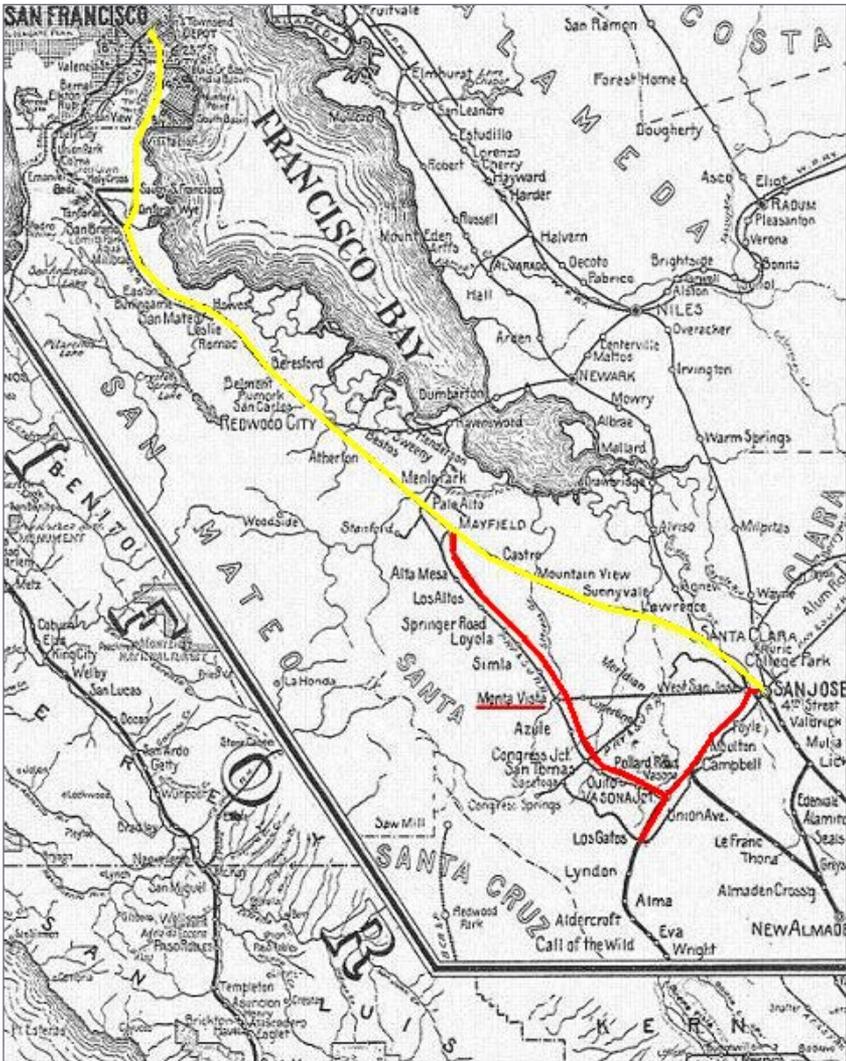
Sometimes we would wait south of San Jose, where the Southern Pacific tracks swung through a curve to parallel the Monterey Highway. Dad would put our old Buick into gear and pace the Daylight all the way to Morgan Hill where it crossed over the highway. My memories of these times are so vivid I can almost smell them.

My favorites were the commuter trains. They were going somewhere with a trainload of people. The northbound train went through Monta Vista every day at 7:00 a.m. The evening southbound came through about 6:30 p.m. I would run out into the dirt street and watch the train speed north to the City, San Francisco.

### A special trip

One morning Mother took me on a shopping trip to San Francisco. My eight-year-old mind was short circuited as I was in kid heaven on my first train ride. I had watched it leave Monta Vista many times and now I was riding it to the City. I met the conductor and examined his cruncher; my word for the ticket punch. It made shapes instead of just holes! He let me play with the cruncher and gave me a stack of destination stubs that I could punch to my heart's delight.

# THE LOS GATOS LOCAL | 3



2. Trains left every morning using the red route between San Jose and Los Gatos, where trains would double back to a wye at Vasona Junction. Trains would proceed northwest through Monta Vista, where I lived, and to Los Altos. The branch connected with the peninsula main line at Mayfield (California Avenue) to continue to San Francisco.



J. Fugate

## OPERATIONS

After the train pulled into the Los Gatos depot, the engine was uncoupled and run around to the rear of the train where it re-coupled. The empty train would run tender first about ten miles to San Jose, where it would be cleaned and serviced.

For the morning run, the locomotive ran tender first from San Jose to Los Gatos. The engine would be uncoupled, run around the train and re-coupled to run normally from Los Gatos to San Francisco. After dieselization, running backward was not a factor.

Late in the line's history, the tracks from the Vasona Wye into downtown Los Gatos were removed.

I saw familiar landmarks as we pulled out of Monta Vista. The Oak Tree, a favorite play spot for local boys. The Stevens Creek bridge, another exploration site, and Simla Junction. This was where engines struggled pulling long trains of hopper cars up to the Permanente Cement plant.

We passed through the Santa Clara Valley and huge fruit orchards with lineside packing plants and canneries. After passing Loyola Corners, we begin slowing down for the Los Altos station stop. More people got on board for their trip to the City and we were soon underway.

Mayfield Junction was next. This was where our train entered the San Jose to San Francisco main line. A nearby Quonset building at El Camino Real would be my workplace thirty years later.

## On the high iron

Out on the main, our train picked up speed and we bypassed several stops on our way to San Francisco. We didn't stop until we got to Redwood City. I can still hear our engine whistle off those stations and remember the thrill of my young adventure.

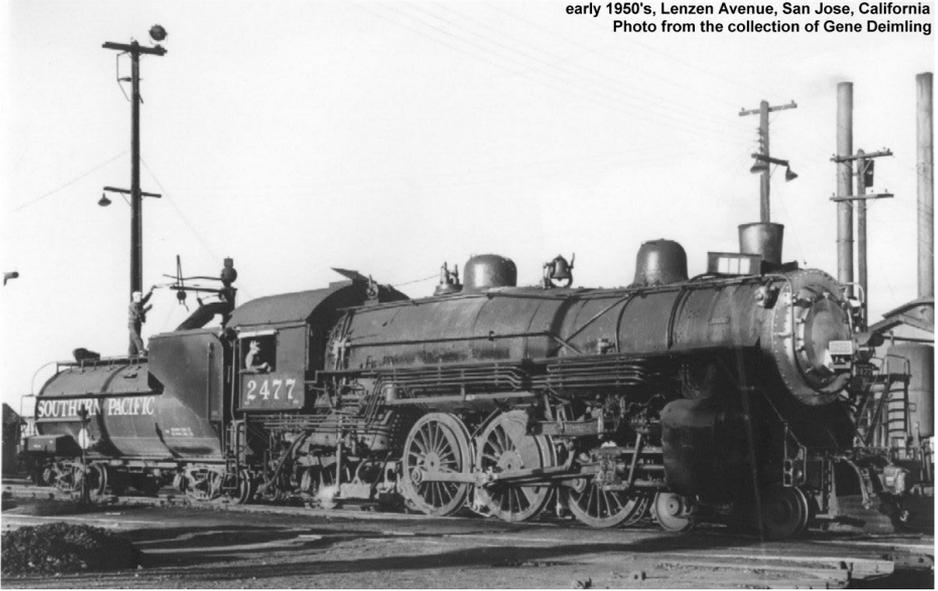
We pulled into the depot at Third and Townsend Streets, along with other trains arriving from San Jose and stations on the peninsula main line. I saw the Noon Daylight cars being spotted on an adjacent track waiting for their beautiful, big GS class locomotive to couple up for the run down the coast.

early 1950's, Lenzen Avenue, San Jose, California  
Photo from the collection of Gene Deimling



3. The Mayfield Branch had two dedicated P-7 class Pacifics. These were the only SP Pacifics built by the Lima Locomotive Works. #2476 is turned at the Lenzen Avenue facilities in San Jose to prepare for another commuter run. *Photo from the Gene Deimling collection*

early 1950's, Lenzen Avenue, San Jose, California  
Photo from the collection of Gene Deimling



#### **4. Southern Pacific 4-6-2 #2477 is serviced at the Lenzen Avenue facilities in San Jose. *Photo from the Gene Deimling collection***

This was where other name trains would start their journeys; the Coaster, the Starlight, the Lark, and the Owl. There was also the Del Monte Express that ran from San Francisco to Monterey, as well as other commuter trains awaiting their return trip to San Jose. I've never forgotten this thrilling experience, even after seventy years.

