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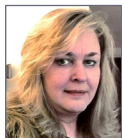
Model Railroad Hobbyist March 2020 | #121

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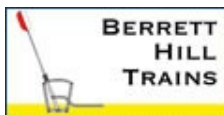
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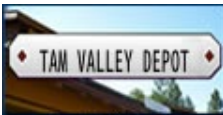
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[INDEX](#)

[TABLE OF CONTENTS](#)



Editor-at-Large Musings: Where do we start?

ERIC HANSMANN



MRH Website this month: Starting a new layout, and more ...

Compiled by JOE FUGATE



What's Neat: Maintenance tip, two layouts, and more ...

KEN PATTERSON



Quad Servo DCC decoder: 2

TERRY CHAMBERLAIN



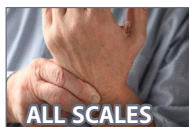
John Peluso's Frisco Eastern Division

The MRH STAFF



Making custom car card boxes

MICHAEL ANTEAU



My solution to shaky hands syndrome

JACK HENINGER



Savvy Modeler online: Hand carving realistic rocks

Compiled by the MRH STAFF



March 2020 news and events

RICHARD BALE and JEFF SHULTZ

In



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TABLE OF CONTENTS | RUNNING EXTRA

March 2020

**RUNNING
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Publisher's Welcome: Better rolling trucks ...

JOE FUGATE



Limited Modeler: Early PRR hopper classes

JIM SIX



Addendum: United States Safety Appliance Act

JIM SIX



Getting Real: Model a compound articulated

NICK MUFF



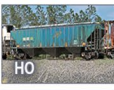
Model a small steam-era coaling station

DAVID MICHAEL REES-THOMAS



Model an SD20 with 3D-printed components

EVAN NEUBEE



Extreme weather a covered hopper

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Ah-Hah Moment: Cool ways to use magnets

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[INDEX](#)

[TABLE OF CONTENTS](#)

MUSINGS FROM THE EDITOR-AT-LARGE



Model Railroad Hobbyist | March 2020

ERIC HANSMANN: WHERE DO WE START?



MANY MODEL RAILROADERS ASK ME THIS

question. I also hear it from people entering the hobby. I've moved to four different cities in the last 10 years and have posed the question to myself after each major move. We end up with an empty space in a new place and get an itch to build something.



1. A mid-1920s image of Potomac Yard features a variety of freight cars from different railroads. I can find only one steel-sheathed boxcar in this image. All other boxcars are wood sheathed. A number of automobile, stock, and ventilated cars are featured. Several different gondola designs lurk in the far tracks. Keefer, Potomac Yards, Alexandria, Va. Retrieved from the Library of Congress, [www.loc.gov/item/2016826186/].

Inspiration

I fall back on basic inspiration to help me move forward. In many cases, a prototype photo nudges me along [1]. The Library of Congress has thousands of images to review in its digital collections. Many large cities and universities have digital history sites with more images to review. As a mid-1920s modeler, I'm thankful these treasures can be downloaded for closer inspection on my home computer.

Prototype maps of all types can get the creative process rolling, too. Sanborn Fire Insurance Maps, ICC railroad valuation maps, and city plat maps are amazing resources. Our towns and cities grew with the railroads. Many maps document the infrastructure and the industrial evolution that we want to model.

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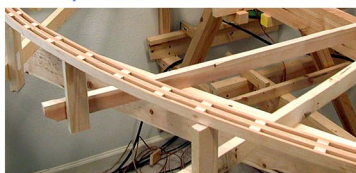
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EDITOR-AT-LARGE | 3

Prototype sources aren't my only inspiration. Sometimes a new kit, new tools, or a train show visit puts an idea into my head that might solve a problem that has been blocking my hobby progress.

Meeting local modelers at NMRA meetings leads to networking and discussions.

Everywhere I have moved, I've met modelers because of my NMRA membership. I often lend a hand on local layouts. Home workbench and layout projects are frequently discussed.

Sometimes I gain a different perspective that can lead me through a challenging task. I've frequently overthought a process and missed a simple path toward completion.



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Convert to action

Once we find inspiration, it's important to dive in and begin. Any layout project can become overwhelming after we start. I often work on small projects that will become part of the layout. Maybe I'll tune some freight cars to run better or install a decoder in a locomotive so I can operate completed parts of the layout.

Everything gets weathered to some degree, but I can't do everything at once. I'll focus on a couple of cars at a time, as a break from larger layout projects. I keep a stock of painted wheelsets ready to replace any shiny new wheels.

I sometimes create task lists to keep progress rolling. It's very easy to fall into a rut and watch YouTube videos for a few hours. A list can pull me to the workbench to fill 15 to 30 minute gaps of time in a busy day. Many steps we use to build models are not lengthy.

Decaling the ends of a freight car in a short time moves the model forward. I can apply decals on the car side to the right of the door in another half hour and finish off the left side the next day. The other side if the car is decaled in a couple more 30 minute blocks. Then it's ready for a gloss coat to seal the work.

Using these small windows of time adds up to real progress. It's a joy to see a finished car side decaled. That inspires me to sit down the next day to complete the car.

Layout development

I've been struggling with my home layout project for over a year. It seems our home improvement projects will not be moving forward, so I won't have a converted garage for my hobby space. Our dreams need to be adaptable to the needs of our households. I've wanted to get an HO scale layout rolling in my home for a couple of years. Now I need to adapt in order to move forward.

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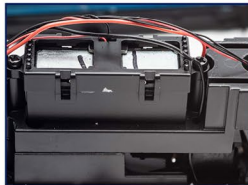
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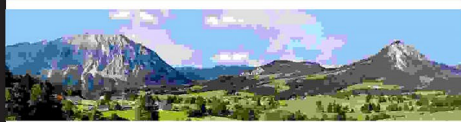
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The garage is a nice 21x25' space, but I won't be able to use as much as I had hoped. I've reduced the project to an L-shaped shelf layout.

I plan to use the yard sections from my former layout and build a new layout on hollow core doors. There are a few scenes from the prototype that will be great to operate and model [2].

This project is like Joe Fugate's TOMA method mixed with some Free-mo ideas.

We must constantly be ready to adapt and change our plans. I've been lucky to have built layouts in a couple of homes over the last decade. While I was hoping to start a larger project, I am happy to have space for any size layout. Building a small switching or chainsaw layout keeps me moving forward.

My last 10x16' layout was fun to build and operate with friends. The sectional components of that layout make it easy to reuse a 12' yard for the new layout.

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[TABLE OF CONTENTS](#)

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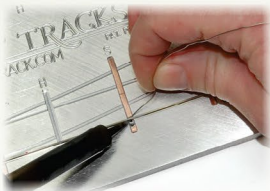
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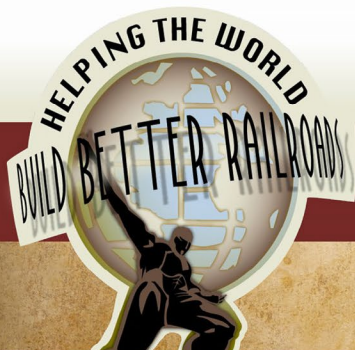


Just insert the rail into the tool and file.

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2. River Avenue in Pittsburgh, Pennsylvania, circa 1911. A team track with crane is on the left while another track leads into a warehouse dock. The Allegheny Yard branch of the B&O served this scene and is running just off the image to the left, along



the banks of the Allegheny River. Pittsburgh City Photographer Collection retrieved from the Historic Pittsburgh website:

historicpittsburgh.org/islandora/object/pitt%3A715.112254.CP

This is how I start. I have a path forward with an intriguing prototype. I've been in metro Nashville long enough to meet many modelers, network to share ideas, and assist with other layouts. A few of them are ready to help me.

Lastly, I've improved my time management skills and pushed several smaller projects to completion. I'm looking forward to warmer weather so I can start prepping the new layout components.

I hope you are inspired to start a layout. Sometimes we have almost everything in front of us but we don't realize it. Take advantage of a small space in your home to build something. It may not be a long term layout, but the skills you learn building a small layout will be yours for a lifetime and help you build the next layout.

Share your story on how you start, with a comment to this editorial on the MRH forum. ☒



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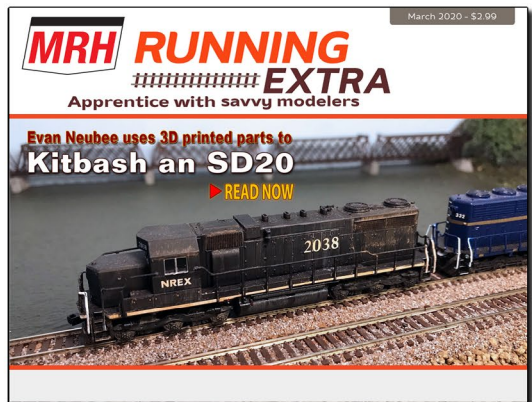
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LAST ISSUE'S RATINGS

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

4.7 A small layout with a big feeling

4.7 Savvy Modeler online: Easy tall grass tufts

4.5 Pete Smith's Loon Lake & Navigation Railway

Issue overall: **3.6**

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THIS MONTH

Model Railroad Hobbyist | March 2020

compiled by **JOE FUGATE**



RATE THIS ARTICLE

Starting the SoCal Desert Rail Division #2

Al Mayo shares his exciting new layout project on the MRH forum:

“The day after my birthday(Feb.17th), I started building my layout. It is exciting too. Here I go, I am on fire.”

View the video on the MRH website by clicking the button below.



View the full thread on the MRH website

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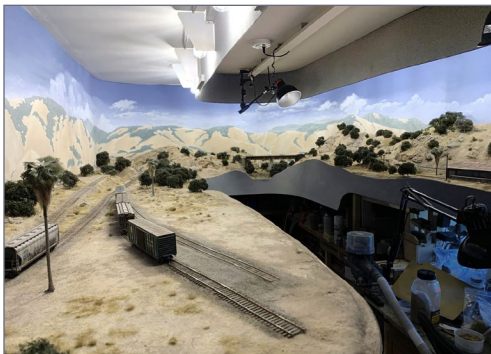
[INDEX](#)

[TABLE OF CONTENTS](#)

What's the right fascia color?

MRH forum member **mayor_79** asked for a recommended fascia color and elicited a lot of great responses, such as this answer from **Rick Sutton**:

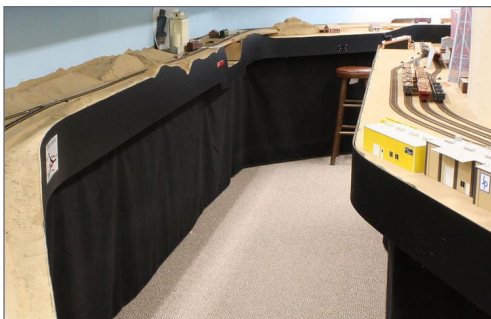
“Repaint the ceiling between the valences to a light gray [and make the] area between valence and sky backdrop straight white to reflect illumination. Paint is cheap. Paint your fascia with a warm gray between the floor and ceiling in value. Pick all colors off of the same color card. A possible starting point is Sherwin Williams SW7658 Clouds gray range.”



1. Forum member **Rick Sutton** shared a photo of his layout to show one fascia color example.

Then MRH forum member **George Booth** posted a nice photo of his layout space illustrating his color choice:

“I’ve always preferred black fascia with a black skirt inset from the fascia a few inches, Here is a photo [2] from a long time ago (my first post, actually).”



2. **Sugar Beet Guy (George Booth)** posted a photo showing his preferred fascia and skirting color.

For more details and more examples of fascia color choices, visit the MRH website and read the full thread.

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

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Wiring of the Shippensburg yard lead



Forum member **JLandT Railroad** (*Jason Miller*) posted recently on his blog:

“Continuing on today with more wiring of the Shippensburg Yard entrance. This is also the interchange from off layout staging into the Shippensburg Classification Yard, and also the yard lead entrance from Harrisburg.

“To ensure reliability into the future I have wired all of the PECO - Code 83 switches with power to the stock rails so that they do not rely on the points for power routing.

“The entrance to the classification yard will be one whole block controlled by either the yard master and/or dispatcher for inbound and trains. Next step is to wire in the power feeders & connect the Tortoise wiring.

“Then the next task is to wire is the switch stock rail power feeds & wire up the Tortoise Motors to the SE8C's and push button on the fascia panels.”

For more details, visit the MRH website and read the full thread.

3. Jason Miller posted photos of his latest layout wiring project on his MRH blog.

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

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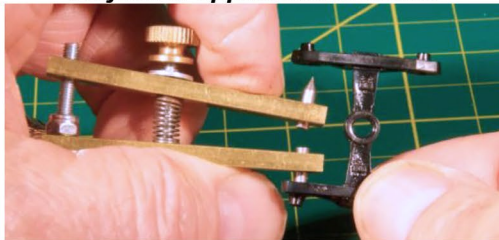
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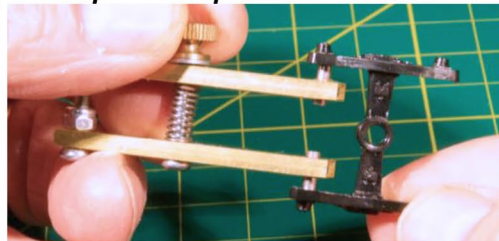
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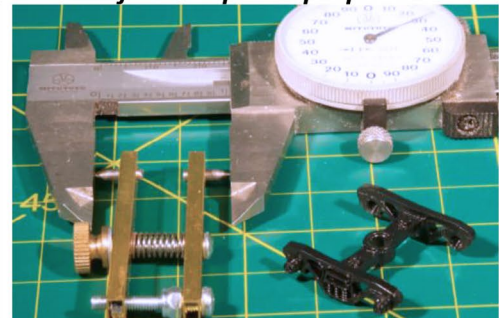
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Repositioning ladders on steel box cars

Inspired by another MRH forum thread, member **Deemior-gos** (*Peter Soulikias*) decided to upgrade the ladders on some of his rolling stock.

“A thread by **mesimpson** has inspired me to move the ladders to the edge of my three TLT CN steel boxcars.

“I filled the holes then sanded them. With some guidance from **Yannis**, I was able to airbrush the filled holes.



4. The cars Peter Soulikias decided to upgrade with new ladders after being inspired by what another MRH forum member was posting about his rolling stock efforts.

“The new holes are for the placement of the ladders. Some of the ladders mounts got broken when I removed them hence no car has all its holes. The cars are ready to have the ladders mounted and for further weathering.”

It's great to see this kind of cross-pollination and assistance between the MRH forum members. That's why we host this site and publish our magazines, books and videos. Visit the MRH website and read the full thread.

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

Weekly photo fun thread

Here's a fun post from a recent MRH weekly photo fun thread: an HOn30 locomotive. Compared to a penny, that's one tiny loco, but it runs!

For more great photos, visit the MRH website and view the full thread.

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5. ChrisFrissell posted several photos of this diminutive Toma Model Works HOn30 kit, with some detail modifications. That's some fine modeling and great photography. Check it out!



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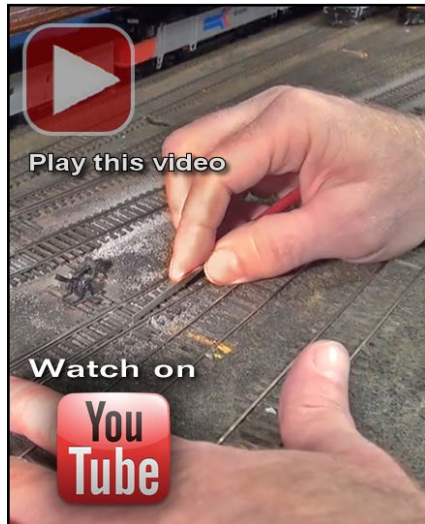
KEN PATTERSON VISITS TWO LAYOUTS

— ONE JUST BEING STARTED AND THE OTHER IN FULL OPERATION. HE SHARES MAINTENANCE TIPS AND SHOWS ATHEARN'S NEW N SCALE DISPLAY ...



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THIS MONTH WE LOOK AT THE PELLEGRINO'S father-and-son operating double deck HO scale layout that will be on tours at this summer's NMRA National Convention



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March 2020 show

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[INDEX](#)

[TABLE OF CONTENTS](#)

in St. Louis, MO. We visit Campbell Rice and his new basement to see the layout he commenced setting up just after moving into his new home.

As it is winter in Missouri as of this writing, I share with you tips for some of the maintenance I have been performing on my home layout. We also look at a new N scale layout display that I built for Athearn Trains; something simple that is light enough and tough enough to survive the trade show circle of weekly travel from show to show.



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Athearn N scale layout



1. Ken built a demo layout for shows that is strong, professional, and portable. This layout was to be 4x3' with a simple loop of Kato N scale track. It needed to be strong and lightweight and catch the eye at trade shows. Ken started the project by stacking two pieces of pink insulating foam on top of each other, gluing them together with Foam Pro adhesive. He then laminated the top of the layout with 1/8" plywood to give a light and strong surface for the track.



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2. The “layer cake” construction has a groove filled with wood blocks to securely fasten the plywood fascia. Once it set up, he laminated the sides of the layout with 1/8” plywood stained black, and using a router and a 3/4” bit to cut a channel, centered in the sides of the layout. This created a groove into which he glued 3/4” blocks of wood all the way around the 4-inch-thick foam base. The wood blocks were glued with Gorilla Glue which is activated with a spray of water. Because this glue expands as it sets up I needed to push each piece of wood back into place as the foam glue cured over a period of 30 minutes. I used a screwdriver to push back the blocks of wood as the expanding glue pushed them out. These blocks of wood will produce a strong surface to staple the laminated sides to the layout structure. I wet the plywood with a garden hose indoors before bending it around the base, to prevent the wood from cracking as it is bent. It is fastened with 1/2” inch staples and an electric staple gun.



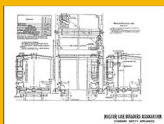
3. The stapler has an adjustment setting that controls how deep the staples will be driven into the plywood, preventing them from being driven past the plywood surface. It took about three test staples to set up the gun for successful attachment of the wood without shooting completely through the plywood. It took a 14-foot strip of wood to wrap all the way around the diorama. The base got three coats of black polyurethane stain. The plywood top is painted with a coat of brown latex house paint for a nice finish.

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4. The Kato track was spiked in to place by drilling very small holes for track pins, using a cordless Dremel tool, through the railroad ties. The track was spiked with very small nails all the way around the loop of track. The power feed wires to the track were run through a brass tube feeding the wires through the plywood top and the four inches of foam to the bottom of the layout.



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5. Here's the finished trade show layout with a train running around it and plenty of space to display models. The track can easily be expanded with turnouts and is ready for foam landforms to add scenery. A layout like this is perfect for running and testing N scale models and can easily be stored under a bed or in a closet when you are finished running trains.



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Layout upkeep this past winter



6. I have been spending a few days each week in between podcast shows to perform general maintenance and upkeep for my 60x30' modular home layout. I recorded a few of the items for this month's video. The control panel that powers the blocks in my switching/staging yard is simply a piece of Plexiglas painted with the track pattern of the yard. Velcro strips hold this flat panel in place on the layout's sides.



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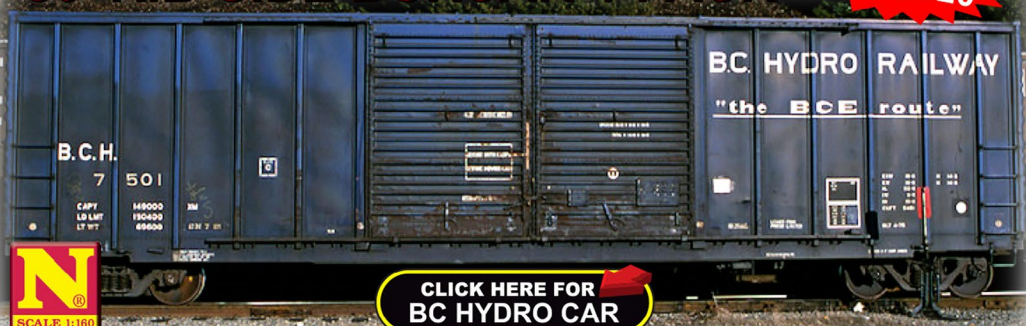




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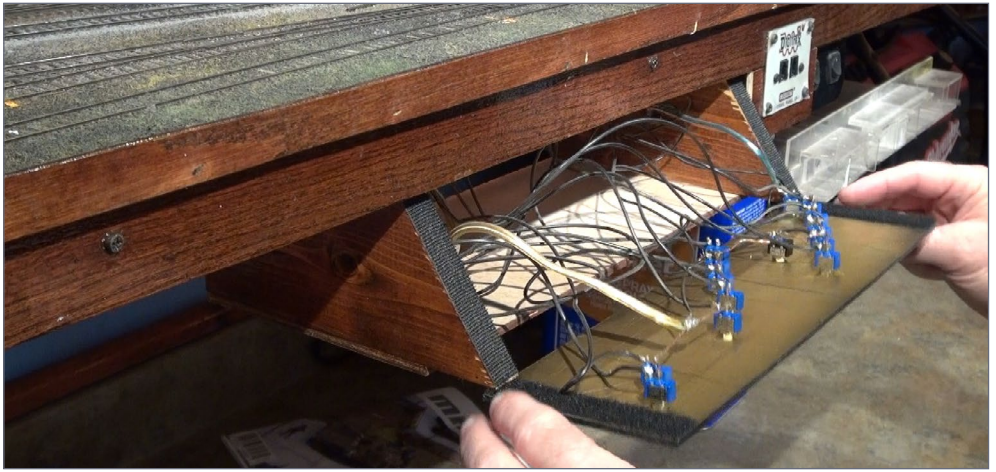
P/circle, ACI and
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on sides, roof and ends

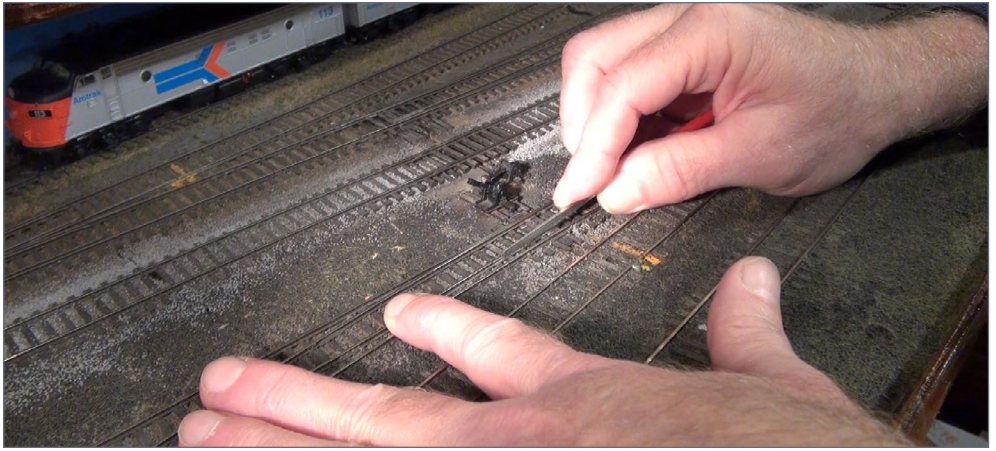
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7. This week I needed to replace a broken toggle switch. The design of the panel made it very easy to get into the wires and replace the switch.



