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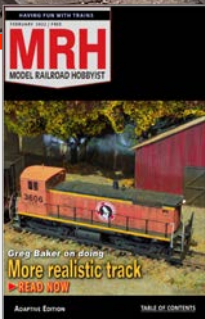
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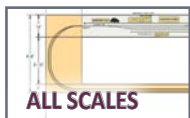
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JOE FUGATE



Limited Modeler: Making the most of a small layout space

JIM SIX



Getting Real: Fun modeling the prototype

JACK BURGESS



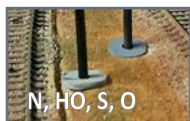
TCS WowSound in a Bachmann 2-8-0

MICHAEL ANTEAU



Rivarossi passenger car conversion

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Savvy Modeler online: More realistic foreground conifers

Compiled by the MRH STAFF



February 2022 news and events

RICHARD BALE and JEFF SHULTZ

PUBLISHER'S WELCOME

introduction



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JOE FUGATE BUILDS A SPEED-TRAP SPEEDOMETER KIT FROM EBAY ...



I LIKE THE IDEA OF SPEED MATCHING MY DCC LOCOS

using a speedometer, but I've been put off a bit by the \$70+ price. Yes, I could build my own for cheap with an Arduino, but I wanted something that didn't involve me having to write code.

I found a speed-trap speedometer kit on eBay for \$40, with some assembly required (see the shopping list link for details).

This speedometer kit comes with a nice Windows software app, so no programming needed, but I do need a laptop. My DCC test track hooks to my Windows laptop, making this speedometer one more handy accessory that's a part of my DCC test track.

To assemble this kit, I just soldered the parts together following the instructions. On the battery-powered half, the pieces include a power LED, a resistor, and two clear emitter LEDs.

The other half connects to the PC through a serial-to-USB adapter and USB cord. This half includes two more resistors, two black detector LEDs, and a 9-pin serial connector.

Once I had soldered all the pieces together, I loaded the software onto my laptop and then plugged the USB cord into a USB port. I checked the Windows device manager to determine the USB connection showed up on COM6. I typed COM6 into the com port box and pressed connect.



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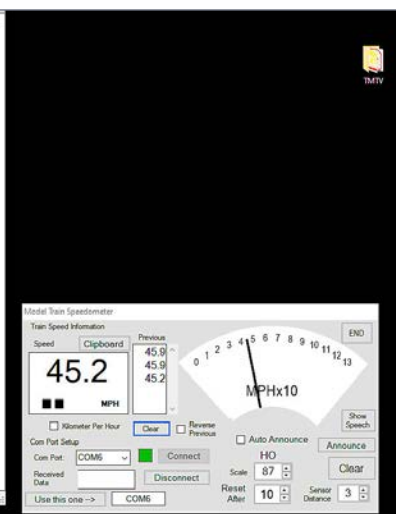
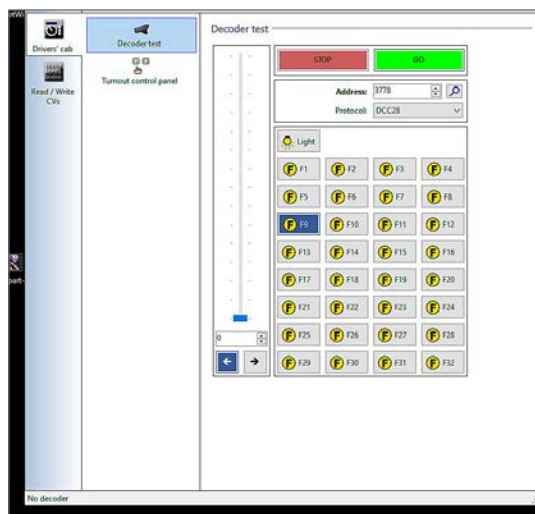
PUBLISHER'S WELCOME | 2

Voila! Up it came and I began testing the speed of my locomotives. Since I'm using my LokProgrammer with my ESU decoders, it's easy to run the loco with the virtual LokProgrammer throttle.

For just \$40, I now have a DCC test bench speedometer. ☑

To get a shopping list for this article, visit the *MRH* website at this link: mrhmag.com/magazine/running-extra/2022-02/publishers-welcome#shopping

1. I built this speed-trap speedometer from a kit I purchased on eBay for \$40. It hooks to my laptop and determines the scale speed of my locos.



2. Using the LokProgrammer virtual throttle and the speedometer, I can easily check my loco speed at any speed step with my laptop and a LokProgrammer.

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THE LIMITED MODELER

column



Images are from the author's collection, except as noted.

MRH Running Extra | February 2022

JIM SIX MAKES THE MOST OF A
SMALL LAYOUT SPACE ...



THIS PAST MONTH, I have been home with my wife Joanne recovering from a bout with the Delta variant of COVID that had both of us hospitalized. Though the worst is over, the doctor said it will be a few more weeks – at least – before we will be back at full strength and in good health. Believe me, you don't want to become ill from COVID.

Feeling better, but still low on energy, I am eager to get started on the layout. I ordered all the track and switches for the new layout a couple of days ago. I went with all Peco because, although it costs more, it is good enough that I am not going to mess around with other brands of track.

My former layout left the property in a dumpster last November with the completion of our remodel. I did not salvage anything aside from a few structures for re-use. May the old layout live long in model railroad afterlife, and may the new layout arise and be everything I want and need.

My new layout, 22'x5' in size, will be less than half the size of my former layout, which was 50'x12'. While 22'x5' is small, it



DOING MORE WITH LESS



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THE LIMITED MODELER | 2

is plenty of room for a good one-town layout to represent Monroeville, Ohio.

I have been promoting one-town layouts for a couple of years, but this is a new adventure for me. It is just another limitation that makes me a truly limited modeler.

PROTOTYPICAL BACKGROUND

Over several columns, I have focused on a segment of the original Lake Shore & Michigan Southern (NYC Lines) main line in northern Ohio between Elyria and Toledo via Norwalk, Monroeville, and Clyde. In 1892, the LS&MS completed its "Airline" between Elyria and Toledo via Sandusky. This new route eventually became the mainline, relegating the Norwalk line to secondary status by 1900.



1. 1876 Map of the Lake Shore & Michigan Southern Railway, which spanned from Buffalo, New York to Chicago, Illinois. The red arrow points to Monroeville, Ohio, which I am modeling.

After World War II, the old main became known as the Norwalk Branch. It lasted in service until 1976, when it was finally abandoned with the creation of Conrail. Today it is a paved bicycle trail, and I have ridden much of it, observing the history that still exists along the route.

The line's towns of Oberlin, Kipton, Wakeman, Norwalk, Monroeville, Bellevue, Clyde, Fremont, Elmore, Genoa, and Millbury all offer good one-town layout modeling possibilities. Monroeville and Clyde held the greatest modeling interest for me, and Monroeville fit my 22x5 layout space best. I can include all the sidings and industries the LS&MS served there.

I refer to the LS&MS and not the New York Central because I am modeling primarily between 1900 and '20. The New York Central did not exist as a railroad until 1914, so much of my era predates it. Before 1914, the Vanderbuilts operated the New York Central & Hudson River RR and the LS&MS as separate lines that spanned the distance from New York City and Boston to Chicago, connecting at Buffalo, New York.

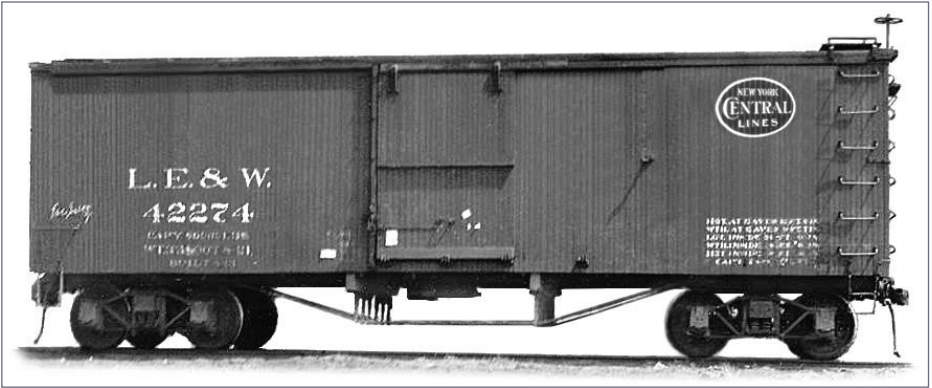
The Vanderbuilts grouped the railroads into the greater *New York Central Lines* in 1905 and began using the NYC Lines black oval herald [2]. The New York Central Lines reorganized into the *New York Central System* in 1936, which lasted until the Penn Central merger in 1968.

ESTABLISHING GOALS

With a much smaller train room to work with, I underwent a reality check. I asked myself what my "real" hobby goals are. I limited myself to realistic, achievable goals and set aside any "dreams."

First, I want a completed layout. Many would say a completed layout is not needed or even desired. After being in the hobby since the early 1950s and never having completed a layout, I believe a completed layout is something that I can and should have.





2. LE&W 42274 displays the paint scheme shortly after 1905 when the NYC Lines oval herald first appeared.

Second, I want to have one of the nicest one-town layouts in the hobby. I believe I have the skills, the experience, and now the place to make this happen.

Third, I want my layout to feature one local peddler freight to switch my one town, along with a few through trains. One to four through trains will add interest, while interfering with the operation of the peddler freight.

Fourth, I want to easily operate the layout by myself. I don't need or want any more than a one- or two-man crew. I have no interest in hosting tours or having multi-person operating sessions.

Fifth, I want to operate the layout set in any year between 1900 and the 1920s, with only locomotives and rolling stock matching the selected year of an operating session.

Sixth, I want to operate with a timetable to control train movement. This does not preclude a switch list for the peddler freight, but it will dictate when other trains appear on the scene and pass through town. I want my operations to be conducted in "real time" without a fast clock or any other gimmick.

I believe that each of these goals is achievable with only a 22x5 train room. I have set a timetable of 12 months to complete them, barring any more health issues. This is both reasonable and attainable.

WORKING-IN STAGING

Until recently, I assumed I had no room for staging with only a straight shelf layout along the 22-foot wall. While I could “live” with that, the lack of through trains during operation would limit the fun and enjoyment I would have.

Then I woke up in the middle of the night with the crazy thought that I could have a 180-degree curve at each end of the layout to access a narrow staging yard on the opposite wall. This would allow through trains after all, even within the limitations of my room.

I find it amusing that I didn’t initially think of fitting an oval design onto my 22x5 train room. With five feet of width, I can easily fit 20” - and 22”-radius curved tracks at each end for staging. This will allow me to achieve my goal #3 – running through trains.

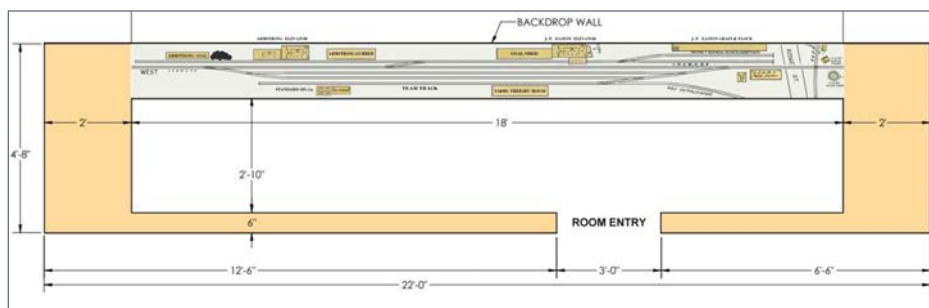
At each end of the layout, the track will curve around to the opposite side of the room to narrow two- or three-track staging yards. As the track exits either end of the detailed town area, it enters curved switches to double-track staging around each end of the layout room and across a narrow shelf. This will be plenty for staging four or more trains [3].

This design will pack a lot of operation into a rather small layout of one town. I am loving it.

Note: The room is not a full 22x5 . Instead, it measures 22’ x 4’-8” finished. Four inches were lost in depth when the room was framed with 2x4s, and drywall was added.

Why is staging so important? Decades ago, Tony Koester and others started telling us that staging is important for operating





3. My layout shelf with my Monroeville track plan I derived from Sanborn maps superimposed across the top. The town is the focus of the layout. The tan areas are for staging only.

railroads in a prototypical manner. Before then, I do not remember seeing track plans in *Model Railroader* or *Railroad Model Craftsman* with staging. Most folks ran their trains from one town to another in sight, on the layout.

Tony Koester has also promoted time table & train order (TT&TO) operations for decades. As much as I resisted TT&TO operation, that is exactly what I will be employing with my new one-town. With such a small layout, my TT&TO will be very simple, but enough to add plenty of fun to operation.

With my focus on the local freight, I don't care to see any other trains until they appear in my location as scheduled, or there-about. The timetable will dictate when these "other" trains appear in town.

I will operate with a timetable and a real-time clock – no fast clock, which for me is just a game. Looking at the timetable and glancing at the clock will tell me when to expect trains. Train orders will dictate how the trains interact with one another.

Generally, I will need to get my local freight out of the way of passing through trains. For me, this all adds to the fun of operating a one-town layout.

THE LIMITED MODELER | 7

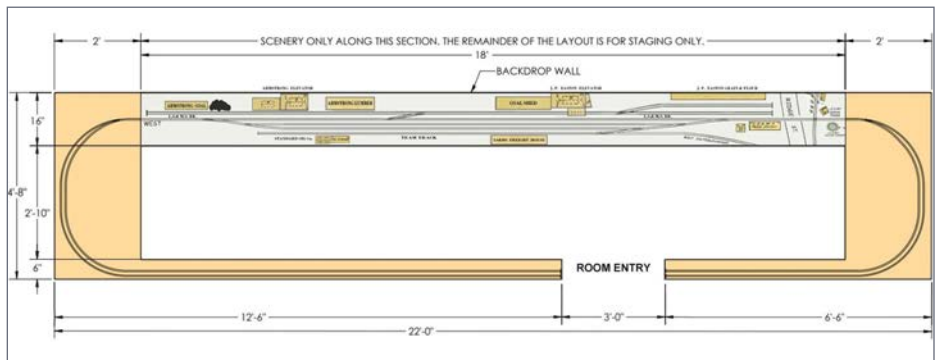
To operate as I am describing, staging is needed for the scheduled through trains. As you can see in [4 and 5] this is easily accommodated with a pair of two-track staging yards. I plan one or two through freights and two local passenger trains, one in each direction. These passenger trains will consist of one or two cars each. The through trains will call for a second operator.

Studying the layout plan in [5] one must wonder if I really need the lift-out section in the middle of my staging yard. I will build the layout without this lift-out and see how it works out.

Should I later decide that it is needed, I can add it. If it turns out that two staged trains will not fit on the staging tracks at the right, then I will add the lift-out bridge to make more room.

I am modeling 1900 to 1920. Locomotives and freight cars were a lot shorter than more modern cars. I only need six inches or less per freight car.

The staging tracks at the right will be at least nine feet each, which will allow for trains of up to 16 freight cars and the



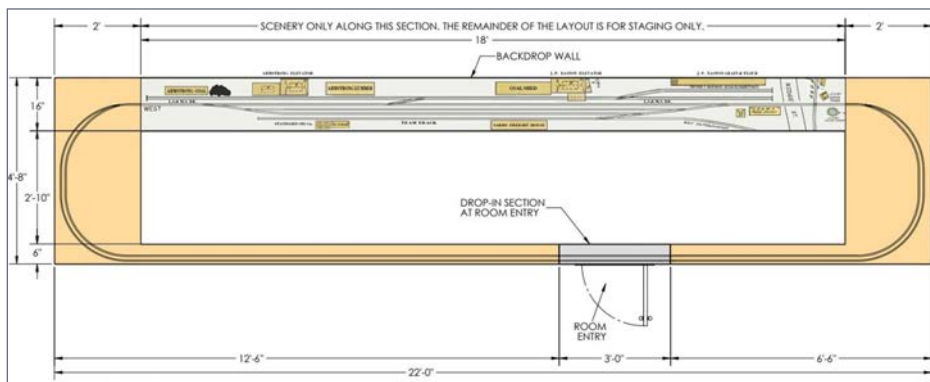
4. Here is the layout with the staging tracks added. As you see, there is plenty of room for staging at least four trains. A third staging track could be added in the future should I find it necessary after operating this way for a while.



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5. This is the same view as [4] except a lift-out section has been added at the room entry. I absolutely do NOT want to have this lift-out, otherwise known as a duck-under, but I am considering it. It would allow for longer staged trains at the right. Without it, train length is limited to 16 to 18 cars. It is something to think about.

locomotive, plenty for my needs. The left end has room for two 28-car trains, which is way more than enough.

I could stage two shorter trains on each of those longer tracks for a total of six staged trains. I am not going to need that many.

PURSuing THE PROTOTYPE

Mine is a true prototype layout plan. It very closely matches Monroeville, Ohio of the early 1900s. My locomotives and rolling will all be prototype-based models. In short, I am pretty much back to being a prototype modeler!

My heart is not into model trains or toy trains. My heart is in modeling prototype railroading and the scenes they pass through. So yes, I remain a prototype modeler – even though I will make compromises to be practical.

J. P. Easton Lumber in Monroeville is a case in point. Try as I have, I have not turned up any photos of this facility from the

early 1900s. So, I will use photo [10] of J. Frank Kelly Lumber as basis from modeling J. P. Easton.

Who would know the difference? In this photo, imagine that you are standing on the railroad siding alongside J. P. Easton Lumber. Works for me!

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6. This 1906 photo is a great view of the three railroads in Monroeville, Ohio. We are looking west along the LS&MS Railroad. The W&LE is crossing from the lower left to the upper right. The north/south B&O crosses the scene between the water tower and the LS&MS depot. The B&O/W&LE depot is just across the bridge at the right. Most of the town or Monroeville is just to the right of this photo, including several industries serviced by the B&O Railroad.



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SETTING THE HEIGHT

The top of the layout shelf will be 60 inches above the floor. I am 6'-2" tall, so 60 inches works well for me. My former layout was 56" above the floor and was OK, but 60" will be better.

Tom Johnson's layout is 60" up, and it is ideal. Besides, I have only four friends who will ever operate with me, and three of them are about my height. The other is shorter, so I will need a kick-around stool for him. Not a big deal! Remember, the layout will be built for me.

What about the two locations where the detailed layout transitions into the blank staging areas? I plan a view break there of a short wall with buildings and scenery up against it to hide the "porthole" from finished layout to staging. This will make layout photography a lot easier.

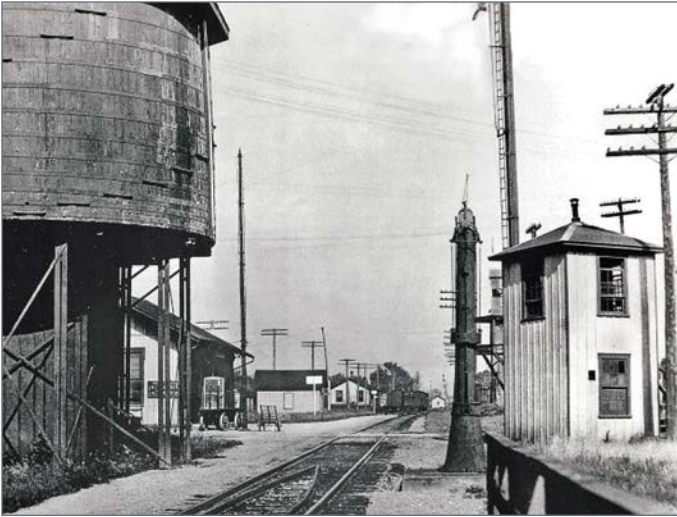
As I proofread the above, I feel compelled to tell you that I have climbed down off my high horse as I am facing some serious limitations. I have truly become a limited modeler in the classic sense of the words. Limited or not, I am happy with this design and the operating possibilities it will provide. As I build the layout, I will take plenty of photos to share with you in the coming months.

I love the many boxcars in the yard. All of this will be modeled on my layout.

WHAT ABOUT THE PENNSY?

If the new layout is to represent the LS&MS and early NYC, then what about my love of the Pennsy? In an earlier column I mentioned that, for I was considering a second layout at a lower level below this one for the Pennsy, but I have ruled that out.

After thoroughly discussing this with Tom Johnson, I have decided to build a few extra buildings and business signs to swap out with those shown in my track plan. The extra buildings and signs will represent Gibsonburg, Ohio, which was a Pennsy town.



7. This is about the same view as [6] but taken about 1920. My curved staging tracks would be behind the photographer. You can see the B&O crossing between the water tower and the LS&MS depot. The

LS&MS crossing tower at the right. The J. P. Easton elevator is just visible between the tower and the water plug.



8. Here is the Monroeville LS&MS passenger depot about 1900 looking southeast. A B&O train is crossing the LS&MS. The LS&MS water tower is in the background. Look at the milk cans on the carts in this photo. Trains will have to stop to pick up milk and drop off empties. It's amazing just how much work the railroads did a hundred years ago.



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9. This 1906 photo is the setting for my layout viewed from the west, left side of my diagrams. Again, the curved staging tracks would be behind the photographer.

The W&LE tracks are at the left side of this photo. Those tracks would be behind my backdrop. It's hard to believe, but we're looking east along the New York City-to-Chicago mainline before 1900.



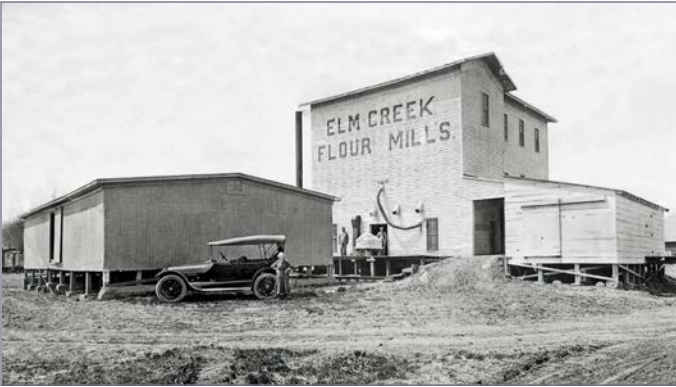
10. This is Frank Kelly Lumber (or is it Rinaldo Brothers?). This is not in Monroeville. Since I cannot find photos of J. P. Easton Lumber Co., I will use this photo as basis

for my modeling. The brick building is perfect for the backdrop. This will be nice.

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11. Elm Creek Flour Mills will be used as the basis for J. P. Easton Grain and Flour since I don't have a good photo of it. I will add a cupola atop the main building to

house the elevator leg. The foreground building at the left will be lined up with the main building at its left, and the railroad track will be alongside the face of the buildings we see here.



12. While not Armstrong Grain, this elevator and feed mill is of the time frame I am modeling, and very representative of what I will build for my Armstrong Grain and Feed. The gondola appears to be loaded with coal.



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13. PRR 9943 as it appeared near the end of WWII. The Crawford hood tender is a nice touch that Broadway Limited replicated perfectly with their model of the Pennsy H10. I have two Broadway Limited H10 locomotives with the Crawford hood tender as pictured. Perfect for Lines West operation in Gibsonburg, Ohio back in the 1920s.

When I have the urge to operate the layout as Gibsonburg, I will swap out those few buildings and signs, then put PRR locomotives and cabooses on the layout along with appropriate freight cars. I already have enough Pennsy power, cabooses, and rolling stock for operating in the 1920s.

In closing, while I get nice feedback on my columns, I really would like to hear what you think about what I have presented in this month's "Limited Modeler," and what I am doing in general. ☑





**JACK BURGESS HAS FUN WITH MODELING
PROTOTYPE DETAILS MORE CLOSELY ...**



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The joys of prototype modeling



GETTING REAL

column

MRH Running Extra | February 2022



MODELING A PROTOTYPE CAN SOMETIMES BE CHALLENGING

BUT IT CAN also be extremely rewarding and plain fun! I enjoy the challenge of uncovering new facts about my prototype, the Yosemite Valley Railroad, or discovering a detail in a new-to-me photo. (My collection of prototype photos of the YV now numbers close to 4,000.)



I want to share some fun and hopefully interesting stories from my 50 years of researching my prototype. I am continually driven by the joy of discovering new information about that railroad and learning why something was done in a particular way.

The major reason I decided to model this railroad was a book entitled *Railroads to the Yosemite Valley* by Hank Johnston, published in 1963 [1]. It had over 400 photos of the YV and associated logging railroads. I needed a lot of photos to build the YVRR equipment and structures I wanted to include on my layout.

Our local library had a copy of this book, and in 1967 I decided to model the YVRR. As I recall, the book was relatively inexpensive, and I couldn't afford it at the time. My parents purchased a copy for me on my 21st birthday.

QUESTIONS

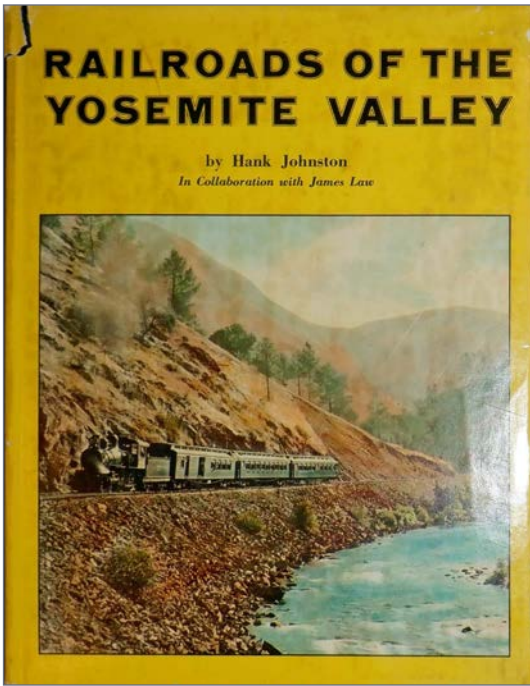
Researching and modeling a current-day railroad can be straightforward. Accurately modeling a railroad that was abandoned about the time I was born, by contrast, resulted in a lot of questions.



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1. This book convinced me to spend the next 55 years of my life (and still counting) modeling the Yosemite Valley Railroad.

For example, the book on the YVRR had only black/white photos. To find out the colors of the various freight cars, passenger cars, and stations, I wrote to author Hank Johnston and asked him. He didn't know, so he passed my letter on to his book collaborator Jim Law [2].

Jim was a former employee of the YV who also served as foreman and superintendent for the logging companies whose inclines connected to the YVRR. He provided the answers to my questions and several more. I eventually met Jim in person three years later, which led to decades of visits, and more questions and answers.

When I started modeling the YV, some of the railfans who took photos of the railroad were still around, so I could purchase copies or borrow their negatives and make prints of

their photos. I also acquired USGS maps (which were updated in 1949) that showed nearly the entire railroad route as “Old Railroad Grade.”

Sanborn maps provided good information on building sizes and details for larger towns such as Merced. The California State Archives had a full set of Yosemite Valley Railroad maps which were drawn by the railroad which included yards and sidings along the entire route.

Official Railway Equipment Registers listed all the freight and passenger cars the YV owned, even though it did not use that equipment in interchange service. With some work, you can find the answers to your questions.



2. My friend Jim Law when he was in his 80s.



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3. The northside logging incline was 8,600 feet long with grades as steep as 6.6% and a 3,000-foot elevation drop. The community of Incline was at the bottom of the incline.

THE YVRR HISTORICAL SOCIETY

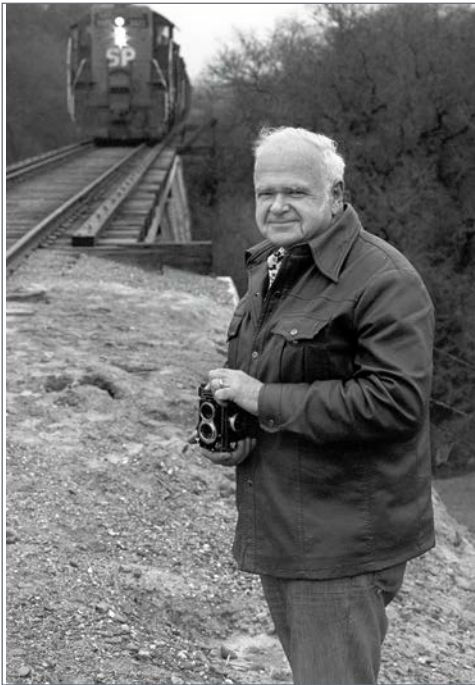
In the early 1970s, *Trains* magazine included a note in one of their spring issues asking readers to submit contact information for railroad historical societies. There was none for the YVRR, so I decided to form one. I submitted contact information for myself for the Yosemite Valley Railroad Historical Society.

I received only one letter from Al Rose, a railfan who had been taking photos of the YVRR from the mid-1930s until the scrapping operations in 1947 [4]. Fortunately, he lived only a couple of hours away. He had about 365 black-and-white photos plus 183 color slides that he had taken of the YV.

When the YVR was abandoned, the scrapper needed photographs of the YV locomotives to hopefully sell them to other railroads. Apparently, the local photographer wanted too much for the prints, and someone suggested the scrapper contact Al.

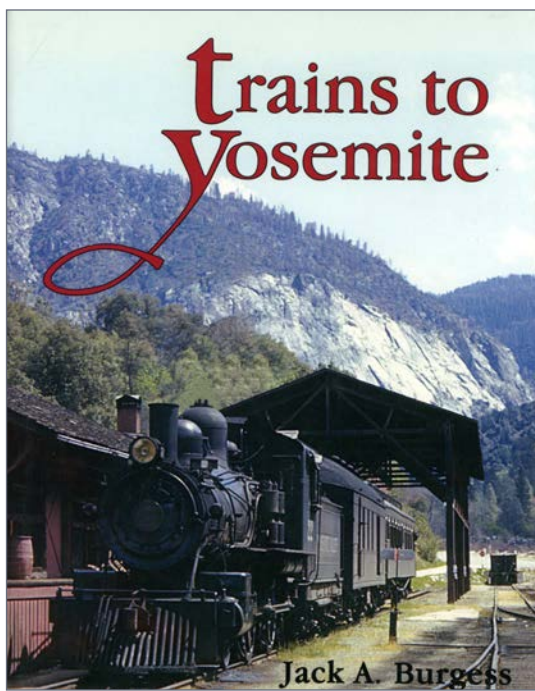
Al offered the scrapper his photos free of charge, in exchange for the opportunity to go through everything the scrapper was going to throw away from the offices. Al saved all the dispatchers' sheets and files on special events, including President Roosevelt's visit to Yosemite National Park in 1938. He also saved some station signs, locomotive number plates, marker lamps, and many other items.

When Al realized how serious I was about modeling the YV, he gave me copies of all the Dispatcher sheets for August 1939, the year and month I model the YV. After Al passed away in 1995, his widow Helga Rose suggested I write a book on the YV. Al had already started a book, and Helga gave me her blessing to use all Al's documents for mine, which I published with Signature Press in 2004 [5].



4. Al Rose railfanning the Southern Pacific Railroad Oakdale branch. The Yosemite Valley Railroad was also his favorite prototype railroad. *Ted Benson photo*





5. My book on the Yosemite Valley Railroad. The cover photo is one of 183 color slides Al Rose took of the YV.

Photos and research can be a godsend when trying to scratchbuild reasonably accurate models. Here are a few stories about building prototype models and the endless search for more information on my prototype. There have also been times when I was just trying to figure out the reasoning behind a bridge or structure.

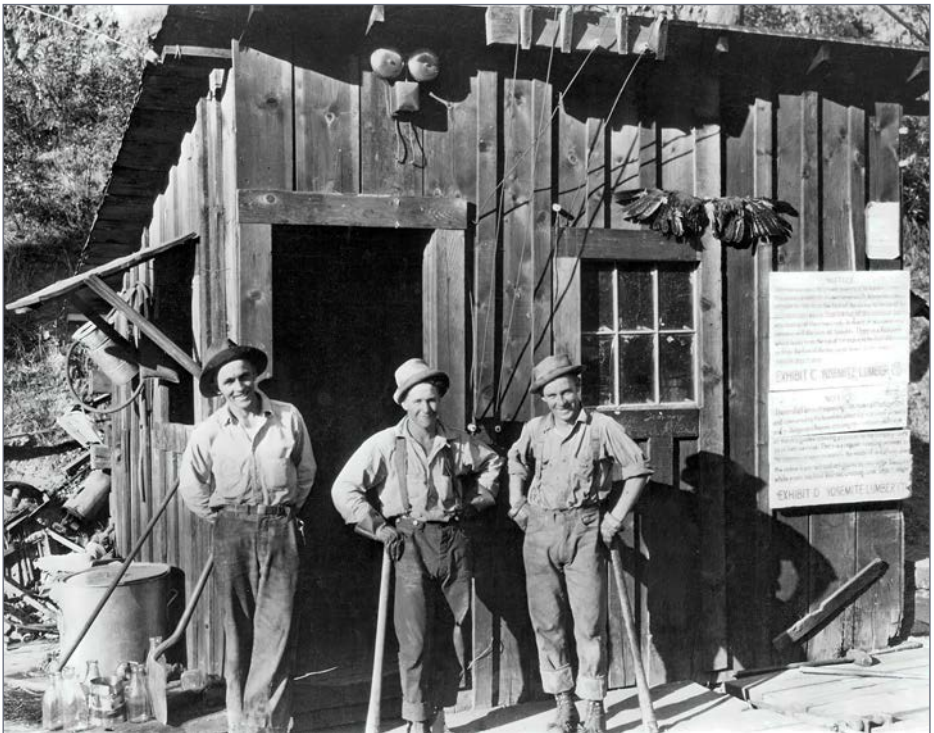
CONVERSATIONS WITH JIM LAW

Modeling a prototype as accurately as possible can lead to more questions. When I met Jim Law, he was living in the former home of the Yosemite Lumber Company incline supervisor in the community of Incline.