### **Special people**

As we got off the train, I thanked the conductor for letting me play with the cruncher. As I handed it back to him, he just smiled and told me I could keep it because he had another one. He handed me another huge stack of used destination stubs. As

we walked toward the downtown area all I could think of was, “How long before I get back on board that wonderful train to ride it home?”

As I recall, the homeward train pulled out of Third and Townsend at 5:17 p.m. and got back to Monta Vista at 6:30. Mother bought sandwiches, potato chips, cookies, and milk for the trip home so we didn't worry about fixing supper. What a day it had been, full of vivid memories. Thanks, Mom, for my first of many train rides on the Los Gatos Local to The City.



5. A unique feature for the Mayfield Branch engines was a road pilot mounted on the rear of the tenders. This modification was made because the locomotives ran backward between Los Gatos and San Jose at the end of the runs. To my knowledge, no other SP locomotives were modified in this way.

## Fast forward

While attending classes in San Francisco many years later, I chose to ride the Los Gatos Local back to San Jose one evening instead of my usual train. I relived the days when the Local was powered by one of the steam engines that now sat rusting on a Bayshore Yards dead line.

As the train swung off the main line onto the Los Gatos branch, it felt like I was going home again. The scenery had changed over the years but miles of orchards and the switch at Simla were all there. The bridge over Stevens Creek was still in use. My boyhood favorite oak tree was standing tall. The wig-wag signal even remained in place at the Stevens Creek Road crossing in Monta Vista.

This trip was different than the one I took with my Mother in 1946. The train didn't feel the same as the old steam-powered one. There was no lurch and rattle as the train stretched out slack. Our modern diesel didn't leave slack in the couplers. The clickity-clack of wheels on rails was almost non-existent as continuous welded rail and concrete ties had replaced the jointed ribbons of steel.

I rode all the way to Los Gatos and dead-headed back to San Jose. I was the lone passenger on the train when it pulled into the old depot on Cahill Street. That was my last ride on the Los Gatos Local.

I hope there are trains in heaven.



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## COMMUTER OPERATIONS

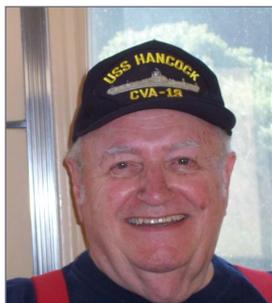
In our current rail system, we have forgotten the role that private railroads had in moving people in and out of the city. Several major cities now use public transit agencies to provide commuter service. In the steam era, private railroads moved thousands of people each day on several lines radiating from the urban core. Pittsburgh, Nashville, St Louis, Kansas City, Dallas, and many more cities had multiple railroads offering commuter service extending 20-50 miles beyond their terminals.

Adding commuter service to a steam era layout can offer another layer of operating interest. These trains do not need to be long and can use a short string of older coaches. Older 4-4-2 and 4-6-0 steam locos were frequently employed in commuter services after being downgraded from the mainline passenger trains.

If a modeled station is at the end of the commuter district, then a small locomotive facility can be used for the commuter power. A couple of storage tracks can become the coach yard where cars are cleaned out at the end of the day. Possibly an adjacent wash rack can be installed near these coach tracks so the terminal crew has another task to complete at the end of the day.

The Los Gatos story illustrates elements you can incorporate into an existing model railroad. One or two commuter station stops along a modeled mainline can increase the play value and operations on your layout. ■

## WILLIAM SPARLING



Bill lived in the San Jose area until moving to Sequim, Washington in 2001. Most of his growing up years were spent in Cupertino, near the Mayfield Branch of the Southern Pacific route to San Francisco. Bill got his first train ride on one of those trains in 1946. His layout, in progress, is loosely patterned after that line. He is now working on a small 4'X8' island railroad.

Bill says, “While I can’t build what most modelers build, I still get a lot of pleasure out of *MRH* each month. I enjoy the excellent tips and tricks to make my struggles easier.

I love to share my experiences with real trains when I was a kid. My wife and I have made several trips together by trains. One of our favorite trips is the Empire Builder between Seattle and Leavenworth, Washington, over the Cascade Mountains and through Cascade Tunnel. This is the longest railroad tunnel in the continental United States. Maybe I will meet one of you on that ride. We are planning our fourth trip on that train sometime this summer. Maybe we will see you.” ■



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# LOOK

column

Model Railroad Hobbyist | April 2019 | #110

## **JEFF SHULTZ:** The ScaleTrains.com General Electric Dash 9-44CW locomotive ...

**IN THE EARLY 1990S, GENERAL ELECTRIC'S DASH 9** series succeeded their Dash 8 line, the locomotives that helped them take the crown of top domestic locomotive producer away from EMD in the 1980s.

Starting with a single demonstrator model in 1993, over 3,500 Dash 9 locomotives rolled off the line in Erie, PA before production ended in 2004, further cementing GE's position as number one.

Original owners of the Dash 9 in North America include ATSF (BNSF), BC Rail (CN), BNSF, Canadian National, Chicago & North Western (UP), CSX, Norfolk Southern, Quebec North Shore & Labrador Railway, Southern Pacific (UP), and Union Pacific. Norfolk Southern also rostered the similar Dash 9-40C and Dash 9-40CW locomotives. Of the US and Canadian Class 1 freight railroads, only KCS and CP did not own Dash 9 locomotives, preferring the similar AC traction AC4400 locomotives instead.

The designator Dash 9-44CW indicates that it's part of the Dash 9 line of locomotives, configured for 4400 hp, with C (3-axle) trucks, and a wide cab.

★ ★ ★ ★ ★  
**RATE THIS ARTICLE**

[ScaleTrains.com](https://www.scaletrains.com)'s representation of the Dash 9 will be available in both Rivet Counter and Operator versions in both HO and N scale. The two models released first, at the Amherst show, were BNSF 4313 and NS 9692. *MRH* was provided with a copy of the HO scale Rivet Counter brand BNSF 4313 for this article.



1. Engineer side view.



2. Elevated  $\frac{3}{4}$  view.

The prototype BNSF 4313 was built as part of an order of 299 Dash 9 locomotives in 1999. Interestingly, some of the order were painted with orange paint under the lower yellow stripe on the nose and others with green paint. The 4313 has green paint and is decorated in the “as delivered” H2 paint scheme.

The Rivet Counter locomotive is equipped with an ESU LokSound V.5 “Full Throttle” sound decoder mounted on a motherboard that contains a built-in PowerPack super-capacitor stay-alive system. The PowerPack is configurable via the ESU LokProgrammer to keep the locomotive powered from 0 to 8.36 seconds from when it loses power. The motor is a 5-pole skew wound type. Operator brand locomotives come equipped with the ESU-LokSound Essential Sound Unit and DCC Decoder. Both the Rivet Counter

and Operator brand locomotives are available without a decoder, and are equipped with a 21-pin DCC connector.

Interesting details on this locomotive include the walkway lights on the engineer’s side, front and rear of the locomotive that are configured to turn on when F8 is pressed to start the prime mover sounds. The Hi-Ad trucks feature rotating axle bearing caps, and spares are supplied in a small bag.



**3. Frontal view.**



4. Rear view.

The Operator brand models do not have prototype-specific details, sharing a common long hood and cab as well as fewer added details. Many of these details will be available separately in a GE Dash 9-44CW detail kit, which will include multiple unit hoses, trainline hoses, coupler cut levers, metal grab irons, windshield wipers, sanding lines and traction motor cabling. Operator brand models share the same motor and drive train as the Rivet Counter brand models. The model weighs within an ounce of 1 1/2 pounds.

The model had no difficulty managing 18" radius curves on my layout, and I measured its speed at 1 mph on speed step 2 of my throttle (there is no movement on step 1) and at 69 mph on speed step 32 with an Accutrack II speedometer. While I have no sophisticated pull-testing equipment, I did have it pulling 24 modern freight cars at throttle speed step 3 without any hesitation.

