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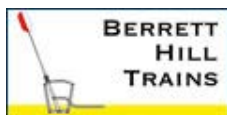
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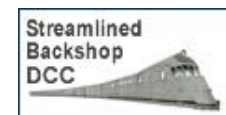
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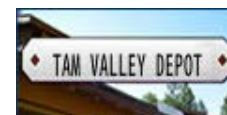
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# PUBLISHER'S MUSINGS



Model Railroad Hobbyist | December 2021

## JOE FUGATE ON WHY WE SHOULD SELECTIVELY COMPRESS RUNNING SPEED ...



**IF YOU'VE BEEN IN THE HOBBY FOR A WHILE, THEN YOU'RE LIKELY ACQUAINTED WITH THE CONCEPT OF SELECTIVE COMPRESSION.** The basic idea is that compared to the great outdoors, we're all space constrained.

Even a large layout of a thousand square feet or more likely has only a few scale miles of track. That's hardly enough to model a single town exactly to scale, much less the entire Southern Pacific Siskiyou Line – to use my own layout as an example.

So what do we do? We use selective compression so we can model the essence of something. The idea is we compress out things we can and yet still maintain the overall feel.

For example, the SP Siskiyou Line of the 1980s had a forest products complex along the tracks in the town of Dillard. In my car, I used the odometer to measure the length of the facility as I drove alongside it. The entire complex is 1.1 miles long!

That's 66 feet long in HO scale – for a single industry! My layout space is a rather generous 50 feet long, but even that's too short for this massive industry. So I selectively compressed it down to just 12 feet long, which is still impressive for one industry on an HO scale layout.


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### What's all this have to do with running speed?

The basic concept here is we just don't have the space to model things at 100% so we compress them down to make our limited layout space feel larger.

Even the most ardent prototype modelers insisting on total accuracy understand that selective compression is a necessity.

I maintain that we need to be doing the same thing with the running speed of our trains – selectively compressing the running speed to make our layouts feel larger.

Can you glance at a model train and immediately know how fast it's running? Not likely unless you have a lot of operating experience trying to run at scale speeds. I know when I've run a train at what I think is a reasonably slow speed, but when I

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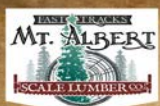
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shoot GoPro video of the train from a railfan perspective, the train appears to be racing past. So we just don't have a very good sense of speed with our model trains.

I'm also assuming we're talking scale model railroading here, not the holiday train set where seeing how fast you can make it go is a routine pastime.

This gets to a basic key point when running trains to railfan or for prototype operation – what's the rush? Why not look for ways to prolong the enjoyment, not rush through it and have it end sooner!

Slow down and let's savor the experience. This gets into the concept I've discussed before I call *quality of run*.

With quality of run, you focus on making the experience of running trains as fun as possible and work to eliminate those

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things that undermine the fun. Interestingly, many things that enhance quality of run are virtually free.

Take for example, running the trains slower. It doesn't cost a single red cent to run at a slower speed. Yet running slower prolongs the fun and makes the layout feel larger. With DCC and back EMF, tuning a decent running locomotive with a DCC decoder to have a great slow speed performance isn't all that hard to do.

### So how does selective speed compression work?

The idea with selective speed compression is to deliberately tune the speed curves on your locos to run slower. For example, let's say a passenger locomotive has a prototype top speed of 70 MPH.

You can get a fancy track speedometer and have it compute train speeds for you. But there are other ways to check train speed that's free.

Online, you can access a free speed/distance calculator to make the computations easy, see:

[www.stonysmith.com/railroad/speedcalc.asp](http://www.stonysmith.com/railroad/speedcalc.asp)

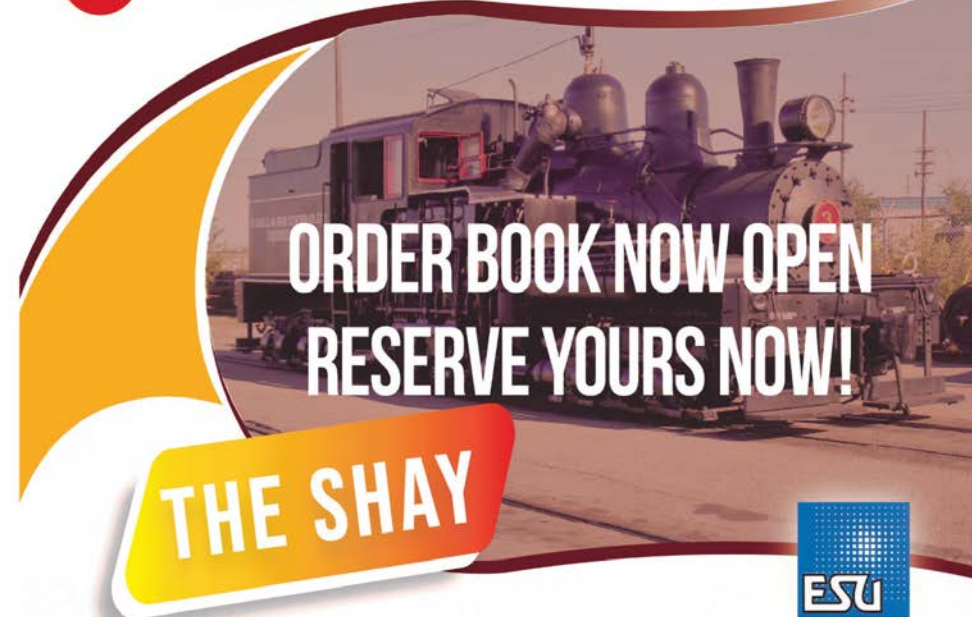
Using this calculator set to HO scale, I can determine at 70 scale MPH, a loco will roll past my 12 foot (144 inch) long Dillard Mill in about 10 seconds.

Let's selectively compress that speed down. You can pick a reduction factor – I'd like to suggest a 65% speed compression factor. That will almost double the apparent size of your layout.

Slowing the top speed of a passenger locomotive down to 45 MPH in HO means the loco will run by the Dillard mill in about 16 seconds instead of 10 seconds. That's still a pretty good clip, frankly.

Let's look at freight locomotive speeds. On my Siskiyou Line, the standard top freight speed is 25 MPH.

Using my Dillard Mill example again, a 25 MPH loco runs past



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the mill in 29 seconds. That's not bad now ... it takes almost half a minute for the loco to get past this huge mill complex.

That really helps make the mill complex seem a lot larger.

I set the top speed of my freight locos just past the 25 MPH mark to say 30 MPH max. That means a loco so tuned will take about 24 seconds to run the 12 feet past my Dillard Mill.

After setting the max speed (CV5) to match this running time, then I tune the locomotive start speed (CV2) and set the mid speed (CV6) to be basically flat.

I haven't found speed curves that ramp up slower or faster to be all that helpful.

Most of the time when I've made the speed curve not flat, I find operators getting frustrated that the loco doesn't seem to respond to the throttle well.

So that's it: selectively compress your loco max speed to make the layout feel larger.

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### Another topic: Color matching

On another topic, recently there was a discussion on the MRH website about trying to determine the right color for a Canadian Pacific mineral red: [mrhmag.com/node/44029](http://mrhmag.com/node/44029)

In all cases when trying to color match something, keep in mind color temperature can affect how a color looks, as can the illumination brightness. Rather than belabor this at any length, just realize color involves a lot of variables, so getting something that's in the ballpark is often good enough.

To begin the process, we need to have a reference, such as a prototype photo. In the case of this particular discussion, the modeler had a model photo he wanted to match to, a boxcar put out by Yarmouth Model Works [1].



1. Yarmouth Model Works car photo used as a color reference.

The modeler wanted to find a Vallejo Model Air or Game Air color that was a close match to the color of this car.

The first thing I did was make a color swatch [2] and then began searching for a close match in the Vallejo official color swatches. Realize we're matching digital colors here, so the fi-

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nal paint may be off to a degree, but as I said previously, we should at least be in the ballpark.

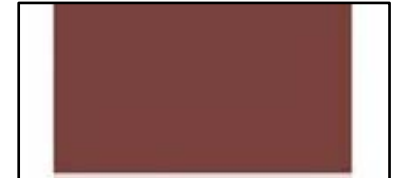
I found Vallejo Game Air Red Terracotta (72.772) to be the closest match [3]. It's a slight shade darker, so I recommended the modeler add 20% white to lighten it slightly.

To compare, I took the Vallejo color swatch and lightened it somewhat to simulate what adding the white would do.

Then I dropped the swatch in over the reference photo and I think the match looks quite good [4]. ☒



2. Color swatch made from [1].



Vallejo Game Air  
72.772  
Red Terracotta

3. Closest match I could find.



4. Matched swatches dropped in over the reference photo. Not bad!





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- 4.9 Extreme weathering a Tangent hopper
- 4.9 Modeling tar paper roofs
- 4.8 Savvy Modeler: Fir/Pine tree modeling

Issue overall: 4.3

Top rated articles in the [November 2021 issue](#) of *Running Extra* ...

- 4.9 Getting Real: Modeling Kansas City Union Station
- 4.9 Limited Modeler: Narrowing your scope
- 4.7 Build a backwoods lumber mill

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### A beautiful diesel engine

MRH forum member **raillandsail** (Brian Eiland) started a thread recently about this very photogenic EMD diesel EA unit with its sleek slanted nose and elongated E unit hood.

Brian posted a YouTube video that shows this loco restored to all its glory. EMD designed the E units especially to pull passenger trains, adding a sleek elegance to them.



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

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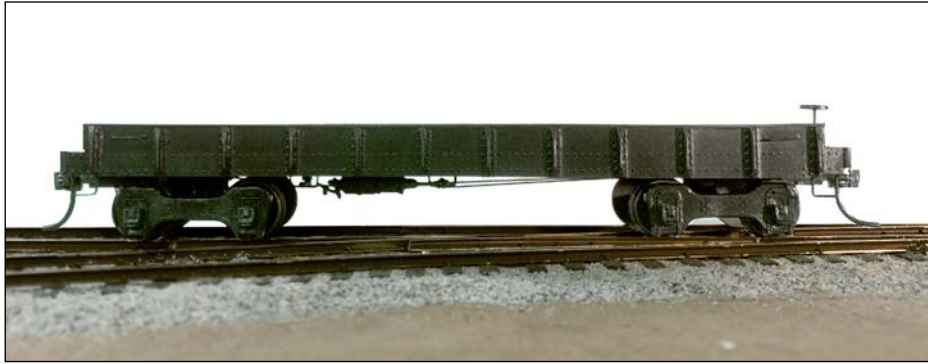
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1. Dave Husman has an intriguing blog thread documenting how he kitbashed this turn-of-the-century gondola from a 50ft Athearn gondola shell.

## Kitbash in a Day: P&R Class GMd gondola

MRH forum member **dave1905** (Dave Husman) recently made a blog thread about an interesting kitbash:

*"I model the Wilmington & Northern Branch of the Philadelphia & Reading Railway, set in 1903. My line serves numerous industries related to the iron and steel trade, so I always have need for gondolas. This is how I kitbashed a model of a P&R class GMd gondola, an early steel gon. 1250 copies were produced by the Pressed Steel Car Co in 1900 and they served until 1934.*

*"My car is kitbashed from an Athearn 50 ft gondola shell and a 36 ft MDC cast metal underframe. This simple kitbash can be done in a day and will fit right in on any pre-Depression era layout."*

Dave then showed the step-by-step process he used to "hack up" the Athearn gondola and get the resulting model shown here [1]. We found the techniques Dave used to show some great kitbashing best practices and could be used for other rolling stock kitbash projects for many other eras or prototypes.

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



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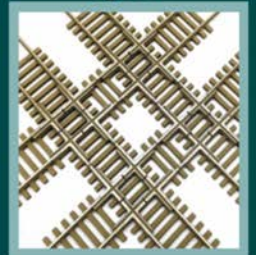
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2. MRH forum member **MikeHughes** has a blog chronicling his small switching layout. Here he's testing double track spacing for staging.

## "Bedside & Hinged" Switching Layout

MRH forum member **MikeHughes** has recently been discussing a rather clever way to build "hidden yet accessible" staging for his switching layout.

*"Since the high-line at Unhinged will need to be supported, I need to implement a tunnel to hold the two staging tracks and provide the foundation for the high-line. Solid blocks of foam will no longer work. And the innards of the tunnel need to be visible and accessible in case of any derailments."*

Mike then went on to say:

*"I had enough 1/4" plywood about, but as I got thinking about all the fancy router work it would need to have any strength, I started to wonder about using foamboard and hot glue instead."*

Follow along and see how Mike's staging build turns out!

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

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3. *MRH* forum member **Paul Lachance** posted a track plan on the *MRH* forum and asked for advice on how to set up a reversing section using a Digitrax AR1 (Automatic Reversing Controller).

## Advice on isolating a reversing section and wiring an AR1

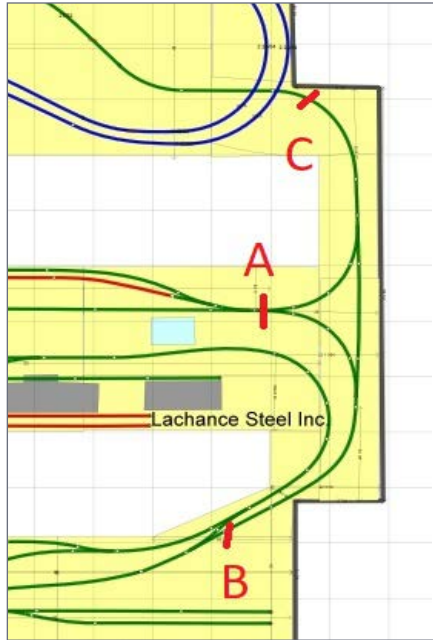
*MRH* forum member **Plachan1** (Paul Lachance) recently posted a track plan on the *MRH* forum and has been asking for advice on how to isolate the track for a reversing section.

Other forum members posted many helpful posts, with this post by HVT Dave being helpful:

*"If your longest train will fit between points A & B, then this option will be a simple solution. You do need to ensure that the distance from A to C is at least the same length or longer."*

From there, the conversation continues as it gets more specifically into adding short protection to the entire layout with PSX breakers along with doing reverse sections.

This is an important conversation to read through because unless done properly, you can end up with the reversing section fighting with the circuit breakers.



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

## More photo fun!

The recent weekly photo fun thread had some especially nice photos. Check it out ...

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



4. *MRH* forum member **Dom Bourgeois** posted this very nice photo of a D&H southbound freight pusher out of Cobleskill, NY in late October 1975.



★★★★★  
**RATE THIS ARTICLE**

5. *MRH* forum member **mesimpson** added this photo of a solid string of tank cars carrying diesel fuel to a portside tank farm where it gets transloaded to barges and sent to various communities around Hudson Bay as their winter power source.





## 2021 PWRS Christmas Wish Book!

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Model Railroad Hobbyist | December 2021

### IN THIS MONTH'S WHAT'S NEAT:

- RAD MCGUIRE DEMONSTRATES PAINTING MILITARY EQUIPMENT
- AN INTERVIEW WITH ED DICKENS
- KEN INTERVIEWS DOUG BLAINE OF BACHMANN TRAINS
- MODELING IDEAS FROM ABOVE SHOWS A WINTER WONDERLAND ...