During a visit to his place in the early 1980s, I talked with Jim about a lumber company telephone shack along the YVRR that appeared in one of the photos in his collection. Jim took

me 100 yards along the abandoned YVRR grade to the telephone shack's former location at the bottom of the old logging incline [6].

Using the location and that photo, I modeled not only the shack but also the figures in the photo. Hank Johnston's book had a readable copy of the sign on the building, which was a series of warnings and regulations for hikers traversing the logging incline. I wrote out a large copy of the sign, photographed it, and sized a print for HO scale – no computers in those days. The sign on my model is readable with magnification [7].



6. From left to right, Jim Law, Lawrence Phillips, and Harry Hudson in front of the telephone shack at the bottom of the logging incline at Incline. *Jim Law collection*



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There was still a small concrete pad with a metal casting mounted on it near the telephone shack. I asked Jim about it, and he told me that the metal casting was for a stiff leg derrick the railroad used to unload equipment headed up the incline during construction [8].

I assumed the derrick was in place only for constructing the incline during the winter of 1923-24 and was razed immediately after, though I failed to ask Jim. The concrete pad and bearing block were interesting details I subsequently added to my layout, anticipating talking about my visit with Jim when inquisitive visitors might ask about it. (No one ever did.)



7. My model of the telephone shack with Jim, Lawrence, and Harry.

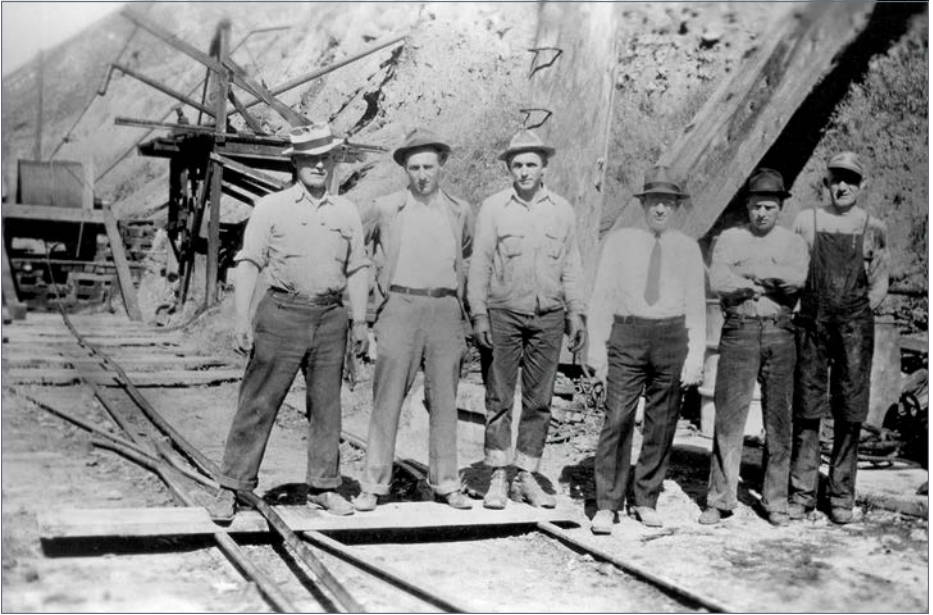
Decades later, I added another prototype photo to my collection that proved the stiff-leg derrick was still there in 1939 [9]. I never thought to ask Jim about that very important fact!

Stiff-leg derricks typically have a vertical mast with two support poles: one in line with the load and the other at 90 degrees so a load could be lifted, rotated to one side, and lowered. The prototype had a high embankment directly behind the derrick, so I modeled the support poles as being on top of the bank [10].



8. Barely visible next to the old railroad tie is a concrete footing with a metal casting attached to it. I decided that would be an interesting detail to model.





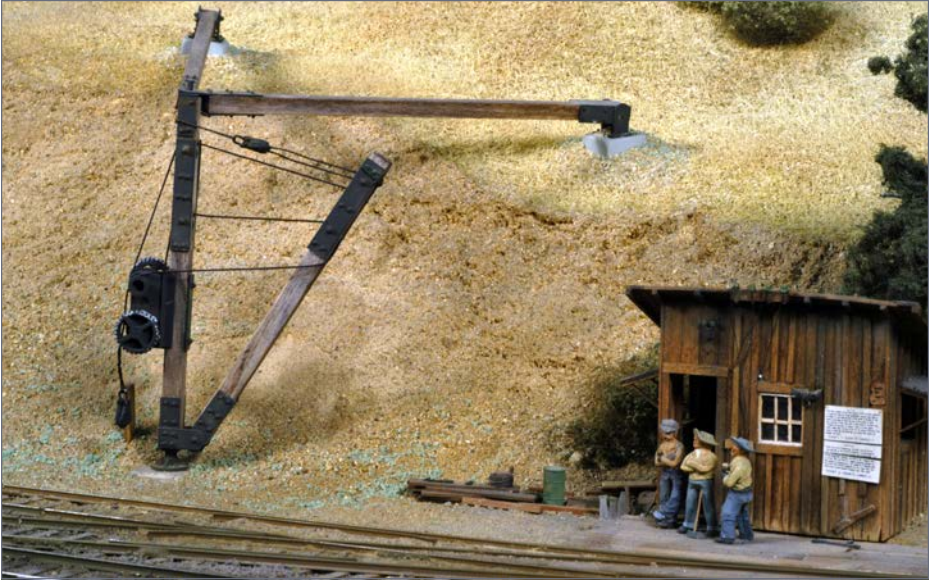
9. The stiff-leg derrick was still there in August 1939, when this photo was taken. It wasn't evident from this photo how the derrick was supported. *Jim Law Collection*

Years later, I acquired another photo of the location, taken from across the river from the tracks. It clearly showed wire ropes supporting the derrick [11]!

I ripped out my two support poles and replaced them with black thread. Rather than fastening the threads to the underside of the layout, I attached fishing weights to them so they would not accidentally be dislodged [12].

BOB THE DOG

On another visit to talk to Jim in mid-1980s, Jim pulled out an old trunk of photographs taken in the 1930s and earlier. I spent a warm afternoon sitting in his yard looking at the



10. Lacking better information, I modeled the derrick with rigid supports like other derricks I had seen in old photos.



11. This 1940 photo looks north toward the bottom of the incline from the south side of the Merced River. The derrick is on the far side of the locomotive tender. *Bob Searle photo*



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12. That “new-to-me” photo let me correct the supports on my derrick.

photos while Jim retold stories of railroading and logging in the “old days.” Jim could recall the location of every photo and the name of just about every individual in a photo, from loggers mugging for the camera to attendees at a Fourth of July party in 1920 when he was only 19 years old.

When he pulled out a photo of three individuals sitting on a YV speeder in front of the El Portal station, Jim not only correctly identified the three distinguished characters, but proceeded to recount their specific life stories [13]. “This here is Jack Scullen (on the left). He was the shop foreman for the YV...”

Trying to interject some levity into the situation, I quickly added, “And that must be Spot the dog,” referring to the black-and-white spotted dog sitting in the shade at the front of the station. Jim quickly retorted, in all seriousness, “No, that was Bob. He was owned by George Faber, the YV station agent.”

“This is Frank Higgins, Motive Power Superintendent (in the center). He was a Santa Fe man.” The YV originally lettered their locomotives like the ATSF, with the road name on the locomotive cab and the number on the tender, likely because of Frank Higgins’s influence.

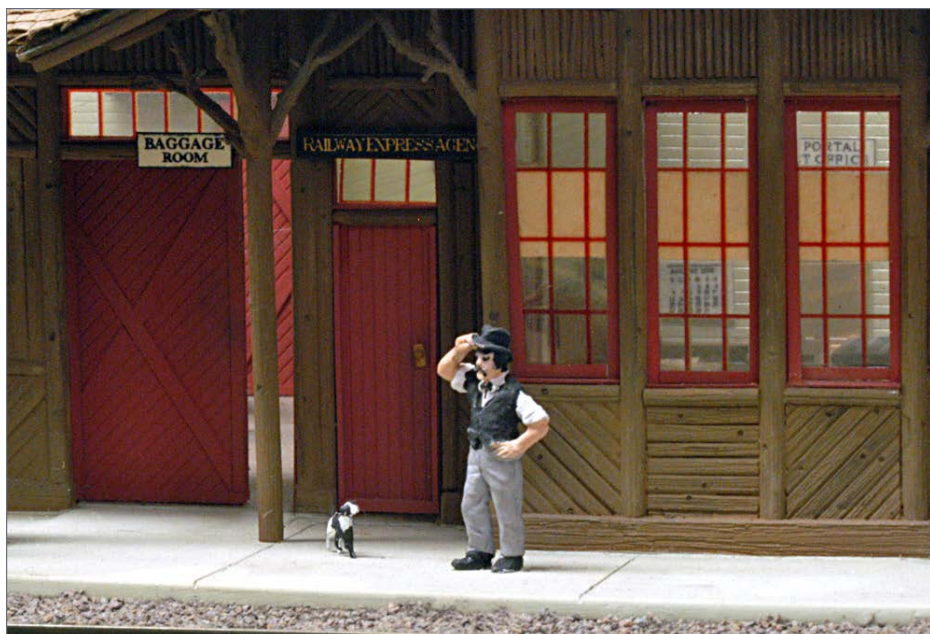
“And that fellow on the right is Judge Fred Ostrander. He later became a California state legislator...”

It is possible that Jim researched that photo 20 years earlier before it was published in Hank Johnston’s book, and remembered the names of the fellows in the photo from that earlier effort.



13. This is the photo Jim Law pulled out with the three distinguished individuals on the YV speeder and Bob the dog.
Clara Boyd collection





14. Station Agent George Faber with his dog Bob to his right.

However, I doubt anyone had asked about the dog over the past 60 years! And I have no doubt that the dog's name really was Bob. I had to model Station Agent George Faber and Bob the dog [14].

THE EL PORTAL HOTEL

Sometime in the early 1990s I was building a model of a hotel that existed in El Portal [15]. I had a few black-and-white photos of the building and I really wanted it to have been painted green with yellow trim. Nearly all the structures on my layout were combinations of white, red, or gray, and I wanted something in a different color.

On another visit with Jim, I asked him if it was painted green with yellow trim which I hoped it was. He agreed that it did,

though he was in his late 80s by this time. His daughter, who rarely joined any conversation, said she recalled it as red with white trim. So that is how I painted the model [16].

MORE QUESTIONS... EXTRA AIR COMPRESSORS

Decades ago, when I was still learning the basics of steam engines, I noticed some photos in Hank's book that spawned even more questions. Early photos of 2-6-0s 28 and 29 showed them with two air compressors on the fireman's side of the locomotive [17].

Later photos showed two more air compressors on the front pilot [18]. I assumed they were there to provide additional braking pressure for loaded log trains operating downhill



15. A fire destroyed the first hotel in El Portal in 1917, and this hotel was built to replace it. *Jim Law collection*



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16. My scratchbuilt model of the El Portal Hotel with the correct paint scheme.

from the bottom of the logging incline to the lumber mill in Merced Falls. Wrong!

Years later, I realized the extra air compressors were added after a major flood on the Merced River in 1937. The flood destroyed miles of YV roadbed, which was only 15 feet above the normal flow level of the river, covering it with debris.

The Southern Pacific Railroad lent the YV several air-controlled dump cars to aid in the cleanup effort. The debris was loaded into the cars and dumped into the river. The extra air compressors supplied the air to operate the dump cars via an air hose mounted to the left of the rear coupler [19].

FRONT AIR COMPRESSORS ON THE 23

YV 22 and 23 were nearly identical Alco 4-4-0s. Both locomotives originally had a pair of air compressors mounted on the fireman's side of the boiler [20]. Later photos show



17. The No. 28 behind the Carpenter Shop in Merced yard in 1934.
Bill Pennington photo



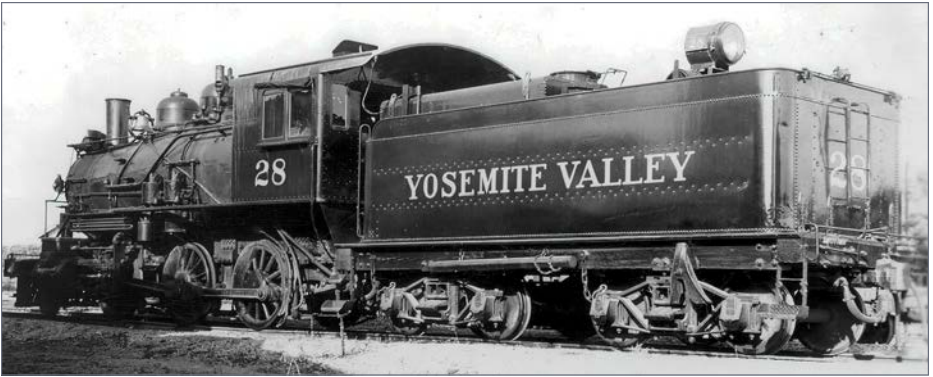
18. The No. 28 in 1942 with the extra pair of air pumps on the front pilot. During the war with Japan in 1941, all of the YV locomotives were fitted with blackout visors over the front headlights. *Bob Lunoe photo*



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19. This photo of the No. 28 shows the air hose for the side dumps to the left of the rear coupler. *Larry Harrison photo*

these two air compressors on the No. 23 were moved to the front of the locomotive. Why?

I wrote a letter to ex-YVRR brakeman Bob Lunoe in the early 1990s and asked him about them. He told me that maybe the YV was impressed by the railroads which had massive locomotives like 2-6-6-2s with air compressors in front of the boiler and decided to move the compressors on the No. 23 from the fireman's slide to the front of the locomotive [21, 22].

He went on to say "It was a tight squeeze when you'd open the smokebox door on the 23; it would hit the handrails around the compressors. So, they needed a skinny kid like myself to get in there and bail out the carbon." Bob added, "The YV didn't do that again."

WRONG WAY RPO CAR

I wrote an article for the August 1989 issue of *Railroad Model Craftsman* about a fictional trip on the YVR 50 years earlier, in August 1939. I chose August 6, 1939, for my "first-person account" since the railroad added a helper locomotive to the eastbound passenger train that day.



20. This photo of the No. 22 at El Portal shows the original placement of the air pumps on the fireman's side of 4-4-0 Nos. 22 and 23.

There is no date on the photo, but the blackout visor indicates it was taken after 1941. *Al Rose photo*



21. No. 23 being turned on the turntable at Merced in 1944. Railfans must have liked the "new" look or realized how unusual it was for a 4-4-0 since I have four straight-on photos of the pumps after they were moved. *Al Rose photo*



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22. My model of the No. 23 with the front air pumps at El Portal, spotted on a spur with a working derail. I kitbashed models of the No. 22 and 23 starting with a pair of Bachmann Maine Central locomotives. Replacement details on the No.

22 and No. 23 included brass air pumps, headlight, train indicator boards, and the turbo-generator.

I mentioned the weather on that date, the name of the conductor on the train, the name of the Pullman I rode in – Lake Sheridan, a 10-1-2, and the fact that we pulled out of the SP station in Merced late, all details recorded in the Dispatcher’s Record of Movement of Trains for that day. The narrative continued with details about the towns we passed and turning on the wye at Moss Canyon before backing into El Portal at the end of the line. I illustrated the article with photos of the passenger train on my layout [23].

Ex-YVRR brakeman Bob Lunoe purchased a copy and sent me an email pointing out that my RPO car was positioned backwards in the train. I had not realized but quickly learned that an RPO car always had the post-office end coupled to the locomotive [24].

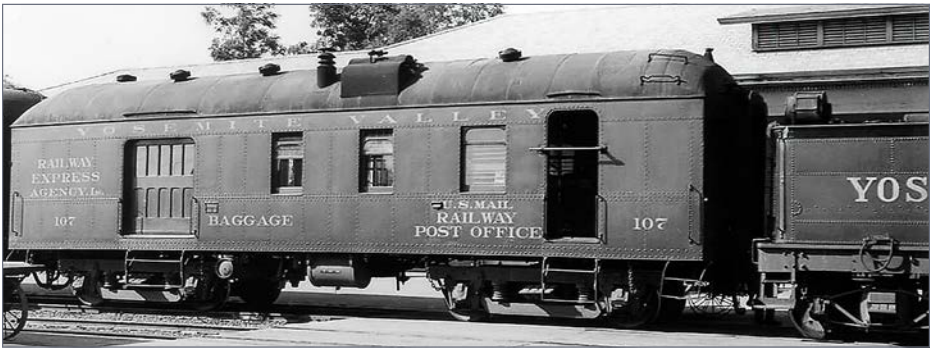
The baggage section of the car was always coupled to the rest of the train, allowing a conductor to enter to retrieve luggage for a passenger if requested. I never made that mistake again [25]!

M-OF-W COOK'S QUARTERS?

Decades ago, I acquired a photo of YV M-of-W car 06. It was obviously a flat car that had been modified with some type of storage space on one end and possibly crew quarters on the other, based on the windows [26]. Maybe a decade later, I acquired another photo that showed the other side [27].



23. This is the photo from the magazine article that caught Bob Lunoe's attention. The RPO is facing backwards.



24. The prototype for my model YV RPO car, stopped at the Southern Pacific Railroad station in Merced. The end with the person-door next to the locomotive is the post office section of the car.



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25. My RPO car 107 is correctly positioned behind locomotive No. 27 with a passenger train at El Portal.

In both photos, I realized it was coupled to M-of-W Cook and Dining car 07, with the windowed end next to the dining car. I concluded that M-of-W 06 must have been the bunk car for the M-of-W cook and crew. Since they had to get up early to prepare breakfast for 7:00 am or earlier, they would have required separate accommodations from the M-of-W crew [28].

STILL UNRESOLVED

Bagby was a station at milepost 47 on the YV. A 1914 California Railroad Commission physical valuation of the YV listed a 5,000-gallon water tank on the south/river side of the tracks there [29]. The YV eventually needed to remove it so they could extend the house track (next to the station). A pair of 5,000-gallon water tanks up against the hillside on the opposite side of the mainline replaced it.

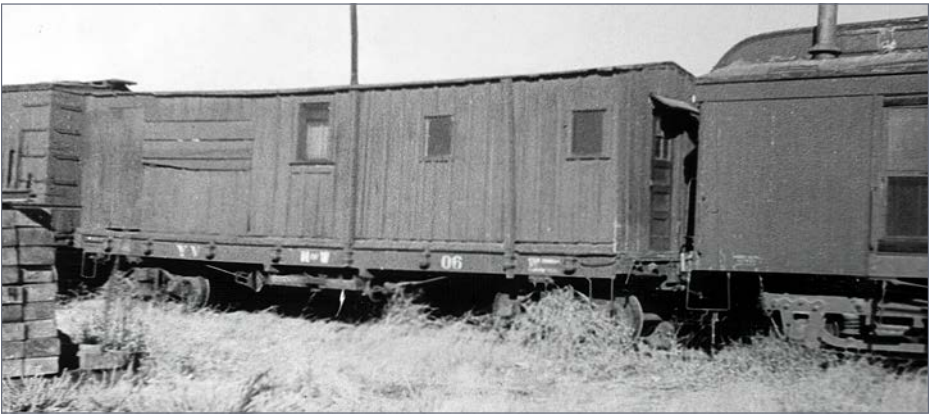
A new pair of 6000-gallon tanks replaced the 5000-gallon pair in 1939 [30]. The YV also installed a water plug west of the water tanks, opposite the station [31].

I wondered why the YV chose to build two 6000-gallon tanks instead of one 10,000-gallon tank. The YV Roadmaster once



26. M-of-W car 06 in Merced. I don't have a date for this photo, but the missing siding at left and the apparent junk stored at right suggest it was near the last run of the railroad in 1945.

Stanley Snook photo



27. The only other photo I have of this car shows the other side of 06. The near end of the car is coupled to the Cook and Dining car 07. It was this photo that convinced me that 06 was a bunk car for the kitchen crew.



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28. My model of the 06 (and 07) on a siding in the Merced yard. I scratchbuilt both cars from styrene.

implied the piping arrangement of the tanks allowed one to be taken out of service for maintenance.

I thought of two other plausible explanations. A single, larger tank would have required more excavation into the hillside to install, which would have been difficult in those days. The three Howe truss bridges between Merced and Bagby would have made shipping a single, prefabricated 10,000-gallon difficult, if not impossible.

Scale Structures Limited released a kit for the twin water tanks in the early 1970s, but I scratchbuilt my own first version of the twin tanks in 1976. But it wasn't done very well so I built a second better one in 1991 [32].

BRIDGE AT FOX CREEK

I have a couple of prototype photos of Bridge 64A over Fox Creek, most likely because the 160-foot-long trestle was a



29. An early but undated photo of the community of Bagby. The first station here is next to the two boxcars. The original water tank (magnified in the inset) was still in place on the river side of the curve east of the dam. The portion in the circle shows the water tank on the curve. *Mariposa Museum collection*

photogenic location in the mornings when the eastbound Yosemite Valley Railroad passenger train would roll by [33, 34].

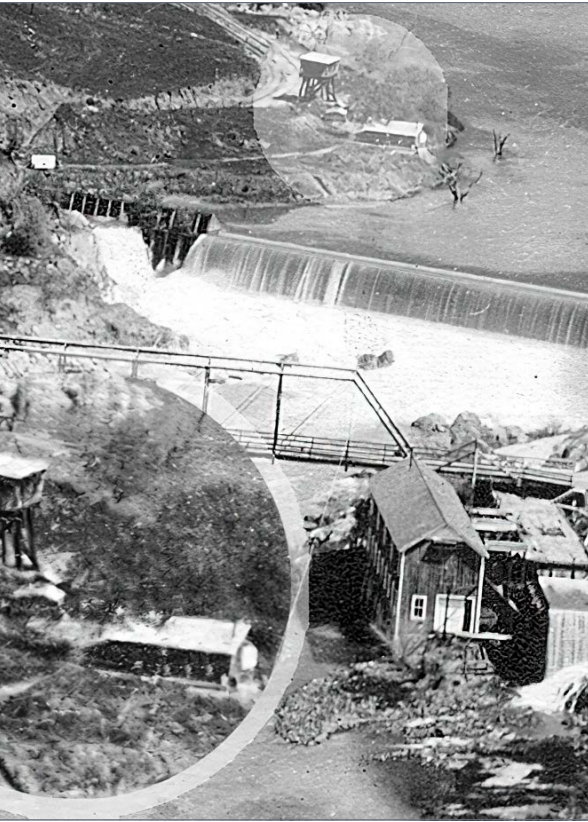
One thing that caught my eye was how the trestle bents were supported. All the untreated Douglas fir bents on this trestle originally rested directly on the ground. By the 1920s, the lower portions of some of the posts of the framed bents were deteriorating.



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The solution was to cut off the deteriorated portion of each post, add a new sub sill, and pour new concrete footings. On at least two of the bents, the posts on the river side of the bridge were satisfactory, while posts on the other side were cut short and rested on concrete footings.

The location of this bridge is accessible only by an eight-mile roundtrip hike from the nearest bridge over the Merced River. In 2011, 15 YVRR fans and I completed this trek. The view of the bridge

remains clearly showed the stepped concrete footings [35].

At that time, I didn't think about how the maintenance crews made these repairs. In the 1920s, the YV generally ran two passenger trains in each direction and two or more freights on a normal day. There was no room to build a temporary shoofly around the bridge.

The only solution that I could think of was that the crews must have built temporary bents to bracket the bents needing repair. Perhaps they used wedges to shift the load from the original bents to the temporary bents. They then cut off the decayed portions of the bents, added a replacement sub sill, and poured a concrete footing.



30. This is the last pair of water tanks installed in Bagby in 1939.
Todd Pederson Collection



31. The water plug opposite the station with the pair of water tanks further east.



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32. A freight train is about to take on water from the pair of scratchbuilt water tanks at Bagby. I wish I had thought to animate this water tank as I did for the water plug, out of sight behind the train.



33. This photo from July 7, 1940, shows Train No. 2 crossing Bridge 64A. The train that day consisted of locomotive No. 25, YV RPO car 107, leased Southern Pacific Railroad diner 10300, a Pullman picked up that morning from the Southern Pacific Railroad in Merced, and YV observation No. 330. The observation car still exists today in beautifully restored, original condition. *Wilbur C. Whittaker photo*



34. Pullman service was available on the YV only between Memorial Day and Labor Day. During the rest of the year, passenger trains consisted of only the RPO car and the observation car. Here is one of those trains passing over

Bridge 64A. Fred Stoes photo



35. Looking west at the remains of Bridge 64A in 2011 with the Merced River to the left. The “stepped” concrete footing for the first bent was a simple way to save concrete without compromising strength.



I didn't have room on my layout for a 160-foot-long scale replica of Bridge 64A, so I built a selectively compressed, 70-foot-long trestle bridge with some of the stepped bents [36]. Building a full O scale model of the 160-foot-long bridge as a display is on my list of future scratchbuilding projects. ✓

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36. My foreshortened model of Bridge 64A connects to a curve to the west (left) and a nearby turnout to the passing track at Incline to the east. If I'd had more space behind the bridge, I would have been able to replicate the terrain of the prototype more accurately.

Installing TCS WowSound in a Bachmann 2-8-0



MRH Running Extra | February 2022

MICHAEL ANTEAU UPGRADES A
LOCOMOTIVE WITH **DCC** SOUND ...



MY HO SCALE NICHOLAS & ASHLEY CREEK RY IS

A prototype-freelanced coal-hauling railroad set in West Virginia. The prototype portion of my inspiration is the Nicholas, Fayette & Greenbrier, and its parent company the Chesapeake & Ohio Railway.

The C&O is well known for its monster steam locomotives like the Texas class T-1 2-10-4 and the Allegheny class H-8 2-6-6-6. They also owned lots of smaller steam locomotives, a good proportion of which were 2-8-0 Consolidations.



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1. The finished product. A Bachmann 2-8-0 with WowSound.

The C&O acquired Consolidations from many sources, and assigned them to Class G. They served from the early 19th century until the end of steam and were often heavily modified over their long careers. Thus, there was a wide variety of “looks” for C&O 2-8-0s.

Bachmann’s Spectrum 2-8-0 Consolidation is a good representation of a C&O G-7 that started delivery in 1903. Some lasted in service until 1957, and I’ve long wanted to add one to my fleet. I wanted an unlettered one so I could easily letter it for the N&AC, and my son found one for me at a recent train show in Van Wert, OH.

The model he found was an early run. The previous owner had installed a DCC decoder, but no sound. All my locomotives have sound, so I knew I would have to install a sound decoder and speaker in this model.

TCS sells a WOWSound kit specifically for this locomotive, the WSK-BAC-1. They also feature an excellent installation document on their site: tcsdcc.com/installation/ho-scale/711. I had never installed a WOWSound decoder, so I decided to give one a try [2].

PART I: INSTALL THE SPEAKER

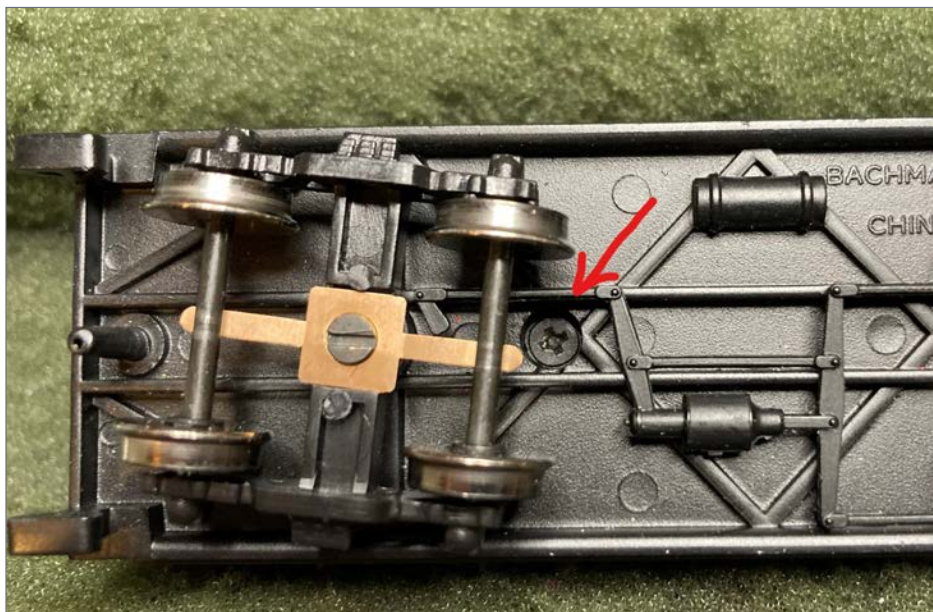
I began my installation by installing the provided speaker in the tender. This early-version tender has heavy metal weights in the bottom, so the best location for a speaker, without major modification, is under the coal load.

The kit included a speaker baffle. The baffle would not fit the recess without modification, so I chose not to use it. The tender shell serves as a good baffle for the speaker on its own.

WowSound INSTALL | 3



2. The TCS
WowSound
WSK-BAC-1 kit
with my
Bachmann
Consolidation
locomotive.



3. Begin by removing the tender shell. Remove one screw in the bottom of the tender, then lift and tilt the tender shell away toward the back to disengage the pins at the rear.



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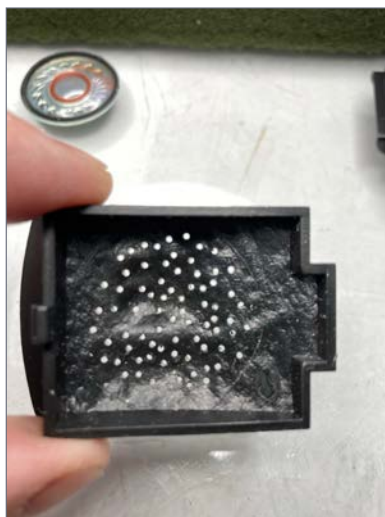
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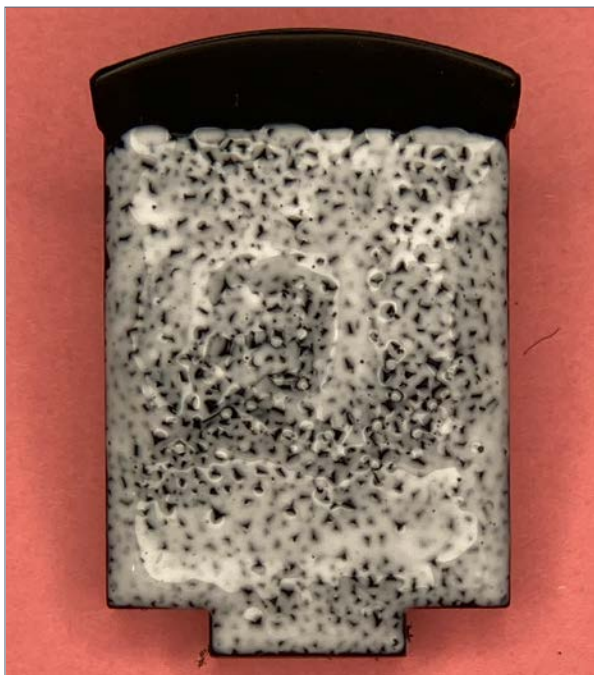
4. Next, press back on the tab inside the tender to pop out the coal load.



5. The coal load is removed, and the speaker will fit in the recess under it.



6. I placed the speaker on the bottom of the coal load to check for fit and scribed a line to mark its location. Then I drilled about 70 #64 holes in the tender coal load inside the scribed circle to allow the sound to escape. The exact size and location of the holes is not critical, but you want them small so they aren't noticeable.



