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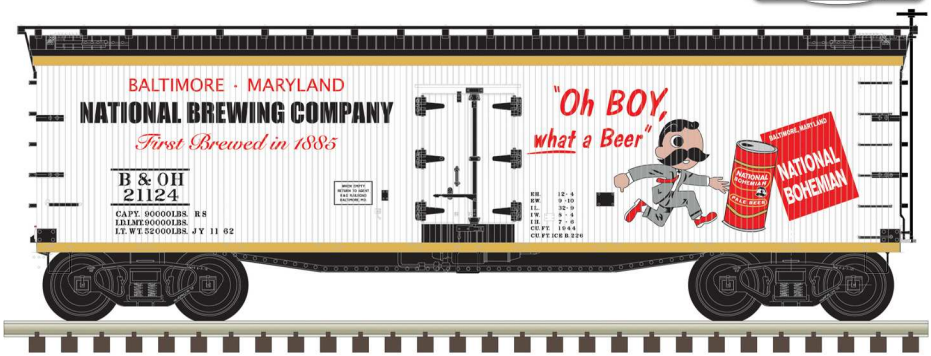

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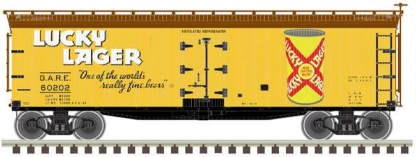

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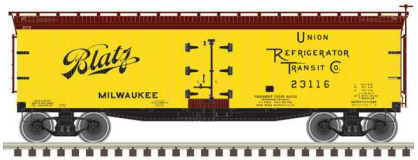

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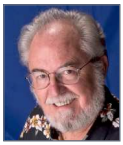

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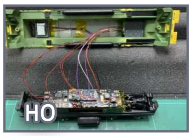

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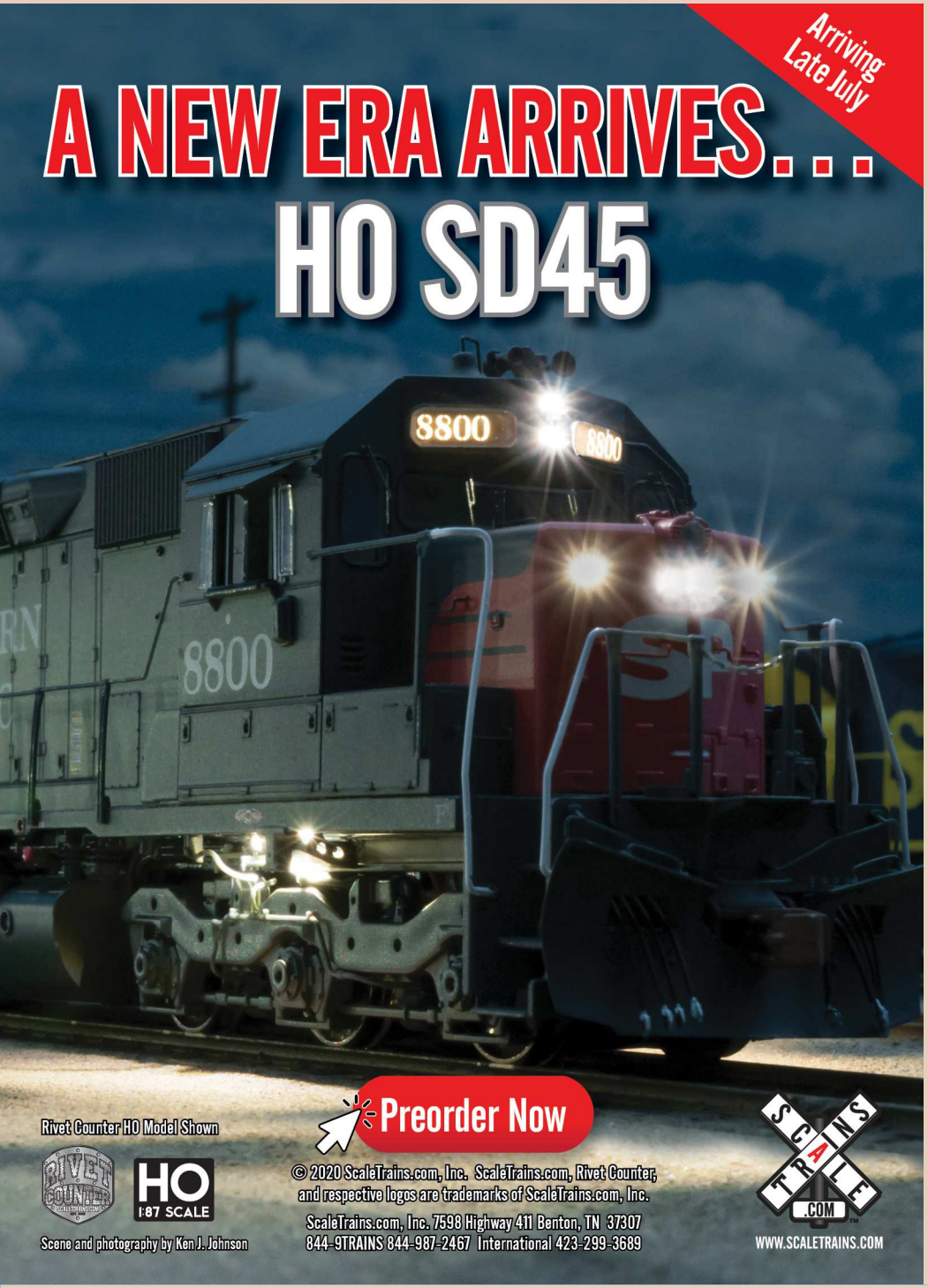

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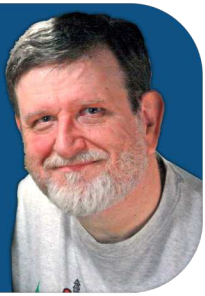

JOE FUGATE *MRH* CHANGES AND A LOOK AHEAD AT 2021...

RATE THIS ARTICLE

OUR NEW SIMPLIFIED *MRH* MAGAZINE DEBUTS WITH this issue. Let me explain what it is and how it works. I do hope you can see the advantage for both you and us with this change.

The new "smarter" PDF formatting

We have made many changes to both the back end process of producing the magazine and to the final deliverable PDF. The main big change on the back end for us is that we're moving from Adobe to Affinity software for the magazine production.

1. The new Adaptive Edition has "smarts" built into it. More robust PDF readers detect the extra coding smarts and try to display the magazine either portrait or landscape (two facing pages), depending on screen width.

For those who can't get the adaptive to work with their favorite PDF reader, we also provide a "Wide Edition" that simply has the two facing pages hard-coded in the PDF. But both are now based on a single portrait master magazine.

We not only get to give Adobe's bloated software the boot, but we also have dropped the monthly payment to Adobe to use their "Creative Cloud" software suite.

Affinity's Publisher, Designer, and Photo programs do most of the same thing Adobe's aging suite does, but with a newer, more modern streamlined interface. And the real clincher is you buy a perpetual license to the Affinity software, rather than rent the software for a monthly fee.

In these tough times, we've had to do a lot of belt tightening to cut costs every which way we can – and this change helps us save *a lot* on our back-end software costs.

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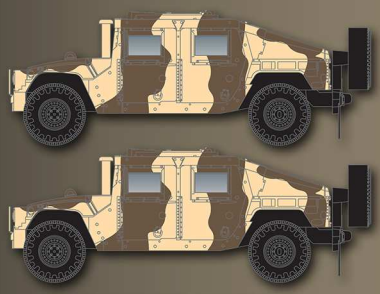

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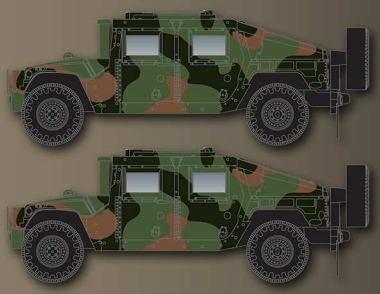

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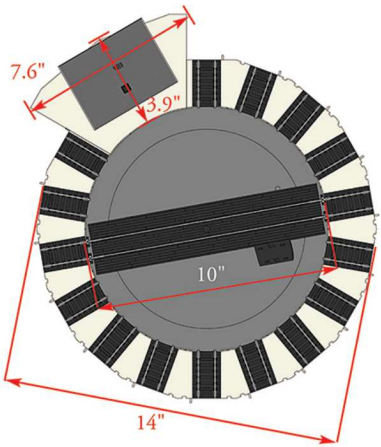

(turntable can be used with smaller On30 engines)

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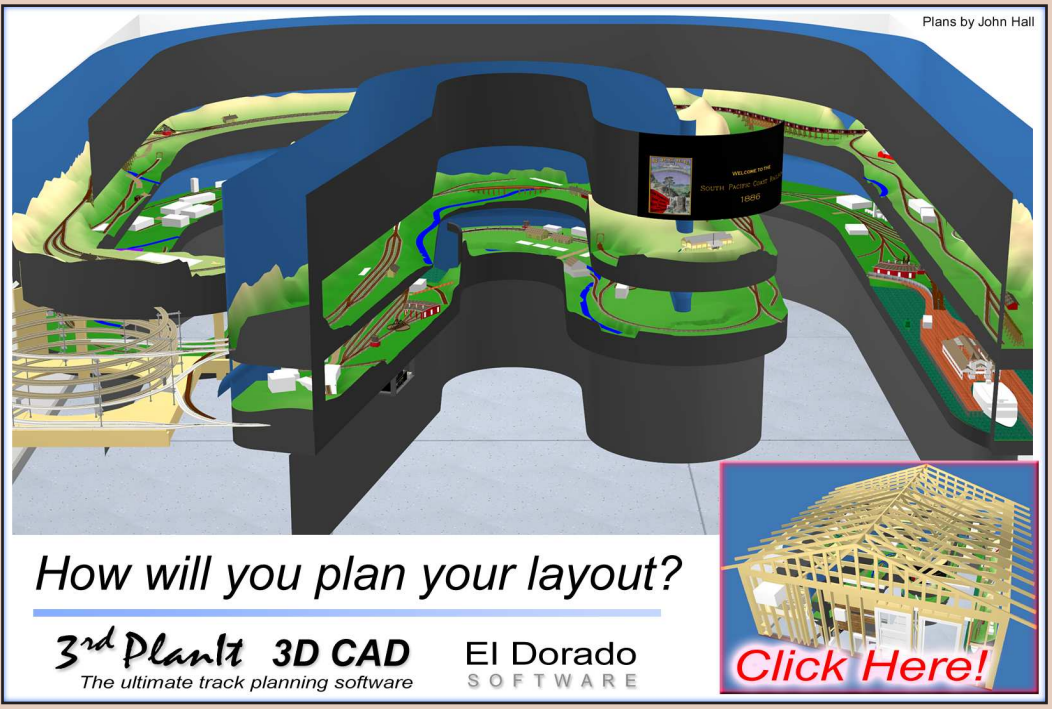

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The new PDF versions: Adaptive and Wide

The new recommended version of *MRH* is the Adaptive Edition. What makes this version so nice is a robust PDF reader will adapt the PDF to the screen width.

For example, if you're reading the Adaptive Edition on a tablet and holding it the wide way (landscape), the PDF reader will show two facing pages similar to how the old landscape edition looked.

But if you turn your tablet the tall way (portrait), then the PDF reader will adapt and show only a single portrait page. Oriented this way, the single portrait page will be larger, making it easier to read. But if you reach a page with a layout plan or a nice wide photo, just turn your device to landscape

BY POPULAR REQUEST

photo by: Gordon Lloyd Jr., Paul Wester Collection

Tri-clops Railfan ▶ Athearn

Thanks Athearn for yet ANOTHER run of the 2-window SD60Ms. What would be REALLY cool would be the 3-window Tri-clops versions. They're good for more than 3 railroads now. If we could get these in Genesis that would be grreaaat 👌👍🤞👏👏👏🤙😛😆😍

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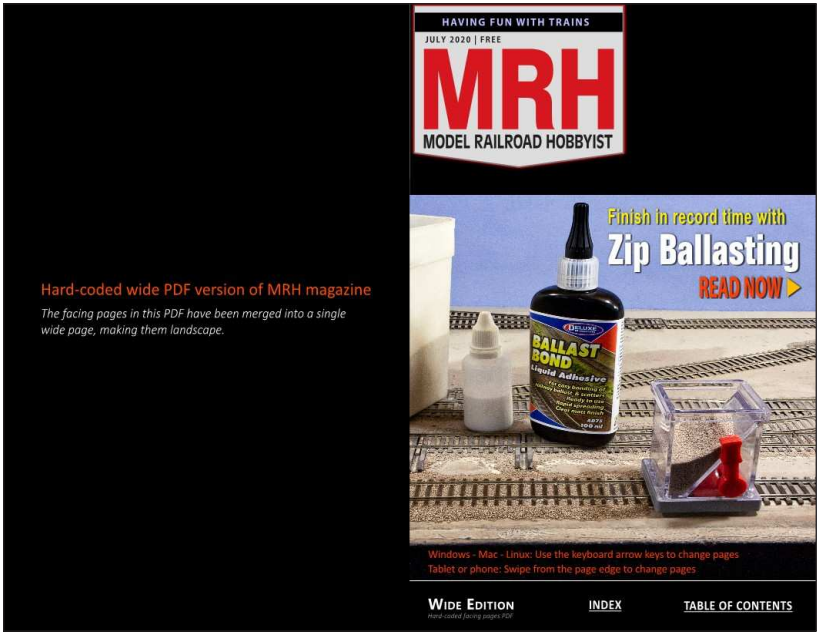
and voila! Now you can view the two page spread in all its glory. Nice!

On mobile devices, the best PDF reader app we've found that gives this behavior is Sidebooks (*not* Adobe Reader). You can get Sidebooks for free on the Apple App Store and on the Android Google Play store. Did I mention the app is free?

On PCs, Macs, and Linux desktop or laptop computers, the best free PDF reader is still Adobe Reader. But on mobile devices, get the Sidebooks App instead, Adobe Reader on mobile devices is badly hobbled – if I was Adobe, I'd be hanging my head in shame – Adobe Reader mobile is a very poor app.

If you aren't willing to use the apps I recommend above, then you may find your "go to" PDF reader just doesn't cut the mustard.



2.The Wide Edition is virtually identical to the old landscape edition. However, the cover is now always the portrait cover.

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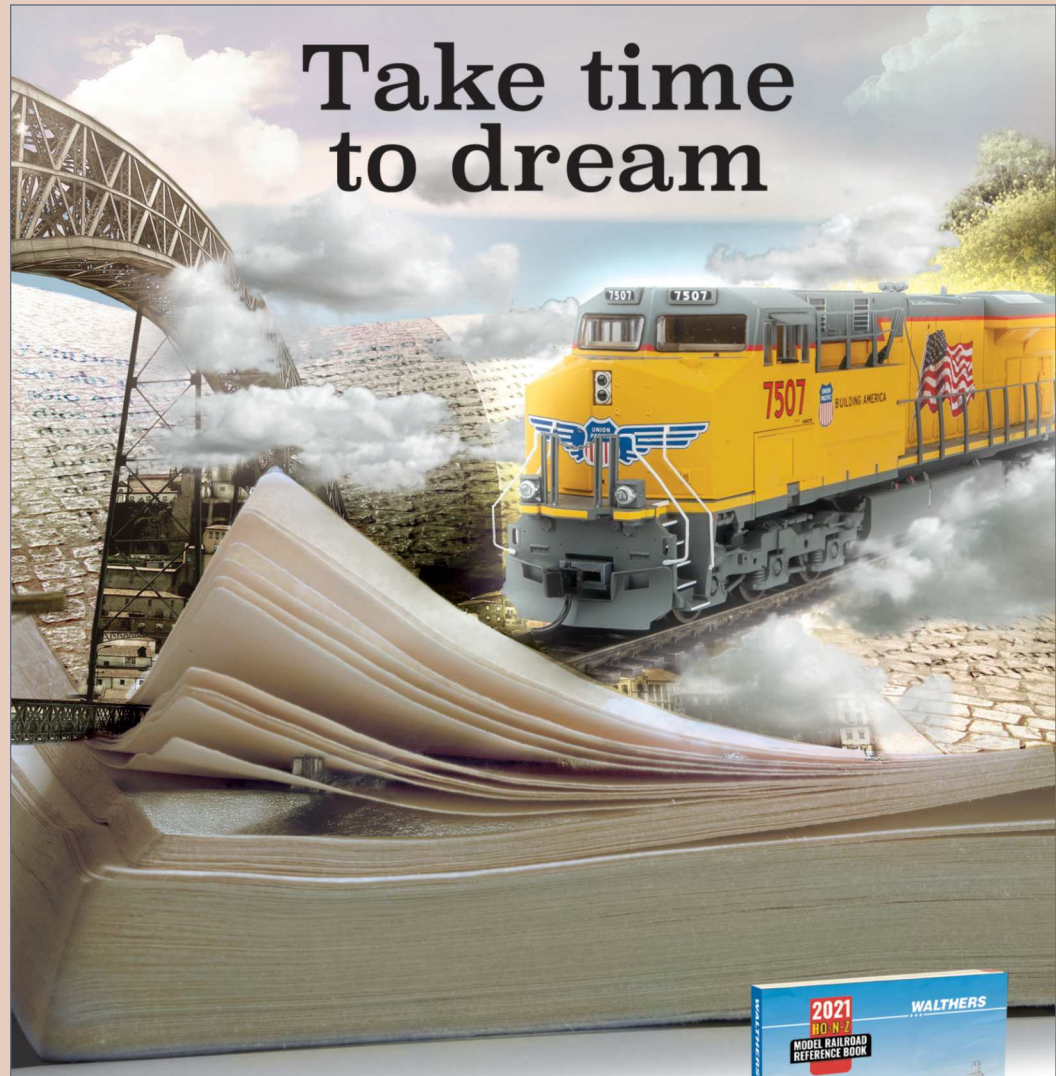
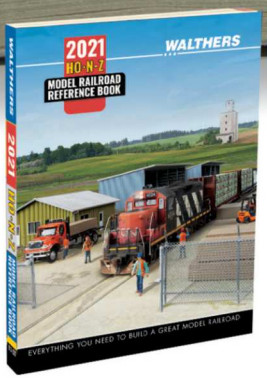
Take time to dream



Dreamingup your next big project can be exciting, and *Walthers 2021Model Railroad ReferenceBook* will help your imagination soar. When you're ready to come down from the clouds and belly up to the workbench, we're here for you too, with thousandsof products to help you build a great model railroad.



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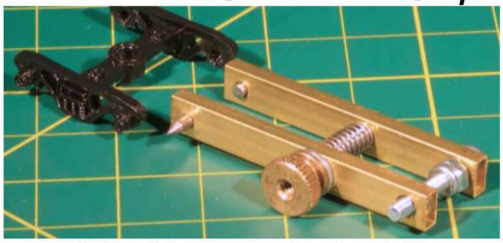

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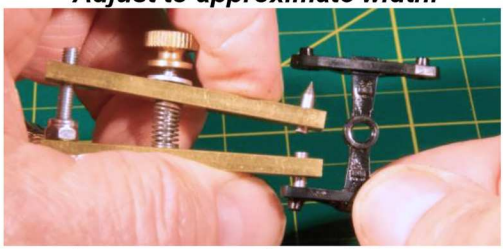
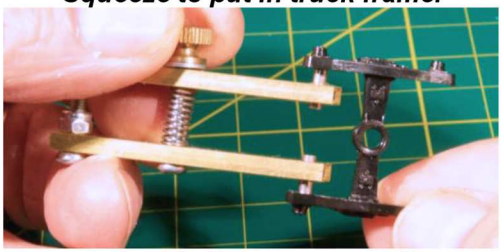


Squeeze to put in truck frame.