*click to play video*

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## THIS MONTH RAD MCGUIRE FOLLOWS UP ON HIS MILITARY

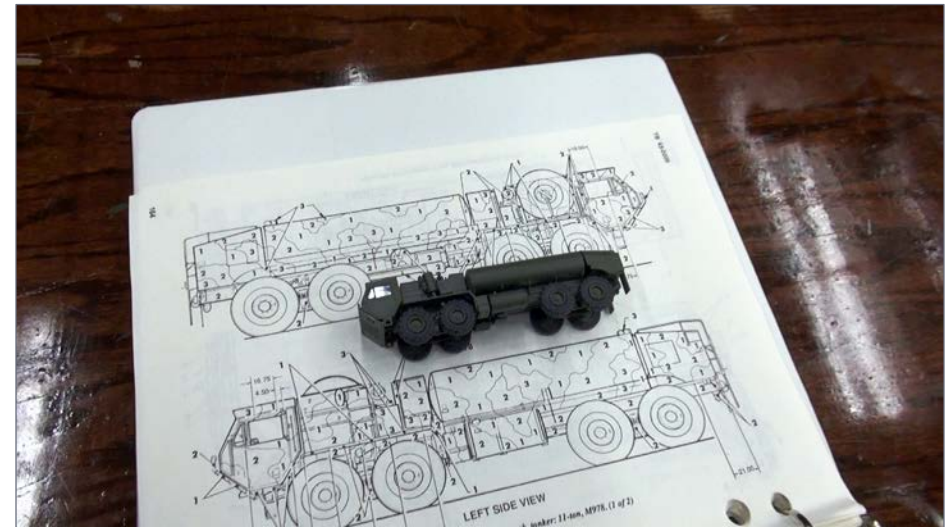
**MODEL** demonstration in November by showing how to paint a 1:87 scale HEMTT tanker truck in NATO camouflage and Ken interviews Ed Dickens, the head of the Union Pacific RR steam program, during the UP 4014's stop in St. Louis. Dan Scheidell's "Modeling Ideas From Above" drone segment shows UP and Amtrak trains going through the snow-covered Cascade Mountains in Oregon. Ken finishes the month with an interview with Doug Blaine of Bachmann Trains, and they go over Bachmann's new products – from Thomas and Friends in 009 gauge to an East Broad Top train set in On30.



## Painting military vehicles in 1:87 scale with Rad McGuire



1. Rad uses Tamiya spray paint to provide a base layer of green on a 1:87 scale Minitanks M978 HEMTT Tanker model.



2. Rad uses an Army "paint by numbers" book, Technical Bulletin (TB) 43-0209 Ch. 1, to guide him in applying the woodland camouflage colors to the M978.



3. Rad adds the NATO brown (color #3) to the camouflage pattern.





4. Rad uses decals from the Arsenal-M Minitanks fuel tanker set. Arsenal-M purchased Roco, the original manufacturer of the Minitanks line.



5. After painting and decaling the model, Rad sprays the model with Tamiya PS-55 Flat Clear.



6. After everything dries, Rad reassembles the model.



7. And with a few hours work an out-of-the-box model goes from this ...





8. ... to this - a detailed and camouflage-painted model.

## Union Pacific's Ed Dickens, Steam Program Manager & Big Boy Engineer



9. While Big Boy UP 4014 was visiting St. Louis this summer, Ken had the opportunity to interview Ed Dickens, the manager of the Union Pacific Steam Program and the 4014's engineer.



10. In 2019, UP 4014 and UP 844 double-headed on an excursion in Wyoming.

## Modeling Ideas from Above: Winter Odyssey



11. Dan Scheidell pilots his drone over the Oregon Cascades to show us the UP and Amtrak in the snow.



## Bachmann Trains Interview with Doug Blaine



12. Ken interviews Doug Blaine about many of Bachmann's new products, including OO9 gauge Thomas and Friends equipment, an On30 East Broad Top train set, and several other new products.



American locomotive decorated as the Central Pacific RR "Jupiter" of Golden Spike fame.

13. Ken began the interview by going through several of the photos he's taken of Bachmann products over the years, including this sunrise photo of an HO scale 4-4-0

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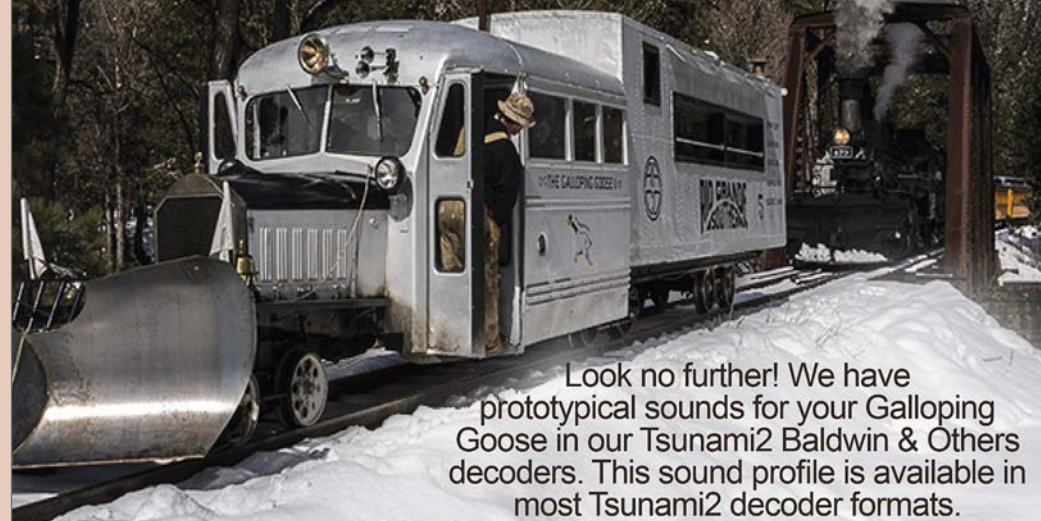


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14. Doug shows off the Amtrak ALC-42 in “Day 1” livery and a video of the light and sound functions of the locomotive.



15. Bachmann is releasing an HO scale train set of the “Norman Rockwell Freedom Train,” representing the 1947-49 Freedom Train that traveled across the United States after WW II, including a car decorated with Norman Rockwell’s Four Freedoms paintings on its side. ✓

★★★★★  
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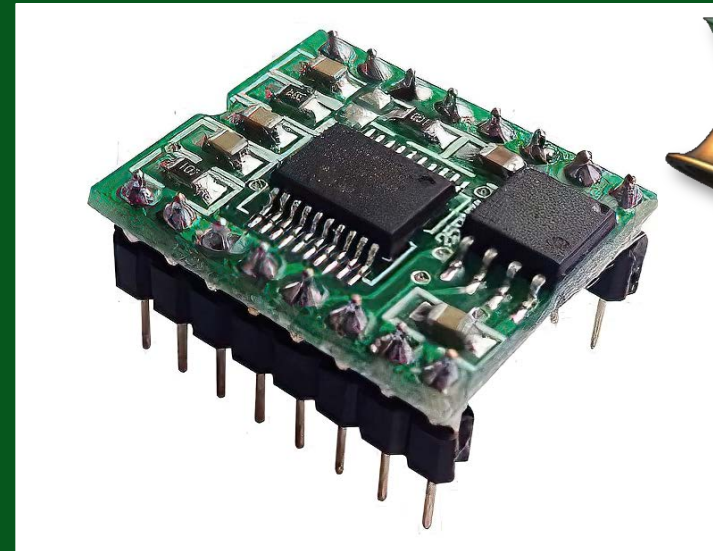
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# Toot-Toot sound system



Holiday fun!



Electrical Impulses

Model Railroad Hobbyist | December 2021

1. WT588D voice chip.  
[www.newegg.com](http://www.newegg.com) photo



**BRIAN KRUPICKA HAS A LITTLE HOLIDAY FUN AND BRINGS HIS GRANDSONS INTO THE OPERATING EXPERIENCE ...**

**I RECENTLY VISITED THE LOCAL TROLLEY MUSEUM WITH TWO OF** my grandsons. One of the highlights was a rope they could pull to sound a trolley horn. My grandsons asked me why I didn't have the same feature in my layout room at home.

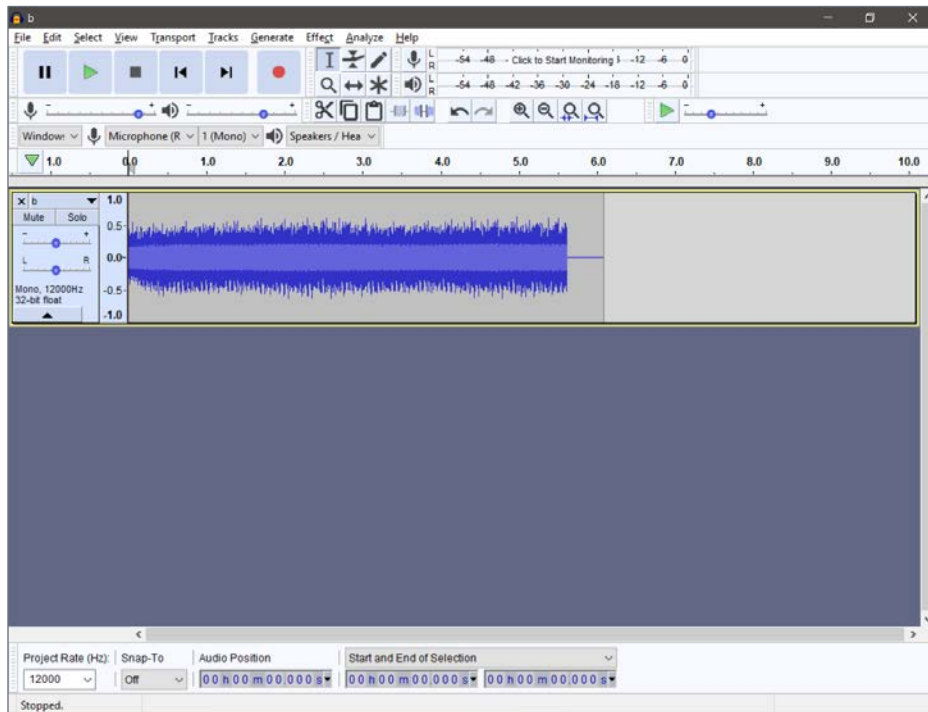


## TOOT-TOOT SIGNAL SYSTEM | 2

I've set up at least 30 electronic features and automations on my layout, so this one seemed doable. I have used the WT588D voice chip for several projects, and it seemed like a good match for this whistle project. The WT588D is a sound module with internal storage for up to 270 seconds of sound at highest quality – plenty for my purposes [1].

My first step was to find a suitable .wav audio file of a diesel horn. I searched the internet for .wav files I liked. When I found what I wanted, I downloaded it.

I opened the file in the sound-editing program, Audacity, cut it to the length, and removed any unwanted sounds. I also formatted it so that it would be compatible with WT588D, setting the track to mono and the sample rate to 12000 Hz. Finally, I saved the new .wav file [2].



2. I used Audacity to modify the file's length and eliminate unwanted sounds. This 5.5 second WAV file was the result.

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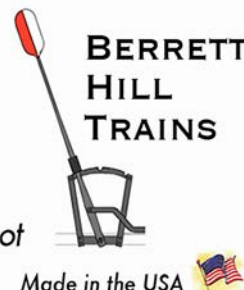


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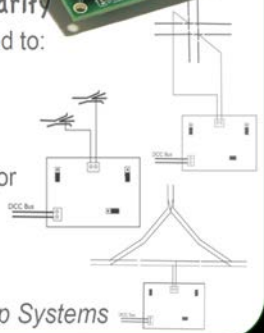
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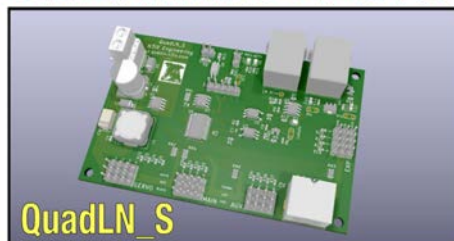
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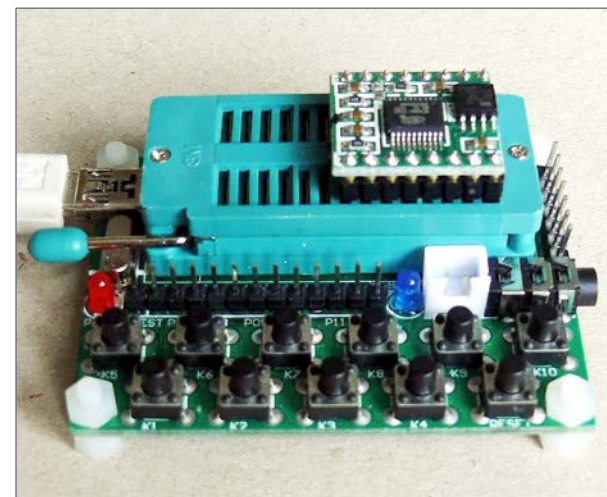
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## TOOT-TOOT SIGNAL SYSTEM | 3

I plugged the WT588D chip into its programmer. The programmer contains sockets for the WT588D chip and a series of buttons, each of which can be used to test the chip's pins. The programmer plugs into a PC via USB [3].

With the programmer plugged into the computer, I loaded the VoiceChip software, which programs the WT588D ([wt588d-voicechip-beta.software.informer.com/1.6](http://wt588d-voicechip-beta.software.informer.com/1.6)). I loaded the diesel horn .wav file into the VoiceChip software and modified it for use with the chip [4].

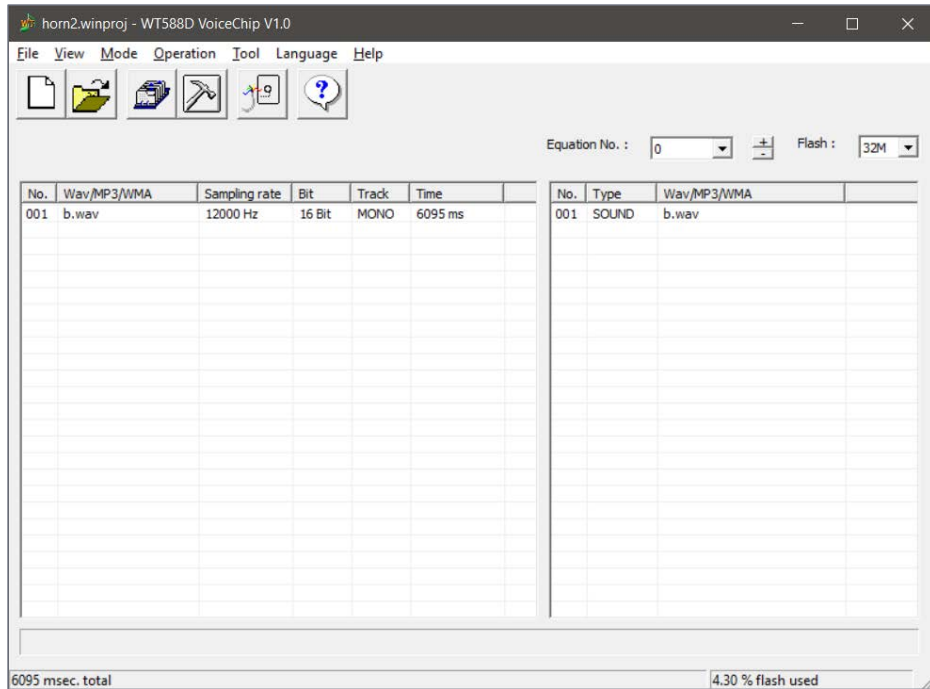
Aside from modifying, compiling, and loading the sound file to the chip, the VoiceChip software also sets the control trigger (trip) requirements. I selected the "Level Loop" control trigger for operation of the pull horn cord. This trigger method allows for long and short activation of the audio file.



3. The WT588D chip is plugged into its programmer. The USB cable connecting the programmer to the PC is at far left:  
[www.instructables.com/Getting-the-Most-Out-of-a-WT588D-Sound-Module](http://www.instructables.com/Getting-the-Most-Out-of-a-WT588D-Sound-Module)

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## 4. Screenshot of the VoiceChip software interface.

The programmer board allows you to test your chip's programming on the spot, while it's still connected to your computer and programming software. This makes modification and adjustment a snap.

The WT588 VoiceChip can be programmed with four different MP3 audio files. I programmed channel 1 with diesel horn sounds, channel 2 with trolley bell sounds, channel 3 with steam engine whistle sounds, and channel 4 with crossing grade bell sounds.

With the WT588D chip programmed to satisfaction, I built a circuit for the whistle.

Two connections each go to the 5VDC power supply, the speaker, and the toggle switch. The circuit requires two 1N4002 diodes in series to reduce the power supply voltage to 3.8VDC.