7. I flipped over the coal load after drilling and coated the top with full-strength white glue.





8. I covered it with Woodland Scenics Run-of-Mine Coal.

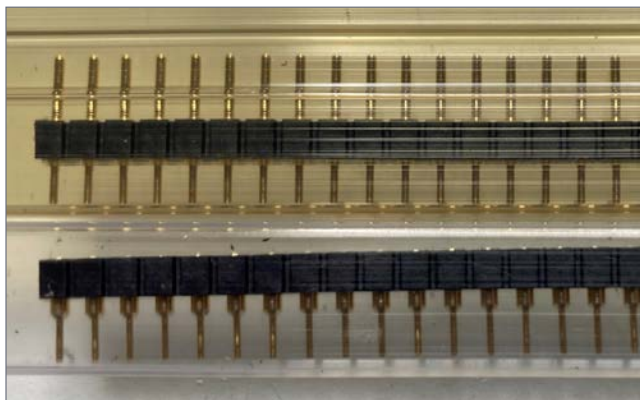


9. Working from underneath the coal load, I used a pin to open any holes the glue sealed.



10. The added coal improved the look of the coal load and camouflaged the sound holes so they were nearly invisible.

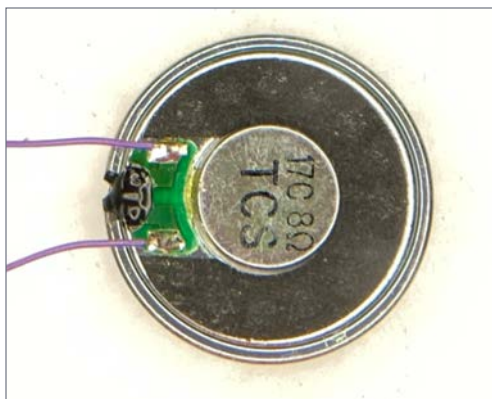
The two purple wires that come with the kit need to be soldered to the speaker. I prefer to add a plug to the wires so the tender shell can be completely removed. I used SIP headers and sockets for this [11].



11. The SIP headers and plugs come in a strip so you can cut off as many as you need with wire cutters or a hobby knife.



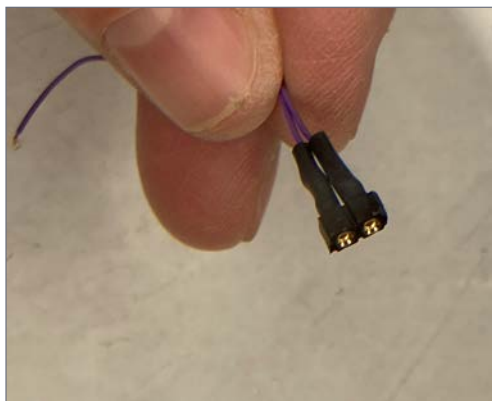
WowSOUND INSTALL | 8



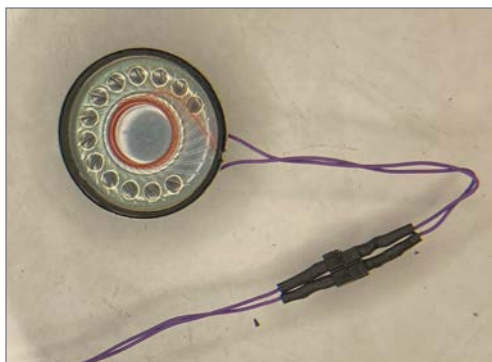
12. Cut the speaker wires in half, then strip about 1/8" of insulation off two of the wires and solder them to the speaker. It's easiest to do this by tinning the wires first, then laying them on the speaker tabs and applying heat with the soldering iron until the solder on the wire melts into the solder on the speaker tab.



13. Slip some shrink tubing over the wires, then solder the other end of wires to a plug and secure the shrink tube by heating it with the iron.



14. Next, solder the other two wires to the socket portion of the header strip.



15. Connect the header and plug together, and the installation is complete. The last two ends will be soldered to the WOWSound motherboard.



16. The final step is to glue the speaker under the coal load. I used a toothpick to place a ring of Walthers Goo on the outside edge of the speaker, being careful not to get any on the speaker cone itself.



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17. I pressed the speaker in place under the coal load.



18. When the glue was dry, I fed the wires through the hole in the tender and snapped the assembled speaker/coal load back into place.



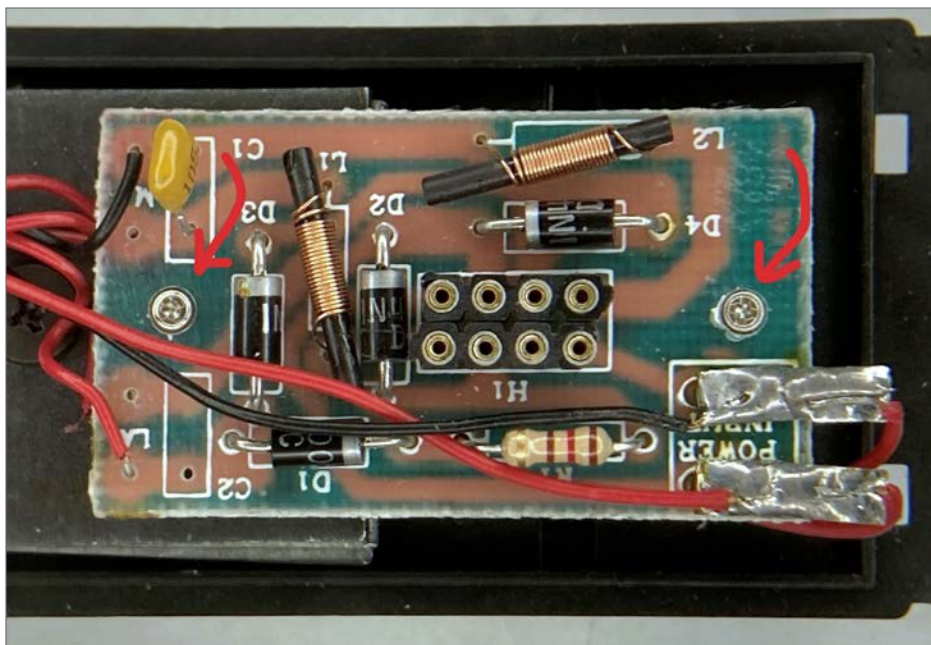
19. The wires extend into the tender shell from the coal load.

PART II: INSTALL THE DECODER

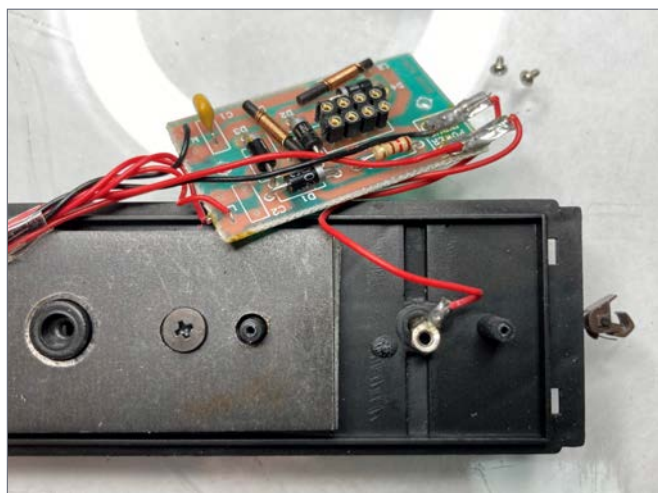
The TCS B-MB1 motherboard included in the kit replaces the stock circuit board. It includes solder pads for all the locomotive's electrical connections, keep-alive capacitors, and a 21-pin mount for the WOW-121 steam decoder

I unsoldered each of the wires from the Bachmann circuit board and attached them to their corresponding tabs on the B-MB1 motherboard. Bachmann wiring does not follow standard DCC wiring colors, but the TCS website installation document has a diagram of which wires do what on the Bachmann circuit board [23].

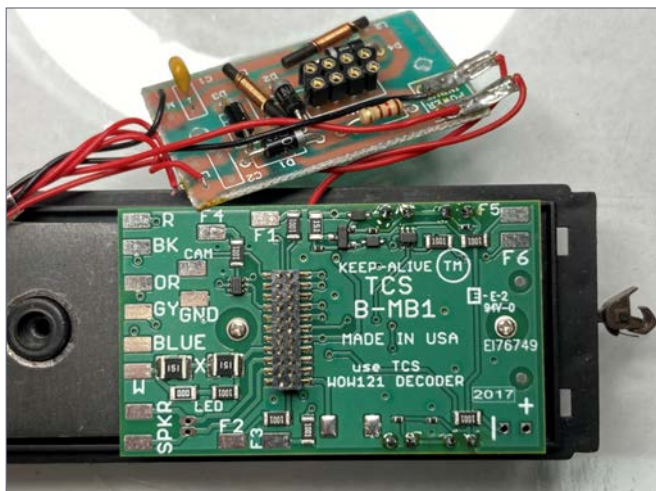




20. Begin by removing the two screws that hold in the original circuit board.



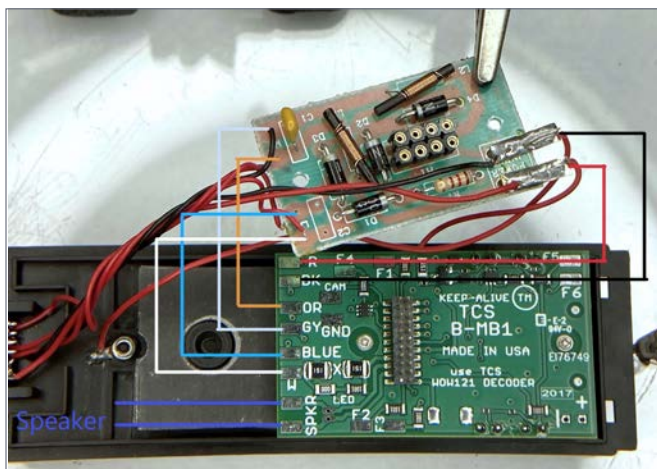
21. Keep all the wires connected to the board for now and be careful not to lose the tiny screws.



22. Mount the TCS B-MB1 board with the socket for the decoder facing up, using the screws from the original circuit board.

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23. The lines on this photo show how to transfer the wiring from the Bachmann circuit board to the TCS B-MB1. Red (+) and black (-) lines denote right and left track power. Orange (+) and gray (-) lines go

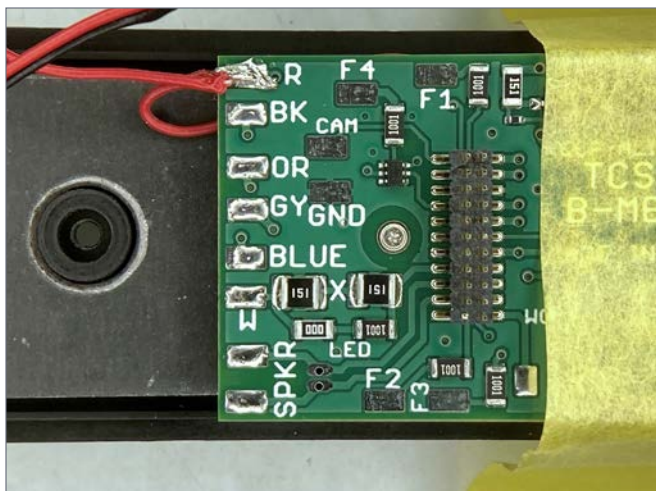
to the motor. The blue (+) line goes to function common, and the white (-) goes to the headlight.



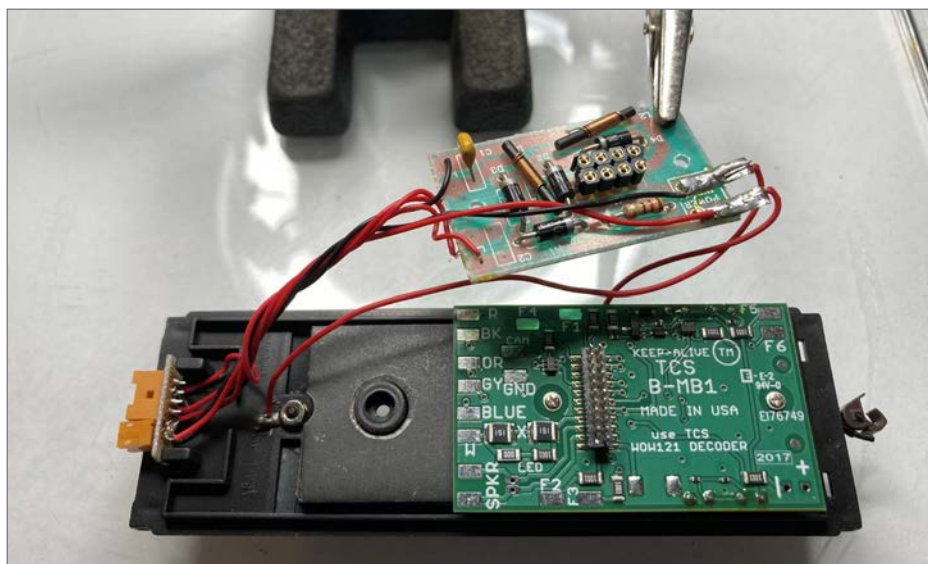
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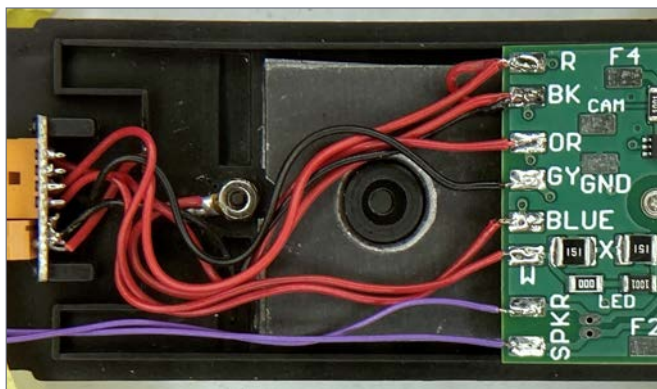


24. Before moving the wires, add a little solder to the pads on the B-MB1. This will make it easier to attach the wires.



25. To move the wires, I held the original board in a “helping hands” tool and used a soldering iron on moderate heat to remove the wires, one at a time, from the Bachmann circuit board, and connect them to TCS B-MB1.





26. The left and right rail pickups (black and red on the B-MB1) each have two wires, one from the engine plug and one from the tender pickup. For these, I stripped the ends

of the wire pairs and twisted them together, then tinned them and soldered them to the B-MB1.

The procedure to follow when moving each wire is:

1. Unsolder the wire from the Bachmann motherboard
2. Cut the wire to length and strip $\frac{1}{8}$ " insulation off the end
3. Tin the wire so it will quickly solder to the motherboard
4. Hold the wire to the motherboard tab and heat it to solder it to the tab

Finally, solder the two speaker wires to the pads on the motherboard marked SPKR and plug the decoder into the B-MB1 motherboard.

PART III: REASSEMBLE AND TEST

To complete the installation, I secured the wires in the tender into a harness with Kapton tape. I also used Kapton tape to hold the wires in position in the tender so they would not interfere with the screw, and the shell would not pinch them during reassembly. I similarly used the Kapton tape to hold the speaker wires in the top of the tender shell, out of harm's way. I then connected the speaker plug [27].



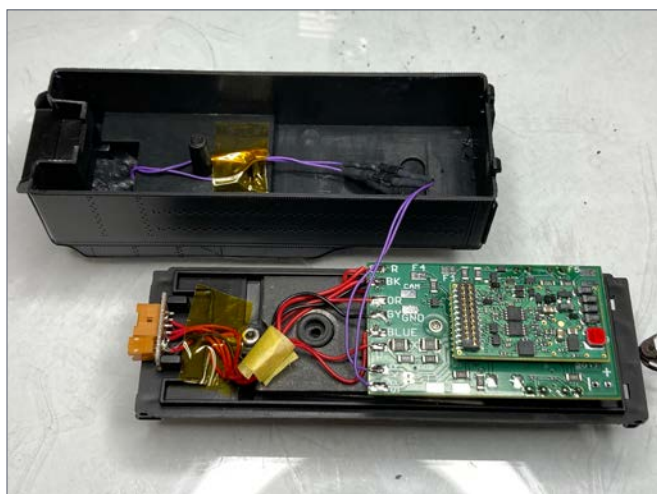
I fit the tender shell back onto the chassis and secured it with the screw from the bottom. I then connected the locomotive to the tender and headed off to the test track!

My locomotive ran and sounded great with the factory settings. The keep-alive also worked great. It worked so well that when I turned off my layout power, the locomotive kept chugging along with background sounds.

The sound was a little too loud for my room, and I wanted to change the decoder address and momentum settings. To make the changes, I fired up my computer and JMRI Decoder Pro. Decoder Pro made programming a snap. You can see and hear the locomotive in action here:

youtu.be/FaR6c3ctmK0

There are so many options available that I'm still diving in, but I can say that I'm very pleased with the ease of this WOWSound decoder installation and its quality performance and features.



27. All wires are in place with Kapton tape for reassembly and the decoder is plugged into the motherboard.

PARTS LIST

Parts:

- TCS WOWSound WSK-BAC-1
- Bachmann Spectrum 2-8-0
- Woodland Scenics Run-Of-Mine Coal
- Mouser Header Strips

Tools:

- Soldering Iron
- Small-gauge wire stripper
- Small Philips screwdriver
- #64 drill bit and pin vise (or similar)
- Helping Hands parts holder

Supplies:

- Kapton tape
- Shrink tubing
- Walthers Goo
- Rosin-core solder
- White glue ☒

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MICHAEL ANTEAU



Michael comes from a railroading family. His grandfather was an engineer for the C&O, and his father was an engineer for CSX.

Michael was first bitten by the model railroad bug watching his dad's Lionel trains, and he built his first 4x8 layout at the age of ten. Michael is now working on his "dream" layout, a prototype-freelanced coal hauling railroad set in transition-era West Virginia.

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

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Rivarossi

passenger car conversion



MRH Running Extra | February 2022



ERIC HAFFNER CONVERTS
RIVAROSSI PASSENGER CARS INTO THE
JEWELS THEY WERE MEANT TO BE ...

RIVAROSSI PASSENGER CARS WERE THE CRÈME DE LA CRÈME YEARS ago. Newer passenger cars from Walthers have surpassed them, but they cost \$60 and more. Granted, Rivarossi cars have their flaws, but the 1930s smooth-side and corrugated cars are still beautiful, and I was determined to make them run well.

Rivarossi passenger car trucks are good looking, but they also have some inherent problems. The trucks have 31-inch wheels with plastic frames on talgo-type trucks. There is an un-prototypical open space between the trucks and the body, which is likely because of the small wheels [1].



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RIVAROSSI PASSENGER CAR CONVERSION | 2

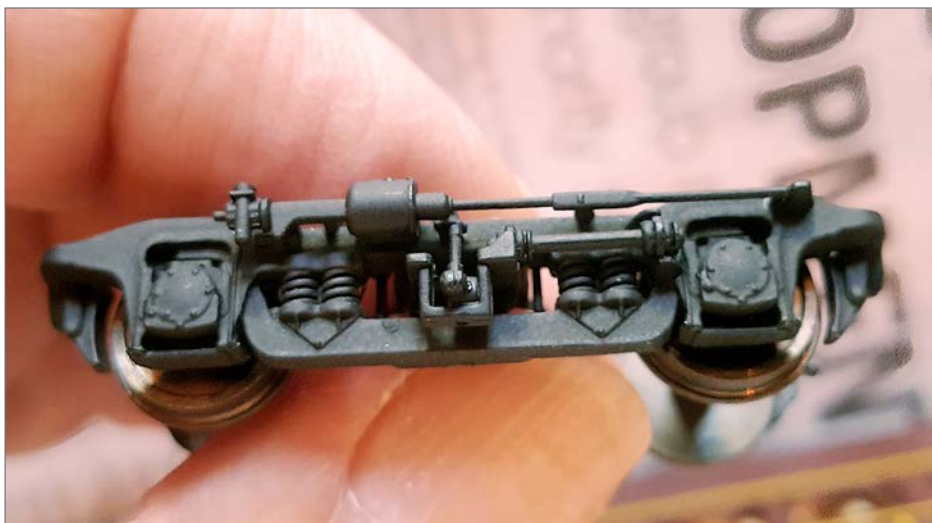
My solution was to upgrade the Rivarossi cars with Walthers passenger car trucks and body-mounted couplers. The Walthers trucks have metal side frames, correctly sized wheels, and other advantages over the originals [2]. Here is the process I used for the upgrade.

I converted four types of Rivarossi smooth-side cars in my collection, including baggage, RPO, coach, and observation. Except for the interior, the passenger cars and the baggage cars were a nearly identical process. I upgraded them with Walthers GSC 41-HR two-axle passenger car trucks (920-2102) and Kadee #451 swing gearbox couplers.

The rear coupler of the observation car was an exception. Rivarossi originally installed a dummy knuckle coupler there. I wanted to have a functional coupler, but maintain the aesthetics of the streamlined observation, so a #158 coupler worked.



1. Rivarossi passenger car truck.



2. Walthers GSC 41-HR passenger car truck.

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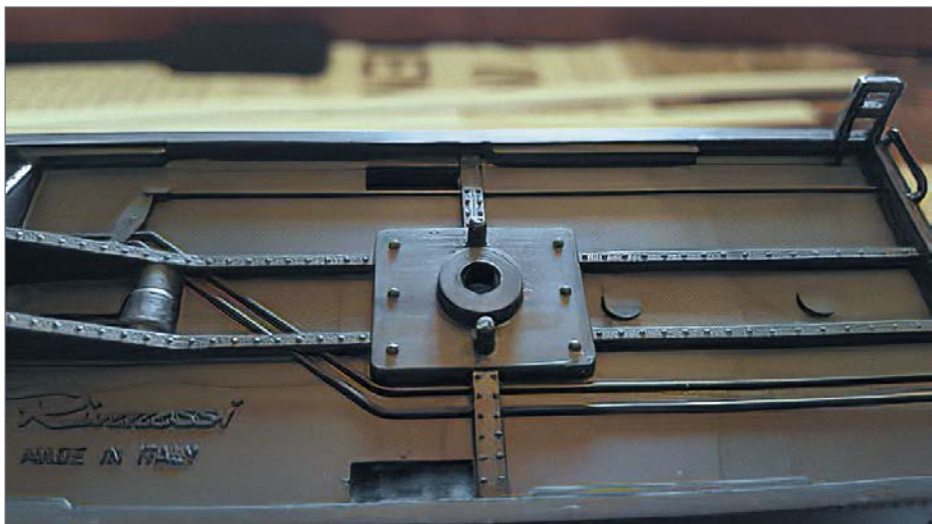
3. Walthers heavyweight type 2411 truck. *Manufacturer photo*



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4. I needed to level the bottom of the car between the bolster and the end of the car. I began by chiseling-down the mold injection marks in the channel between the frame braces.

The RPO was considerably different. I installed Walthers three-axle heavyweight type 2411 trucks (920-2204) [3]. The length of the trucks proved incompatible with the #451 draft gear, so I used Kadee #158 couplers on both ends instead.

The common denominator for my upgrades was the use of Walthers trucks and body-mounted draft gear.

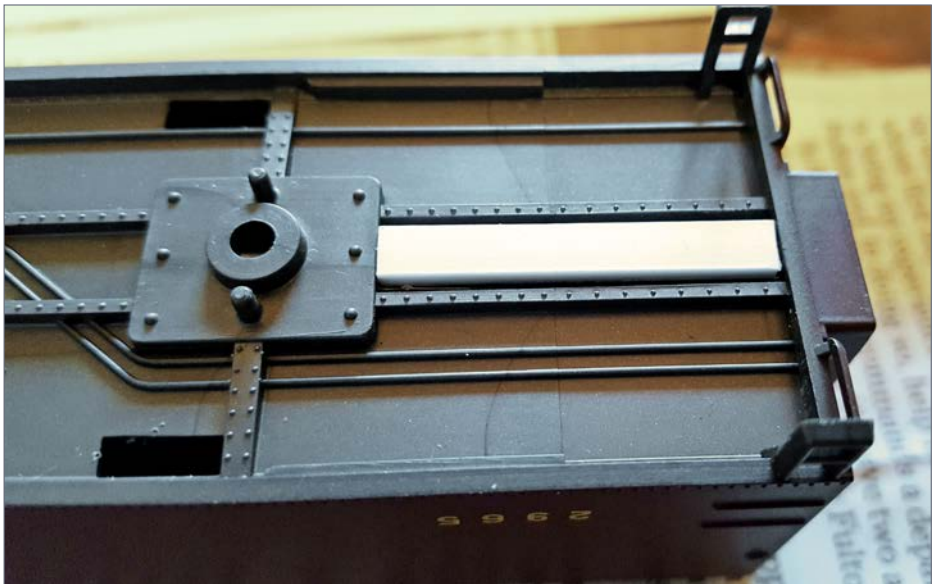
PREPARING THE TRUCK BOLSTERS

The first step to the upgrade was body preparation on the Rivarossi coaches. I needed to lower the bolster to match the height of the Walthers trucks, and I also needed to create a flat, uniform surface from the edge of the truck bolster to the end of the car. There were several molding marks and molded-on spacers that were in the way of these installations [4].

Once I had removed the mold injection marks, I prepared pieces of Plastruct 0.060 x 0.156-inch channel styrene (9067) to place in the frame channel between the truck bolsters and the car ends. The length of styrene I needed for the fill was the same for each car. I noticed, however, that the floor heights were not necessarily the same [5].

The Walthers trucks have a much lower bolster than other trucks, so I needed to add a block of styrene to compensate. I chiseled-off the pips and mount on the Rivarossi bolster with a #17 chisel blade and filed the surface smooth with a nail file [6].

I proceeded to experiment with balsa wood to find the size of block I needed to lower the bolster to match the Walthers truck bolster height. I determined that I needed a block of 1/8-inch thick by 1/4-inch wide. The length of the block was



5. The Plastruct styrene fill is in place. The spatial relationship between the truck bolster and the end of the car were consistent for each Rivarossi car type I did, though the floor heights varied.



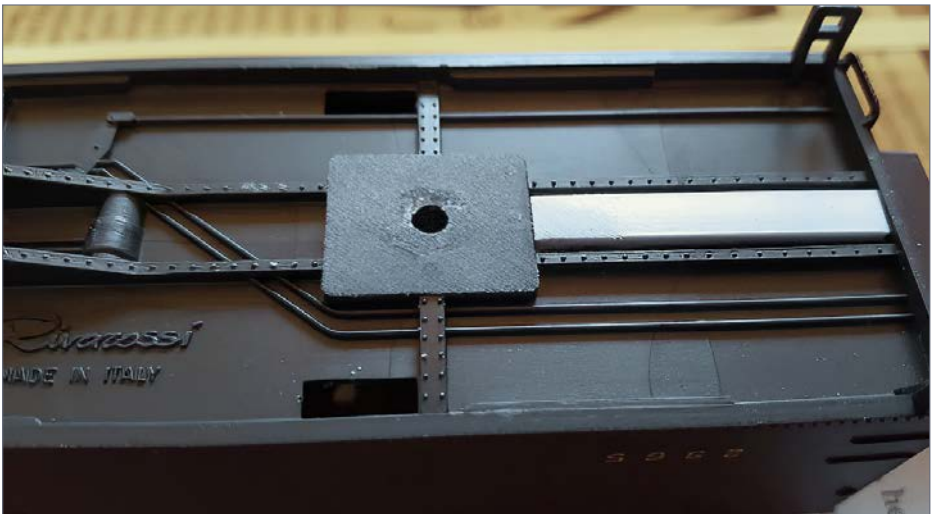
RIVAROSSI PASSENGER CAR CONVERSION | 6

not critical, so long that I left plenty of room for the Kadee #451 swing arm draft gear.

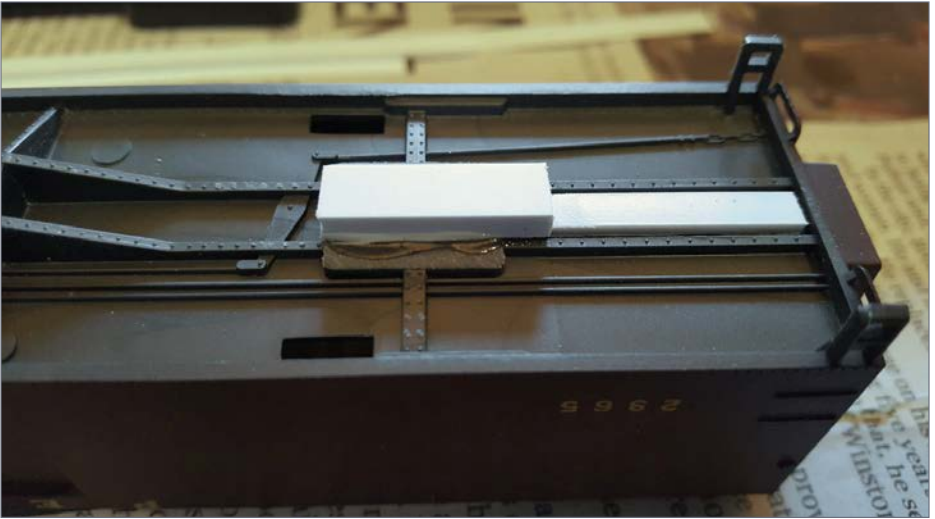
After the initial car, I changed to styrene. The length of the block was not critical, so long that I left plenty of room for the Kadee #451 swing-arm draft gear. I experimented with clear PVC cement to glue the different plastic parts together, and was pleased with the results [7].

I drilled a #47 hole – large enough for a #3 screw/unthreaded – even with the edge of the interior recess of the Rivarossi bolster. The location of the truck mounting hole was critical for proper truck pivot. I shimmed the coupler mounts as needed to achieve a flush fit with the end of the passenger car [8].

Walthers offers universal truck bolsters (#920-2310) to help mount their trucks on other manufacturers' cars. I inserted these into the #47 holes so the flange was flat against the body. This alleviates any concern that the trucks will interfere with the spacers.



6. The truck bolster is cleaned up and ready to go. The original Rivarossi pin mount was deformed in this procedure, but that wasn't a problem because I won't be using the same mount again.



7. The 1/8 x 1/4-inch block is in place. Note the spacing between the block and the end of the car is sufficient for Kadee #451 swing-arm draft gear.



8. The mounting hole is drilled. I found that the Kadee mounting area needed a 0.020" shim to fit flush with the end of the car.



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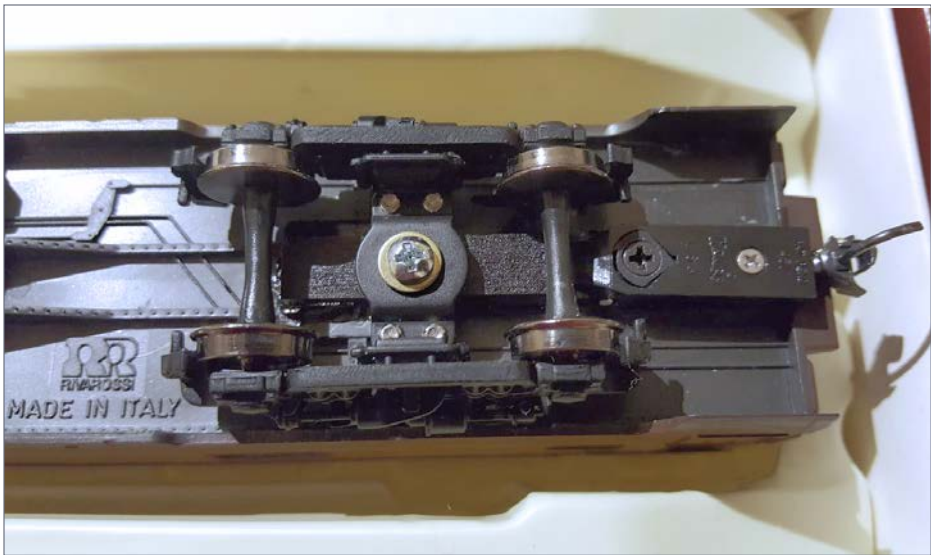
I chose #3-48 screws for the conversion because the 1/4 inch outside diameter of the #3 screws' flat washers were just the right size to hold the trucks on the car. I had to ream the universal truck bolsters to accommodate the screws. I held the bolster in a drill chuck and, without running the drill, used a jeweler's square file to enlarge the hole.

It seemed that the effort of reaming the bolsters was justified, and the #3-48 screw and washer proved a reliable and simple solution to attach the trucks. I found a 5/16-inch screw length fit exactly, but 3/8-inch extended into the car interior. I did not tap (thread) the holes for the screws.

I mounted the Kadee couplers so that most of the coupler was under the car's "diaphragm." Since the coupler swings, it is positioned to provide much closer coupling than may be considered normal. This positioning is still sufficient to allow the coach to run on 24-inch radius curves [9-13].