Adjust Caliper to proper fit.

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In that case, we also produce the Wide Edition where we hard-stitch the two facing pages together in the PDF.

Since we're now standardizing on a single master format that uses portrait pages, we're only making the portrait cover.

That means, the new "landscape look alike" PDF has a portrait cover [2]. Otherwise, the rest of the Wide Edition magazine should look indentical to the beloved landscape edition.

We see the advantages of this change as two-fold:

1. You now have a smart 21st century PDF that adapts to the screen size. Very handy, especially if you have a tablet, smartphone, or a Windows Surface laptop.
2. We now have a single portrait-based master throughout the entire magazine production process, saving us a couple days or more each month on the magazine production process.

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We had to completely redo all our magazine pages in Affinity Publisher this month, which took us extra time. However, that's a time-and-effort cost we only need to do once and we're now ready to rock and roll going forward!

Looking ahead at 2021

It's no secret our society is experiencing major upheaval from the global pandemic and from tough social issues. Will there be a second wave of the pandemic this winter? Who knows.

And this being an election year, what lies ahead come November and beyond into 2021? How will things play out in cities that actually do defund the police?

For this reason, we have decided to sit out 2021. We're not going to any shows, nor will we be travelling to layouts or having guests come in studio for TrainMasters TV.

In short, we're just going to wait things out until we can see what the new normal looks like. We don't believe that will become clear until we get well into 2021.

In the meantime, we'll be staying close to home here at the *MRH* offices, producing lots of fun magazines, books, and videos on this hobby we love.

Thanks to the internet, we can all stay connected and talk about *having fun with trains!* ☑

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Last issue's ratings

The three top-rated articles in the June 2020 issue of *Model Railroad Hobbyist* are:

4.7 Make your own StayAlive

4.7 June 2020 news

4.5 The K10 hobbyshop layout

Issue overall: **4.2**

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

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Model Railroad Hobbyist | July 2020

Compiled by JOE FUGATE

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N scale shelf layout

MRH forum member **scroteau** maintains a running video blog of his shelf layout, the N Scale Midland & Dorchester Railroad. In the video linked to this particular thread, he talks about adding a photo backdrop to the scene above. Also scroteau discusses his brick freight terminal building and the process he used to paint and weather the building.

View the full thread on the MRH website

▶ *MRH'S* MONTHLY GREAT MODELER POSTS

1, 2. Peter Soulikias embarked on a project to renovate this old brass 0-8-0 switcher, and he chronicles the process on the *MRH* forum.

Redoing a brass 0-8-0

MRH forum member **Deemiorgos** *(Peter Soulikias)* has a thread discussing his renovation of this old brass 0-8-0. Peter cleaned it up, lubed it, weathered it, as well as painted the rods and the rims of the drivers.

Follow Peter's progress on the *MRH* website thread link below.

View the full thread on the MRH website

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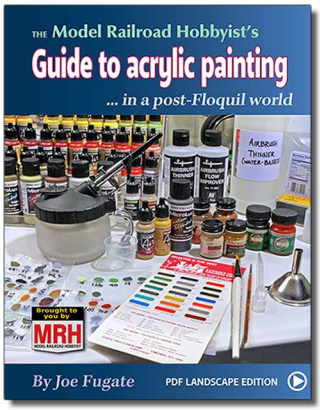

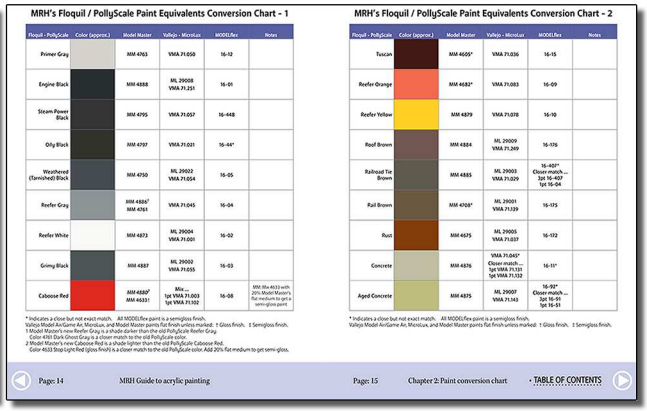

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3, 4. These scenes show Jeff Bulman's excellent modeling, illustrating how a small layout can look very nice indeed.

12x9 HO Aberdeen Carolina and Western

Forum member **JeffBulman** posted photos of his small HO layout. We have to say, this looks like one very nicely done layout! Jeff says about his layout:

"I started it in July 2018 and it is mostly complete. I am modeling the ACW Railway in the modern era. It is a 12 by 9, point-to-point design with a peninsula. Now the weathering and detailing will start! Control is Digitrax , it is set at 53" height."

To see all the photos Jeff posted, use the button below.

View the full thread on the *MRH* website

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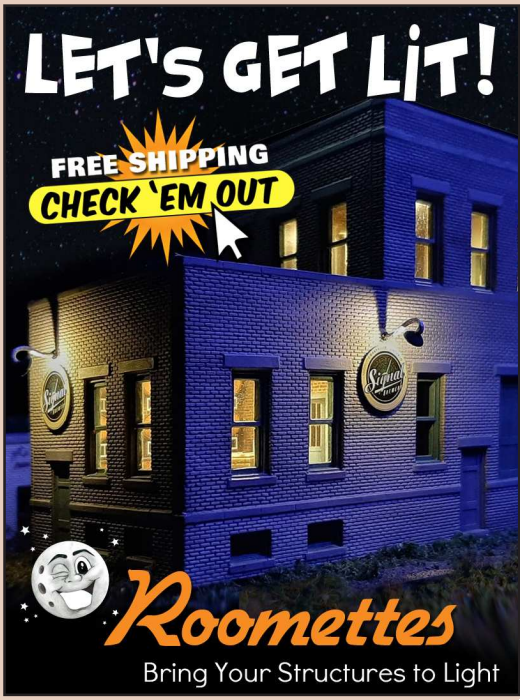

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5. As Chris Adams develops this scene on his layout, he's studying the prototype and trying to get something that looks "right." Note all the prototype photos taped along the fascia for refrence.

Backed up at the Backdrop

MRH forum member **Chris Adams** shares his struggle and mental block dealing with the backdrop in an area on his layout in this thread on the *MRH* website.

Note the photos on the fascia Chris is using to get some sense of the right look and feel of the area.

Chris relates, however, that so far he is thoroughly stumped. He's looking for suggestions to get him past this roadblock.

Visit the *MRH* website post any suggestions you have as Chris continues to ponder this problem!

View the full thread on the *MRH* website

Latest *MRH* "Weekly photo fun" thread

As of this writing, here's a couple interesting photos from the latest *MRH* Weekly photo fun thread. Check it out!

View the full thread on the *MRH* website

4. *MRH* forum members **mevans** and **rcgrabbag** posted these photos on the latest new MRH weekly photo fun thread. Visit this link to view all the great photos on this thread.

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WHAT'S NEAT column

Model Railroad Hobbyist | July 2020

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KEN PATTERSON'S COLUMN THIS MONTH ...

- Using the right soldering tool can improve the quality of your soldering
- Soldering wiring, track, and various models
- Repairing a damaged $5000 1/24th scale brass steam locomotive ...

WHAT'S NEAT!
MODEL RAILROADING
all about
Soldering
MRH July 2020 show

▶ PHOTOS AND VIDEO OF SUPERB MODELS

THIS MONTH KEN DEMONSTRATES SEVERAL SOLDERING TOOLS, including soldering track joiners, wire feeders, electronics, and models. He also shows how to use a resistance soldering station to repair both a brass locomotive and a light tower.

Ken describes his soldering tools

1. In this month's What's Neat, Ken Patterson demonstrates several soldering tools and their use in model railroading. From right to left in this photo are two pencil-type adjustable-temperature soldering irons with digital readouts and assorted screw-on tips, a PBL resistance-soldering station, a combination pencil iron/air soldering station, and a switch selectable 20/40-watt pencil iron station. In front is a Weller soldering gun, which Ken describes as "your old grandpa's handgun."

2. Shown here are some of Ken's common soldering supplies, including 60/40 rosin core solder on the spool, rosin flux paste in the plastic tub, de-soldering braid, a bottle of PBL liquid acid flux, and Micro Engineering metal darkener. Acid flux cleans brass better and faster than rosin flux, but should never be used for electrical soldering and must be cleaned off the joints you use it on. Otherwise the acid will slowly eat through the joint, causing it to eventually fail.

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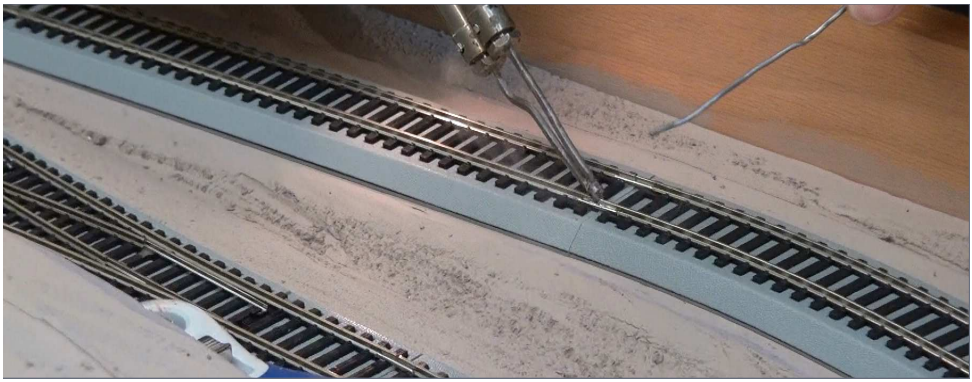

3. Ken shows that with a little care and practice, you can use a soldering gun to solder track without melting the surrounding ties. The gun has two trigger settings, with 100 watts on the first click and 140 watts on the second.

4. Ken is using a handheld soldering iron set to 650 degrees with a knife-type tip to solder rail joiners on code 70 weathered track. Before soldering, the rail is cleaned with a wire brush until it shines. Ken is using rosin core solder and holds the side of the blade tip to the side of the rail. In two or three seconds, the solder flows into the rail joiner.

5. Using a simple pencil tip soldering iron, Ken solders a 22-gauge wire for block switches. He tins the wires with rosin core solder, and then touches the wires together and applies heat to solder them together permanently.

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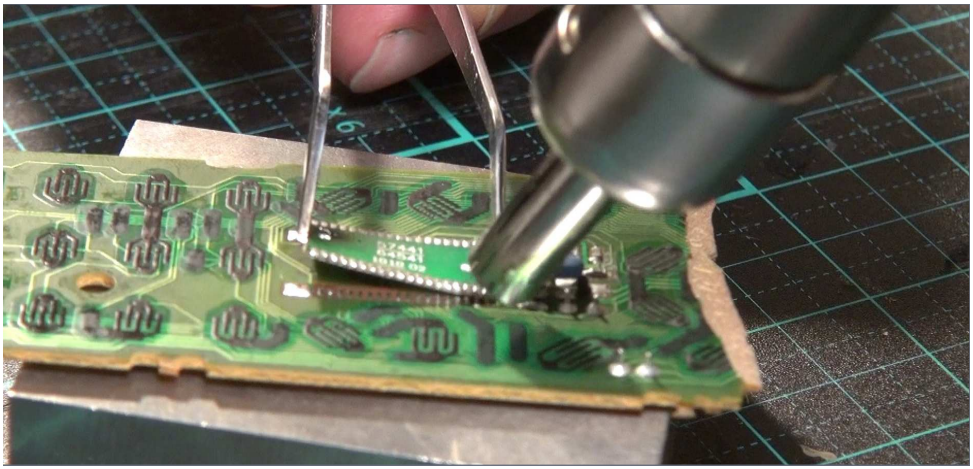

6. Ken removes a computer chip from a circuit board with the hot air soldering rig. The air temperature is set to 700 degrees with a quarter-inch diameter nozzle. It heats the solder on the board evenly, allowing the user to pull the chip off with tweezers. The heat gun comes with various flat and round nozzles for different applications.

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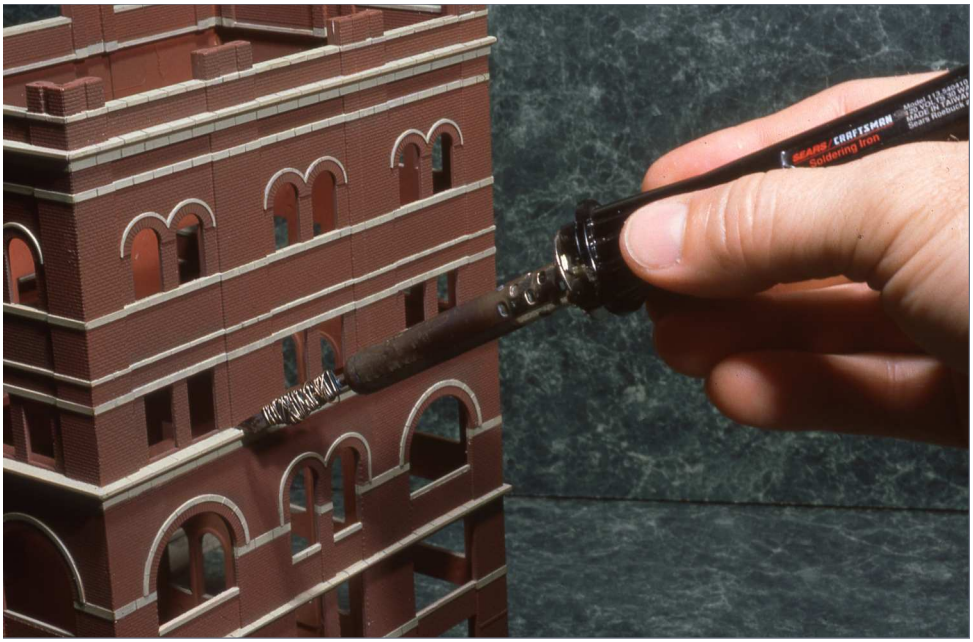

7. An additional use for a soldering iron is as a hot knife. Here Ken has attached a hobby knife blade to the soldering iron by wrapping wire around them. He uses it to melt lines into plastic kits, such as forming the mortar joints in the decorative stonework seen here.

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Resistance soldering methods

8. Resistance soldering simplifies making models from brass stock, pre-etched kits, or brass locomotive repair and construction. With his 5-setting adjustable PBL soldering rig, Ken can solder the finest small parts and heavy brass stock. Resistance soldering uses an electrical current between a grounding wire and a carbon cathode, turned on by a foot switch. It allows the user to precisely place a great deal of heat instantly, soldering the joint without softening other nearby solder joints or melting nearby plastic.

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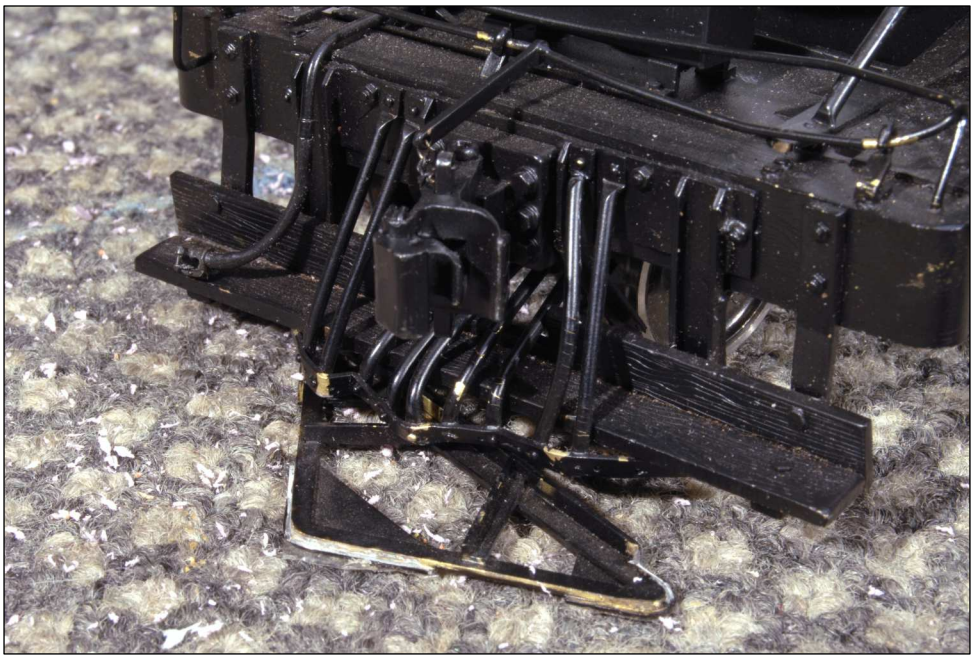
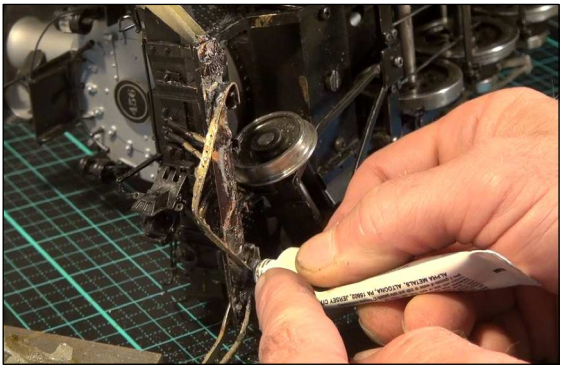


9. A $5000 1/24th scale brass K-27 had its pilot smashed in shipping. Ken will show how to make this look as good as new using resistance soldering.



10. Because brass is such a soft metal, it is easy to bend the pilot back into shape. Here Ken is applying plumbers paste solder to the reshaped pilot on the model.

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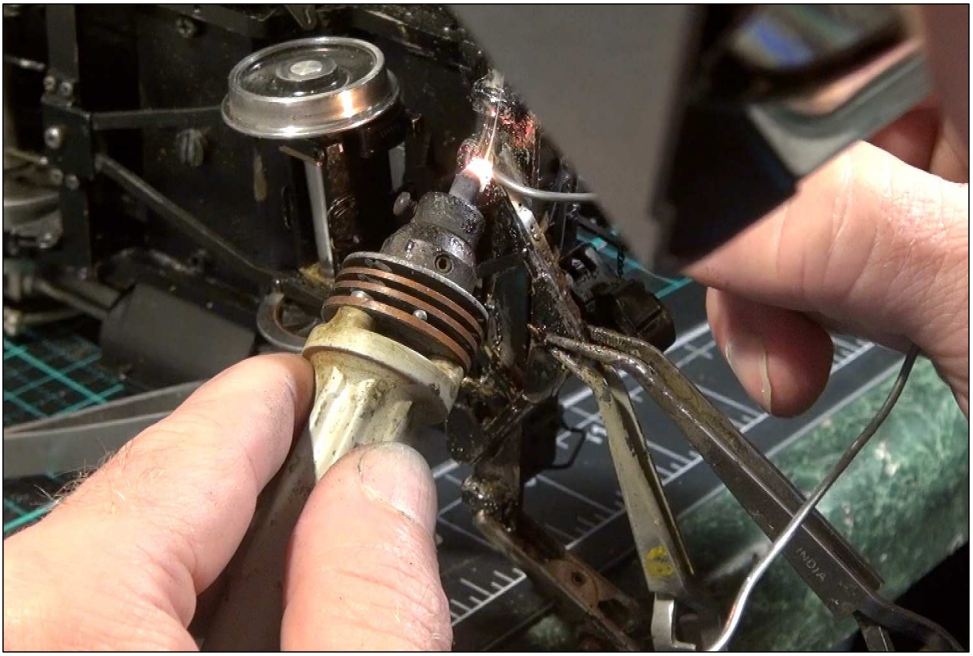

11. After brushing on PBL liquid acid flux, Ken uses tweezers to hold the parts together as he clamps the grounding clip to the model and touches the carbon probe to spots where the parts join together. The carbon tip glows white as it instantly melts the solder for a permanent bond.