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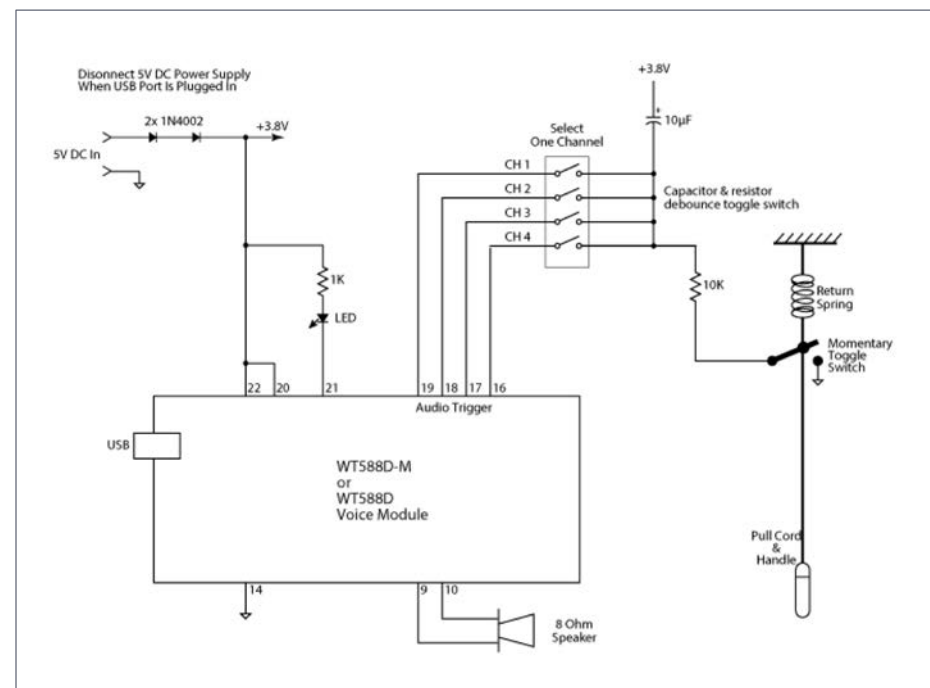
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I also added a red LED for on/off signaling, and a 10K resistor in series with the SPST toggle switch leads. Since there is only one pull activation cord, I added a DIP switch to select the sound [5, 6].

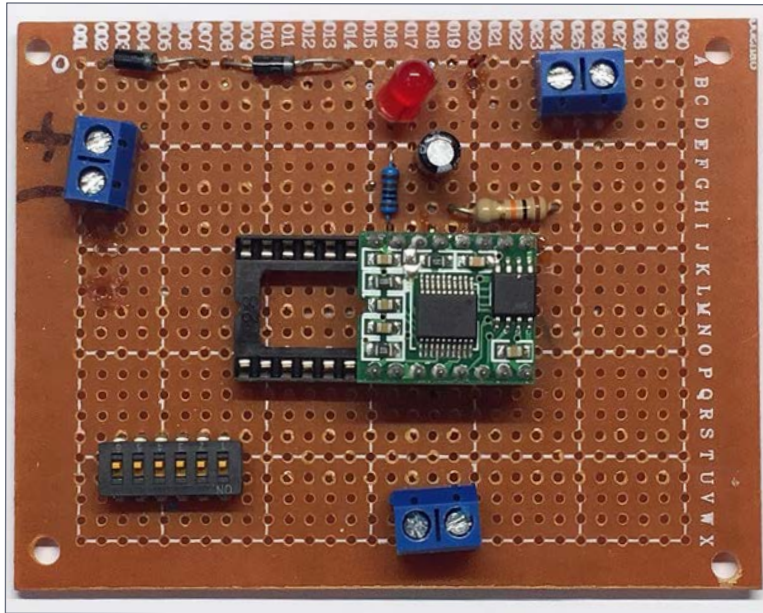
Next up was the pull-cord assembly. I used a momentary SPST toggle switch to trigger the horn. I added a six-inch extension to the switch handle to increase its throw distance and mounted it on an L-bracket that I secured to ceiling joists.

I attached a sash cord to the toggle switch extension and fed it through a switch cover plate mounted on the drywall ceiling [7]. I repurposed an old wooden file handle for the pull-handle [8]. To let out the sound, I installed a 4-inch, 8-ohm, 10-watt speaker in the drop ceiling [9].



### 5. Circuit diagram for the whistle.





6. Circuit set in perf board.



7. Switch cover plate on the ceiling.



8. Pull-handle.



*click to play video*



9. Ceiling speaker installation.





## TOOT-TOOT SIGNAL SYSTEM | 8

As it turned out, the combined weight of the toggle switch extension, sash cord, and handle was too much, so the switch was always triggered. I resolved the issue by adding a spring to the switch extension tip to pull the toggle back into the off position.

With this new gadget installed, my grandsons can pull the handle and sound the horn when they visit for the holidays or any other time. What a simple and fun way to bring them into the operating experience!

Happy holidays! ☑

### BRIAN KRUPICKA



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

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

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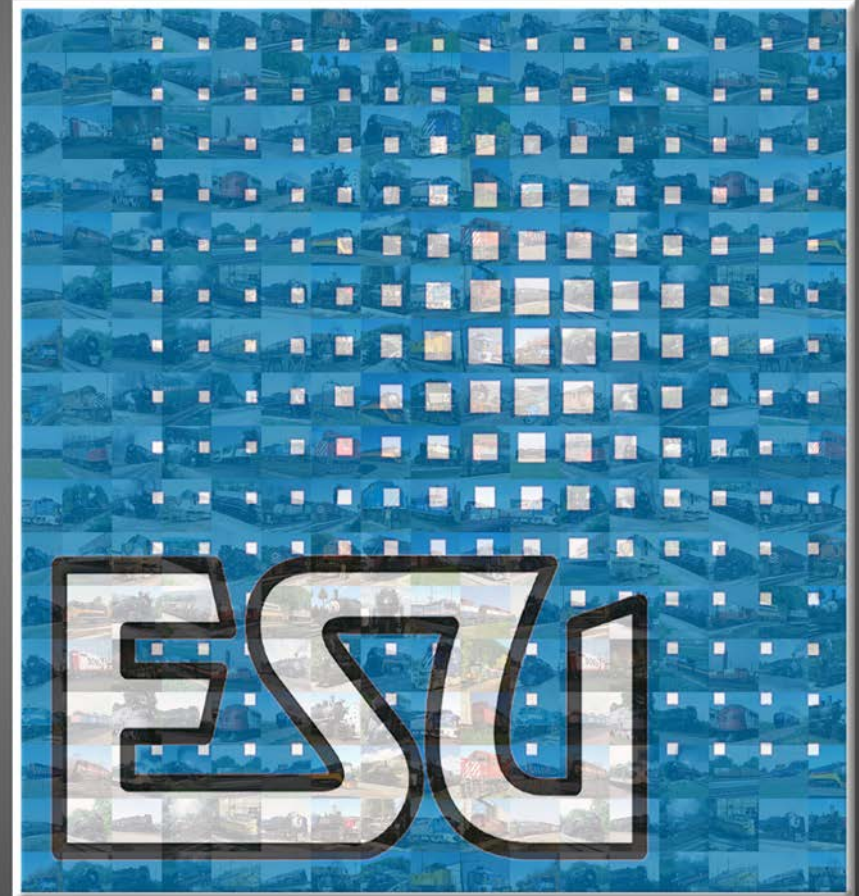


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MRH MARKETPLACE | 2

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# Atlas covered hopper makeover



**BOB RIVARD** DETAILS, REPAINTS,  
AND WEATHERS AN **ATLAS 3,500**  
CU. FT. CAPACITY HOPPER MODEL ...



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Model Railroad Hobbyist | December 2021

**I RECENTLY PICKED UP AN ATLAS 3500 CU. ft.** capacity ACF hopper at a local flea market for a bargain price of \$15. The Atlas car was factory-painted for Kerr-McGee Industries. I had no doubt that not only was the Atlas factory Kerr-McGee paint scheme accurate, but the car itself was a very accurate representation of the prototype [1].

Using prototype documentation for my projects is important. I figured it would be a simple matter to search the various prototype modeling websites to confirm the Atlas factory paint scheme. But after searching for hours, I couldn't find a prototype photo for my model.

I decided to look through *Classic Freight Cars, Vol. 11: Covered Hoppers* by Henry Maywald. I found the perfect candidate for my project on page 60: SCPX 3527, painted for Shell Chemical Plastics.



1. The 3500 cu. ft. ACF hopper from Atlas, fresh out of the box.



2. This prototype photo of the ACF cylindrical hopper painted for Shell Chemical Plastics was the prototype inspiration for my project. *Henry Maywald, Classic Freight Cars, Vol. 11: Covered Hoppers* photo



3. Applying the Plano photo etched roof walk.



## ATLAS COVERED HOPPER MAKEOVER | 4

Since I was repainting the car, I decided to upgrade it with a photo-etched ACF cylindrical hopper roof walk from Plano Model Products (part 096). I knew upgrading the roof walk would turn an already accurate Atlas car into a true model of the prototype. Plano provided a detailed set of instructions that made the task straightforward.

I didn't want the Kerr-McGee logo or the hopper car's reporting marks to show through the new paint, so I decided to sand them off. I used fine sandpaper with a wet sanding technique to minimize damage to the car's details.

I studied the prototype photo and decided to use Scale Coat II Chessie Yellow, which I had on hand, as a starting point. The prototype was more of a yellow-orange, so I mixed some drops of GN 2046 orange with the Chessie Yellow until I had a match.



4. Sanding out the Kerr-McGee logo.

## ATLAS COVERED HOPPER MAKEOVER | 5



5. I applied a white base coat.



6. Painting the model.

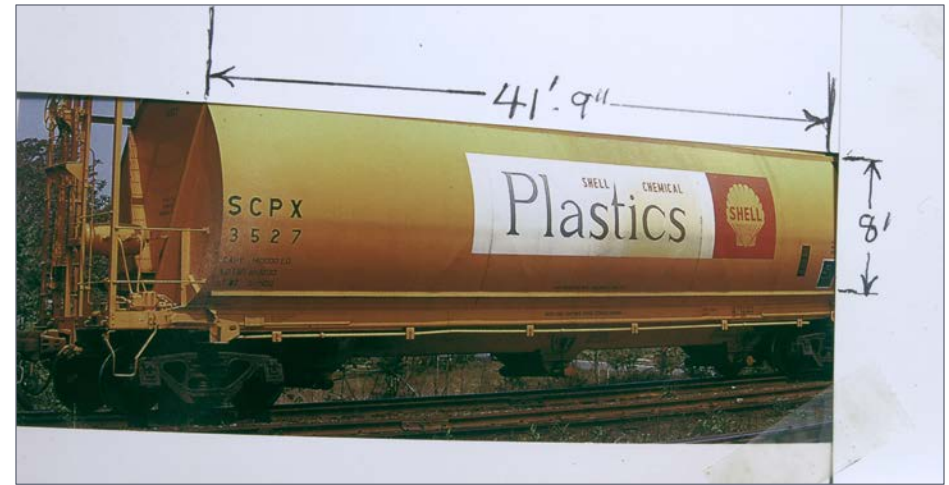




7. Comparing my model's color with the prototype photo.



8. Microscale's decals were too large.



9. Measurements for Brillinger to use for decal design.

I gave the model a coat of Scale Coat II 2011 white for a neutral base coat. This is always an important step when applying a transparent color such as yellow [5].

Once I had the basecoat applied, I proceeded with applying my yellow-orange color to the car. I was satisfied that the color matched the prototype well [6, 7].

I assumed that using the Shell logo decals from MicroScale set 429 would be correct for my project. As it turned out, the decal was far too large [8]!

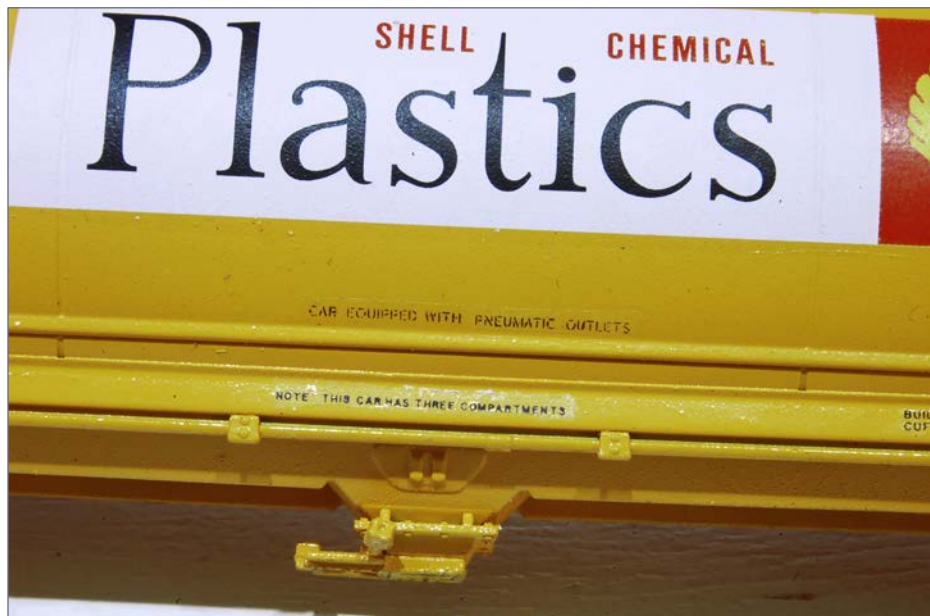
I turned to my "go-to" decal guy, William Brillinger [PDC.ca], hoping the prototype photo was enough to create the correct logo. I provided him with the HO scale measurements [9].

When Bill sent me the result to approve the artwork, I couldn't have been happier! I asked if he could reproduce the reporting marks and car number [10]. The MicroScale hopper decal set

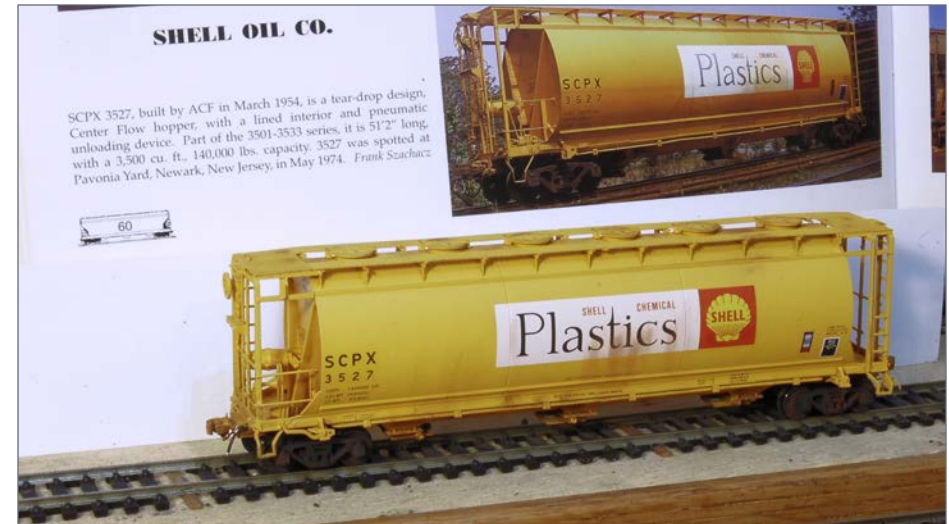




10. Brillinger's decals were the right size for my car.



11. I used MicroScale's decal set for the car's vital information.



12. The completed car, weathered.

had the correct size for the car's capacity information and other critical data, so I used those, too [11].

Another inspection revealed that the car has Bettendorf friction bearing trucks instead of the roller bearing trucks Atlas included. I swapped them out for ASF Ride Control trucks from Kato (31-601).

I applied Testors Dullcote to give the model a dead-flat finish. Finally, I applied Scale Coat II flat grimy black to the trucks and underframe area for light weathering [12].