8. All the way around the layout's main line there are more than 45 turnouts. One very important maintenance procedure is to clean the switch points to ensure good electrical conductivity. I do this by running a very fine diamond file in the switch points. Cleaning the points' contact point and the outside rail ensures smooth operation.



9. The Woodland Scenics Just Plug lighting system – I shared the installation of the lights in my wharf scene in the July 2017 What's Neat video – needed repair because some of the lights were broken off by hands reaching in to the scene. Because my layout is made of foam modules on top of simple tables, it is easy to pull out the wharf scene to replace these amazing lights.



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EVAN NEUBEE models an SD20 using 3D printed components.

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NICK CAMPBELL does extreme weathering on a modern covered hopper model.

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Joe and Tony Pellegrino's operating layout



10. This month we look at Joe Pellegrino and his son Tony's HO scale layout. This is their fifth layout over the years and this one was designed for operation, modeling the Illinois Central from Chicago to Venice, Illinois. The layout's primary operation location is Alton, Illinois, modeling all the industries running along Broadway, the steel mills, glass factory, box industries and smelters along the industrial line.



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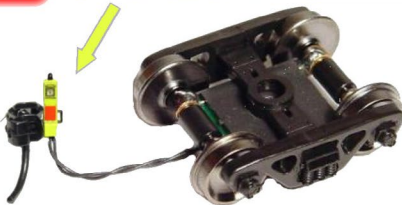


11. The night we filmed the interview for this month's video there were eight or more individuals operating trains on the layout. Measuring 18x30', the layout has three levels. The bottom level is staging yards. The main level is at 32" inches from the floor and the third level is at 56" from the floor.

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12. The layout is run by a full-time dispatcher and trainmaster, making sure every operator has train orders and assignments. All communication is done with radios and every train movement requires paperwork and train orders to proceed. It is very organized and well thought out. There is a helix to get the trains from level to level measuring 6x10' with five levels and a 2 percent grade. All the track is Atlas code 83 track.

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13. A gate allows operators access into the layout. This gate is amazing in its design, with three main lines on two levels. They use door hinges to help conduct the power to the gate with no wires. This layout will be available to view at the NMRA St. Louis National Convention in 2020 and Joe and Tony will host four operating sessions as well as layout tours the week of the convention. Check out the NMRA website for more information on how you can run and view this amazing layout. www.gateway2020.org.



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Campbell Rice: Two weeks' work on a new home layout



14. Campbell Rice, part of the What's Neat This Week podcast crew, invited us to his newly built basement and custom-built room for his layout just two weeks after he moved into his new home south of St. Louis. He has already set up benchwork measuring 24" wide and 6 to 8' long to accept modules he built for his home layout when he lived in Arkansas.

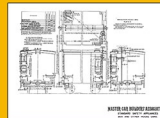


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15. The lighting will be strip LEDs with the option to change colors from day to night. Campbell's scenery is carved foam with plaster cloth and rock castings overall. He looks forward to working more with DCC and static grass and all the new techniques developed by current day modelers. He seems to already be a master at creating realistic-looking scenery colors and photographic backdrops that match each scene. Campbell says layout design is his favorite part of the hobby now but he looks forward to learning more about operation and incorporating this into his modeling pleasure.

[See the video on the first page ...](#)



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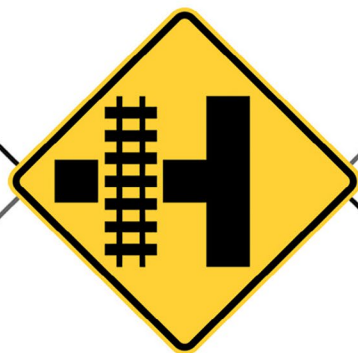
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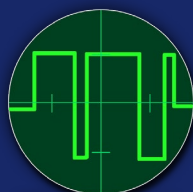
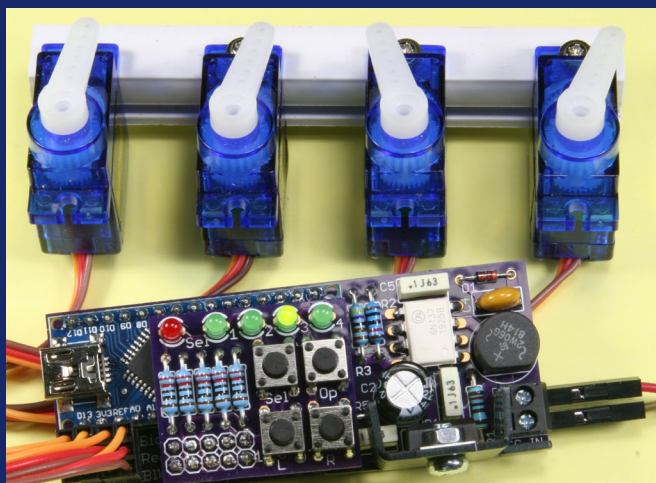
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Quad servo DCC decoder

Part 2



**Electrical
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1. In Part 1 last issue, I covered how to build and install the software on this decoder allowing more accurate control of four servos. Here in Part 2, I show how to adjust the positioning of each servo with great precision. Note I have the keypad plugged directly into the decoder here.

TERRY CHAMBERLAIN'S frustrations with commercial decoders led to building his own highly configurable quad servo DCC decoder ... Part 2 ...

AS DISCUSSED IN PART 1, I BASED MY QUAD SERVO DCC Decoder (QSDD) around a standard Arduino Nano module to give me a DCC decoder that accurately controls the position of up to four servos – all for less than \$20.

If you followed my construction directions in Part 1, you have now built your own QSDD and loaded its software using an Arduino sketch.



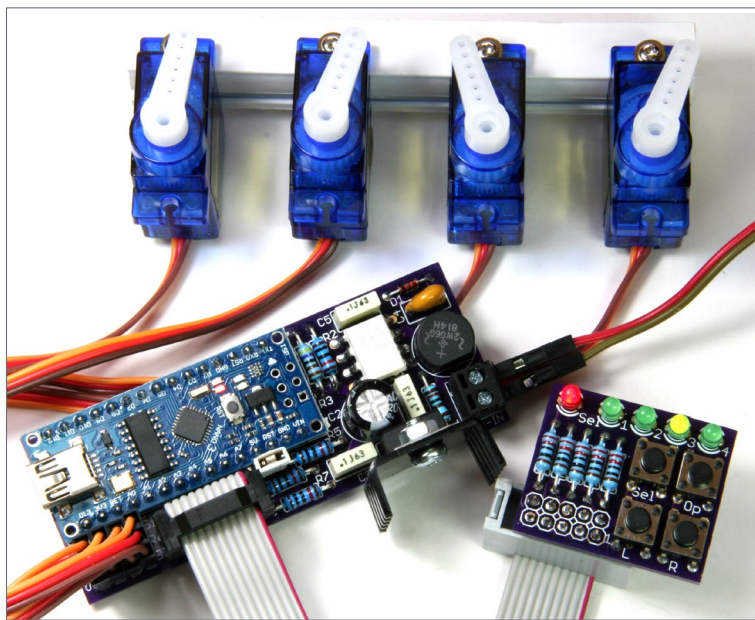
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In Part 2 I show how to precisely set the throw and transit rate of each servo. I also explain how to assign DCC addresses to the servos so you can control them with your DCC system.

Finally, I delve a little deeper into the technical details of the QSDD in a sidebar for those who are interested.

Picking up where we left off

Let's assume you have connected the QSDD and the keypad directly [1] or via a ribbon cable [2] – and that you have the four servos plugged into the appropriate header sockets.



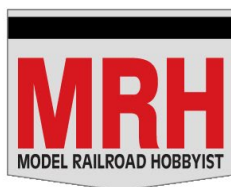
2. Connect the keypad using the ribbon cable (up to 40" long). Use this approach when you have installed the decoder and servos under the layout.

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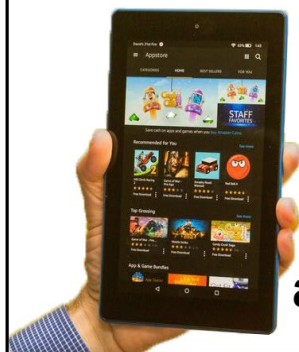
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The longer cable makes it easy to set up turnouts when the decoder and servos are out of sight under the layout. Once you have the servo action set to your liking, you can operate the servos via DCC commands, with no need for the keypad.

The keypad also allows operating the servos by hand using the pushbuttons instead of DCC commands.

Power the QSDD from your DCC system by a connection to the track, or directly to the command station. Commands can be sent using either handheld controllers or suitable software on a PC, such as JMRI PanelPro or my own A-Track application.

JMRI PanelPro:


jmri.org/help/en/html/apps/PanelPro/index.shtml

A-Track app:

www.a-train-systems.co.uk/atrack.htm

Servo Setup – Step-by-step

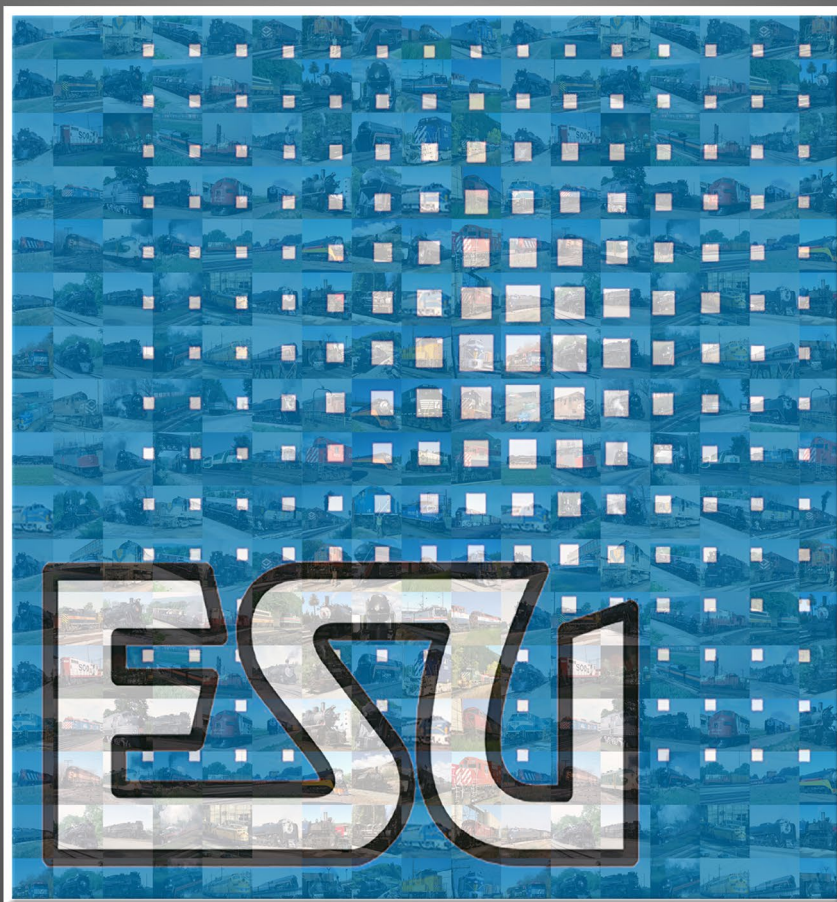
You do not need a USB connection for this setup. However, if you do connect the USB cable from the Arduino Nano to your computer and run the Arduino IDE (whether the QSDD sketch has been loaded or not), then you will get messages to confirm changes made during setup as you make them.

This can be helpful, especially when performing setup for the first time. To display the messages, enable the Serial Monitor in the Arduino IDE by clicking the icon () at the right-hand end of the toolbar. Set the rate at 115200 baud, and make sure debug messages are enabled (as in the supplied sketch).

When you plug the USB cable into the Arduino Nano you will see the red Sel LED and one or more of the green LEDs flash on and off

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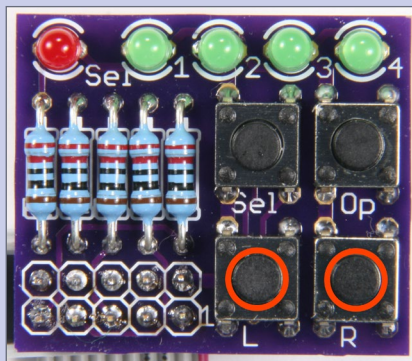


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a few times. Once the USB link gets fully initialized, the decoder board resets automatically, lighting then extinguishing all of the LEDs, and moving the servos to their last defined position.

STEP 1: FIND THE CENTER POINT



3. Use the **L** and **R** buttons to center the servos.

First we must find the center point of each servo's movement.

Standard micro servos such as the SG90 have a nominal range of 180 degrees. This goes from full right at 0° to full left at 180° although, because of mass production tolerances, the range can vary by up to 15° either way.

Press the **L** and **R** buttons on the keypad together [3], then release them. All servos should move to their center positions (90°). You may want to adjust the fitting of the servo actuating arms so they align with whatever position you want as the center of each servo's range.

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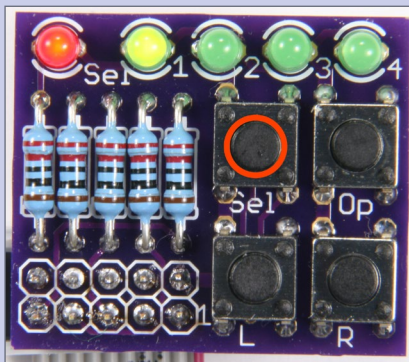
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STEP 2: ADJUST THE LEFT LIMIT POSITION



4. Press the Sel button to select servo 1.

Press and release the Select (**Sel**) button. The red **Sel** LED will light, together with green LED 1, and servo 1 will move to its current left limit position.

You can now adjust the left limit position leftwards, one degree at a time, by pressing the Left (**L**) button, or rightwards by pressing the Right (**R**) button.

Alternatively, just hold down either the **L** or **R** button until you reach the limit position you need to do this faster than one degree at a time.



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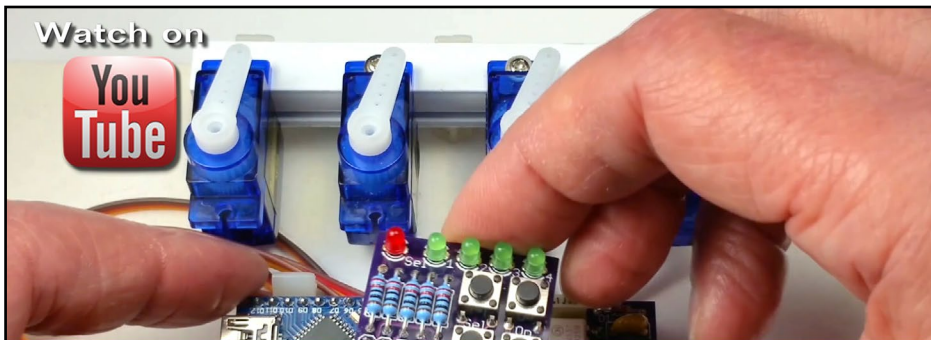
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QUAD SERVO DCC DECODER PART 2 | 6

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DCC servo decoder setup

March MRH companion video



In this video, the author steps you through the setup process.

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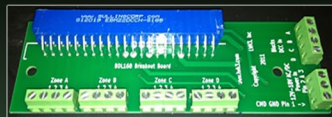
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STEP 3: ADJUST THE RIGHT LIMIT POSITION

Press and release the **Sel** button again. The red **Sel** and green 1 LEDs remain lit, but servo 1 will now move to its current right limit position which can be adjusted, as in Step 2 above, by pressing either **L** or **R** buttons.

STEP 4: ADJUST THE SERVO TRANSIT RATE

Press and release the **Sel** button. The red **Sel** and green LED 1 remain lit, and servo 1 will now move at its set rate to its left limit position, then return at the same rate to its right limit position.

If the transit rate is either too fast or too slow for your needs, then press the **L** button to make the rate slower (Leisurely), or the **R** button to speed the rate up (Rapid).

After each button press, the servo will move from right to left and back again at the new rate.

The decoder will not respond to button presses while a servo is moving. You can, however, keep either button depressed continuously and watch the transit rate for servo 1 either speed up or slow down until it reaches the rate you want.

When either the slowest or fastest rate has been reached, the movement of the servo will stop. The decoder will no longer respond to further presses of whichever button caused it to reach its lower or upper rate limit.

STEP 5: SAVE THE ADJUSTMENTS

Press and release the **Sel** button. This time the red **Sel** LED will blink at a steady rate, with the green LED 1 lit.

You now have the option of saving all the position and rate adjustments you have made as configuration variable (CV) values, replacing the default settings. These saved CV values will be stored permanently in the Arduino Nano memory even when power is switched off.

To save the new CV values, press the **R** button (Retain the changes, Replacing the current CV values). Alternatively, press the **L** button instead (Losing changes and Leaving the current CV values as they are).

After you have either saved or discarded the changes, the green LED 1 will go out, although the red Sel LED will continue to blink.

At Step 5 if you press and release the **Sel** button instead of either the **L** or **R** buttons, this immediately takes you to Step 6 and discards any changes.



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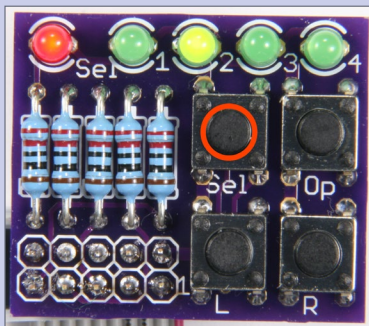
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STEP 6: MOVE TO THE NEXT SERVO



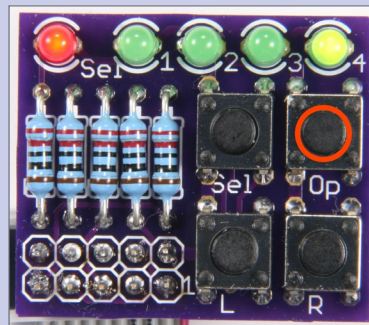
5. Press **Sel** to complete the setup for servo 1 and move to servo 2.

Press and release the **Sel** button once again to complete the setup process for servo 1 (unless you skipped here directly from Step 5).

The red **Sel** LED will stop blinking, while green LED 1 will go out and green LED 2 will light. You can now repeat the actions of steps 2 through 6 to carry out the setup of servos 2, 3, and 4.

After you have completed the setup of servo 4, pressing and releasing the **Sel** button will terminate the setup process, and all LEDs will be extinguished.

If you wish to setup a specific servo, rather than having to cycle through all four of them one at a time, at either Step 2 or Step 6, press and release the **Op** button. This will skip (and not save) the setup of the currently selected servo, lighting the green LED for the next servo.



Pressing the **Op** button when servo 4 has been selected ends the setup process.

6. To jump directly to a given servo number during setup, use the **Op** button to cycle through the servos.

STEP 7: MOUNT THE SERVOS IN PLACE

Once you have the movement range of each servo set to what you need, you can fit the servos into whatever mounts and linkages you are using to connect to the layout turnouts.

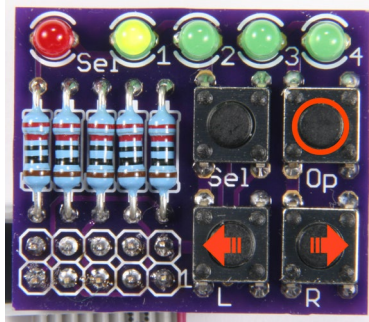
After everything is secured, you can repeat the servo setup process to fine-tune the position limits and transit rates.

After driving a servo to the required limit position, it is “detached,” which means only the friction in the servo gear train is holding the linkage in place. You may want to move the limit positions out by a degree or two to ensure that the turnout points stay in position.

The problem does not arise with Peco turnouts because they have an over-center spring to maintain the switched position.

Manual servo operation

You can check the operation of the servos by pressing the **Op** button on the keypad. This lights the green 1 LED to show that servo 1 is selected.



Press the **L** button to move servo 1 to its left limit position at the set rate, or the **R** button to move servo 1 to its right limit position. No movement

7. Use the Op button and the L or R buttons to manually operate a servo.

will result, of course, if the servo is already positioned at the selected limit.

Further presses of the **Op** button will light green LEDs 2, 3, and 4, in turn, selecting the corresponding servos 2, 3, and 4, and detaching the previously selected servo.

When the relevant green LED is illuminated, the currently selected servo can then be operated by using the **L** and **R** buttons, as described.

A final press of the **Op** button will switch all LEDs off, with all servos detached.

Connecting the keypad to the decoder board using the ribbon cable allows the keypad to be mounted on a fascia and used for direct control of your turnouts, if that is how you wish to operate. A cable up to 40 inches (1 meter) long can be used.

Servo operation – DCC commands

With the decoder connected to your layout track, you can operate any of the servos and the connected turnouts by issuing the appropriate command from your DCC system to the addressed servo.

Default addresses 1, 2, 3, and 4 are assigned as part of the pre-loaded software, but you can assign whatever addresses you wish to the four servos, as explained in the next section on setting decoder output addresses.

For the key sequences to operate the servos and their attached turnouts, using some common DCC systems, see [8].

When using DCC commands to operate the servos, the decoder board on its own provides all the functions of a standard accessory decoder. You do not need the keypad or a USB connection to a computer.

Great control in a tiny package

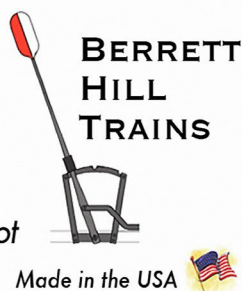


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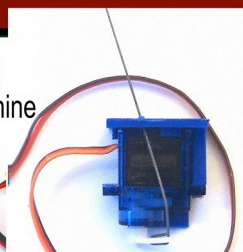
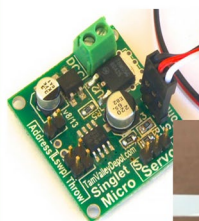
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NCE	<p>Press SELECT ACCY</p> <p>Type in one of the set addresses followed by ENTER</p> <p>Press 1 or 2 to throw the turnout, depending on its current position</p> <p>If the turnout does not move, press SELECT ACCY twice to throw it in the opposite direction</p>
Digitrax	<p>Press 'SWCH'</p> <p>Type in one of the set addresses</p> <p>Press OPTN / t or CLOC / c to throw the turnout, depending on its current position</p>
Lenz	<p>Press F then 5 (LH100) or Points/Signals (LH101)</p> <p>Type in one of the set addresses followed by ENTER or 'Points/Signals'</p> <p>Press + or - (LH100) or M (LH101) to throw the turnout, depending on its current position</p>
MRC	<p>Press ACCY</p> <p>Type in one of the set addresses followed by ENTER</p> <p>Press 1 or 2 to throw the turnout, depending on its current position</p>

8. Table of key sequences to operate the servos for several common DCC systems.

After operating each servo, the current position is stored in the relevant configuration variable (CV 59, 64, 69, or 74) for that servo. Powering-off the decoder does not affect the stored position; when switched on again the servos are repositioned to where they were the last time they were powered up.