Several runs of the Dash 9 are planned, and Norfolk Southern's standard cab Dash 9-40C "Top Hat" locomotive will be part of the

second run. When asked about the possibility seeing the nearly identical AC4400 in the future, Shane Wilson of ScaleTrains.com simply replied, “That would make sense, wouldn’t it?”

It will also be interesting to see if ScaleTrains.com releases the Dash 9 in either of the Australian paint schemes it has worn – Fortescue Metals Group and Pilbara Rail.



5. Close-up of rear radiator section and truck detail.



6. Close-up of fuel tank and air tank details.



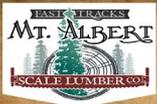
7. Conductor's side view.



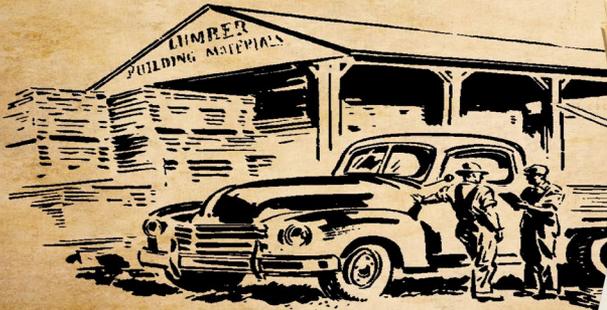
8. Illuminated number boards and front and side walkway lights.



9. Speed trap results at slowest and fastest throttle settings.



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Model Railroad Hobbyist | April 2019



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## Make concrete grade crossings from scratch

For the first rollout of our new monthly *Savvy Modeler Online* feature, here's a great 10-minute how-to on scratchbuilding a quite authentic-looking concrete grade crossing by YouTube modeler **railfan220**. Each month we'll be featuring some of the most savvy modeling we've found online. ■



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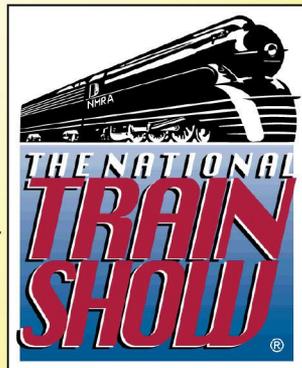
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# APRIL NEWS

column



Model Railroad Hobbyist | April 2019

**RICHARD BALE** and  
**JEFF SHULTZ** report the  
latest hobby industry news



## INDUSTRY NEWS

### NorthWest Short Line

**NorthWest Short Line** is shutting down after 60-years in business. The announcement was made by current owner David Rygmyr who purchased the Seattle-based company in 2008 and relocated operations to Hamilton, Montana. The company, which specialized in mechanical power components, precision gears, and wheelsets in all scales, was established in 1959 by Raoul Martin. On-hand inventory will be liquidated over the next few months ...



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## NEW CLUB BUILDINGS

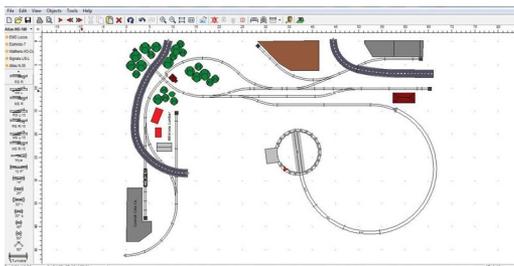


**Keystone Division Two and Division 1** of the NMRA Mid-Central Region are raising funds for the 2020 MCR regional convention by selling laser kits produced for them by Portland Locomotive Works. Kits for sale include a Fire Hose Shed in HO scale, an Oil/Coal Shed in N, HO, S, and O scales, a signal tower in O scale, and a telegraph building in HO and O scales. Also available are The Jaite Station and Freight House, a two building HO scale kit. The prototypes for the kit served along a B&O branch in north-east Ohio during the early 20th century and are still standing along tracks used by the Cuyahoga Valley Scenic RR in the Cuyahoga Valley National Park. For more information on all these kits please visit. [www.keystonedivision.org](http://www.keystonedivision.org).

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## NEW PRODUCTS FOR ALL SCALES

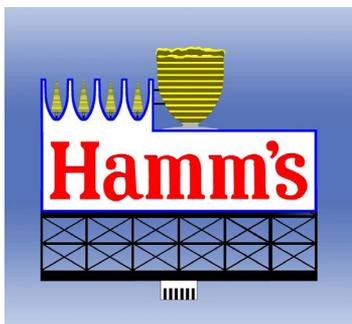
**Atlas** has upgraded the paid version of its Track Planning Software introduced last fall (see MRH September 2018 #103). In addition to several fixes to the original release, the upgraded 1.5.0 version



offers a new “Ramp” figure, automatic conversion from sectional to flex track, right-click menu item for hiding un-needed tracks in the current library, new options for drawing a grid in 2D mode,

new layers window buttons for rearranging layers (only in the licensed version), and a new fit-to-screen command. Atlas Track Planning Software is available as a free demo or as a paid licensed version with several additional features. To download the software or purchase a license go to [shop.atlasrr.com/p-53321-atlas-track-planning-software.aspx](http://shop.atlasrr.com/p-53321-atlas-track-planning-software.aspx).

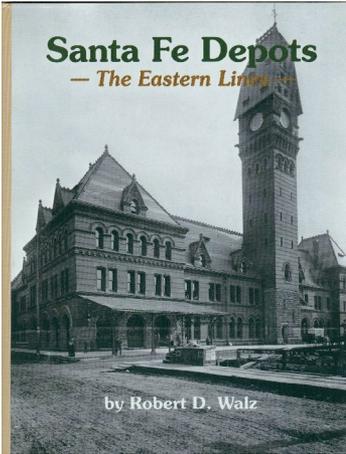
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New animated electronic signs from **Miller Engineering** include Hamm's Beer and Swingline Staplers. Both are based on prototype signs. The model signs are available in two sizes, making them suitable for N through O scale scenes. For additional information including seeing the signs in action, visit [www.microstru.com/Coming-soon.html](http://www.microstru.com/Coming-soon.html).

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The **Santa Fe Railway Historical Society** is publishing *Santa Fe Depots: The Eastern Lines*, by Robert D. Walz. Containing a route-by-route and station-by-station look at the depots of the



Eastern Lines Grand Division of the AT&SF, this 208-page hardcover book includes 568 photos. Using a format developed by John McCall for the listing of stations and the arrangement of accompanying data in four previous books, the book covers the Santa Fe lines that ran from Chicago on the east end to Boise City, OK on the west. Other lines ran from Ottawa, KS to Tulsa, OK, Superior, NE through Wichita to Wellington, KS, and from Newton to

Arkansas, KS and Purcell, OK. There were depots and towers at over 620 stations in this area, from one-room wood frame buildings to large masonry buildings as depicted on the cover. For more information or to purchase the book go to [sfrhms.org/product/santa-fe-depots-the-eastern-lines](http://sfrhms.org/product/santa-fe-depots-the-eastern-lines).

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**SoundTraxx** has posted a video explaining the multiple functions of its Tsunami2 Digital Sound Decoders, including how to add lights. Although the methods individual modelers follow in wiring their lights may vary slightly depending on which decoder they have, the video walks viewers through the process for various SoundTraxx decoder formats. To view the video go to [view.bbsv1.net/bbext/?p=land&id=8257812EE8C615CAE0530100007FB91B&vid=d5cef23d-e554-4ae2-b53a-920d1d3873dc](http://view.bbsv1.net/bbext/?p=land&id=8257812EE8C615CAE0530100007FB91B&vid=d5cef23d-e554-4ae2-b53a-920d1d3873dc).

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## O SCALE PRODUCT NEWS

**Atlas O** has announced road names for a new 42-foot coil steel car coming later this year. The names are EXNS-Indiana Harbor



Belt, CSX, Norfolk Southern, US Steel Geneva Works, Kansas City Southern, Inland Steel, and Republic

Steel. The O scale Master line model will have see-through walkways, removable hoods, interior floor detail, and four simulated steel coils. Atlas O rolling stock is available with a choice of 2-rail or 3-rail trucks and couplers.