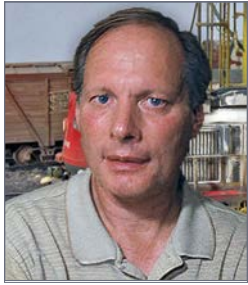
In closing, you can see how my initial \$15 bargain car turned out to cost much more. Sometimes that's the price you pay for dead-on accurate models of the prototype. It certainly looked sharp on my High Line diorama. ☑

*Pictures continued on next page ...*





## BOB RIVARD



Bob Rivard has been fascinated with trains since the age of 5 when he received his first train set, the proverbial Lionel.

He really enjoyed his job at KARE TV, working there for 43 years as a broadcast technician. He recently retired. He ran the robotic cameras during the 10 p.m. news. ■



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13. My shell hopper car looks sharp in consist on my High Line diorama



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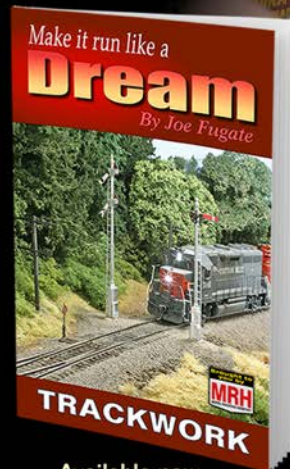
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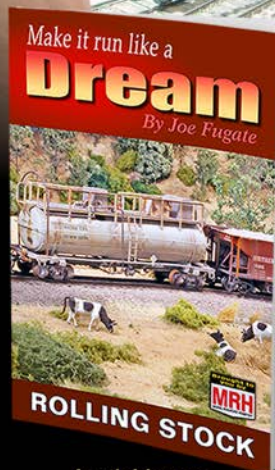


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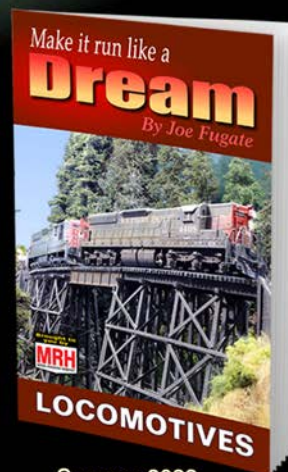
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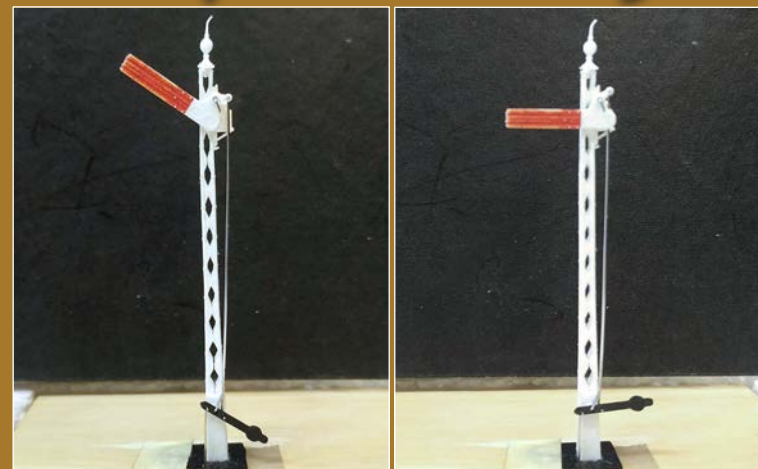


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# Suction-operated semaphore signals



Model Railroad Hobbyist | December 2021

**HENRY VAN WYK DEMONSTRATES HIS INNOVATIVE SUCTION SYSTEM FOR SIGNAL ACTUATION ...**

**I WANTED TO DEVELOP A REASONABLY PROTOTYPICAL SIGNAL SYSTEM FOR** my layout representing South African Railways in the 1980s. The block signals governing movement between stations are totally automatic, using current sensors in the track.

The signals are interlocked, so the two signals controlling the same segment of track cannot be green at the same time. I accomplish this with self-locking relays.

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The relay system works very well for color-light signals, but the small village of Vlakteplaas represented on the upper level of my layout, still used semaphore signals in the 1980s. Semaphore kits from Ratio plastic models closely resembled the South African Railways semaphore signals I needed [1].

The blade connects to the actuating arm with a thin steel wire supplied with the kit. Animating the signals with my relay-based signal system presented a challenge.

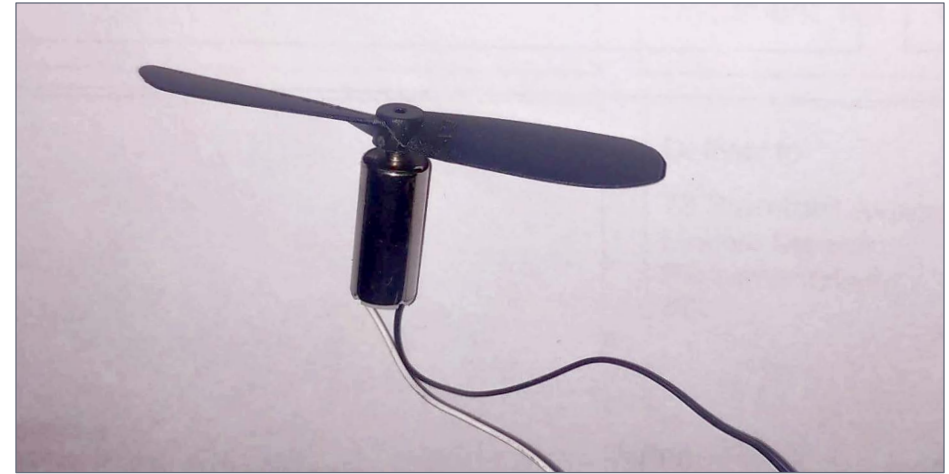
Coil-operated or servo-based systems require momentary contact, rather than the constant current of the relay system. Meanwhile, the space between the upper levels of my layout at Vlakteplaas is such that it can't accommodate the height of slow-motion turnout machines.

### AN OLD EXPERIMENT YIELDS NEW IDEAS

I developed a system about 25 years ago for animating semaphore signals with a vacuum-activated lever. Using the motor and fan I



1. Ratio Semaphore signal kit.



2. Electric drone motor and propeller.

salvaged from my daughter's broken toy hairdryer, a small hinge, a cap from a can of spray paint with the end cut away, and a lid from a yogurt tub, I built a vacuum system.

When the fan blew air out the top of the spray paint lid, the suction pulled the lid closed. The lid moved an attached actuator lever attached to the semaphore signal's control rod.

This solution was perfect for my needs. I could supply constant current to the small electric motor, and it was self-cooling, so there was no time limit for the motor to be on. I just had to re-create the system.

I knew that small drones use electric motors and propellers. I searched eBay for those components and ordered six of them to test my idea [2].

Next, I needed a tube, a hinged disc to pull closed with suction, and an actuator lever. I showed my idea to a model railroading friend (Chris Larkin) who had a 3D printer, and two weeks later, he had the parts for a prototype [3].

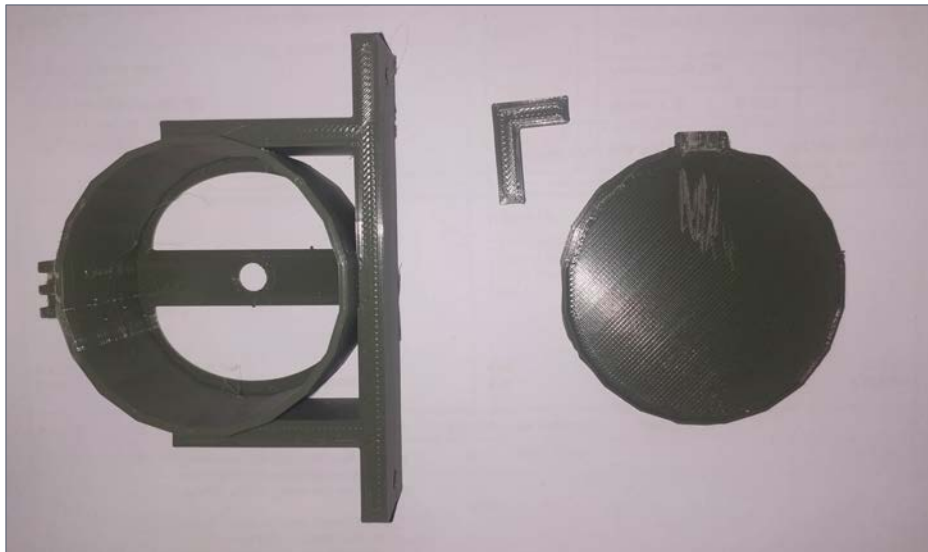


After some testing and some tweaks, we had the system perfected, and he printed six sets. My friend has made the .stl files for this system available on Thingiverse: [www.thingiverse.com/thing:4886678](http://www.thingiverse.com/thing:4886678)

## ASSEMBLY

I pushed the propeller onto the motor shaft. We designed the tube with a mounting hole in the center just the right size for the motor to fit snugly. It fit as planned [4].

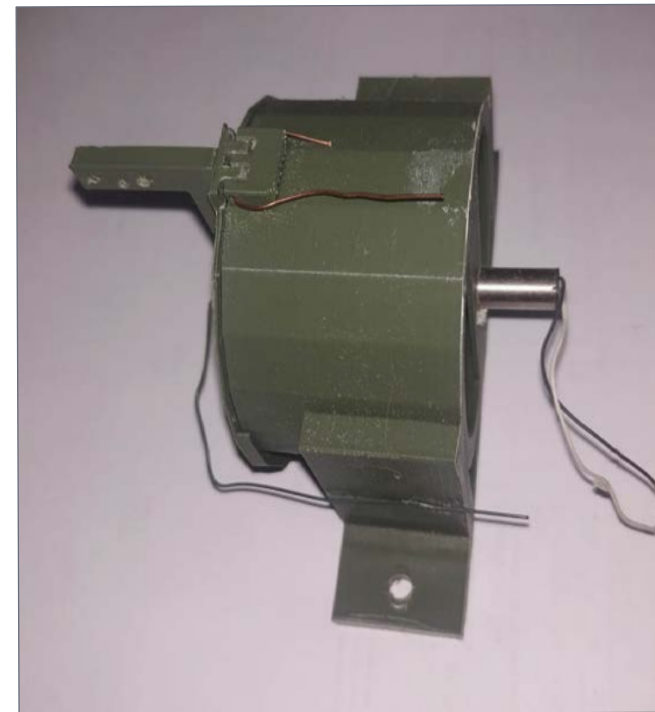
I glued the actuator arm to the disc so it formed an extension of the built-in hinge. I meshed the hinge parts on the barrel and the disc together and inserted a small piece of wire for the hinge pin, making certain that the disc could swing freely. I glued a small piece of wire to the barrel and bent it to prevent the lid from opening all the way to aid in the installation process [5].



3. 3D-printed parts included the tube, the actuator lever, and the disc.



4. Motor inserted. The disc will attach to the tube's built-in hinge (top).



5. The suction machine is fully assembled.



## SIGNAL MODULE

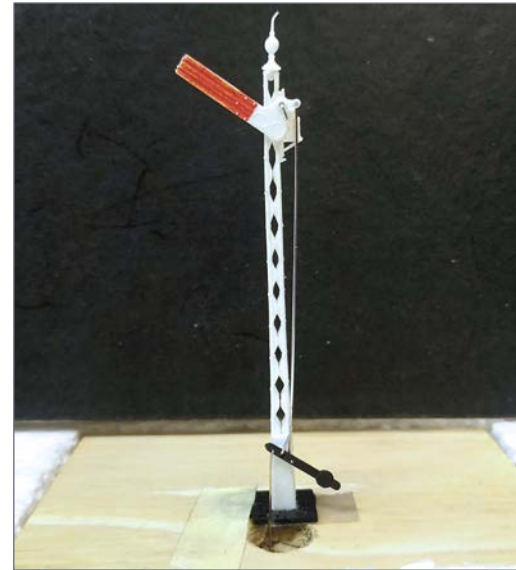
It is easier to connect the blade to the actuating arm at my workbench than under my layout, so I opted for a modular approach. The module consists of a small piece of plywood with a hole drilled in it, the signal above ground level, and the suction mechanism below the plywood [6].

A thin steel wire connects the signal mast to one of three holes molded into an operating lever at the signal's base. I used the center hole as the fulcrum, with the signal mast wire attached to a hole on one end of the lever and the actuator wire from the suction device attached to a hole on the other.

I carefully measured and bent the steel wire to attach to the actuating arm. I cut the wire slightly longer than required so I could bend it into a U-shape to prevent it from dislodging from its mounting hole. I glued the signal to the plywood so that its operating lever was directly above the hole [7].



6. Underside of the signal module, as seen in place below the layout.



7. The signal module above the layout, with the signal operating lever directly above the hole in the module.

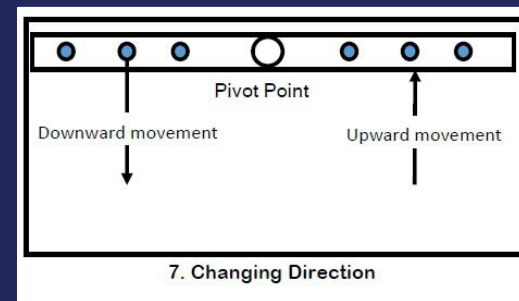


H. van Wyk

## FULCRUMS, PIVOT POINTS AND LEVERS

I used mechanical knowledge of fulcrums and levers to connect the suction devices to the signal arms.

This "class 1" lever has a center pivot point and two holes on either side of the pivot point to reverse the direction of force. When the actuating arm connected to one of the holes pushes upward, the other hole moves downward [8].



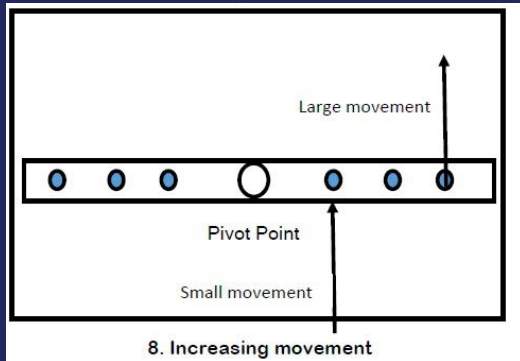
8. A class 1 lever reverses the direction of force.



H. van Wyk

## FULCRUMS, PIVOT POINTS AND LEVERS CONTINUED ...

To increase the movement of the load relative to the force, I use a class 3 lever, where the force is attached to the lever to the hole nearest the fulcrum, and the wire from the signal to a hole farther out [9].



9. A class 3 lever increases the distance the load travels" requires a full stop.

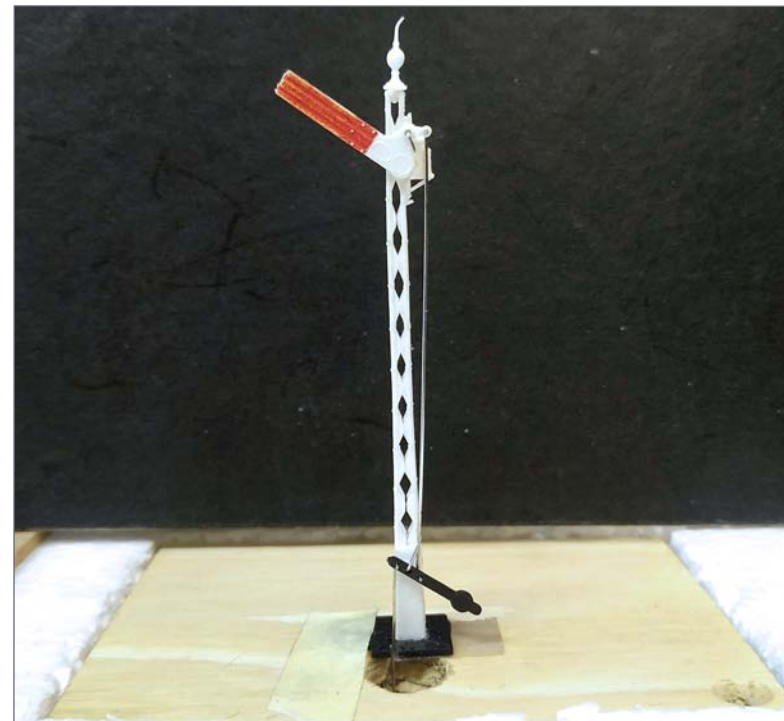
## INSTALLING A SIGNAL MODULE

I wanted the semaphore signal module to drop right into the layout, so I traced the shape of the module base on the layout's baseboard and cut it out. Then I glued a small Masonite lip around the bottom of the cut-out in the baseboard, for the module to rest on [10].