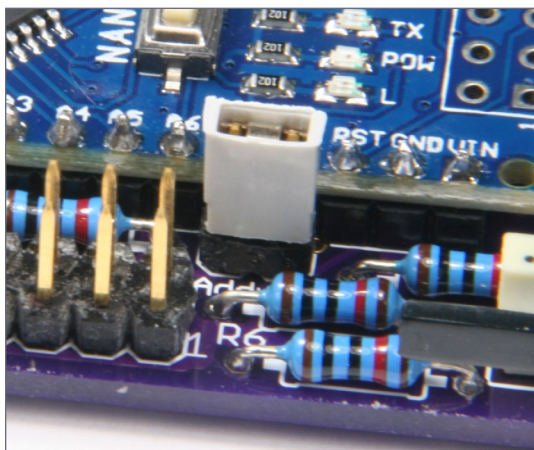
Setting servo (aka turnout) addresses

While the four default addresses (1, 2, 3, and 4) may be adequate if your layout only has four turnouts, you generally need to assign specific addresses to the decoder for each servo.

To start assigning addresses, fit a shorting plug [9] across the two pins of the Addr programming header on the decoder for which you wish to program addresses. This puts the decoder in “set address” mode rather than “operate servo” mode.

We assume the keypad been removed and not connected.

From your DCC system, prepare to send an accessory command to the decoder, as described in the preceding section, by selecting the Accessory function for your type of DCC system.



9. The shorting plug in place on the decoder board's Addr programming header.

Type in the address you wish to assign to servo 1, followed by the key sequence to throw the turnout. You can select either direction of throw, since the command direction is ignored. Because you have the **Addr** plug in place, the address you enter is recorded for servo 1 in the decoder.

To be accepted, addresses must lie in the range of 1 to 2043. Address values outside of this range will be ignored and will not replace whatever value is currently stored for the relevant servo (turnout) address.

Now select the Accessory function again on your handheld controller, enter the address to be assigned to servo 2, and proceed to throw the turnout. Repeat this sequence twice more to program the addresses for servos 3 and 4.

All four entered addresses will now be stored in configuration variables 41 through 48, with each address held in two consecutive CV locations, e.g., servo 1 address in CV41 and CV42, servo 2 address in CV43 and CV44, and so on.

If you have a USB connection to the Arduino Nano from your PC, and the Arduino IDE Serial Monitor is enabled, confirmation (debug) messages for each servo address programming step will be displayed in the IDE Serial Monitor window.

Remove the shorting link from the programming header to terminate the setting of servo addresses on the decoder. This action resets the decoder and allows it to operate normally. The shorting link can be stored on one of the programming header pins until the next time it is needed.

Monitoring and manual control of setting servo addresses

Connecting the keypad to the decoder board with the shorting plug on the **Addr** header offers you more flexibility. You can set

addresses and also get visual feedback through the keypad LEDs during the programming process.

With the shorting link in place, the red **Sel** LED and green LED 1 will be lit [10]. Setting the address for servo 1, using your hand-held controller as described previously, will cause the red **Sel** LED to blink as an acknowledgment that the address has been received, the green LED 1 will go out, and green LED 2 will light.

Subsequently, entering addresses for servos 2, 3, and 4 will repeat the sequence with green LEDs 2, 3, and 4.

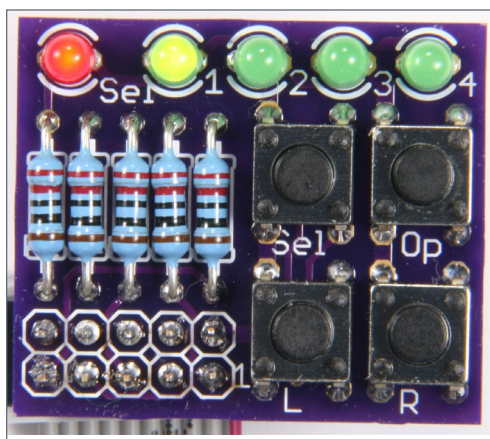
After all four addresses have been received, they are stored in CVs 41 through 48, all of the green LEDs go dark, and the red **Sel** LED blinks continuously.

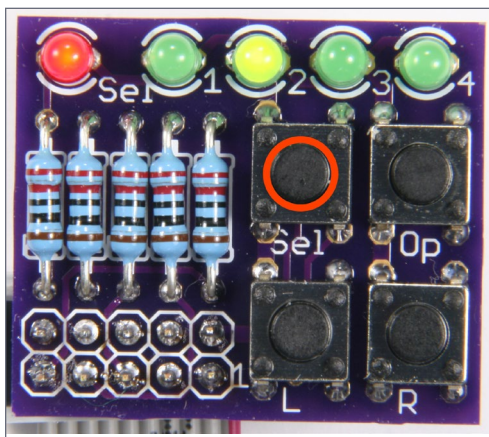
In this state, the decoder will not respond to any button presses or to any DCC commands. Remove the shorting link to terminate programming, which will turn off the **Sel** LED. This resets the decoder and returns it to normal operation.

However, with the keypad connected and the **Addr** shorting link in place, you have the option of choosing *which* servo addresses to program.

Starting with the red Sel and green 1 LEDs lit, pressing the

10. You can connect the keypad during address programming to get more flexibility.





11. Press **Sel** during address programming to skip to the next servo.

Select (**Sel**) button turns green LED 1 off and green LED 2 on, and skips entry of a new address for servo 1 [11].

You can now enter a new address for servo 2 or skip this also by pressing the **Sel** button again, which turns green LED 3 on and lets you program a new address for servo 3.

When you reach the option of programming an address for servo 4, entering a new address (or pressing **Sel** to skip programming) turns off all green LEDs, stores any entered addresses in the relevant CVs, and leaves the red **Sel** LED blinking continuously.

As stated before, in this state the decoder will not respond to any button presses or to any DCC commands. Remove the shorting link to terminate programming, turning off the red **Sel** LED, resetting the decoder and returning it to normal operation.

Store the shorting link on one of the programming header pins until the next time it is needed.

As mentioned before, if you have a USB connection to the Arduino Nano from your PC, confirmation (debug) messages for each step will be displayed in the IDE Serial Monitor window.

Reversing servo direction

After mounting the servos to your turnouts, you may find you need one or more of them to operate in the reverse direction, so that issuing a Route Command from your DCC system correctly throws the turnout in the diverging direction instead of the straight direction.

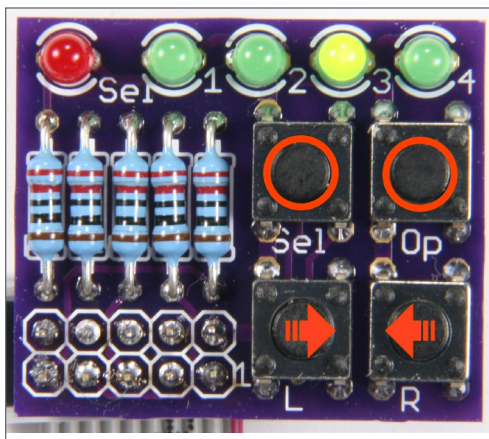
To change a servo operating direction, connect the keypad to the decoder and press the **Op** button one or more times to light the green LED corresponding to the servo to be reversed.

Now press and release the **Sel** button once. The red **Sel** LED will light briefly to acknowledge that the reversing change has been saved to the relevant configuration variable (CV 56, 61, 66, or 71).

After this, pressing the **L** button will move the selected servo to the right, and the **R** button moves it left [12].

The servo will react similarly to received DCC commands from your system.

Complete the process by pressing the **Op** button as many more times as required to extinguish all of the green LEDs.



12. Using the **Op** and then **Sel** button reverses the operating direction of the servo. After this, using the **L** or **R** button throws the servo in the opposite of the labelled direction.

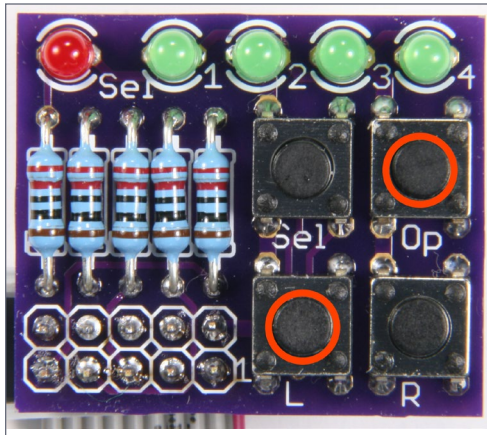
Exactly the same sequence of actions will return the servo to normal operation.

Resetting the decoder

Normally to reset the decoder and restart the uploaded software, you would press the reset button on the Arduino Nano.

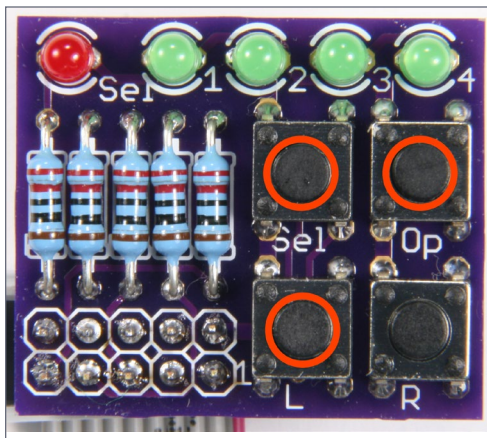
However, with the keypad plugged in to the decoder board, the reset button is covered. So as an alternative, press and hold down the **L** button on the keypad. Now press the **Op** button, then release both buttons together to reset the Arduino Nano.

All LEDs should light and then go out, and all of the connected servos should move to (or remain at) their last commanded position.



13. As an alternative to reset the decoder, press and release the L and Op buttons simultaneously.

14. To restore all the default values to the decoder, press and hold the L button, then press and hold the Op button, then press and hold the Sel button. Now release the Sel button, then release the Op and L buttons.



You can also restore all of the decoder parameters to their default values. See the instructions in the [14] caption.

After this, as with the normal reset, all the LEDs should light and then go out.

However this time, the red **Sel** LED will light briefly again as the CV default values are loaded, followed by all of the connected servos moving clockwise to their default rightmost position (20 degrees right of center).

Take care. If you have the servos linked to a layout turnout, make sure this movement can be accommodated and will not cause damage to the linkage or to the servo. Bear in mind that the plastic gear train in most servos can easily be damaged if you drive the servo against an inflexible stop.

Configuration variables and DCC operations

Like all NMRA-compliant decoders, the QSDD holds its working data in a set of configuration variables (CVs), as seen in [15].

Select the CV number to be programmed, enter the new value, and press ENTER (or whatever key is required by your system to complete the command). Since it is not possible to read back the values of CVs in Operations mode, you will have to judge, by the subsequent behavior of the decoder, whether the change of CV value was a success.

Reset is accomplished by pressing the Reset button on the Arduino Nano or, by holding down both the **L** and **Op** buttons on the keypad and then releasing them.

If connected to a programming track, the QSDD, unlike most commercial accessory decoders, allows you to read the current values of all CVs and then write (program) new values if required.

QUAD SERVO DCC DECODER PART 2 | 19

CV Nbr	Default Value	Description
1	1	Board Address LSB – internal use – ignore any value loaded here
7	89	NmraDCC Version
8	13	Manufacturer (Do-It-Yourself)
9	0	Board Address MSB – internal use – ignore any value loaded here
29	226	Decoder Configuration – Extended Accessory + Output Addressing
41	1	Output 1 Address LSB
42	0	Output 1 Address MSB
43	2	Output 2 Address LSB
44	0	Output 2 Address MSB
45	3	Output 3 Address LSB
46	0	Output 3 Address MSB
47	4	Output 4 Address LSB
48	0	Output 4 Address MSB
50	0	Load Default CV Values if Not = 173 (0xAD), Auto set = 173 after load
55	6	Servo 1: Slow Rate (1 to 16)
56	1	Servo 1: Direction - 1 = Normal Op, 0 = Reverse Op
57	70	Servo 1: Right Limit
58	110	Servo 1: Left Limit
59	70	Servo 1: Current Position
60	6	Servo 2: Slow Rate (1 to 16)
61	1	Servo 2: Direction - 1 = Normal Op, 0 = Reverse O
62	70	Servo 2: Right Limit
63	110	Servo 2: Left Limit
64	70	Servo 2: Current Position
65	6	Servo 3: Slow Rate (1 to 16)
66	1	Servo 3: Direction - 1 = Normal Op, 0 = Reverse Op
67	70	Servo 3: Right Limit
68	110	Servo 3: Left Limit
69	70	Servo 3: Current Position
70	6	Servo 4: Slow Rate (1 to 16)
71	1	Servo 4: Direction - 1 = Normal Op, 0 = Reverse Op
72	70	Servo 4: Right Limit
73	110	Servo 4: Left Limit
74	70	Servo 4: Current Position

15. QSDD decoder configuration variables (CVs).

When you do this, ensure that the keypad is attached to the decoder, since the necessary acknowledgment back to the DCC

Command Station (a pulse of current) is generated by briefly switching on all five of the keypad LEDs together.

Reading and writing of CVs values via a programming track (Service mode) can be done as normal using your DCC system. However JMRI Decoder Pro appears to decide that the decoder is not a locomotive and refuses to proceed further with any programming track operation (can someone tell me differently?).

If you have any type of NCE DCC system plus a Windows computer, my own application, A-Track (www.a-train-systems.co.uk/atrack), will happily read and program the QSDD CVs and allow you to save a record of them to a file.

Item #1 - Addr 0001 - Configuration Variables

Item Description QuadServoDecoder46

Program CVs
 Read/Verify CVs
 Copy All CVs
 Paste Main CVs
 Paste Exten'd CVs
 Paste Index'd CVs
 Update Item
 Close

Identity **Config**

Item Type
☒ Accessory
☐ Consist
☐ Locomotive
☐ Multiple
☐ None

Acc'y Output Addr 0001 ☒
Extended Address 0000
Consist Address 0000
User Identifier #1 000
User Identifier #2 000
Manufact Version No. 089
Manufacturer ID 013

☒ Not Allocated ☐ Edited ☐ Not Prog'd

CV	0x	1x	2x	3x	4x	5x	6x	7x	8x	9x	10x	11x	12x
0	000	255	255	000	000	173	006	006	255	255	255	083	000
1	001	255	255	000	001	000	001	001	255	255	255	068	024
2	255	255	255	000	000	000	070	070	255	255	255	070	000
3	255	255	255	000	002	000	110	110	255	255	255	255	255
4	255	255	255	000	000	000	070	070	255	255	255	255	255
5	255	255	255	000	003	006	006	255	255	255	255	255	255
6	106	255	255	000	000	001	001	255	255	255	255	255	255
7	089	000	255	000	004	070	070	255	255	255	255	255	255
8	013	000	255	000	000	110	110	255	255	255	255	255	255
9	000	255	226	000	000	070	070	255	255	255	081	255	255

16. This screenshot of my A-Track application shows the Configuration Variables window for the decoder, with all relevant CVs set at their default values.

Note: While an NCE PowerCab system will program the QSDD in any mode, the older NCE PowerPro system has much less-tolerant programming hardware.

If you wish to use an NCE PowerPro to read or write QSDD CVs, then you need to connect to the QSDD via a programming booster such as the SoundTraxx PTB100, or have the Arduino Nano module powered from a computer USB port while programming is taking place.

If using Direct programming mode from the NCE PowerPro results in too many errors (misread CV values), then I recommend Paged mode instead.

The principal advantage of being able to save a complete set of CVs to a file can be valuable when you have a layout with a lot of turnouts and multiple QSDDs to drive them.

After setting up one decoder and its four associated turnouts to your satisfaction, you can then take a copy of the amended CVs and transfer them in a single operation to all other QSDDs.

Setting up these other QSDDs then consists of only of small adjustments to the servo throws to compensate for differences between individual servos (and perhaps between turnouts and linkages).

Adjustments to any of the CV values can be made simply by typing in a new value (or set of values), and then using the A-Track application's program function to transfer them to the connected decoder.

I hope you find the QSDD to be as useful as I have for more accurately driving servos on a layout! ☒



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DR TERRY CHAMBERLAIN



Terry Chamberlain got into model railroading almost by accident in the 1990s when he responded to a request from some modelers in California to build a DCC system based on an Atari personal computer – and he had to build a simple layout to prove that it all worked. Eventually the project evolved into A-Track, a Windows application to provide full computer support for the complete range of NCE DCC systems, with facilities similar to JMRI's Decoder Pro and Panel Pro.

Terry is a professional electronics engineer and spent most of his career in the UK defense industry designing, and managing the development of, large real-time computer systems for the Royal Navy. Now that he has retired he is still hoping to build the logging and mining layout he has been planning for years (after several visits to Colorado) – but keeps getting distracted by new computer and electronics projects for model railroading. ■



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TECHNICAL DETAILS OF THE QSDD DECODER

For anyone who is interested, I provide the circuit schematics of the decoder [17] and keypad board [18] here.

The DCC input circuitry is adapted from the design by Wolfgang Kuffer (mrrwa.org/dcc-decoder-interface) and is used by Geoff Bunza as the basis for several of his projects.

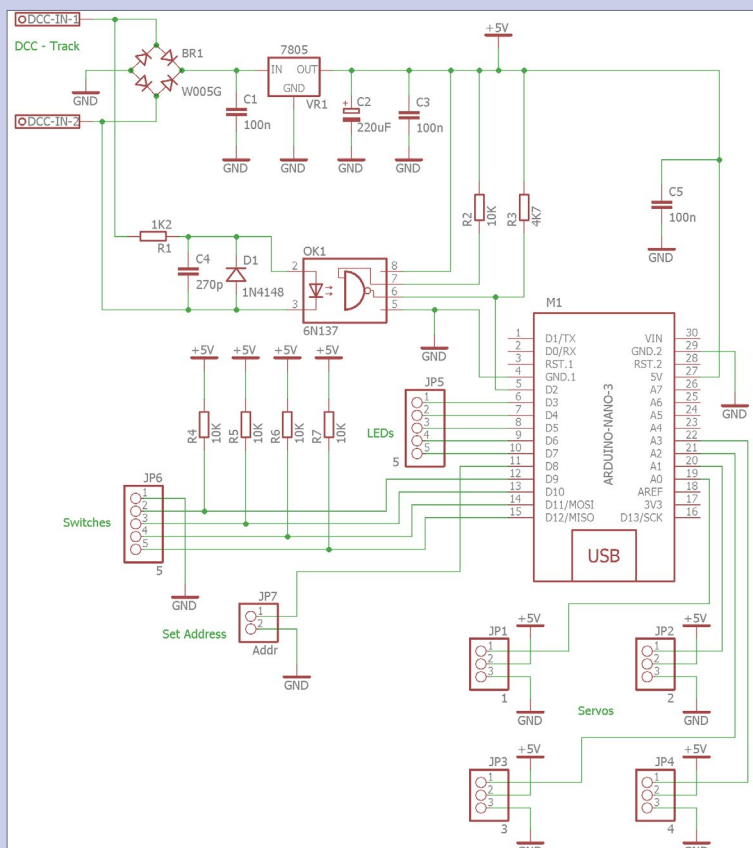
The DCC signal from the layout track (normally 14 - 16 volts AC) is rectified by diode bridge BR1 to supply around 14 volts DC to the voltage regulator VR1 which, in turn, supplies +5 volts to the Arduino Nano, its associated circuitry, and the attached servos.

Although the normal current through the regulator, with servos inactive, of about 45 mA keeps its power dissipation below 0.5 watts, this could rise briefly to as much as 10 watts if all four servos are commanded to drive simultaneously. Hence the need for the heatsink attached to the regulator.

The input DCC signal is also connected to the input of optoisolator OK1 via resistor R1. Capacitor C4 filters out any high-voltage spikes from the track, and diode D1 prevents the optoisolator input diode from being fatally reverse-biased by the negative-going part of the DCC signal.

The output from optoisolator OK1 is a replica of the DCC waveform, but at a safe +5 volt level, so that DCC command packets can be input to digital input D2 of the Arduino Nano module. Here they are decoded by the NmraDcc library functions, and relevant accessory commands then passed to the QSDD sketch code.

TECHNICAL DETAILS OF THE QSDD DECODER COM



17. QSDD decoder circuit diagram.

The remainder of the circuitry covers the various inputs to, and outputs from, the Arduino Nano.

The LEDs mounted on the keypad are driven from outputs D3 – D7 via connector JP5 on the decoder and connector JP1 on the

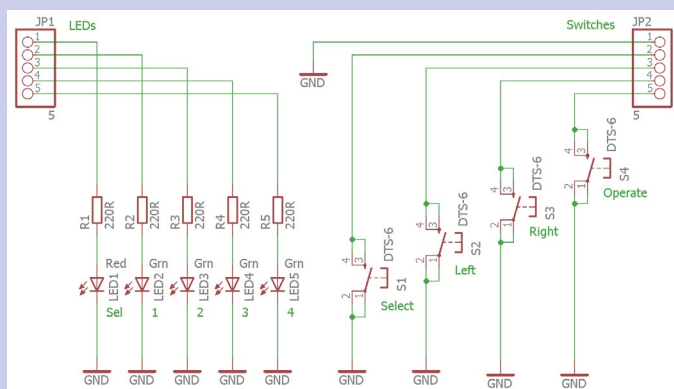
CONTINUED ...

keypad with resistors R1 – R5 setting the current through each LED to approximately 13 mA.

Pins D9 – D12 are set as inputs which are connected to the four buttons mounted on the keypad via connector JP6 on the decoder and connector JP2 on the keypad. The inputs are normally pulled up to a HIGH level by resistors R4 – R7 on the decoder but are taken to a LOW level (GND or 0 volts) whenever the appropriate button is pressed.

Pin D8 is similarly taken to a LOW level whenever the programming shorting link is fitted to header JP7. This pin uses an internal pull-up, rather than an additional external resistor, to maintain its level HIGH when the link is not fitted.