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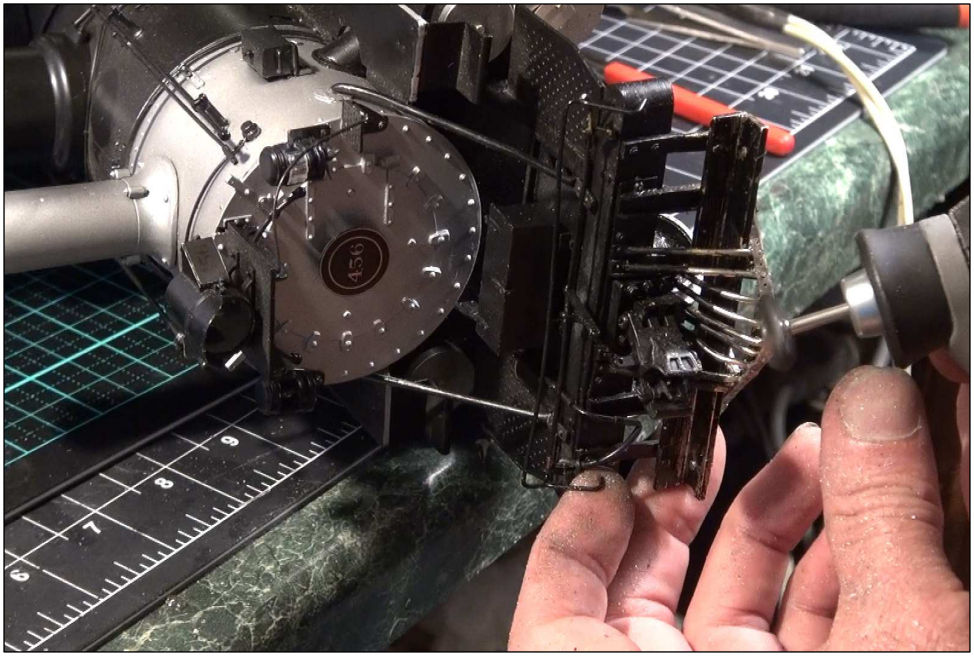

12. Using a wire brush attached to a rotary tool, Ken cleans up the newly solder joints, smoothing out the solder for a factory new appearance. He wiped down the brass areas to clean off any remaining acid flux residue before airbrushing the model black.

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Other uses for a resistance solderer

13. Here Ken solders jumper wires to his code 250 garden railway track with rosin core solder and his resistance soldering machine. Because of the mass of metal in the track, trying to heat it all up with a normal soldering iron would take a very long time and give the heat time to damage the plastic ties.

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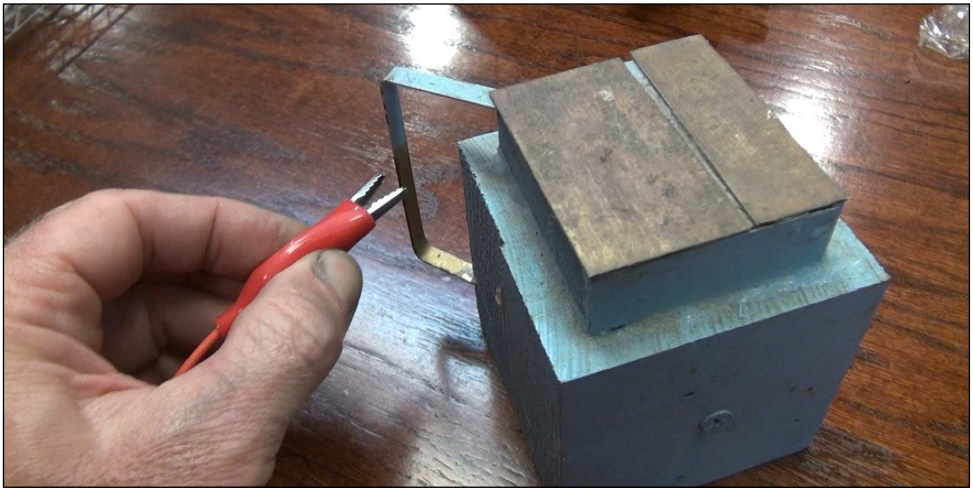
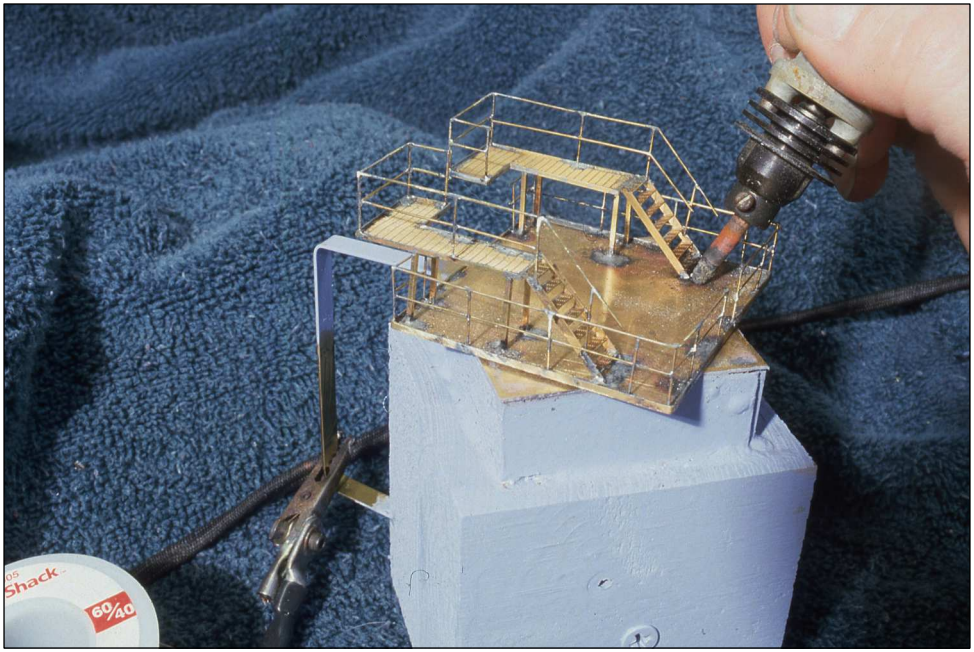


14. To assist in brass construction, Ken constructed a brass base, using a block of wood and flat brass stock. Measuring about three inches square, the brass handle provides a convenient place to clip the grounding wire, and the base provides conductivity to the model and carbon tip.

15. Ken scratchbuilt this tugboat, using photos to guide him. The walls are Plexiglas and the base is styrene. All the handrails, steps, and roof details were built from brass stock.



16. Here Ken uses his brass base to assemble the handrails and steps for the tugboat model. Ken used liquid solder paste and the PBL resistance solder system's lowest setting to avoid burning through the fine handrail parts. It is important to have the carbon probe in solid contact with the brass structure before switching on the current with the footswitch. Otherwise, if the current is already turned on, it will arc from the thin brass wire to the carbon element as it gets close, vaporizing the brass wire.

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17. Ken built the roof of the tugboat cab on top of the brass base, using prototype photos to create and locate the spotlights, handrails, and antennas. The photos were also used to form the curved edges of the roof. The brass base kept the entire assembly grounded during the construction process.

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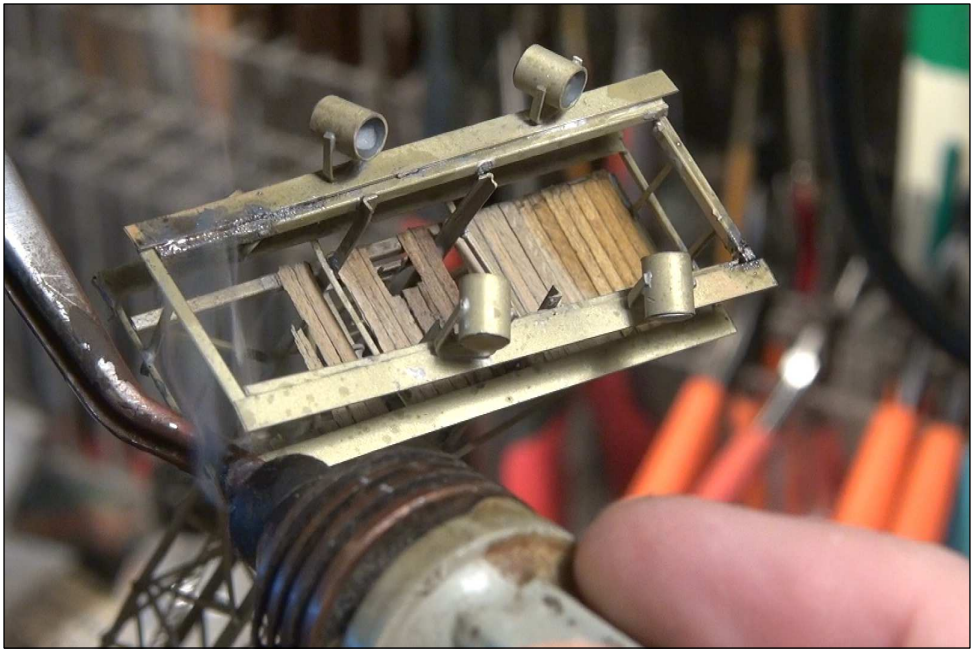

18. At the end of the video, Ken shows how he repaired a scratchbuilt brass switchyard light tower. The entire structure was built from fine brass angle stock and measures a scale 110 feet tall. The lights were cut from brass tube and everything was soldered together using resistance soldering before being airbrushed silver.

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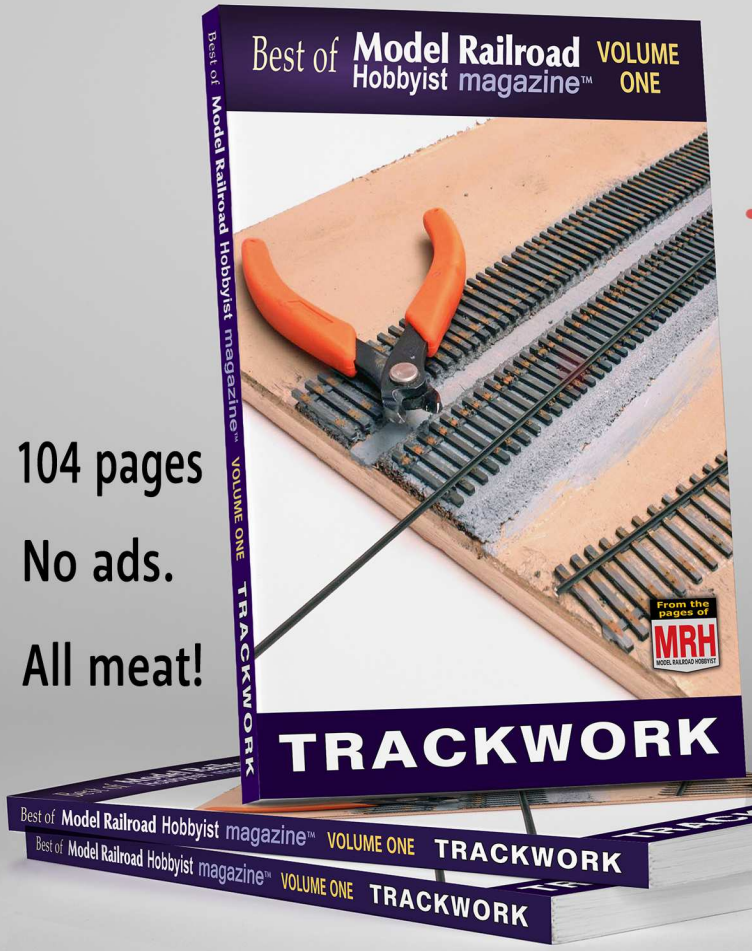

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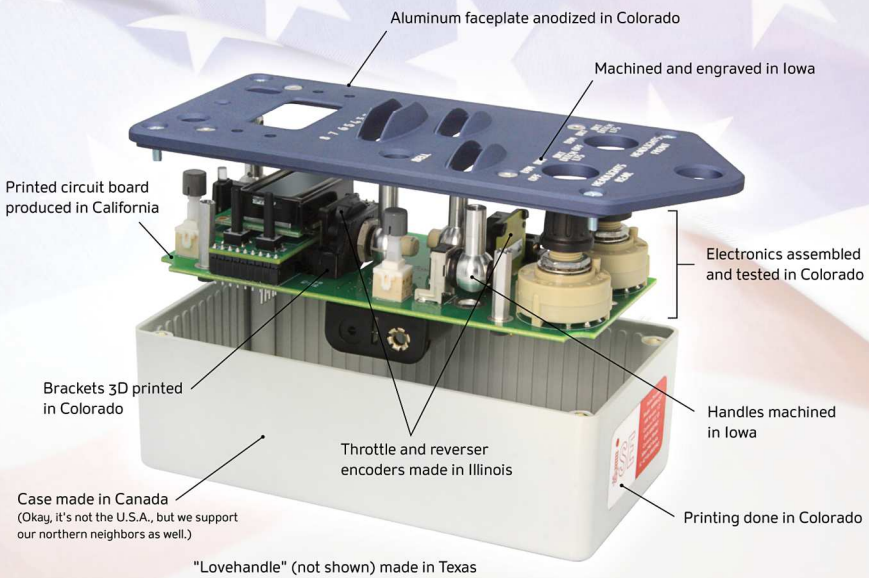

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Upgrade an Athearn switcher

Electrical Impulses

Model Railroad Hobbyist | July 2020

Jason Miller upgrades an Athearn switcher with ESU Loksound, LED lights, and stay-alive ...

Jason has been working on his HO layout for the past eight years. It's based on the Reading Railroad from the early 70s into the Conrail merger era (1976).

Jason put the layout in a standalone 36' x 13' (11m x 4m) shed in Victoria, Australia. He uses DCC and plans on installing ESU Loksound decoders into all of his locos to take full advantage of the ProtoThrottle for his operations.

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A DEFINING MOMENT FOR ME CAME WHEN VISITING MY FIRST model railroad layout – hearing the sound of that diesel prime mover and the turbo whine as it throttled up.

I had purchased a few DC locomotives and had one converted to DCC to run with my NCE system, but once I heard that sound I was hooked. My layout had to have sound!

I bought my first locomotive with sound: an Athearn Genesis Reading FP7. Hearing that EMD 567B V16 with a Roots blower had me hooked!

I did my first solo sound installation by putting a Soundtraxx Tsunami GN1000 into an Atlas Silver series Conrail MP15DC. Once I knew I could install sound into my DC locomotives, I knew all would have sound.

Over the years, the leaps in electronics technology within the model railroad industry have been astonishing. One recent addition has been the Iowa Scaled Engineering's ProtoThrottle. It makes operating a layout much more realistic, and works extremely well with the current crop of sound decoders from ESU, TCS, and Soundtraxx.

Buying my second ProtoThrottle lead me to commit entirely to ESU's Select Direct decoders in all of my HO locomotives. I based my decision on the work that ESU and Iowa Scaled Engineering did to ensure the two platforms work flawlessly together, and take full advantage of new ProtoThrottle features.

A person can use any of the three sound decoder vendors I mentioned above. The conversions I'm doing could also assist with non-sound DCC installations too.

This installation into a SW1500 turned out to be quite tight and challenging. But if a person can do one of these, most other installs come easier, as they generally have more room.

DOING THE INSTALL

There are several steps involved when I convert a standard DC model to one with DCC with sound. For this article, I converted the decoder to a DCC with sound version, that fixed a common power pickup issue, upgraded the Athearn bulbs to LEDs, and added a stay-alive device.

REMOVING THE STOCK COMPONENTS

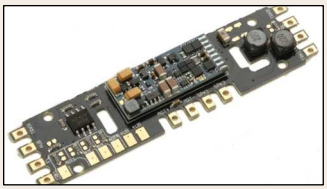
First, I removed all of the detail parts from the locomotive. I removed anything that was likely to get damaged by handling the shell and/or frame.

I also removed the stanchions, grab irons, and horn from the cab [1-4]. The cab itself needed to be removed to upgrade the stock Athearn bulb lighting to LEDs, and to install the stay-alive.

1-4. I removed all the detail parts from the switcher first.

PARTS, MATERIALS, TOOLS, AND THE PROCESS

Sound decoder

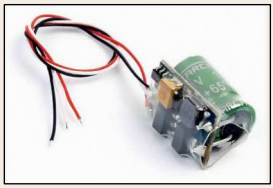


ESU - Loksound - Select Direct V4 decoder 73700 (discontinued). You can use a Loksound 5 DCC Direct as well.

V4 - www.esu.eu/en/products/loksound/loksound-select-direct

V5 - www.esu.eu/en/products/loksound/loksound-5-dcc-direct

Power Pack Mini - stay-alive capacitor



ESU - Power Pack Mini (54671).

www.esu.eu/en/products/accessories/powerpacks/powerpack-mini

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ESU - Thin/Flexible -AWG 36 Stranded Decoder Wire.

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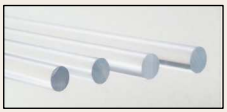
Locomotive headlight lenses



Plastruct 1/16" (1.65mm) Clear Acrylic Rod.

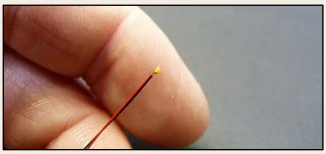
www.dccsolutions.com.au/apps/webstore/products/show/4335990Locomotive headlight lenses

...

plastruct.com/collections/strip-amp-rod-2/products/90291-ar-2h

0402 micro LEDs

Pre-wired 0402 (Warm White) Micro LEDs for locomotive lighting.



Kapton tape

For securing decoder wires, decoders and other electrical components.