With the module dropped in, I made the electrical connections. The drone motors I used are rated at 4.2 volts, so I used a 3.5-volt power supply connected to the switches on the dispatcher's panel. I checked polarity to make sure that the motors ran in the correct direction. Finally, the signal was complete [11]. ✓



10. Masonite lip around cutout in baseboard, viewed from under the layout.



11. The completed signal module installed on the layout.





# SUCTION-OPERATED SEMAPHORE SIGNALS | 10

## 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. Up to age 5, Henry lived with his parents in a company house adjacent to the South African Railways line. He daily saw steam locomotives shunting and hauling mainline freight and passenger trains.

An electric train set soon replaced the battery one. He and his dad built a layout on his bedroom floor. With every Christmas and birthday, the set was expanded with more track, locomotives and rolling stock. 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. ■



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## JEFF SHULTZ INTRODUCES JTC's EXPANDED INTERMODAL OFFERINGS ...

**NEW FROM THE JACKSONVILLE TERMINAL COMPANY (JTC) ARE MODELS OF** the National Steel Car (NSC) 17-post 53' well car, and controlled-entry kiosks in N-scale. JTC is also introducing its Visionary Series of N scale containers, which will include containers decorated for famous model railroads, holiday and event commemoration, and other non-prototypical paint schemes.

JTC has been producing quality N scale, magnetically stacking intermodal containers for several years now. Their offerings include containers unavailable in other scales, such as flat rack containers with folding bulkheads. JTC's containers were in a "First Look" article in the December 2018 *MRH* ([s3-us-west-2.amazonaws.com/mrhpub.com/2018-12-dec/online/index.html](https://s3-us-west-2.amazonaws.com/mrhpub.com/2018-12-dec/online/index.html)).

## NSC 17-POST WELL CARS

The NSC 17-post well car is a 53' double-stack well car, class NWF13, released by JTC in both TTX (DTTX) and Canadian



## JTC'S EXPANDED INTERMODAL OFFERINGS | 2

Pacific paint schemes. *MRH's* review cars are DTTX 656443 and DTTX 659626 [1, 2].

The cars' paint schemes match prototype photos found on Wikipedia, minus the several years of weathering. Like the prototype, the 53' well car can carry two 20' containers or one 53', 48', or 40' container in the well and a 53', 48', or 40' container on top [3, 4].

The models are equipped with 100-ton Micro-Trains trucks and body-mounted Micro-Trains couplers. The pin holes in the 40' position on the well floor are oval-shaped to accommodate multiple brands of containers. The end walkways are etched metal and include the holes in the plate [5].



1. JTC N scale NSC 17-post 53' well car side view.



2. JTC N scale NSC 17-post 53' well car 3/4 end view.

## JTC'S EXPANDED INTERMODAL OFFERINGS | 3



3. Prototype photo of DTTX 656443. Photo: Wikipedia Commons. [upload.wikimedia.org/wikipedia/commons/9/94/DTTX\\_656443\\_%285862737822%29.jpg](https://upload.wikimedia.org/wikipedia/commons/9/94/DTTX_656443_%285862737822%29.jpg)



4. Prototype photo of DTTX 659626. Photo: Wikipedia Commons. [upload.wikimedia.org/wikipedia/commons/5/5b/DTTX\\_659626\\_%285548840121%29.jpg](https://upload.wikimedia.org/wikipedia/commons/5/5b/DTTX_659626_%285548840121%29.jpg)



5. Top view showing etched metal detail.

The cars weigh 0.9 ounces, below the recommended weight of 1.32oz. per NMRA RP-20.1 ([www.nmra.org/index-nmra-standards-and-recommended-practices](http://www.nmra.org/index-nmra-standards-and-recommended-practices)) for a car 5.47" long. One JTC 53' container brings it up to 1.3oz. Currently sold out, the models retail for \$44.95 for individual cars or \$88.95 for a two pack of DTTX cars.

## CONTROLLED-ENTRY KIOSK

JTC's controlled-entry kiosk model represents the hardware found at the entry to intermodal terminals, warehouses, controlled parking lots, or port terminals. The kiosk includes cameras, the entry terminal, and a movable gate with non-operating stop and proceed lights, mounted on a single curb base [6, 7].

While I couldn't find an exact prototypical match, JTC's kiosk resembles Orbita's GateKiosk hardware. The kiosks come with the hardware in orange, silver, yellow, green, Maersk blue, and red, with solid or striped curbs, depending on the hardware color. A three-pack of kiosks retails for \$36.95.



6. JTC controlled-entry kiosk in yellow, with yellow-and-black striped curb base.



7. JTC controlled-entry kiosk in silver, with red-and-white striped curb base.

## NEW CONTAINER RELEASES

JTC introduced its Visionary Series with a set of 53' containers for three well known model railroads – the Virginian & Ohio, the Allegheny Midland, and the Virginia Midland [8]. The Visionary Series has since expanded to include containers of all standard sizes, with special schemes for holidays, conventions, other non-prototypical paint schemes.

Retail prices vary from \$14.95 for a single 20' container to \$49.95 for a Gateway 2020 commemorative set of one 53' and two 20' containers and a year's membership in Ntrak/T-trak.

Recent container releases have included 40' corrugated containers painted in Zim's "The Z Factor" scheme and Maersk's rainbow scheme [9].

Find JTC's products at dealers and on their website at: [jtcmodeltrains.com](http://jtcmodeltrains.com)





8. JTC's Visionary Series 53' containers for the Virginian & Ohio, Allegheny Midland, and Virginia Midland.



9. JTC's 40' containers in Zim "The Z Factor" and Maersk's rainbow paint schemes. ☒

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# SAVVY MODELER *Online*



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## Upgrade Athearn Blue Box with Genesis motor

YouTube modeler **KB02** shows how he upgraded an Athearn Blue Box loco with an Athearn Genesis motor. This is a great way to bring that favorite Blue Box loco into the modern era and make it run much better, plus make it easier to add DCC as well.

This thirteen minute video shows you the  
entire process and how easy it is to do  
this great Blue Box upgrade! ☒

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column



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



## INDUSTRY NEWS

### Pennsylvania charges online hobby stores

The Attorney General of Pennsylvania has filed a complaint against Internet Hobbies, LLC and Hobby Models, LLC, two online shops operated by co-defendants Dale and Diane Bruner. The complaint alleges that the defendants consistently failed to deliver products and failed to refund consumers' money, violating the Commonwealth's Consumer Protection Law.

The lawsuit alleges that despite being more than two years behind on fulfilling some consumers' orders, the defendants have continued to accept orders and collect money. When consumers reached out to inquire about the status of their orders, the defendants allegedly either ignored the consumers or provided excuses after excuses. When other consumers would request refunds from the defendants for undelivered items, the defendants allegedly often refused to issue refunds, or informed consumers that they had been provided refunds, but never sent them.

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

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The lawsuit seeks a court order for the defendants to pay restitution to Customers, to stop doing business in Pennsylvania, and pay civil penalties for each violation of the Consumer Protection Law. Pennsylvanians were advised to stay on alert for other business aliases used by the defendants, including: Hobby Wheels, Hobby Rails, Hobby Book Depot, Red Star Hobbies, Military Model Depot, Model Airplane Depot, Model Railroad Depot, Model Ship Depot, Gundam World Online, [www.takom-military.com](http://www.takom-military.com), Model Kit Closeouts, and Model Train Closeouts.

Any Pennsylvanians who believe that they have been affected by these companies should contact the Office of Attorney General at [www.attorneygeneral.gov/submit-a-complaint](http://www.attorneygeneral.gov/submit-a-complaint) or contact the Bureau of Consumer Protection by sending an email to [scams@attorneygeneral.gov](mailto:scams@attorneygeneral.gov), or calling 1-800-441-2555.

**N3IX Engineering**, which developed the QuadLN\_S Loconet Servo Decoder in collaboration with Tam Valley Depot, has taken over manufacturing, sales, and support of the QuadLN\_S family of products from Tam Valley Depot. The QuadLN\_S has been improved over the years to support up to 16 servos as well as an OS/Control point with add-on boards. Several new additions are also in development.

Info: [quadln.n3ix.com](http://quadln.n3ix.com)

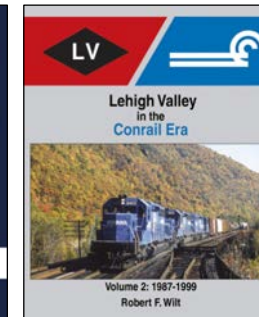
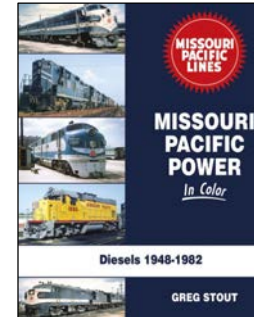
## NEW PRODUCTS FOR ALL SCALES



**Model Train Technology** has announced the Dwarf Signal Controller, designed to indicate turnout position. It can be triggered with a stall-current motor, the MTT Coil Switching adapter on a twin-coil machine, DCC Mirroring, MTT Precision Detector, or a

mechanical toggle or spring-loaded center switch. The Dwarf Signal Controller is a four-light fiber light controller, providing signaling for two turnouts, and comes with two dwarf signals with 36" of fiber cable and pins each. MTT has also designed full-interlocking into the controller.

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

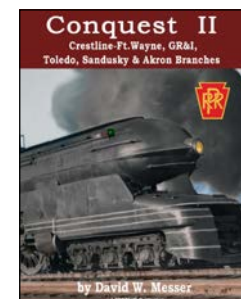


**Morning Sun** has released *Missouri Pacific Power in Color: Diesels 1948-1982*. This new book by Greg Stout features Alco freight and passenger cab units, road switchers, EMD freight and passenger cab units, yard

power, first- and second-generation road switchers, Baldwin Lima Hamilton yard power, and General Electric road units.

Morning Sun has scheduled a March 1st release date for Robert F. Wilt's *Lehigh Valley in the Conrail Era Volume 2: 1987-1999*. Wilt explores the evolution of the LV's remaining vestiges under the new operations of Conrail during its reign as a megalithic corporation, until it becomes a partner in an even larger corporate giant.

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



The **Pennsylvania Railroad Technical & Historical Society** has released *Conquest II Crestline-Ft. Wayne, GR&I, Toledo, Sandusky & Akron Branches* by David W. Messer. The book documents the plant and trains of PRR's speedway between Crestline and Ft. Wayne, the Grand Rapids & Indiana from Ft. Wayne to Mackinaw City, the Toledo Branch to



Detroit, and the Sandusky and Akron Branches. Containing over 750 illustrations, the 8 ½" x 11" hardcover book is 344 pages and includes a separate packet of 20 large maps.

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

## O SCALE PRODUCT NEWS



**Atlas O** has announced an impressive list of new products scheduled for release during the second quarter of next year. The pre-order deadline is January 19, 2022. Heading the list of new O scale models is a Genesis P42 diesel unit. The locomotive will be available decorated for Amtrak Phases III, V and VI, and Amtrak's midnight blue scheme. All versions will display Amtrak's 50th Anniversary logo. The P42 model will be available with Proto-Sound 3.0 and Proto-Scale 3-2 3-rail/2-rail conversion capability.



Atlas O passenger cars will be available decorated in Amfleet Phase I, III, V, VI, and midnight blue; all with the 50th Anniversary logo. Special features include working diaphragms, overhead interior lighting, and detailed interiors. The cars will be available in four-car sets made up of three coaches and one diner.



A new Atlas O model scheduled to be available during the second quarter of 2022 is an EMD F40PH passenger locomotive. Features include metal body side grilles, a detachable snowplow, directional LED headlights, interior

cab lights, operating ditch lights and illuminated LED markers and number boards.



Road names scheduled for this release include Amtrak Phase III and IV, MBTA, Metro North, and NJ Transit. The locomotive models will come with Proto-Sound 3.0.



Atlas O has announced several new paint schemes for a classic EMD F7 diesel. Both A and B F7 units will be available decorated for Chesapeake & Ohio, Reading, Southern Railway, and Southern Pacific.



Sound and operating options include 3-Rail TMCC Electric Railroad Co. Cruise Commander, Railsounds digital sound system, Lionel Trainmaster Command Control, and 2-rail DCC.



A steel cupola caboose is included on Atlas O's 2022 second quarter production schedule. The model will feature see-through running boards, window awnings, window glazing, a smoke jack, separately applied brake wheels, and roof grab irons. Road names will be Alaska Railway, Chesapeake & Ohio, Erie Lackawanna, Maine Central, Reading, Southern Railway, Southern Pacific, and New York, Ontario & Western.



Union Pacific, Canadian National, Maine Central, Milwaukee Road, New York Central, and Denver & Rio Grande Western are the road names that will be available on this Russell snowplow coming from Atlas O during the second quarter of next year.

This triple-bay Center Flow covered hopper will be available from Atlas O sometime during the second quarter of 2022. In



addition to the Missouri Pacific scheme shown here, road names will be BNSF, Chicago & North Western, Grand Trunk Western, Union Pacific, and Vermont Railway.



Atlas O has included a unique all-door boxcar in its first 2022 production schedule. Road names for the 55' car will be available for British Columbia Railway, Champion

International, David J. Joseph Transportation, Simpson Timber, Triangle Pacific, and Masonite Corporation.



This heavy-duty railroad crane with positionable boom and hooks, and six-wheel trucks is due next year from Atlas O. Road names will be Clinchfield, Kansas City Southern, Nickel Plate Road, Santa Fe, Western Pacific, and Denver & Rio Grande Western. The same road names will be available on a boom car.



Atlas O's list of new models scheduled for release during the second quarter of 2022 concludes with a scale test car. The unusual test car will be available for Burlington Northern, Chicago &

North Western, CSX, Jersey Central, New York Central, and Norfolk Southern. All the Atlas O models mentioned in this report will be available for either 2-rail or 3-rail operation. Info: [www.atlasrr.com](http://www.atlasrr.com)

**Protocraft** has brass O scale models of Great Northern's 1937-1942 double-sheathed wood boxcars. The accurately scaled models were built in Korea by Boo Rim using a host of



prototype data including original Pullman-Standard engineering drawings. The models come with Bettendorf 50-ton trucks

with working journal lids and steel sintered rib-back wheels with ball-bearings.

Info: [www.protocraft.com/brass\\_models.cfm](http://www.protocraft.com/brass_models.cfm)



**RSLaserKits** is selling a kit for an On30 scale 18' pickle car of freelance design. Decals are included. The kit is sold less trucks, couplers and brake details for the underframe.

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



**San Juan Model Company** has released On3 scale models of narrow-gauge Conoco high-dome tank cars. These fully detailed injection molded plastic models

are factory assembled with appropriate trucks fitted with metal wheelsets. The models are available accurately decorated for 1926, 1930, 1935 and 1940.



Multiple road numbers are available for a black 1926-era car with Continental Oil Co. in white lettering in a choice of sans-serif or Roman font.

Additional choices include a 1935-era car with black frame, silver tank, with large CONOCO in green sans-serif lettering; and a black 1940-era car with large CONOCO in white sans-serif lettering.





Info: [www.sanjuancarco.com](http://www.sanjuancarco.com)  
To see the cars in operation, visit  
[www.facebook.com/sanjuancarco/videos/4303538166394953](https://www.facebook.com/sanjuancarco/videos/4303538166394953)

## HO SCALE PRODUCT NEWS



Northern Pacific modelers will be pleased with the three NP freight car kits **Accurail** has scheduled for release in February. The mix includes a single-sheathed outside braced wood box car with Youngstown sliding doors. The HO scale model is based on a prototype built in December 1925.



Accurail's 40' NP wood reefer with a steel underframe and 4' swing doors represents a prototype built in 1922.