9. Here are my observation cars after much cutting and testing and fitting.



10. This was my first completed conversion of a Rivarossi observation car using blocks of balsa wood. After I was satisfied with the fit and coupler height, I painted my conversion black with a paint marker. The Kadee #451 mounts with a #2-56 screw (#50 hole). Though it's not obvious from the photo, I positioned the couplers so that only the coupler's knuckle extended beyond the coach's "diaphragm."

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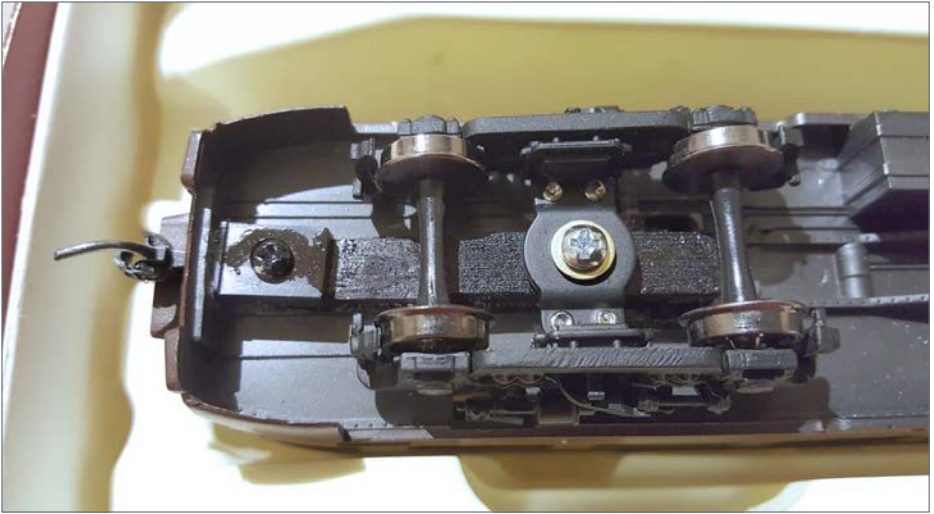
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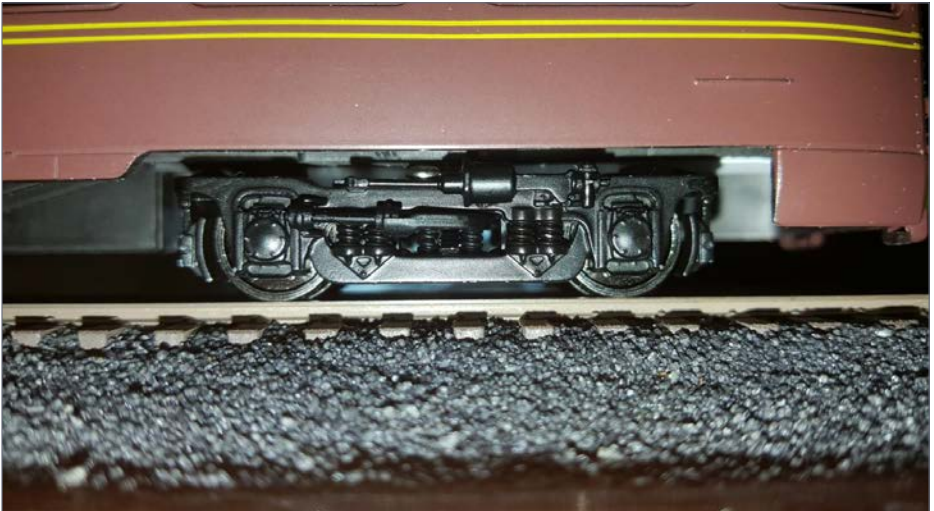
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11. I installed a Kadee long-shank coupler (#156) on the tail end of the observation car. After shaving off the original coupler pocket, the Kadee draft box installed with no height adjustment.



12. Looking Good!

INCREASING THE WEIGHT

After replacing the trucks on my Rivarossi passenger cars, I added a thin sheet of lead (Miscellaneous Railroad Company LSW 118) to the floor. The full-length sheet would have put the car over the NMRA recommended weight, so I cut the lead so it extended only bolster-to-bolster [14].

I chose lead for several reasons. Unlike steel, lead is not magnetic. Its density also allows for a thinner sheet than steel, which was important because I wanted to re-install the interiors. Finally, lead is soft, so you can cut it with regular scissors, diagonal cutters, or even a single-hole punch.

After fitting the lead sheet into the passenger car, I glued it with automotive black weather- stripping adhesive from the auto-parts store. This stuff really sticks! You could use Walther's Goo or whatever glue you prefer, but I know the weather-stripping adhesive is not letting go.



13. This is a converted Rivarossi tail car (on the left) coupled to a Walther's passenger car to verify car and coupler height and compatibility.





14. This is the “tail car” with the sheet of the LSW118 lead before I glued it into the car. Notice that I snipped around the various protrusions so the sheet would lie flat. I have since determined that a hand-held hole-punch does a much better job of making the notches.



J. Regier

WEIGHTING THE CARS

Lead is a toxic substance. Always take proper precautions when working with lead, and be sure to clean up your workspace afterwards.

If you are looking for non-magnetic, highly dense materials to weight your Rivarossi cars, lead is just one option. Check out Lewis Phelps’ discussion of tungsten as an alternative in the September 2020 *MRH* “Publisher’s Musings,” for example. Aside from not having the toxicity of lead, tungsten is denser, and in its powder or shot form, it can have even more flexible application than a lead sheet.

With these older Rivarossi cars, you’re also not strictly limited to thin sheet weight if you’re looking to add weight without raising floor height significantly. For example, the under-car details shown in [6] are almost always hollow plastic moldings just waiting to be filled with a tungsten-epoxy slurry. You can do the same for the hollow plastic underside of the interior moldings.

Finally, I was prepared to re-install the car interiors. Unfortunately, the screws I used to mount the couplers protruded a bit too far above the car's floor level [15].

To clear the screws, I had to drill holes into the interior so that it could rest over the screws. The holes were ugly, but at least the screws did not protrude beyond the interior floor level [16]. Putting things in perspective, the holes in the interior floor are nearly invisible in normal viewing [17].



15. Oops! The coupler screw is too long.



16. The holes are ugly, but necessary to clear the screws.



Finally, I added lighting. Rapido's Easy-Peasy lighting system made this a cinch. The kits are battery-powered and you can shorten them as needed [18]. ☑



17. This is the original Rivarossi interior re-installed into the tail car. The holes in the floor are unobtrusive under normal viewing.

See final picture on the following page ...

ERIC HAFNER



Eric grew up in Philadelphia only a few blocks from a freight yard, and was exposed to trains daily.

His Grandmother liked trains, his Dad liked trains, and his brothers and sisters liked trains. The Family switched from Lionel trains around the Christmas tree to a year-round basement HO layout in 1955. Since Eric loved everything electrical and mechanical, model railroading was a perfect match.

In 2020 he started on his second layout on a shelf. That can be found on Facebook as "Dreams 2". ■



18. My baggage car is complete with its three-axle trucks and Rapido Easy-Peasy lighting kit. I may replace the interior with a 3D-printed interior I found on eBay for Athearn RPO cars. It'll require some trimming to fit my Rivarossi car, but the detailing looks much better.

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Building “bump-resistant” signals for your model railway



MRH Running Extra | February 2022

HENRY VAN WYK MAKES A
SIGNAL THAT CAN TAKE A LICKING
AND KEEP ON TICKING ...



THE USE OF DIFFERENT TERMS FASCINATES ME WHEN IT COMES to watches. “Water-resistant” watches can endure a brief exposure to water, whereas “waterproof” watches can endure unlimited exposure.

I bring up this point because I do not want to give instructions for building something that does not meet expectations. The signals I build are bump-resistant, not bump-proof. This means they can handle a few small bumps with relative ease, but might still sustain damage with a heavy, hard-handed bump.



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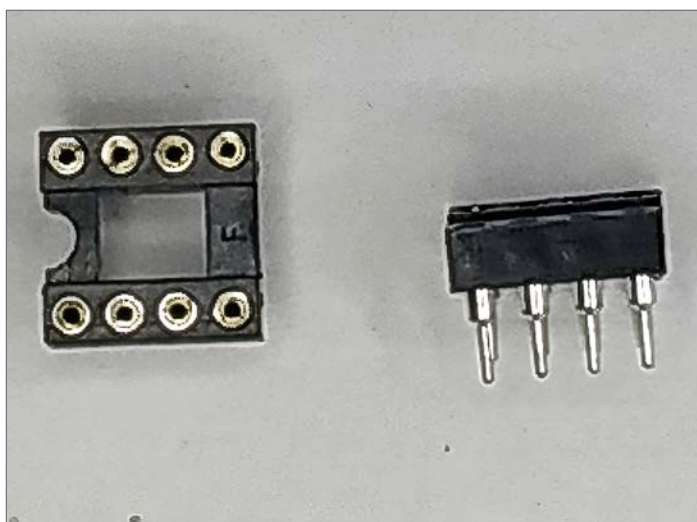
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The idea for bump-resistant signals originated with my late father, who had a display layout he set up at church fairs and community shows. Since his layout was portable, all the buildings and other above-ground structures had to be removable. Hence, he needed plug-and-play, “bump-resistant” signals.

For this article, I describe the process for making simple two-aspect signals. You can repeat the same steps to create signals with three or more aspects.

COMPONENTS

The key components to this system are 8-pin integrated circuit (IC) dual-inline-pin (DIP) sockets in an unusual pairing. I use a DIP socket with machined, round pins and solder tail for the signal's base [1]. This plugs into a second DIP socket with flat pins and sprung female receivers that is embedded in the layout [2].



1. Eight-pin DIP socket with machined round pins and solder tail.

BUMP-RESISTANT SIGNALS | 3

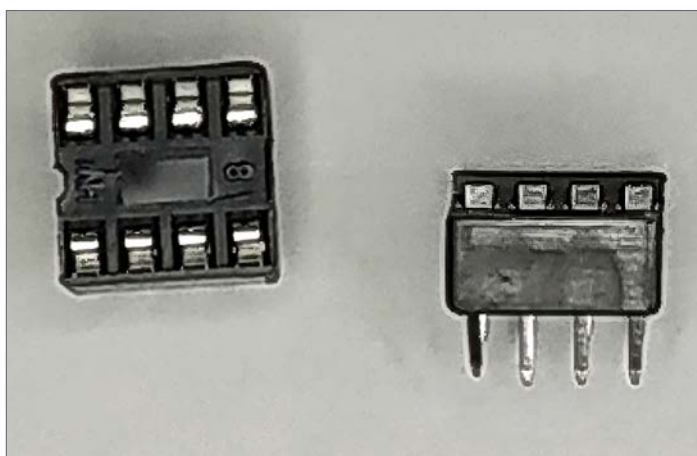
The unusual pairing of the signal base's round-pin DIP socket with the female receptacles of the DIP socket in the layout base works well in this case. It provides a sturdy structure for the signal with electrical connection for its LEDs. At the same time, the seating of the round pins within the flat-pinned socket allows the signal to break away without damage if bumped.

Other components include:

- PC “stripboard” (perforated circuit board with metal strips for soldering) 2x2 inches max
- Brass sheet for signal head
- One red and one green 3mm LED
- 1K resistors for the LEDs
- Color-coded, 24 AWG or smaller wire: red, green, and black.

MAKING THE SIGNAL HEAD

I construct the signals using 3.5mm brass tubing for the mast and brass for the head. The shape of the head should match that of your prototype for its intended purpose.



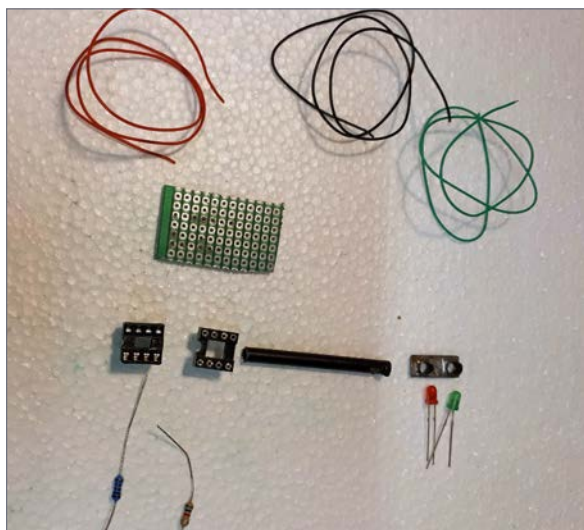
2. Eight-pin DIP with sprung female contacts.



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3. Components for bump-resistant signal.

First, I mark the shape and size of the signal head on the brass sheet and cut it out. Next, I drill holes for the LEDs in the signal head. Finally, I make hoods for the LEDs.

I make the hoods from short pieces of 3.5mm brass tubing, just long enough to cover the LEDs. I cut at a 45-degree angle on one end of the brass tubing and straight on the other [4].

Once I have the pieces cut out, I solder them onto the head. While the first hood is normally easy, the signal is small enough that it can be tough to solder the second hood on without disturbing the first solder joint. Putting wet tissue paper around the already-soldered head helps dissipate the heat as I solder the second [5].

Glue is another option for attaching the hoods to the signal head. If you choose this option, use epoxy. Other glues seem to come apart over time.

Once I have the signal head assembled with the hoods in place, I solder it to the mast, made of 3.5mm brass tubing. The length of the mast depends on prototype and your own preferences.



4. Signal head and hoods.



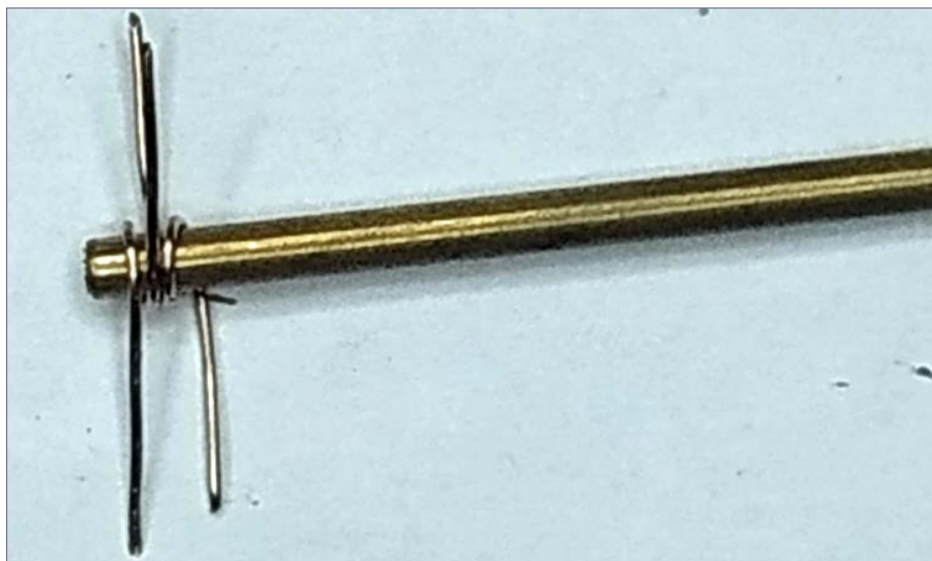
5. Soldering the second signal hood onto the head.



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6. Wires twisted.

THE BASE

A sturdy base is critical for making the signal bump-resistant. There is more of a process to it than simply planting the mast into a hole in the baseboard.

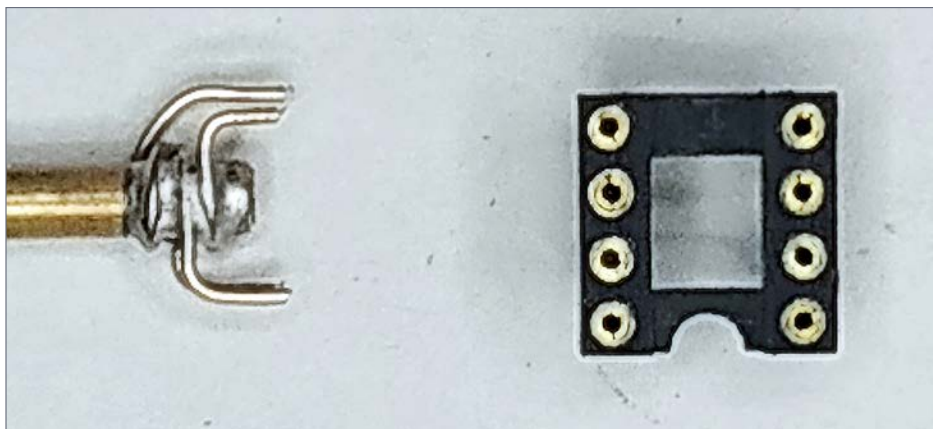
To begin I twist two pieces of stiff wire around the base of the mast in opposite directions [6]. I then solder these wires to the base, and bend and trim the ends so they fit into the middle four pins of the round 8-pin DIP socket [7].

I solder the wires into the four middle pins of the DIP socket, making sure the signal mast sits squarely. In addition to serving as the signal's base, the middle four pins serve as the common ground for the LEDs in the signal mast [8].

I solder the common leads from the LEDs together and then to the signal head. I then solder thin red and green wires to the

BUMP-RESISTANT SIGNALS | 7

leads of the respective LEDs and thread the wires down the signal mast and through the space in the DIP socket [9].



7. The wires are bent and trimmed to match the middle four holes of the DIP socket.



8. The mast wires are soldered into the DIP socket.



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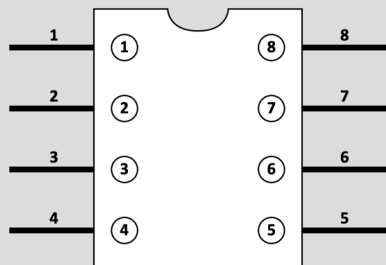
Finally, I cut the wires to length and solder the green wire to pin 1 and the red wire to pin 8 on the DIP assembly. Pins 2, 3, 6, and 7 are all common [10, 11]. It is important to note where each wire goes on the assembly because I need to wire the receiving socket accordingly.

Once the wiring is complete, I reinforce and insulate the base with a non-conductive epoxy, making sure to keep the epoxy clear of the pins sticking out the bottom. I coated the front of the LEDs with a liquid masking medium.

I paint the signal black, making sure to paint the back of the LEDs, too, to stop light bleeding through. When dry, I remove the masking from the front of the LEDs.



9. The LEDs are in place with the common wires soldered to the mast and the color wires threaded through to the signal base.



10. Pin numbering diagram for the 8-pin DIP socket.

PREPARING THE RECEIVING SOCKET

For the receiving socket, I solder the flat-pinned DIP socket to a piece of stripboard roughly twice its size. Later I will screw the oversize stripboard onto the baseboard of the layout for the mount.

I place the DIP socket so it spans four separate conductive strips of the stripboard, and cut gaps in the copper strips between all but the middle four pins. I solder current-limiting resistors for the LEDs onto the stripboard, too. Finally, I solder the corresponding color-coded wires to the strip board, using black for the common.



11. The completed signal is ready for paint.

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To embed the assembly in the layout, I drill a hole through the layout baseboard that is slightly larger than the DIP socket I am using. I then test fit the stripboard with the DIP socket in the hole and look for the best position for the screws.

During this step is crucial to orient the DIP socket correctly in the hole as it will affect the direction the signal will face. Using the four middle pins for the function common helps avoid shorts from any errors in orientation, but the signal will either face the wrong way or will not work at all (no wires to pins 4 and 5).

Once I am satisfied that everything is oriented so the signal will face the correct direction, I mark the best position for the screws. I then drill holes in the stripboard for the screws, taking care that the screws will not bridge any electrical gaps between the copper strips.

Finally, I screw the circuit board into position underneath the layout and connect the wiring to the switches and power supply.

If the baseboard is thicker than $\frac{1}{4}$ -inch, two-inch foam for example, it's not a problem. I either use a longer mast for the signal or I stack the round-pinned DIP sockets together like Lego blocks until I have the height I need [12].



12. This DIP socket is at the right height in the layout. This socket has 14 pins instead of eight. This basic design for bump-resistant signals can be expanded to accommodate a variety of signals.

For mounting the stripboard to foam, I recommend using a small piece of wood with a hole in it to accommodate the DIP socket. Then you can glue the wood to the foam and screw the stripboard to the wood.

Once the mounting socket is ready, you can plant the signal by inserting the DIP pins into the socket. This connects the signal to power and secures it to the layout.

FINISHING TOUCHES

To disguise the hole in the baseboard as a concrete footing. I cut a styrene disk slightly larger than the hole. I then drill a 3.5 mm hole in the center of the disk and cut a slit from the edge of the disk to the hole in the center.

I paint the disks a concrete color and allow them to dry. Then I slip a disk over a mast and slide it down until it covers the hole in the baseboard. Finally, I finish the signal detailing out with ladders and platforms [13].



13. The signals are in place on the layout. The “concrete” base hides the electronics underneath.



If by accident, a signal meets with a hand or elbow, it simply dislodges from the DIP socket, and I can plug it right back in. You can use this same method for use with commercially available signals. My signals are HO scale, but you can adapt the method for other scales.

This method has saved me much frustration. Signals no longer break when bumped by hand or by a derailed train, but simply become dislodged instead. ☑

HENRY VAN WYK



Henry became involved in the model railway hobby at the age of 5, when he received an HO scale Lima battery-operated train set for his birthday.

An electric train set soon replaced the battery one. He and his dad built a layout on his bedroom floor. Soon the floor layout was replaced with a larger one hinging from a wall in the garage. This was eventually replaced by a multi deck layout but sadly, Henry's dad passed away in 2006, and it was never finished.

During 1994-2004 Henry had a layout based on the MKT and had bi-weekly operating session with four to six operators. After his dad passed away, Henry inherited all his dad's South African Railways models, and currently models the South African Railways from 1980-1990.

Henry lives in Pietermaritzburg, South Africa, with his wife and two sons. He also has two adult daughters from a previous marriage. When he is not working on his model railway, he is a property manager for the Methodist Church of Southern Africa, managing two apartment blocks. ■

THE AH-HAH MOMENT

column



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JOE FUGATE GIVES HELPFUL SUPERGLUE
APPLICATION TIPS ...

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I'VE BEEN TALKING ABOUT THESE HANDY BLUNT NEEDLE TIPS AND I KEEP FINDING MORE USES FOR THEM [1].

It turns out we can use these blunt metal tips on superglue bottles. To keep the tip from popping off accidentally, I superglue the tip onto the bottle nozzle.

Not only do the tiny metal needles make applying the superglue more precise, we can use the rubber tip caps I've mentioned in past articles to keep the superglue from drying out as quickly.

But that's not all! If the metal needle tip gets clogged, you can use a lighter to heat the needle and push out the softened clog! *Ah-hah!*

I now store my superglue in the refrigerator to increase shelf-life. I put the glue bottles in a ziplock bag and add a few leftover silica gel packets into the plastic bag [2] to absorb any moisture. Moisture causes superglue to harden, so stored this way my superglue will last a year or more. Let the glue return to room temp before use. Also, I store unopened bottles in the freezer.

By the way, those silica gel packets last indefinitely. Just recharge them by leaving them in the sun for a couple hours to dry it out.



1. These blunt needle applicators fit nicely on the tip of most superglue bottles.



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THE AH-HAH MOMENT | 2

2. To greatly extend the shelf life of my superglue, I put the rubber tips on the blunt needle ends, then store the bottles in a plastic ziplock bag with silica gel packets and keep them in the refrigerator. (Note: I also seal the bottom of the needle tips with a bead of superglue.)



3. To make a reusable glue palette, I take an old jar lid and apply masking tape to the top of it. Once the palette gets full of glue spots, I just replace the soiled masking tape with fresh tape. Voila – fresh new glue palette again!

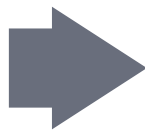


One last tip: I get myself an old jar lid and put masking tap on it, giving me a reusable glue palette [3]. Once the palette has been fully used, I just replace the tape and voila, fresh new glue palette. Works as a glue palette for epoxy and other glues as well! ☑

To get a shopping list for this article, visit the *MRH* website at this link: mrhmag.com/magazine/running-extra/2022-02/ah-hah-moment#shopping

Bonus section!

Here are all the pages from
the February issue of
*Model Railroad
Hobbyist magazine*
as well!



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HAVING FUN WITH TRAINS

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Greg Baker on doing

More realistic track

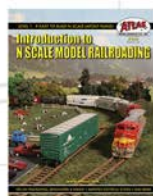
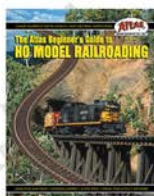
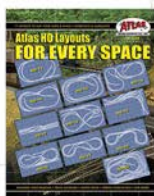
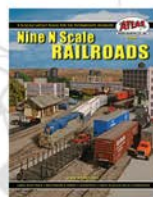
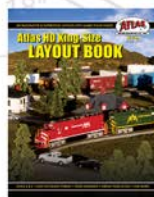
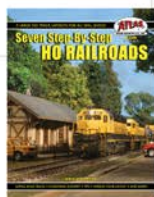
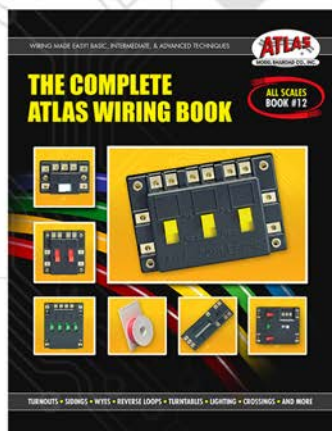
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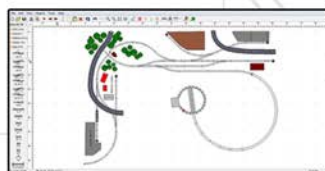
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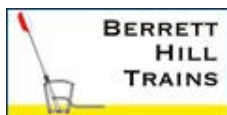
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PUBLISHER'S MUSINGS



Model Railroad Hobbyist | February 2022

JOE FUGATE THE FIRST MAJOR TRAIN SHOW RETURNS: AMHERST ...



IT'S BEEN A LONG TIME COMING, but the first major public train show is back: The Amherst Railroad Hobby Show in West Springfield, MA. This show has been a mainstay of large hobby shows in late January, and arguably may be the largest model railroad show in North America.

While I think being forced to learn how to do well-produced online / virtual train show events has been good for us, I do feel it's great to see a big public train show again. I'm hoping this is the first of many more big model railroad shows in 2022.

MRH is also planning on attending the NMRA National Train Show in St. Louis this coming August. If you recall, this show



1. Here's the MRH Media booth setup at the Amherst Model Railroad Show a few weeks ago. It was good to be back at a big public model train show again.

was originally to be in St Louis in 2020, but pandemic lockdowns led to this show being cancelled. The NMRA had to also cancel the 2022 show in the UK due to the 2022 Commonwealth Games taking over the facilities, so St Louis petitioned to have their show take this open 2022 slot instead.

Anyhow, back to the 2022 Amherst Show, which took place January 29th and 30th. MRH had a booth [1] there and our MRH News and Tech guy, Jeff Shultz, attended the show. Since our regulars from Canada, Les Halmos and Jean-François Delisle, could not make the show – we had two volunteers help staff the booth, Barry Rosier and Mike Dettinger [2]. Thanks, guys!

Weather can sometimes be a problem with this January show in West Massachusetts, and that's the case this time with a nasty *nor'easter* winter storm. Fortunately, most of the snow

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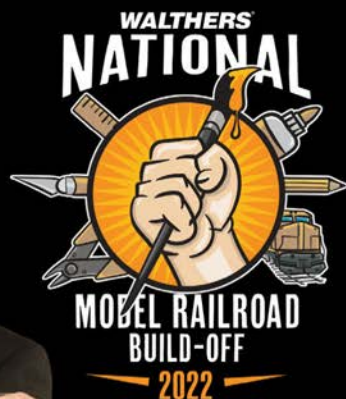
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PUBLISHER'S MUSINGS | 3

hit a few hundred miles to the east and West Springfield got a dusting of a few inches. Temperatures remained cold, however, getting down near zero each night.

Attendance ended up being on the light side this time, coming in at around 6,000 total, compared to past years where attendance has been as high as 20,000. But we need to start somewhere and



2. We'd like to thank our two booth staffing volunteers, Mike Dettinger (left) and Barry Rosier (right). They're shown here with the Deluxe Materials model that was roaming the show. Deluxe Materials is an MRH Sponsor that made the trip over from the UK to attend the Amherst Show.



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we're thrilled to see this public show back and look forward to getting back to more typical numbers next year and beyond.

New product announcements at Amherst

It's also nice to see fun new product announcements back as of this show. Our MRH guy on the ground, Jeff Shultz, documented many new announcements, and captured the two most anticipated new announcements from ScaleTrains [3] and Train Control Systems [4].



3. Scale Trains announced their new GP30 line of HO locomotives at Amherst.



4. In this video, Jeff Shultz interviews Train Control Systems about their new DCC System announcements.



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The Shay locomotive was the most widely used geared steam locomotive. The locomotives were built to the patents of Ephraim Shay, who has been credited with the popularization of the concept of a geared steam locomotive. Although the design of Ephraim Shay's early locomotives differed from later ones, there is a clear line of development that joins all Shays. In 1884, they delivered the first 3-cylinder (Class B) Shay.

Class B, Lima-built 50-ton 2-truck Shay

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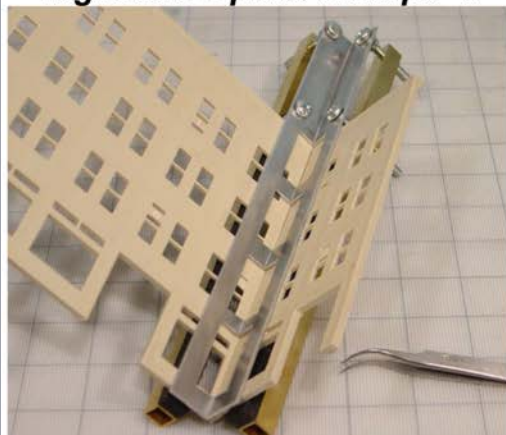
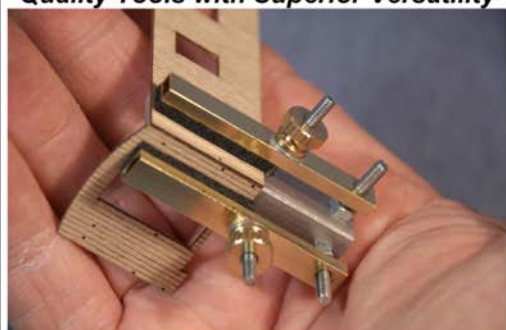
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Train Control Systems has been working on their new DCC system for several years now, and it looks like it's finally starting to materialize. Make sure and check out Jeff Shultz's video [4] for details.

For more thorough coverage of the many products and layouts on display at the Amherst Show, MRH has these forum threads with photos and videos galore:

[Amherst Show, setup](#)

[Amherst Show, Saturday](#)

[Amherst Show, Sunday](#)

[Amherst Show, TCS interview](#)

Others have posted their take on the show as well:

[Walking around the show](#)

[Scale Trains GP30 details](#)

[Delivering steam locomotive](#)

[Monson RR #3 \(real loco\)](#)

If you'd like to know more details of this show, you have several hours of fun photos and videos to peruse.

Thanks to all who attended the show and documented it for the rest of us who could not make it.



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Articles we could use

Every so often, let me tell you what articles we would like to have in our backlog when trying to balance an issue. For more on producing an article for us, please see:

<https://forum.mrhmag.com/post/writing-for-mrh-12213363>

Before I delve into the specific topics, let me first say we can always use more N scale article submissions. Thanks to the fact there are two (count them, *two*) N scale-specific magazines, most N scale modelers consider it a feather in their cap to get published in one of those journals.

That means those two N scale magazines siphon off most of the better N scale articles, leaving MRH with far fewer N scale articles than we would like. Roughly one out of 5 articles we publish should be N scale if we're to match the general hobby population as to who models in N scale.

To you N scalers out there, let me make you a deal (read the next few sentences carefully). If you can write an N scale article for us, send us a query asking us if we're interested using this link:

<https://mrhmag.com/authors/query>

If we're interested, we will give you the details on how to proceed. ***And here's the deal:*** If we like your final article, *we will pay you upon acceptance for it*, rather than waiting until publication.

We need more good N scale articles, it's that simple.

Okay, now on to article topics we could use.

We need more scenery articles of any kind. I consider weathering and painting to also be scenery-like, so an article on how to weather a structure counts as scenery. Of course, there's the standard terrain, plastering, applying dirt, rocks, and grass.