Tools and other materials:

- Adjustable-temperature soldering iron with fine-tip
- Solder
- Flux pen or paste
- Wire cutters
- Wire strippers
- Spring tweezers
- Tweezers
- Small phillips screwdriver
- Small flat blade screwdriver
- 1/16" (1.65mm) thumb drill
- X-Acto knife
- Double-sided tape
- Foam locomotive cradle
- Hobby gear lube ■

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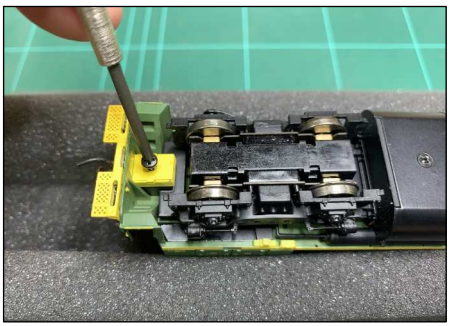
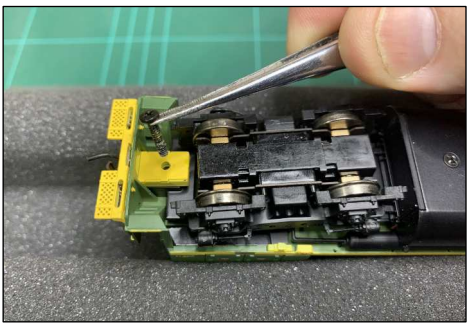
To remove the outer shell, I needed to first remove the couplers and coupler pockets. I removed the screws holding the couplers and pockets in place [5, 6, 7].

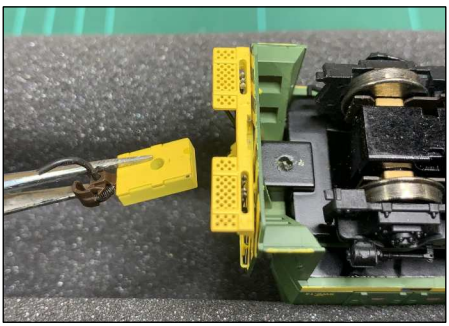
Removing the shell with most Athearn locomotives is easy. I placed the locomotive on a foam pad, gripped the rear power truck, holding only the truck and not the shell and/or cab. Then I placed a finger just under the rear of the shell, gently dropped the locomotive onto my finger that was resting on the foam pad. This released the shell from the frame [8, 9, 10].

The shell should then lift up off the frame, revealing the power trucks, Athearn circuit board, and wiring [11].

Once I got the shell off the frame, I needed to remove the shell completely. I started by removing the small piece of white tape







5, 6, 7. Next, I removed the couplers and coupler pockets.

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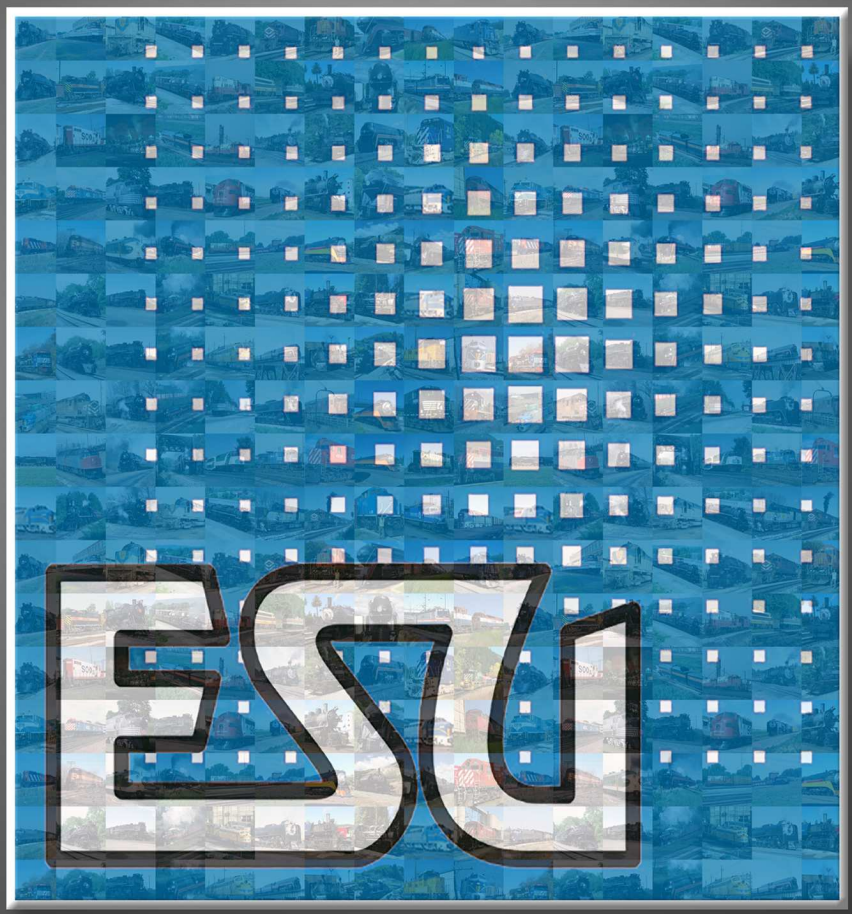

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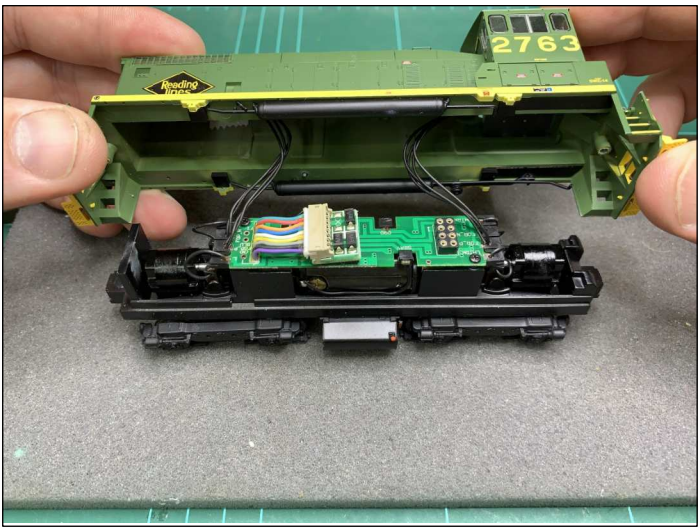
8, 9, 10. I removed the shell by gently dropping the edge onto my finger.

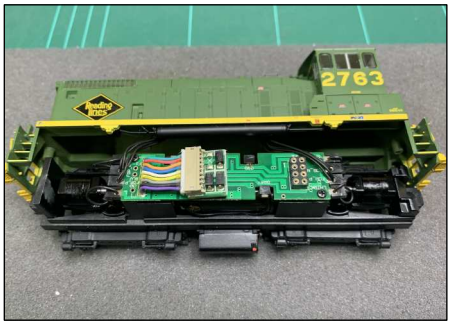


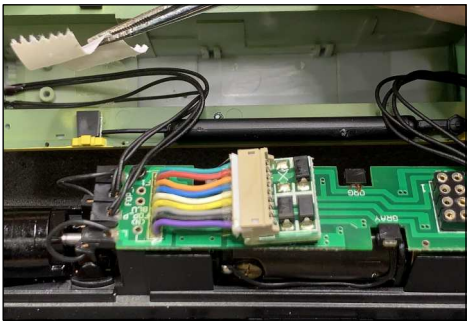
11. The shell removed from the frame, showing the circuit board and wiring.

that held the front headlight wiring to the underside of the shell [12a-b].

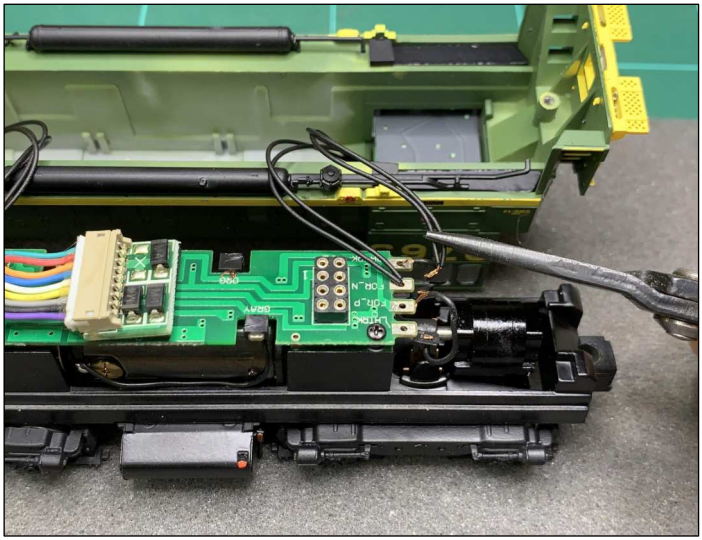
Then I removed the stock Athearn bulb wires so that the shell could be disconnected from the circuit board [13].

Once I removed the two sets of bulb wires, I set the shell aside [14].



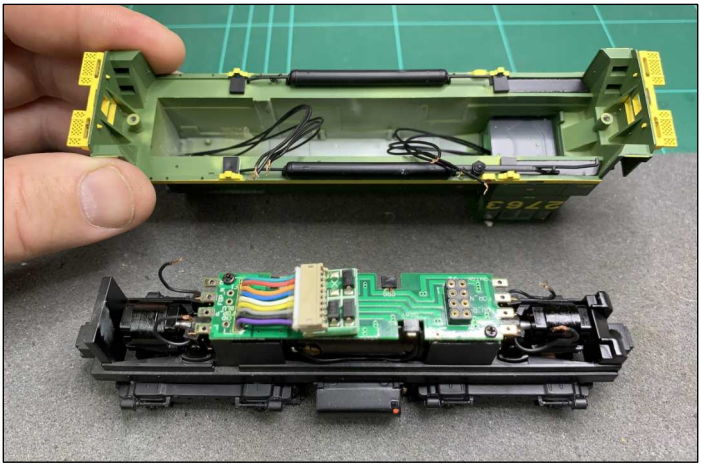


12a, 12b. Next, I removed the tape holding the Athearn bulb wiring to the shell.

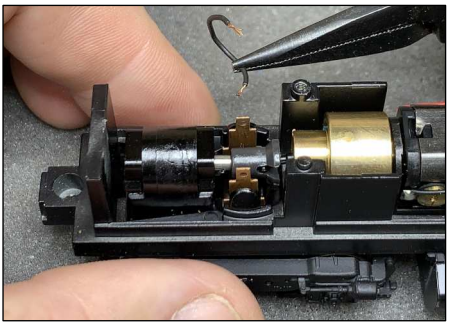


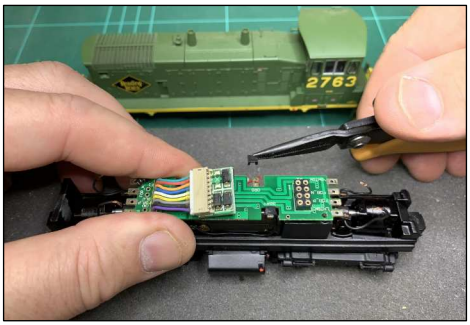
13. Removing the bulb wiring and plastic retainer clips.

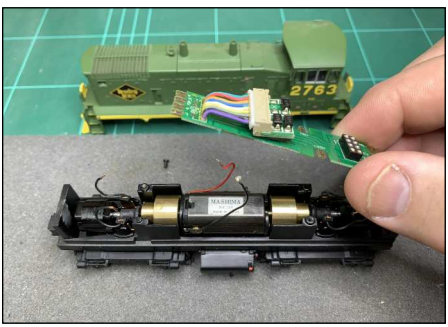
Next, I removed the remaining power truck and motor wires from the circuit board, and then removed the circuit board by undoing the two small screws [15, 16, 17].



14. With the bulb wires disconnected, the shell can be totally separated from the circuit board.







15, 16, 17. I detached the final sets of wires from the trucks and motor connections, then removed the circuit board.

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MAKING THE POWER TRUCK/POWER PICKUP MODS

One issue that bothers many model railroaders comes from sporadic power pickup.

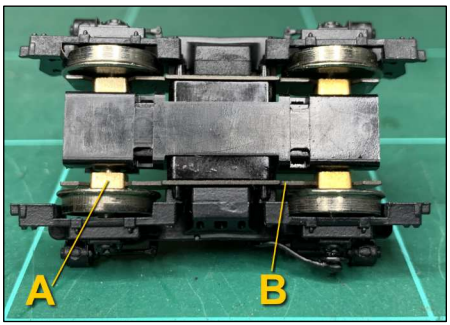
Some of the problem comes from the design, and the multiple connections between the wheel contact with the rail, and the decoder.

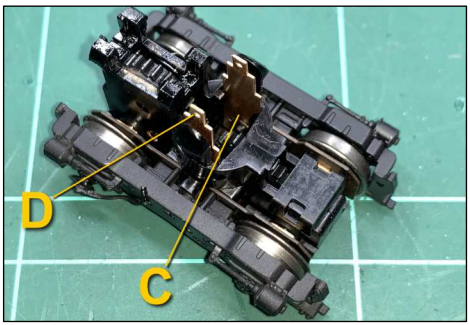
This is the first upgrade I always do for a locomotive – improve conductivity.

On the Athearn SW1500 switcher, I found the weak points for electrical connectivity. I traced the path from the rail to the decoder, and found those weaknesses to be:

A. Wheel axle to square bearing [18]
B. Square bearing to bearing plate [18]
C. Bearing plate to decoder wire truck tab [19]
D. Decoder wire truck tab to the decoder [19]

Those four points [18, 19] can cause electrical continuity issues. One of the best ways to eliminate this problem is to replace the multiple connections with one direct-soldered connection to the decoder.





18, 19. The lettered points above show connections that could cause poor electrical conductivity.

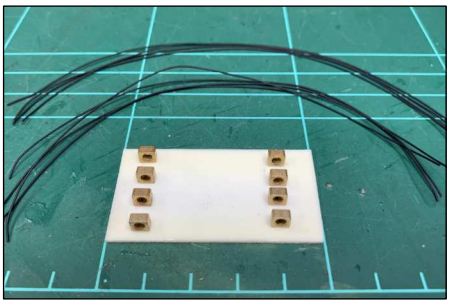
This also got rid of the plastic push connectors securing the wires to the decoder tabs. Those can create yet another poor connection.

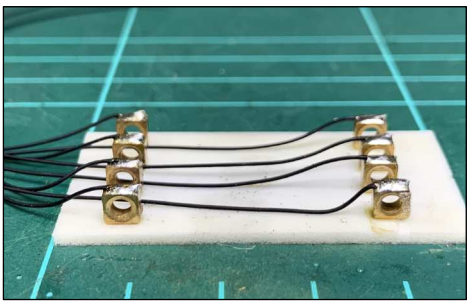
To make a good electrical path, I soldered a decoder wire directly to a square brass bearing on all the wheels, and I soldered the other end of the wire to the decoder. By making four of these connections per truck, I created an "all-wheel pickup" on each truck, ensuring the best possible power route between the rail and decoder.

Before soldering the decoder wire to the wheel bearing, I disassembled the wheels/axle from the plastic gear so heat from the soldering did not damage the gear or wheel gear sockets.

When soldering the decoder wire to the square wheel bearing, I first cleaned the surface with a Dremel motor tool with a wire brush attachment. I then soldered on a black flexible 36AWG stranded decoder wire – I used black to keep the color consistent. I stuck the four square bearings onto some double-sided tape to hold them in position [20, 21].

Once the wheel bearings cooled, I reassembled the wheel/axle, plastic gear and wheel bearings, then checked the wheel gauge.





20, 21. I used a piece of double sided tape to secure the worm bearings while soldering the decoder wire. In [21], the completed wheel bearings with their wires.

LUBRICATING THE SQUARE BEARINGS

To further improve running and electrical performance, I added a small amount of graphite powder to the inside of the wheel bearing [22].

I used a wooden skewer with a small amount of graphite on the pointed end, using a twisting motion to apply a small amount inside the brass square bearing [23, 24, 25].

I then reassembled the wheel axles and bearing.

LUBRICATING THE POWER TRUCK GEARS

While I had the trucks apart, I removed the Athearn grease from the inside frames and gears, then applied Hob-E-Lube Premium - Gear Lube. I placed a small drop on each gear axle, and on the gear teeth once I had the gears placed back into the trucks.

Next I placed a wheelset into the truck and rotated it with my fingers so that the gear lube is spread throughout all the gears [27-30].

I added a bit more lube once the trucks had been installed into the frame.

22. I used this graphite powder to lubricate the wheel bearings.

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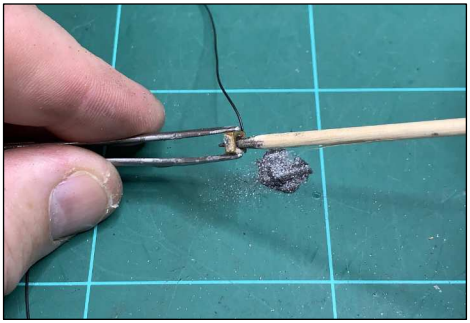

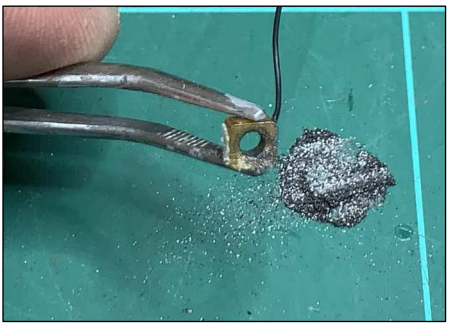

23, 24, 25. I used graphite powder on the wheel axles to lubricate and assist with electrical conductivity.

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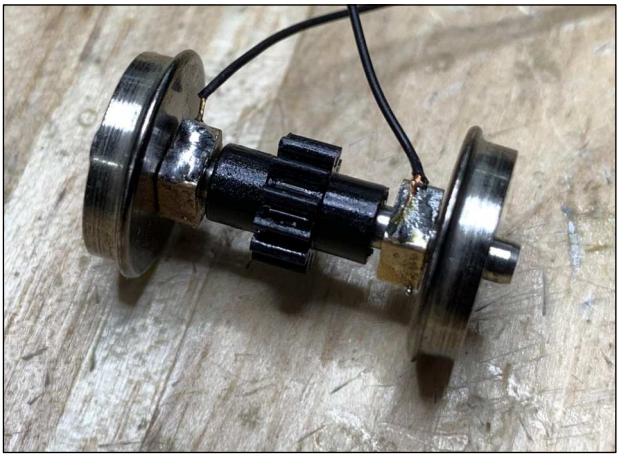
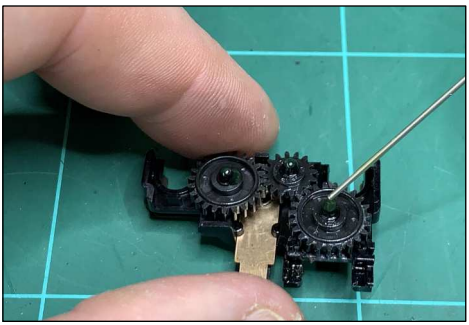
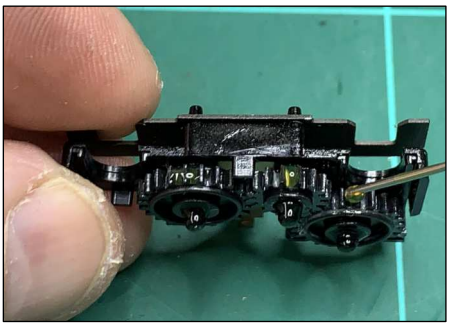
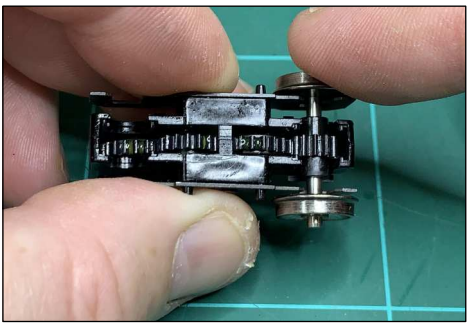


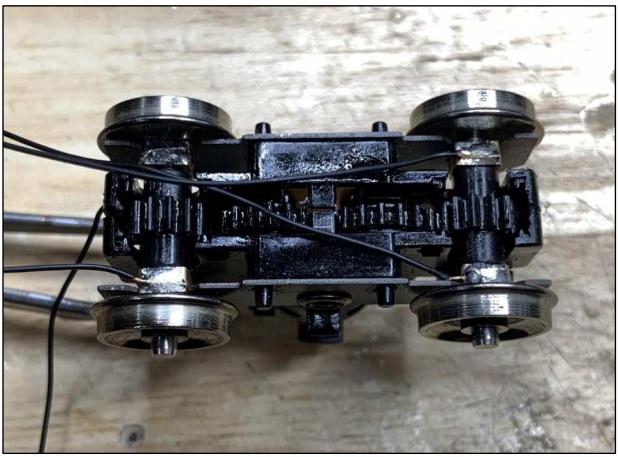
26. The reassembled wheel, axle, gear, and bearings with decoder wires attached.