Completing Accurail's trio of Northern Pacific freight car kits is a 40' double sheathed boxcar with National sliding doors. All

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

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



**Athearn** is accepting advance reservations through December 31, 2021 for a new production run of SD70M locomotives. Delivery of the Genesis HO scale models is planned for January 2023. Three different Union Pacific paint

schemes are in this run including locomotive No. 1979 in the distinctive We Are One scheme. The colorful locomotive led a tour this summer marking UP's dedication to diversity and togetherness.



Additional UP SD70M units in this release come with EMD low plow pilots, GPS domes and Nathan K3 horns.

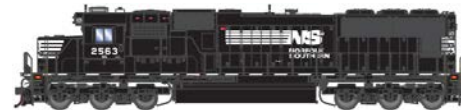


UP No. 4000 has a red sill, while No. 4015 has a yellow sill and silver trucks.



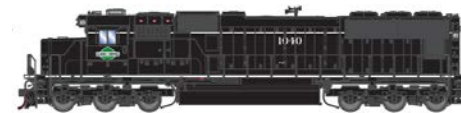
Canadian National units feature the SD75I body with isolated cab, ribbed anti-climbers, a CN plow pilot, and

the distinctly Canadian raised walkways.



The Norfolk Southern SD70M units in this release were ex-Conrail units. Notable features include a Nathan K5LAR24

horn, a small front plow pilot, diagonal dashes on the side sill, and an air conditioner.



have air conditioners.

Illinois Central units and those decorated for Denver, Rio Grande & Western also



All of the Genesis SD70Ms in this run will have factory installed lift rings and wire grab irons, dual sanding

lines, see-through radiator fans, front and rear trainline and MU hoses with silver ends, all-wheel electrical pickup and all-wheel drive. The type of antenna system and variations in fuel tanks will be road specific.



Reservations for Athearn's next production run of EMD SW1500 switcher locomotives are due December 31, 2021. Availability of the HO scale ready-to-run model is

scheduled for January 2023. This will be the first run of Athearn's SW1500 with factory installed LED lighting and Tsunami2 sound.



Heading the list of road names is a Western Pacific unit fitted with a footboard pilot, sunshades, and a firecracker antenna. A Wisconsin Central locomotive with a small

weed-cutter style plow represents three SW1500s WC acquired from Southern Pacific.



SW1500s decorated for SSW-Cotton Belt will have footboard pilots, a P-3 horn, and Gyalight. Additional road names for Athearn's SW1500 include Conrail and Burlington

Northern with an operating Western-Cullen beacon light. Undecorated models will be available with a choice of SP/SSW appliances or in the standard EMD as-built configuration. Features on Athearn's SW1500 include a detailed cab interior, front and rear trainline hoses with silver glad hands, separately applied wire grab irons, and see-through radiator intake grilles.

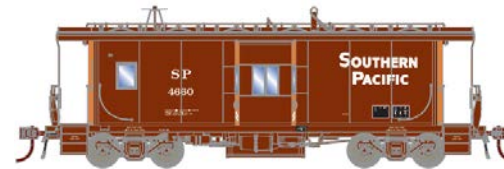
Sound equipped versions of Athearn's SD70M and SW1500 locomotives will have a Tsunami2 DCC/Sound decoder and dual cube speakers. Sound units will function in both DC and DCC environments. Analog DC units will be DCC-ready with a 21-pin connector for installation of an aftermarket decoder.



R. Bale

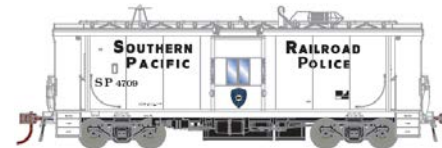
## BAY WINDOW CABOOSE

As freight cars grew taller in the late 1950s and early 1960s, it became more difficult for caboose crews to see around the bigger cars. Wide-vision and bay-window cabooses were developed with a bay that projected beyond the side of the car body. This allowed the crew to see around the larger cars while monitoring their train. Athearn's Genesis model is based on a standard prototype introduced by the International Car Company of Kenton, Ohio. ICC cabooses saw service on most U.S. railroads.



Athearn has included another run of HO scale Genesis series Southern Pacific class C-50 bay window cabooses in its

January 2023 production schedule. The fully detailed HO scale model will be available with DCC controlled sound options including air horn or trainline air whistle, clickety-clack with optional wheel flat spot sounds, brake set/release sounds including retainers and brake squeal, big-hole emergency brake application sound, handbrake tie-down/release, and adjustable flange squeal.



Decorating schemes and class-specific details will be available for SP class C-50-8, SP Police caboose class C-50-9, and SP class C-50-9 Kodachrome scheme.



A class C-50-5 caboose will be available decorated for Willamette & Pacific Railroad, a GWI railroad that operates on



former SP and BNSF tracks in Oregon. It is now part of the Portland & Western Railroad.



A Western Pacific version of the C-50 caboose is based on a group of six cars WP ordered from International Car in 1980.



Completing this release is an SP C-50-9 caboose with a Union Pacific patch.



flatcars and 40' smooth-side Fruehauf Z-Van trailers. Raised and lowered hitches will be included with each flatcar. Features include a die-cast underframe, wire formed brake plumbing, wire grab irons and ladders, and a separately applied ratchet brake. ASF 70-ton Ride-Control roller-bearing trucks will have machined metal wheelsets and rotating bearing caps. A minimum track radius of 22" is required.



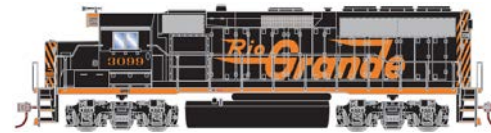
Each of two mineral red TTX flatcars and two yellow RTTX flatcars will be available packaged with a Z-Van trailer. The trailers will be decorated for Realco, Penn Central, The Rock, and MoPac. The trailers, which will also be available separately, will have rubber tires, mud flaps, and wheeled or shoe-style landing gear per the prototype road being modeled.

Athearn's January 2023 production schedule includes 89' Trailer Train

Each of two mineral red TTX flatcars and two yellow RTTX flatcars will be



**Roundhouse** brand models coming from Athearn in January 2023 include a GP40-2 diesel locomotive.



Road names will be CSX, Burlington Northern, Denver & Rio Grande Western, Kansas City Southern, Norfolk Southern, and US Army.



The economy priced GP40-2s will be available for DC operation with a DCC-ready 21 pin plug for installation of an aftermarket decoder.



A Roundhouse chemical tank car completes Athearn's January 2023 release. Three numbers each will be available for General American Transportation, Baker's Chocolate, Stein Hall, Sol-U-Phos, Union Pacific, and Vulcan Chemicals.



The Roundhouse models will have a separately applied brake wheel, wire safety handrails, body-mounted operating knuckle couplers, and appropriate trucks with machined metal wheels.

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



**Bowser Trains** has scheduled a mid-December release for Pennsylvania Railroad and Western Maryland versions of its HO scale Alco RS-3 Phase 3 locomotives. This much-anticipated project began almost seven years ago when a prototype Phase 3 unit was measured at the Rochester & Genesee Valley Railroad Museum. Since then several other prototypes with varying degrees of modifications have also been

measured. Ultimately, Bowser will produce 22 versions of the RS-3 locomotive.



Details on Bowser's PRR model include a Train Phone antenna, marker lights, number boards, train control box, dynamic brakes, MU receptacles, a ladder on the fireman's side of the long hood, and short handrails on the engineer's side.



Specific roadname details on Bowser's Western Maryland edition of the RS-3 include number boards and dynamic brakes. Two road numbers will be in this release. Both versions of Bowser's RS-3,

Phase 3 locomotive feature individual air hoses, windshield wipers, grab irons, coupler lift bars, operating headlight, window glass, can motors with flywheels, nickel silver wheels and knuckle couplers.



Bowser has reopened the reservation window for its HO scale M630 locomotive project. New orders will be accepted until January 7, 2022.



Paint schemes include five variations of CP Rail, three British Columbia Railway versions, three BC Rail, and two

Delaware & Hudson schemes.



Models will also be available decorated for Pacific Great Eastern Railway and Western New York & Pennsylvania. Delivery expected in the fall of 2022.

Bowsers RS-3 and M630 models mentioned in this report will be available for analog DC operation. They will have a 21-pin plug for an aftermarket decoder. DCC/Sound versions come with a factory installed LokSound Select decoder  
Info: [www.bowser-trains.com](http://www.bowser-trains.com)



**Canadian Pacific CP Shops Gift** Department is selling an HO scale model of FP9A locomotive No.

1401 as it appeared during its service life with the Royal Canadian Pacific business train and 2816 Empress steam program between 2000 and 2016. Custom-built for CP by Rapido Trains in cooperation with CP's Heritage Operations department, the HO scale model wears a paint scheme unique to No. 1401.

Features include correct fuel and water tanks, detailed cooling coils, numerous etched-metal parts including non-warping Farr side grilles, full cab interior, operating headlight, and metal Macdonald-Cartier knuckle couplers. The DC/DCC-ready model has ditch lights installed which become operational with the addition of an aftermarket DCC decoder.

Info: [www.cp-merchandise.com/us-store.html#!/gifting/heritage-model-train-63.html](http://www.cp-merchandise.com/us-store.html#!/gifting/heritage-model-train-63.html)

**Eastern Seaboard Models** has announced its first HO scale model, a Magor/PC&F XIH insulated heated plug-door boxcar.





Ordered in two batches, Bangor & Aroostook ordered 300 of the cars built by Magor in 1950, followed by 150 more cars by Pacific Car & Foundry in 1953, with New Haven ordering 100 cars from PC&F to add to the B&A order. All the cars were decorated in the State of Maine paint scheme. The model is made of injection molded plastic with etched brass roofwalks and brake platforms. Kadee #148 couplers and InterMountain ASF A-3 50-ton solid bearing trucks with low profile metal wheelsets come standard. Both Bangor & Aroostook (Magor, 1950) and New Haven (PC&F, 1953) will be available. The models are planned for a summer 2022 availability.

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



**Exact Rail's** latest release is a 50' FMC 5327 cu. ft. exterior post boxcar with 12' plug doors. Road names are Green Bay Western (1981 patch), East Camden & Highland (1979 as delivered), Laurinburg & Southern, Chattahoochee Industrial Railway, Minnesota, Dakota & Western; and two Quebec Central schemes.



The HO scale model has individual wire grab irons, separately applied door tracks and latching bars, and ASF 100-ton Ride-Control trucks with 36" machined metal wheelsets.



ExactRail has scheduled a PS-2CD 4427 cu. ft. triple-bay covered hopper for release later this month.



Road names will be Santa Fe, Milwaukee Road, Kansas City Southern, Far-Mar-Co, TLDX-Peavey, TLDX-CGF, and TLDX-West Central Coop.



Also expected from ExactRail later this month, or in early January, is a group of HO scale Gunderson 7466 cu. ft. wood chip gondolas. With etched wood grain the HO scale model accurately recreates the composite wood panels of the 1965-built prototype.



Notable details include drop-down brake rigging, wire uncoupling levers, separately applied air hoses, and ASF 100-ton Ride Control trucks with machined metal wheelsets. ExactRail's wood chip gondola will be available in multiple road numbers decorated for Georgia Pacific and in four Southern Pacific schemes.



ExactRail has scheduled a January release date for a new production run of Bethlehem 3483 cu. ft. quadruple-bay coal hoppers.



Road names for the HO scale models will be Chicago North Western, and three schemes each for Reading & Northern, and

Denver & Rio Grande Western.



All ExactRail HO scale models mentioned in this report come equipped with Kadee #58 knuckle couplers.

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



R. Bale

## PS-1 BOXCARS

One of the most successful designs of plain boxcars was the PS-1, with Pullman-Standard producing more than 100,000 PS-1 boxcars between 1947 and 1963. By 1957 more than 78 railroads had purchased PS-1s. Although commonly referred to as 40' or 50' cars, the interior lengths were 40'-6", and 50'-6" respectively. The sides of most PS-1s were assembled of butt-welded steel panels riveted to the door frames and corner posts. Between 1948 and 1954 Pullman-Standard produced a number of 40' PS-1s with 10-panel riveted sides. Customers could specify side door openings of 6', 7', 8', and 9' on the 40' cars, and 8', 9' or 15' on the 50' cars. Double doors could also be specified. Customers had a choice of Pullman-Standard, Youngstown, or Superior sliding side doors. The corrugated steel ends were of Pullman-Standard design stamped in two sections riveted together. The assembled end was riveted to the sides and at the roof. PS-1s built after 1949 had a signature of six small rectangles at the top of the ends. Polling pockets and the type of end sills were optional. The copper bearing galvanized roof was composed of riveted panels of Pullman-Standard design. The cars came with Apex or U.S. Gypsum steel brake platforms and running boards. The brand of geared hand brakes varied with Miner, Ajax model IP80, and Equipco type 4000 being among the most common.



**Kadee's** newest HO scale model is a 40' PS-1 boxcar decorated for the BCK-Buffalo Creek Railroad, a subsidiary of the Lehigh Valley Railroad Company. The model

replicates a prototype car built in 1956 by Pullman-Standard with 7' five-panel sliding Superior doors. Like the prototype, Kadee's version is painted boxcar red with a silver roof and black P-S ends.

The HO scale ready-to-run model has a fully detailed underframe, see-through running boards and brake step, a



finely detailed brake wheel with proper curved contour, Kadee metal knuckle couplers and self-centering trucks.

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



**KatoUSA** has released HO scale Gunderson MAXI-IV triple-car sets of double-stack well-cars. Road names currently available include TTX

with a choice of original or new logos, two BNSF schemes, and two Pacer Stacktrain sets with different road numbers.



Like the prototype, the Kato model has two different sized wheels. The two end trucks have 33" wheels while the two middle trucks, which

support more weight, have 38" scale wheels. Kato also has 2-packs of 53' containers decorated for BNSF, EMP, NACS, Swift, and Canadian National.

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



**Moloco** is accepting reservations through December 26, 2021, for an HO scale 50' ACF 100-ton high-cube boxcar with double plug doors. The HO scale model replicates a 1972 non-waffle Santa Fe prototype



that evolved from the 1971 waffle design. The plate clearance of the prototype pre-dates the Plate F introduction so they were stenciled with *Exceeds Plate C*.



Decorating schemes in this production run will include a 1972 Burlington Northern car in BN green. Santa Fe cars in Indian Red

with Shock Control (Bx-154) and Freight-Saver slogans (Bx-163) will have a 9' circle-cross logo.



Cars in Santa Fe's mineral brown paint include a 1988 Bx-154 repaint, a Bx-163 painted in 1991 with ATSF's Q-Quality

slogan, and a 1998 BNSF repaint. Undecorated kits will also be available in this release.

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



**Rapido Trains** is preparing final tooling for an HO scale Southern Pacific 40' outside braced boxcars.



Both class B-50-15 cars with 7/9 corrugated steel ends and class B-50-16 cars with Dreadnaught 3/5 ends will be produced.

Additional variants include KC or AB brakes, Viking or Murphy radial roofs, and both original wood and rebuilt steel sides.



R. Bale

## SP B-50-15 & B-50-16 BOXCARS

Beginning in 1925, the Southern Pacific ordered nearly 5,000 40' wood boxcars, with outside bracing in a Pratt pattern, in two classes: B-50-15 and B-50-16. The cars were built to nearly identical designs, with the exception being in the steel ends. Cars in the B-50-15 class received 7/9 corrugated steel ends, while class B-50-16 cars were built with 3/5 Dreadnaught ends. Both groups of cars used a variety of commercial roofs with the Murphy radial roof and the popular Chicago-Cleveland Viking roof being the most common. Almost all the B-50-16 cars received Viking roofs. The majority of these cars were delivered with Bettendorf's original T-section trucks with integral journal boxes. Many were updated later with Bettendorf U-section double truss trucks. In 1935 Southern Pacific began a program of upgrading cars in both classes by replacing the wooden sides with steel sheet sides inside of the side bracing. Brakes were also upgraded from K to AB systems. The initial rebuilds were assigned to service with Pacific Motor Trucking followed by cars for Baggage Express (BX) service. The steel sided cars remained in service for many years with some still in revenue service as late as 1970.