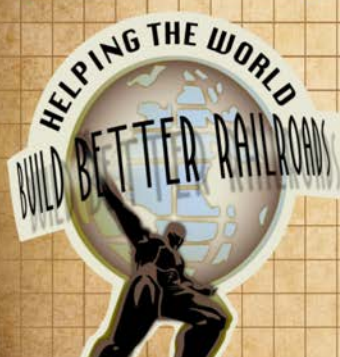
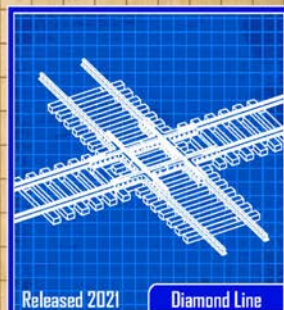
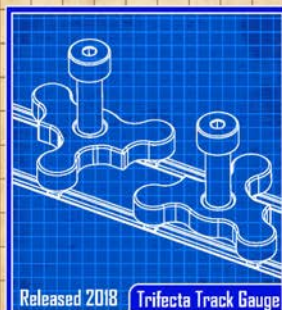
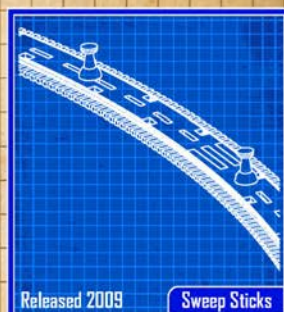
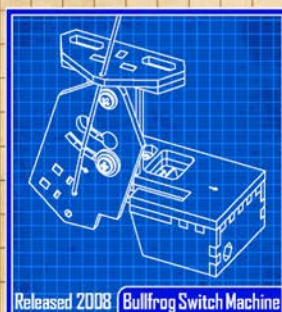
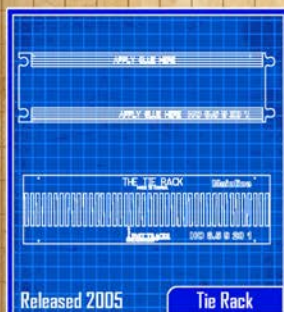
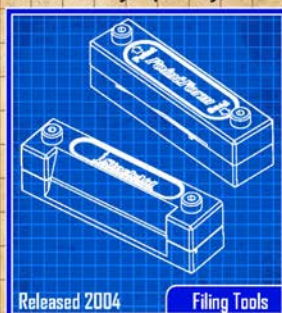
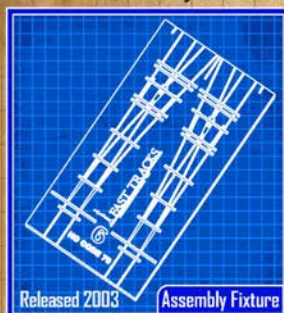
We can also use more articles on making realistic trees, bushes, and water courses. Modeling a dock and the water underneath would also be great. As would modeling ponds, mud puddles, and so on.



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We can also use more articles on wiring and DCC. With DCC, we can use specific DCC install examples in locomotives. Also articles on how you wired reversing sections – a wye, a turntable, or the more common reverse loop would all be great.

Also, how do you program your decoder settings? Once you're done showing us how you installed the decoder, spend time showing us your CV settings, too.

On the electrical side, we can always use clever ways to install feeders so they don't show. We also would love more discussion on doing short management with circuit breaker boards.

Also, how do you wire your turnout throws so they can be activated from two different locations? Does anyone still use diode routing control with their turnout throws?

Wiring also includes things like working crossing gates, working semaphores, and structure lighting.

We hope to see more of these submissions in the months ahead. Start with this link to tell us about your article idea:

<https://mrhmag.com/authors/query>

If you yourself do not feel able to contribute, but you do know someone who could contribute, can you please pass the word that we're looking for these topics?

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LAST ISSUE LIKES

Most liked articles in the [January 2022 issue](#) of *MRH* are:

- 1st** Modelers' survey of glues, part 1
- 2nd** MRH DCC shortcuts card
- 3rd** The perfect storm

Most liked articles in the [January 2022 issue](#) of *Running Extra* ...

- 1st** Limited Modeler: Jim Six's new layout project
- 2nd** Building Scituate Harbor Marine Supply
- 3rd** Getting Real: Finishing the Jenkins scene

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Best of the

MRH WEBSITE



THIS MONTH

Model Railroad Hobbyist | February 2022

Compiled by **JOE FUGATE**



Grade crossing system advice

MRH forum member **NevinW** (Nevin Wilson) asked for advice from forum members on their recommendations for overall “best” grade crossing animation system.

Several stepped in with recommendations, including MRH Sponsor, Chuck Stancil, from Logic Rail. A number of other forum members gave the Logic Rail solution a thumbs up.



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

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



1. New MRH forum member **Blshoop** posted several impressive photos of his car float operation in answer to a request from forum member **cadmaster**.

Modeling car float operations

MRH forum member **cadmaster** (Neil T.) recently asked to see car float operation examples anyone may have built.

New *MRH* forum member **Blshoop** (Bryan S.) posted some fascinating photos of his car float modeling:

"Hi, I'm a long time reader, 1st time poster. I'm in the process of building a double deck layout loosely based on the Jersey City Car floats for Lehigh Valley on the lower level. Didn't have room to model it with both floats so I compressed it into one. Not a lot of scenery down yet, but here is my float and tug boat and the yard that feeds it and the local industries.

Mostly LV, CNJ, RDG, and some PRR/PC power and equipment. Late 60s- early 70s. No Chessie or Conrail!"

Nice! Bryan's work looks quite good and it's great to have him on the forum posting his progress. We love watching our fellow modelers' railroad empires come together on the MRH forum.

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



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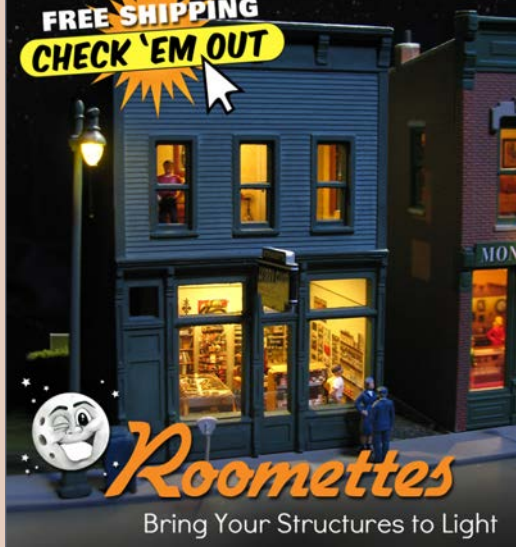
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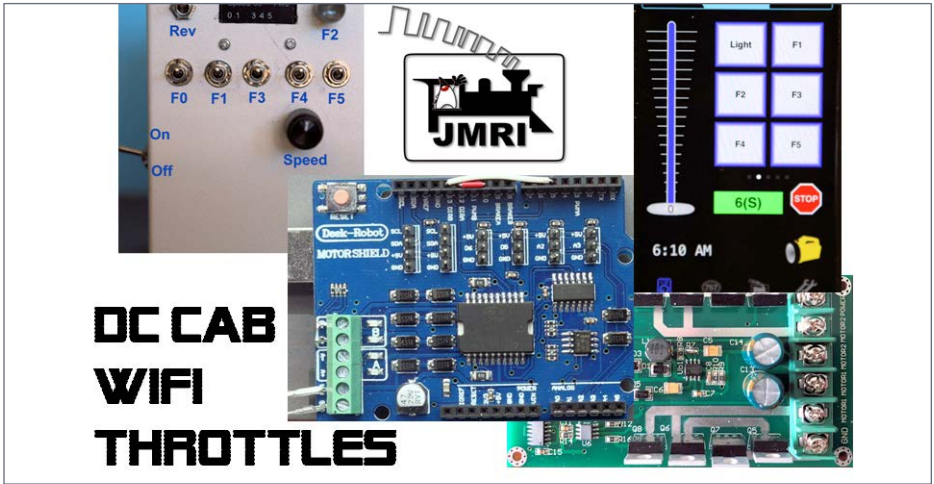
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DC CAB WIFI THROTTLES

2. *MRH* forum member **Geoff Bunza** talks about how you can use JMRI with a DC layout. Wow, Geoff, some great thinking outside the box!

Making JMRI do DC, believe it or not!

MRH forum member **geoffb** (Geoff Bunza) surprised us all with a thread about using JMRI with DC, no less!

“There are many modelers who for various reasons, use DC throttles to control the locos and trains on their layouts. What if you could combine the simplicity of a DC throttle with the sophistication of JMRI control, signaling, sensors, and even WiFi throttles? Yup!

WiFi throttles for DC train control! And what if you could put such layout control together for less than the cost of an old dual throttle power pack? Interested? Let’s see how it can be done!”

Geoff goes on to describe what he calls “DC Simplicity with JMRI Sophistication” and then steps through accomplishing all this magic by adapting an Arduino and a motor shield board.

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



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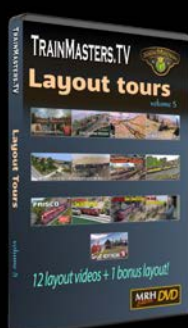
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3. MRH forum member **Bernd** recently got himself this new Comgrow CNC machine at a very reasonable price. He's giving us his blow-by-blow learnings as he explores the limits of its modeling capabilities.

New Comgrow CNC machine for the workbench

MRH forum member **Bernd** (Bernd F.) recently acquired a very reasonably priced Comgrow CNC machine. Bernd wants to explore the limits of what it can do, so he's been taking us through all the trials and tribulations of unboxing, setting it up, and getting it working.

Bernd also wants to determine if this machine might be a more powerful alternative to a Cricut or Silhouette cutter:

"This small 16.5lb machine will do routing, carving, milling, and laser cutting. I want to see if it will cut like the Cricut/Silhouette cutter machines. If it does, it'll be more versatile than the crafting machines [for a similar price]."

We're watching this thread closely!

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



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Locomotive backshop modeling photos

Every once in a while, someone posts nice photos of a modeling project. Check out this recent loco backshop thread ...

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

4. New *MRH* forum member **RE#1** has been posting his entire build process for an HO engine house he's been building. Now that he's past the initial stages and getting into the finish detailing, the photos he's posting make you do a double-take. Truly "Yes, it's a model" level amazing modeling and inspiring photography.



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5. Here's another of **RE#1**'s engine house modeling. The step platform with its etched walkways and brass wire railings looks great – it's hard to believe this is HO. The workshop tools and debris he keeps adding looks better and better.

What's new on TMTV

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WHAT'S NEAT

column



Model Railroad Hobbyist | February 2022

KEN PATTERSON COVERS HOW TO LAY LONG STATIC GRASS FIBERS, MISSOURI PACIFIC HERITAGE UNIT IN OREGON, BUILDING MULTIPLE-LEVEL DISPLAY SHELVES, AND BACHMANN'S NEW PRODUCTS ...



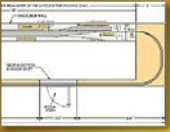
click to play video

PHOTOS AND VIDEO OF SUPERB MODELS

THIS MONTH JENNIFER KIRK SHOWS HOW SHE LAYS LONG STATIC grass fibers on a hillside, complete with flowers and other scenic touches, Modeling from Above features the UP Missouri Pacific Heritage unit running through the Cascade Mountains and Willamette Valley in Oregon, Ken shows how he built the multi-level shelf inserts he uses to display his models, and Larry Harrington from Bachmann joins Ken to announce some new Bachmann products for the upcoming year.

in the **FEBRUARY 2021 MRH RUNNING EXTRA!**

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1. The opening segment of this month's "What's Neat" was created by Michael Scalere.



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Laying long static grass fibers



2. Jennifer Kirk demonstrates laying long fiber length static grass on the layout.



3. Jennifer shows the large-mesh applicator screen on the War World Scenics static grass applicator.



4. Jennifer also shows how to add texture and flower effects using ground foam, called “Scatter” by War World Scenics.



5. The large mesh is designed for use with 10mm and 12mm fibers.



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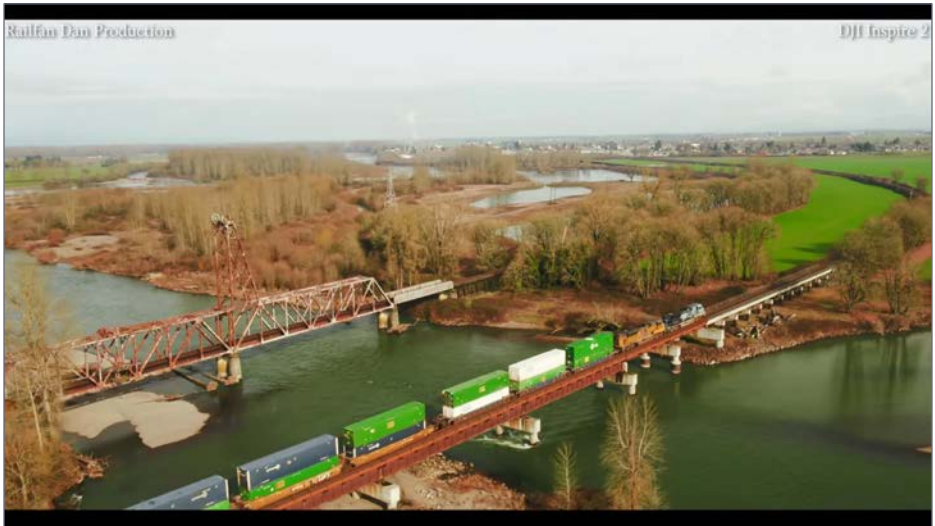


6. Jennifer attached the ground probe of the static grass applicator to the de-energized track on the layout. The hopper of the static grass applicator should be only partially filled, between 1/4 and 1/3 full. Check frequently to make sure the hopper hasn't run out.



7. To glue the static grass down, Jennifer uses War World Scenics Layering Spray. It allows multiple layers of static grass to be built on top of one another.

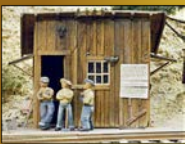
Modeling from Above – the Missouri Pacific Heritage unit in Oregon



8. Dan Scheidell follows the UP 1982, the Missouri Pacific Heritage unit, through the snow-covered Cascade Mountains and up the Willamette Valley in this month's Modeling from Above sequence. Here the train crosses the Willamette River, with the Portland & Western RR bridge in the background.

in the **FEBRUARY 2021 MRH RUNNING EXTRA!**

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Building multiple-level display shelves



9. Ken demonstrates how he built the three-level shelf inserts he uses to display his collection of models.



10. The shelves consist of straight 1x4 boards assembled in a stair-step pattern. The vertical parts are ripped on a band saw to a height of 2-½ inches high.



11. Ken uses red oak stain so the inserts match the other furniture in his basement. After drying, three layers of Minwax high-gloss polyurethane are applied.



12. The shelf inserts slip inside the openings in Ken's shelves, which were built out of 2x12 dimensional lumber. The shelves are generally screwed down to secure them.



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New products from Bachmann Trains



13. Bachmann Vice-President Larry Harrington shows the new Phase VI version of the Amtrak Charger locomotive. Also shown are the new concrete track EZ-Track product, and an N scale streamlined PRR K4.



14. Also shown was a test sample of the N scale ALC-42 model, which will feature TCS-WOW Sound and lighting. There will also be an SC-44 version. A test sample of the NYC Express Reefer in HO scale closed out the segment.

For the full video showing the techniques Jennifer used to lay static grass, the full Modeling from Above video, Ken assembling the shelf inserts and the new models shown by Larry Harrington, click the video link at the beginning of this article. ☑

in the **FEBRUARY 2021 MRH RUNNING EXTRA!**

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Easy DCC loco speed matching



Electrical
Impulses

Model Railroad Hobbyist | February 2022

1.Speed matching DCC locomotives doesn't have to be difficult. Joe Fugate shows two easy methods you can use from to handle this common DCC layout task.



JOE FUGATE SHOWS TWO EASY METHODS FOR SPEED MATCHING DCC LOCOS ...

SPEED MATCHING DCC LOCOMOTIVES NEED NOT BE HARD. Once you know the basics, you can speed match any two locos on your layout in less than five minutes.

Let's cover a few setup tips first, then we'll move on to the actual speed matching process.

BEFORE YOU BEGIN

To make speed matching as simple as possible and to get the most consistent results, always do these steps first:

1. Warm up the locos: Run both locos you want to speed match first so they're warm. Running the locos around for 5 minutes should do it. Speed matching cold locos can lead to them not running as you expect later once they're warm.

2. Set the speed table off: To start with, turn the speed table off using CV29 in the locos you want to speed match. To set CV29 to 4-digit addressing, 28/128 speed steps, and the speed table off, give it to a value of 34.

3. Remove all momentum: Set acceleration (CV3) and deceleration (CV4) off in both locos. To do that, set CV3/4 to zero.

With this done, you're ready to speed match.

EASY SPEED MATCHING

When I speed match, I like to use a passing siding or a couple of empty yard tracks. I put one loco on each track.

I select one loco to be my reference loco and I adjust the other locomotives to match it.

Speed matching the easy way involves setting just three decoder values: starting speed, top speed, and mid-speed – in that order. As for what values to set these to, see the sidebar: *Setting locomotive speed levels*.

We'll assume you're good with your reference locomotive's starting, top, and mid-level speed and that it starts moving just as you crack the throttle. In my example, I'm using loco 3778 as the **reference** locomotive and 8369 as the **subject** locomotive [2].

1. Put the two locomotives in a consist: With one locomotive on each track, put the two locomotives into a consist. This will make both locomotives run together using a single throttle.



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2. For my speed matching example, I use 3778 and 8369. I'm using a long passing siding area so the two locomotives can run side-by-side, one on each track. That makes it easy to eyeball that the locos are running the same speed.

Even though the locos are in a consist, you can still use programming on the main (POM) to program the CV values of each individual locomotive. CV values can be from 0 to 255.

2. Get the starting speed to match: I use 28 speed steps on the throttle since 128 speed steps are too fine for speed matching.

Just barely open the throttle (speed step 1) and see if the two locos start moving. Adjust the starting speed CV2 in subject loco with POM until it just barely moves as well and closely matches the reference loco. Typically, CV2 will be a small value that's less than 10.

The two locomotives don't have to be identical, but they should be close.

3. Get the top speed to match: Next, crank the throttle up to top speed. Adjust CV5 up or down with POM as needed in the subject locomotive until it matches the reference locomotive. Typically, CV5 will be a value from 128-255.

Again, close is good enough, they don't have to match exactly.

4. Get the mid speed to match: Finally, set the throttle at 50% and compare the two locos. Adjust the subject loco CV6 mid speed value with POM until the speed matches the reference locomotive. Typically, CV6 will be a value from 40-80.



J. Fugate

SINGLE OR DOUBLE TRACK?

In my example, I'm recommending you use two tracks to speed match, but you can also use a single track with a bit of care. Just space out the locomotives, keeping them 2-3 feet apart. Once you get the speeds closely matched, you can drop the distance down to just a few inches to fine tune the loco speed so that they won't open or close their spacing even if running a long distance.

If you like, you can use a single loop of track on a card table for speed matching, again spacing the two locos out. The loop of track is continuous, so you can keep the locos running as you adjust the speed values on-the-fly.



3. Instead of an area of double track, you can also use a stretch of single track to speed match. Just set the locos 2-3 feet apart and watch them closely to make sure they don't collide until you get the speeds closely matched.

Once you've got the two locos running close to the same speed from just cracking the throttle through 50% throttle and to max throttle, you can put them on the same track separated by about a foot and run them around the layout to see how they do.

If they're close – only slowly closing or widening the gap between the reference loco and the subject loco over several yards of running distance – then that's close enough to go ahead and run them coupled together as a single lashup.



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4. Once the two locos have been speed matched, I can run them side-by-side and they will stay together for several yards. At this point, I can add back in any desired momentum and couple them together into a lashup.

5. (Optional) Further refinement: If you want to fine-tune the locos to get them to run even more closely together, you can, although it's not required. Just separate the locos again by about 12" then use POM to further adjust CV2 starting, CV5 max, and CV6 mid up or down one number at a time on the subject loco.

Resist the temptation to adjust the reference loco. That's the "gold standard" for your fleet and you should not touch its speed settings.

6. Now adjust momentum: Once the locos run together to your satisfaction, now go ahead and adjust the momentum settings in CV3/4 as desired. You can further compare the two locos to make sure they speed up and slow down consistently. Again, close but not exact is okay.

SPEED MATCHING WITH A SPEEDOMETER

You can also speed match using a speedometer. With this method, you don't need a reference locomotive, just some standard speeds for starting, mid-level, and max speed.

What speeds should you use for these levels?

See the sidebar, *Setting locomotive speed levels* for a more detailed discussion on what speed levels to choose.

The beauty of using a speedometer accessory to speed match is you can set your entire fleet to run at a given speed from start to max. Then you can freely consist any locomotive you like with any other locomotive and you're good to go!

While you can manually compute loco speed by timing the loco movement between two points on your layout, it's far easier to just purchase or build an electronic speedometer with a speed-trap to automatically measure your loco speed for you.

See the shopping list link at the end of this article for speedometer products you can purchase. They cost from \$40-\$80.

Or if you have an electronics bent, you can build your own speedometer relatively inexpensively (often less than \$20). How to do this has been covered in past *MRH* magazines:

■ **DIY running-in-place speedometer**

forum.mrhmag.com/post/model-railroad-running-stand-speedometer-12216697

■ **Arduino speed-trap speedometer**

forum.mrhmag.com/post/building-an-arduino-speedometer-12218703

In my case, I bought a speed-trap speedometer kit [5] off eBay for \$40. It did involve a bit of soldering, but it wasn't too hard – mainly just some resistors and LEDs. It does require a Windows laptop to run the speedometer software, however.

With speedometer speed matching, you don't need a reference locomotive, instead you have a set of target speeds. In my case, I'm aiming for a starting speed of 1 mph, top speed of 45 mph, and a mid-speed of 25 mph.

1. Set loco starting speed. Use the speedometer to check the loco's starting speed. I'm aiming for 1 mph, give or take, if possible. A speed from 0.5 mph to 1.9 mph is acceptable.

If the speed is too slow or too fast, I adjust the CV2 starting speed value up or down as needed using Programming on the



SETTING LOCOMOTIVE SPEED LEVELS

In the my December 2021 *MRH* Editorial, I make the case for selectively compressing loco speed to make the layout feel larger. You can go read all about that here:

forum.mrhmag.com/post/publishers-musings-selectively-compressing-speed-12219830

On my Siskiyou Line 2 layout, I have decided to make the top speed of all my locos 45 mph. I've also decided I want the loco speed to ramp up slightly faster in the first half, so I've set mid speed at 25 mph rather than 22.5 mph.

Ideally, I want the starting speed to be around 1 mph, which looks nice and slow on the model. ■

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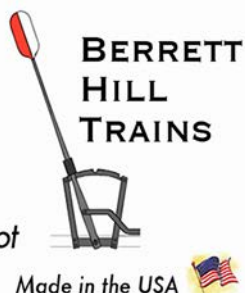
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Main and retest until I get within my target window of 0.5 mph to 1.9 mph.

Also, I run the locomotive backwards through the trap to see if it runs close to the same speed backward as it does forward. Most locomotives will not run exactly the same speed both directions, so don't be alarmed if the speed is off slightly (a few tenths).

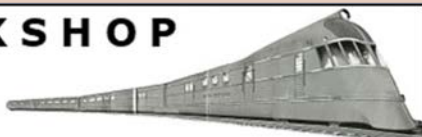
But if the speed difference each direction is significant – say more than 0.5 mph different at speed step 1 – then we may need to look at using forward and reverse trim to get the two speeds to match. More on that later.

If the loco won't run slow enough, then consider getting a better decoder with back EMF, dithering, or some other such slow-speed enhancement feature. If that's not enough, you may need to tune the loco mechanism, looking for any gear binding or burrs.

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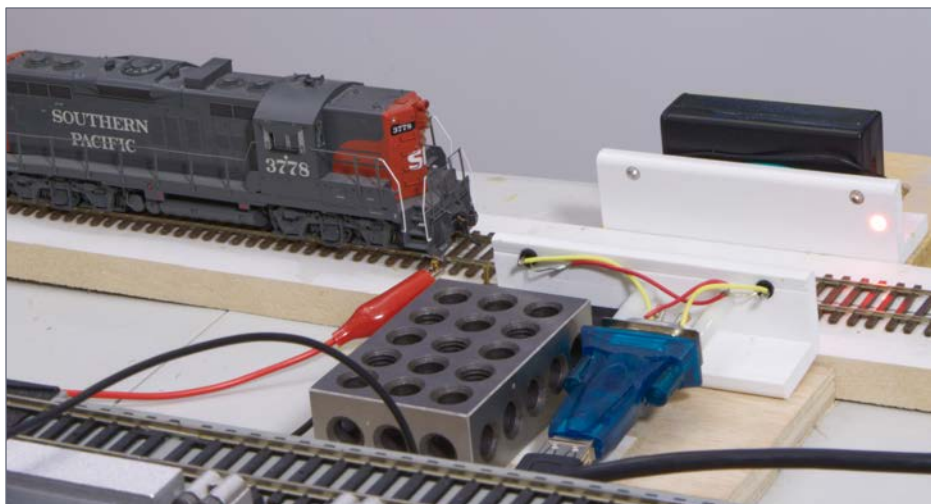
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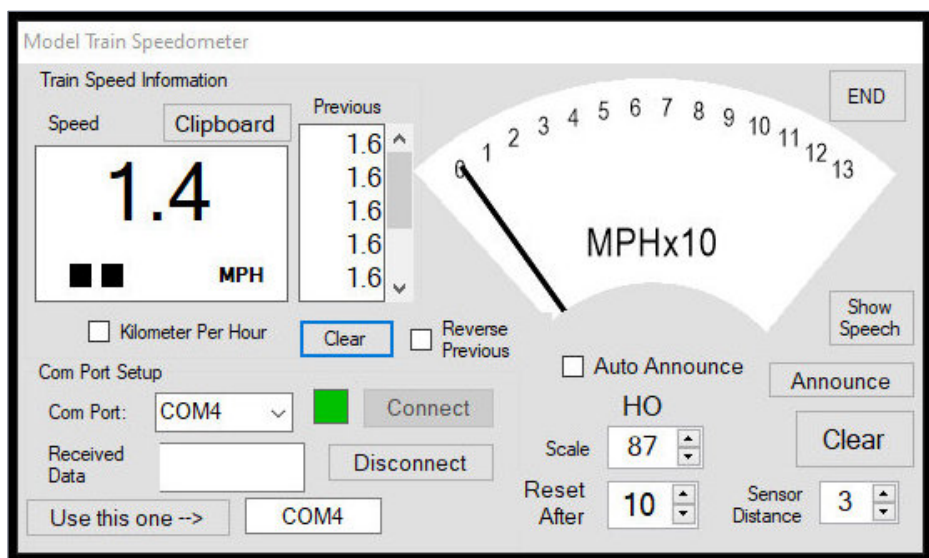
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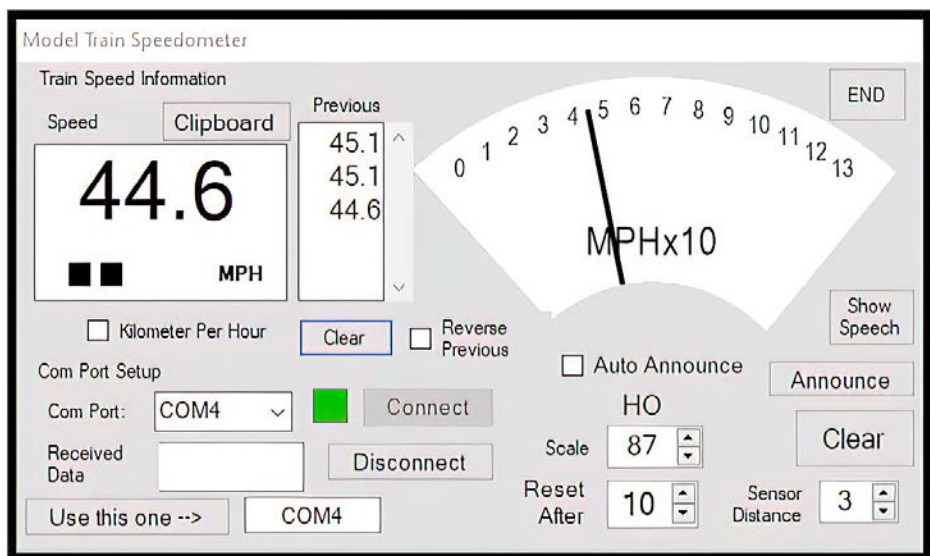
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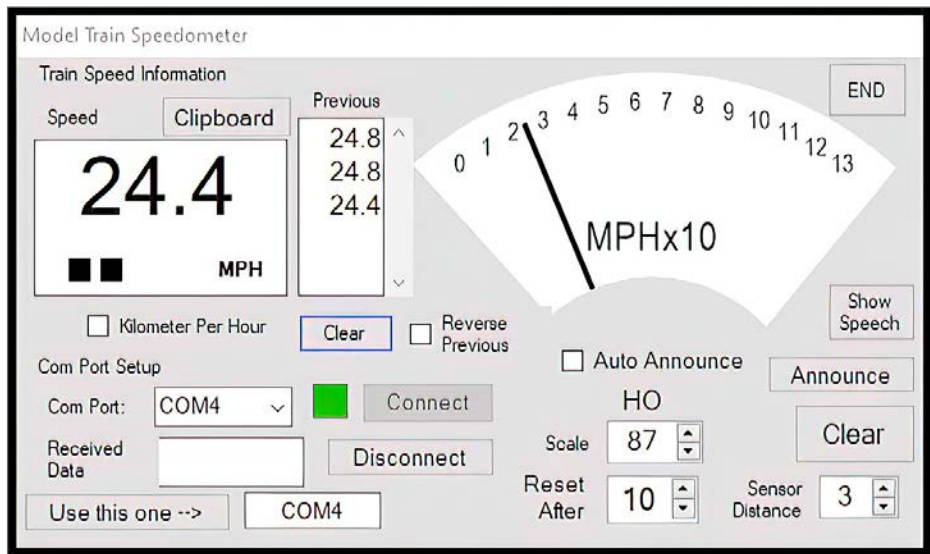
5. I bought this speed-trap speedometer off eBay for \$40. It nicely captures the loco speed as the loco rolls between the two sets of sensors and sends the result to my laptop.



6. I checked the starting speed (speed step 1) of loco 3778 from the previous speed matching example, and this is what I got. It's 1.6 mph forward and 1.4 mph backward. Close enough.



7. I check the top speed (speed step 28) of loco 3778 and adjust CV5 until it meets my goal of ~45 mph max.



8. I check the mid-level speed (speed step 14) of loco 3778 and adjust CV6 until it meets my goal of ~25 MPH.



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Finally lube the loco so it's running as smoothly as possible.

2. Set loco top speed. Use the speedometer to check the loco's top speed [7]. I adjust the CV5 max speed value up or down as needed using POM until I get my target max speed of 45 mph. Getting within 1 mph over or under is fine at this level.

I also check the reverse speed. We have lot of wiggle room at top speed: if it's under 5 mph different between the two directions, I'm good. Otherwise, time for forward / reverse trim (next section).

3. Set loco mid speed. Use the speedometer to check the loco's mid-level speed [8]. I adjust the CV6 mid speed value up or down as needed with POM until I get my target mid speed of 25 mph. As with top speed, getting within 1 mph either way is fine.

I again check the reverse speed. Like top speed, if it's under 5 mph different between the two directions, I'm good. Otherwise, let's see how to adjust forward / reverse trim.

FOREWARD / REVERSE TRIM

If your loco runs a noticeably different speed going forward than it does in reverse, most decoders have a speed table feature called forward/reverse trim.

The bad news: to enable forward trim (CV65) and reverse trim (CV95) requires a 28-step speed table. We used the far simpler CV2/CV6/CV5 to avoid that complexity.