Finally, Pins A0 – A3 are each set as outputs to drive one of the four attached servos, connected via the three-pin headers, JP1 – JP4 on the decoder board. ■



18. QSDD keypad circuit diagram.



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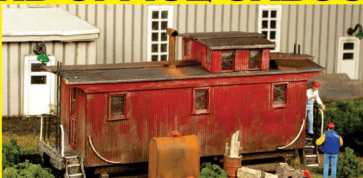
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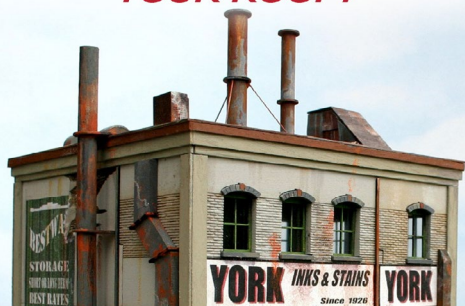
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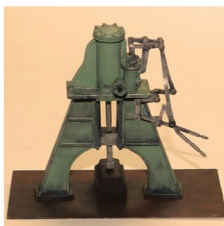
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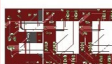
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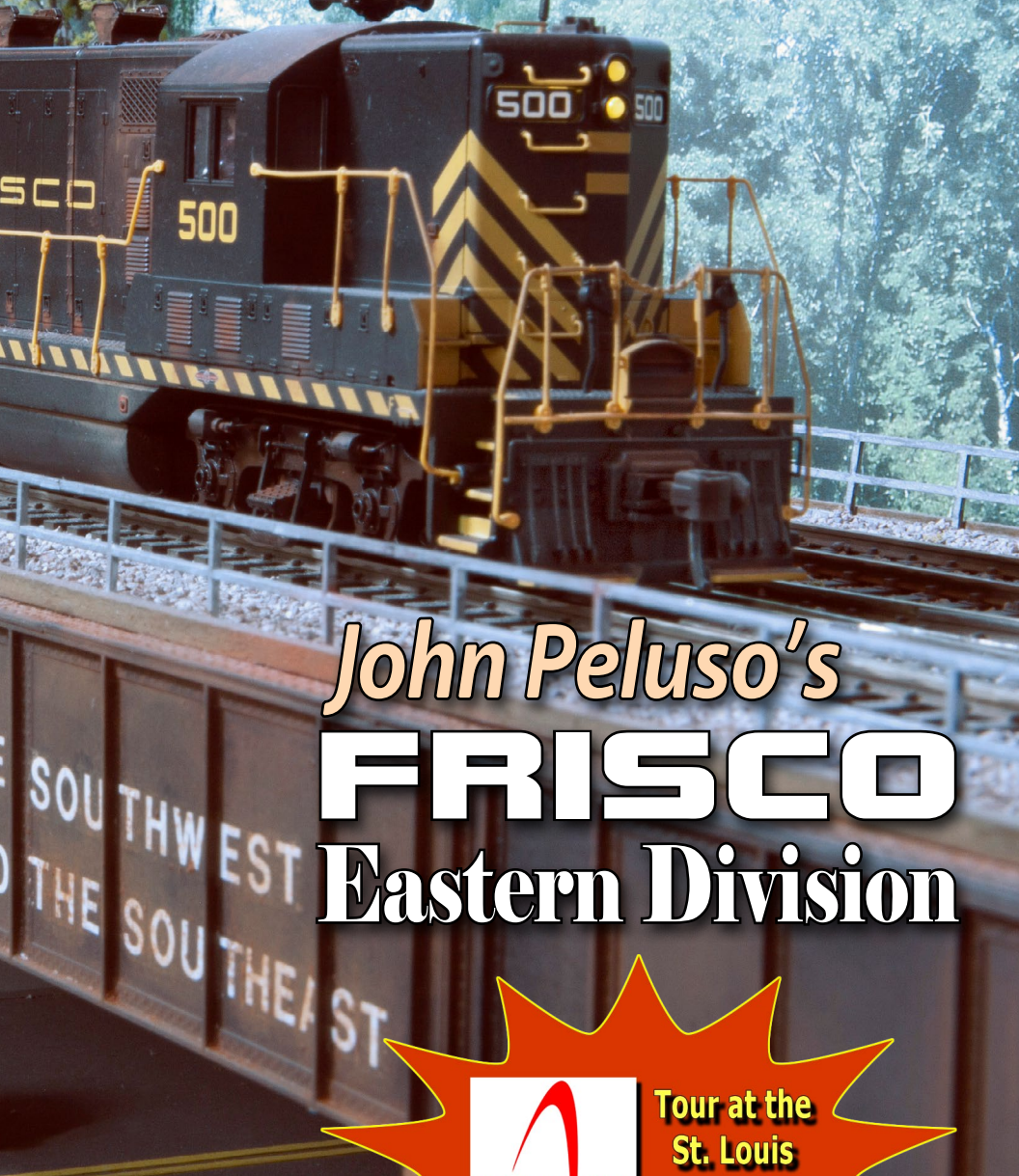
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THE MRH STAFF *visits this Frisco layout that fits a lot of railroading into a 16x30' space...*



John Peluso's **FRISCO** Eastern Division



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[INDEX](#)

[TABLE OF CONTENTS](#)



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MRH STAFF: JOHN, HOW DID IT ALL BEGIN WITH you and trains?

JOHN PELUSO: It all started when as a young lad my parents gave me a train set for Christmas. It was a Marx train set and as I got older, I realized there was HO scale in the market. I said, I've got to have one of these!

The realism of HO scale track compared to the three-rail track really influenced me in going farther than what I did with just a starter train set. It just kept snowballing.



1. John Peluso models the Frisco Eastern Division between St. Louis and Springfield, Missouri. Here a fast freight crosses the Meramec River.



2. John models the late 1950s to early 1960s. At that time, the Frisco still ran a number of name passenger trains such as *The Meteor* shown here.

MRH: You ultimately decided to model the Frisco, why is that?

John: Well, the Frisco railroad was close to the house where we lived, and we rode our bikes down to the railroad tracks. The trains were right there. I didn't have to go anywhere else to see other railroads. The Missouri Pacific ran parallel with the Frisco down on Macklind Avenue and Manchester Road. It was a sight to see a pair of double mainline track close to one another.

I was fascinated by the black and gold coloring of the Frisco freight locomotives and the red E8s for the passenger locomotives. I chose to model the Frisco because I really like the paint scheme.

MRH: What era are you modeling?

John: I model the late '50s and early '60s. I wanted to have shorter cars and shorter wheelbase locomotives. I have four-axle locomotives and they look proportionate to the tighter radius model curves – as well as the rolling stock, the 40' boxcars and 50' boxcars. You wouldn't have that overhang look like you do with longer cars and locos on a sharp radius.

MRH: You picked an era just late enough that Frisco steam is no more, correct?

John: Yes, the steam-to-diesel transition period was done by then. My main reason for not modeling steam was I don't remember steam as a young child. Steam was gone by then. The only thing I remember were the F units, FA units and the GP7s. Then a bit later, the GP35s and Alco-GE U25s.

Plus, steam engines take a lot of room as far as storage facilities.

MRH: Walking into your layout room, what do we see?



3. A coal train rolls through St. James on its way to Springfield, Missouri and beyond.



4. John's layout has a mix of rural and industrial areas along its 400' mainline run from St. Louis to Springfield. You can also see the newest Frisco "white & mandarin orange-red" paint scheme starting to show up on the line.

John: As a visitor enters the room, they're going to see two levels instead of one. And they're only going to see part of it because it is linear – it's not a tabletop. As visitors come into the room and I walk them down the aisles, they are amazed at how much track there is. They're pretty amazed at what is done in a very small space.

MRH: So how much space do you have?

John: The layout space is approximately 16 feet wide by 30 feet long. The reason for the double levels is I wanted a lot of main-line running. I wasn't too satisfied with a single level of track. So, a double-decked main line was my ultimate goal.

MRH: How did you develop that track plan for this space? Did it take a lot of tries or did you get it on the first try?

ABOUT THE FRISCO



The St. Louis-San Francisco Railway was in operation from 1876 to 1980. Affectionately known as the “Frisco,” the line never made it west of Texas, terminating 1,000 miles away from San Francisco.

Finally accepting its land-locked midwestern role despite its ambitious name, the Frisco matured into a rather successful regional railroad.

Throughout its colorful history, the Frisco has not been your typical central US “granger route.” Instead, the Frisco developed its own memorable culture, right down to the early American callback of its coonskin logo. ■

John: The track plan that I designed was not really easy as far as coming up with a configuration. I did follow the prototype trackage as it was back in the '50ties and '60ties, from my remembrance.

The area that I model the Frisco called the Eastern Division. The Eastern Division ranged from St. Louis, Missouri to Springfield, Missouri with Springfield being the major hub of the Frisco railroad.

The line that I model runs from St. Louis to Springfield. In order to achieve that, I needed to do a double deck layout to fit as much main line as I could into the area that I had.

When designing the layout, I came up with a basic linear track plan and then I proceeded to jot out from there as far as locating the industries and mainline tracks. I wanted to incorporate many scenes into the layout from what I remembered. I just started designing the layout in segments, like where different industries were located along a certain part of the layout or the mainline.

But the mainline tracks that you see I derived from the actual Frisco track book that I acquired when Frisco had a museum located in Springfield. The actual Frisco track plans really helped my design and track configuration of the layout.

MRH: Nice, using the actual Frisco prototype track plans! Take us around your layout briefly from one end to the other.

John: My layout models the Eastern division of the Frisco railroad. The layout starts in Chouteau Yard, which is downtown St. Louis. From there it heads east with the next stop from Chouteau being Lindenwood Yard, which is the main yard.

There trains get broken down and cars are switched. If you're doing a through train, the train departs Lindenwood Yard and

enters Webster Groves, then on to Valley Park and to Eureka where it enters the helix and comes up to the upper level.

Then it enters the town of St. James. Next after St. James is Dillon. From Dillon it goes to Rolla. From Rolla it goes to Dixon. Dixon sits on the outskirts of Springfield. Then it enters the Springfield Yard staging area. And that's the terminus in the room.

MRH: What about designing the aisles to get it all to fit into this space?



John: The largest aisle space on the layout is 36" and the smallest is 24. I find 24" is good enough for one person to negotiate, but kind of hard with two people coming down the same aisle.

I usually tell the operators to try not to pass each other in the middle of the aisle, wait until the end of an aisle, and then you can proceed down the next aisle to your train.

Since using DCC wireless throttles, you really can stand at one end of the layout and run your train without walking beside it. But I can see why people want to walk it because it's more realistic.

MRH: When then, did you start construction?

John: I started construction on the layout approximately in the year 2005, but I wasn't really in it full fledge. I just kind of pieced it a little at a time. Then when I retired in 2008, then I hit it pretty hard to get it going.

And I had help. There were people who helped me with benchwork, wiring, scenery, and kit building. It was a unique experience to have everybody skilled in different aspects of the hobby able to input – and I could learn from them also on different things.

MRH: Did building the layout go as you expected?

5. A mixed freight pulls out of Lindenwood Yard, crossing the long deck girder bridge. The train crosses McCausland Avenue as it heads west toward Webster Groves.



John: The speed of the construction went pretty fast because I had read books on benchwork. I've also seen other people who built a layout and how they'd done benchwork. I pretty much copied from other people who are in the hobby.

MRH: What's the ruling grade on the layout?

John: The ruling grade on the layout is the helix and the grade is at 1.7%. And then there's what they call Dixon Hill, which is another grade on the visible layout and that is only 1.5%.

MRH: On your helix, what's the radius and how many levels does it have?

John: The helix consists of a 32" single mainline radius and there's four levels to reach the second level.

MRH: What kind of track are you using?

John: I use Atlas code 83 track with #6 switches, mostly on the yards and in the industries. And #8s on crossovers. I used Atlas



6. A mixed freight powered by a couple of GP7s sits on track five in Lindenwood Yard, awaiting clearance to depart for points west.



7. Lindenwood Yard's engine house displays Frisco diesel power in both the old black and yellow scheme and the new white and mandarin orange-red scheme.

primarily because of the cost and it looked satisfactory to me as far as prototype-looking track.

MRH: How many feet of main line do you have?

John: I have approximately 350 to 400' of mainline track on the layout.

MRH: Any idea how many turnouts you have on this layout?

John: I'd say there's 62 or more.

MRH: What's the minimum radius on the main line?

John: The minimum radius on the main line is 30".

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

John: The greatest challenge about the layout is what height did I make the lower level and what height that I make the upper level. I did cross sections – I used stick people – I wanted to make sure that I had the right separation between the lower and upper level.

I didn't want it too high where some people would have to step on stools. But there was no two ways getting around it – some people do need to step on stools to do some switching, but it's just a compromise that I had a live with. All in all, it works out pretty well.

The lower level is 43" and the upper level is 62", with a 19-inch separation.



MRH: Tell us about your unique way of getting into the layout room.

John: When I designed the layout, I knew there was going to be a problem with getting into it and I didn't want to crawl underneath it.

So, I designed a swing gate. Even though the layout is two levels, I designed one swing gate for both levels. I open it up simultaneously without needing two different swing gates.

I designed the swing gate so it would be scenicked and not just raw plywood or just a bridge you swing open. I wanted a swing gate on both levels and have it scenicked.

MRH: How well has the double-decked swing gate worked?

John: They're working out just fine. I think they are successful in achieving what they were supposed to do.

With the double-decked swing gate there is lighting to be considered on the lower deck. I use a disconnecting system that's just an extension cord plug. When you have to open

8. This three-span truss Meramec River crossing stands as one of the most dramatic bridge scenes on John's layout.



the gate, you just disconnect the light through the cord plug and then open the gate.

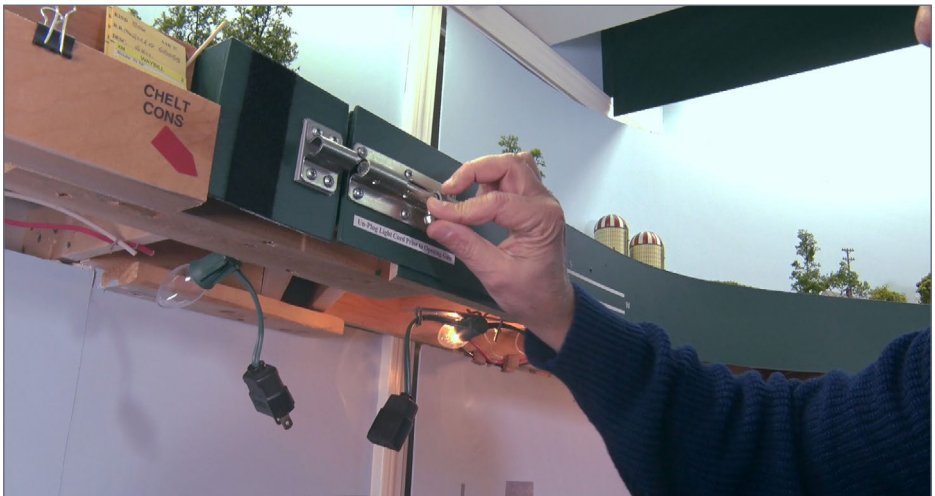
MRH: Any nasty surprises when doing the layout?

John: There were no big surprises on the layout because I took the time to design it right. If there was a surprise or a problem, I was able to correct the problem right away and finish the design and construction the way it is now.

MRH: What do you like the most about your layout?

John: What I like most is the scenery aspect. There are other things I enjoy doing too, but scenery is my main thing. I'm able to achieve realism through photographs and I hope that when people see it, it looks real to them.

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



9. John uses a clever double-deck swing gate to enter the layout room. Here John has unplugged the lighting and unbolts the latch as he prepares to open the swing gate.



10. Here John has completely opened the double-decked swing gate and moved it all the way up against the layout. Now you can freely enter or exit the layout through the room door.



11. The swing gate has legs that go all the way to the concrete floor with rollers, making it very stable when opening and closing.

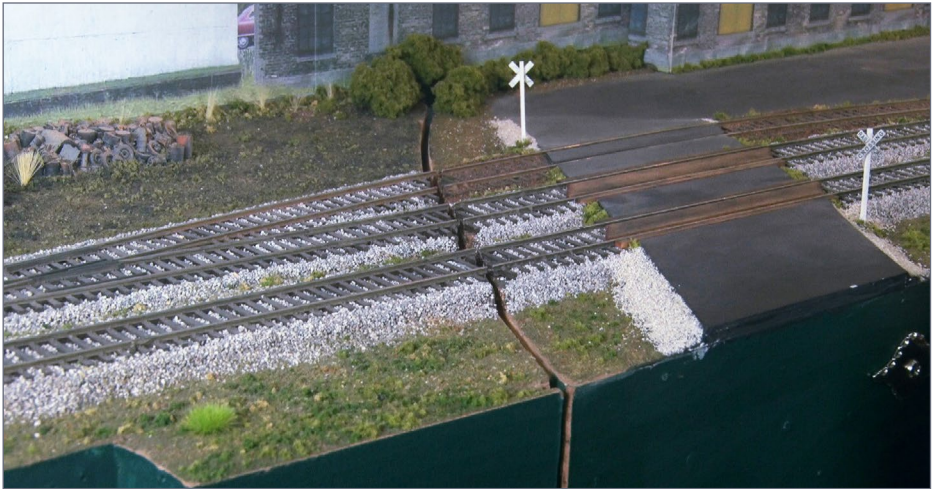
John: I wish I had more house space, I wanted to achieve as much main line as I could. There are certain things you know you must settle for. That's basically it.

MRH: If you had to do it over again, what would you do differently, if anything?

John: I would try to incorporate more industries for switching. I do like mainline trains but switching is the thing most people like to do during the op sessions. So that's what I would do different.

MRH: What type of control system are you using and why?

John: I am using CVP EasyDCC. Everybody around here uses Digitrax and I wanted something different, and I'm glad that I did. I really like the EasyDCC system. It's really easy to operate and when I have ops sessions, there's no disruption at all with it.



12. Here you can see a swing gate joint on the lower level when the gate is closed. John reports no problems with the gate or the track – it works “exactly as designed,” says John.



13. An EMD switcher works Lindenwood Yard, the main yard on John's Frisco layout.

MRH: What kind of decoders are you using and why?

John: When I first started out using decoders, sound was not really in, so I was using NCE. With sound, I started using all kinds of decoders, like Soundtraxx. Now I'm using LokSound and I like the LokSound best of all.

MRH: How do you program the decoders? Do you just program on the main, or do you use JMRI?

John: When I first started programming the decoders, I used a programming track and then moved to programming on the main. Later on, I learned to use JMRI, which is a lot simpler.

MRH: As a fan of LokSound decoders, do you use the Lok Programmer at all?

John: No, I use the Sprog to connect JMRI to the layout.

MRH: What's your least favorite part of doing a layout and how do you motivate yourself to do it anyway?

John: My least favorite part of a doing a layout is scratchbuilding structures. I've done a few and it is time consuming. I like

kitbashing better than scratchbuilding. Kitbashing is easier and it allows me to easily come up with different ideas for structures.

MRH: Tell us about the locomotive fleet that you have.

John: When I first started building the layout, I needed locomotives and Frisco locomotives weren't available as ready-to-run. So, I had to paint my own and decal them. Whatever locomotives I acquired, I stripped them down and repainted them to Frisco.

There was one company that made Frisco decals, but they're no longer in business. Fortunately, I made sure that I bought enough to last me into the future. Now there are more people developing Frisco decals, so I'm kind of glad – painting a Frisco unit has a good future!



14. EMD F3 units pull this coal train through St. James (and exits the helix from the lower level). John's motive power includes not only F and GP units from EMD, but also Alco FAs and GE U25Bs.



15. An Alco RS-1 switches this industrial area on the outskirts of Springfield.

MRH: What kind of diesels are we talking about? Mostly EMDs, Alcos, a little bit of everything?

John: The Frisco had F units – EMD – and they had Alco FAs, and they also had GE locomotives. I try to incorporate all of them because Frisco used a variety of different of locomotives for specific traffic purposes.

MRH: Do you have favorite brand of model locomotives you prefer?

John: I really don't have a favorite brand. I think Athearn is a good brand, so are Stewart and Bowser. I don't have any InterMountain engines, but I would like to see how they work.

MRH: Tell us a bit about your rolling stock fleet.

John: My rolling stock consists of different varieties. A majority of it is Athearn blue box, but I did like the Proto 2000s when they came out with kits. Also, Accurail and other ones that I

can't remember off the top of my head. I do like the Athearn blue box because they're easy to put together. The real intricate kits with a lot of detail really look nice, but as the train goes by, you really don't notice the details that much. That's why I stick to the Athearn blue boxes.

MRH: What sort of couplers are you using?

John: I use mainly Kadees. The majority of the Kadee couplers are the old number fives, but I'm starting to use the whisker types now. But mostly, I'm using Kadee number fives.

MRH: What are your thoughts on doing layout scenery and backdrops?

John: For backdrops on my layout I use pre-printed backdrops from Scenic King, a company which is no longer in business. But there are other pre-printed backdrops out there now that are just as good or better than Scenic King.



16. John managed to get a lot of layout into his 16x30' space by using two very narrow decks.



17. Here you can see how narrow John has made the shelves on much of his layout. Railroads are inherently linear in nature, so running a single mainline through two decks of narrow shelves gets more railroad into the space.

As for the scenery methods I use, I go with cardboard strips glued together and I use either masking tape or a plaster gauze to cover that up. Then I add a final coat of a drywall mud.

When that's dry, I give it a paint of earth color. Then I use Woodland Scenics foam, a coarse turf or a fine turf, it just depends. I try to blend the colors to keep the greens to a lighter green, rather than a dark green or a burnt grass type of color.

MRH: What's your favorite weathering method?

John: My favorite weathering method for rolling stock or structures is chalk. I'll use a spray brush only if I have to, but mostly it's chalk.

MRH: Speaking of structures, what kind of structures do you have on the layout?

John: Most of the structures I have on the layout are from Cornerstone. And some of them use the Cornerstone modular

wall system. I like being able to fabricate buildings using the modular wall system.

MRH: What about your bridges?

John: I have a three-span truss bridge crossing the Meramec River and those are Walther's kit truss bridges. I have another bridge made from Atlas girders and I used the Atlas deck truss bridge for one of the bridges. I just placed them together and made new gussets to join them so I can't really tell where the joint is.

MRH: What about the tunnels on the layout?

John: I didn't model tunnels because the Frisco didn't have many along the Eastern Division that I model. Matter of fact, I don't think there were any tunnels. There may have been one that



18. John expanded the apparent depth of his narrow shelves by using a nice photo backdrop around most of the layout, a quite effective technique.

was no longer in use during the '50s and '60s that I model. So, no tunnels on the layout.

MRH: We notice when you do need to use hidden track-age such as the helix and staging, the tracks tend to disappear into the trees because there aren't any tunnels.

John: Yes, I use hidden staging and when the trains come into the layout from staging, they appear on the layout out from under a bridge or through some kind of trees hiding the track.

MRH: Do you host regular operating sessions?

John: I do host regular operating sessions. We have a round robin crew where we all participate in each other's layout op sessions.

We try to have two operating sessions every month with the round robin crew, which usually ends up being about two to three operating sessions in a year.

Right now, I'm also having my own operating session once a month during the weekdays for us retired folks. The round robin on the other hand has both retired people and people who are still employed.

MRH: How long does an operating session last?

John: Usually around three hours or three and a half hours. We try not to do it any longer because it does get tiresome being on your feet.

MRH: Are you using timetable and train order? Are you using a dispatcher using radios? What are you doing?

John: I'm using a schedule with a dispatcher. The communication is done by two-way radio between the road crew and dispatcher. The dispatcher will verbally give orders to the road crew to proceed to a given point and hold until further instructions. So, it's a "mother, may I?" type of operating system.

MRH: What are you using to route the cars?

John: For car routing I use car cards with four stages to each waybill. At the end of each session, I restage the trains in the staging yard and turn the waybills around for the next session.

MRH: How are your operating sessions working out?

John: When I first got into operating, I was kind of a greenhorn at it. I asked for assistance from the round robin ops crew to help me develop an operating scheme. It's been trial and error, really.

We realized there were too many trains running, so we came up with a two-sequence type of operation with an A-sequence and a B-sequence.

Each sequence fits within the three hours and it's working out very well.



19. The other end of John's layout terminates at the staging yard in Springfield. While the staging yard ladder remains visible, the rest of the staging yard loop disappears under a bridge overpass into the hidden area also housing the helix and lower staging.

MRH: Do you use a fast clock at all?

John: I'm not a fan of fast clocks, but I've operated on them. I can take it or leave it, but I didn't want a fast clock on my layout. I just want people to have fun and for it to be a more relaxed atmosphere.

MRH: Do *you* run trains at an op session, or do you just watch?

John: During a op session, I am the overseer of the operating sequence. I'm in the layout room and I distribute the work orders to the crew.

When they're done, they give me their paperwork and I issue more work orders for the next road crew taking a train out of the yards or out of staging.

MRH: You sound like a crew caller.

John: It's exactly what it is. I am a crew caller.