Also coming from Atlas O is a group of 1973 Ford F-100 pickup trucks. The ready-to-use model has simulated chrome bumpers and grille with plastic headlights and tail lights. In

addition to the candy apple red scheme shown, the truck will be available in light green, light blue, and a pair of two-toned schemes: brown and white, and green and white. For additional information contact a dealer or visit [atlaso.com](http://atlaso.com).

.....



**Berkshire Valley Models** is selling kits for two versions of a 1930s-era O scale truck. The kit for the log truck includes white metal castings and laser-cut

wood. The logs are not included.



Also new is a 1934 field service truck with numerous detail parts including 55-gallon drums, hand tools, oil cans, and a 200-gallon tank for refueling equipment in the

field. Decals for the drums are included. For information visit [berkshirevalleymodels.com](http://berkshirevalleymodels.com).

.....



**Sunset Models** has announced the Alco FA1 and FA2/FB diesel locomotives in O scale for late 2019. Both two- and three-rail versions will be available, the

two-rail with QSI Q3 DC/DCC with sound and the three-rail with ERR Cruise, TMCC with Railsounds 5.0, remote coupler, and smoke. The units will come with fixed pilots and will have a minimum radius of 054 simple curves and 072 turnouts for the three-rail version and 48-inch minimum radius for the two-rail versions. Models will be Phase I or Phase II depending on the prototype being modeled. FA1 road names include Demo, Erie Lackawanna, Frisco, Rock Island, GM&O, GN, Soo Line (no B-unit), New Haven, New Haven Green, Reading, Seaboard Air Line, UP and Wabash. The FA2 roadnames include B&O, CN, Erie, L&N, Lehigh Valley, MKT (no B-unit), Missouri Pacific, NYC, PRR, SP&S, and Western Maryland (no B-unit). For more information visit [3rdrail.com](http://3rdrail.com).

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## S SCALE PRODUCT NEWS



**Right On Track Models** has released an S scale kit for Berkys Lumber. The kit includes an office and a lumber storage structure. Parts in the kit include laser-cut MDF

structure components, styrene windows and doors with glazing, cast metal detail parts, textured tar paper roofing, and step-by-step instructions. The office has a footprint of 4.5 x 2-inches. The finished storage structure measures 7.75 x 4.25-inches. For information visit [rightontrackmodels.com](http://rightontrackmodels.com).

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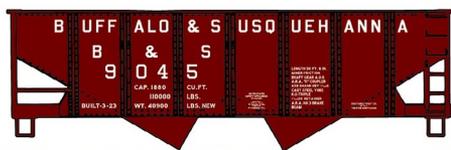


**Golden Gate Depot** has announced three new S scale aluminum passenger car sets. The first set is the 1937 Santa Fe Super Chief with Baggage Car

3430, 8-1-2 Sleeper Laguna, Lounge Dorm 1370-Acoma, Diner 1474-Cochit, 6-2-2 Sleeper Taos, and 2-3-1 Observation Navajo. The second set is the 1938 PRR Broadway Limited Fleet of Modernism and post-war, including the 18 Roomette, two 12-5 Duplex, 4-4-2 Sleeper, Diner, and Observation. Extra 4-4-2 sleepers and diners will be available to reserve. The last set is the 1948 NYC 20th Century Limited, with an RPO, Diner, Kitchen, 12 Double Bed, Lounge, and Observation. Extra cars available to reserve include the 4-4-2, 10-6, 12 Double-Bed, and 22 Roomette. All the cars will be available with scale or HiRail wheels, and in scale length and “shortie” versions. For more information go to [www.goldengatedepot.com/reservationS.html](http://www.goldengatedepot.com/reservationS.html).

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## HO SCALE PRODUCT NEWS



**Accurail** has released several new HO scale freight car kits including a three-pack of Buffalo & Susquehanna twin-bay coal hoppers. The B&S



models are based on a group of USRA cars built in 1923.

The prototype of this Chicago, Burlington & Quincy triple-bay covered hopper was built by

Pullman-Standard in 1967. Accurail's HO scale kit includes appropriate roller-bearing trucks.



Accurail is selling two new HO scale kits for Fowler 36-foot wood boxcars. Road names include a 1914 car decorated for Georgia Railroad, and a

Toronto, Hamilton & Buffalo car built in 1932.



Also new from Accurail is an HO scale kit for a 40-foot Rutland Railway stock car with wood sides. The model follows a 1903 prototype that was rebuilt in 1921.

HO kits for Pullman-Standard triple-bay covered hoppers are available in white, gray, and mineral red with data only. All Accurail kits come with trucks and Accumate knuckle couplers. For additional information contact a dealer or visit [accurail.com](http://accurail.com).

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**Athearn** has announced the creation of their Genesis 2.0 product family, with the latest developments in modeling, LED lighting, and additional details. The first HO scale Genesis 2.0 product will be the Phase II SD90MAC-H, a 6,000 hp locomotive first produced by EMD in 1996 and purchased by the Union Pacific and Canadian



Pacific railroads. Featuring the 16-256H prime mover, fewer than 70 of the full 6000hp units were produced, with the majority of the SD90 series using the 4,300 hp 16-710 prime mover instead and informally designated as the SD9043MAC. The Athearn model will include “better than brass” detail, advanced LED lighting including illuminated numberboards and ground lights, see-through step-well steps, and dual sugar cube speakers. DCC+Sound units will be equipped with a Tsunami2 sound decoder with custom EMD 256H prime mover sound recorded by SoundTraxx. Roadnames available in this first release include Union Pacific, Canadian Pacific, and Fortescue Metals Group with four roadnumbers each, as well as the EMDX 90 prototype. The models should be available in Spring 2020.



Athearn also plans to release two versions of Union Pacific’s SD70ACe diesel locomotive in December. Decorating schemes will be Spirit of UP No. 1943, and Union Pacific No. 9082 flag scheme.



Features of the HO scale Genesis models include LED lighting, correctly-sized working ditch lights, silver tipped front and rear trainline air hose and MU hoses, uncoupling bars, windshield wipers, tinted side windows, mirrors, interior detail including control stand, see-through radiator fans, etched dynamic brake

grille and screen with grid detail underneath; Chicago Blower brand air blower visible behind the see-through grilles, and wire grab irons.



Additional Genesis models coming in December include a group of SD60E diesels. A Norfolk Southern unit wearing the GoRail promotional scheme will be equipped with a 4300 gallon fuel tank.



Norfolk Southern No. 9-1-1, honoring First Responders, will have a 3900 gallon fuel tank. Units decorated in NS black horsehead scheme will come with 4000 gallon tanks.



## NS SD60E CABS

In 2010 Norfolk Southern launched a major rebuilding project for its SD60E locomotives. The program included installation of a completely new cab designed to provide the crew more room and better protection in the event of a crash. The original cab weighed 3,800 pounds compared to 12,500 pounds for the new cab. With its pronounced number board/headlight housing and flat front with a centered cab door, the SD60E replacement cabs look unlike anything else on North American rails.



New Genesis series SDP45 units coming from Athearn late this year with SoundTraxx DCC will

feature prototype sound recorded from EMD's 645E3 20-cylinder prime mover. In addition to the Southern Pacific unit shown, road names will be Conrail, Morrison-Knudsen, Great Northern, and Erie Lackawanna.



Athearn has included a new run of HO scale EMD F59PHI locomotives in its December schedule. In addition to Montreal's AMT-



Agence Métropolitaine de Transport shown, liveries for the Ready-to-Roll model include Amtrak, Amtrak Cascades, and two Amtrak rail-safety schemes.



Amtrak began a campaign in late 2000 promoting better rail-safety awareness. Several locomotives in Northern California (No. 2007) and



Southern California (No. 455) Amtrak service received colorful printed vinyl wraps.



Paint schemes on additional F59PHI models coming in December 2019 include Utah Front

Runner, Metra Chicago, Union Pacific, Southern Pacific, Rio Grande, and Polar Northern Railroad in a Christmas scheme. See the N scale entry for more roadname illustrations.



Genesis models coming from Athearn in February

2020 include GP40-2 diesels decorated for Denver & Rio Grande Western, CSX, and Norfolk Southern.