27-30. Lubricating the truck tower gears with Hob-E-Lube Premium - Gear Lube.

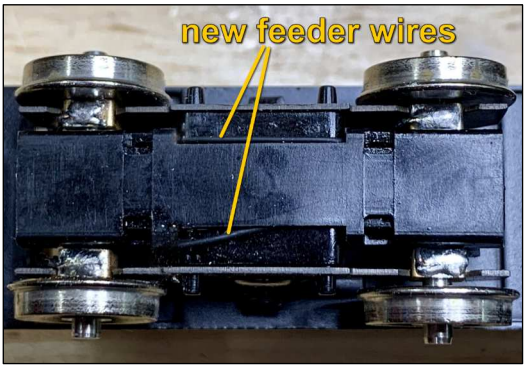


31. The reassembled power truck frame with the decoder wires facing toward the motor end.

Once I had the wheelsets reassembled, I put the power trucks back together. When inserting the wheelsets into the truck frames, I checked that the square bearings faced the right way, and that the decoder wires went toward the motor-facing end of the truck frame [31].

I carefully secured the longer "rear" decoder wires underneath the bottom truck clip [32], to ensure that they did not snag anything when the loco was running.

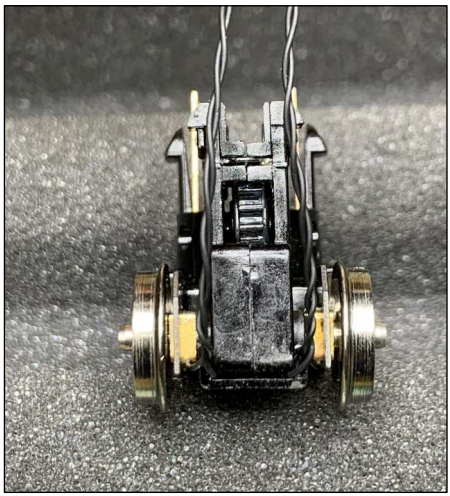
Once I had the decoder wires secured, I twisted the two left decoder wires together, and then the right ones.



When I had the two pairs twisted together [33], I soldered the two ends in each pair together. This ensured a solid electrical connection.
This wiring fix now made each truck a far more reliable all-wheel-pickup.

32. ↑ The longer "rear" decoder feeder wires secured underneath the bottom gearbox clip.

33. → The left and right side decoder feed wires twisted together.



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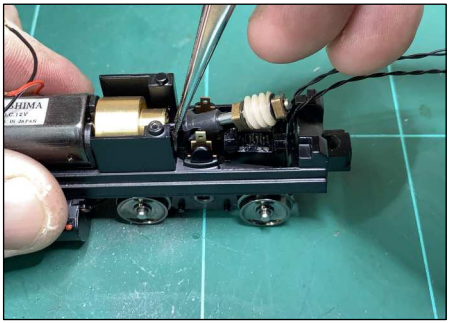
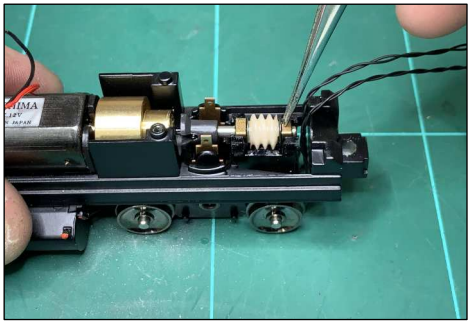
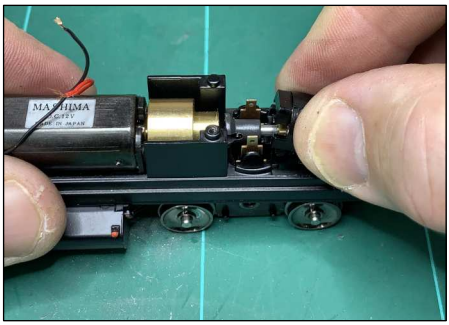
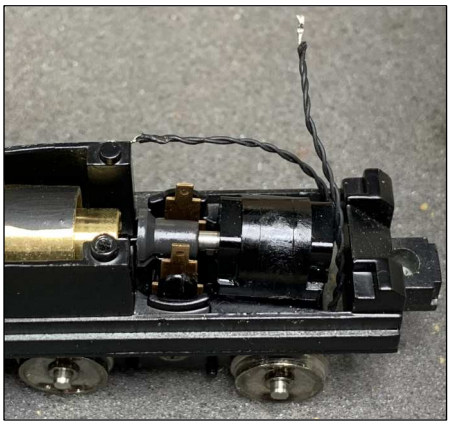
Photos [34, 35, 36] show the truck reassembly. I added a drop of gear lube onto the worm gear and shaft connection as well.







34, 35, 36. I put the truck assembly back into the chassis, and connected the motor worm shaft back to the truck.



37. The completed left and right power pickup wires ready to be soldered onto the decoder.

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UPGRADING STOCK ATHEARN BULB LIGHTS TO LEDS

Whenever I add decoders to my locomotives, I upgrade the older Athearn incandescent bulbs to warm white 0402 LEDs. In the past I added a single warm white 3mm LED, and added some 1.65mm light pipes that fit into the headlight openings.

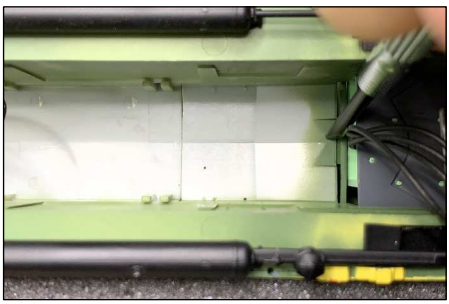
Before moving into the LED upgrade, I first removed the old bulbs.

To access the cab lights, I removed the cab from the shell first. I turned over the shell and located the three plastic locking lugs that secured the cab to the shell. The front lug was wider than the two at the rear.

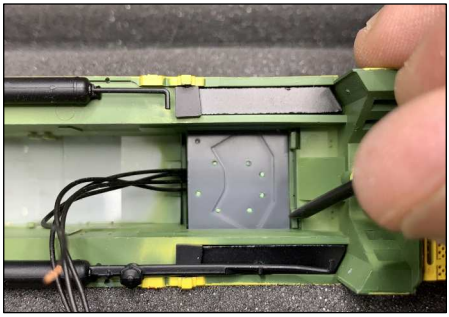
Using a flat blade screwdriver, I gently pushed the front locking lug back toward the front of the cab, pressing down at the same time to release the lug. With the lug released, the cab was sitting off the shell tilting toward the front of the cab [38, 39] and [40, 41].

The cab was now removed from the shell by pulling out the bulb wiring from behind the control stands.

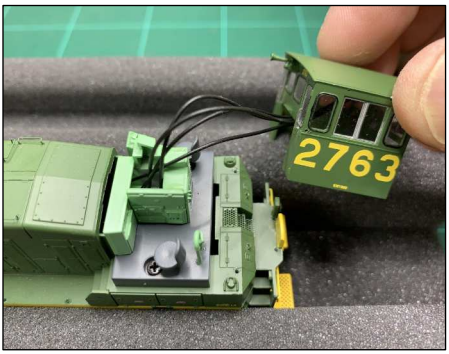
The bulbs might be attached with glue, but they should loosen from the plastic without issue. I had in the past had the wire break away from the bulb, if this occurs you may need to use a skewer to push the bulb out of its housing [42, 43, 44].



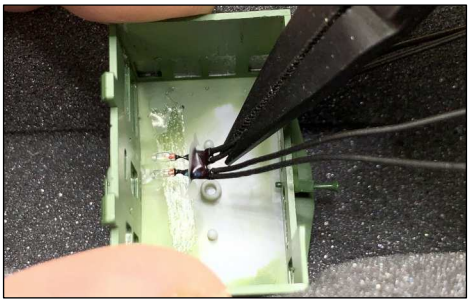
38, 39. I released the cab front locking lug with a small flat-blade screwdriver.



40, 41. Using the flat-blade screwdriver, release the last two locking lugs to finish releasing the cab.

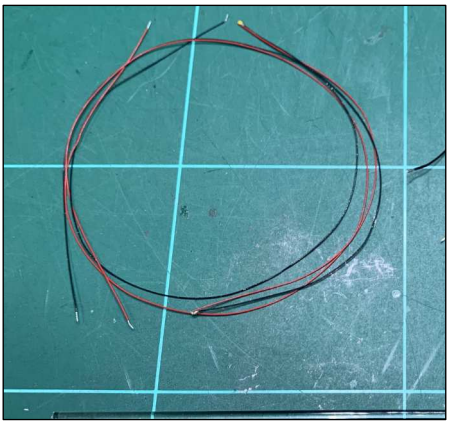


42. I removed the cab and pulled out the bulb wiring. Also see [43, 44].



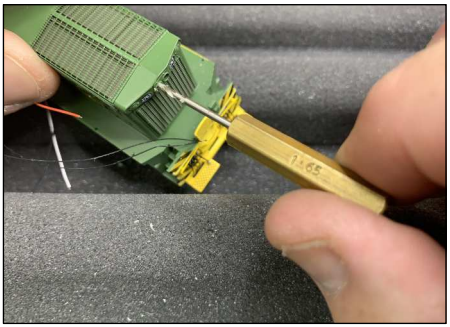
43, 44. I removed both the front and rear bulbs and wiring.

For the next step, I installed the light pipes and 0402 LEDs into the cab and front hood. For the light pipes, I used Plastruct clear solid tube 1.65mm / 1/16" in diameter. It fits perfectly into the Athearn openings [45].

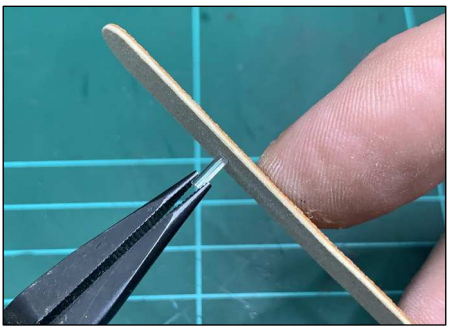


The back half of the front shell and cabin needed to be drilled-out with a 1.65mm drill so the light pipe can slide the entire way through [46].

45. The 0402 pre-wired LEDs and clear light pipe I used for headlights.



46. I drilled out the back half of the shell to insert the light pipes for the headlight.



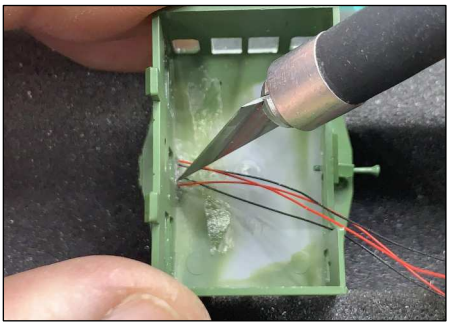
47. I smoothed the face of the light pipe with a fine emery file.

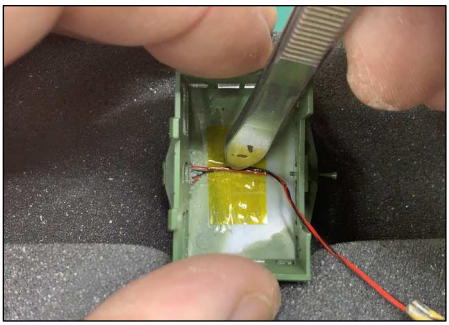
Next, I inserted the light pipes into the headlight openings and glued the 0402 LEDs into place. Due to their small size, I used one LED per headlight.

When cutting the light pipe to length, the face may be on an angle or not smooth. If this happened, I smoothed the face with a fine emery file [47]. This ensured the front face looked like a headlight lens, and ensured a flat surface on which to bond the LED.

I placed a piece of Kapton tape across the cab to hold the LEDs in place while gluing them. Once the glue dried, I folded down the two sets of wires and secured them with Kapton tape to the roof of the cab [48, 49, 50]. I used a multimeter set on "diode mode" to check that the LEDs worked.

When connecting the two sets of wires, I wired them in parallel, the red wires to +UB (common) on the decoder, and the black wires to the FL tab.





48, 49, 50. I installed the light pipes and 0402 LEDs using CA, then secured the wires using Kapton tape.

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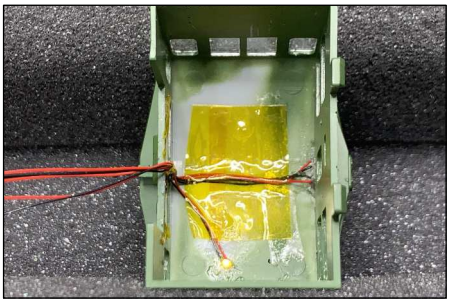
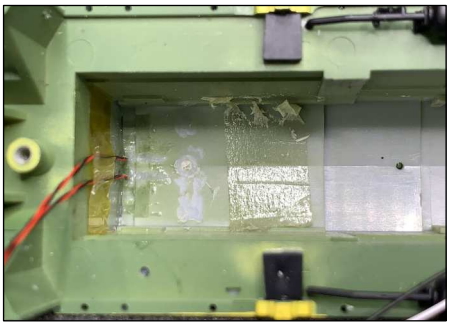
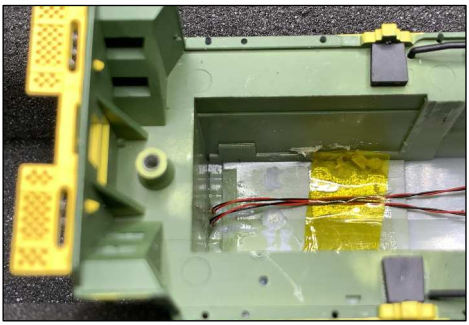
I then installed the cab lighting, using just a single 0402 LED connected to the AUX6 lighting tab on the ESU decoder. Due to their small size, the 0402 LEDs can be used in many places not previously thought of in HO locomotives. I placed this LED centered over the engineer's seat, and just above the front sliding window [51, 52].



51, 52. I installed a single cab light to add some “pop” to cab interior.





53, 54, 55. I installed the front LEDs into the headlight openings.

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I then installed the front headlights, again inserting the light pipes into the headlight openings and gluing the LEDs to them [53, 54, 55].

When the glue dried, I carefully removed the Kapton tape and bent the wires down so they ran along the center of the inside top of the shell. I secured the wires with more Kapton tape and tested the LEDs again with a multimeter to ensure they worked correctly.

INSTALLING THE STAY-ALIVE: ESU POWER PACK MINI

There have been many discussions online about solving the problem of poor-running locomotives on model railroads.

I took a two-part solution. First I upgraded the wiring to get the best electrical connectivity from the rail to the decoder by using direct wires with soldered connections.

While this has improved the reliability on my locomotives, I've gone farther to bulletproof them completely by adding a stay-alive capacitor to them all.

The ESU Power Pack Mini (PPM) isn't a cheap solution [56], but then it did have some special features that made it worth the extra dollars.

A big one: the ESU Power Pack Mini did not need to be disconnected/removed when programming the decoder on a LokProgrammer. It also had an integral charging circuit controlled by the decoder to avoid the inrush current that could trip boosters.

56. The ESU Power Pack Mini, I instal this stay alive circuit with all my DCC upgrades.

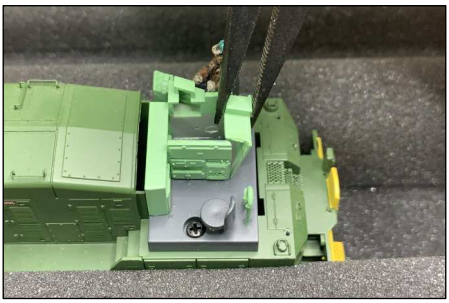
To install the PPM in a switcher, I used the small space left between the control stands. I needed to make some alterations to get it to fit, but they're quite easy to do.

First, I removed the cabinet facing toward the back of the cab interior [57, 58].

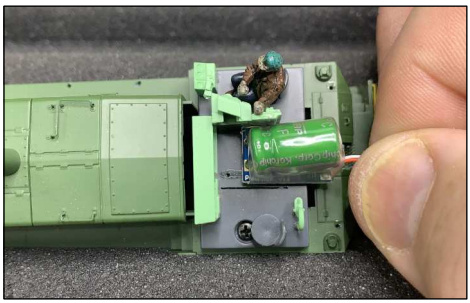
Next, I removed the side panel facing the conductor's chair, again with the small pliers. I gently pried the panel away from the plastic floor and the front control panel [59].

I then placed the PPM into its final location [60], and marked along the edge with a marker for the side panel to be glued back.

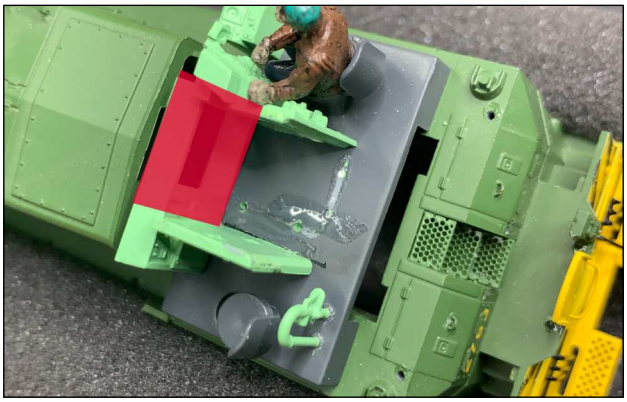
When I had the side panel glued back into its new location, I allowed the glue to cure overnight.



57, 58. I removed the rear cabinet panel with small pliers.



59, 60. I took out the side panel using the same method as the rear panel, and marked the position of its new location.



61, 62. I glued the side panel in place and removed the red section (bottom image) from the front wall of the interior.

Once the glue cured, I then removed the back section of the cab interior to allow the PPM to be positioned as far forward as it can go.

Once I had the front section removed [62], I secured the PPM to the floor with a little CA. I then added the real panel back over the end of the PPM with CA. The rear panel needed to be shortened a little to fit over the PCB at the bottom of the PPM.

When I have all of the reinstalled pieces secure, I re-installed the cab back onto the shell [63, 64, 65]. Before I did this, I painted around the LEDs with some silver paint to mask any light bleeding through from the cab headlight LEDs.