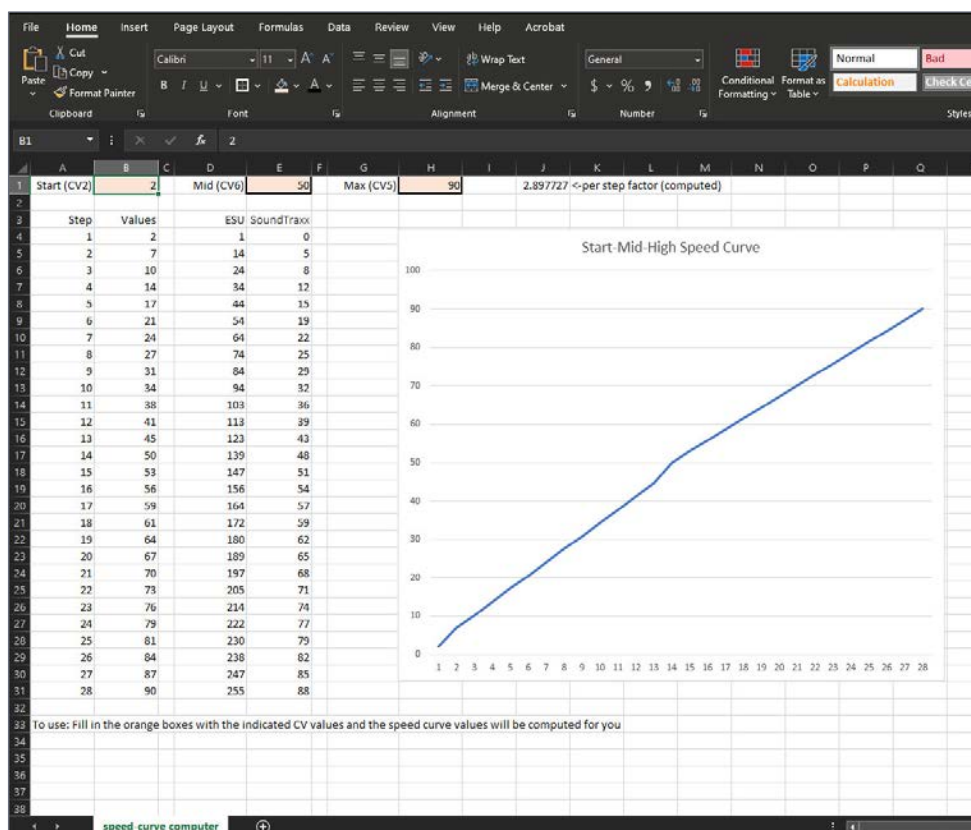
Never fear, I have created a spreadsheet that will compute the 28 different speed step values if you have the values of CV2, CV6, and CV5. Get this spreadsheet in the bonus downloads for this issue ([bonus download link](#)).

Various decoders implement their speed table slightly differently, so check the next section where I summarize decoder speed table differences.

To use this spreadsheet, just enter the starting speed value from CV2, the mid-level speed value from CV6, and the max speed

value from CV5 in the orange boxes [9]. The spreadsheet automatically computes the values for all the speed table steps. It also draws a nice graph of the speed curve. Any tiny “bumps” in the drawn speed curve come rounding in the computations.

I have standardized on ESU decoders, so I have included a column in the spreadsheet that computes the ESU speed table values as well, since it's done a bit differently than most other decoders. Also, SoundTraxx decoders are a bit different too, so I've added them as well (more on these differences coming up).



Once I have these spreadsheet values, I can just enter them into the appropriate speed table steps straight from the spreadsheet. It's easiest to do this with a tool like JMRI DecoderPro.

SPEED TABLE DIFFERENCES IN DECODER BRANDS

NMRA S9.2.2 specifies all decoders must provide CV2 (Vstart).

Providing for CV6 (Vmid) and CV5 (Vhigh) is optional. These are active when CV29 is set to speed table off (bit 4=0).

Speed tables may optionally be implemented and use CVs 66 (Fwd Trim), 67-94 (the actual speed curve), and 95 (Rev Trim). Setting CV29 to speed table on (bit 4=1) activates it.

Various decoder manufacturers implement the speed table feature with slight differences.

SoundTraxx Tsunami decoders: When the speed table is active (CV29 bit 4=1), the value in CV2 is not ignored but is effectively added to CVs 67-94 in the speed table, pushing it upwards.

The advantage of this variation from the NMRA standard is that you can tweak the starting speed without reshaping the whole curve, but the disadvantage is that you can effectively flatten the top end of the speed table if the maximum speed was already high.

QSI decoders: When the speed table is active (CV29 bit 4=1), the values in CVs 2 and 5 are not ignored.

If CV2 or 5 are non-zero, these become the actual Vstart and/or Vhigh and the effective values in CVs 67-94 are compressed or expanded (scaled) in the decoder, so the actual curve starts and/or ends on the value in Vstart and/or Vhigh.

The advantage of this variation from the NMRA standard is that you can tweak both starting and maximum speeds without reshaping the whole curve. But if your speed table already covered a restricted range, the curve will be expanded, with possible integer multiplication errors producing glitches in the speed table and erratic loco behavior.

ESU: When the speed table is active (CV29 bit 4=1), the values in CVs 2 and 5 are not ignored, but specify the actual Vstart and Vhigh of the loco.

In addition, the value of CV67 is fixed (read only) at 1 and the value of CV94 is fixed (read only) at 255.

The speed table curve shape then fits between these fixed end points, and adjusted up or down as needed to fit the end points.

The effective values in CVs 67-94 get compressed in the decoder so the actual curve always starts and ends on the values in Vstart and Vhigh.

The advantage of this variation from the NMRA standard is that you can tweak both starting and maximum speeds without reshaping the whole curve and without the glitchy and erratic speed table errors in the QSI approach.

The ESU LokProgrammer and JMRI DecoderPro software both enforce the restrictions on CVs 67 and 94 so you know what your speed table will actually look like.

In the April issue, we'll look into using JMRI and/or the LokProgrammer to do speed matching and adjusting things like forward and reverse trim. ☒

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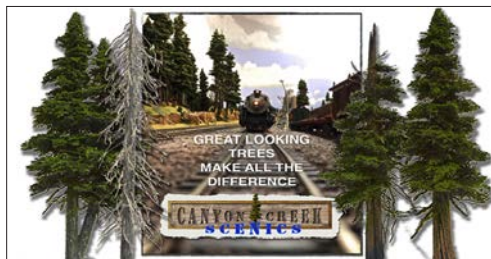
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Floquil/PollyScale stash running out?



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



Floquil Color	Color Category	MIH Base	MIH Tint	MIH Ratio	Notes
Power Gray	Gray	MIH 4562	MIH 2500	10:10	
Engine Black	Black	MIH 4555	MIH 2500	10:10	
Steam Engine Black	Black	MIH 4575	MIH P1027	10:100	
City Black	Black	MIH 4570	MIH P1027	10:100	
Weathered (Charcoal) Black	Black	MIH 4570	MIH P1027	10:100	
Router Gray	Gray	MIH 4550 ¹	MIH 2500	10:100	
Router White	White	MIH 4551 ¹	MIH 2500	10:100	
Router White	White	MIH 4551	MIH 2500	10:100	
Graying Black	Black	MIH 4557	MIH 2500	10:100	
Cannon Red	Red	MIH 4551 ¹	MIH 2500	10:100	MIH use MIH 4551 ¹ 25% MIH 2500

¹ Indicates a color that has not been matched. MIH/Color Match is a proprietary formula. When Matched to Colors A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AB, AC, AD, AE, AF, AG, AH, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GG, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LL, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MM, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NN, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TT, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ.

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Tan		MR 4027*	MR 71,076	16-15	
Beige/Grey		MR 4028*	MR 71,082	16-09	
Beige/Yellow		MR 4029	MR 71,078	16-16	
Red/Brown		MR 4034	MR 20,000 MR 71,249	16-05B	
Red/Light Tan		MR 4045	MR 20,000 MR 71,029	16-05*	Check with MR for 16-05 See 16-04
Red/Brown		MR 4046*	MR 20,000 MR 71,036	16-05B	
Red		MR 4075	MR 20,000 MR 71,037	16-05B	
Cerulean		MR 4076	MR 71,040*	16-07*	Check with MR for 16-07 See 16-06
April Green		MR 4087	MR 20,007 MR 71,142	16-06*	Check with MR for 16-06 See 16-05

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Modeling track



GREG BAKER DETAILS A PECO TURNOUT ...



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I'VE BEEN WORKING ON A SMALL, photo-realistic layout representing an industrial scene, and needed everything, including the track and turnouts, to look the part. I learned some tricks and techniques for detailing track that I want to pass on. Follow along with this project as I detail and install a commercial turnout to look like part of a well-used industrial spur.

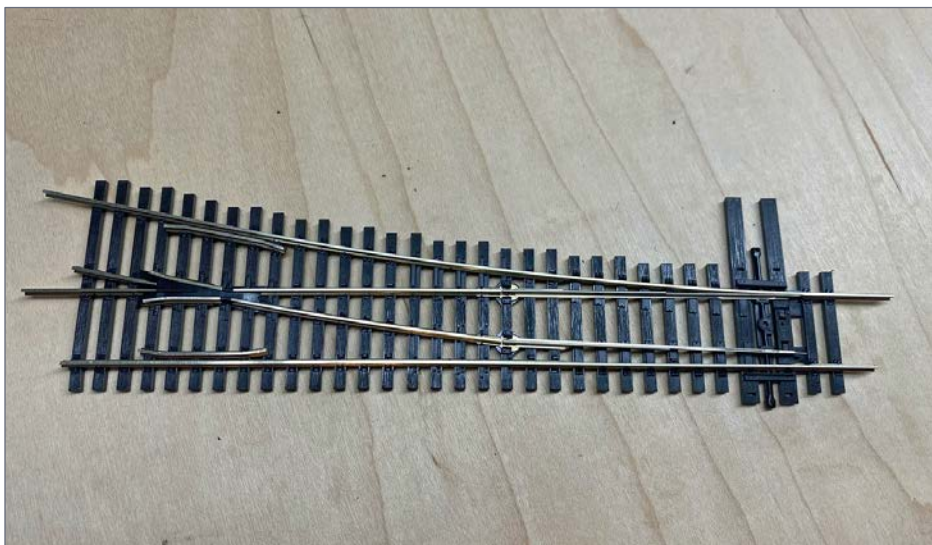
UN-EVENING THE RAIL HEADS

The evenly cut rail ends of commercial turnouts and commercial track in general have always bothered me [1]. In the real world, square joints like this would create an operational hazard, so railroads almost always stagger their rail joints. My first step was to clip the rail ends so that they were no longer even [2].



1. This out-of-the-box Peco #5 code 83 right hand turnout has some molded-on detail. The rails ends are cut evenly.





2. Cutting off the ties at the turnout ends and nipping the rail ends to make them uneven gave the joints a more prototypical offset.

ROUGHING-UP THE TIES

Out-of-the-box turnouts also are far too pristine for branch lines or industrial spurs, where the tracks and turnouts, and especially the ties, look like they have been out in the elements for ages. Roughing-up the ties was my next step.

I began roughing-up ties using my rotary tool with a nylon brush in its chuck. I know of no quicker method to distress the ties and give them a worn and rotted look, as if they've been in place for decades [3].

After roughing-up the ties with the rotary tool, I used my #11 X-Acto blade on some to rough them up even more. I made cuts to represent ties that had split, broken, or otherwise fallen apart with age.

DETAILING THE TURNOUTS

With all the ties distressed, I could proceed adding details. I used a variety of commercially available products to achieve the look I wanted.

Out-of-the-box Peco turnouts are spring-loaded so they snap into and hold position. If you want the switch action to be free-floating, then you will need to remove a small plastic piece on the underside of the switch point to free the spring. This step is necessary only if you plan to add manual or powered switch machines.

To add support to the throw bars, I carved and cut the area around the throw bar, and flattened it with my #11 blade. I cut two pieces of 0.010" x 0.020" styrene.

I glued one piece to the underside of the switch points between the points and the frog with CA. I split the other one to create a 0.010" x 0.010" piece, and glued the two halves to the top of the throw rod, and added the support piece using Plastic Weld [4].



3. These ties show serious deterioration and distress.





4. Turnout supports in place.

Next, I opened the “Throwbars & Point Hinges HO” detail kit from Proto87 Stores (101904). Proto87 Stores makes a variety of photo-etched metal track details, and they are tiny!

I started with the long point detail sets and used medium CA to secure them. I took care not to glue the turnout points in place [5, 6, 7].

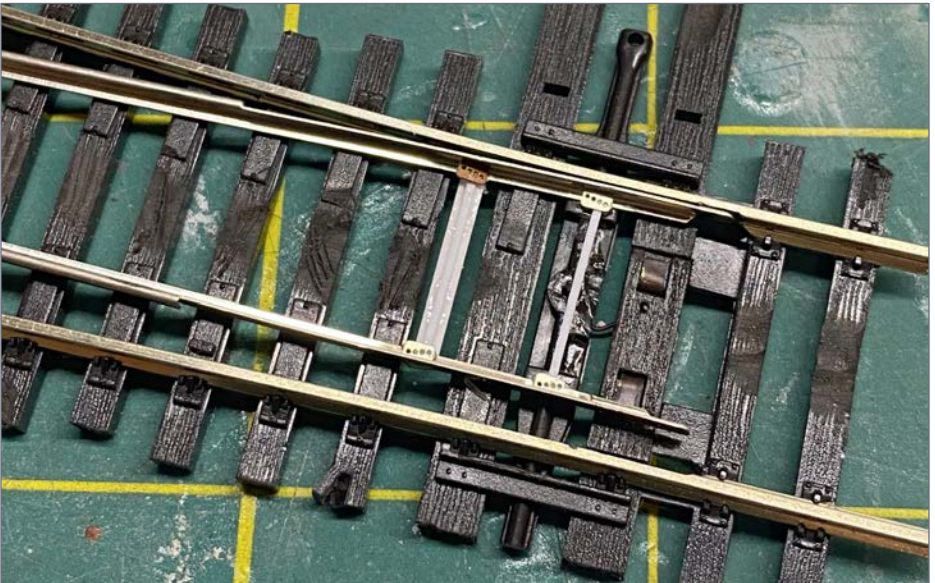
INSTALLING AND WEATHERING THE TURNOUT

With the turnout detailed, I was just about ready to install it on the layout. I soldered wires to the underside of the rails, drilled holes in the roadbed, and threaded the wires through. I used clear DAP adhesive sealant to secure the turnout to the roadbed [10].

When the adhesive dried, I verified the turnout was secure. I then masked the switch points with tape and sprayed the entire turnout with a coat of brown camouflage paint. With the



5. The point detail is in place. If you look closely, you can see the detailing on the upper point rail.



6. The hinge details are in place.



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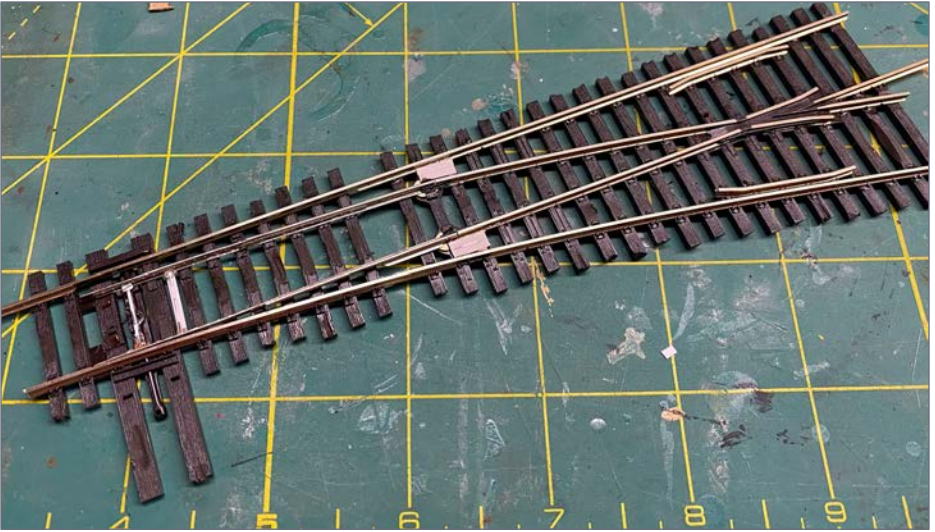
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7. The throw rod detailing was the final step. Gluing fine, photo-etched metal details to a 0.010" styrene surface was a challenge. I recommend a set of very small tweezers and some patience during this step.



8. The Proto87 Stores kit had point heel plate details that I also added. I used scrap styrene to represent the heel block, where a switch point is attached to a pivot.



9. With the details on this turnout complete, it was ready to install on the layout.



10. The turnout is in place.

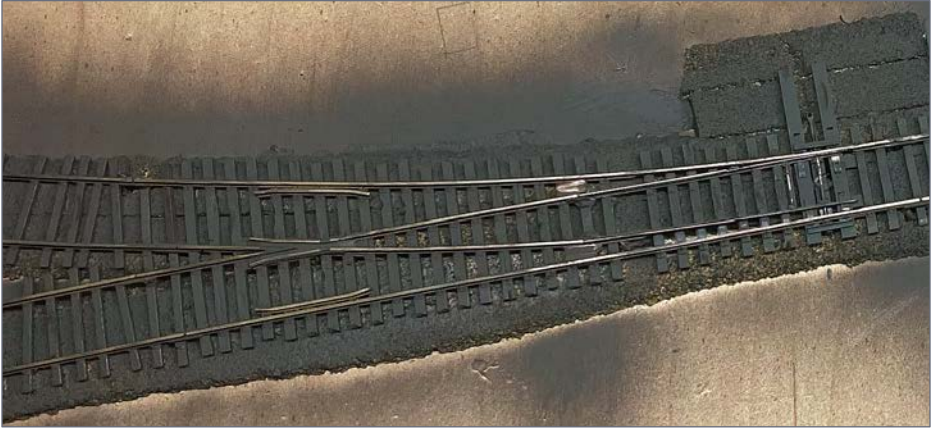


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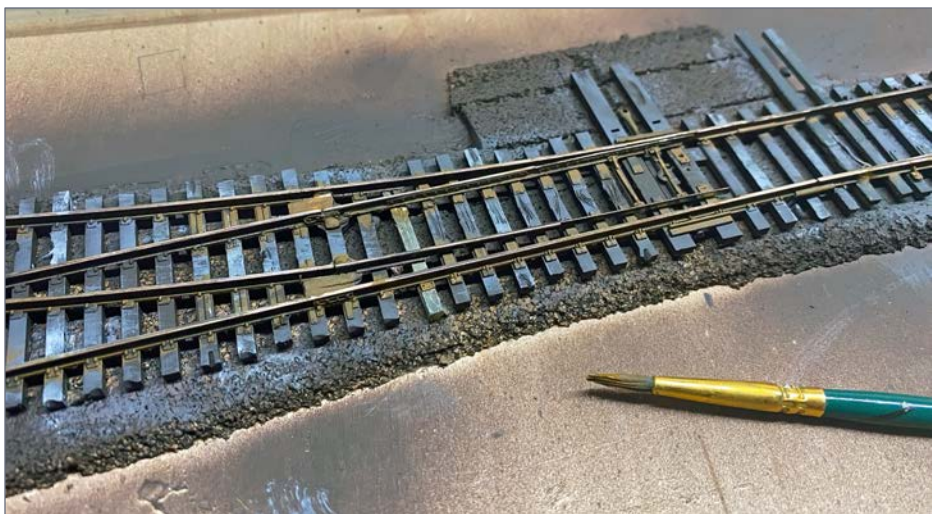
paint still wet, I wiped as much of the paint as I could from the rail heads to make cleaning easier afterwards [11-13].



11. The turnout was sprayed camouflage brown.



12. I weathered the ties using a combination of Vallejo Flat Earth, White, and Gray Black. Since I was modeling some pretty rough track, I made most of the ties gray to represent old, worn-out ties. For newer replacement ties, I used Vallejo Gray Black.



13. I painted the rails and other metal parts Vallejo Earth Brown, a nice base rust color.

DIRT AND BALLAST



14. I dusted the area with real dirt. Once satisfied with the coverage, I sprayed it with wet water – water with detergent to break the surface tension – and secured it with a 50:50 mix of water and white glue.



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15. With the dirt dry and secure, I sprinkled on some fine gray Woodland Scenics ballast. I went extremely lightly on the ballast since I wanted to represent a light, poorly maintained branch line. I secured it using the same method as for the dirt.



16. When the water and glue dried, I cleaned up the rail head and made sure all switch points were clear and working properly.

FINISHING TOUCHES

I filled in the areas around the switches with a variety of pre-made grass tufts. I like using my own homemade tufts, though there are a variety of commercial options available.

There are a variety of static grass applicators available, too. I prefer using individual grass tufts rather than using a grass applicator because it gives me better variety and control. This gives a better feel of individual plants and grass stands as they would appear in nature, rather than general overgrowth [17]. ☑

See final picture next pages ...

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17. Brush and weeds go with poorly maintained track.



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GREG BAKER



Greg has been “seriously” model railroading since 2000, but as long as he can remember he has always been fascinated by trains. Greg’s main interest is the Spokane Portland & Seattle Railway and its operations in Oregon in the late 1960s. He enjoys the operations along the Oregon Trunk, but has recently started a modeling project based on Astoria, Oregon.

Greg lives in the Portland, Oregon area, and has started a job with a local transit agency there. He is excited to be back in Oregon and to enjoy everything it has to offer, while spending time with his wife and two kids. He is currently working on remodeling his garage into a workshop and layout room. ■

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18. With some buildings, a few trees, static grass, and leaf scatter, the scene comes to life. The turnout looks the part of serving an old, run-down spur.



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Adjusted Ops for my new layout



Photo from the Bill Lane collection

Model Railroad Hobbyist | February 2022

RICK BALASSAITIS LOOKS AT HOW
HE ORDERS HIS OPERATIONS ...



WITH THE STORM BLOWN OVER AND THE DEBRIS CLEANED UP – “The Perfect Storm,” January 2022 *MRH* (forum.mrhmag.com/post/the-perfect-storm-12243030) – it was time to get the transportation system humming again. We mustered a crew of two and began the first attempt at operations since the cataclysmic rebuild of the Pennsylvania-Reading Seashore Lines.

The normal order of assigned freight runs on the PRSL branches that ran through Woodbury in the 1950s included three turns from Woodbury. A coal drag and the tank sweeper traversed the Deepwater branch, and the Sand Hog traveled the Millville branch [1].

In addition, the Camden Pavonia yard handled freight transfers from Philly and performed local switching in the Camden



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ADJUSTED OPS ON MY NEW LAYOUT | 2

industrial area. (In real life, Pavonia also handled multiple freights on the unmodeled PRSL main lines through Haddonfield to the shore.)

<u>Train #</u>	<u>Type</u>	<u>Origin</u>	<u>Destination</u>	<u>Notes</u>
WY841,40	Coal Drag	Staging	Deepwater	
Philly Transfer	Car Transfers	Staging	Pavonia	
WY843,42	Deepwater Local	Pavonia	Deepwater	
WY33,34	Sand Hog	Staging	Millville	
WY27,26	Millville Local	Pavonia	Millville	
WY51,50	Salem Local	Pavonia	Salem	
WY79,80	Tank Sweeper	Staging	Deepwater	
XXX	Camden Local	Pavonia	Camden	Fit in ASAP

1. The order of freight operations through Woodbury.

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Building a speed-trap speedometer

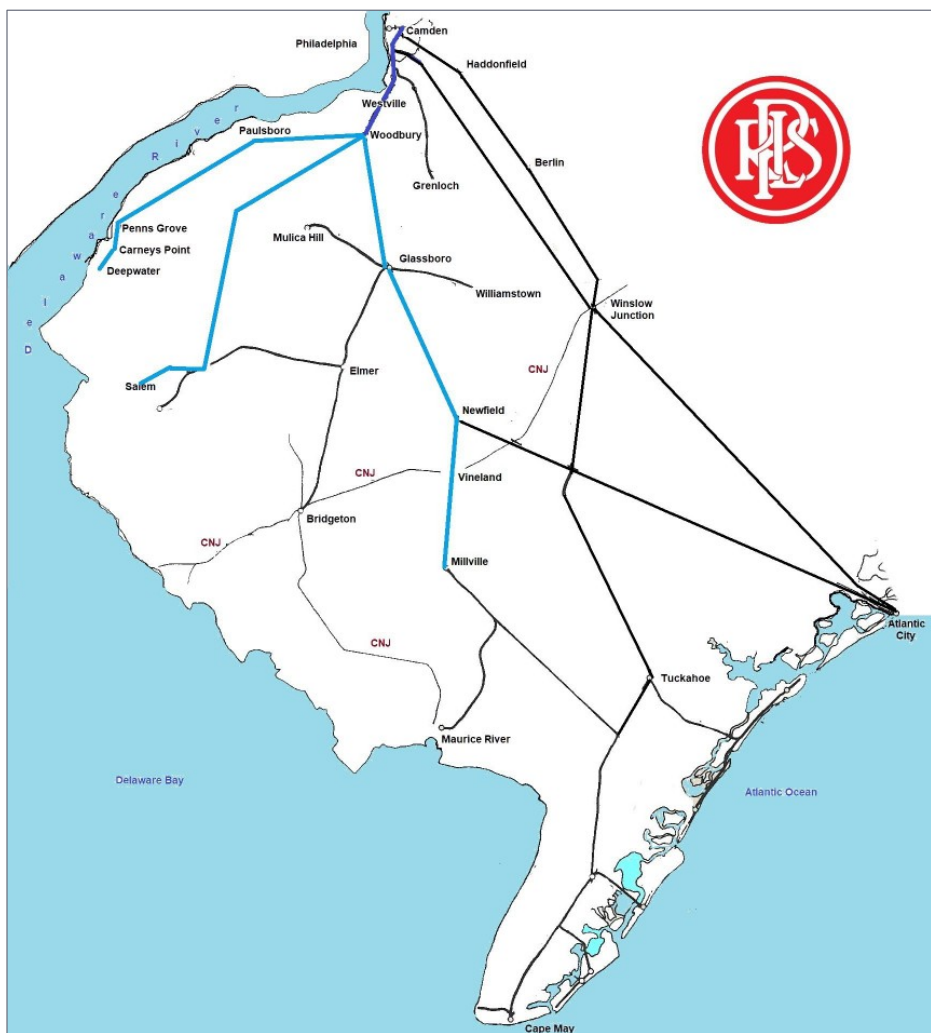
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2. All lines (except those marked for the Central Railroad of New Jersey) are Pennsylvania-Reading Seashore Lines trackage. The thicker dark lines represent the three towns modeled on my PRSL layout. The blue lines show the branches we run off layout.)

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WY841 Deepwater coal drag



3. We begin the weekday with WY841, the coal drag to the Deepwater power plants. Reading tended to outbid the Pennsy in supplying power plant coal in southern NJ and multiple RS-3s usually headed their coal drags.



4. I am sure the Woodbury commuters did not find the swirling coal dust enjoyable during WY841's run-by!

The Philly transfer



5. The Philadelphia transfer arrives in the Camden Pavonia yard with loads and empties from the frontier (anything beyond southern New Jersey). As in real life, a Pennsy Baldwin RT624 handles the assignment. A pair of Baldwin S-12s head out to meet it and get started on the breakdown and reclassification of the freight cars.



6. Baldwin B12s were the only PRSL diesel yard switchers on their roster and had long useful lives in southern NJ.

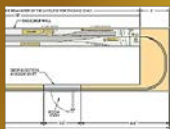




7. The Pennsylvania Railroad and the Reading Company sent their aging steam locomotives to NJ to die, an intermediate stop on the way to the scrap yard. Here a PRR K4 4-6-2 Pacific takes on coal. In just a few years the water towers would be torn down, and the coaling towers would become dilapidated monuments to the bygone age of steam.

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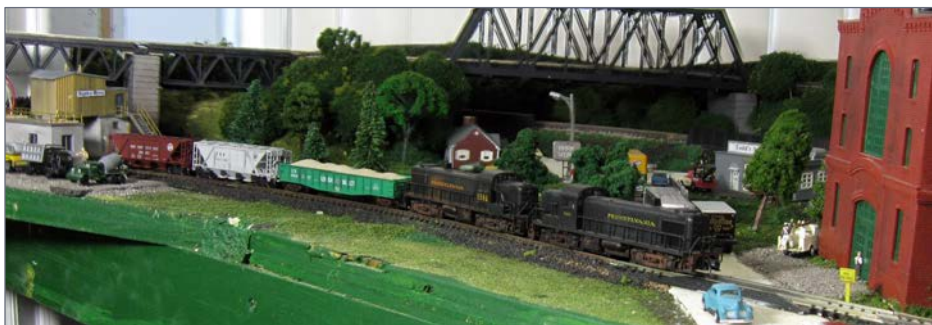
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WY843, 842 Deepwater local

After adding cars from the Philly transfer, WY843 the Deepwater local leaves next to serve Buzby Bros. in Westville, and a concentration of chemical plants and refineries in Woodbury and along the Delaware River.

All trains on these branches are dispatched as “turns.” They leave the Camden freight yards, go to one of the three branch terminus's (Millville / Salem / Deepwater), and return the same day.



8. WY843 delivers loads of sand and cement to Buzby Bros. in Westville.



9. PRR H30 covered hoppers at Buzby Brothers.



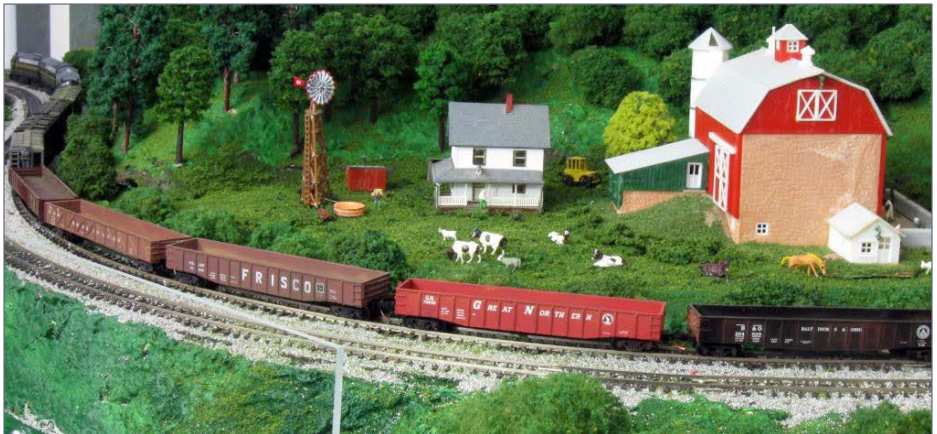
WY33, 34 the sand hog

South Jersey is built on a firm foundation of sand. In the early 1950s, sand was one of our premier exports. The construction of the American interstate highways was gearing up.

Pennsylvania provided the concrete and New Jersey the fine sand to mix with it. Once again, the railroads got to support their biggest competitor, the trucking industry, by the building of their highways.

WY 27, 26 the Millville local

The Millville branch handled glass-making and mid-sized manufacturing, in addition to produce and a thriving group of vineyards. Wheaton Glass and Owens-Corning were among the businesses shipping by rail. GP38s – anachronistic for the 1950s era because they did not arrive on the PRSL until 1967 – typically handle this train. Before 1967, Baldwin AS-16s were the PRSL's sole home road power.



10. WY33 heads south with a string of empty gondolas and covered hoppers. Here we see it passing the Haines-Falcone dairy farm.



11. WY27 heads south through Westville with time-warped PRSL GP-38s in the lead.

Alas, nobody produces AS-16s in N scale. PRSL's joint owners, the Pennsylvania and Reading Railroads, assigned a variety of locomotive power to the PRSL that are available in N scale. The GP38s are a compromise to represent PRSL home road power.

WY51, 50 the Salem local

WY51 heads through Woodbury and off to the lush farmlands in the heart of South Jersey. It always contains large blocks of reefers. Woodbury contains a small icing facility, so most of the reefers are iced here and the newer mechanical reefers take on fuel.

WY79, 80 the tank sweeper

The final departure of the day is the tank sweeper. It is off to the refineries in Westville and Paulsboro.