Individual details include separate ladders and grab irons, metal stirrup steps, and Carmer uncoupling levers.



Cars will be available in SP's 1931-1946 and 1946-1952 schemes, Overnight black and passenger green.



Rapido is also tooling a new Bettendorf T-section truck with integral journal boxes for the car.



Mid-Train Dome car featuring all new tooling.

Rapido has also announced a special release of the Superior Stainless



Dome-Coach, in service from 1955-1983, with coach seats on the lower level of the long end. It operates long-end forward; and a Dome-Coffee Shop, in service from 1983-present, which has a coffee shop on the lower level of the long end and operates short-end forward. There is a lounge in the short end.



The model will feature Rapido's typical attention to underbody details,

including air, steam, and electrical lines, factory installed grab irons, a realistic stainless-steel finish, operating diaphragms with etched-metal end gates, magnetic metal couplers, and track powered interior lighting.



Paint schemes in this release include Canadian Pacific

Maroon scheme, CP Rail Action Red, Via Rail Canda, and exclusive to Spring Creek Model Trains – the Rio Grande Ski Train "California" in both early and late schemes.

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

**Resin Car Works** has released two new prototypically accurate HO scale resin tank car kits, including a 6,500-gallon UTLX tank car. The new RCW kit is an update of a Sunshine



Models kit produced in 2003 from Frank Hodina's masters.



The diameter of the UTLX dome on the original Sunshine kit has been corrected and the decal set has been updated with more details and numbers.



The second new RCW kit is for a 10,000-gallon UTLX tank car. Components in both kits include the resin tank and frame,

Precision Scale Company brass tank car stanchions, Tichy brake set parts, assorted wire, grab irons, and turnbuckles; and Tahoe sideframes for a 50-ton Andrews truck.

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



**San Juan Model Company** has released HO<sub>n</sub>3 scale models of narrow-gauge Conoco high-dome tank cars. These fully detailed injection-molded plastic

models are factory assembled with appropriate trucks fitted with metal wheelsets. The models are available accurately decorated for 1926, 1930, 1935 and 1940.



Multiple road numbers are available for a black 1926-era car with Continental Oil Co. in white lettering in a choice of sans-serif or Roman font.





Additional choices include a 1935-era car with black frame, silver tank, with large CONOCO in green sans-serif lettering; and a black 1940-era car with large CONOCO in

white sans-serif lettering.

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

To see the cars in operation go to [www.facebook.com/watch/?v=4303538166394953](https://www.facebook.com/watch/?v=4303538166394953)



R. Bale

## EMD SD38-2 DIESEL LOCOMOTIVE

Built by Electro Motive Division from 1972 through 1979, the six-axle, 16-cylinder, non-turbocharged, SD38-2 was designed primarily for heavy, slow freight operations. Unlike the engine of its SD38 predecessor – which drove a generator to supply power to the traction motors – the SD38-2s 2,000hp prime mover drove an alternator which produced AC current that was rectified to DC to power the six traction motors. Another major change for the SD38-2 was the introduction of the Dash-2 modular electrical cabinet. Although total sales were less than 100, the SD38-2 proved to be a reliable workhorse with many continuing in service today.



**Scale Trains** has expanded the selection of HO scale Rivet Counter EMD SD38-2 locomotives scheduled for

release late next summer. Southern Pacific models will replicate prototypes as they appeared in the 1980s and 1990s with black armrests in the cab and operating LED front and rear tricolor flush mounted classification lights. SP No. 2972 will have blanked class lights and brown cab armrests. SP No. 2975 will have an operating LED Stratolite beacon.



Where appropriate to the road name being modeled, Rivet Counter SD38-2 models will have operating LED ground lights, ditch lights, and beacons. LED lighting features on all Rivet Counter versions of the SD38-2 will have lit number boards, directional headlights, and red, white and green classification lights.



In addition to the SP models, road names include BC Hydro, Louisville & Nashville, Frisco, two Yankeetown Dock

schemes, and two Elgin, Joliet & Eastern schemes: Bicentennial and as delivered in orange. Scale Trains' SD38-2s will be available for DC operation or with factory installed DCC and sound.

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



**Tangent Scale Models** is selling a new production run of HO scale PRR/PC 52' 6" Class G43 100-ton steel gondolas with corrugated sides.



Decorating schemes include a 1966-era PRR car displaying a classic Keystone and a 1984 renumbered car with a COTS panel replacing the Keystone.



Conrail is represented by two PC repaints; a 1980-era with a COTS panel and Timken rotating axle caps, and a 1988 car modified with cushioned

draft gear and coil racks.



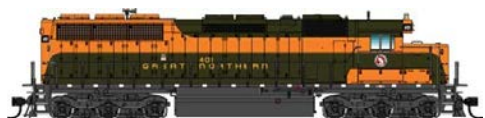
The mix includes Norfolk Southern cars with coil racks. One is a 1999 repaint and the other displays conspicuity stripes that were added in 2010.



Completing this release of decorated cars is a Penn Central gondola from 1968 in the original PC green. All the cars in this release come with Kadее

couplers and 100-ton Barber S-2 trucks with metal wheelsets.

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



**Walthers** 2022 production schedule includes the release of six road-specific versions of an EMD SD45

next August. The HO scale Proto series models will be available with LokSound 5 DCC and sound for DCC and DC layouts.



Models decorated for Great Northern and Milwaukee Road will have operating Pyle-National beacon lights,

Leslie SL-3 horns and Flexicoil-C trucks with brake cylinders mounted low on the truck frame.



Walthers SD45s decorated for Southern Railway and Norfolk & Western will have high short hoods and be

arranged for operation with the long hood forward. They will also be fitted with Leslie S-5T-R horns and Flexicoil-C trucks with the brake cylinders mounted high on the truck frame.



Additional road names include Wisconsin Central with operating ditch lights, and Penn Central with a Leslie SL-3 horn and a Sinclair antenna system.



Walthers plans to release a new production run of 60' High-Cube Plate F boxcars next month.



The HO scale Mainline series models will have separately applied latch bars on the plug doors, and a detailed

underbody with cushioned underframe including a brake air reservoir mounted at the prototypically correct angle.



Road names will be BNSF, Canadian National, Union Pacific, and three TTX schemes.



Road specific details in this release of the Mainline series models include either X or diagonal roof panels. The cars

will come with 70-ton roller-bearing trucks with 33" turned metal wheelsets.



Additional new HO scale models coming from Walters next month include a group of

53' Rail-Gon gondola cars.





The Mainline series cars are based on Rail-Gon 310000 series prototypes used in nationwide pool service beginning in the 1980s.



Road names will be Conrail, CSX, Delaware & Hudson, Soo Line, Rail-Gon, and a Rail-Gon car with a B&O patch.

Walther's Rail-Gons will ride on 100-ton roller-bearing trucks with 36" machined metal wheelsets.

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

## N SCALE PRODUCT NEWS



Train flatcars and 40' Fruehauf Z-Van trailers. Raised and lowered hitches will be included with each flatcar. Features include a die-cast underframe, wire grab irons and ladders, and a separately applied ratchet brake. Appropriate roller-bearing trucks with machined metal wheelsets.



Each of two mineral red TTX flatcars and two yellow RTTX flatcars will be available packaged with a Z-Van trailer. The trailers will be decorated for Realco, Penn Central, The Rock, and MoPac. The trailers will have rubber tires, mud flaps, and wheeled or shoe-style landing gear per the prototype road being modeled. The trailers will also be available separately. Reservations for the trailers and the trailer-flatcar

**Athearn's** January 2023 production schedule includes N scale 89' Trailer

Each of two mineral red TTX flatcars and two yellow RTTX flatcars will be

combinations are due December 31, 2021.

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



**Bluford Shops** has released to dealers a new production run of N scale triple-bay hopper cars with offset sides. Road

names are Baltimore & Ohio, Burlington, Missouri Pacific, Canadian National, Grand Trunk Western, RI-The Rock, Union Railroad, Delaware & Hudson, Chicago North Western, Illinois Central Gulf, Chicago Great Western, and Southern Railway.



The N scale model gains some heft with a die-cast slope sheet and hopper center sill assembly. The sides, ends and hopper

doors are injection molded plastic.



Additional details include a correctly molded brake tank, valve and air lines; body mounted brake hose detail, body

mounted magnetically operating knuckle couplers, a removable coal load, and appropriate trucks with Fox Valley metal wheelsets. Multiple car numbers are available for each road name.



Bluford is accepting advance orders for a war emergency twin-bay composite hopper car. Availability of the N scale ready-to-run model is planned for the fourth quarter of 2022.



Construction of the composite hopper car will be similar to Bluford's triple-bay cars including a die cast underframe and plastic

body. Details including trucks and a removable load will also be similar.



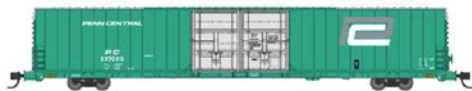
Road names will be Atlantic Coast Line, Baltimore & Ohio, Chicago, Burlington & Quincy; Clinchfield, Lehigh Valley, Louisville & Nashville, Monon, Nickel Plate Road, Santa Fe, Southern Railway, Virginian, and Pennsylvania Railroad.



Bluford Shops is also booking pre orders for another production run of its 86' Pullman-Standard auto parts boxcar with double plug doors. Availability is planned for the second half of 2022.



This new release will feature an improved draft gear design that accommodates Micro-Trains 1015 and compatible couplers and upgraded 70-ton roller-bearing trucks with Fox Valley metal wheels. Models in this run will have separate wire grab irons and etched-metal end platforms.



Road names will be Santa Fe, CP Rail, CSX, Conrail, Detroit, Toledo & Ironton; Grand Trunk Western, Norfolk Western, Norfolk Southern, Western Pacific, Chicago North Western, and Penn Central.

Future projects under way at Bluford Shops include another run of ICC bay window cabooses and an 8-panel twin-bay coal hopper. Info: [bluford-shops.com](http://bluford-shops.com)



R. Bale

## UP BIG BOY

Union Pacific's Big Boy is a simple articulated 4-8-8-4 steam locomotive built by the American Locomotive Company between 1941 and 1944. The initial group of 20 locomotives was delivered in 1941, followed by five more in 1944. The Big Boys were designed to eliminate the need for double heading on the UP mainline climb eastward from Ogden into the Wasatch Range with the ability to pull long freight trains at a sustained speed of 60 mph once past mountain grades. They more than met the goal and remained in service until 1959. Scheduled to be named Wasatch, the locomotive acquired its nickname after an unknown worker scrawled Big Boy in chalk on the front of No. 4000, then under construction at Alco. Specifications include 68" drivers, 23.75" x 32" cylinders, a weight of 762,000lbs, and an overall length of 85' (plus the tender). Peak horsepower of about 7,000hp is attained at 41 mph.



**Broadway Limited** is booking

advance orders through February for an N scale Union Pacific 4-8-8-4 Big Boy steam locomotive. The N scale model, which is scheduled for release in late 2022, will feature Paragon4 Sound for DC or DCC environments. The model will be available in the 1941 as-delivered paint scheme with a 25-C-100 coal tender, and in the similar 1944 scheme with a Wilson aftercooler and a 25-C-400 coal tender.

Big Boy locomotive No. 4014 will be available, with a Challenger excursion tender, painted in the standard Big Boy Tour finish as well as in the glossy Promontory Excursion paint scheme.





Boy locomotives No. 4023 and 4024 in a fantasy two-tone gray scheme.  
Info: [www.broadway-limited.com](http://www.broadway-limited.com)



**InterMountain Railway** plans to release a group of Fox Valley N scale bi-level Autoracks during the next 30 days. Road names on Autoracks mounted on TTX flatcars include Union Pacific, Kansas City Southern, Transportación Ferroviaria Mexicana, Conrail, Norfolk Southern, BNSF (New image small logo), Union Pacific, Southern Railway, and Western Pacific.



Autoracks with the same name on both the rack and the trailer include Grand Trunk Western, Providence & Worcester, Ferromex, BNSF (Brown circle cross logo), Canadian National, and CP Rail.



The ready to-run-models feature etched-metal see-through side panels, non-working brass ends, appropriate trucks with 33" machined metal wheelsets, and knuckle couplers.  
Info: [www.intermountain-railway.com](http://www.intermountain-railway.com)



**Jacksonville Terminal Company** has released eleven new paint schemes on 40' High-Cube corrugated containers: Florens, Hamburg Sud, MSC, MOL,

Broadway Limited will also offer Big

NileDutch, ONE (Cascade Gray), and ONE (Cherry Blossom) come in two-packs of containers with the same scheme, with CCL and CMA CGM, and Lloyd Triestino and Seaco/SeaFreight available in two-container mix packs.



In the Visionary Series, JTC is releasing a USMC Fleet Marine Forces Storage Container in Desert Sand. A 20' standard height container, it is being sold as a single unit. All JTC containers include their magnet connection system.



JTC is also releasing a new run of the popular NSC 17-post 53' well car in CP and TTX with availability in December.

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



**Kato USA's** June 2022 release of N scale triple Gunderson MAXI-IV well-cars combined with six 53' ribbed containers has been expanded with the announcement of four additional sets.



BNSF well-cars with the Swoosh logo will be available with a choice of six Florida East Coast containers or six Crowley Logistics containers.



Well-cars decorated for TTX with the new logo will be available with six Canadian National containers or six Canadian Pacific containers.  
Info: <http://katousa.com>





Leading the list of new N scale models from **Micro-Trains Line** is this 50' Western Pacific boxcar with sliding Youngstown doors.

The Route of the Feather scheme includes a bold DF indicating the car is equipped with an Evans DF loader for handling automobile parts.



This 50' Chesapeake & Ohio car wears the Chessie System scheme established after the merger of C&O, B&O and WM. The car has 8'

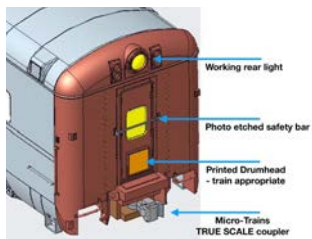
plug doors and has had its running board removed and ladders shortened.



This 39' single-dome tank car with arch bar trucks depicts a prototype built in 1920 for the W.J. McCahan Sugar Refining Co. of Philadelphia, PA.

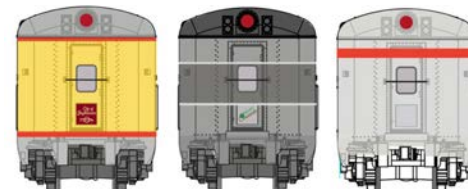


Completing our list of new N scale releases from Micro-Trains is an ex-Western Maryland twin-bay covered hopper that has been patched for CSXT. Micro-Trains is offering the 2970 cu. ft. car in a weathered paint scheme.  
Info: Contact a dealer.



**RailSmith Models** is tooling a blunt end for several Southern Pacific sleeper/observation cars. The N scale model will replicate the design Pullman developed in building observation cars for the Cascade and

Golden State. Southern Pacific converted five of its Plan 4140 sleepers following the identical P-S design.



Details on RailSmith's N scale blunt ends include operating rear and interior lights, photo-etched door safety bar, drumheads as appropriate to the prototype

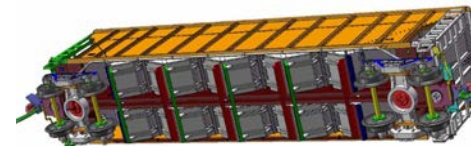
being modeled, and a Micro-Trains coupler. Models scheduled for release during the second quarter of 2022 include Southern Pacific's Cascade, City of Los Angeles, City of San Francisco, and pool-car silver and red scheme.

Info: [lowellsmith.net](http://lowellsmith.net)



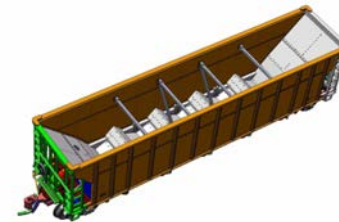
**Rapido** is developing an N scale AutoFlood III rapid discharge hopper car. The

model is based on an all-aluminum 4,200 cu. ft. prototype built with five discharge gates. Cars decorated for BNSF, CGFX, GLFX, GGPX, KPLX, PGNX, and UP/CMO will be available in 18 unique numbers for each road.