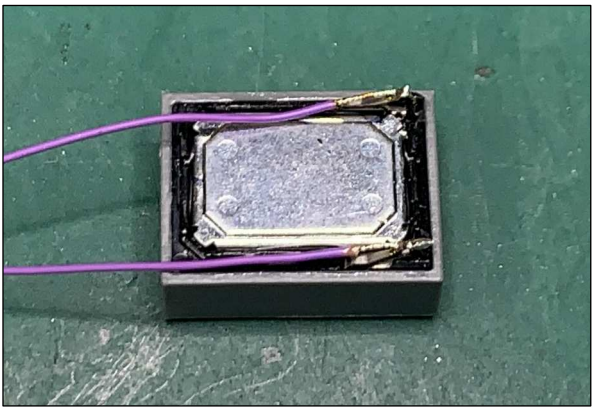
I also tested the LEDs again to ensure they still worked.

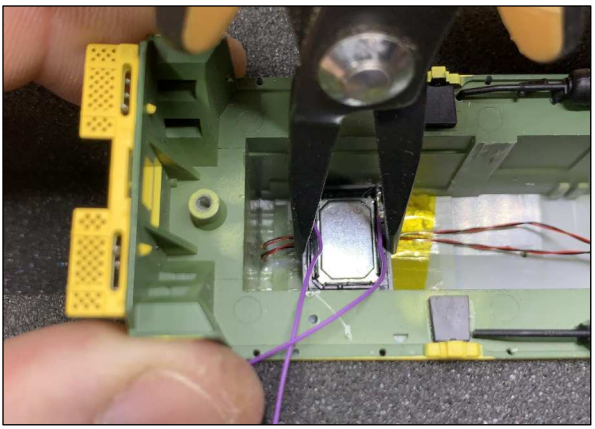
Text continues on page 30 →

63, 64, 65.
I reinstalled the cab back onto the shell.

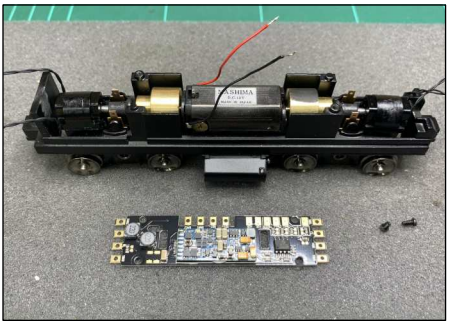
VIEW READER COMMENTS

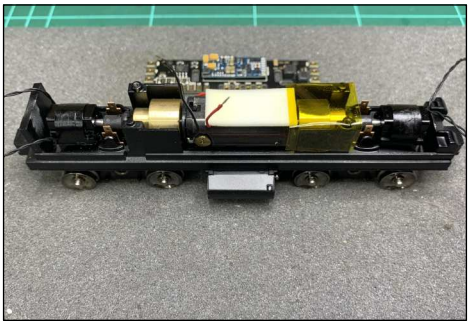
66. The DCC Solutions "Thunder" Speaker.

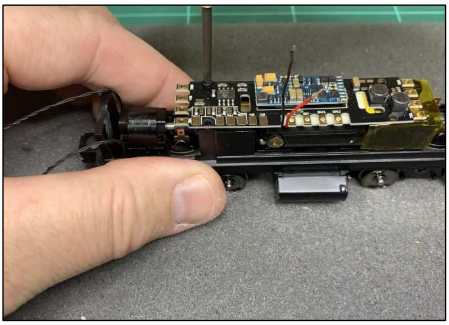




67, 68. I installed the sugar cube speaker into the front of the shell with double-sided tape.

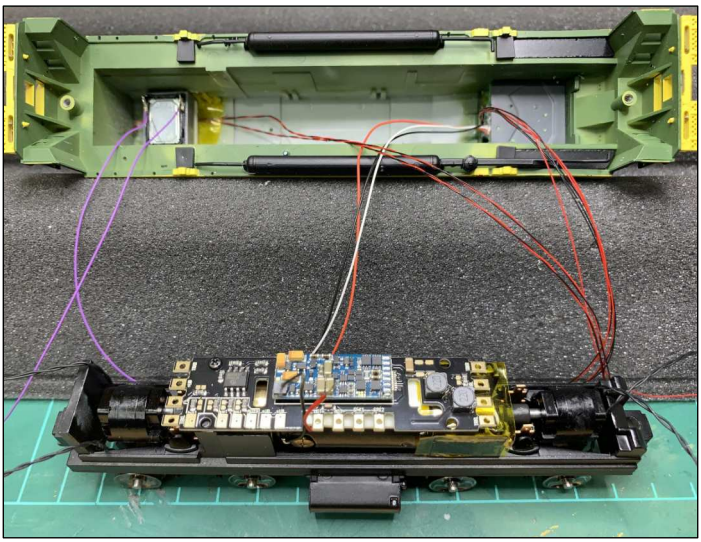




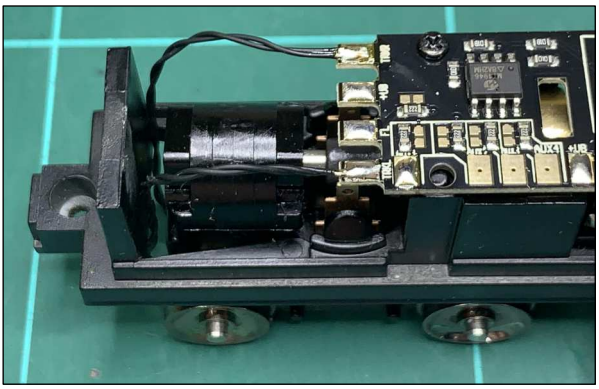


69, 70, 71. I used some double-sided tape to secure the decoder, and added Kapton tape for insulation.

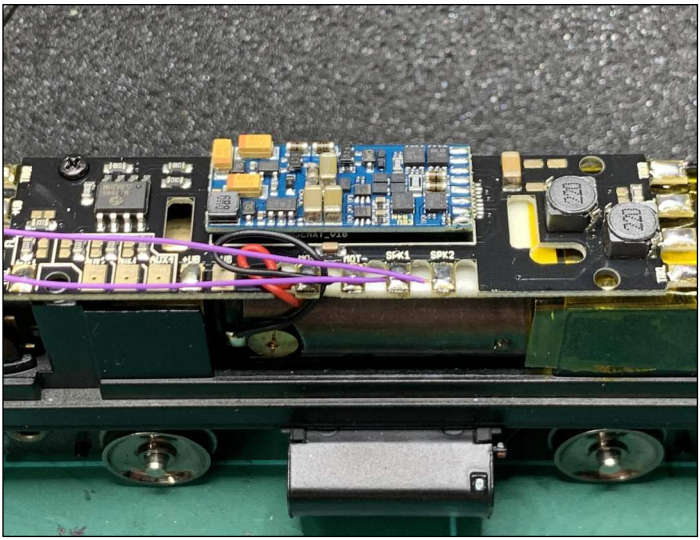
VIEW READER COMMENTS



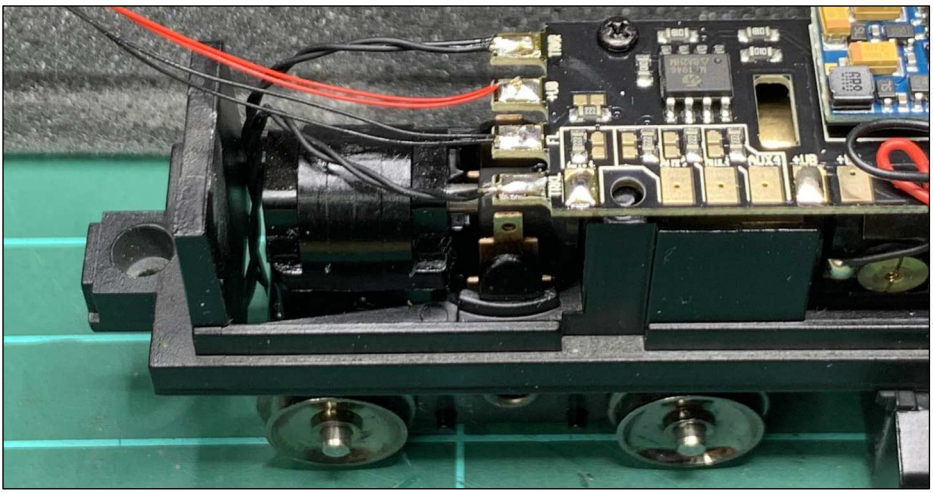
72. The installed ESU Select Direct Decoder, ready for wiring soldering.



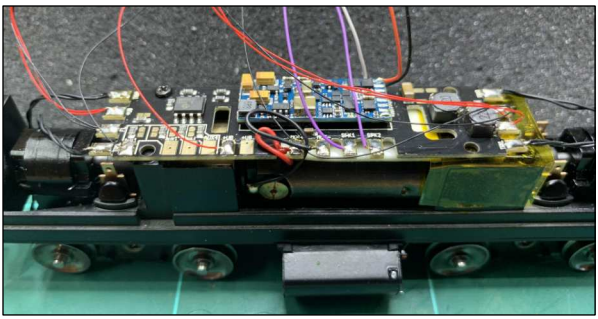
73, 74. I soldered the truck to decoder wires first, then soldered the motor wires. Finally, I checked that the motor and gears functioned correctly by running the locomotive on the layout.

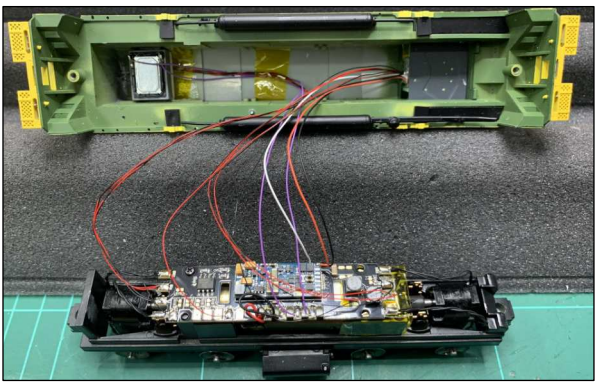


75. I soldered the speaker wires to the decoder tabs.



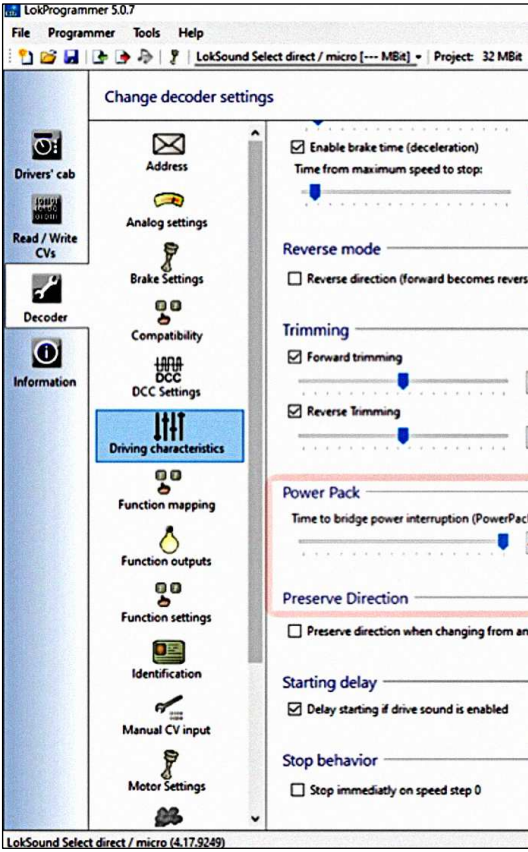
76. I soldered the remaining lighting circuits to the circuit board.





77, 78. The completed installation of the decoder, LED lighting upgrade, stay-alive and speaker into the Athearn SW1500 switcher.

VIEW READER COMMENTS



79. My LokProgrammer screen showing the programming of the Power Pack Mini timeout.

INSTALLING THE SUGAR CUBE SPEAKER

With advent of sound in HO scale locomotives, the hobby took a huge step forward. Since then, there have been many advances in quality, and ever-smaller speakers for sound.

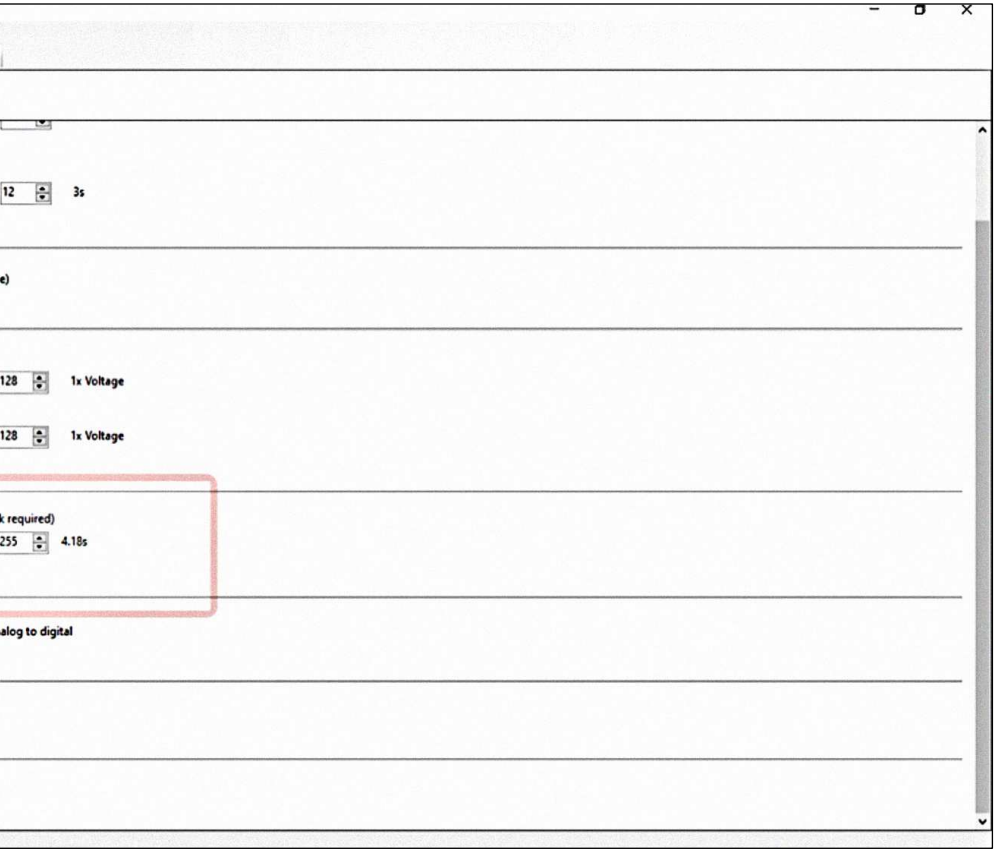
I had been using ESU's small sugar cube speaker, but didn't enjoy having to put the enclosure together.

I since discovered a supplier here in Australia that had a similar sugar cube design incorporated into a 3D-printed sound enclosure. Those produced great sound and fit into some very tight places [66].

To install the speaker into the locomotive, I cut and stuck a piece of double-sided tape to the bottom of the speaker. I then soldered the speaker leads on.

I placed the speaker so it would clear the decoder tabs. I also had to remove the small plastic nubs from inside the shell to secure it in the right position [67, 68].

Once I had the speaker secured, I moved on to installing the decoder onto the frame.



For this, I placed a small piece of double-sided tape onto the frame near the rear of the motor.

I also placed a piece of Kapton tape over the frame to cover the two lugs of the frame so that they did not contact the decoder bottom and accidentally short it out.

I then screwed down the front of the decoder and secured the rear with double-sided tape [69, 70, 71]. Once I had the decoder mounted, I started the process of soldering all the wires to their decoder tabs [72].

I began by soldering the wires from the trucks to the decoder tabs,

then soldering the motor wires. I did this first so I could test the motor, gears, and wheel gauge on the layout before adding any more wiring, and before attaching the shell [73, 74].

Next, I soldered the speaker wires to the decoder [75].

I then soldered the remaining front and rear headlights and the internal cabin light to the decoder [76].

One of the added bonuses of using an ESU - Select Direct Decoder (V4) is that the lighting outputs all have a 2K resistor preinstalled on the board. That means I could solder the LEDs directly to the circuit board without having to also install inline resistors.

Once I finished the installation [77, 78], and before I reinstalled the detail parts back onto the shell, I placed the loco back onto the layout and checked all the functions.

By running the switcher, I could test that nothing was binding, rubbing, or interfering with either of the trucks. I could also check the sound and speaker.

80. I operated the SW1500 switcher with newly installed LokSound V4 - Select Direct decoder with my ProtoThrottle.

Once I had done this, I let the switcher run for at least 45 minutes to give it a good run-in. I did vary the speed roughly every 10 minutes.

Now it was time to load the SW1500 sound file into the decoder and adjust any necessary CVs. Two CVs controled the ESU - Power Pack Mini (PPM) operation: CV315 and CV 113.

www.esu.eu/en/downloads/instruction-manuals/accessories

CV315 sets AUX 6 = 0; this allowed the PPM to operate.

CV113 sets the stay-alive timer [79]. For max time (around four seconds), I set CV113 = 255. A value 150 gave about 2.45 seconds.

Operating with the ProtoThrottle

One of the main reasons I decided to use ESU Version 4 and 5 decoders is because they work well with the Iowa Scaled Engineering ProtoThrottle.

This throttle has changed the way I operate my layout, taking operations to the next level. See the video [80] for a link to a short operating session highlighting using the ESU LokSound decoder with the ProtoThrottle.

CONCLUSION

This has been one of the most enjoyable decoder installs to date. The addition of the 0402 LEDs and the ESU Power Pack Mini have taken the reliability and operating potential to the next level for my loco fleet.

This is my the third Athearn SW1500 that I have completed. Even though these small locos can be challenging to install a full DCC, sound, and stay-alive package, it's an enjoyable project.

My next series of installations will have more lighting functions, as the use of the micro 0402 LEDs has opened up a whole new range of possibilities. I hope this article gives you the confidence to try a

decoder install with sound, and gives seasoned DCC installers a few new ideas to try with their DCC installations. ☑

JASON MILLER

Jason lives in Diamond Creek, Victoria, in Australia.

Jason has been a professional firefighter for 18 years. When not at work, he enjoys spending time with his family, coaching Toby's Australian Rules Football team.

Jason is married to Linden and has two sons, Lachlan, 12, and Toby, 9. ■

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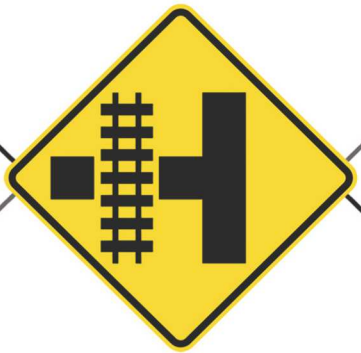

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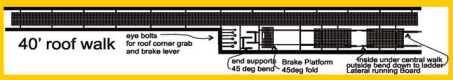

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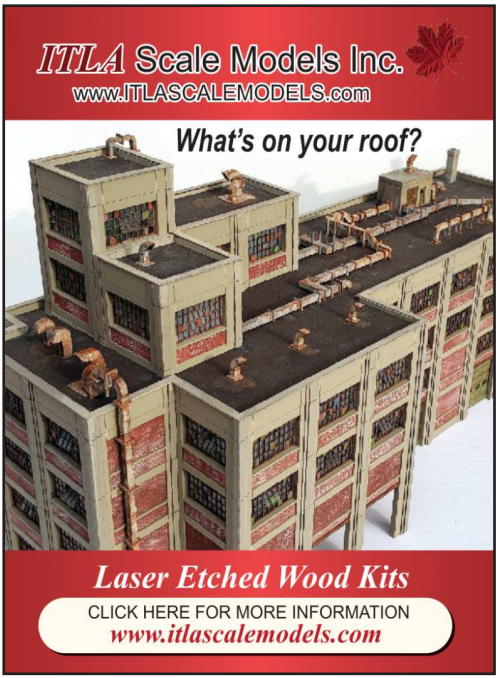

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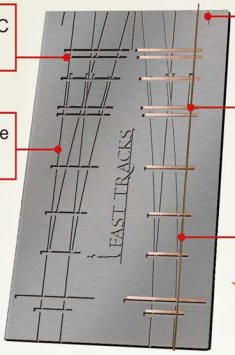

★★★★★ Guard rail forming grooves are provided to precisely shape the guard rails.