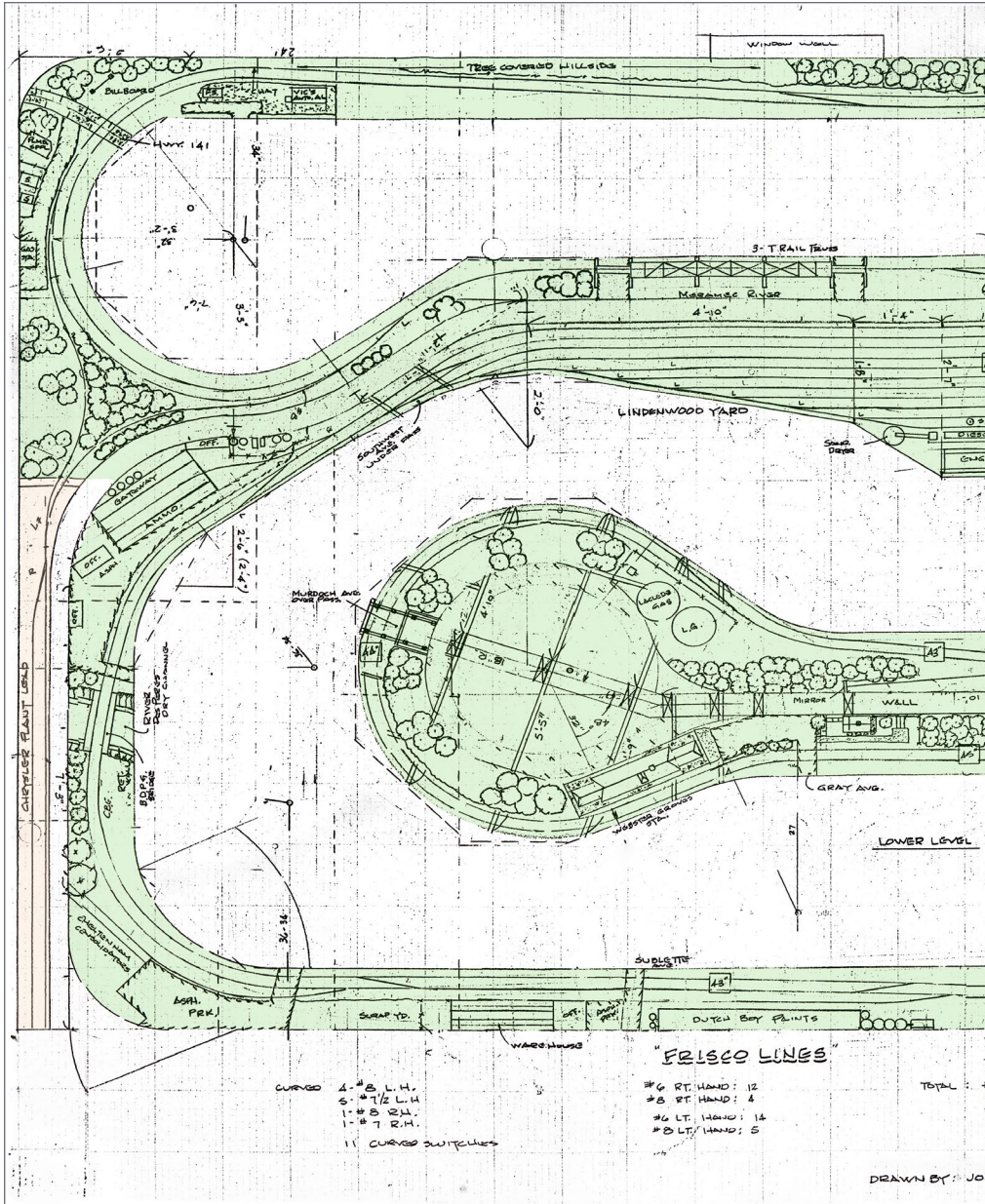
MRH: How well do you like HO scale? Would you consider doing a different scale or gauge?

John: I like HO scale because it lets me achieve the layout that I want in my given space, but I have operated on other layouts of different scales, mainly O scale.

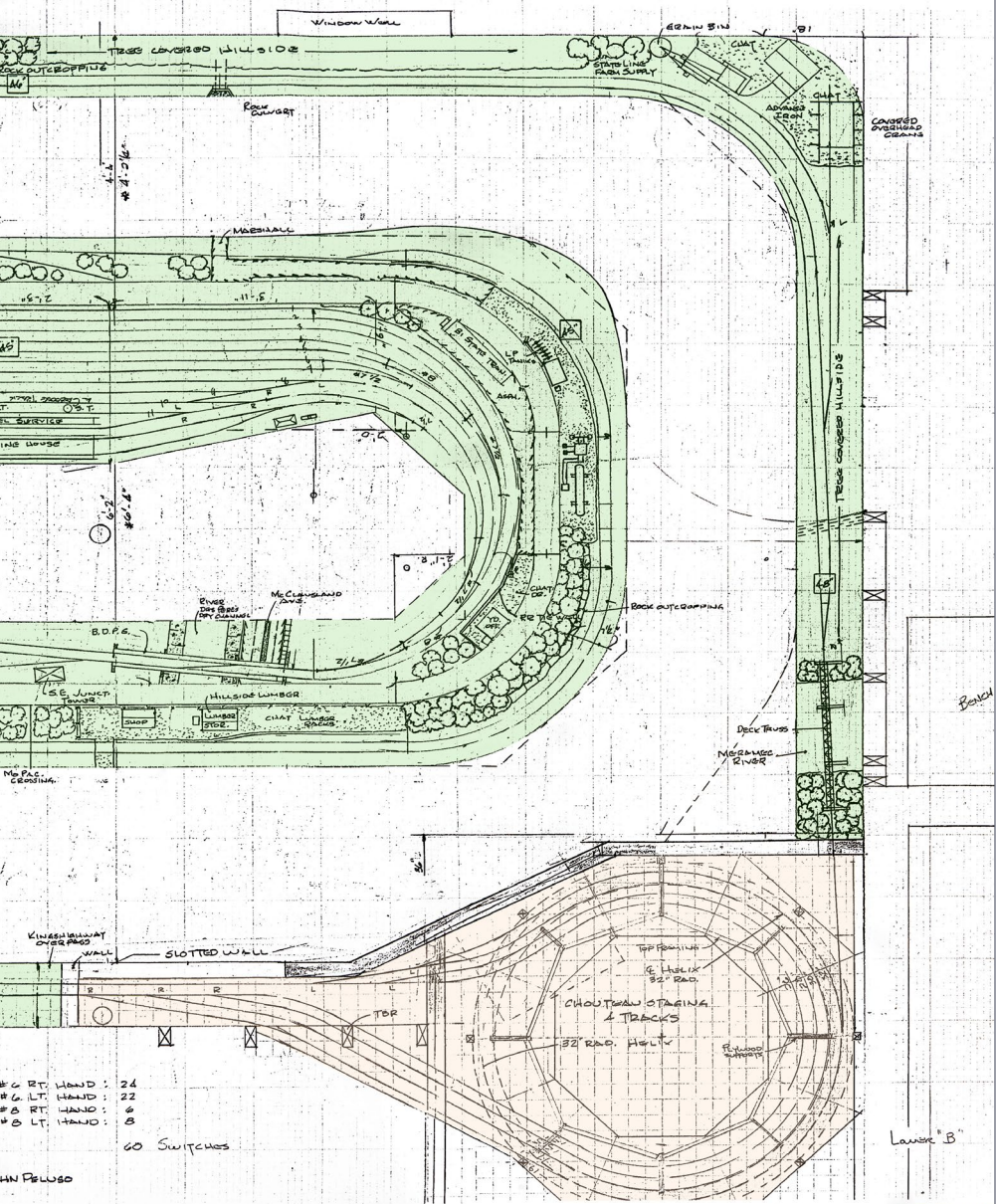
I like the look of O scale and like the realism of O scale. But some O scale layouts I have operated on are *very large*. Since I like a lot of mainline running, that can't fit that type of layout in my basement.

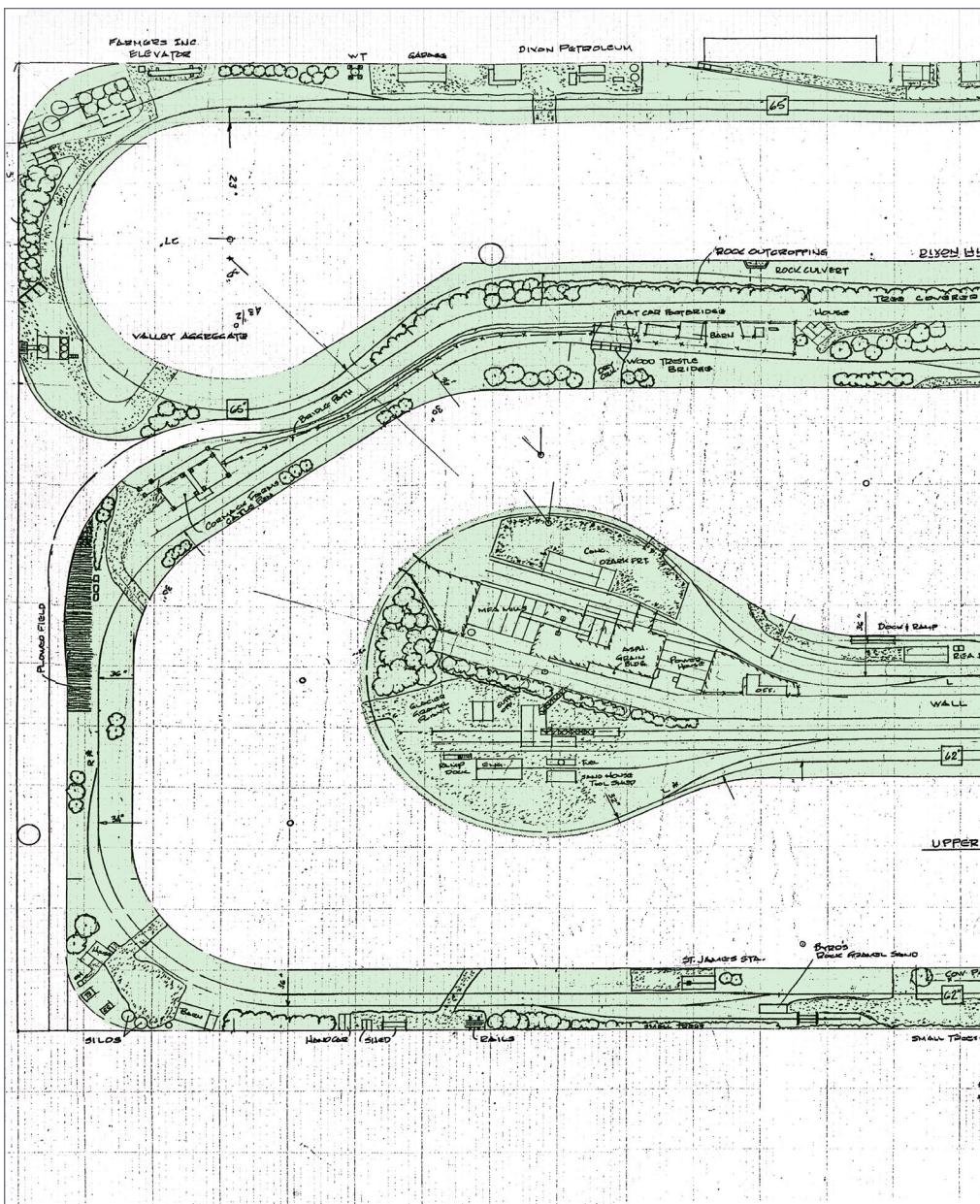
But I have given thought to having an O scale switching layout. That might be something in the future.

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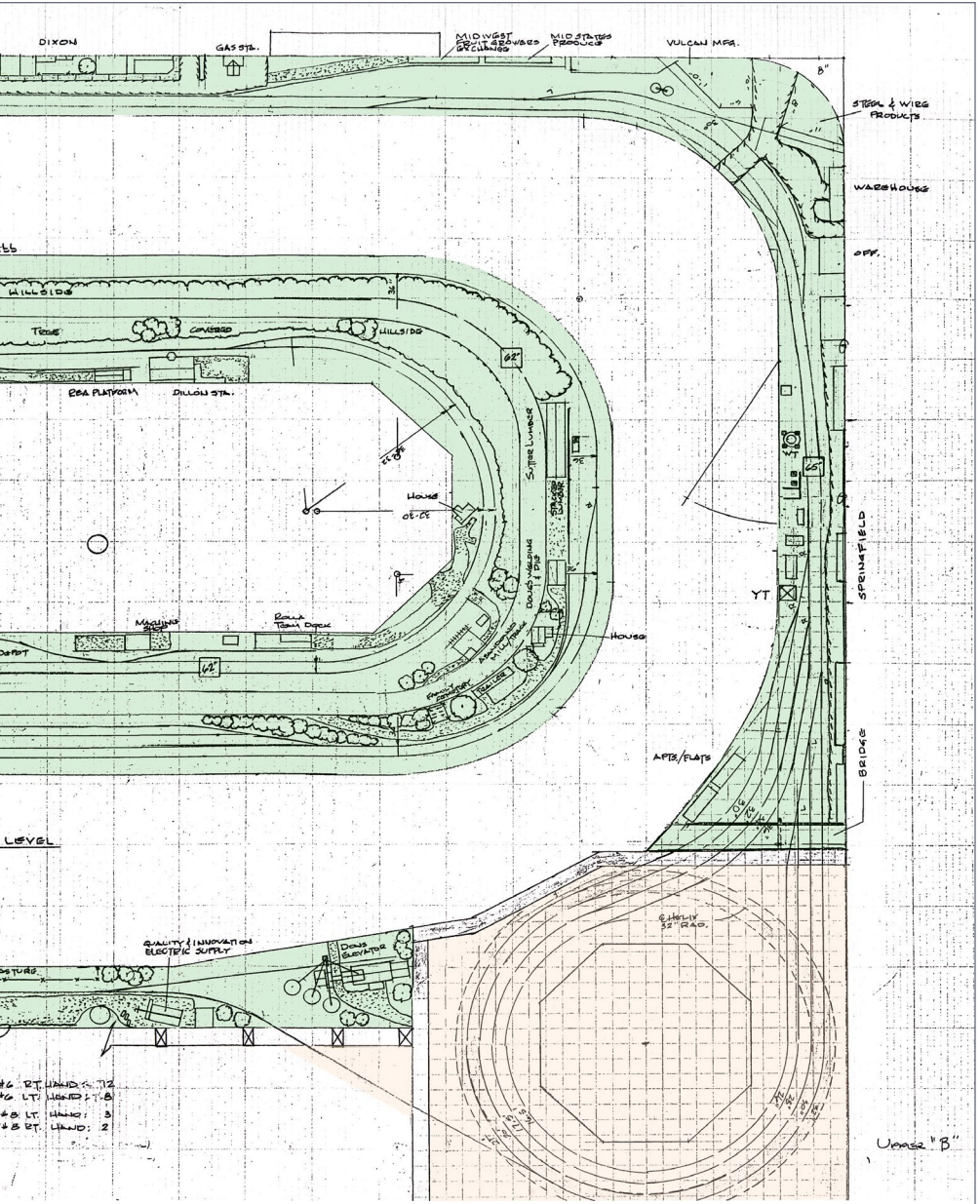


20. John Peluso's Frisco Eastern Division track plan, lower level.





21. John Peluso's Frisco Eastern Division track plan, upper level.



MRH: What are your thoughts on layout size and this layout? Can a layout be too large?

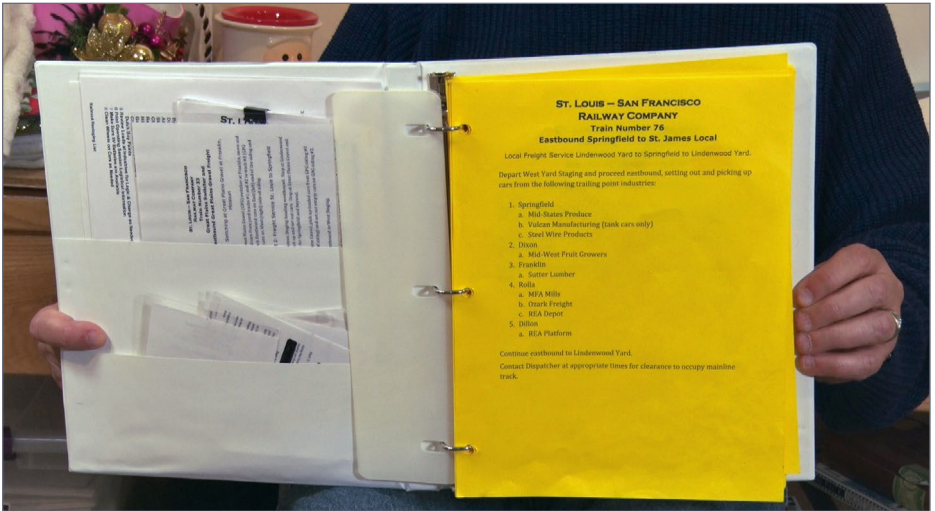
John: Realistically, the size of a layout depends on the individual. A layout can be too big with very high maintenance and very time consuming.

But when I built my layout, I made sure I built everything to not need that much maintenance. And if it does need maintenance, I have easy access to it so I don't have to reach far to do any hard maintenance on it. So yes, a large layout can be a problem.

MRH: Your layout is going to be open for the convention this summer. What do you hope convention goers get out of coming to see this layout?



22. John hosts regular operating sessions on his layout. The wireless EasyDCC throttles work nicely to minimize crew confusion when trying to pass each other in the layout's often narrow 24" aisles.



23. John has developed a two different train sequences he calls A and B, and then has created a train procedure guide for each train to assist the operators.

John: I hope those that come to operate on here have an enjoyable time operating the layout. I'm pretty sure they will because I've had other open house layout op sessions, one of which was Arch Rails.

I've gotten tremendous feedback from the people who participated. They were amazed at the scenery. They also liked how well the layout runs, how smooth it is. There were no derailments, no shorts, and they seemed fascinated by how it was put together and they really enjoyed themselves.

MRH: What sage advice would you give to someone who's brand new in the hobby?

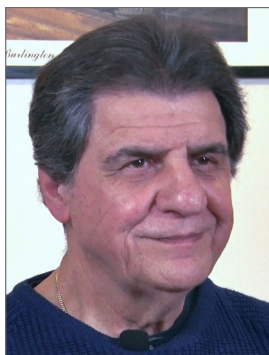
John: For someone who is just starting out in the hobby, take your time deciding on what you want to achieve. What do you want to do with the model railroad that you have?

Don't overdo it and don't overspend, you know, don't bite off more than you can chew. Choose a scale you think you can be comfortable with. Choose the type of railroad that you can be comfortable with.

There's all sorts of things you can do. There's all kinds of opportunities for a person to start out in this hobby and see what you can achieve. ☒



JOHN PELUSO



John got interested in model trains when his parents gave him a three-rail Marx train set for Christmas. Later John became enamored with the more realistic two-rail HO trains and moved to that scale.

John grew up in the St. Louis area and fell in love with the St. Louis – San Francisco, aka, the Frisco, a local prototype. He started his current double-decked HO layout in 2005 and has been an ardent Frisco modeler since discovering that prototype as a kid. ■

John Peluso's **FRISCO**



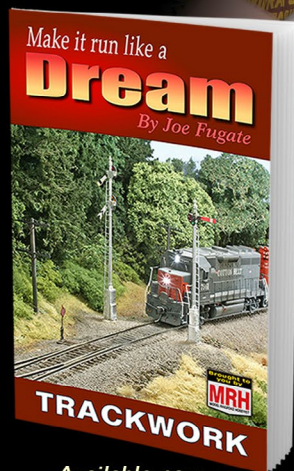
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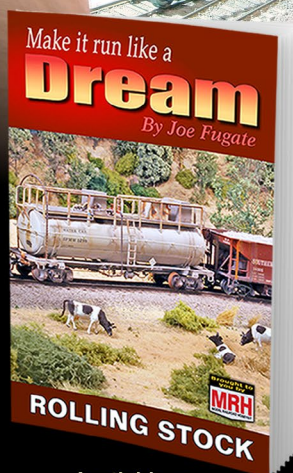


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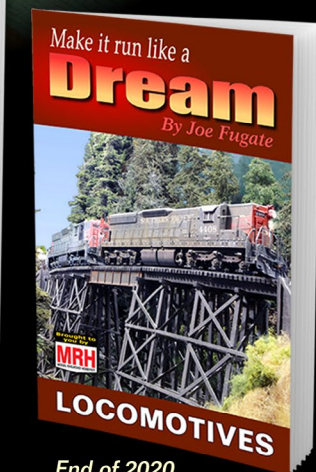
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1. The finished car card boxes in use on Michael's layout.

MICHAEL ANTEAU adds homemade car card boxes along the layout fascia ...

AFTER EXPERIMENTING WITH SEVERAL METHODS of routing cars, I recently settled on car cards and waybills for my HO scale Nicholas & Ashley Creek Ry. I am using car cards created with Easy Model Railroad Inventory by Bob Langer. This is a great program available for free at pdc.ca/rr/freebies courtesy of Bob and Bill Brillinger.

My car routing method requires a card box for each industry on the layout. I wanted the boxes to be consistent and to be an integral part of the layout benchwork. I also wanted them to feel “railroady” and be fun to use.



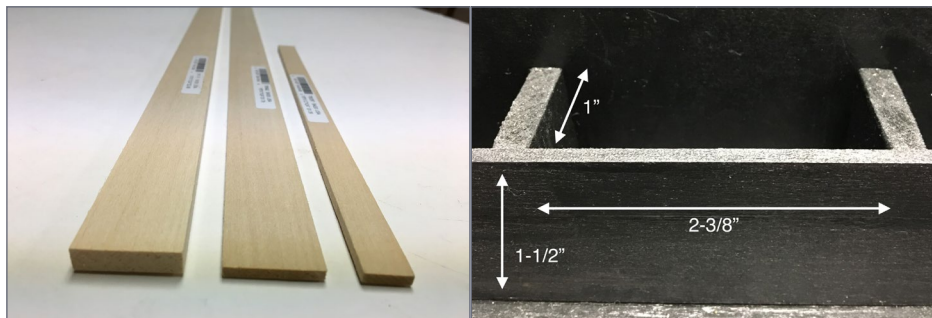
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After some experimentation, I settled on 1x¼" basswood for the box dividers and ⅛" basswood for the front. I use a box spacing of 2⅜" inches to match my cards, and a divider height of 1-½". Each box is 1" deep. You can adjust the dimensions to match your car cards.

To build the boxes, I first install the base shelf, usually the same pine 1x4" board I use for benchwork. I screw this to the bottom lip of the benchwork, or anchor it to the fascia from behind with glue and screws.

I make the base shelf 3" deep to allow for card sorting in front of the boxes. I cut a 1" wide strip of Masonite hardboard and attach it to the front of the shelf with wood glue and a nailer. This forms a ½" lip that holds car cards at a convenient viewing angle when sorting.

Next, I build the card boxes themselves. I made a simple spacer to help me install the boxes consistently. I cut and sanded a small block of wood 2⅜" long and drove a drywall screw into it



2a,b. Mike used basswood lumber to construct his car card boxes, made to the dimensions shown.



3a,b. Mike marks the end of his boxes with a taller piece. The shelf itself is attached to the fascia with glue and screws.