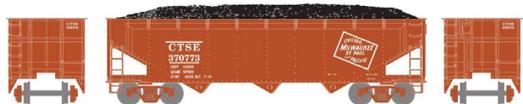
GP40-2s decorated for DT&I, GTW, Reading, Conrail, and Southern Pacific are also listed in

Athearn's February schedule. All Athearn locomotives mentioned in this report will be available for DC operation with a DCC-ready 21-pin NEM socket, and with factory installed Tsunami2 sound and DCC decoder.



Athearn rolling stock models scheduled for release in February 2020

include this 60-foot ICC Hi-Cube boxcar. Road names for this HO scale Ready-to-Roll car will be B&O, CSX, Family Lines, Angelina & Neches River Railroad, Burlington Northern, and Missouri Pacific.



A 40-foot triple-bay coal hopper with offset sides will be available next February decorated for

Milwaukee Road, Wheeling & Lake Erie, Alaska Railroad, Southern Pacific, Lackawanna, and Toronto, Hamilton & Buffalo. The HO scale model comes with a removable coal load and will be available in singles as well as four-packs with different road numbers.



In addition to Western

Pacific, Athearn plans to release this 85-foot general purpose flat car decorated for Brillion & Forest Junction, Erie Western, Terminal Railroad Alabama State Docks, Conrail, Trailer Train (two schemes), Maine Central, and American President Line. Details include trailer hitches for trailer-on-flat-car service,

mounting brackets for use with 20- or 40-foot containers, wire grab irons, and 70-ton trucks with 33-inch machined metal wheelsets.



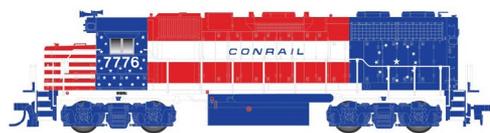
**Roundhouse Brand** products scheduled for release next February include a 30-foot three-win-

indow caboose with offset cupola. The HO scale ready-to-run model features wire truss rods. Road names will be P&E-New York Central System, Canadian National, Rio Grande, Chesapeake & Ohio, Great Northern, Pennsylvania, Southern Pacific, Union Pacific, and Santa Fe.



Another release of Roundhouse ACF quadruple-bay covered hopper cars is also planned for

February 2020. Road names for the HO scale ready-to-run model will be ACFX/BF Goodrich, CAI, Conrail, Chicago North Western, Luzenac America, BNSF, ADM, and Union Pacific. For additional information on Athearn and Roundhouse brand models contact a dealer or visit [athearn.com](http://athearn.com).



**Atlas** plans to release HO scale versions of both GP38 and GP40 diesel locomotives during the third

quarter of 2019. In the late 1970s to early 1980s, many GP38s were fitted with a new air filter system that required modification to the dynamic brake blister. Atlas is producing both the original and modified DB blister and will issue the correct version based on the practice of the railroad being modeled. Road names for the GP38 will be Conrail, Conrail Bicentennial, Norfolk Southern, Norfolk Southern (First Responders scheme), North Shore, Bangor & Aroostook, and R J Corman.



Atlas will make its HO scale GP40 available for Pan Am, Seaboard Coast Line, New Orleans Public Belt,

Georgia Railroad, Western Pacific, Baltimore & Ohio, Southern Pacific (speed lettering), and New Jersey Transit. Details included but not installed on the GP40 include an electrical cabinet air filter box (ECAFB) and two engine compartment roof vents which were added by many railroads after delivery.

Atlas' GP38 and GP40 both feature golden-white LEDs, cab interior with crew, movable drop steps, walkway safety tread, uncoupling bars, MU and trainline hoses, individual windshield wipers, and metal grab irons. Atlas Gold series models will be equipped with DCC sound and decoder. Silver series models for DC operation will come with an NMRA 8-pin plug to simplify installation of an after-market DCC decoder.



## EMD GP38 AND GP40 ROAD SWITCHERS

In 1966 EMD introduced a new line of locomotives powered by its 16-cylinder 645-series prime mover. The four-axle locomotive with a rating of 3000 horsepower was christened GP40. Between 1966 and 1971 EMD produced more than 1,100 GP40s. Concurrent with the introduction of the GP40, a non-turbocharged version built on the same chassis and using the same body, was introduced as the 2000 horsepower GP38. It also carried a considerably lower price. More than 700 GP38s were delivered during the seven years it was catalogued by EMD.



Also scheduled for release during the third quarter of this year is another run of Atlas Master series 17,360

gallon tank cars. The HO scale ready-to-run model is based on an insulated car built by American Car and Foundry primarily for transporting chlorine. Road names will be PPGX, ACFX (black with orange stripe), ACFX Olin, GATX, GPBX, and HOKX.



Atlas has included a Master series 42-foot coil steel car in its third quarter release. The HO scale model will feature see-through walkways, removable hoods, interior floor detail, and four simulated steel coils. In addition to Indiana Harbor Belt, road names will be CSX, DLRX (GE Railcar), Inland Steel, and Norfolk Southern. For additional information contact a dealer or visit [atlasrr.com](http://atlasrr.com).

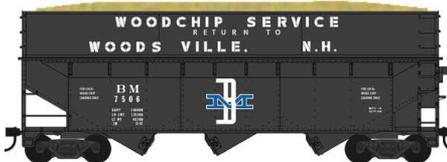
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HO scale wood chip cars are among a group of new hopper cars coming from **Bowser** this spring. Seventy-ton triple-bay hoppers with ribbed sides and ribbed upper side extensions will be available decorated for Norfolk Southern, Louisville & Nashville, and Gulf, Mobile & Ohio.



Ribbed side cars with flat extensions will be decorated for Seaboard System, and Georgia Railroad.



Road names for wood ship cars with offset sides and flat side extensions will be Boston & Maine, and Canadian National.



Completing Bowser's run of 70-ton triple-bay wood chip hoppers with offset sides and ribbed extension will be cars decorated for Milwaukee Road, Soo Line, and CP Rail.



Also coming from Bowser this spring are 100-ton triple-bay coal hoppers.

Road names on this release

will be B&LE, Baltimore & Ohio, Burlington Northern, Chessie B&O, Chessie C&O, Chessie (CSXT patch), Chessie WM, CSX (small logo), NS, P&LE, PPLX, RBMN (ex PPL), and Reading & Northern (ex PPL). The HO scale ready-to-run models will have knuckle couplers and roller-bearing trucks with 36-inch wheelsets. For additional information contact a dealer or visit [bowser-trains.com](http://bowser-trains.com).

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**Broadway Limited Imports** is selling several HO scale versions of the Chesapeake & Ohio J3 4-8-4 steam locomotive. They include three black in-service schemes as well as the Presidential Express in unique green livery. Variations in tender lettering include Chesapeake & Ohio, Chessie

System Railroads, and Family Lines Rail System. Distinctive features on the J3 include the large flat sand dome, and the headlight and air pump radiator shield mounted on the solid pilot.

Broadway Limited's 4-8-4 models feature Paragon3 Sound & Operation System which includes Rolling Thunder sound and operation in both DC and DCC environments. The J3 is one of



BLI's Brass-Hybrid series models with the super-structures of both the locomotive and tender crafted in brass. The chassis and power train are die cast.

For additional information contact a dealer or visit [broadway-limited.com](http://broadway-limited.com).



R. Bale

## C&O 4-8-4 GREENBRIERS

Beginning in the mid-1930s, the Chesapeake & Ohio Railroad replaced the Pacifics and Mountains on its major passenger trains with heavy high-speed 4-8-4 locomotives from Lima Locomotive Works. Given the class designation J3, the first five were delivered in 1935. Two more arrived in 1942 with the final five joining the fleet in 1948. They were among the last major steam engines Lima built. While most railroads called their 4-8-4s Northern, the C&O dubbed theirs Greenbriers. Chesapeake & Ohio No. 614 was preserved and is on display at the C&O Railway Heritage Center in Clifton Forge, Virginia.



A structure named Sincere Towing is the first release for a new Kit-of-the-Month Club announced by **Fos Scale Models**. In the program subscribers will receive a new HO scale structure kit each month. The kits will be of laser-cut construction with designs ranging from trackside to waterfront to main street. The models will typically

have a footprint of 3 x 3-inches and will include laser-cut structural components, plastic windows and doors, metal detail parts,

color signs, and assembly instructions. The monthly subscription cost will be \$34.95 including shipping. The Kit-of-the-Month models, including Sincere Towing, will only be available on the subscription program. For complete details visit [fosscalemodels.com](http://fosscalemodels.com).