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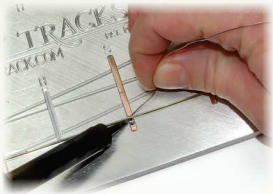

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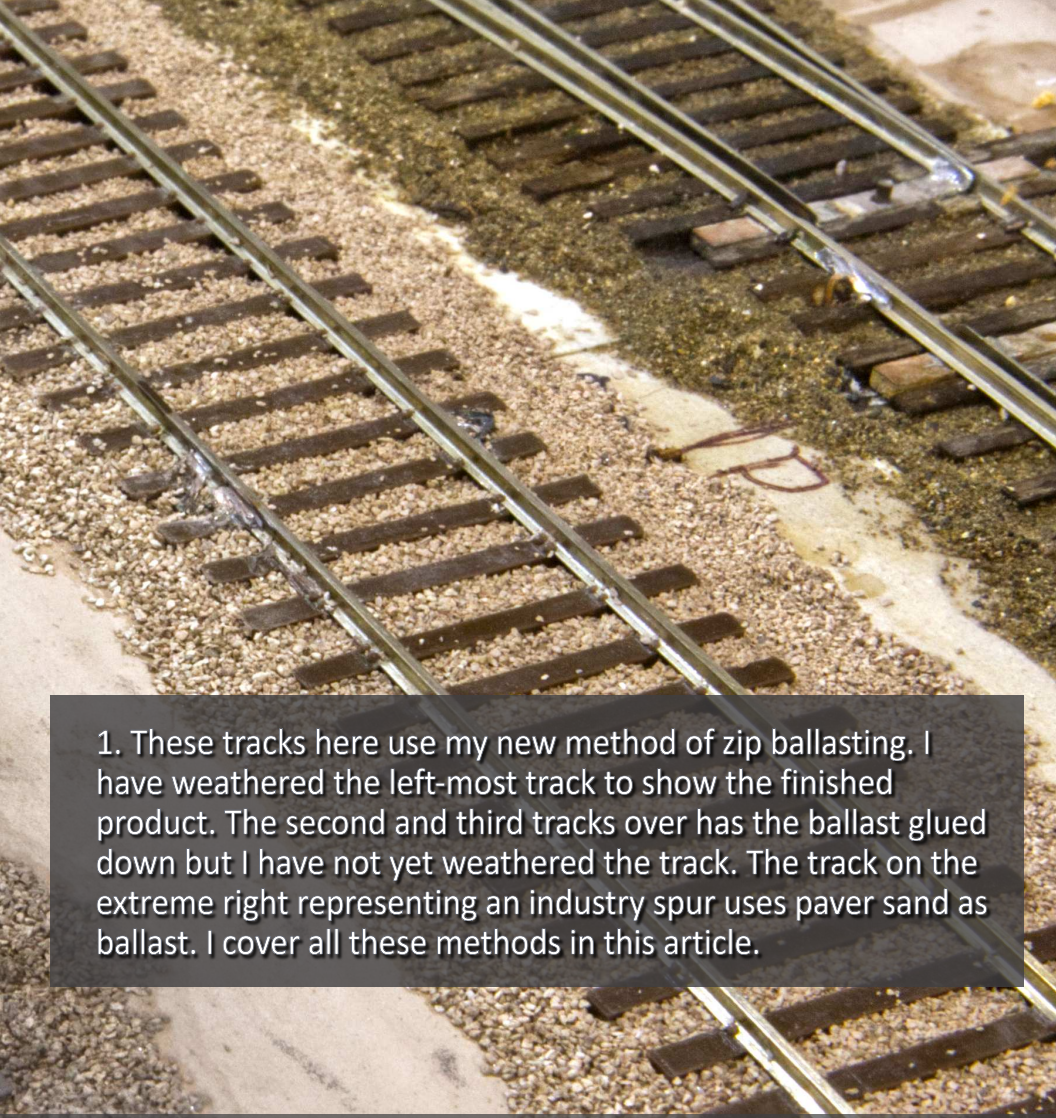
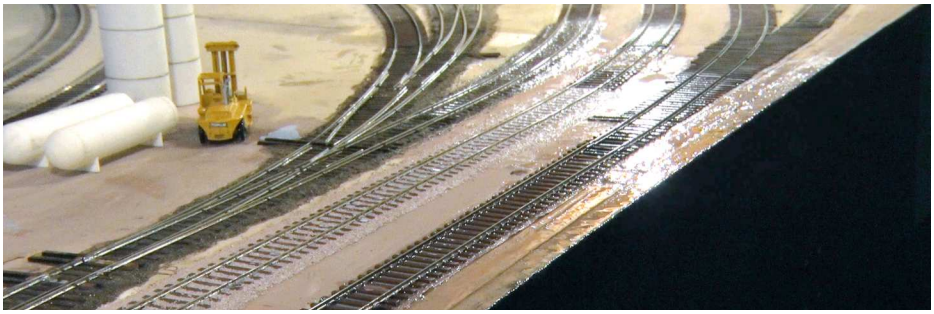


1. These tracks here use my new method of zip ballasting. I have weathered the left-most track to show the finished product. The second and third tracks over has the ballast glued down but I have not yet weathered the track. The track on the extreme right representing an industry spur uses paver sand as ballast. I cover all these methods in this article.

★★★★★
RATE THIS ARTICLE

Model Railroad Hobbyist | July 2020

WAY BACK DURING MY EARLY DAYS IN THE HOBBY, I first tried to apply diluted glue to my carefully manicured dry Woodland Scenics ballast – and quickly found out the stuff balled up and just made an awful mess.



2. I dislike spraying wet water on dry ballast because it's hard to confine the spray to just the one track. The wet water spray gets lots of things wet, as you can see here.

I discovered that I needed to soak the ballast with wetting agent first. I started out using wet water[1] in a sprayer, but it took some real finesse to wet the dry ballast without disturbing it.

Even with wet water, spraying down the dry ballast can disturb the ballast if you're not careful. I also don't like how the spray can be difficult to control, getting everything in the general area of the track soaking wet [2].

As an alternative, I tried wetting down the dry ballast using isopropyl alcohol (IPA). It disturbs the ballast much less than wet water, but spraying the IPA also makes a similar mess and on top of that, it fills the room with foul alcohol fumes.

I moved to applying the IPA with an eye dropper, giving me much greater control. It also keeps down the strong alcohol smell to just a faint scent – much more tolerable.

However, as I've started doing my new TOMA[2] Siskiyou Line 2 layout, I'm taking this opportunity to rethink how we do layout

1. To make wet water, adding a few drops of dish detergent to the water reduces the suface tension. Wet water soaks in more readily without disturbing the ballast.

2. **T**he "**O**ne **M**odule" **A**pproach. To learn more, see the August 2017 Model Railroad Hobbyist magazine.

construction. I go back to ground zero on the process, and look at all the advancements over the last couple decades and try a fresh approach.

I keep asking, is there a better way? When it comes to ballasting the track, I asked myself if we could simplify and speed up the process.

After lots of research and experimentation, I found my answer: yes indeed, we can simplify and speed up ballasting!

THE NEW ZIP BALLASTING METHOD

The new zip ballasting method involves these three quick, simplified steps:

1. Apply the ballast rapidly and neatly with a premium ballast applicator tool.
2. Do a minimum of manicuring with your fingers.
3. Glue down the dry ballast with a glue formula that wicks right in without disturbing the ballast.

That's it! The process goes very quickly now. It's very rewarding to do ballasting now that it proceeds so quickly!

3. For HO, I like the Proses ballast spreader model that includes a shutoff valve. I find the sloped divider helps smooth the ballast flow regardless of how much ballast is in the spreader. Bachmann and Walthers also sell this model of ballast spreader.

HO/OO Ballast Spreader

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$ 24.55

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$ 15.62

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TT Ballast Spreader

$ 15.62

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O Scale Ballast Spreader 3-Rail

$ 25.67

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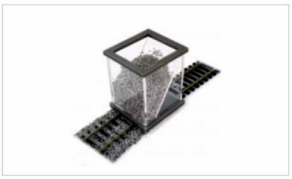

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$ 25.67

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N Ballast Spreader

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HO Ballast Spreader for Marklin

$ 15.62

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G & 1 Scale Ballast Spreader

$ 35.71

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4. This model of ballast spreader with the sloped divider is available for almost all the major scales, except for S scale. This screen grab comes from the Proses store in the UK (add about $16 shipping if you're outside the UK). This model of spreader is also available online from Walthers, Bachmann, and Amazon. (See the end of the article for a shopping list link).

Applying the dry ballast

I have the best results using the Proses ballast speader tool. I've tried a number of different ballast spreaders and find the Proses design with the diagonal divider gives me the most even flow of ballast.

In HO, they also make a version with a shut off valve, and that's the model I use [3]. This spreader can be found for most of the major scales from Proses, Walthers, Bachmann, and on Amazon [4]. (See the end of this article for a shopping list link.)

5, 6. I put some Woodland Scenics ballast in the spreader, open the valve, and slide it down the track. Once I'm done, I shut off the valve and remove the spreader. It does a decent job of applying the ballast smoothly, with just a bit of dressing needed.

7. I clean the ballast off the tops of the ties by rubbing my fingers down the middle of the track. I also run my fingers down the ends of the ties outside the rails. It can take several passes each direction to get the ballast removed from the tops of the ties.

Manicuring the dry ballast

I typically ballast about 12″ of track at a time.

To manicure the dry ballast and get it ready for gluing, I just use my fingers. The process takes longer to explain than it does to do.

I first run my finger down the middle of the track, scraping the ballast off the tie tops and sliding any excess toward the end of the area I have covered with ballast [7].

Next, I run my finger down the tie tops outside the rail on each side. I also pat down the ballast edge to give it a smooth slope without any humps.

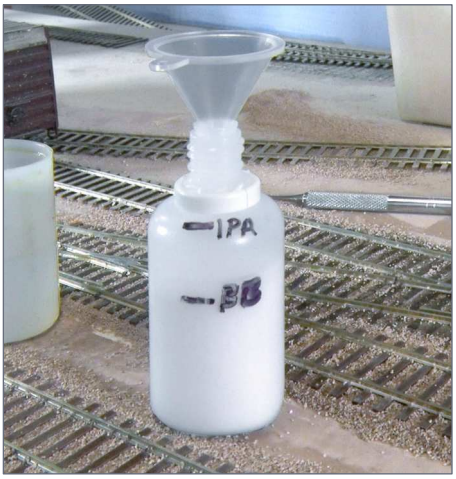
A bit of ballast will bunch up against the base of the rail - to remove that I pinch the rail with my fingers and slide them vigorously down the rail [8].

I go back and forth between these methods with my fingers until the ties and rail generally get clear of ballast grains [9].

8. The process of removing the ballast off the tie tops tends to stack ballast up against the base of the rails. To remove that, I pinch my fingers around the rail and slide them down the track. A combination of [7] and [8] back-and-forth effectively cleans the ballast off the tie tops, making the track ready for glue application.

9. Here's an up-close view of the manicured ballast ready for the glue. This took just a couple minutes to do with only my fingers. If there's an errant single grain of ballast here or there, I'm not concerned. I can take care of that easily after the glue has set. I just want the ballast generally off the tie tops and off the sides of the rails like I show here.

10. Here's my zip ballasting "secret weapon," Deluxe Materials' Ballast Bond. This special ballast glue can be used against many dry model ballast products without pre-wetting.



11. For Woodland Scenics ballast, I need to make a special formula of 2 parts Ballast Bond to 1 part IPA to get a glue mixture that wicks easily into the dry ballast.

12. I apply my special Ballast Bond + IPA formula to the dry ballast and it wicks right in. With no pre-wetting needed, this saves a tedious and messy step, making for a rapid transition from spreading the ballast to gluing it. I'm very pleased with how well this works – zip ballasting, indeed! (See the text for details.)

Gluing the ballast

Now, time for the real magic in this process – applying the glue *directly* to the dry ballast. No pre-wetting needed!

I use Deluxe Materials Ballast Bond instead of white glue (PVA to our fellow modelers outside the US) because it has a lower viscosity than white glue, allowing it to be used on dry ballast without pre-wetting. *Ah-hah!*

In my testing, Ballast Bond wicks right into dry ballast that's real rock without disturbing it, saving the messy pre-wetting step. True stone ballast includes materials like sifted paver sand or commercial ballast brands like Arizona Rock & Mineral.

However, Woodland Scenics (WS) ballast is a different story because it's made from crushed walnut shells – essentially a finely-ground wood-like product that they can dye different colors as needed. In other words, WS ballast is super lightweight, causing it to "float" or ball up very easily when gluing.

Straight Ballast Bond, which wicks great into dry natural stone ballast without disturbing it, causes dry Woodland Scenics ballast to just ball up. The result is an ugly mess. Bummer.

After some experimentation with Ballast Bond, I discovered I can mix two parts Ballast Bond with one part 70% Isopropyl alcohol and voila! Ballast Bond wicks into dry Woodland Scenic's ballast without disturbing it. Hooray!

Once my special Ballast Bond formula had set up, I checked the solidity of the bond of the WS ballast against some paver sand ballast I had glued with Ballast Bond straight. I found no difference in the quality of the dried glue bond.

I also talked to John Bristow at Deluxe Materials and he blessed the IPA + Ballast Bond mixture as a great idea that does not harm the setting action of Ballast Bond.

13. After the glue has fully set up, I use a small bladed screwdriver to remove any stray grains of ballast that got glued to the rails or that sits on top of the ties.

FINISHING THE TRACK

Once the glue has set up completely, it's on to finishing up the ballasted track.

Cleaning up the bonded ballast

I generally wait overnight for the ballast glue to set up solidly.

The next day, I closely examine the track for any stray grains of ballast on the top of the ties or on the rails and I remove them using a tiny bladed screw driver [13] and/or a dental pick[3].

Once I have completed this process, I run a vacuum over the track to clean up these loose grains of ballast [14]. I find it helpful to rub my fingers back and forth on the track to stir up the loose grains so the vaccuum won't miss them.

With this task done and the track now nicely ballasted, let's add a bonus topic next on how to weather up the track to take it to that extra level so it looks much more realistic.

---

3. Next time you visit your dentist, ask them if you can have a few of their old worn dental picks they were planning to throw away. Often, you can get a great selection of useful picks this way!

14. After knocking any stray grains of ballast loose from the tie tops or off the sides of the rails, I run a vacuum over the track. I find it helps to rub the track with my fingers to stir up the loose grains so the vacuum will easily capture them.

15. My ballasted Micro-Engineering flex track looks like this once I have cleaned up any stray grains from the bonded ballast. The tiny scale spike heads can be difficult to see, but they're there. Time to give the track a nice finished look with some weathering!

16. I always like to use prototype reference photos when I do weathering. Here is a photo I took on the Siskiyou Line several years ago now. That's my wife Patty in the background on the bridge.

Weathering the track

As my first step in any weathering project, I like to find prototype reference photos.

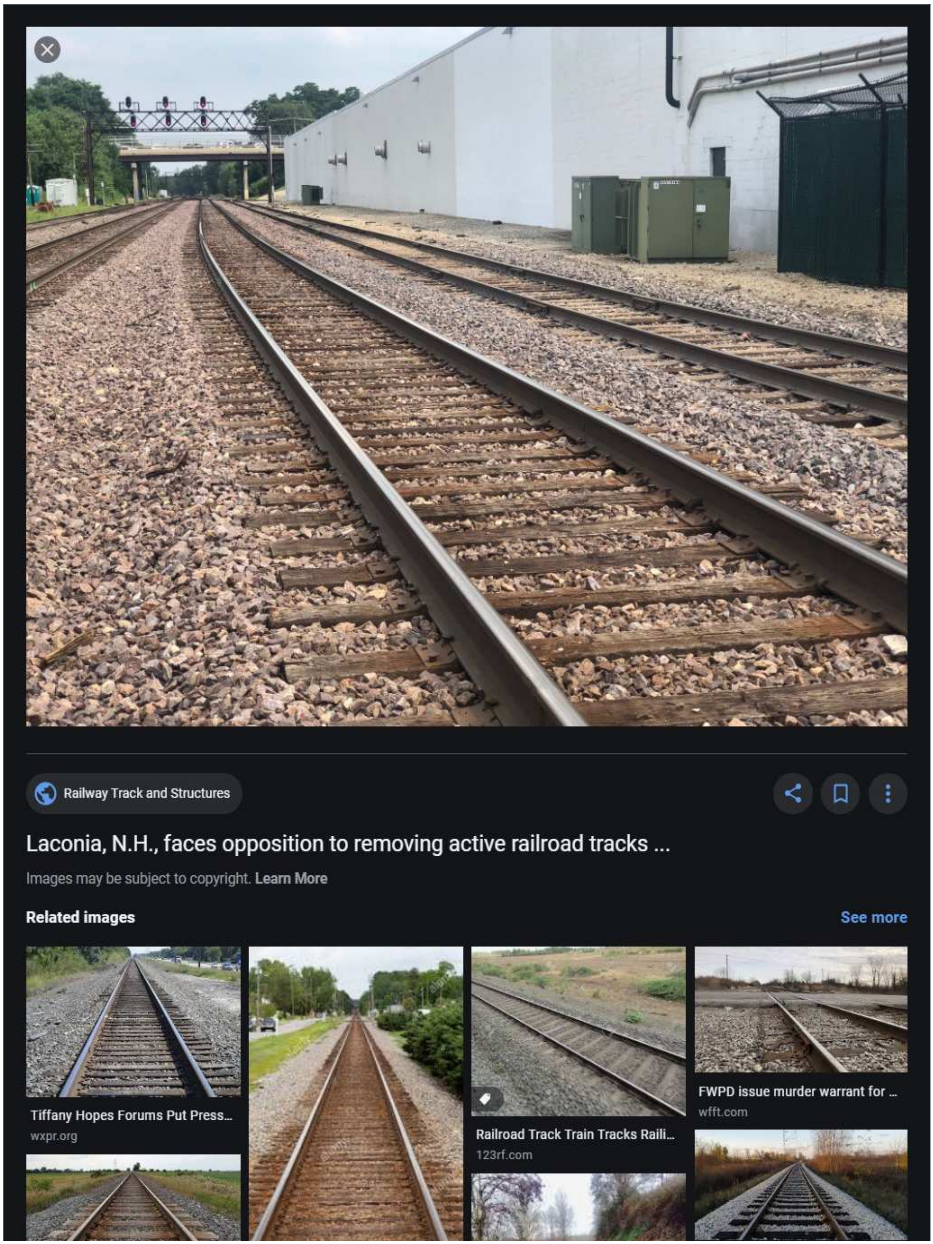
For this ballasting project, I checked my Siskiyou Line photo stash and found a likely photo of some prototype track I wanted to use as a weathering guide [16].