4a,b. A 3" deep base adds a convenient card sorting shelf along the front.

for a handle. I stuck the UPC stickers from the basswood I'm using to it as a reminder when I need to buy more lumber.

To build the boxes, I cut my 1x¼" basswood into 1½" high pieces, with two 2" pieces for the ends. I use wood glue to attach the left end piece of the card box to the base and the fascia. Then I place the spacer next to the edge and glue in the dividers, one by one. Finally, I glue on the right end piece.

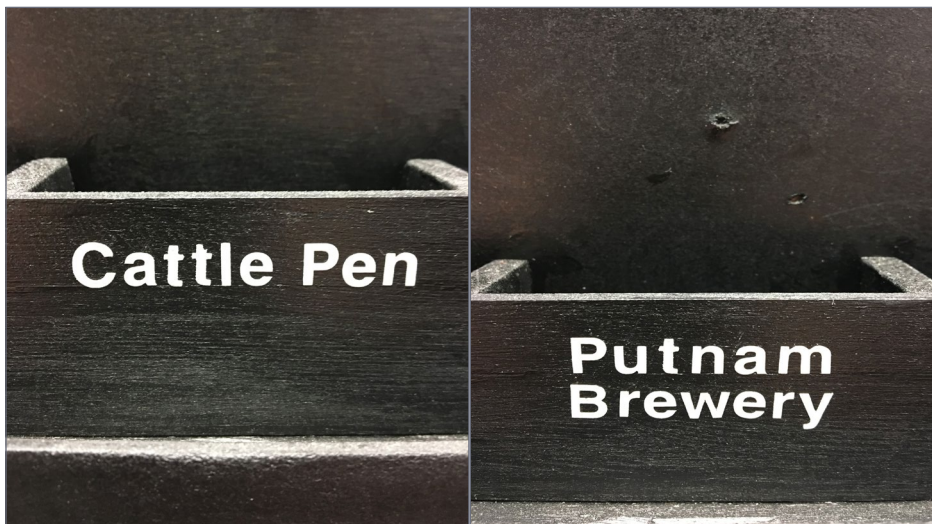
After the glue has set for fifteen minutes or so, I glue on the ⅛" front pieces. I use a 1" wide strip on the bottom, and a ½" wide strip on top, to match the height of the dividers. When the wood glue dries, the resulting structure is very strong.



5. To standardize the car card box spacing, Mike made a simple spacing jig from a piece of wood and a drywall screw.



6. After painting, the dividing line disappears between the two pieces of wood Mike used for the card box face.



7a, b. After painting the car cards box assembly black, Mike applies 1/4" white self-adhesive letters to label each box.

After painting, the slight dividing line between the two pieces disappears, but that subtle line aids in making the box labels straight and level.

I paint my car card boxes black to match my fascia. Then I use ¼" white self-adhesive letters to label each box. These stick well but are easily removed if I want to make changes.

I use a hobby knife to peel off each letter and position it on the box. For long labels, I start at the middle and work outward in both directions, so the final label is automatically centered.

Last, I add "L" hooks to the edge of the shelf for hanging throttles and clipboards. I use Digitrax wireless throttles, and I learned a trick from a friend.



8a,b. Mike adds L hooks to the car card box lip for hanging throttles and clipboards used to carry ops paperwork.

We put a gentle loop in the LocoNet plug wire and secure it with a zip tie. This makes a handy loop to hang the throttle. We've used these for over a decade with no problems. I can also hang the small clipboards I use to carry car cards and other railroad paperwork.

That's it – I find these car card boxes easy to make and they work great for holding and working with car cards on the layout. ☒

MICHAEL ANTEAU



Michael Anteau comes from a railroad-ing family. His grandfather was an engineer for the C&O and his father was an engineer for CSX.

Michael was bitten by the model railroad bug watching his dad's Lionel trains, and he built his first 4x8 layout at the age of 10 on a sheet of plywood on the dining room floor! Michael is now working on

his "dream" layout, a prototype freelanced coal hauling railroad set in transition-era West Virginia. His lovely wife Angie leased him the largest room in the basement and she actively encourages his hobby.

Michael lives in Northwest Ohio and works in Information Technology. He has two grown children. When he is not working on the Nicholas & Ashley Creek RY, Michael also enjoys playing piano, biking, hiking, traveling and winemaking ■



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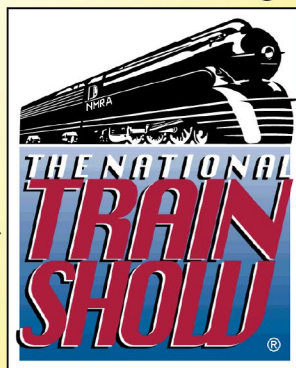
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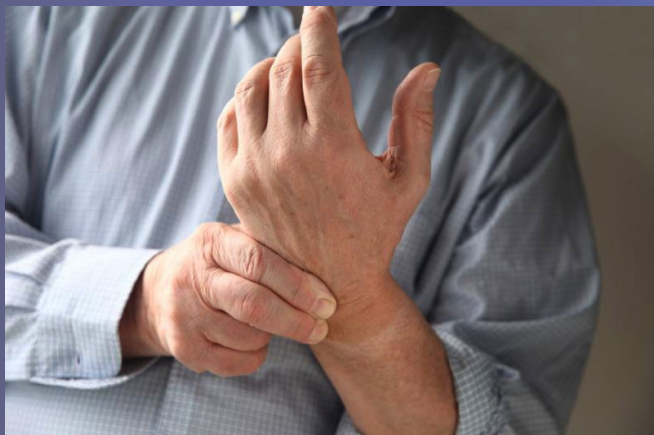
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My solution to **Shaky Hands Syndrome**



Model Railroad Hobbyist | March 2020

1. As we age, we can develop issues such as shaky hands that hinder our modeling. The author relates his journey in dealing with this issue.

An N-scale kit sent **JACK HENINGER** on a quest to ease his shaky hand issues ...

DISCLAIMER:

Let me emphasize that this article simply relates my experience and, what has worked for me. At no point did I consult a medical doctor, nor is this intended as medical advice. Please consult a physician if you need medical assistance – do not just rely on this article.



RATE THIS ARTICLE

ABOUT TWO YEARS AGO I FOUND AN N SCALE

InterMountain reefer kit at our local train show. I wanted to see if I could build it.

I didn't realize just how bad my hands now shake while trying to add very small parts. Take grab irons for example. There are two holes, get the part in the tweezers, aim it at the holes – now who keeps moving my hands around?

“Alright there's the hole, so time it just right and it should go in. OK, watch the hole, it's all a matter of timing and stab downward – OK *now!* Yes, finally success!”

Grab irons can be particularly difficult because they have two holes and two pins. With a bit of moving the grab around, I could finally get the second pin located too. Don't complicate things by talking about adding glue, too!

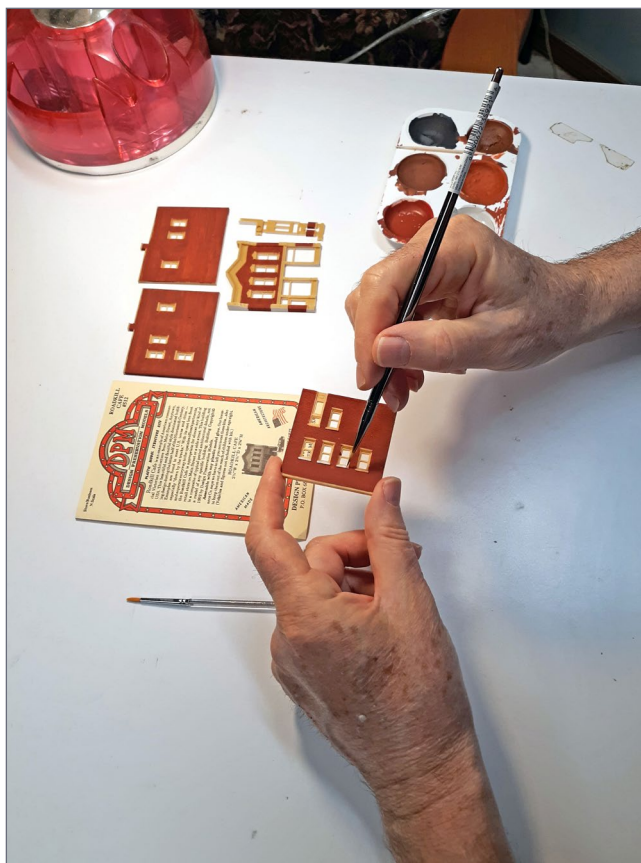
With a bit of practice, I found it got easier to get little parts into their holes in the car body.

I suspect some of you can relate either through your own experience or through someone you know.

I was 66 years old (now 68), and was not at all ready to give up on this hobby – and I sure didn't want to change scales – although I did give it some thought!

My path to improvement

I have been a big fan of natural healing since the late '70s. When you look into all the body needs to function properly or to heal



2. Ever try painting window frame trim with shaky hands? It can be extremely difficult!

itself to some degree, there can be a lot to it. I wanted something over-the-counter that I could afford and might help, so I tried some natural supplements.

I first tried PQQ, (Pyrroloquinoline Quinone Disodium Salt). The one I found that's put out by Natural Factors also contains CoQ10 and Vitamin E.

I tried this by itself for about six months, but it is pricey. The PQQ helped, but I still had issues.



J. Fugate

THE *MRH* DISTINCTIVE

When I titled this magazine *Model Railroad Hobbyist* back in 2009, I did so deliberately.

I like to remember first and foremost, the hobby is about those of us who do the hobby. Rather than focus on the models exclusively, I want to remember the human element of doing the hobby as well in *MRH*.

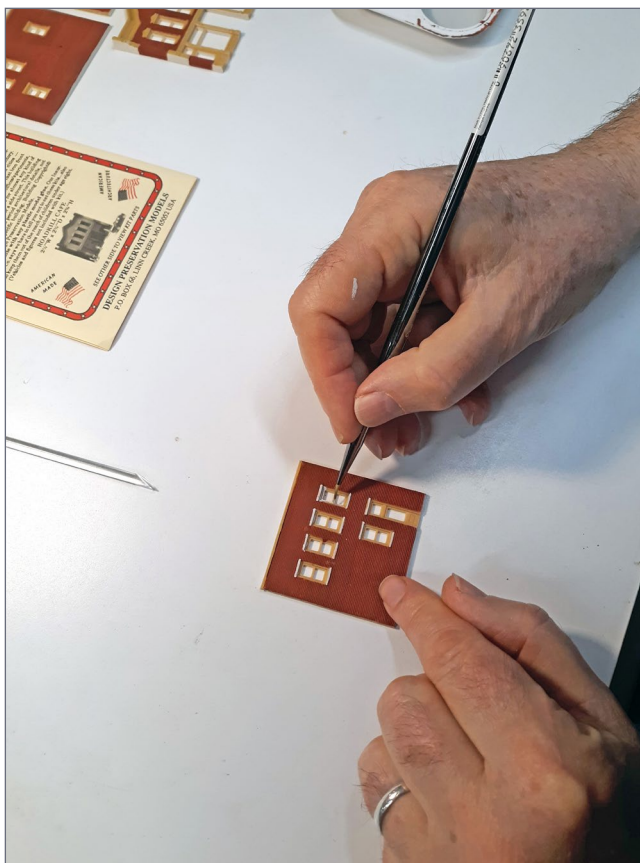
Other hobby magazines tend to focus on just “the stuff” – it’s all about the models, and they treat the people as a side note much of the time. While the models certainly matter a lot for a model railroading magazine, I never want to sideline the human element.

By themselves, models are static – they just *sit* there. Add in the people element and now the models move, they evolve, they come alive – modelers have clever solutions to the hobby’s challenges that yield a satisfying result. And it’s the fact the trains move and do interesting things that makes this hobby so engaging!

As the *MRH* founder and publisher, I like to go beyond the models to also do articles about making our life in the hobby better. This article serves as the latest example of this *MRH* distinctive.

Then I discovered N-A-C, (N-Acetyl-L-Cysteine). It’s put out by Jarrow, and according to the label, it’s a precursor to Glutathione, which is a major component of our brains. When I started taking both the PQQ and the N-A-C together, the shaking in my hands all but disappeared.

Last summer I went to a Metaphysical Fair, and it turned out my wife knew one of the vendors there selling health-related lotions and creams. One of them, Magnesium Lotion, supposedly targets muscle issues.



3. After experimenting with some over-the-counter natural supplements, my shaky hands have completely gone away. Now I can paint that window trim with ease!

My wife suggested I try it on my wrists. I did and when I got home, I worked on a kit. The shaking was gone!

I went back the next day and got a bottle. It is produced by Jordan Essentials, a multi-level marketing firm – I'm not affiliated with them, I just wanted to try this one product.

I also checked our local health food store, and they have several magnesium lotions and oils. I have not tried them yet, but I will once the bottle runs out.

I also tried an experiment when my bottle of PQQ ran out. I just took the N-A-C and used the Magnesium Lotion together. It also works well.

I have since found that taking N-A-C three times a day at first means it builds up in the body. Now I am down to taking N-A-C once a day, and I put the lotion on when I get up and then again before I go to bed.

Since I started this combination of supplements, I have built two RS Laser structure kits and six or more craftsman car kits in On30, HO, and HOn3 – with no issues at all.

I am very pleased. ☒

You can find an up-to-date shopping list for this article here:

mrhmag.com/magazine/mrh2020-03/shaky-hands



4. Here are the supplements I tried that helped with my shaky hands problem. Your mileage may vary, so no guarantees – but these helped me. See the text for details.

JACK HENINGER



Jack started out with a Lionel train set at the age of 6. He discovered HO scale while in junior high and then encountered N scale in high school.

Having very little money to spend on trains, Jack experimented with scratch-building structures. Jack built his first real layout as a 5'x9' island in his bedroom. Graduation, a stint in the US Air

Force, along with marriage and school put trains on hold until the mid-1980s.

A new marriage, moving to Minnesota, and buying a basement with a house on it got Jack model railroading again. In 2005, they moved to Missouri to warm up.

Jack is now retired, is active in his church, and likes exploring alternative health methods.

Jack currently lives in Springfield, Missouri and models primarily in HO. ■



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[INDEX](#)

[TABLE OF CONTENTS](#)

SAVVY MODELER *Online*



Model Railroad Hobbyist | March 2020



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Hand carving realistic rocks

YouTube modeler ***BNSFUPRailroader*** demonstrates step-by-step how he hand carves some very realistic rock formations in plaster. Generally speaking, you just let the plaster form natural breaks as it hardens and you break it away with various tools. Watch the video carefully and then experiment yourself, with some practice the results can be pretty amazing. ■



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[INDEX](#)

[TABLE OF CONTENTS](#)



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MARCH NEWS

column



Model Railroad Hobbyist | March 2020

RICHARD BALE and
JEFF SHULTZ report the
latest hobby industry news



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INDUSTRY NEWS

Amherst Presents Another Successful Show

The Amherst Railway Society 2020 Railroad Hobby Show, held in West Springfield, Massachusetts the weekend of January 25-26, reported attendance at 21,534. With more than 500,000 square feet in four buildings, the show continues to be one of the largest and most important model railroad events in North America.

New Address for InterMountain

InterMountain Railway Co. has completed a move to a new facility at 30 East 9th Ave., Longmont, Colorado. The move includes tooling and molding operations, shipping and receiving, and corporate offices.

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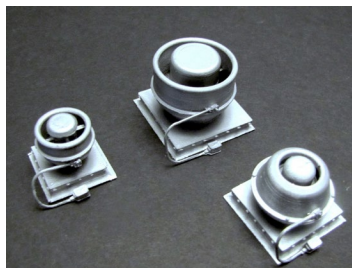
▶ **THE LATEST MODEL RAILROAD PRODUCTS, NEWS & EVENTS**

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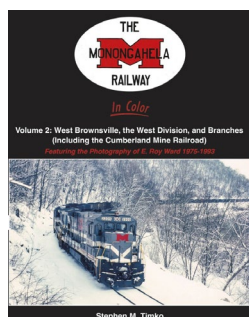
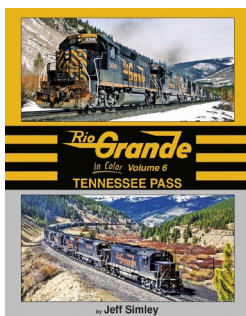
[INDEX](#)

[TABLE OF CONTENTS](#)

NEW PRODUCTS FOR MULTIPLE SCALES



Dimensional Modeling Concepts offers a range of 3D printed detail items including Kitchen/Cooker Exhaust Fans in both HO and O scales. The fans are available in 3, 4, and 5-foot diameter. For additional information visit dmcrrproducts.com.



Morning Sun Books has released Volume 2 of *The Monongahela Railway in Color*, by Stephen Timko. This volume covers the former MGA West Division, including the modern (1967) Waynesburg Southern and (1984) Manor Branch. The

book features 300 full-color photos by noted rail photographer E. Roy Ward.

Morning Sun has scheduled an April release date for volume 6 of *Rio Grande in Color: Tennessee Pass*, by Jeff Simley. This volume features 1990s action on Tennessee Pass as the last Rio Grande-powered trains moved traffic over the Continental Divide. The book covers every facet of operation needed to keep trains going on the three percent grade of Tennessee Pass. It is the last hurrah for the Rio Grande before it succumbed to industry mergers. For additional information contact a dealer or visit morningsunbooks.com.

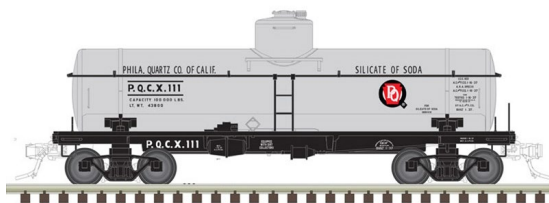
Motrak Models has created a paint rack kit suitable for holding up to 21 of the 2 oz. craft paint bottles commonly found at



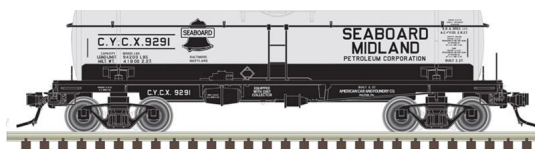
Michaels, Hobby Lobby, or Walmart. Made of 1/8" hardboard, assembly is with wood glue and should only take about 15 minutes. The rack is designed to sit on a workbench or mounted to a vertical surface. Screws are included. For more information visit motrakmodelsusa.com.

.....

O SCALE PRODUCT NEWS



a Type 27 tank car built by American Car & Foundry.



Atlas O has scheduled another run of 8,000 gallon tank cars for release during the third quarter of 2020. The O scale model is based on

Road names will be SHPX-Hayden Newport Chemicals, Protex Industries, Seaboard Midland Petroleum,

Celanese Chemicals, Champion Oils/Sterling Fuels, Canfield Tank Lines, and Philadelphia Quartz of California. Features include a diecast underframe, and metal handrails and grab irons. Separate models will be available for 2-rail or 3-rail operation.

Also scheduled for release late this summer is a steel caboose with a centered cupola. The Atlas O Trainman series model is



based on a prototype built by Magor Car Corporation in the late 1930s.

Features include separately applied window awnings,

window glazing, smoke stack, brake wheels, roof grab irons, and see-through running boards. The models come with interior lighting with an on/off control switch on the chassis. Plain-bearing caboose trucks with 33-inch wheelsets will be available for both 2-rail and 3-rail operation.



Road names will be Chessie System-Safety Caboose, Union Pacific, Long Island Railroad, Jersey Central, Chesapeake & Ohio, Alaska, and New York, Ontario & Western.



Atlas O has included 40- and 45-foot corrugated containers in its 2020 third-quarter release. Carrier names include MYK Logistics, Evergreen EMCU, K-Line, Ocean Network Express, Cosco, Maersk, CAI, and Hapag-Lloyd. For additional information contact a dealer or visit atlaso.com.



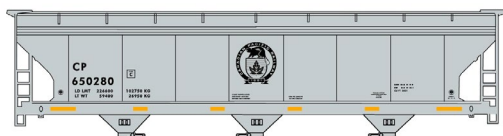
S SCALE PRODUCT NEWS

National Scale Car has entered the S scale field with the introduction of Superior double doors. The cast resin doors are designed to fit Pacific Rail Shops' S scale model auto car.



The doors replicate the six-panel prototype doors installed on Canadian National's 40-foot steel auto cars built in 1952 by Canadian Car and Foundry. For additional information visit nationalscalecar.com.

HO SCALE PRODUCT NEWS



New HO scale kits recently released by **Accurail** include this ACF Centerflow triple-bay covered hopper car. The model is decorated for Canadian Pacific with a Beaver herald. The model is available individually and in a three-pack with different road numbers.



Accurail's new HO scale kit for this Milwaukee Road 40-foot rib side steel boxcar follows a prototype built in 1940 that received a

new paint job in the late 1960s.



Accurail is selling a three-pack of Gulf Mobile & Ohio 41-foot steel gondolas. The trio includes one kit decorated with initials only



(top) and two kits with the road named spelled out. The HO scale

models represent prototype gondolas delivered to GM&O in 1950 and rebuilt in 1966.



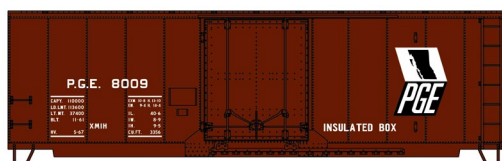
This 40-foot Louisville & Nashville PS-1 steel boxcar is based on a car built by Pullman Standard in December 1953. The model, like the prototype, has 10-foot Youngstown sliding doors.



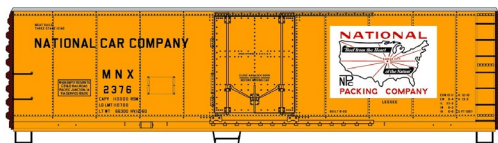
New HO scale kits coming from Accurail during the next few weeks include this CN 70-ton hopper with offset sides. The model represents a triple-bay car built in March 1959.



Also coming soon from Accurail is a kit for this class MX7 New Haven 36-foot Fowler boxcar. The prototype of this single-sheathed wood car was built in the late 1920s.



Accurail's new kit for this Pacific Great Eastern 40-foot insulated steel boxcar replicates a prototype built with a plug door in November 1961.



The prototype of this National Car Company plug-door reefer was leased to National Packing Company. The 40-foot steel car was built in 1955 and is equipped with meat rails. Special instructions

posted to the left of the MNX reporting marks states ‘When empty return to CB&Q Railroad, Pacific Junction, IA.’



Accurail's HO scale kit for this Grand Trunk Western 50-foot riveted steel boxcar with six-panel Superior

sliding doors, follows a class XME car delivered to GTW in October 1953.



Completing Accurail's list of new HO scale kits is this 40-foot ice refrigerator car decorated for NRC Banana Distributing Company.

The wood-sheathed prototype was built by Pullman-Standard in 1930. All Accurail car kits include appropriate trucks and Accumate knuckle couplers. For additional information contact a dealer or visit accurail.com.



R. Bale

EMD SD80MAC

The SD80MAC is a 5,000hp C-C locomotive EMD built for Conrail in 1995-96. The 80-foot prototype uses EMD's 20-cylinder 710G3B prime mover, a huge diesel engine with an oil capacity of 510 gallons and a water cooling capacity of 342 gallons. A key spotting feature of the SD80MAC is the wide radiator housing similar to GE locomotives. Additional details include rear number boards, the placement of the front number boards above the cab windows, and recessed red marker lights in the nose.