Notable features on Rapido's new N scale model include a heavy die-cast frame and floor with full interior rivet and K-member details, detailed end

cages including air and brake piping, detailed outlet gates, separately applied end cross-over platforms and uncoupling levers, and Barber S-2 100-ton trucks with machined metal wheelsets.



A removable coal load will be included with each model. Advance orders are being booked now. A release date is TBA.

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





Scale Trains has scheduled the release of a large group of N scale ET44 GEVO locomotives for November 2022. The mix includes both Operator series models and top-of-the-line Rivet Counter models.



Both series share the same body, motor and drive train, however, some of the labor-intensive surface detail and fine lettering are minimized on the Operator models.



Road names for Operator series ET44s will be Kansas City Southern, BNSF (Heritage III), CSX, Norfolk Southern, Canadian National, and Union Pacific.



Rivet Counter versions of the ET44 will be available decorated for Canadian National (Veterans scheme), CN-BC Rail, CN-Wisconsin Central, CN-Illinois Central, Union Pacific, Norfolk Southern, Kansas City Southern, CSX, BNSF (Heritage III), and CN-Elgin, Joliet & Eastern.



Both Rivet Counter and Operator models will be available for DC analog operation or with DCC and sound.

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

## STRUCTURES & SCENIC SUPPLIES



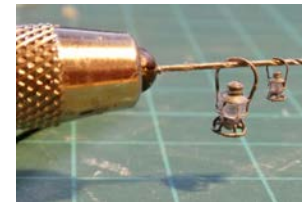
**The Electric Wallpaper Co.** has released The Costello Building, a new cardstock **Roomettes** kit that adds 3D interior details to Woodland Scenics HO scale Goodfellows Hall.



The Costello Building becomes a hardware store, thrift shop and office space. The Roomettes kit includes material for five laser-cut rooms, two storefront window displays, shelving, a store counter, desks, posters and exterior signs.

All Roomettes kits include LEDs with plugs that are compatible with lighting systems from Woodland Scenics Just-Plug, Model Train Technology, and NCE.

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



**miniprints** has introduced 3D printed Adlake Kero railway lanterns. The nicely detailed lanterns are 3D printed in clear resin. They come with a support attached for easy painting. According to the instructions, just paint the parts you want to appear metallic. The HO scale lanterns come in a 5-pack.

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



New 1:87 scale vehicles from **Oxford Diecast** include this black 1941 Lincoln Continental convertible with the top down covered by a tan boot.



Also available now is a 1958 Edsel Citation coupe in a turquoise over white paint job.



Oxford has also released a 1:87 scale model of a 1959 Pontiac Bonneville coupe featuring lots of chrome and a red interior.

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



**RSLaserkits** has released a new N scale structure, "Pryor Machine and Tool." Measuring 11 1/4" x 3", the laser-cut basswood structure features

loading docks on three sides. The roofing material is pre-colored and a laser-cut stencil for the sign is included. The building is suitable for a factory, warehouse, or freight house. Info: [www.rslaserkits.com](http://www.rslaserkits.com)



**Walthers Cornerstone** will begin the New Year with the release of N scale kits for two modern industrial buildings. Construction features a concrete block foundation with steel upper panels. The Transload Terminal version has a large end door for inside railcar loading/unloading.



The Warehouse model has outside railcar and truck docks. Both versions have four truck docks with weather bellows. The assembled HO

scale models have a footprint of 10-1/2" x 6-5/16".

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

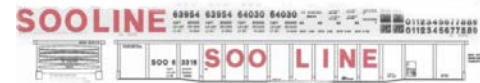
## NEW DECALS, SIGNS AND FINISHING PRODUCTS



New water slide decals from **Mask Island** include this Atlantic Coast Line 70-ton twin-bay covered hopper.



Mask Island has also released a decal lettering set for a Santa Fe 53' 91500 series flatcar.



A lettering set for Soo Line 53' white mill gondolas is now available from Mask

Island. Sufficient material is in each set to letter two models. All Mask Island decals mention in this report are for HO scale. Info: [www.maskislanddecals.com](http://www.maskislanddecals.com)



**National Scale Car** has released new HO scale decals

for NATX 8,000-gallon tank cars and A.E. Staley tank cars.



Reruns of popular decals expected in the near future include PRR X31's, B&O wagon top and SAL boxcars. Info:

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



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## ! BRIEFLY NOTED AT PRESS TIME ...

**Kato** has added Amtrak Phase VI and Dash 8 Phase III 50th Anniversary decorating schemes to the special run of HO scale GE P42 Genesis locomotives scheduled for release in March ...

**Kadee's** next PS-1 HO scale boxcar will be decorated for Western Pacific ...

**Sylvan Scale Models** is booking reservations for a CP Rail NSC 52' 8" boxcar with double plug doors. Delivery is planned for early 2022 contingent upon receipt of sufficient reservations. Send email to [mesagkits@gmail.com](mailto:mesagkits@gmail.com) for details ...

New HO scale items coming from **Walthers** in February include 85' Budd cars with fluted sides. The mix includes an RPO, baggage combine, two coaches, a diner, a dome car and a 10-6 sleeper. A new production run of Walthers Mainline F7A and B units is set for release next June, to be followed in late summer by an all-new Trinity 25,000 gallon tank car. ■



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# SELECTED EVENTS



Model Railroad Hobbyist | December 2021

## DECEMBER

***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/NGG](https://groups.io/g/NGG)



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

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**AROUND THE USA, IN-PERSON**, Various dates.  
ScaleTrains.com Road Trip.  
Info: [www.scalettrains.com/roadtrip](http://www.scalettrains.com/roadtrip)

## December 2021 - January 2022

**CALIFORNIA, SACRAMENTO**, January 8-9, 2022. Great Train Show. Cal Expo.  
Info: [www.trainshow.com](http://www.trainshow.com)

**ILLINOIS, WHEATON**, January 2, 2022. Great Midwest Train Show. Dupage County Fairgrounds.  
Info: [www.trainshow.com](http://www.trainshow.com)

**MASSACHUSETTS, WEST SPRINGFIELD**, January 29-30, 2022. Railroad Hobby Show sponsored by the Amherst Railway Society. Eastern States Exposition Fairgrounds, 1305 Memorial Avenue.  
Info: [www.railroadhobbyshow.com](http://www.railroadhobbyshow.com)

**MISSOURI, ST. CHARLES**, January 29-30, 2022. Great Train Show. Saint Charles Convention Center.  
Info: [www.trainshow.com](http://www.trainshow.com)

**OHIO, COLUMBUS**, January 15-16, 2022. Great Train Show. Ohio Expo Center.  
Info: [www.trainshow.com](http://www.trainshow.com)

**PENNSYLVANIA, OAKS**, January 8-9, 2022. Greenberg's Great Train & Toy Show, Greater Philadelphia Expo Center.  
Info: [www.trainshow.com](http://www.trainshow.com)

**PENNSYLVANIA, ROCHESTER**, December 17-18, 26, 2021. 6th Annual Holiday Model Railroad Open House, sponsored by the Rochester Area Heritage Society. 350 Adams St.  
Info: [www.facebook.com/events/165159615767212](https://www.facebook.com/events/165159615767212)

**TEXAS, PLANO (Dallas Area)**, January 15-16, 2022. Dallas Area Train Show, sponsored by the North Texas Council of Railroad Clubs. Plano Centre, 2000 East Spring Creek Parkway.  
Info: [www.dfwtainshows.com](http://www.dfwtainshows.com)

**VIRGINIA, CHANTILLY**, December 18-19, 2021. Greenberg's Train & Toy Show, Dulles Expo Center.  
Info: [www.trainshow.com](http://www.trainshow.com)

**VIRGINIA, RICHMOND**, January 22-23, 2022. Greenberg's Great Train & Toy Show. Richmond Raceway Complex.  
Info: [www.trainshow.com](http://www.trainshow.com)

**VIRGINIA, VIRGINIA BEACH**, January 15-16, 2022. Greenberg's Great Train & Toy Show. Virginia Beach Convention Center.  
Info: [www.trainshow.com](http://www.trainshow.com)

**WASHINGTON, PUYALLUP**, January 22-23, 2022. Great Train Show. Washington State Fairgrounds.  
Info: [www.trainshow.com](http://www.trainshow.com)

## 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)

**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)

**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)

**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)



**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)

**MASSACHUSETTS, ORLEANS**, December 18th, 2021, Nauset Model Railroad Club Open House. Rear of Hiltop Plaza, 180 Route 6A. Info: [www.nausetmodelrrclub.com](http://www.nausetmodelrrclub.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)

**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, 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)

**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)

**PENNSYLVANIA, MALVERN**, March 24-27, 2022, Valley Forge Railroad Prototype Modelers 2022. Desmond Malvern Conference Center. Info: [www.rpmvalleyforge.com](http://www.rpmvalleyforge.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)

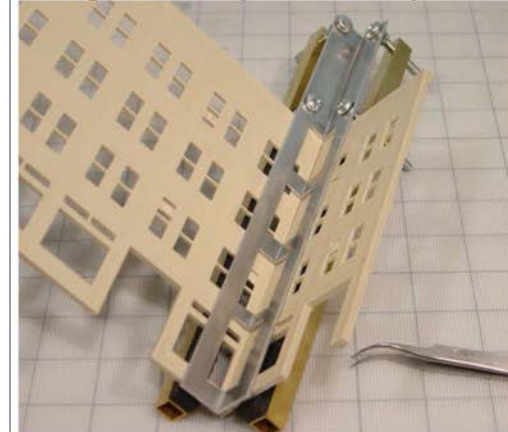
**TEXAS, PASADENA (Houston Area)**, February 12, 2022, The Greater Houston Train Show, presented by the San Jacinto Model Railroad Club. Pasadena Convention Center, 7902 Fairmount Parkway. Info: [sanjacmodeltrains.org](http://sanjacmodeltrains.org)

**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)

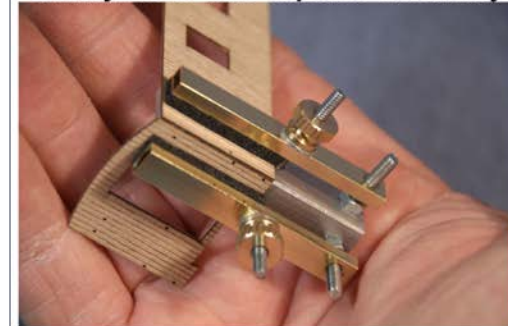
**WISCONSIN, MADISON**, February 19-20, 2022. Mad City Model Railroad Show and Sale. Exhibition Hall, Alliant Energy Center, 1919 Alliant Energy Center Way. Info: [www.nmra-scwd.org](http://www.nmra-scwd.org) ■

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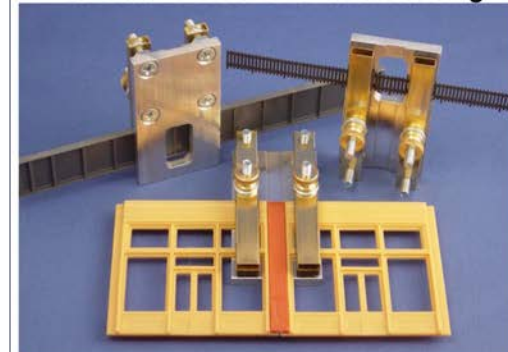
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## Rick Balassaitis rebuilds a 95% complete layout ...



### Common CVs

- V1: 1: Short address
- V2: 2: Value
- V3: Acceleration
- V4: Deceleration
- V5: Vhigh
- V6: Vmid
- V7: Vbig velocity
- V8: Vbig (flat below)
- V9: Total Power
- V10: BEHF Cutoff
- V11: PwrUp Limit
- V12: Alternate mode P8-V12 FL
- V15-16: Deceleration lock
- V17-18: Long address
- V21: Consist address
- V22: Consist active P8-VL FL
- V23: Acceleration adjust
- V24: Deceleration adjust
- V26: Deceleration configuration
- V29: Error Indicator
- V36: Kick start
- V37: Motor warmup
- V38: Speed table
- V46: Reverse time
- V155-156: User ID

# DDC Shortcuts Card v1.4

## Model Railroad Hobbyist (mrhmag.com) - Jan 2022 bonus

Reading decoders to factory settings (ignoring programming tracks)

- Set CV 8 to 8: DigitalX, ESU/LokSound, SoundTraxx Tsunami
- Set CV 8 to 32: Lenz
- Set CV 28 to 2: NCE, SoundTraxx DCS, TCS
- Set CV 125 to 1: MRC
- Hardware reset only: SPI (see decoder manual)

Then remove loc on track and push on track (or power cycle the layout).

### LOCO DENSITY MOVE?

Use Dip Mode (programming on the track)

- Set CV3 to 2 and 3 and try again
- Set CV2 to 2 and CV1 to value 3-9
- Single throttle to value in CV1
- Still doesn't work? Then...
- Still doesn't work? Then...
- Still doesn't work? Then...
- Still doesn't work? Then...

### Accessory decoder (OFF-normal or accessory reserved (not used))

Addressing digits (off#2 digit **ON#4**-digit)

Speed table (off#none omnium speed table)

Railcom (ignored by DCC hardware)

**DC sensing (OFF-normal omnium on DC)**

Speed steps (off#1-4 **ON#2/18**)

Reverse direction (OFF-normal or reverse)

### GETTING OFF-NORMAL TO SPEED PERFORMANCE

Time and be the best decoder for the speed! **Warning!**

Locomotive and brake in your loc. Do the following while the loc is still warm:

- Turn the speed step table in CV 8 to 1 with CV 8 to 25 (CV28)
- Put the decoder in 2F182 mode and speed on 18 (6 in CV28). Set CV1, CV4, CV8 to zero.
- Turn the loco, then debouncing the slowest speed step which it will keep running.
- Put the speed step table in Vattin (CV2).
- Turn the loco to be speed table CV4.
- Turn the throttle to speed step 1.
- Play with loco until you get the loco to move consistently at speed step 1. Tweak CV4 if needed.
- Turn the loco to be speed table CV2.
- Set CV 8 to desired mid-speed (45-64 decimal)
- Now try acceleration, deceleration, longer compensation, dithering, or BEHF as desired.

### CV Bit Mapping

120	64	32	16	8
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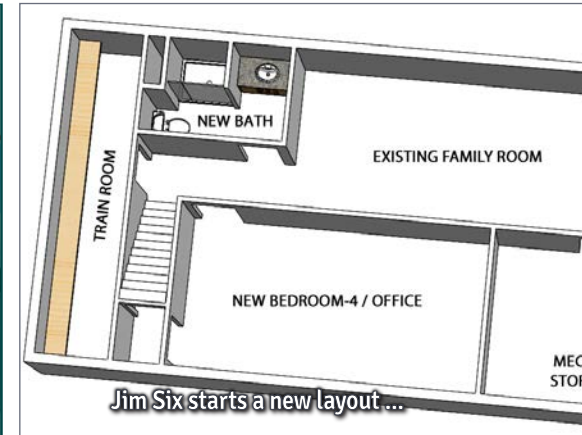
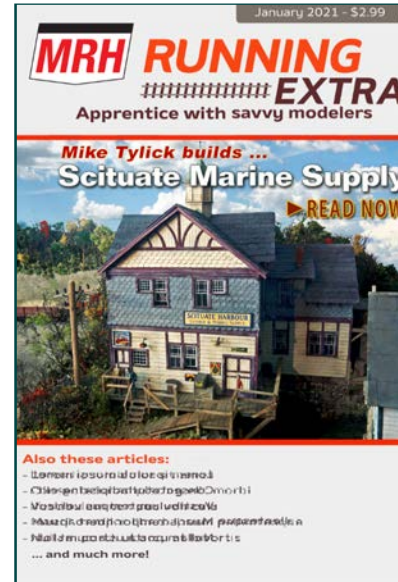
CV 29	64	32	16	8
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### Manufacturer IDs (CV 8)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	
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