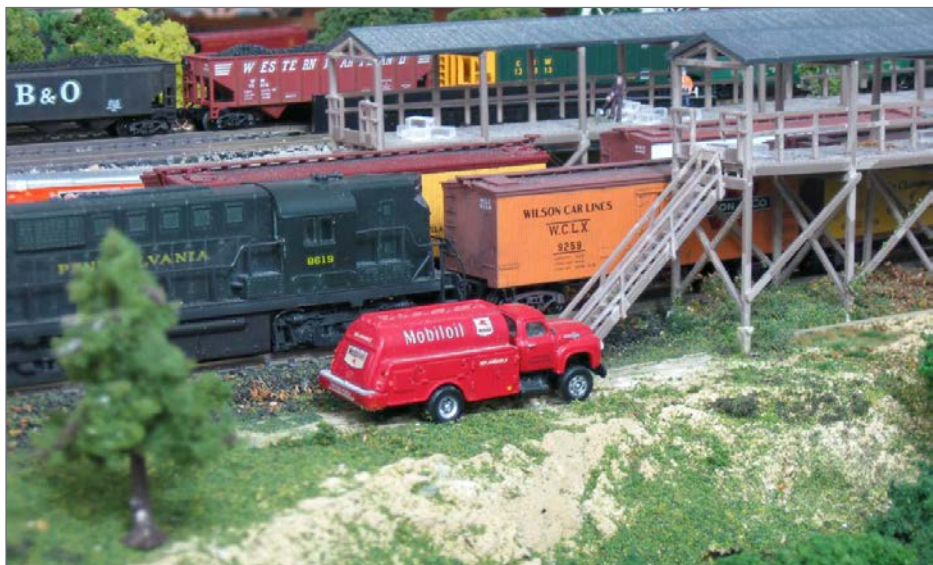
The missing local

The Philly transfer has already returned to Philadelphia with loads from South Jersey and unneeded empties, and during some idle time, the Pavonia yard crew built the Camden local and headed out. The yard switcher will scoot across the mainline to RCA, Campbell Soup, Van Sciver, and the NY

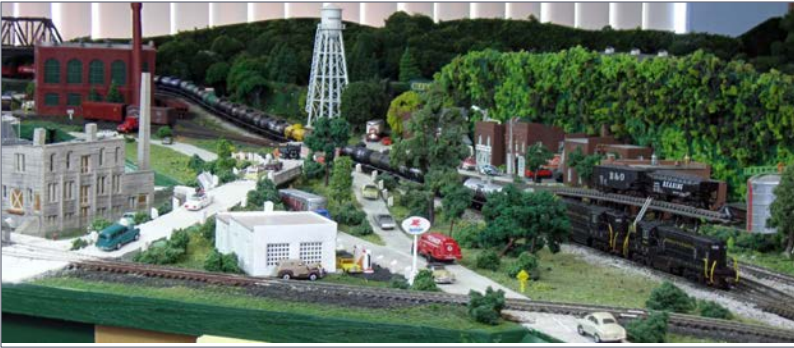




12. WY51 passes Broad Street Lake in Woodbury.



13. WY51 works the icing tracks in South Woodbury



14. The Tank Sweeper southbound through Westville.

RR	Car#	Type	WY27	Tuesday Switch List		Next CL#	Notes
PRR	220306	H *	P PRSL Power Plant	Westville, NJ	Empty	X99	
PRR	220538	H *	P PRSL Power Plant	Westville, NJ	Empty	X99	
RDG	17055	B *	D Coney Davis Lumber	Westville Team Trk	Finished Lumber		
RDG	196504	B *	P Broadway Feed Co.	Westville Team Trk	Empty	Y00	
PRR	244877	H Co	P Buzby Bros.	Westville, NJ	Empty	Y00	
PLE	20375	B *	D Texaco	Westville, NJ	Big Parts		
BO	276383	B *	P Hollaway Lumber	Westville, NJ	Empty	Y00	
FBX	5300	R *	D Woodbury Icing Track	Woodbury, NJ	Empty		
WCL	9259	R *	P Woodbury Icing Track	Woodbury, NJ	Produce	M08	
LV	79006	B *	P Armstrong Cork	Vineland, NJ	Cork Roadbed	X99	
BO	380645	B *	D Sears, Roebuck, & Co	Vineland, NJ	TVs		
PRR	104287	B *	P Vineland Winery	Vineland, NJ	Bottled Wine	X99	
GN	18748	B *	D T.C. Wheaton Co.	Millville, NJ	Empty		
LV	37048	G *	D Ricci Bros. Sand Co.	Port Norris, NJ	Empty		
ERIE	79006	B *	D Hack & Sons Pipe Co.	North Woodbury, NJ	Metal Paint		
PRR	342617	G *	P Hack & Sons Pipe Co.	North Woodbury, NJ	Water Pipes	X99	
SRLX	5199	R *	P Del Monte	Westville, NJ	Frozen Foods	M57	
RDG	64395	H *	P Barry Bros.	Westville, NJ	Empty	X99	
BO	30842	H *	P Barry Bros.	Westville, NJ	Empty	X99	
Drops: 7		PickUps: 12					

15. This is the drops/pickups switch list for WY27 the Millville Local. We originally ran a standard four-cycle Waybill card system but as the train sizes grew, the operating crew became less happy with handling a large stack of cards so I transferred the card cycles onto a spreadsheet, copied them to a Microsoft Access database and using SQL generated a switch list for each train. Now we can handle up to eight waybill cycles for cars being shipped off line and eventually returning on-line.



Shipyard, then scurry back in time to declassify some of the returning road jobs.

HOME AGAIN

During this time, many of the turns have reached their destinations at the three termini that radiate from the junction at Woodbury, served their customers there, done the runarounds, and headed back to Camden.

When WY80 (tank sweeper) finally limps home, the day will be over... and we can do it all again tomorrow! ☑

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16. WY79 serving the Texaco refinery in Westville.



17. Soup's On! Or soon will be. The Camden local slides by the RCA spur to Campbell Soup to deliver another cooled load of local vegetables.



18. WY840 is now straggling home with empties. It had to cross over three tracks in Woodbury to continue right-hand running back to the yards.



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19. The Millville Local, now designated WY26 drops a loaded coal car at Barry Bros. Fuel in Westville. Most spurs along the double-tracked main line are convenient trailing-point sidings.



20. WY33 is now WY34, the loaded sand hog, here leaving North Woodbury.

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21. The sand hog passes through Westville.



22. WY50 Salem local returning home to Pavonia Yard.



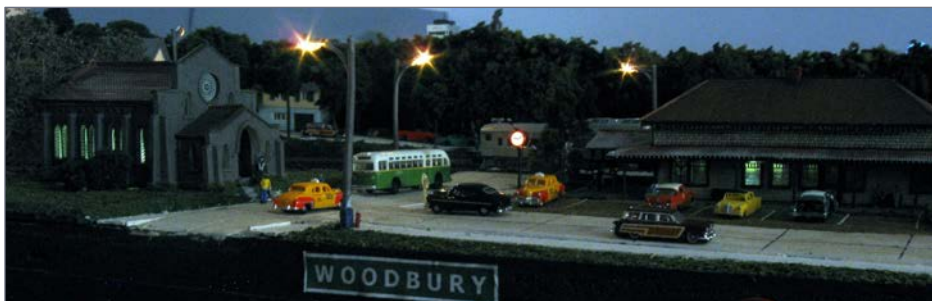
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23. WY842 makes a delivery at the Woodbury Bottling Co.



24. Right On Track Models has produced an accurate laser model of the Woodbury station (in multiple scales). The N Scale version is now the crowning centerpiece of my layout.

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Bump resistant signals

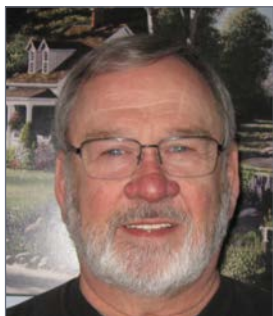
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RICK BALASSAITIS



Rick grew up in Westville and Woodbury Heights, always within a block of the PRSL. Although he preferred coal mountain rail-roading, he knew eventually he would model his hometown railroad with its ugly “black” Baldwins. Woodbury is the junction for 3 southern NJ branchlines to Millville (manufacturing), Salem (farm), and Deepwater (chemical/petroleum).

Right on Track Models created a kit of the Woodbury station. Most of the industries serviced in Westville and Woodbury have fairly accurate stock buildings, and the Walther’s Union station is a stand-in for the Philadelphia 30th street station.

Rick has a stable of Atlas Baldwin VO-1000s which handle the yard switching, but no one makes the Baldwin AS16 road switchers in N scale. Fortunately the PRSL’s parent companies sent all their old steam and diesel engines to live out their last days on PRSL tracks, so most of their smaller engines are legitimate to run.

The freight cars are steam diesel era with a mix of 30% PRR, 15% Reading and 5% of the adjoining railroads (CNJ, B&O, LV, Erie, NYC, C&O, N&W), 15% miscellaneous, and 5% PFE just because he likes them better than Pennsy’s FGE.

Rick has been married almost 50 years, and God has blessed him with 4 children, 13 grandchildren, and one great-grandchild. ■

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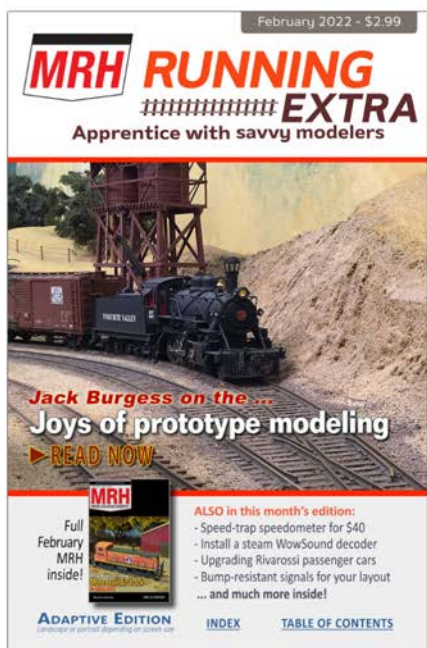
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Making great looking conifer trees

YouTube channel **Creative Art** has some interesting videos about how to make model trees. This particular “wordless” video shows the step-by-step process without any narration. They also make their own fine ground foam, but you can just buy that if you like.

This process is a bit tedious, but it does make superb looking conifer/spruce-type model trees. Give it a try, it makes some quite realistic foreground conifers. ☑



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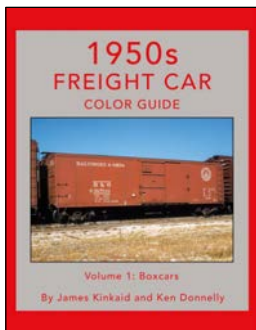
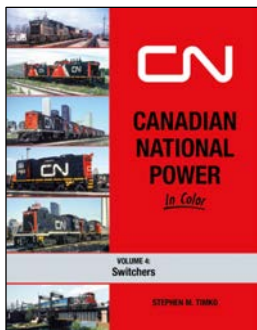


Model Railroad Hobbyist | February 2022

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



NEW PRODUCTS FOR ALL SCALES



New titles from **Morning Sun Books** include *Canadian National Power: Switchers*. Edited by Stephen M. Timko, this fourth volume in the CN power series covers General Electric's industrial-size units and the standard switchers of

Alco/MLW, EMD/GMD, and CLC end-cab units. A handful of Whitcombs are included, as are the GMD/CN-built units.

Of special interest to prototype modelers is Morning Sun's *1950s Freight Car Color Guide, Volume 1, Box Cars*. This book covers the classic period that pre-dates mergers that would erase many venerable roads. In the 1950s, boxcar red was everywhere, but colorful new looks were arriving. It was the final decade of solid bearing trucks, running boards, and the ultimate years of stock cars, ice-bunker refrigerator cars, and the XM 40' boxcar.

THE LATEST MODEL RAILROAD PRODUCTS, NEWS & EVENTS



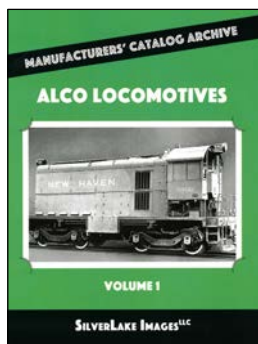
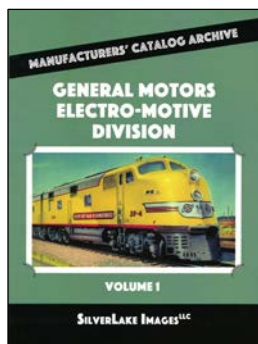
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New softcover books coming from Morning Sun include *Soo Line Color Portfolio*, that features the distinctive red and white locos, freight cars, and early wine-colored equipment of the Soo Line. Cabooses, passenger and freight trains, equipment and structures are all included in this full-color book. Morning Sun has also released volume 5 of *Observation Car Color Portfolio: SAL – YW*. Reporting marks presented in this softcover volume include SAL, SCL, Sierra, SLSF, SOU, SP, SP&S, SSW, T&P, TSE, UCRS, UP, USA, USN, VIA, WAB, WM, WP, and YW.

Info: www.morningsunbooks.com



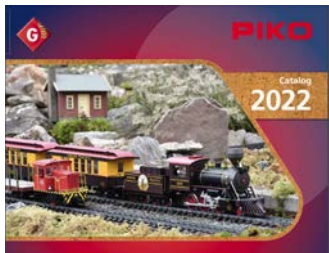
New publications from **Silver Lake Images** includes reproductions of manufacturer's catalogs for *General Motors Electro-Motive Division* and *Alco Locomotives*. The GM book includes reprints of sales brochures titled *Electro-*

Motive Division Presents the F3, Passenger Traffic is Profitable, and a brief look at EMD and its facilities in *Welcome to Electro-Motive Division of General Motors*.

Silver Lake's Alco publication includes reprints of *Diesel Switching Locomotives*, *Freight Locomotives for the Delaware & Hudson*, *Alco Three Cylinder Locomotives*, and a look at some of the engines built by MLW from the 1920s to 1940s in *Montreal Locomotive*.

Info: www.ronsbooks.com

LARGE SCALE PRODUCT NEWS



PIKO America has a new catalog of large scale models available for download at:

cdn.shopify.com/s/files/1/1960/4221/files/99702_US_G-Catalog_2022_1-121-lowres.pdf?v=1641401248

HO SCALE PRODUCT NEWS



New HO scale freight car kits announced by **Accurail** include an undecorated 40' wood stock car. The economy-priced model comes with a horizontal brake wheel atop a vertical brake shaft, and Bettendorf-style solid bearing trucks.



This Reading twin-bay coal hopper with panel-sides is available singly and in 3-packs with different road numbers. The HO scale model represents a Reading class HTj car built in 1919.



This Union Pacific class CH-100-26 triple-bay covered hopper was built for UP by Pullman-Standard. Accurail's HO version is available in a 3-car set with different road numbers.



Accurail has an HO scale kit for an ACF 2970 cu. ft. Center Flow twin-bay covered hopper available in two road names. In addition to the brown BNSF version, the model is also available decorated as an Erie Lackawanna car ACF built in June 1967.



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

Info: www.accurail.com



hopper. The HO scale model accurately replicates the 41' 11" prototype Trinity introduced in the 1990s.



American Limited Models, division of San Juan Model Company, has completed the 4th production run of a Trinity Railcar 3281 cu. ft. twin-bay covered

hopper. The HO scale model accurately replicates the 41' 11" prototype Trinity introduced in the 1990s. Spotting features that distinguish the 3281 from earlier twin-bay covered hoppers include the overhanging arched roof, heavy top reinforcement stiffener, and folded jack pads at the bolster.



Paint schemes with six road numbers include ERCX-Excel Railcar, GNAX-Holcium, CMEX-Cemex, and HWCX-Halliburton.



Features on the ready-to-run model include wire grab irons, coupler cut bars, photoetched roof walk and coupler cross-over, and lower shelf knuckle couplers. The model comes with 100-ton roller-bearing trucks

with metal wheelsets and rotating bearing caps. An interesting detail is the car road number printed on the trucks.

Info: www.americanlimitedmodels.com

Athearn is introducing an HO scale model of the EMD GP18 locomotive. Produced between 1958 and 1963, its 567D1 prime mover featured 1,800hp, 50hp more than the GP9's 1,750hp. Featuring new radiator grills, it was also available from the factory with either a high or low short hood.



Scheduled for a March 2023 release, the model will be available decorated for Lehigh Valley, Conrail, Missouri Pacific, Rock Island, Seaboard Coast Line, and Grand Trunk Western.

Scheduled for a March 2023 release, the model will be available decorated for Lehigh Valley, Conrail, Missouri Pacific, Rock Island, Seaboard Coast Line, and Grand Trunk Western.



The Genesis model will come with a full cab interior, coupler cut levers, wire grab irons, flexible rubber trainline hose and MU hoses, and other wire and etched metal detail parts.

The Genesis model will come with a full cab interior, coupler cut levers, wire grab irons, flexible rubber trainline hose and MU hoses, and other wire and etched metal detail parts.



All models will come equipped with either a SoundTraxx Tsunami2 DCC sound decoder with dual cube speakers or DCC-ready with a 21-pin DCC quick-plug NEM connector.

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Athearn's March 2023 production also includes a Genesis GP50 locomotive in HO scale. It will be available in both high-nose and low nose configurations, and in two body phases.

Athearn's March 2023 production also includes a Genesis GP50 locomotive in HO scale. It will be available in both high-nose and low nose configurations, and in two body phases.



Roadnames included in this run are Burlington Northern, BNSF (Santa Fe patch), Chicago & Northwestern, Norfolk Southern, and Santa Fe.

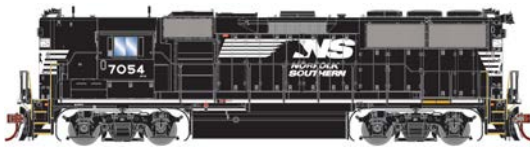
Roadnames included in this run are Burlington Northern, BNSF (Santa Fe patch), Chicago & Northwestern, Norfolk Southern, and Santa Fe.



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DCC-ready with a 21-pin DCC quick-plug NEM connector.

All models will come equipped with either a SoundTraxx Tsunami2 DCC sound decoder with dual cube speakers or



A Genesis HO scale 50' PC&F Youngstown plug-door boxcar with both 6' & 8' doors is also on the March 2023 schedule.



Wisconsin Central. Primed for Grime models will be Golden West Service cars patched for Southern Pacific and St. Louis Southwestern/Cotton Belt.

The model will be available decorated for Southern Pacific, Southern Pacific Speed Letter, Golden West Service, and



bearing caps, trainline hoses, and machined black wheels with RP25 contours. Body-mounted McHenry double-shelf knuckle couplers are standard.

The cars will feature separate wire grab irons and coupler lift bars, etched metal coupler walkovers, rotating



In the Ready-To-Run line, Athearn is releasing a run of HO scale 5-bay rapid discharge hoppers in seven roadnames and paint schemes.



Cars decorated for The Andersons (ITGX) will be available in white, red, or

black, and other roadnames are Helm Leasing (HLMX), Cape Breton & Central Nova Scotia (CBNS), Electric Fuels Corp (ELFX), and Georgia Power Co. (GGPX).



The ELFX and GGPX cars are used in coal service, the others for sugar beets.

ITGX cars will come with separate etched upper

extensions. All cars are available either singly or in 5-packs with unique road numbers. Wire grab irons, a separately applied brake wheel, and removable loads are standard.



Also in the Ready To Run line, Athearn is releasing an HO scale 50' FMC combination door boxcar. Appropriate for

1974 to the current era, roadnames in this release are Railbox – Early, Railbox – Late, Railbox (Primed for Grime), Burlington Northern, Minnesota, Dakota & Western; and Missouri Pacific.



Equipped with separately applied wire grab irons and etched end platforms, the cars also come with McHenry scale knuckle couplers and machined metal wheels with RP25 contours.



Included in the March 2023 production run is the

Ready To Run HO scale Gunderson Maxi 1 5-unit articulated wellcar set. Roadnames for the standard car set are TTX/Burlington Northern (DTTX), Santa Fe Leasing (SLFC), Trailer Train/Southern Pacific (DTTX), and K-Line/Rail Bridge (RBCX).



A set of cars decorated for DDTX also includes five Hapag-Lloyd 40'

containers. All cars include fine ladder detail, wire grab irons, etched walkways, and separately applied brake piping and trainline

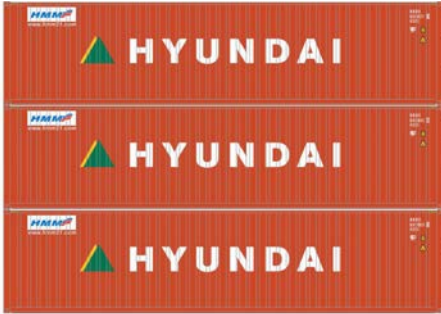


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hoses. Prototypically correct 33" and 38" nickel silver wheels with RP25 contours are standard.



Athearn is also releasing four new sets of 40' High-Cube containers. Roadnames in the run are Hyundai, Wan Hai, CMA-CGM, and Hapag-Lloyd. The containers are fully assembled, stackable, and individually numbered.



Continuing the line of UPS branded equipment from Athearn is a 28' drop-sill trailer. To be released in both a no logo and large logo paint scheme, the trailers are equipped with rubber tires, painted wheels, and are fully assembled.



In Athearn's **Roundhouse** line, the venerable F-unit locomotive model has been updated with LED lighting.



Roadnames in this release are Amtrak, Burlington Northern, CSX, Kansas City Southern, Pan Am Railways, and Union Pacific.



The DCC-ready locomotives are equipped with a 21-pin plug and feature separately applied horns, a 5-pole motor with flywheels,

single or dual headlight per the prototype, and machined metal wheels with RP25 contours.



Accompanying the F-units above, Roundhouse is also releasing HO streamlined passenger cars. The coaches are available separately and the diner, dome, and observation cars will be a three-car set.



Roadnames include Amtrak, Burlington Northern, CSX, Kansas City Southern, Pan Am Railways, and Union Pacific. The observation car features a decorated drumhead. The cars are equipped with machined metal wheels and body-mounted McHenry scale knuckle couplers.

Info: athearn.com



Atlas' production schedule for the 4th quarter of this year includes a new release of HO scale GP-38 diesel locomotives.



Features on the Master series model will include golden-white LEDs, directional lighting, cab interior details with crew, separately-installed windshield wipers, metal grab irons and handrails, movable drop steps, walkway safety tread, coupler cut bars, MU and trainline hoses, and a snowplow pilot.



Road names in this release will be Central Maine & Quebec Railway, Chesapeake & Delaware, Chicago & North Western,

FURX, Indiana Harbor Belt, Providence & Worcester, Rock Island,



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Union Pacific, Conrail, Norfolk & Western, Tennessee, Alabama & Georgia; and Florida, Gulf & Atlantic in Bicentennial paint. Atlas Gold series DCC sound models will be available, as well as Silver series DC models with a DCC-ready 8-pin connector.



Also coming from Atlas during the 4th quarter of this year is a Fairbanks Morse H24-66 Train

Master road switcher. The HO scale model is based on the massive 2,400hp diesel locomotive FM produced in the early 1950s.



Road names scheduled for this release are Chihuahua Pacific, Lackawanna, Jersey Central, Reading, Southern Pacific,

Canadian Pacific, and Pennsylvania. DCC Gold series locomotives with ESU LokSound and Atlas Silver series DC versions will be available in this release.



R. Bale

PULLMAN 10-1-1 SLEEPER

The Pullman Company built and operated thousands of heavy steel passenger cars during the first twenty years of the 20th century. Beginning in the late 1920s many of the earlier cars were rebuilt with private rooms replacing some of the open sections. They were also modernized with mechanical air conditioning with ducting added to the clerestory roof over the sleeping areas. Typical of the upgrades, some of which remained in operation into the late 1950s, was Pullman plan 3973, which had 10 sections, 1 drawing room and 1 compartment. Sections were open area with seats for daytime travel that were converted to an upper and lower berth at night. For privacy heavy green curtains were hung over the open section. This was the most common and least expensive sleeping accommodation. Drawing Rooms featured an enclosed room with a small couch opposite a seating section. At night the seats were converted to upper and lower berths and the couch became a bed. These rooms were equipped with a sink and toilet. Compartments were smaller than drawing rooms and did not have a sofa/bed. Pullman 10-1-1 sleepers had two large restrooms at opposite ends of the car. They were fitted with sinks and a toilet. The ladies restroom included a vanity table. The men's room, which also served as a smoking lounge, was larger since more men than women traveled during that era.



Atlas has included a selection of Pullman 10-1-1 sleeping cars in its 4th quarter

production schedule. The 10 section-1 drawing room-1 compartment design was among Pullman's most common sleeping car configurations. After Pullman disbanded in the late 1940s, many of the 10-1-1 sleepers were sold to individual railroads where they continued in service into the 1950s.



Pullman owned cars in this run include Island Charm, Island Glade, Island Peer,

Macintyre Range, and Sentinel Range. Former Pullman cars owned by Union Pacific include Douglas Fir, Inland Empire, and Silver Spruce. Chicago & Eastern Illinois 10-1-1 sleepers in C&EI's Georgian paint scheme will be available for Chief Garry, Chief Red Shield, and Chief Joseph.



Atlantic Coast Line cars include Island Home, La Boheme, and La Gioconda.

Chief series cars in Northern Pacific livery will include Chief Black Foot, Chief Red Cloud, and Chief Taholah. Completing this release is an Illinois Central car wearing the name of Chief Goliah.



Atlas' HO Pullman models feature full underbody details, operating

diaphragms, interior detailing, and window glazing. The six-wheel trucks are fitted with metal wheelsets. A minimum track radius of 24" is recommended. These cars are being produced from the excellent tooling originally developed by Branchline.



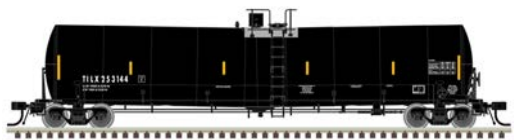
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Atlas plans to release its HO scale Master series Trinity 25,500 gallon insulated tank car late this year with five new road names.



The insulated general purpose tank car commonly carries such commodities as vegetable

oil, tallow, styrene, benzene, asphalt, biodiesel, acrylates, and other chemicals. Trinity is still producing the prototype which was introduced in 1986. Decorating schemes available on this release include TILX (2019 repaint), GATX (Owensboro Grain), TILX (AGP), GATX (Soy Power Bio Fuels), and NATX (UTCX repaint). The model will be available singly and in 3-packs with different road numbers.



Atlas plans to release its ACF 4650 triple-bay Center Flow covered hopper with new paint schemes and road names late this year. The

Master series HO scale model will have an etched metal roof walk and 100-ton roller-bearing trucks with body-mounted Accumate knuckle couplers.



Decorating schemes will be Engelhard, Georgia Kaolin, Tabor & Co., Farmland Co-op, Union Pacific (ex-SP patch), Canadian National,

Wisconsin Central, and Southern Pacific.



Atlas' 4th quarter production schedule includes a Trainman 70-ton triple-bay open hopper.

The HO scale ready-to-run model will be available for Baltimore & Ohio, Alaska Railway, Peabody Coal, Chicago & Eastern Illinois,



Western Maryland, and Reading. A removable coal load is included with each model.



Completing Atlas' 4th quarter release of HO scale models is a Trainman series C&O steel cupola caboose. The specially decorated model celebrates the 50th anniversary of Operation Lifesaver.

A portion of the proceeds from the sale of this model will be donated to Operation Lifesaver to assist their continued efforts to provide crucial rail safety education.

Info: www.atlasrr.com



R. Bale

SD30C-ECO LOCOMOTIVE

The SD30C-ECO is a 3,000hp diesel electric locomotive built between 2013 and 2016 by EMD for the Canadian Pacific Railway. The SD30C-ECO diesel meets EPA emission standards and the CP's crashworthiness requirement. The C suffix in the model designation denotes crashworthiness of the cab, frame, and fuel tank. The cabs and fuel tanks on SD30C-ECOs were built new, but the frames, trucks, and numerous internal components were recycled from the CP's fleet of aging SD40-2s. Several different phases of SD40-2s were used as donor locomotives which resulted in variations in the configuration of some rooftop elements in the new SD30C-ECOs. With the increased emissions requirement, the SD30C-ECO received flared radiators similar to those on SD45s. With the exception of the headlights and ditch lights, all other lights in the SD30C-ECO are LED.



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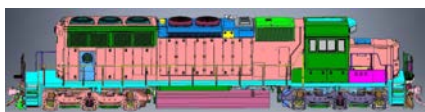


Photo courtesy Steve Thomas

Bowser plans to deliver a group of Canadian Pacific SD30C-ECO diesel locomotives early next year.



Specific details of the HO scale Executive Line model include individual air hoses, windshield wipers, coupler lift bars, and an operating headlight.



DCC sound versions of the SD30C-ECO will have a factory installed LokSound V5 decoder. Analog DC versions will have a

21-pin plug for an aftermarket DCC decoder. Pre orders are being accepted through March 31, 2022.



R. Bale

ALCO RS-3 ROAD SWITCHER

The American Locomotive Company introduced the 1,600hp RS-3 road switcher locomotive in May 1950.

Designed specifically to compete with EMD's GP7, the RS-3 would become the most commonly seen Alco locomotive across the country. Schenectady-based Alco and its Canadian counterpart, Montreal Locomotive Works, built 1363 of these versatile locomotives before production ended in late 1956. Spotting features of the familiar and reliable RS-3 included pronounced rounding at the corners on the cab and long, low hoods, giving the locomotive a more streamlined appearance than its RS-1 predecessor. The radiator-fan housing was also rounded. The short hood could accommodate a steam generator. Because of this option, and the RS-3s good looks, some railroads elected to employ theirs in passenger/commuter service.



Bowser has announced plans to produce another production run of Alco RS-3 Phase 3 diesel

locomotives. Delivery is scheduled for early 2023 with preorders for guaranteed delivery being accepted through March 31, 2022.



Specific details on the HO scale ready-to-run model include individual air hoses, windshield wipers,

grab irons, coupler lift bars, and an operating headlight. The power trucks feature blackened wheels.



DCC sound versions of the RS-3 locomotive will have a factory installed LokSound V5 decoder.

Analog DC versions will have a 21-pin plug for an aftermarket DCC decoder.



Road names on this release will include Burlington Northern, Boston & Maine, Chesapeake

& Ohio, Lehigh Valley, Long Island, and Lake Superior & Ishpeming Marron.



Additional road names will be Maine Central, Missouri Pacific, Nickel Plate Road, Norfolk

Southern, Pennsylvania, Spokane, Portland & Seattle; and Western Maryland.

Info: www.bowser-trains.com

Broadway Limited plans to release an HO scale version of EMD's E series diesel locomotives this month. The ATSF E



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delivered red-orange color, a pre-1946 version with the traditional red, and a postwar version.



the December release. The BLI models feature an ABS molded body on a diecast metal chassis. Details include etched metal grilles and individually applied grab irons, handrails, horn, bell, and windshield wipers.



The locomotives will be equipped with Paragon4 Rolling Thunder sound and dual DC and DCC control system.

Info: www.broadway-limited.com



ExactRail has released another production run of its HO scale Bethlehem 3483 cu. ft. quadruple-bay coal hopper car. The

accurately-detailed model features numerous prototypical components including a new draft box, with accurate striker contours and appropriate key detail.



Separately applied details include coupler cut levers, wire grab irons, brake rods and levers, bell

cranks, air hoses, and Wine door locks. The model comes with Kadee No. 158 metal couplers and ASF 100-ton Ride-Control trucks with machined metal wheelsets.

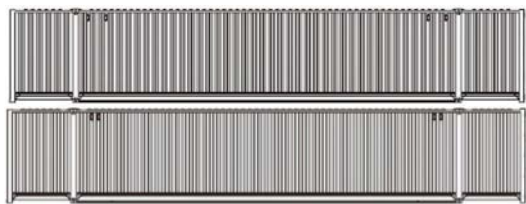


ExactRail's ready-to-run model is available now in three Denver & Rio Grande Western paint schemes and two schemes each for Chicago & North Western and Reading & Northern. Each car comes with two styles of removable coal load. An undecorated version is also available. Info: www.exactrail.com



Jacksonville Terminal Company has announced its first HO scale product, an Ocean 53' 6-42-6 container with IBC corner castings. It will have three door styles, per the prototype and include

the JTC magnetic connecting system. The containers will be available in several roadnames, including the Oceanex "LTL" scheme, which will be sold as a single container, and Trailer Bridge (ex-APL), APL (early), and Crowley (blue), which will be sold in 3-packs. Orders are being taken through February 28th and the run is being "built to order."



Two other versions, a 6-42-6 53' corrugated container without corner IBCs and a 8-55-8 53' corrugated container are expected later this year.

Info: www.jtcmodeltrains.com

Kadee's newest release is a 50' PS-1 boxcar decorated for the Missouri-Kansas-Texas Railroad Company. The HO scale model



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replicates a car built by Pullman-Standard in 1955 with 8' six-panel Superior sliding doors.



The Kadee model features accurately-detailed ladders, grab irons, and stirrup steps; and see-through running boards and brake step. The Ajax model 3059 brake wheel is correctly detailed including the proper dished contour. The ready-to-run model comes with Kadee metal couplers and self-centering trucks with metal wheelsets.

Info: www.kadee.com



KatoUSA has added an HO scale diner and a coach-baggage to its selection of Amtrak Superliner Phase VI cars. The ready-to-run models have full interior

detailing and flush tinted windows.

Info: www.katousa.com



MAC Rail has released two versions of a Protein Feed Hopper Top. Used to cover wet corn byproducts in Bethgon hoppers, the Hopper Top comes in two styles, High and Low. The kit consists of a 3D printed hopper top in an aluminum finish and an adhesive vinyl "tarp" that is installed by the modeler. It fits many of the HO scale Bethgons

available on the market.



MAC Rail has also announced a 3D printed kit to convert Athearn Hertzog HZGZ 40000 series Thrall hoppers into middle or end ballast conveyor cars. The kit includes the Phase 1 “receiving” and “delivering” conveyor panels, electrical

boxes for the side of the railcar, and a link to full color instructions. Expected in May 2022. Phase 2 delivery car and Phase 3 power car kits are anticipated for fall 2022.