Athearn is creating an all-new Genesis

2.0 SD80MAC locomotive. The HO scale diesel is based on a group of 30 prototypes EMD delivered to Conrail in the mid-1990s. Decorating schemes include Conrail (four road numbers with detail variations), CSX (patched Conrail with replacement antenna and repainted roof, below), Norfolk Southern (with marker lights plated over), and Electro-Motive demonstrator.



Features on the Genesis 2.0 model include etched,

see-through walkway steps, and SoundTraxx Tsunami2 sound with dual cube speakers. Lighting features include headlight, number boards, front and rear red marker lights, ground lights, and alternately flashing ditch lights. Availability of the HO scale Genesis 2.0 SD80MAC is scheduled for October 2020.



Athearn's January 2021 production schedule includes

a rerun of its Genesis EMD FP7 diesel, which is essentially an F3 unit stretched 4-feet to accommodate a steam generator and additional water supply for passenger heating service. The key spotting feature of an FP7 is the gap between the front truck and the battery box/fuel tank assembly. Athearn will offer the HO scale model decorated for a variety of railroads with numerous road-specific details.



Details on the Southern FP7, which is an ex-CNO&TP

unit, include mushroom style exhaust spark arrestors, dual sealed beam headlight, nose MU door, and a firecracker antenna.



Frisco installed unique spark arrestors on its FP7s, which Athearn will

offer in two lettering schemes.



Southern Pacific FP7s will be available in both Black Widow and Bloody Nose paint schemes. SP details include a snowplow pilot and

an auxiliary battery box in the gap behind the front truck.



Four versions of Rock Island's partially skirted FP7s will be available in various

combinations of silver or grey bodies, single or dual sealed beam headlights, and blanked out or painted portholes.



Athearn plans to offer St. Louis Southwestern-Cotton Belt FP7s in

SP Daylight paint with two different lettering schemes.



Two versions of Chicago & North Western FP7s will feature different

horns, exhaust spark arrestors, headlight treatment, and nose heralds. All of Athearn's HO scale Genesis FP7 diesels will come with constant directional lighting, cab interior, uncoupling levers, MU and trainline hoses, windshield wipers, wire grab irons, sander lines, and Blomberg-B trucks.



R. Bale

LIGHTWEIGHT SP CHAIR CARS

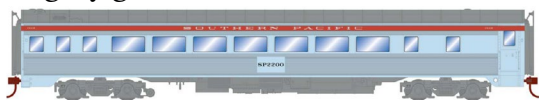
Southern Pacific class 77-C-1 and 77-C-3 lightweight chair cars were constructed in 1937 by Pullman Standard. The cars were originally painted red, orange, and black and assigned to the Coast Daylight. Later, the cars were repainted and used in different trains, including the Lark and Golden State. Some cars received Southern Pacific's general service scheme of silver or gray with a red letterboard. The cars were assigned to general passenger service until the advent of Amtrak.



Athearn has included a group of Southern Pacific 77-foot lightweight chair cars in its January 2021 production schedule. The HO scale Genesis models are based on SP class 77-C-1 and 77-C-3 chair cars.



In addition to the original Daylight paint scheme, the models will be available decorated for the Lark (above), and four variations of silver or gray general service with a red letterboard.



Features include constant lighting, underbody

detail, operating diaphragms, skirted or de-skirted to match prototype car number, and appropriate trucks with metal wheelsets. A minimum radius of 24 inches is recommended.



New HO scale Ready-to-Roll models coming from Athearn next January include this 50-foot Evans boxcar with double 8-foot plug doors.



The models will have a separately applied brake wheel and end ladders, and 70-ton roller-bearing trucks with machined metal wheelsets.



In addition to Canadian Forest Products ("Red Cedar shingles and shakes" slogan), road names will be British Columbia Railway, Illinois Terminal, Louisville & Nashville, Georgia Pacific, Quinault Pacific, and Wisconsin Central.



Athearn has included a selection of 20-foot corrugated containers in its January 2021 production schedule. Carrier names will be APL, Magellan, MSC, NYK, Raffles, Touax, and Yang Ming.



The containers will be available in three-packs with different fleet numbers.



Roundhouse brand models coming from Athearn in January 2021 include an ACF 5250 cu. ft. Centerflow covered hopper with

four discharge bays. The HO scale model is based on a prototype introduced by American Car & Foundry in the 1960s.



Road names will be Penn Central, Rock Island, Canadian Pacific, ACFX-American Car & Foundry,

MWCX-Midwest Railcar Corp, FURX-First Union Rail/POOL, and RNDX-Glasshopper I and II. The model will have round or trough hatches depending on the road being modeled. For additional information on Athearn and Roundhouse products contact a dealer or visit athearn.com.

.....



R. Bale

GE U28C DIESEL

The U28C road locomotive, introduced by General Electric in 1966, delivered 2800hp, an increase of 300hp over its predecessor, the U25C.

Built on a 7-foot-longer frame than the U25C, the U28C also incorporated other improvements such as floating bolster trucks. A passenger-hauling variant, identified as the U28CG, was produced for the Atchison, Topeka and Santa Fe Railway. These units were given Warbonnet paint schemes and put into service on the Texas Chief, replacing aging F units. Upon retirement from passenger service the U28CGs were repainted into the standard Santa Fe freight colors of blue and yellow. Early U30Cs were based on the U28C design and were visually identical to the Phase II U28C, which this new model from Atlas represents.



year. Road names will include Santa Fe in the road's familiar red and silver Warbonnet scheme as well as the blue and yellow freight version.



headlight on the nose and cab-mounted Gyrallight.



Louisville & Nashville, Conrail, and an undecorated model will also be in the initial release.



Atlas Master series Gold models come with a factory installed ESU LokSound decoder. Atlas Silver series models are for standard DC operation. They come with a speaker and 21-pin plug for conversion to sound with the installation of an after-market decoder.



Also coming from Atlas during the third quarter of 2020 is a NJ Transit ALP-45DP locomotive.

Features include directional LED headlight/ditch-lights and red marker lights, positionable non-functioning pantograph, factory-applied railings, air horn, and antenna details. Decorating schemes include NJ Transit, and NJT Erie-Lackawanna heritage scheme.



A package of grab irons and a drilling template is included for installation by the customer. DCC versions of the ALP-45DP locomotive come with an ESU LokSound decoder.



Concurrent with its acquisition of ALP-45DP locomotives, NJ Transit also purchased 62 multi-level commuter cars from Bombardier Transportation. The mix included cab cars to facilitate push-pull operation.



Atlas will offer three NJ Transit cars including a cab car, a basic coach trailer, and trailer with a toilet window.



NJ Transit cars decorated in Heritage schemes will be available for Pennsylvania Railroad (cab car), Pennsylvania Reading Shore Lines, Erie-Lackawanna, and Conrail (trailers) and CNJ (toilet trailer).

Atlas' HO scale multi-level commuter cars feature interior seat details, LED illumination, separately applied lift lugs, end barriers, and rubber diaphragms. In addition to these features, the cab cars will have directional LED headlight/ditchlights and red marker lights, separately applied air horn, and an antenna. The models will be available individually as well as in specially priced three-packs.

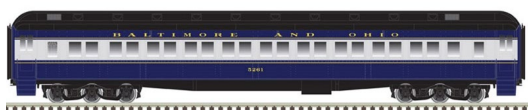
Heavyweight single- and paired-window coaches are also scheduled for release during the third quarter of 2020.



ing, numerous separately-applied underbody details including brake piping, steam traps, and brake rigging; and Accumate knuckle couplers, and six-wheel trucks with metal wheelsets. A 24-inch minimum radius is recommended.



Louisville & Nashville, and Gulf, Mobile & Ohio.



Ohio, Canadian National, and Baltimore & Ohio.



Great Western, Western Maryland, and Jersey Central.



A new production run of the Atlas HO scale 1993 Ford Explorer is planned for release late this summer. The model will be equipped with side view

The Atlas models will have full interior details, scale operating diaphragms, window glazing, numerous separately-applied underbody details including brake piping, steam traps, and brake rigging; and Accumate knuckle couplers, and six-wheel trucks with metal wheelsets. A 24-inch minimum radius is recommended.

Road names for single-window coaches will be New York Central, Nacionales de Mexico,

Cars with paired windows will be available for Florida East Coast (MOW), Chesapeake &

Freight equipment due from Atlas during the third quarter includes a Trainman series 40-foot plug door boxcar. Road names for the HO scale models will be SSW-Cotton Belt, RBNX-Fruit Growers Express, RBWX-Burlington Northern, Chicago

mirrors, headlight and taillight glazing, interior details, and simulated rubber tires. Some will have a non-functioning rotary beacon.



Atlas' Explorer will be decorated for railroad support services including Santa Fe, Burlington Northern, Canadian National,

Chicago North Western, Conrail, Guilford Rail System, RJ Corman, and Sperry Rail Service. Unlettered versions will be available in orange, white, and yellow. For additional information contact a dealer or visit atlasrr.com.

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Bowser has announced English's Sound Upgrade Kits. One kit upgrades the Atlas HO scale Multi-level commuter cars and includes a 16 x 32 speaker and ESU LokSound decoder. A second kit is designed for the Athearn SD90MAC-H locomotives and includes two sugar-cube speakers, a special speaker housing and an ESU LokSound decoder. For more information visit bowser-trains.com.

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Broadway Limited has released HO scale models of GE ES44AC diesel locomotives. The ES44AC is part of GE's Evolution Series 4400hp diesel units built to meet

the EPA's 2005 Tier 2 emissions standards.



This well-detailed HO scale model of the contemporary diesel comes equipped with

Paragon3 Sound and control system that includes a variable load-based smoke output.



Road names include Florida East Coast, Kansas City Southern, BNSF (Swoosh scheme), CSX (Boxcar scheme), CREX (gray, blue and yellow),

Norfolk Southern, Norfolk Southern-Monongahela Heritage, Union Pacific, and GE Demonstrator. For additional information contact a dealer or visit broadway-limited.com.

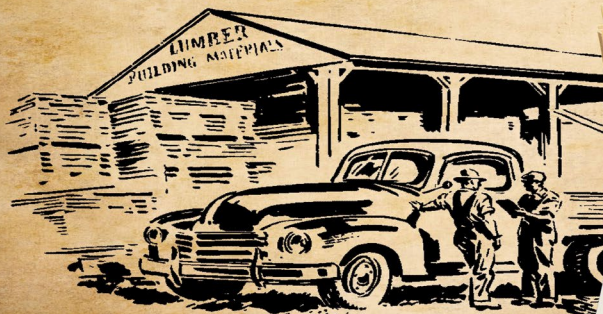
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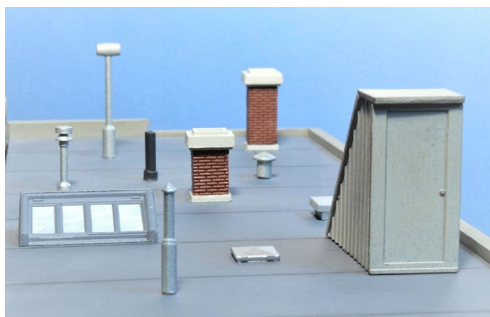


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City Classics has released a set of Rooftop Details in injection molded styrene. Including details commonly found on small and medium-sized buildings, each set consists of two stairways, two skylights, four chimneys, eight access

hatches, and 20 vent pipes. The stairways have a choice of different style doors and both vertical and horizontal siding.



Also new from City Classics is a second set of Retail Signs. Capturing the look of hanging signs from the 1930s through the present, each set includes 12 different molded plastic signs with almost 30 different full color paper overlays. The set includes names for retail stores, restaurants, printers, banks, doctor's offices, and other services. A separate offering includes full-color paper wall signs with names that match many of the businesses in both the first and second storefront sign kits. To purchase or for more information, visit cityclassics.biz.





East Coast Circuits is offering for pre-order River Point Station F-450XLT DRW Super Cab Fleet Service vehicles modified with 11 LEDs, including constant-on headlights, four grille strobes, rear yellow strobes, hazard pattern taillights, and an 18" operating light bar. Trucks will be available decorated for United Transit Co., Fleet Master, City Line Tire, and Great Eastern Fabricating. Also available will be white, yellow, orange and red trucks without lettering. LEDs require 9-12V DC power. For more information visit eastcoastcircuits.com.

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Digital Fox has an HO scale kit for a 70-ton Canada Southern triple-bay coal hopper car with offset sides. The kit was produced for Digital Fox by Accurail and comes with a removable coal load, Accumate knuckle couplers, and appropriate trucks with Delrin wheelsets. The kit is available in three CS road numbers. To order go to digitalfox.com.

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Dimensional Modeling Concepts has an HO scale kit for an FCL-14000 HO 6 x 45-foot Shell & Tube Heat Exchanger. The kit, which makes an impressive flat car load, is composed of 48 3D printed parts. DMC owner Mike Brusky reports that a fully assembled

version of the model is also available. For additional information visit dmcproducts.com.

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ExactRail has scheduled a summer release for a Coilshield and Protector for Thrall

54-foot coil cars. The Platinum series HO scale model will be available decorated for Conrail (G52U), Conrail (re-painted hood), Conrail (patched hood), CSXT/NYC (patched), CSXT/NYC (blue repaint), Norfolk Southern (1992 as delivered), and Norfolk Southern (post-2010). The model will be equipped with ASF 100-ton Ride-Control trucks with 36-inch machined metal wheelsets. For additional information visit exactrail.com.

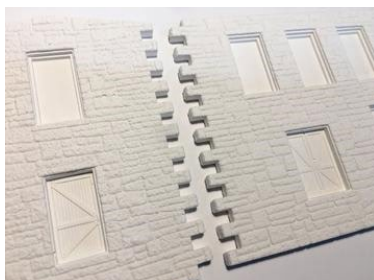
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Fos Scale Models has released an HO scale kit inspired by a stone factory that manufactured metal type for the pre-digital printing industry. Identified as Hendrix Type Foundry, the HO scale kit is composed of a hybrid of materials including cast Hydrocal stone walls and laser-cut wood walls. The stone walls are finger jointed which results

in seamless corner joints. The adjunct wood structures can be arranged in a variety of ways.

In addition to the cast plaster walls and loading ramp, the kit includes laser-cut clapboard walls, scale lumber, plastic windows, numerous cast metal and laser-cut details, color signs, and extensive assembly instructions. The footprint of the assembled



building is approximately 5 x 13". Figures and scenery in the illustration are not included. For additional information visit foscalemodels.com.

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Funaro & Camerlengo has HO scale kits for heavy-duty four-truck flat cars. The model replicates

Pennsylvania Railroad class F34, Southern Pacific class F-200-1, and Chicago & North Western 200-ton flat cars. These are challenging craftsman-style kits not recommended for beginners.

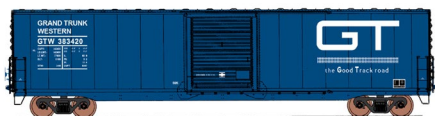


Components include a one-piece cast resin body, numerous detail parts, decals, and appropriate truck frames.

Wheelsets and couplers are not included. For additional information visit fandckits.com.

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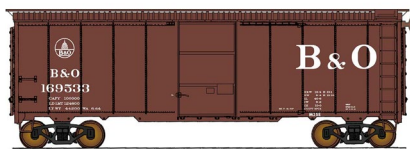
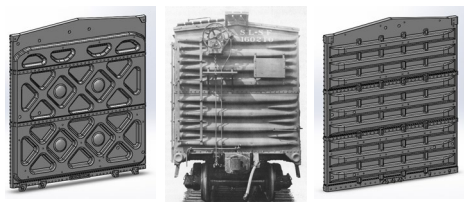
New HO scale models coming soon from **InterMountain Railway** include a 60-foot PS-1 boxcar. In addition to two different Grand Trunk Western schemes, road names will include Union



Pacific, Rock Island, Illinois Central, and a red Santa Fe car displaying a Super Shock Control slogan.



InterMountain is also preparing to release a group of 1937 AAR boxcars with three different types of steel ends. They include (from the left) Deco waffle end, Dreadnaught end, and Canadian NSC-2 end.

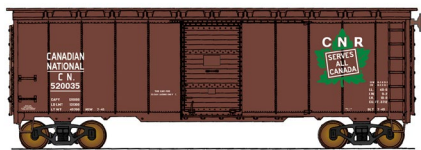


Road names for boxcars with Deco ends will be Baltimore & Ohio and two Chesapeake & Ohio schemes.



Cars with Dreadnaught ends will be decorated for New York Central, Louisiana & North West, Atlantic & East Carolina, Copper

Range, and Delaware, Lackawanna, & Western.



Road names for cars with NSC-2 ends include Canadian National and Ontario Northland. For additional information contact a

dealer or visit intermountain-railway.com.

Kadee has announced a March release date for two new HO ready-to-run models. First up is a Tidewater Southern 50-foot PS-1 boxcar



built by Pullman Standard with 8-foot, six-panel, Superior sliding doors. Kadee's HO scale model is based on a prototype built in 1955 and painted in factory-new boxcar red.



The second new model coming from Kadee is an HO scale version of a Union Pacific 40-foot PS-1 boxcar. Like the prototype, Kadee's ready-to-run model has 6-foot, seven-panel, Superior doors.



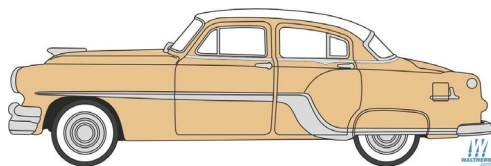
One side of the UP car displays a "Serves All The West" slogan while the opposite side shows "Road of The Streamliners." The Kadee model represents a prototype car built in 1948. All Kadee

ready-to-run models come with Kadee metal knuckle couplers and self-centering trucks. For additional information contact a dealer or visit kadee.com.



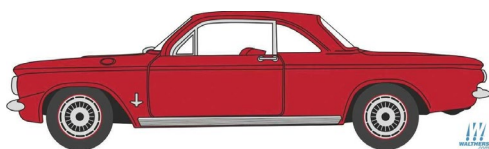
Motrak Models has released the Paterson Fire Hose Company kit in HO scale. Designed as a background structure, it is 2" deep, 6.5" long, and 5" tall. The kit contains Tichy windows and doors, a laser cut freight door, resin detail parts, signage, and laser cut

basswood walls and tarpaper. For more information or to purchase, visit motrakmodelsusa.com.



Oxford Diecast has scheduled the release of three new 1:87 scale vehicles this month. They include this 1954 Pontiac Chieftain

4-door sedan decorated in white over what Pontiac sales literature called Maize Yellow. The 1950s-era automobile features wide white wall tires and plenty of chrome.



Also new this month is a bright red 1963 Chevrolet Corvair coupe. Promoted as an economy model, the basic Corvair came with

black wall tires and a limited amount of bright trim.



Oxford is selling a 1950 Chevrolet panel truck decorated as a police van with wide white wall tires, bright fender trim, and a non-working emergency light on the roof. For additional

information contact a dealer or visit walthers.com.



ScaleTrains.com has scheduled a late September release for an all-new HO scale PS-Trinity articulated five-unit well-car set. Nicknamed Backpacker, each of the five wells can handle a 40' container

with a 40, 45, 48, or 53' container in the top position. The Rivet Counter model will be available decorated for Trailer Train, and Trailer Train/K-Line. The prototype Backpacker is distinguished from other intermodal cars by its low-profile design. Introduced in 1986, many Backpackers continue in service today.



square corrugations. The HO scale Operator series model replicates a prototype introduced in the late 1970s that featured vertical transitions between the highs and lows of the corrugations and two logo panels near the ends on each side. The distinctive design is noticeably different from today's international containers.



Hung, ITEL, ICSU-TransAmerica, CLOU-Container Leasing, NYK, and NJCU-Hanjin.

The Backpacker well-cars will be joined in September by a new 40' container with

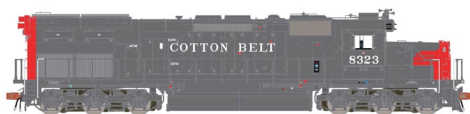
Carrier names on ScaleTrains.com's square corrugation containers will be KHLU-Kien



R. Bale

TUNNEL MOTORS

The SD40T-2 is a six-axle 3,000hp diesel locomotive built by EMD between 1974 and 1980. The SD40T-2 is popularly called a Tunnel Motor, because they were designed for better engine cooling in mountainous areas. The spotting differences between an SD40-2 and an SD40T-2 are the radiator intakes and radiator fan grilles located at the rear of the locomotive. The original owners of the SD40T-2 Tunnel Motors were Southern Pacific (229 units), SSW-Cotton Belt (10 units with an extended nose), and Denver & Rio Grande Western (73).



ScaleTrains.com plans to release another production run of EMD SD40T-2 Tunnel Motor diesel locomotives.



Road names on this late 2020 release will be Southern Pacific (Kodachrome scheme with

operating SP light package), SSW-Cotton Belt (with extended nose and SP light package), and Denver & Rio Grande Western. Undecorated SSW and DRGW versions will be available.



ScaleTrains.com is planning to release another production run of PS-2CD 4785 cu. ft. triple-bay covered hop-

per cars this fall.



Road names for the HO scale Operator series model will be Penn Central, ADM, Burlington Northern (Ex-PC

repaint), Central Soya, Conrail, Cotton Belt (with three-section trough hatches), M-K-T, and RFMX (Patched ex-Penn Central). For additional information visit [scaletrains.com](https://www.scaletrains.com).



Summit-USA has released an HO scale kit for a Taco Bell Restaurant. The design represents structures the fast-food chain constructed during the 1970s and '80s. Many of the buildings still exist but most are now being used by restau-

rants other than Taco Bell.

The kit includes milled styrene and laser-cut acrylic structure components, clear acrylic window glazing, Plastruct clay tile roofing, and illustrated instructions. Signage includes self-adhesive logos and a 3D printed bell. The assembled structure has a footprint of 7.5 x 5.75-inches. For additional information contact a dealer or visit summit-customcuts.com.

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Tangent Scale Models is now offering their first caboose model, the International Car Company B&O I-18 steel bay window caboose. The fleet of 46 I-18s was B&O's first set of non-railroad produced cabooses. Delivered in 1965 and 1966, most survived to become part of CSX. Continually modified through the years, the cabooses wore many paint schemes, beginning with B&O blue at delivery, and including the standard yellow Chessie System repaint and multiple color Safety Schemes starting in 1973. Additionally, across the years various details such as marker lights, window screens, toilet dump pipes and retention tanks, air vents, and end lights were changed, added, or removed. Six paint and detail schemes, plus two undecorated detail versions are available.



The first version is in the as-delivered B&O blue, after the B&O had made safety changes between delivery and 1968. The updates included

changes to the end steps and platform locations, changed railings and protective side screens on the bay windows. This version is available in four numbers.

The 1973+ repaint scheme is the yellow Chessie system scheme including blue graphics, orange (vermillion) striping and silver roof. This version includes the as-delivered Pyle lanterns and



standard toilet dump pipe. Four road numbers are available in this version.



The Green Chessie Safety 1973+ scheme is available with the correct road number C-3000, and features a large safety emblem and the “BE ALERT, DON’T GET HURT” slogan. The bay windows on this version have the prototype’s added four extra air vents.