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**InterMountain Railway** has announced a few details on another production run of its HO scale ACF 4650 cu.

ft. triple-bay covered hopper. The ready-to-run model will have etched-metal roof walks and appropriate trucks with metal wheelsets. Cars with three loading troughs will be available decorated for SSW-Cotton Belt, Burlington Northern, Southern Pacific, Norfolk Southern, and Soo Line.



Cars decorated for NCLX-Sclair Polyethylene, ACFX-Sterling Salt, ACFX-ECC International, and Wisconsin Central (CN noodle)

will be equipped with six round loading hatches. The run will also include cars decorated for ACFX-French's and ATSF. A release date is pending. For additional information contact a dealer or visit [intermountain-railway.com](http://intermountain-railway.com).

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**Kadee** plans to release a Toledo, Peoria & Western PS-1 boxcar next month. The HO scale ready-to-run model follows a 1953 prototype built with 10 welded side panels

and narrow bolster tabs. The 7-foot, five-panel Superior door may have been installed when TP&W shopped No. 621 in 1964.



Also coming from Kadee in May is a 50-ton standard AAR twin-bay open hopper with off-set sides decorated for the Nashville, Chattanooga & St. Louis Railway.

The model is based on a class HM17 car built by Pullman-Standard in May 1949. The prototype was equipped with Enterprise discharge door latches, Apex Tri-Lok brake steps, and A-3 Ride-Control trucks. Kadee's HO scale version comes with a removable simulated lump-egg coal load. All Kadee ready-to-run models come with Kadee couplers and two-piece self-centering trucks. For more information contact a dealer or visit [kadee.com](http://kadee.com).

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R. Bale

## 1935 AAR TWIN-BAY HM COAL HOPPER

The HM classification indicates an open car with two self-clearing hoppers, fixed sides and ends, and hinged discharge doors perpendicular to the rails. Corrosion was always a problem on coal carriers and one of the principal goals of the 1935 AAR twin-bay design was to replace vulnerable fabricated centers sills, cross bearers, and body bolsters with impervious high-strength steel castings. Between 1935 and 1960 more than 127,000 hoppers of this design were built. The car measured 34-feet over the strikers, but the height varied slightly in various production batches. The design was used by several car builders resulting in variations but typically the car height over the rails was 10-feet 8-inches.



**Monashee Laser Engineering** has released three HO scale kits of Canadian enclosed 40,000-gallon water

towers. The kits are based on Canadian National, Canadian Pacific, and Pacific Great Eastern prototypes and have details appropriate to each railroad. The kits include 3D designed parts, scale chain and a positionable sway pipe. Windows, doors, and shingles are laser cut, and the kits contain a 15-page construction manual with over 30 photos. For more information see [www.monasheelaserengineering.ca](http://www.monasheelaserengineering.ca).

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**Rapido Trains** has added Lehigh Valley locomotives No.7640 and No.7643 to the previously announced lineup of HO scale Alco RS-11 locomotives scheduled for

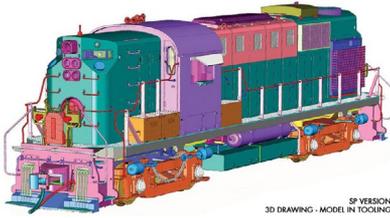
release later this year. The two additional models are being produced in conjunction with Anthracite Railroads Historical Society, a non-profit organization that will benefit from the sale of the two LV locomotives.



In making the announcement, Rapido noted that the position of the letter-

ing and LV herald on No.7640 and No.7643 will be based on the unique appearance of the prototypes after they were repainted in Cornell Red in early 1973.

Lehigh Valley road specific details on Rapido's RS-11 will include correct steps, lights, equipment boxes, fuel tanks, and air intake louvers, straight metal side handrails with plastic



stanchions, and operating number boards, headlights and green and white class lights and cab control stand lighting. DCC sound units will have an ESU LokSound decoder featuring

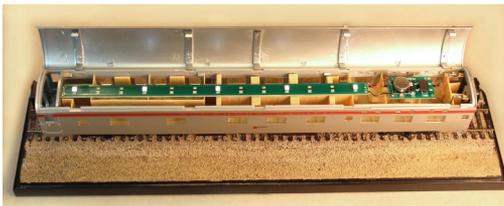
sounds recorded from a full-size Alco 251B prime mover. DC non-sound units will come with a 21-pin plug to ease installation of an after-market decoder. For additional information contact a dealer or visit [rapidotrains.com](http://rapidotrains.com).

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**SP Daylight/Class 5** is selling an HO scale Union Switch & Signal H-2 searchlight signal. The Southern Pacific Railroad utilized the H-2 searchlight as a replacement for the original Type B semaphore signals. The kit includes the original one-piece concrete foundation, subsequent two-piece stacked foundations, and both narrow and wide signal cabinets. The model can be built with different signal heights and cabinet configurations.

The H-2 is the first release of a full line of exact scale kits for US&S signals the company plans to produce.



SP Daylight/Limited Editions has released a DCC/DC constant lighting kit for use in Walthers HO scale lightweight passenger cars. The kit is composed of two PCB peel 'n stick boards, wiring, and connector

posed of two PCB peel 'n stick boards, wiring, and connector

spades designed for Walthers lightweight passenger car. No soldering is required. The light-bar features five equally spaced surface mounted cool white LEDs.



Up to eight more LEDs (or marker lights) can be added to the light-bar. The kit includes a power control board which can be placed in the car's restroom

or kitchen/pantry space. The two PCB boards are pre-wired together with spade connectors to match Walthers lighting contacts. For additional information go to [spdaylight.com](http://spdaylight.com).

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**Tangent Scale Models** has released a second production run of its Pullman-Standard PS-2CD 4427 cu. ft. triple-bay

covered hopper. The HO scale model appears to faithfully replicate the distinctive high-side prototype that was in production between 1966 and 1971.



Details on the ready-to-run car include accurate stirrup steps, see-through roof walks, etched metal crossover platforms,

wire ladder rungs and grab irons, jacking pads, tow loops, side air lines, air hoses, and coupler lift bars. Details specific to the prototype car being modeled include six different outlet gates, two different sets of roof hatches, two roof walk end supports, two crossover platform options, two different end ladder options, two different brake wheels, and two different center sill options.



Tangent is offering the HO scale ready-to-run model in nine decorating schemes including SLSF-Frisco (1967 version), Milwaukee Road (1967 and 2007

versions), and Rock Island (three versions, EJ&E 1980, NAHX 1980, Iowa Interstate 1987).



Additional decorating schemes available for Tangent's 4427 high-side PS-2CD include TLDX-Flamer (1967 yellow), TLDX-Landmark (1967 yellow),

and TLDX Landmark (1977 red repaint). The models come with Kadee couplers and 100-ton trucks with machined metal 36-inch wheelsets. For additional information visit [tangentscalemodels.com](http://tangentscalemodels.com).



**Walthers** is selling HO scale 70-foot RPO-baggage cars typical of standard heavy-weight equipment used by

many railroads between 1914 and the 1970s. The ready-to-run model represents cars with a 30-foot postal compartment complete with mailbag stanchions, sorting cases, and multi-direction catcher arms. The cars come with six-wheel trucks with electrical pickup. The type of truck is appropriate to the road name being modeled. Cars with clerestory roofs are available for New York Central Santa Fe, Great Northern, Milwaukee Road, and Soo Line.



Road names for cars with arch roofs are Union Pacific, Illinois Central, Denver & Rio Grande Western, and Southern Pacific.

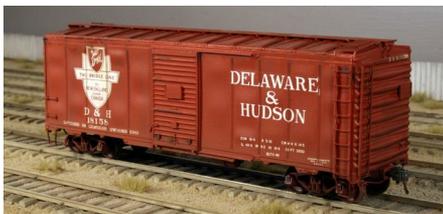


Walthers is selling a kit for a modern yard office. Although simple in appearance, the HO scale model is composed of 91 different parts molded in three colors. Details include separate

doors and windows, air conditioner, electrical box, smoke jack, decorative panels, a printed interior, and signs. The assembled model has a footprint of 3 x 2.38 x .94-inches.