Also from MAC Rail is an HO scale GE Dash 9 stack cap. It is a 3D printed detail part of a feature commonly found on BNSF Dash 9 and AC4400

locomotives. Each package includes two caps that will fit on either Athearn or Scale Trains locomotive models.

Info: macrailproducts.com



previously unavailable in HO, cover the time period from the mid-1950s through the 1970s.

Rapido is working toward a late 2022 release for three groups of fully-detailed piggyback trailers. The three body types,



For the 1955 to 1960 era, Rapido will offer a 35' Fruehauf integral-post trailer with ribbed sides and rounded front corners. Decorating

schemes will be Union Pacific, Boston & Maine, New Haven,



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Nickel Plate Road, and Delaware, Lackawanna & Western. A 35' trailer decorated for Pennsylvania Railroad will have a curb side loading door.



Two 40' Fruehauf trailers, an exterior-post design and one with fluted sides, will reflect prototype practice in the 1960s.

Exterior-post trailers will be available for Erie Lackawanna, and Western Maryland. Trailers decorated for Penn Central, Lehigh Valley, Pennsylvania Railroad, and Republic Carloading will all have side doors.



Fruehauf 40' trailers with fluted sides and curb side doors will be available for Santa Fe, Great Northern, Northern Pacific, and Southern Pacific.



Per prototype practice, a 40' Navajo trailer with fluted sides will have rear doors only. All schemes will be offered in three individual numbers.

Info: www.rapido-trains.com

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R. Bale

## EMD GP30 DIESEL LOCOMOTIVE

The GP30 was a 2,250hp diesel electric locomotive built from 1961 through 1963 by the Electro Motive Division of General Motors. EMD developed the GP30 to compete with General Electric's new U25B. The GP30 is readily identified by its high profile and stepped cab roof. EMD used a GP20 frame for the GP30 and since equipment for the centralized air system required more room behind the cab, additional space was achieved by raising the height of the locomotive, giving room for the central air system, turbocharger and electrical cabinet. This extra height behind the cab meant that the body style used for previous GP units was not suitable. Designers from GM's Automotive Styling Center created the GP30's signature hump and cab roof profile. The hump-like bulge started at the front of the cab and encased the air intakes for the enlarged air system and the dynamic brake blister. GP30 marketing literature claimed 30 distinct improvements over the GP20 and this was the reason for the GP30 designation. A total of 948 GP30s were built including 40 cabless GP30B units ordered by the Union Pacific Railroad. Many GP30s have been preserved by museums and tourist railways.



**Scale Trains** has added an EMD GP30 diesel to its growing list of accurately detailed HO scale locomotives.



The Rivet Counter model will have LED lighting in the front, rear, and side walkway lights; ground lights, number boards, and ditch lights.



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Road specific details include variations in the cab, dynamic brakes, doors, grilles, and trucks.



The initial release, tentatively scheduled for September 2022, will be available for Pennsylvania, Norfolk & Western, Chicago & North Western, and two schemes for Denver & Rio Grande Western.

A CSX RDMT road slug is also part of the release.



Four Union Pacific units will be available, including cab-less GP30B passenger and freight units, a standard GP30 with a cab,

and GP30 No. 844, which replicates a prototype preserved at the Nevada State Railroad Museum in Boulder City, NV with faded gray paint.



The HO scale Rivet Counter models will be available for DC (DCC-ready) operation, and with factory installed DCC and sound.



Scale Trains has scheduled a July release date for a group of Conrail Bethgon coal gondolas. The HO scale Rivet Counter model accurately replicates Conrail class G52X cars built in 1997.



Notable details on Scale Trains HO version include unique COTS and end data, photo-etched metal see-through end crossover platforms, full brake and underbody details, 32 wire grab irons,



and rotating bearing caps. Two types of coal loads, offset and symmetrical, are available as a separate purchase.

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



prototype cars built by Greenville Steel Car Company in the 1969-1970 period for auto parts service.



**Tangent** has introduced an HO scale model of an 86' Greenville high-cube boxcar with four plug doors per side. The ready-to-run model replicates a group of

Tangent offers the quad door boxcar with several road specific options including two underframe styles (center-of-car cushioning and end-of-car cushioning),

three brands of etched-metal end crossover platforms (Gypsum, Apex, or Morton), and several prototypically-accurate brake wheels and gear boxes (Ajax, Universal, Equipco, Miner, Champion-Peacock, or Elcon-National). The models come with flexible rubber air hoses, Kadee metal knuckle couplers, and Tangent's new 70-ton roller-bearing trucks with 33" machined metal wheels and rotating bearing caps.



The list of road names begins with a B&O car in a Chessie 1979 repaint scheme. The B&O car comes with Morton crossover platforms and an Ajax power



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hand brake. Two Conrail schemes represent 1988 repaints of former Penn Central cars built in 1970. Tangent's quad door boxcars are also available in a Southern Railway post-merger scheme, and in a 2011 SP/UP 2011 repaint with delineators and a center-of-car cushioning system.



GTW was the largest purchaser of Greenville's quad door box car design. Tangent's version features Gypsum crossover platforms, and an Ajax

geared hand brake housing. The GTW model is available in eight road numbers; all others are available in four.

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



**Walthers** has released a new production run of PC&F 57' mechanical reefers. The HO scale models are based on prototype cars Pacific Car

& Foundry built for Pacific Fruit Express beginning in 1967.



Details on Walthers ready-to-run model include short ladders and low hand brakes, 9' Youngstown plug doors with separate latch

bars, Stanray peaked, ribbed roof; and either Keystone or Hydra-Cushion underframe detail as appropriate to the road name being modeled.



Additional details include 70-ton roller-bearing trucks with 33" machined metal wheelsets and metal knuckle couplers.





Northern Pacific NPM, Southern Pacific Fruit Express SPFE, and Union Pacific Fruit Express.



An undecorated model is also available in this release.

Walthers has scheduled a March release for a group of Thrall rebuilt 40' well-cars. The HO scale models will be available as single cars and in five-unit sets. The models are based on prototype cars introduced in 2003. They are designed to carry 20' and 40' containers in the well, with 40' or 53' containers on top.



Walthers HO scale ready-to-run models feature separate deck-mounted brake detail with piping, IBC storage

boxes, and a heavy diecast metal frame for reliable operation whether the cars are empty or loaded. Single cars will be available decorated for DDTX with black and white TTX logos and a choice of white or yellow delineators. Additional DDTX cars will be available with a small red TTX logo, and with a large red TTX Forward Thinking logo.



Five-unit cars will be available decorated for BNSF, SFLC-Santa Fe Leasing, DTTX with large red logo, a

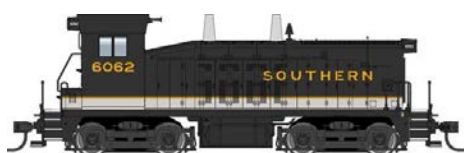
small red logo and DTTX with a large black and white logo.

Walthers is quoting an August release date for a selection of HO scale EMD SW7 diesel switchers. SW7 spotting features





available decorated for Southern Railway and Chesapeake & Ohio.



included in this release. Phase II units with footboards will be available for Detroit, Toledo & Ironton; Kansas City Southern, Pennsylvania Railroad, and Seaboard Coast Line. A Phase II SW7 without footboards will be available decorated for Conrail.



Walthers Mainline series SW7 will be available for standard DC operation and with factory installed DCC ESU Sound.



service from the late 1920s to the 1960s. The model is equipped with AB brakes.



Roadnames include Sunoco, ACF Industries (ACFX - two paint schemes), General American

(GATX), Gulf Oil, Shippers Car Line , and Union Tank Car Line.  
Info: [www.walthers.com](http://www.walthers.com)

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**Westerfield** has released HO scale resin kits for three versions of a 40' single-sheathed boxcar built in the 1920s for the Chicago & North Western Railway and its subsidiary Chicago, St. Paul,

Minneapolis & Omaha Railway. The cars eight side panels and diagonal bracing in a Howe pattern make them appear to be copies of the USRA design, however they have numerous improvements and are slightly lower than the earlier USRA cars.



The cars were built in three groups: 1923, 1925 and 1927. The earliest version had a Hutchins Dry Lading roof, Murphy 7/8 corrugated ends, metal reinforced wood doors, K brakes and a vertical hand

brake staff. The most visible change in the 1925 production was the application of Ureco hand brakes and an enclosed gear box at the base of the brake staff.

The 1927 production version of the car came with a Chicago-Cleveland Viking Roof, Union Metal 4/4 Dreadnaught ends, Youngstown top-mounted corrugated steel doors, Ajax power hand brakes and K brakes. Cars from all three production runs had wood running boards.



The kits are composed of a cast urethane one-piece body, additional cast details, Hi-Tech rubber air hoses, Yarmouth etched bronze corner steps,



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appropriate hand brakes, and decals. Trucks and couplers are not included.

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

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## N SCALE PRODUCT NEWS



**Athearn** has announced an N scale FMC combination door boxcar for its March 2023 production run.



Roadnames in this run are Railbox – Early, Railbox – late, Railbox (Primed for Grime), Burlington Northern, Minnesota, Dakota & Western, and

Missouri Pacific. The models will include screw-mounted roller-bearing style trucks, body mounted McHenry scale knuckle couplers, a scale profile brake wheel, and machined metal wheels for operation on Code 55 and 80 rail.

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

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**Atlas** has released its 4th quarter production schedule for N scale models. Heading the list is an EMD GP-7/9

that will be available for DCC operation with an ESU LokSound decoder. A DC version will be DCC-ready with a speaker already installed.



Road names for the Atlas Master series model will be New York Central, Chesapeake & Ohio, Santa Fe,

Rock Island, Erie Lackawanna, New Haven, Toronto, Hamilton & Buffalo; Wabash, Grand Trunk, and Southern Pacific. The ready-to-run N scale model will have directional lighting with golden-white LEDs.





to handle dense, heavy lading such as cement. The design was based on Trinity's larger 5660 PD which was itself based on a 1990 Thrall design.

Atlas has developed an all-new N scale model of a Trinity 3230 cu. ft. PD (Pressure Differential) covered hopper. Trinity developed the prototype 3230



Chicago Freight, RCCX Roanoke Cement, TILX Trinity Industries Leasing, GBRX, GACX General American, and CBFX CIT Group.

Atlas's new Master series N scale model features an etched metal roofwalk and metal wheelsets. Road names on this initial release will include CRDX



Atlas plans to release new road names for its Master series N scale Trinity 25,500 gallon general-purpose tank car late this year.



switcher. The N scale model is based on the massive 2,400hp diesel locomotive FM produced in the early 1950s.

Also coming from Atlas during the 4th quarter of this year is a Fairbanks Morse H24-66 Train Master road



asphalt, biodiesel, acrylates, and other chemicals. Trinity is still producing the prototype which was introduced in 1986. Decorating schemes available on this release include ADMX (Kung Fu Graffiti), TILX (2019 repaint), GATX (Owensboro Grain), TILX (AGP), and GATX Soy Power Bio Fuels.

The insulated tank car commonly carries such commodities as vegetable oil, tallow, styrene, benzene,





Pennsylvania. DCC Gold series locomotives with ESU LokSound and Atlas Silver series DC versions will be available in this release.



specialized covered hoppers feature eight loading hatches and four discharge outlets.

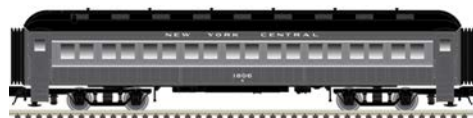


Atlas has included a new run of ACF Center Flow pressure hopper cars in its 4th quarter schedule. The

Details include an etched metal roof walk, and 100-ton roller-bearing trucks with body-mounted Accumate knuckle couplers.



Road names available in this release will be ADM (molecule scheme), ADM (leaf scheme), Luzenac America, Grace Davison, OMYA, and three ACFX-Venturi versions (with an orange sill and with and without conspicuity stripes).



separately applied diaphragms is coming from Atlas in the 4th quarter of 2022.



The Trainman series N scale model, which is based on a C&NW and CNJ prototype, will

be available decorated for Erie Lackawanna, New York Central,

Rock Island, Wabash Chesapeake & Ohio, New Haven, and Toronto, Hamilton & Buffalo.



An Atlas Trainman series 40' boxcar with double sliding Youngstown doors and Improved Dreadnaught steel ends is scheduled for release during the 4th quarter of 2022.



Road names will be Baltimore & Ohio, Canadian National, Denver & Rio Grande Western, Illinois Central, Lehigh Valley, Southern Pacific, Great Northern, and Gulf, Mobile & Ohio.



Completing Atlas' 4th quarter release of new N scale models is a Trainman series C&O steel cupola caboose. The specially decorated model celebrates the 50th anniversary of Operation Lifesaver. A portion of the proceeds from the sale of this model will be donated to Operation Lifesaver to assist their continued efforts to provide crucial rail safety education.

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



**Broadway Limited** is currently selling N scale models of two popular hopper cars. An open top car is based on a Norfolk & Western 70-ton

class H2a triple-bay coal hopper car with peaked ends.



Authentic road names include three N&W schemes, and one each for Baltimore & Ohio and Pennsylvania Railroad. Fantasy

liveries for systems that operated similar cars include Western Maryland, Santa Fe, Chesapeake & Ohio, Appalachian Bituminous, Peabody Coal, and Consolidated Power & Light.



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represents an all-welded class H32 car built in 1948.



railroads that operated similar equipment are available for Santa Fe, Chesapeake & Ohio, Canadian Pacific, Great Northern, Milwaukee Road, Union Pacific, Atlantic Sugar, and FMC Chemical.



with separately applied details. The H2a comes with a removable coal load.

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

A covered hopper car with five-outlets is also available now from Broadway Limited. The N scale model

Paint schemes include Conrail, Penn Central, and six Pennsylvania variations. Fantasy schemes for

Broadway Limited's N scale H2a and H32 models are both composed of ABS plastic chassis and body



names. The N scale models feature an etched metal roofwalk and machined metal wheelsets.



sas City Southern, TILX Imperial Sugar, Potash, and Dakota, Minnesota & Eastern.

**InterMountain** has released an N scale Trinity 5161 cu. ft. triple-bay covered hopper in 22 road

Road names include Canadian Pacific/SOO, CSX, Norfolk Southern, BNSF, AGP, ADM (Leaf), Union Pacific/CMO, Kan-





BNSF heritage schemes are available for Great Northern, Frisco, Burlington Northern, Fort Worth & Denver,

Northern Pacific, Burlington Route, Colorado & Southern, Santa Fe, and Spokane, Portland & Seattle.

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



**Jacksonville Terminal Company (JTC)** is releasing 53' 8-55-8 corrugated

containers decorated for APL Logistics, Walmart, YRC (Yellow Roadway), and Swift.



Additionally, JTC is releasing 20' standard height containers decorated for Hapag-Lloyd and NYK Logistics.



40' HC containers in the January release include Bridgehead, Maersk, Florens, MOL (Mitsubishi Orient Lines), SEACO, available in 2-packs. Mixed pack 40' containers are Genstar and CNC Line, and

Capital Intermodal and HMM.



A new product under development that was on display at the 2022 Railroad Hobby Show in West Springfield, MA was an N scale refrigerated container. It included a magnetically attached genset. Several variations on the reefer container are being tooled.



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Also under development are three different container chassis, with 3-axes, 2-axes, and a 20' foot chassis.

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

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**KatoUSA** has added a baggage car to its selection of Viewliner II equipment. The car is decorated in Amtrak Phase III heritage scheme. Two road numbers are available for this

car which represents Amtrak's latest addition to its fleet of single-level cars.

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

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New ready-to-run N scale models from **Micro-Trains** includes two versions of an 83'

heavyweight railroad business car. The model decorated for Chicago & North Western rides on six-wheel trucks. It represents a car built in 1925 for the Baltimore & Ohio before being acquired by C&NW in 1948.



The Pennsylvania version in Tuscan red represents a modernized business car built in PRR's Altoona

Shops in the mid-1920s. The car went through several modifications over the years including the installation of an ice-activated cooling system which was later replaced with mechanical air conditioning.



American Car & Foundry built the prototype of this GNBC-Farmrail triple-bay covered hopper car in 1965. Micro-

Trains ready-to-run N scale model is fitted with Barber roller-bearing trucks.



rides on Bettendorf solid-bearing trucks.

This 39' GATX tank car is based on a prototype leased to Industrial Molasses Corporation of Leonia, New Jersey. The N scale model



weathered model patched for Seaboard Coast Line represents an ex-Seaboard Air Line car acquired by SCL in the late 1960s. Micro-Trains N scale version has 10' six-panel Superior sliding doors.

Micro-Trains has released two versions of a Pullman Standard 50' boxcar without running boards and with shortened ladders. The



The Rock Island version of the Pullman Standard 50' boxcar has 8' Youngstown sliding doors. Detailed instructions on the side of

the car state "Ammunition Loading Only."  
Info: Contact a dealer.



Wabash 12-4 sleepers: Blue Horizon and Western View. Built by American Car & Foundry and delivered in 1950, Blue Horizon was assigned to the Chicago-San Antonio connection of The Texas Special in 1956. AC&F delivered Western View in UP's yellow & gray scheme. It was repainted in the Wabash blue scheme in the late 50's. RailSmith has tooled new parts and used existing

## Railsmith Models

is booking reservations for two



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Pullman components to create this unique N scale sleeper.

Info: [www.lowellsmith.net](http://www.lowellsmith.net)

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covered hopper cars.

**Scale Trains** has scheduled a summer 2022 release for a new production run of N scale 5188 cu. ft. triple-bay



with red logo), five BNSF schemes (standard, horizontal ribs, Santa Fe heritage, Fort Worth & Denver heritage, and Great Northern heritage), CMO/GATX, NOKL, SOXX (ex-BNSF patched), and Union Pacific.

Twelve decorating schemes will be available including three KCS versions (Southern Belle, gray patched, and gray



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

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## STRUCTURES & SCENIC SUPPLIES

**Atlas** has scheduled the release of both N and HO scale whip style street lights for late this year. Single and dual arm versions will both be available. The lights fixtures will come in 3-packs with installation instructions and correct resistors for the LED lights.

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

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**Berkshire Valley Models** has a new HO scale craftsman kit for a two-story barber shop. The kit includes laser-cut wood parts, signage, and white metal details including the barber pole. The kit is designed to allow the addition of interior details if desired. The assembled building has a foot print of 1.875 x 5.25 inches.



Also new from Berkshire Valley is a kit for a hearse wagon, coffin, and a team of horses. The kits are composed of laser-cut wood and white metal details. Kits for both O and HO scale are

available. Additional coffins are available as a separate purchase. Info: [berkshirevalley@gmail.com](mailto:berkshirevalley@gmail.com)



**East Coast Circuits** has a new LED equipped model based on a 1:87 scale SceneMaster ambulance. Equipped with an International 7600 cab, the model features 24 LEDs, including alternating headlights, front and rear light bars, taillights, and two scene lights.

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



www.fosscalemodels.com © 2012

**Fos Scale Models** has re-issued its HO scale craftsman kit for Red Hook Wharf, a complex of eight waterfront businesses on a pier that measures 8 x 24 inches. The individual structures in this impressive kit include Goldring Oysters, Langford Ice, Sternad



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Freight, Grove Marine Paint, Knapp Ship Chandlers, Kidwell Spar & Mast, Red Hook Fish Oil, and the brick Sea Hag Bar & Grill. The structures can be positioned on the wharf in a variety of sequences.

The kit includes eight structures with laser-cut walls, Tichy plastic doors and windows, a variety of roofing material, and color signage. Additional components include a wood piling pier, wood jib crane, Tichy plastic jib crane, metal detail parts, assembly templates, and detailed instructions. Figures and vehicles shown in the photograph are not included. The kits are produced in batches to fill pre-paid orders.

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

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**Frenchman River Model Works** has several announcements this month, starting with the 1/47 scale Barnaby Black & Company Leather Goods. Designed by Thomas Yorke, it is a small false front building. Materials in the kit include two side walls, front wall, false front wall, resin cornice, resin rear wall, corrugated roofing,

wooden barrel, boardwalk, and rocks for the foundation, all of which are resin. Other parts include a smokestack, signage decal and aluminum flashing material. Dimensions are 2.75" wide, 3.375" deep, and 5" tall.



Also designed by Thomas Yorke is The Standard Mercantile Store, an old-time general store. Resin parts in the kit include the front wall, the false front, a cornice, four side walls plus a wall section with a gable end, a rear wall, a boardwalk, wood strip, decorative

corbels, a door, two finials, two trash cans, a wooden barrel, a gas pump and base, and 13 rocks. The kit also includes scale lumber, stair risers and treads, multiple types of roofing

material and other items. Dimensions are 3.75" wide, 8.575" long, and 6.675" tall.

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

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**Motrak Models** has announced "The Clam Box." Located in Ipswich, MA since 1935, The Clam Box is a structure with a unique appearance, with sides that angle out like the top flaps of a box. It will be available in N, HO, S, and O scales. Info: [motrakmodelsusa.com](http://motrakmodelsusa.com)

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**Walthers** has announced an HO scale Quonset hut kit with delivery expected in April 2022. The kit builds a military style Quonset hut, which was originally introduced by the allies in 1941. Corrugated inserts make the windows optional. Molded in three colors and clear plastic, the finished model measures 6 9/16" x 2 3/4" x 1 3/8".



Also announced for April is a converted Quonset hut, which includes a brick false front attached to the standard Quonset hut. Add-on window air conditioners and an electric meter are included. Dimensions of the finished kit are 6 9/16" x 2 3/4" x 1-3/8".



Expected in May 2022, Walthers has announced a 3-Rail Farm Fence Kit in HO scale. The kit includes 28 single fence sections, 4 corner fence sections, 18 gate sections in two sizes, and 8 fence posts. The kit is very



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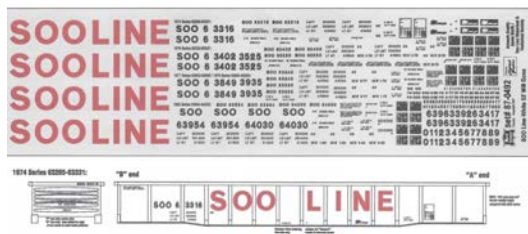
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configurable, from an enclosure with double gates measuring 12 9/16" x 13 23/32", to straight fences up to 38 11/16" long, depending on the modeler's choice of gates.

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

## NEW DECALS, SIGNS AND FINISHING PRODUCTS



data options. Jason Korth of the Soo Line Historical & Technical Society prepared the art work for this prototypically accurate lettering set.



Additional new HO scale lettering sets from Mask Island include decals for Nickel Plate Road and Akron, Canton & Youngstown 55-ton twin-bay hopper cars.



Also new are decals for Delaware, Lackawanna & Western 3800 series quadruple-bay covered hopper cars.



Decals for Midland Valley Railroad and Kansas, Oklahoma & Gulf Railway gondolas are available now.

HO scale decals for mill gondolas for the Conemaugh & Black Lick Railroad, and Rock Island Railroad complete Mask





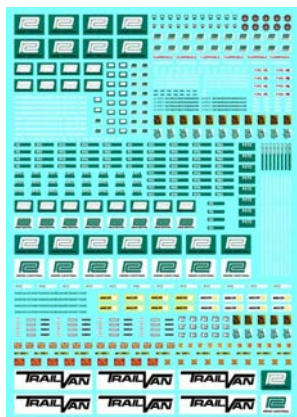
Island's latest release.  
Info: [maskislanddecals.com](http://maskislanddecals.com)



**National Scale Car**  
has released a new  
HO scale decal for a  
Chicago, Milwaukee,  
St. Paul & Pacific

Railroad USRA single-sheathed boxcar. The lettering set (D229) covers the 4000 cars Haskell and Barker, American Car & Foundry, and Bettendorf built for the Milwaukee Road. The set contains enough material to decorate two cars.

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



**The Penn Central Historical Society** is selling a comprehensive HO scale decal set for accurately decorating just about every type of PC vehicle and truck trailer. The multi-colored decal includes, but is not limited to, Excelsior Leasing, PRR, PCZ, PCTZ, POCU, NYCU, NYCZ, Availco, Flexi-Van, TrailVan, ICC data panels, and builders' plates for Strick and Fruehauf. The artwork for this project was created by Gene Fusco with research by Jim Homoki and Gene Fusco.

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

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# SELECTED EVENTS



Model Railroad Hobbyist | February 2022

## FEBRUARY

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

## Ongoing 2021

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

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

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

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

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

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

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

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

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

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

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

**AROUND THE USA, IN-PERSON**, Various dates.

ScaleTrains.com Road Trip.

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

## February – March 2022

**FLORIDA, PALMETTO**, February 19-20, 2022, 43rd Annual RealRail Model Train Show, hosted by RealRail: The Railroad Education and Learning Center of Florida. Bradenton Area Convention Center, 1 Hazen Blvd.

Info: [realrail.org/upcoming-events/rail-pass](http://realrail.org/upcoming-events/rail-pass)

**GEORGIA, CARTERSVILLE**, March 12-13, 2022. Piedmont Division 2022 Model Train Show. Clarence Brown Conference Center, 5450 GA Hwy 20.

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

**GEORGIA, SAVANNAH**, March 25-26, 2022. Savannah Prototype Modeler's Meet. Southside Assembly of God, 401 Tibet Ave.

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

**ILLINOIS, URBANA**, March 26-27, 2022, Lincoln Square Train Show, sponsored by the Illinois Terminal Division, NMRA. Lincoln Square Village, 100 W High St.

Info: [itd.illinoisterminaldivision.org/show/show.htm](http://itd.illinoisterminaldivision.org/show/show.htm)

**OKLAHOMA, TULSA**, March 18-20, 2022, Layout, Design, Operation Weekend (LDOP), sponsored by the Indian Nations Division of the NMRA. Akdar Shrine Center, 2808 S Sheridan Road.

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

**OREGON, CORVALLIS**, March 19-20, 2022. Winterail 2022, Railroad photography exposition and collectables sale. Corvallis High School, 1400 NW Buchanan Avenue.

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

**OREGON, PORTLAND**, March 12, 2022, Willamette Model Railroad Club 2022 Model Railroad Swap Meet. Kliever Armory, 10000 NE 33rd Dr.

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



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**PENNSYLVANIA, MALVERN**, March 24-27, 2022, Valley Forge Railroad Prototype Modelers 2022. Desmond Malvern Conference Center.

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

**WASHINGTON, SPOKANE**, March 6, 2022. Model Train Show, presented by The River City Modelers Train Club. Spokane County Fair & Expo Center, Buildings A, B, &C, Gate G-404 North Havana.

Info: [www.rivercitymodelers.org/rcm-train-show-info.html](http://www.rivercitymodelers.org/rcm-train-show-info.html)

**WEST VIRGINIA, CHARLESTON**, March 12-13, 2022. 16th Annual Train & Craft Show, sponsored by the Kanawha Valley Railroad Association. Charleston Coliseum and Convention Center, 200 Civic Center Drive.

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

**WISCONSIN, MADISON**, February 19-20, 2022. Mad City Model Railroad Show and Sale. Exhibition Hall, Alliant Energy Center, 1919 Alliant Energy Center Way.

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

## **Future 2022-2023 by location**

**NEW ZEALAND, CHRISTCHURCH**, April 15-18, 2022. Back on Track National Model Railway Convention 2022. St. Andrews College, 347 Papanui Rd.

Info: [www.modelrailcon.nz](http://www.modelrailcon.nz)

**NEW ZEALAND, DUNEDIN**, 7-8 May 2022, Dunedin Model Train Show. Taieri Bowling Club, 12 Wickliffe Street, Mosgiel.

Info: [dunedinmodeltrainshow@gmail.com](mailto:dunedinmodeltrainshow@gmail.com)

**CALIFORNIA, ROHNERT PARK**, April 21-24, 2022. Return to the Redwoods, Pacific Coast Region NMRA Convention. Doubletree by Hilton Hotel Sonoma Wine Country, One Doubletree Drive.

Info: [www.pcrnmra.org/conv2022](http://www.pcrnmra.org/conv2022)

**CALIFORNIA, SANTA CLARA**, May 26-28, 2022, O scale - S scale - Narrow Gauge West. Hyatt Regency Hotel, 5101 Great America Parkway.

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



**COLORADO, DENVER**, April 2-3, 2022, Rocky Mountain Train Show – Spring 2022. National Western Complex, 4655 Humboldt St.

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

**COLORADO, LAKEWOOD**, June 2-5, 2022 Sn3 Symposium. Sheraton Denver West, 360 Union Boulevard.

Info: [groups.io/g/NNG/topic/87954737#1335](https://groups.io/g/NNG/topic/87954737#1335)

**INDIANA, INDIANAPOLIS**, May 18-23, 2022. Indy Junction 2022, the Midwest, Mid-Central, and North Central Regions NMRA Convention. Indianapolis Marriott East, 7202 East 21st Street.

Info: [www.indyjunction2022.org](http://www.indyjunction2022.org)

**MAINE, WESTBROOK**, May 14, 2022. Southern Main Model Railroad Club Train Show. Westbrook Community Center, 426 Bridge St, off exit 48 I-95).

Info: [southernmainemrc.wordpress.com](http://southernmainemrc.wordpress.com)

**MISSOURI, St. LOUIS**, August 7-14, 2022, NMRA National Convention and National Train Show. St. Louis Marriott Grand Hotel, 800 Washington Avenue.

Info: [gateway2022.org](http://gateway2022.org)

**OREGON, ELSIE**, April 2, 2022. 2022 Pacific Model Loggers' Congress. Camp 18 Restaurant & Museum, 42362 Highway 26.

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

**OREGON, EUGENE**, May 10-14, 2022. PNR 2022 Regional Convention, Valley River Inn.

Info: [pnr.nmra.org/1div/Eugene2020/home.htm](http://pnr.nmra.org/1div/Eugene2020/home.htm)

**PENNSYLVANIA, HARRISBURG**, June 10-11, 2022. 2022 Harrisburg Narrow O Summer Meet. New Hope Church, 584 Colonial Club Drive.

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

**TENNESSEE, JOHNSON CITY**, June 3-4, 2022, George L. Carter Railroad Museum Big Train Show, East Tennessee State University Mini-Dome, State of Franklin Road.

Info: [www.etsu.edu/railroad/events.php](http://www.etsu.edu/railroad/events.php)



**TENNESSEE, NASHVILLE**, June 15-19, 2022. 28th Annual National N Scale Convention, Sheraton Music City, 777 McGavock Pike.

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

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

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

**VERMONT, WHITE RIVER JUNCTION**, October 16, 2022. Upper Valley Model Railroad Show, sponsored by the Connecticut Valley Model Railroad Club. Connecticut Valley Auto Auction Building, 1567 VT-14.

Info: [cvrr.railfan.net/cvmrr](http://cvrr.railfan.net/cvmrr)

**WASHINGTON, TACOMA**, September 1-4, 2022. 42nd National Narrow-Gauge Convention, Hotel Murano, 1320 Broadway.

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

**WYOMING, CHEYENNE**, May 14-15, 2022. Sherman Hill Train Show. Event Center – Archer, 3801 Archer Parkway.

Info: [www.shermanhillrails.org/trainshow](http://www.shermanhillrails.org/trainshow)

**WYOMING, CHEYENNE**, May 11-14, 2022. Union Pacific Historical Society Convention. Red Lion Hotel, 204 West Fox Farm Road.

Info: [uphs.org/conventions/future-conventions](http://uphs.org/conventions/future-conventions) ■

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# Coming next month in MRH ...

Bob Rivard super-details a ScaleTrains gon ...



Rick Balassaitis on getting more realistic turnback loops ...



Actual LCC layout install example ...

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



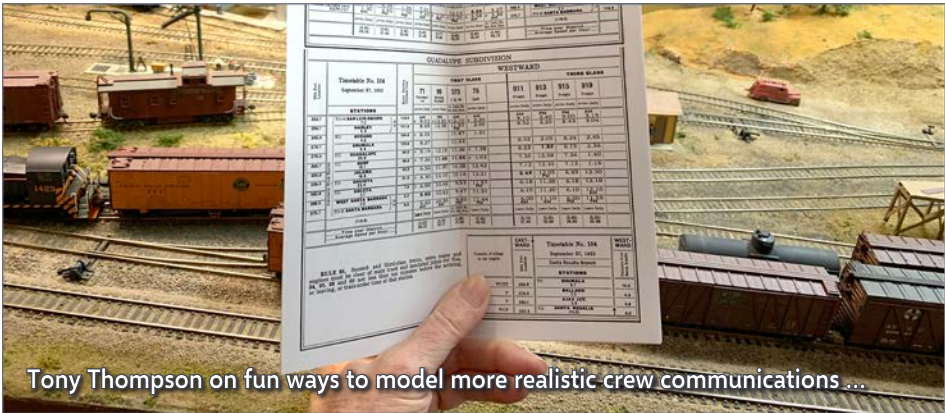
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# Coming next month in Running Extra ...

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