The white Chessie Safety 1975+ scheme is another safety scheme, with LONG CHANCES SHORTEN LIVES across the length of the caboose. Modern details include the added blue toilet retention tank and white chlorinator overflow pipe. This caboose is available in its prototype number of C-3003.



The Raceland Repaint 1980+ cabooses feature Chessie “box” style markers replacing the Pyle lanterns, and an FRA-approved Star Model 845-F Incandescent Flashing end light. This caboose is available in number C-3019.



The Chessie System 1982+ scheme includes a slightly faded paint scheme and bright yellow bay window patches where the caboose has been renumbered. Both cabooses in this scheme, 903014 and 903045, feature the

updated toilet retention tanks, Chessie “box” style markers, COTS and Inspection interval lettering, and FRA red end lights of the I-18 class cabooses that survived until 1982.



Unlit (no electronics included) undecorated kits are available in both the 1968+ detail package and the 1979+ era details. The kits include Tangent 70T Gould Roller Bearing trucks with power pickup and 33” 110 tread wheels. No couplers are included with the undecorated kits.

All of the models are equipped with DC/DCC compatible interior and marker light lighting powered through pickups on the caboose trucks that include 33” CNC machined wheels. For more information or to purchase, visit tangentscalemodels.com.

.....



Walthers has released a new production run of EMD SD50 diesel locomotives. The HO scale Mainline series model features an

all-new drive mechanism including newly tooled power trucks and HT-C side frames.



The body shell has been updated with revised dynamic brake intake grilles, anti-slip detail on the walkways and open gratings

on the steps. The body shell has molded drill starter points for grab irons (sold separately in EMD SD50-60 Diesel Detail Kit #910-256).



Road names in this release are Chessie System (B&O), CSX, Denver & Rio Grande Western, Kansas City Southern, Southern Pacific, and Union Pacific.



The Walthers Mainline series SD50 is available for standard DC operation as well as equipped with an ESU sound

and DCC decoder. An undecorated unit in this release is already sold out at Walthers. Check with a dealer for availability.



Walthers has released a group of 40' ice refrigerator cars that feature wood sheathed sides and ends, 4' swing doors, a deep fish-

belly underframe, and Andrews plain-bearing trucks with machined metal wheelsets.



Road names include American Refrigerator Transit with Missouri Pacific and Wabash heralds, Merchants Despatch, and North

Western Refrigerator Line with a Chicago North Western herald.



Completing this release is an SFRD reefer with a Santa Fe system map on one side and Grand Canyon Line on the opposite side. For addi-

tional information contact a dealer or visit walthers.com.

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N SCALE PRODUCT NEWS

Athearn has included a selection of N scale 20' corrugated containers in its January 2021 production schedule.



Carrier names will be APL, Magellan, MSC, NYK, Raffles, Touax, and Yang Ming.



The containers will be available in three-packs with different fleet numbers. For

additional information contact a dealer or visit athearn.com.

New **Atlas** N scale items available now from dealers include SD50/60 and SD60E locomotives, 41-foot ballast cars, 50-foot SIECO pulpwood flat cars, 45' logging flat cars and Russell snowplows..



Atlas' production schedule for the third quarter of 2020 includes an N scale GP40-2W diesel locomotive.



Road names will be Guilford Rail System, Huron Central, Pan Am Railways, and Canadian National in the URL scheme, and zebra scheme.



Also coming from Atlas during the third quarter of 2020 is a NJ Transit ALP-45DP locomotive.

Features include directional LED headlight/ditchlights and red marker lights, positionable non-functioning pantograph, factory-applied railings, air horn, and antenna details. Individual grab irons, including a drilling template, are supplied for customer installation. Decorating schemes include NJ Transit, and NJT Erie-Lackawanna heritage scheme.



DCC versions of the ALP-45DP locomotive come with an ESU LokSound decoder.



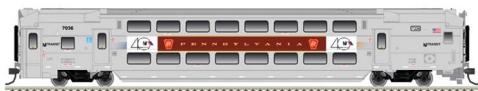
Concurrent with its purchase of ALP-45DP locomotives, NJ Transit also purchased 62

multi-level commuter cars from Bombardier Transportation including a cab-car to facilitate push-pull operation.



Atlas will offer three NJ Transit cars including a cab-car, a basic coach trailer,

and trailer with a toilet window.



NJ Transit cars decorated in Heritage schemes will be available for Pennsylvania

Railroad (cab car), Pennsylvania Reading Shore Lines, Erie-Lackawanna, and Conrail (trailers) and CNJ (toilet trailer).

Atlas' N scale multi-level cars feature interior seat details, LED illumination, separately applied lift lugs, end barriers, and rubber diaphragms. In addition to these features, the cab-cars will have directional LED headlight/ditchlights and red marker lights, separately applied air horn, antenna. The N scale models will be available individually as well as in specially priced three-packs.



cu. ft. triple-bay covered hopper. The model is based on a low-side car Pullman introduced in the mid-1960s.



names will be ADM, SOO Line, Rock Island, Northern Pacific, Delaware & Hudson, and Conrail.



be Norfolk Southern, Mass DOT, Missouri Pacific, CSX, Canadian National, and Amtrak.



a heavy diecast metal frame, and 70-ton BLMA trucks with metal wheelsets.



Road names will be TTX, RTTX-TTX, PTXX (with conspicuity strips), and Trailer Train.

New N scale freight equipment coming from Atlas during the third quarter of this year includes an upgraded PS-4427

Features on the N scale model include new gate tracks on the discharge chute, and an upgraded brake wheel. Road

Also scheduled for release during the third quarter of 2020 is a 41' ballast hopper car. Road names for the Master series model will

Atlas' third quarter release of new N scale models includes another production run of class F89J 89' flat cars. The Master series model features positionable trailer hitches,

Road names will be TTX, RTTX-TTX, PTXX (with conspicuity



Atlas' list of new products due in the third quarter of 2020 concludes with a group of N scale 1993 Ford Explorers. In addition to the

Burlington Northern scheme shown here, the SUV will be available decorated for Sperry Rail Service, RJ Corman, Guilford Rail System, Conrail, Chicago & North Western, Canadian National, and Santa Fe. Unlettered Explorers will be available painted yellow, white, and orange. For additional information contact a dealer or visit atlasrr.com.

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Bowser has announced two new N scale items in its English Model Railroad line. The first is a sound upgrade kit for Atlas' N scale Multi-level commuter cars consisting of a sugar cube speaker, special speaker housing and an ESU LokSound decoder.



The second item is a Union Pacific and Rock Island style F unit snowplow. For more information or to purchase these items, visit bowser-trains.com.

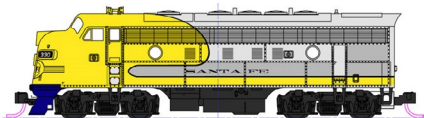
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Ipswich Hobbies has released an N scale craftsman style kit named Union Freight House. The design of the model is based on the old Boston & Maine freight house in Union, NH. The structure has

been preserved as part of the Heritage Park Railroad Museum in Wakefield, NH. The N scale kit features laser-cut basswood, scribed interior floor, peel and stick shingles, and loading dock

details. The assembled model has a footprint of 2.25 x 6". To purchase visit www.IpswichHobbies.com.



Kato USA has expanded its July production schedule to include N scale F7A and F7B diesels decorated

in Santa Fe's Yellow Bonnet freight scheme. Both A and B units will be available for DC, and DCC operation. Units with ESU LokSound will be available on special order through an authorized Kato dealer.



Kato has released a new run of its PRR Broadway Limited equipment including new names and numbers on 11 Tuscan red cars. The N scale cars are avail-

able in 10-car sets consisting of a heavyweight Bm70M baggage/mail car (above), a 12-Duplex 4-double bed sleeper, a 5-double bed/bar lounge car, a diner, a kitchen dormitory car, four 10-6 sleepers (below), and a blunt-end observation car with a train-phone antenna mounted on the roof.



A four-car set consisting of two Budd-built 21-roomette cars and two 4-4-2 sleepers is also available.



For modelers wanting a complete Broadway Limited consist, a Santa Fe 4-4-2 transcontinental sleeper is available. All PRR cars, except the heavy-

weight baggage/mail, follow a lightweight prototype with smooth

sides and skirts. The stainless steel Santa Fe sleeper has fluted sides and no skirts. Both lighted and non-lighted versions of the passenger cars are available.

Motive power available for Kato's N scale Broadway Limited includes GG1 electric locomotives in Tuscan red and Brunswick green, and black Penn Central and Amtrak schemes.



An EMD E8A decorated for Broadway Limited service in Tuscan red with five gold stripes will be released this month. Options for the locomotives include basic DC

operation, DCC, and ESU LokSound DCC. For additional information contact a dealer or visit katousa.com.

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Micro-Trains Line has released an N scale 78' single-window heavy-weight coach decorated

for two popular roads including New York Central. The ready-to-run models represent heavyweight steel equipment built in the 1920s that continued in service through the 1940s. The NYC model is painted Pullman green and rides on four-wheel trucks.



The Pennsylvania Railroad version of the coach is painted Tuscan red with a black roof and is equipped

with six-wheel trucks.

New N scale freight equipment from Micro-Trains includes this 89' tri-level closed autorack car. The car carrier is owned by TTX



and is lettered for Norfolk Southern service.



Car Company and leased to Gibson Wine Company, a vintner located in Sanger, California.



This 39' tank car represents a single-dome car built in the 1920s by American Car & Foundry. The N scale model is based on a car owned by General American Tank

Micro-Trains has released this 40' Union Pacific class A-50-19 boxcar in two road numbers. The N scale model represents a prototype built by Pullman-Standard in March 1947

with double sliding Youngstown doors. UP assigned the car to service appliance manufacturers.



This 70-ton ATSF 50-foot composite gondola with drop ends and fish belly side frames, follows a prototype built by Pullman-Standard in

1943 and rebuilt in 1973. Contact a dealer for additional information about Micro-Trains models.

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The N Scale Architect has released the 14th kit in their Tracksides Series, the N scale Flag Stop Station. The kit includes a laser cut platform, canopy and privy, a

re-purposed Overton coach body, roof details and corrugated roofing. The finished model measures 4.75" long, 2" wide, and 1.5" high. For more information visit thenarch.com.



ScaleTrains.com is quoting a September release date for another production run of N scale carbon black covered hopper cars. The

run includes two Sid Richardson cars with faded paint and distressed lettering. Both the somewhat boxy Thrall 5750 cu. ft. version and the more traditional Thrall 4727 cu. ft. will be available. Details include round roof hatches, butterfly outlet gates, and sampling spigots. For additional information visit scaletrains.com.

NEW DECALS, SIGNS AND FINISHING PRODUCTS



Deluxe Materials is preparing to introduce Roket brand UV cured adhesive to the North American market. The adhesive reportedly sets up most materials in one to three seconds. Each application kit will include the adhesive and an activating UV light powered by two lithium batteries. Deluxe

Materials is a UK-based supplier of specialty adhesives distributed in North American by Walthers and Horizon Hobby. Roket UV is expected to be available through dealers by late April.



Speedwitch Media sells a selected assortment of carefully researched, high-quality HO scale water slide decals. Recent additions

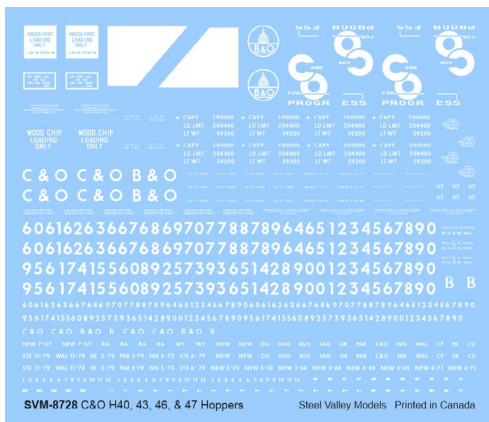
include Chicago and North Western war emergency boxcar, and Missouri Pacific 50' single-sheathed 89000-series auto car.



Also new from Speedwitch Media are decals for Virginian single-sheathed boxcars as built in 1916, and Minneapolis & St. Louis ARA single-sheathed boxcar.



For additional information visit speedwitchmedia.com.



Steel Valley Models has HO scale decals for Chesapeake & Ohio class H40, H43, H46, and H47 hopper cars. To purchase visit www.facebook.com/SVMHopperTopper/photos/pcb.2910132352342210/2910106659011446/?type=3&theater.

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BRIEFLY NOTED AT PRESS TIME ...

Chooch Enterprise founder Mike O'Connell has announced his retirement. O'Connell pioneered the development of vinyl and cast resin detail products. The future of the business, established in 1974, is pending.

The East Broad Top Railroad has been acquired by a newly-formed nonprofit. Operating out of Rockhill Furnace, Pennsylvania, the 33-mile coal hauler built in the 1870s is the only original surviving narrow gauge railroad east of the Rocky Mountains. Among the backers of the nonprofit are Wick Moorman, former chairman and CEO of Norfolk Southern and former CEO of Amtrak; Henry Posner III, a former Conrail manager who is chairman of the Iowa Interstate Railroad and the Railroad Development Corporation, of Pittsburgh; and Bennett Levin, a retired mechanical and electrical engineer who owns the Juniata Terminal Company, which operates two Pennsylvania Railroad E8 diesel locomotives and three private cars...

Sylvan Scale Models is taking reservations for a limited rerun of its highly-regarded HO scale Canadian National 40-foot single-sheathed boxcar. Additional information about the craftsman-style resin kit is available on request at mlwm420@gmail.com ...



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SELECTED EVENTS



Model Railroad Hobbyist | March 2020

MARCH 2020

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

CANADA, ONTARIO, MISSISSAUGA, March 29, Train Market, sponsored by Lakeshore Model Railroaders Association, at John Paul II Polish Cultural Centre, 4300 Cawthra Road.

CANADA, ONTARIO, TORONTO, March 21, Railway Prototype Modellers Meet, at Humber College, 205 Humber College Blvd, North Campus, Building B, Rooms B201 and B202. Info at torontoprototypemodellers.wordpress.com.

CALIFORNIA, LOS ANGELES, March 28-29, Open House at Pasadena Model Railroad Club, 5458 Alhambra Avenue. Info at pmrrm.org.

CALIFORNIA, REDLANDS, March 28-April 5, Train Days 2020, sponsored by N-Land Pacific, at San Bernardino County Museum, 2024 Orange Tree Lane. Request info from Chuck Coker at chuck@ix23.com.

FLORIDA, SARASOTA, March 21-22, 43rd Annual Real Rail Train Show at Bradenton Convention Center, 1 Haben Blvd, Palmetto. Request info from David Fontaine at davidf34205@yahoo.com.

INDIANA, INDIANAPOLIS, March 7, Train Show sponsored by Naptown & White River Model Railroad Club at Emmerich Manual High School, 2405 South Madison Avenue. Info at naptownrr.org.

INDIANA, NAPPANEE (Metro Elkhart), March 21, 15th Annual Train Show sponsored by Elkhart Model Railroad Club, at Claywood Event Center, 13924 North 1100 West (County Line Road). Info at www.emrrc.com.

KENTUCKY, LOUISVILLE, March 21, NMRA Division 8 Mid-Central Region Train Show and Sale, at Holy Family Parish Saffin Center, 3938 Poplar Level Road.

NEW MEXICO, LAS CRUCES, March 21-22, Train Show & Open House hosted by Southern New Mexico N-Scalers, at Southern New Mexico State Fairgrounds. Request info from Mike at mififer@hotmail.com.

NEW YORK ALBANY, March 14, Train Show, at Polish Community Center, 225 Washington Avenue Extension. Info at albanytrainshow.com.

NEW YORK, BATAVIA, March 29, Great Batavia Train Show, sponsored by Genesee Society of Model Engineers at Genesee Community College, Richard Call Arena. Info at www.gsme.org.

NEW YORK, ROCHESTER, March 7-8, Open House sponsored by Rochester Model Railroad Club at 120 South Clinton Avenue. Info at RocMRRC.com.

OHIO, GREENVILLE, March 1, Swap Meet sponsored by Darke County Model Railroad Club at Darke County Fairgrounds Youth Building, 800 Sweltzer Street. Info at model-railroad-hobbyist.com/sites/model-railroad-hobbyist.com/files/webform/news/2020dcmrr_swap_meet.jpeg.

OREGON, PORTLAND, March 14, Swap Meet sponsored by Willamette Model Railroad Club at W.D. Jackson Armory, 6255 NE Cornfoot Road. Request info from Brigg Franklin at wmrc-swapmeet@gmail.com.

PENNSYLVANIA, MALVERN (Valley Forge), March 27-29 2020, Railroad Prototype Modelers Meet, at Desmond Hotel. Info at rpmvalleyforge.com.

VERMONT, ST. ALBANS, March 14, Vermont Rails Model Railroad Show at Collins Perley Sports & Fitness Center, sponsored by the Northwestern Vermont Model Railroad Association. Info at www.nwvrailroad.org.

WISCONSIN, CEDARBURG, March 8, 25th Annual Model Train Show & Swap Meet, at Circle B Recreation 6261 Highway 60. Info at www.metrorrclub.org.

April by location

CANADA, ONTARIO, FENWICK, April 19 and 26, Open House sponsored by Greater Niagara Model Railroad Engineers, at 1141 Maple Street. Info at www.gnmre.ca.

NEW ZEALAND, CHRISTCHURCH, April 10-13, National Model Railroad Convention. Info at www.modelrailcon.co.nz.

CALIFORNIA, CONCORD, April 30-May 2, Clear to the Coast convention co-hosted by NMRA Pacific Coast Region and Western Railway Museum, at Crowne Plaza Concord/Walnut Creek, 45 John Glen Drive. Info at pcrnmra.org/conv2020/#convcar.

CALIFORNIA, OCEANSIDE, April 11, Train Show & Swap Meet sponsored by North County Model Railroad Society at Heritage Park. Info at swapinfo@ncmrs.org.

COLORADO, COLORADO SPRINGS, April 17-18, TECO-Train Expo Colorado, at Chapel Hills Mall. Info at www.tecoshow.org/tecospwap.htm.

COLORADO, COLORADO SPRINGS, April 17, Track to Success Train Show, held in conjunction with the TECO Train Expo. Request info from Al Hovey at alhovey@comcast.net.

INDIANA, FRANKLIN, (Metro Indianapolis), April 4, Franklin Spring Train Show, sponsored by NMRA Central Indiana Division at Johnson County Fairgrounds, 250 Fairground Street. Info at www.cidnmra.org.

IOWA, DAVENPORT, April 18, Model Railroad Show at Mississippi Valley Fairgrounds, 2815 W. Locust Street. Request info from Roger Kujawa at AGWRailway@gmail.com.

MONTANA, HELENA, April 26, 40th Annual Helena Railroad Fair, at Helena Civic Center, 340 Neill Avenue. Info at rrfair@mt.net.

NEW MEXICO, ALBUQUERQUE, April 2-4, Sn3 Symposium. Info at sn32020abq.org.

OREGON, ELSIE, April 4, 16th Annual Pacific Model Loggers' Congress, hosted by Lon Wall and Jeff Johnston at Camp 18 Restaurant and Logging Museum, 42362 Highway 26. Info at www.pacificmodelloggerscongress.com.

OREGON, EUGENE, April 21-24, Make Tracks to Eugene 2020 Convention, hosted by NMRA Pacific Northwest Region, at Valley River Inn, 1000 Valley River Drive. Info at www.MakeTracksToEugene.com.

Future 2020, by location

AUSTRALIA, SYDNEY, ROSEHILL NSW, June 5-9, 34th National Model Rail Convention.

CANADA, BRITISH COLUMBIA, BURNABY, May 22-24, 2020, 5th Annual Railway Modellers Meet of BC, sponsored by Burnaby Railway Modellers at Simon Fraser University's Burnaby campus. Info at www.railwaymodellersmeetofbc.ca.

NEW ZEALAND, DUNEDIN, MOSGIEL, May 9-10, Model Train Show at Taieri Bowling Club, 12 Wickliffe Street. Request info from Trevor Buchanan at dunedinmodeltrainshow@gmail.com.

ARKANSAS, JACKSONVILLE, August 22-23, 10th Annual Jacksonville Train Show, sponsored by Tuscarora Lumber Company at Jacksonville Community Center, 5 Municipal Drive. Request info from Daryl Conner at 501-982-6835.

FLORIDA, TALLAHASSEE, June 27, 26th Annual Model Railroad Show & Sale at Forth Florida Fairgrounds. Info at www.facebook.com/events/564525630749478.

ILLINOIS, EAST PEORIA, May 14-17, NMRA Midwest Region Convention, at Holiday Inn, 101 Holiday Street. Info at www.peo-riarocket2020.org.

KANSAS, HERINGTON, May 2-3, Herington Railroad Days and NMRA Meet, sponsored by NMRA Central Division, at Herington Community Building, 800 South Broadway.

KANSAS, HUTCHINSON, June 6-7, Center of the Nation Model Railroad Expo, at Kansas State Fairgrounds, Pride of Kansas Building, 2000 N Poplar. Info from kansascentralmodelrailroad-ers.org.

MICHIGAN, EAST LANSING, November 22, Train Show & Sale hosted by Lansing Model Railroad Club at Michigan State University Pavilion, 4301 Farm Lane. Info at lmrc.org.

MISSOURI, ST. CHARLES (Metro St. Louis), September 2-5, 40th National Narrow Gauge Convention, St. Charles Convention Center/Embassy Suites Hotel. Info at www.40nngc.com.

MISSOURI, ST. LOUIS, July 17-19, National T-TRAK Layout Exhibit and N Scale Banquet at 2020 National Train Show. Info at nationalt-traklayout.com.

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.

TENNESSEE, NASHVILLE, May 31-June 6, National Garden Railway Convention, at Gaylord Opryland Resort. Info at ngrc2020.com.

VIRGINIA, FISHERSVILLE, May 17, 34th Annual Shenandoah Valley Model Train & Railroading Show, sponsored by Augusta County Model Railroad Club at Augusta Expo, 277 Expo Road. Info at www.acmrrc.org.

Beyond 2020 by date

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

ENGLAND, BIRMINGHAM, 2022, NMRA National Convention and National Train Show. www.nmra2022uk.org. ■



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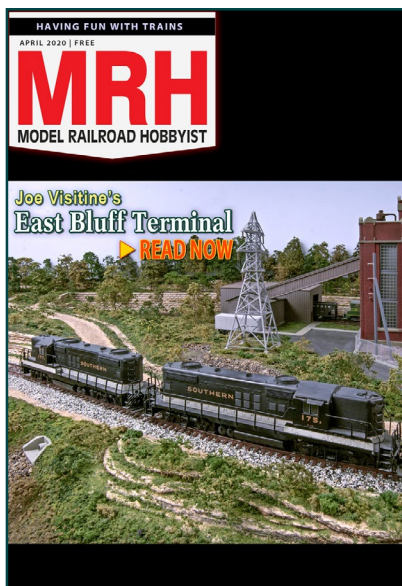
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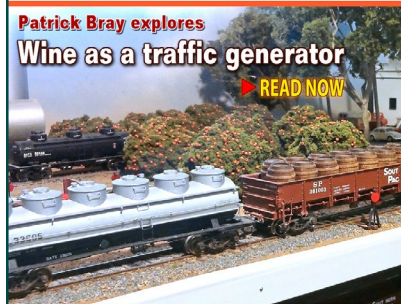
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