In our March report on Walthers new track we inadvertently included several items from the old Walthers/Shinohara product line that are not currently planned for the new line. We apologize for any inconvenience caused by our error. Availability of Walthers new line of HO scale nickel silver track components begins in April with the release of 36-inch sections of flex track. Additional items scheduled for release in October include #4, #5, and #6 right and left hand DCC-friendly turn-outs; rail joiners, pre-wired terminal rail joiners, and a Code 83 to Code 100 transition track. Insulated rail joiners and spacer ties will also be available. All items mentioned will be offered in Code 83 and Code 100. For more information contact a dealer or visit [walthers.com](http://walthers.com).

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**Yarmouth Model Works** has released an HO scale resin kit for a 40-foot Delaware & Hudson 50-ton boxcar. The 1:87 model is a faithful replica of 300 prototypes D&H built in

its Oneonta Shops beginning in 1949. Construction of the all-welded cars featured flat side ribs, 3/4 Improved Dreadnaught ends with a short square rib at the top, and a Murphy diagonal-panel roof. The first 200 prototypes were fitted with Youngstown

doors while the final 100 received seven-panel Superior doors. Yarmouth's HO kit features a one-piece resin body, an etched Apex Tri-Lok running board, Ajax hand brake, and Tahoe #106 Buckeye trucks. Speedwitch Media produced the D&H decals. For additional information visit [yarmouthmodelworks.com](http://yarmouthmodelworks.com).

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## N SCALE PRODUCT NEWS



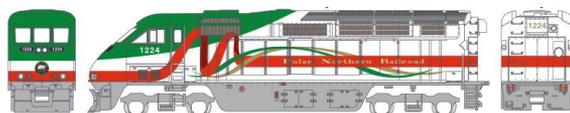
**Athearn** plans to release a new production run of N scale EMD F59PHI locomo-

tives in December. In addition to the Utah Front Runner version shown here, road names will be Montreal's AMT-Agence Métropolitaine de Transport, Amtrak, Amtrak Cascade, Metra Chicago, Union Pacific, Southern Pacific, Rio Grande, Polar Northern Railroad (Christmas theme), and two Amtrak rail-safety schemes.



Amtrak began a campaign promoting rail-safety awareness in the late 2000s. Several locomotives in Northern California (No.2007) and

Southern California (No.455) Amtrak service received printed vinyl wraps.



Features of the N scale ready-to-run locomotive include LED lighting, see-through

cab windows, and bi-directional constant lighting. Non-sound locomotives are DCC-ready. Sound equipped locomotives feature a

DCC decoder with SoundTraxx Tsunami2 sound. See the HO scale entry for other road name illustrations.



New N scale freight cars coming from Athearn next

February include this

40-foot triple-bay coal hopper with offset sides. Road names will be Southern Pacific, Milwaukee Road, Wheeling & Lake Erie, Alaska Railroad, Lackawanna, and Toronto, Hamilton & Buffalo. The N scale model comes with a removable coal load and will be available in singles as well as four-packs with different road numbers.



Athearn has included a 30-foot three-window caboose with offset cupola in its list of new models

coming next February. The N scale ready-to-run model has wire truss rods. In addition to Santa Fe, road names will be P&E-New York Central System, Canadian National, Rio Grande, Chesapeake & Ohio, Great Northern, Pennsylvania, Southern Pacific, and Union Pacific. For information on all Athearn products contact a dealer or visit [athearn.com](http://athearn.com).



**InterMountain Railway** has announced a few details on another production run of its N scale ACF 4650 cu. ft.

triple-bay covered hopper. The ready-to-run models will have etched-metal roof walks and appropriate trucks with metal wheelsets. Cars with three loading troughs will be available decorated

for SSW-Cotton Belt, Burlington Northern, Southern Pacific, Norfolk Southern, and Soo Line.



Cars decorated for NCLX-Sclair Polyethylene, ACFX-Sterling Salt, ACFX-ECC International, and

Wisconsin Central (CN noodle) will be equipped with six round loading hatches. The run will also include a car for ACFX-French's, and ATSF. A release date is pending. For additional information contact a dealer or visit [intermountain-railway.com](http://intermountain-railway.com).



**Bachmann** is offering an N scale 4-8-2 Light Mountain locomotive in the Sound Value-Equipped line.

Roadnames in this release include Southern, Louisville & Nashville, NC & St. Louis, and Missouri Pacific. The locomotives feature NMRA-compliant dual-mode Econami DCC & Sound decoders, operating headlight, completely hidden drive train, gear drive, and E-Z Mate Mark II coupler in the rear and a dummy coupler on the front. Separate details include the bell, whistle, pop valves, sanding lines and handrails..



Also available soon from Bachmann are the Old Time Gondolas and Water Tank cars. These cars feature body-mounted E-Z Mate Mark II couplers and blackened metal wheelsets. For more information visit a dealer or [bachmanntrains.com](http://bachmanntrains.com).



**Micro-Trains** has released two ready-to-run N scale versions of a 3-2 heavyweight observation car. The two-tone green Northern Pacific car was rebuilt and converted into a business car for company officials in the 1950s.



The Southern Railway car represents a heavyweight prototype built in 1903. It was rebuilt in 1939 with two staterooms, a dining room, and a small galley.



Micro-Trains has added two cars to its series of Heinz 57 Varieties vintage billboard reefers. At its peak H.J. Heinz operated a fleet of 700 truss-rod ice refrigerator cars that promoted its products. The newest cars from M-T are decorated for Baked Beans and Spaghetti. For more information on Micro-Trains products contact a dealer or visit [micro-trains.com](http://micro-trains.com).



## NEW DECALS, SIGNS AND FINISHING PRODUCTS

**Modelrailroadworks** has released two new water-slide decal sets. The New York Central experimental gold

cigar band scheme shown above contains sufficient material to decorate two HO scale locomotives.



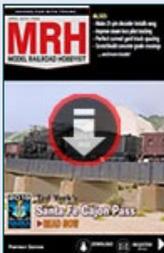
This Kennecott Copper Corp set will decorate three locomotives. It is available in both N and HO scale. For additional information visit [info@modelrailroadworks.de](mailto:info@modelrailroadworks.de).



## DISCLAIMER .....

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## DOWNLOAD ISSUE



DOWNLOAD PORTRAIT



DOWNLOAD LANDSCAPE



## BRIEFLY NOTED AT PRESS TIME ...

Blaine Hadfield of **Arrowhead Models** has announced plans to introduce an HO scale ACF 4600 cu. ft. covered hopper in 2020. In making the announcement Hadfield acknowledged that Athearn offers a Genesis model based on the same triple-bay prototype ...

**Atlas** has released a helpful series of videos for hobbyists and budding photographers wanting to capture their railroad empire and equipment in realistic scenes. The video, titled Layout Photography Tips and Tricks, can be viewed at [www.youtube.com/watch?v=qoCtLGGnlt0#action=share](http://www.youtube.com/watch?v=qoCtLGGnlt0#action=share) ...

**ExactRail** has just released several versions of Johnstown America AutoFlood II hopper cars. The N scale models are based on smooth-side aluminum prototype that could be unloaded through the five outlet bays or by a rotary machine ...

**ScaleTrains.com** has released its HO scale Rivet Counter version of Tier 4 GEVO ET44 locomotives in several road names include Navajo Mining and the Union Pacific version with angled exhaust. Models decorated for BNSF, CSX, Canadian National, and Norfolk Southern are also in this release ...

**SoundTraxx** has posted a video on YouTube that offers step-by-step guidance on installing a TSU-4400 Digital Sound Decoder in O scale equipment. To view the video go to [view.bsbsv1.net/bbext/?p=land&id=83BEF43DD0E95B7CE0530100007F819B&vid=d121df21-2e78-4e8c-9e3c-3ce675565631](http://view.bsbsv1.net/bbext/?p=land&id=83BEF43DD0E95B7CE0530100007F819B&vid=d121df21-2e78-4e8c-9e3c-3ce675565631).



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# SELECTED EVENTS



Model Railroad Hobbyist | April 2019

## APRIL 2019

*(Many events charge a fee. Check individual info website for details.)*

**AUSTRALIA, NEW SOUTH WALES, ERINA HEIGHTS**, April 19-21, 14th Australian Narrow Gauge Convention, at Central Coast Grammar School. Info at [www.austnarrowgaugeconvention.com](http://www.austnarrowgaugeconvention.com).

**CANADA, ONTARIO, MISSISSAUGA**, April 14 Lakeshore Model Railroaders' Association Flea Market, at John Paul II Polish Cultural Centre, 4300 Cawthra Road.

**ALABAMA, GADSDEN**, April 13, 33rd Annual Train Show sponsored by Coosa Valley Model Railroad Club, at 210 At The Tracks, 210 Locust Street. Info at [coosavalleymodelrailroad.com](http://coosavalleymodelrailroad.com).

**CALIFORNIA, HAWTHORNE (Metro Los Angeles)**, April 6-7, Los Angeles Model Railroad Society Open House, at 14005 Crenshaw Blvd. (Up stairs). Info at [lamrs.org](http://lamrs.org).

**COLORADO, COLORADO SPRINGS**, April 13-14, TECO 35 Model Train Show – The Golden Spike, at Chapel Hills Mall Event Center, 1710 Briargate Blvd. Info at [tecoshow.org](http://tecoshow.org).

**CALIFORNIA, SAN BERNARDINO**, April 27, Western Prototype Modelers Meet, at San Bernardino Train Depot, 1170 West 3rd Street. Info at [railroadprototypemodelers.com](http://railroadprototypemodelers.com).

**INDIANA, INDIANAPOLIS**, April 13, Indianapolis Spring Train Show, sponsored by NMRA Central Indiana Division at Manual High School Gym, 2405 S. Madison Avenue. Info at [cidnmra.org](http://cidnmra.org).

**KENTUCKY, NEW HAVEN**, April 6, Kentucky Railway Museum Annual Train Show & Sale, at St. Catherine Academy Gym, 413 North 1st Street. Info at [kyrail.org](http://kyrail.org).

**MAINE, WESTBROOK (metro Portland)**, April 6, Train Show at Westbrook Community Center, sponsored by Southern Maine Model Railroad Club. Info at [southernmainemrc.wordpress.com](http://southernmainemrc.wordpress.com).

**MICHIGAN, WYOMING (metro Grand Rapids)**, April 13, Spring Train Show, sponsored by Grand River Valley Railroad Club, at HSB Inc., 5625 Burlingame Ave SW. Info at [grvrrc.org](http://grvrrc.org).

**OHIO, MARION**, April 26-28, Central Ohio Railroad Prototype Modelers Meet. Request info from [dblake7@columbus.rr.com](mailto:dblake7@columbus.rr.com).

**TENNESSEE, MEMPHIS**, April 27, Memphis Model Railroaders Open House, at AZO Inc, 4445 Malone Road. Info at [memphismodelrailroaders.com](http://memphismodelrailroaders.com).

### May 2019, by location

**CANADA, BRITISH COLUMBIA, BURNABY**, May 3-5, Railway Modellers Meet of British Columbia, at Simon Fraser University, Burnaby Campus, West Mall Centre. Info at [railway-modellersmeetofbc.ca](http://railway-modellersmeetofbc.ca).

**CALIFORNIA, SAN PEDRO**, May 18-19, Belmont Shore Model Railroad Club Open House, 3601 South Gaffey Street, Bldg 824. Info at [belmontshorerr.com](http://belmontshorerr.com).

**CALIFORNIA, SANTA CLARA**, May 23-25, O Scale West, S West, and Narrow Gauge West combined meet, hosted by O Scale West, at Hyatt Regency Hotel. Info at [oscalewest.com](http://oscalewest.com).

**CONNECTICUT, FARMINGTON**, May 31-June 1, New England-Northeast Railroad Prototype Modelers Meet, at Farmington Marriott, 15 Farm Springs Road. Info at [nerpm.org](http://nerpm.org).

**MASSACHUSETTS, WAKEFIELD**, May 18, Model Railroad Flea Market, sponsored by North Shore Model Railroad Club, at Lakeside Inn, 595 North Avenue. Info at [nsmrc.org](http://nsmrc.org).

**NORTH CAROLINA, DENVER**, May 31-June 2, Modular Layout Display sponsored by the Sipping and Switching Society of North Carolina, at Salem United Methodist Church. Request info from Glen Frix at [gafrix@charter.net](mailto:gafrix@charter.net).

**TENNESSEE, JOHNSON CITY**, May 31-June 1, Scale Model Train Show & Sale, sponsored by Mountain Empire Model Railroaders, at George L. Carter Railroad Museum, East Tennessee State University. Info at [memrr.org](http://memrr.org).

**TEXAS, TAYLOR (Metro Austin)**, May 4-5, Austin Area Train Show, at Williamson County Expo Center, 5350 Bill Pickett Trail. Info [austinrailway.org/trainshow.html](http://austinrailway.org/trainshow.html).

### Future 2019, by location

**AUSTRALIA, QUEENSLAND, TOOWOOMBA**, June 1-2, Model Trains & Hobby Expo, sponsored by Toowoomba Model Railway Club, at Toowoomba Showgrounds, Glenvale Road. Request info from Ted Freeman at [tmrcepo@gmail.com](mailto:tmrcepo@gmail.com).

**ARIZONA, MESA, (Metro Phoenix)**, September 25-29, Arizona Junction, 2019 NMRA Pacific Southwest Region Convention, hosted by PSR Arizona Division, at Sheraton Mesa Hotel at Wrigleyville West, 860 North Riverview Mesa. Info at [azdiv-nmra.org/psr2019convention](http://azdiv-nmra.org/psr2019convention).

**CALIFORNIA, CROCKETT**, June 8-9, Carquinez Model Railroad Society Open House, at 645 Loring Avenue. Request info from Dave Tateosian at [davetateosian@sbcglobal.net](mailto:davetateosian@sbcglobal.net).

**CALIFORNIA, RICHMOND**, June 15, San Francisco Bay Area Prototype Modelers Meet, at St. David's School Hall, 871 Sonoma Street. Info at [www.bayareaprototypemodelers.org](http://www.bayareaprototypemodelers.org).

**ILLINOIS, COLLINSVILLE (metro St Louis)**, July 26-27, St. Louis RPM Meet, at Gateway Convention Centre. Info at [www.icgdecals.com/stlrpm](http://www.icgdecals.com/stlrpm).

**MARYLAND, LINTHICUM HEIGHTS (Metro Baltimore)**, September 19-22, Mid Atlantic RPM Meet, at Double Tree by Hilton, BWI Airport, 890 Elkridge Landing Road. Info at [marpm.org](http://marpm.org).

**NEW YORK, LIVERPOOL, (Metro Syracuse)**, September 19-22, NMRA Northeastern Region Empire Junction 2019 Convention, at Holiday Inn, 441 Electronics Parkway. Info at [empirejunction.org](http://empirejunction.org).

**OREGON, PORTLAND**, August 27-31, 35th National Garden Railway Convention, hosted by Rose City Garden Railway Society, at DoubleTree by Hilton Hotel, 1000 NE Multnomah Street. Info at [www.ngrc2019.org](http://www.ngrc2019.org).

**TEXAS, FRISCO**, June 27-30, 2019 Texas Special NMRA Lone Star Region Convention, at Drury Inn & Suites, 2880 Dallas Parkway. Info at [www.2019TexasSpecial.com](http://www.2019TexasSpecial.com).

**UTAH, SALT LAKE CITY**, July 7-13, 2019 NMRA National Convention and National Train Show. HQ at Little America Hotel. Info at [nmra2019slc.org](http://nmra2019slc.org).

## Beyond 2019, by date

**ENGLAND, BIRMINGHAM, 2022**, NMRA National Convention and National Train Show.

**CALIFORNIA, SANTA CLARA, 2021**, NMRA National Convention and National Train Show.

**MISSOURI, ST. LOUIS, July 12-18, 2020**, NMRA National Convention and National Train Show. HQ at Hilton St. Louis at the Ballpark. Info at [gateway2020.org](http://gateway2020.org). ■



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