I also like to search the internet for further reference photos from real railroads, just to have some additional views to guide me. I found one photo of real railroad track that looks a lot like the track in [16], so I captured a copy of that photo as well [17].

Putting these photos on my iPad tablet allows me to have them at my fingertips for reference in the layout room right next to me as I work.

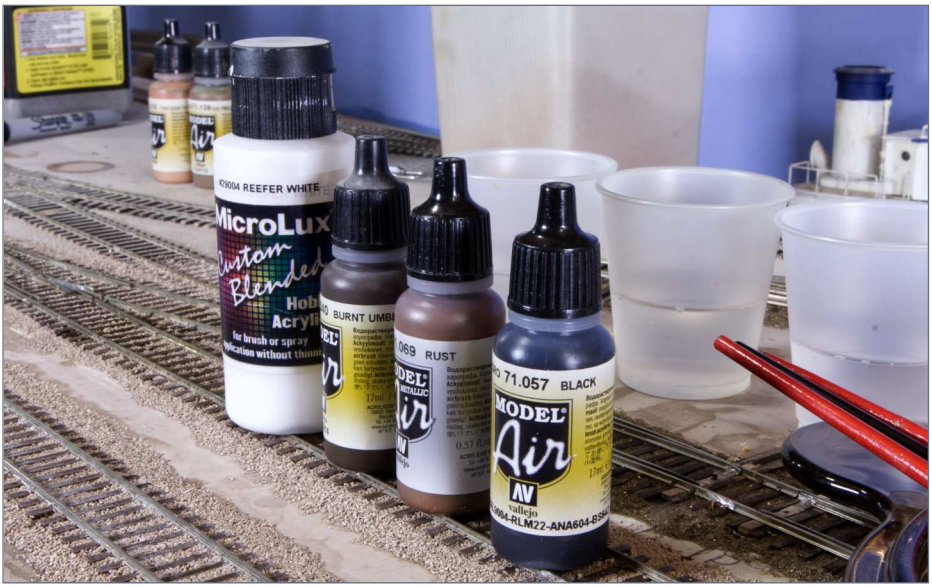
With my reference photos in hand, I moved on to weathering the track.

Recoloring the ties: Real railroad ties vary in color. I use Vallejo acrylic paints and mix them to create that natural variation by painting the ties various shades of dark gray, light gray, and different shades of black-brown or tan [18, 19. 20].



17. I also went online and did a Google search for some railroad track photos that could be helpful, such as this one.

18. Since I'm using acrylic paint to paint the ties various colors, I like to set up my three cups of thinner and my brush wet tray. For details on this, download the free MRH Acrylic Painting Guide.



19. I'm using these four Vallejo/Microlux colors to do my tie painting: Reefer White, Burnt Umber, Rust, and Black.

20. I mix these colors on old business cards to various shades. I'm just doing colors by eye – some black-browns, dark gray, light gray, and light brown. You can see the tie colors in the lower part of the photo. This process removes that sameo-sameo plastic look to the ties and creates a more natural variation in the color.

Paint the rails: Once I've added some variation to the ties, I move to painting the rails.

From the reference photos, I can see the rails have what I would call a dark dirty rust color. To make this color, I mixed the Vallejo paints in [19] using this formula:

2 drops Rust

7 drops Burnt Umber

1 drop Black

1 drop Reefer White

I mixed up this color on a business card and painted it onto the rails with a fine-tipped brush. If I get some of the color onto the ties, I don't worry. If you study the prototype photos [16, 17], notice some of the rail color gets onto the ties and tie plates as well.

21. After painting the ties various different shades, then I mixed a dark rust color and painted the sides of the rails (see the text for the formula). The colors look rather stark right now, but once the paint dries, I will do some blending to soften and dirty up the track. Remember, the most realistic weathering comes by building up layers of color. If you try to do all your weathering in a single layer, it tends to look too garish and less realistic.

22. Here's how the track looks now that the wet paint on the rails in [21] has dried. Note paint dried to a slightly darker tone. Most acrylics have this behavior so it's something you should plan for when aiming for a given color.

23. As a blending step, I brushed on a layer of Neutral Gray Pan Pastels with a half-inch brush. Hold on, I know this doesn't look great, but it tones down and blends the colors. More layers coming!

24. Next, to bring back some of the color, I dip a small flat brush in acrylic thinner (Armor All Auto Glass cleaner makes great thinner for this and it's less than $3 per pint), and I brush down the ties and the rails to wash off most (but not all) of the gray PanPastel. The photo shows the track after it has been washed but not yet dried.

Once the rails have dried, I then move to softening, blending, and dirtying the ballast.

Toning down the colors: The colors in [22] look too stark, so they need to be toned down and blended.

For this step, I like to use Neutral Gray Pan Pastel. I brush it on using a half-inch flat brush[23]. It may look bad, but hold on!

25, 26. Once the track washed in thinner has dried, I brush on Burnt Umber Pan Pastel in a blotchy fashion on the ties and ballast. Remember the shoulders too! I use a smaller brush to apply the Burnt Umber Pan Pastel to the sides of the rails also.

27. The track on the left shows my final result of all this process. It's the weathering using multiple layers that really brings the track to life. It looks a whole lot more realistic than the unweathered but ballasted track on the right. That stark plastic look is gone!

Next, I wash off most of the gray using a brush dipped in thinner [24].

After this, then I dirty up the track with Burnt Umber PanPastel [25, 26]. If needed, I will wash down the ties and the rails again with thinner. Depending on how vigorously I scrub the ties or rails, I can control how much PanPastel I remove.

Here's the final result in [27].

So there you have it – zip ballasting – applying ballast to your track in record time.

I'm pleased with this "re-invented" ballasting process and how much simpler and faster it is than the "old" way.

Ballasting your track has never been this fun! ☑

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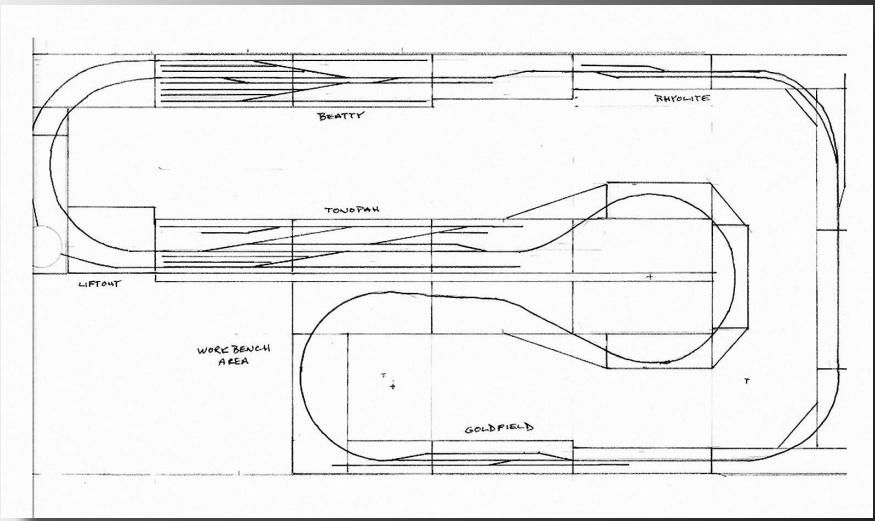
Double duty layout design



Model Railroad Hobbyist | July 2020

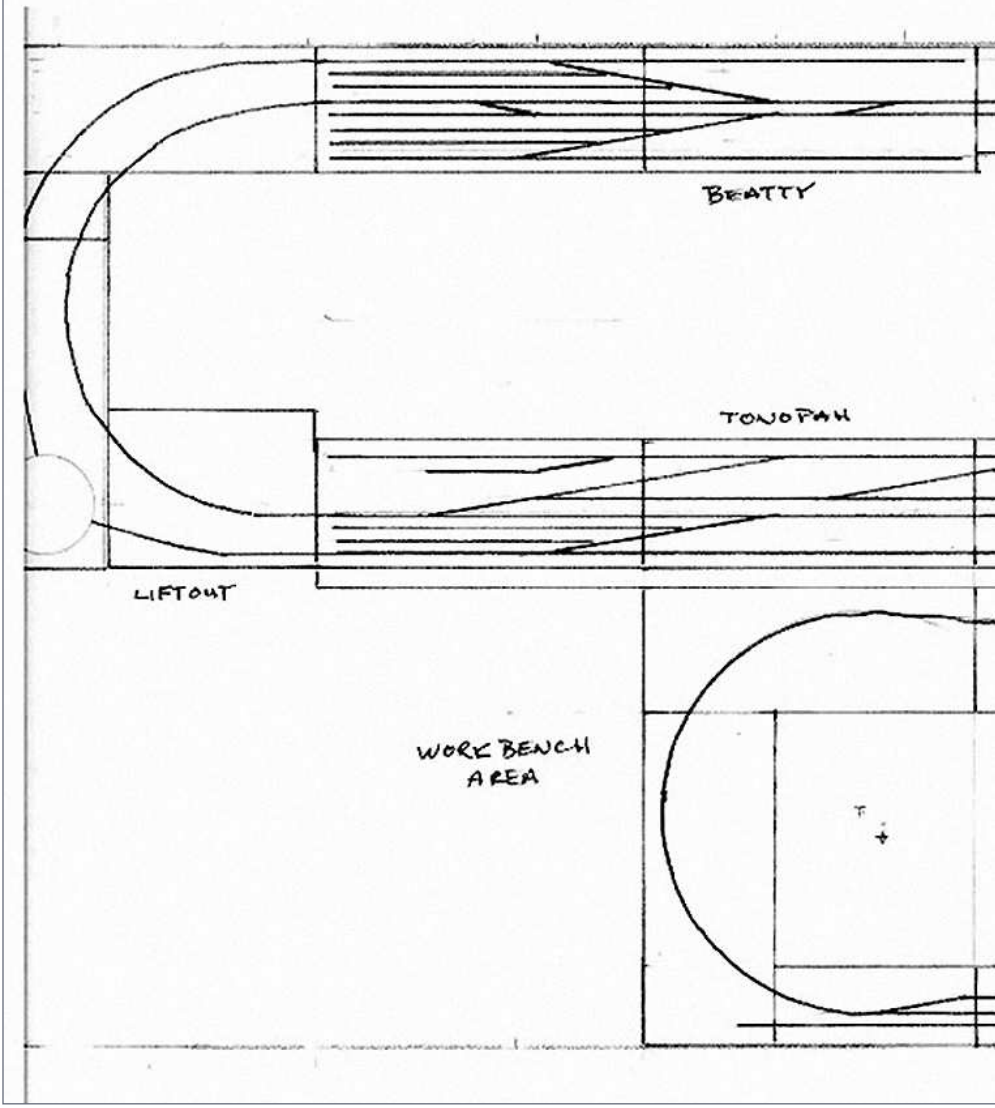
RATE THIS ARTICLE

MICHAEL VESETH DESIGNS A GARAGE LAYOUT WITH OPERATIONAL FLEXIBILITY ...

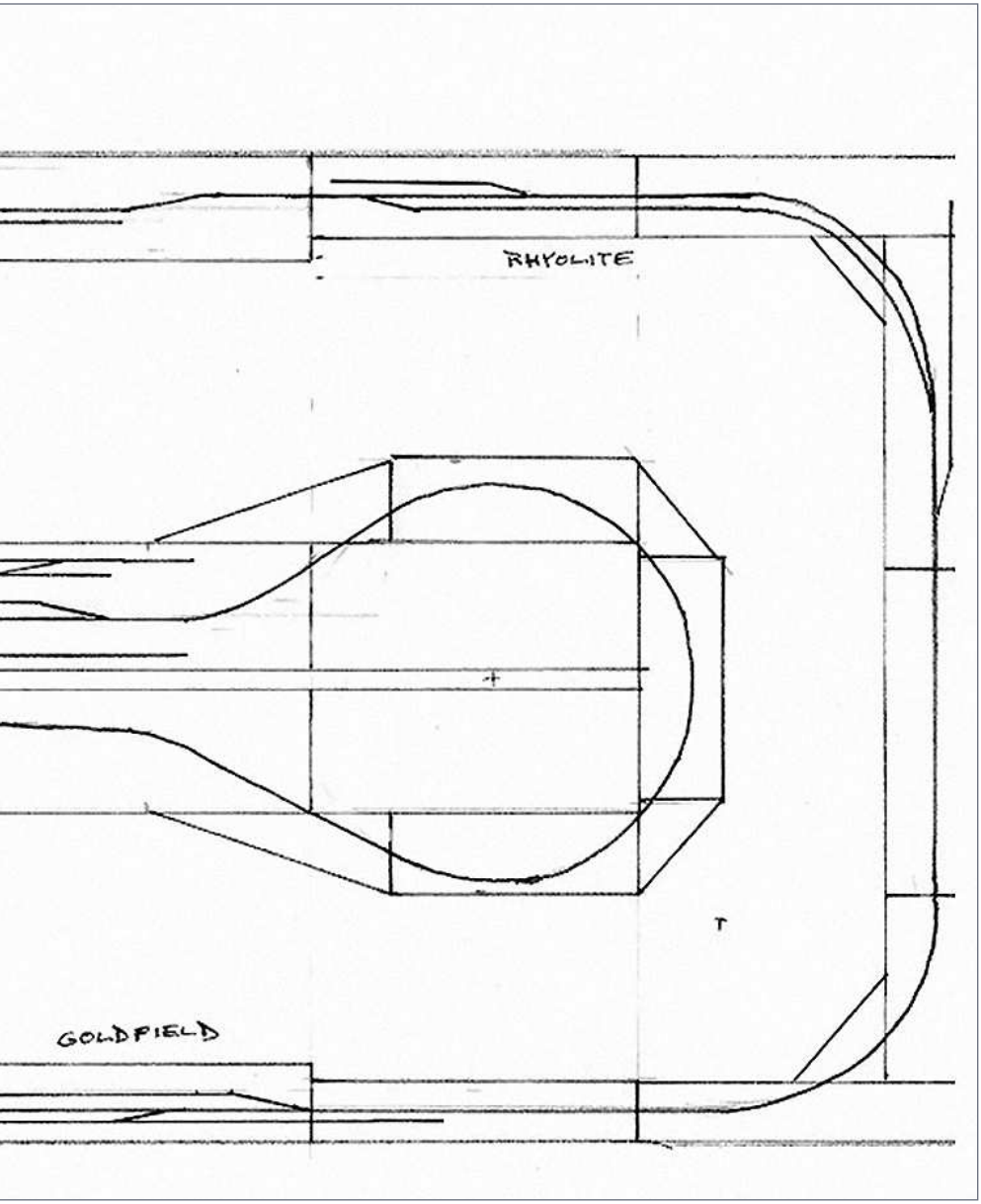
I PLANNED AND STARTED CONSTRUCTING A MODEL RAILROAD LAST WINTER in my California basement.

As my inspiration, I use David Barrow's South Plains District domino module format with minimalist scenery. I am modeling transfer runs between a yard at Beatty, Nevada and the city of Tonopah, Nevada.

Layout Plan

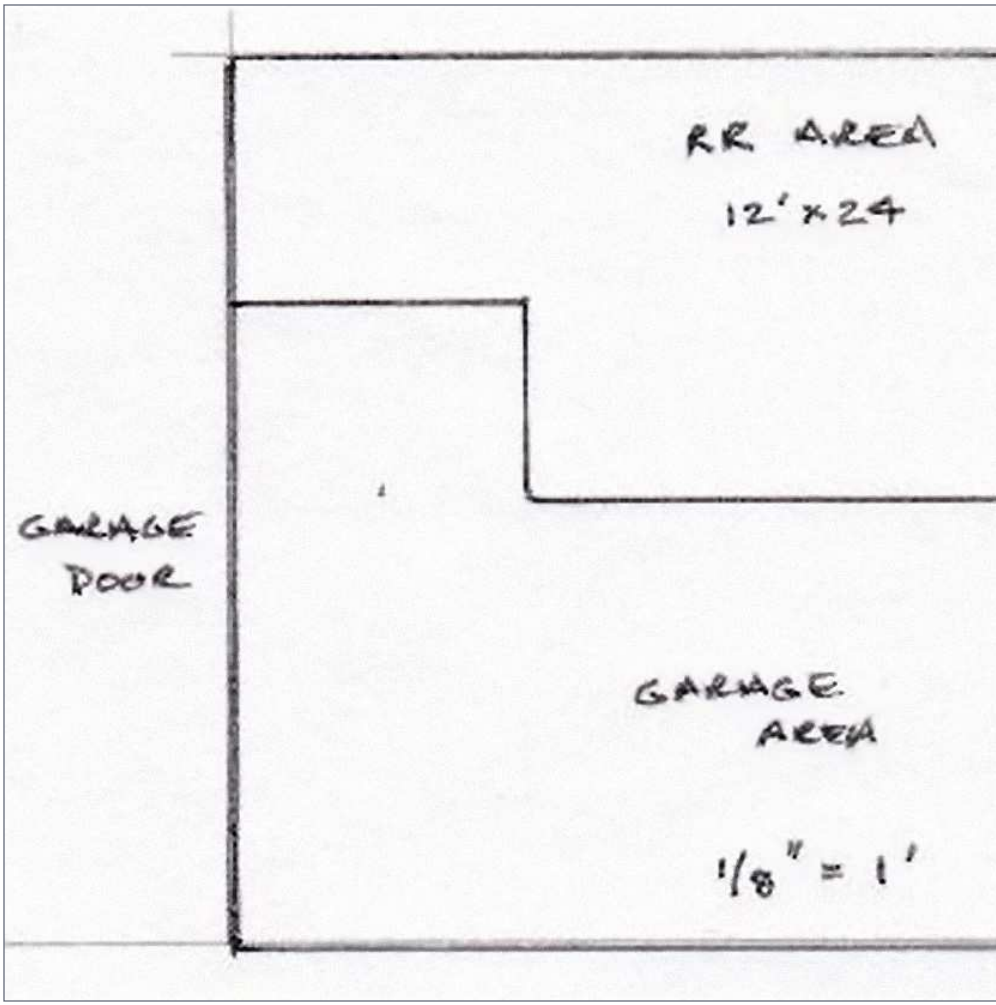


1. Michael's drawing of the railroad area showing the shapes and widths of his 4-foot modules.


RHYOLITE
GOLDFIELD

The benchwork consists of 18″ by 48″ modules constructed of ¾″ birch plywood with 2″ x 2″ legs at a height of 52″. In places, I narrowed the width to 9″, 12″, or 15″ to allow ample aisle width.

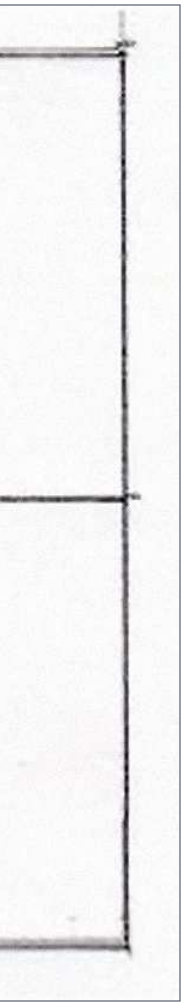
I used ¾″ birch plywood as the top of each module, and covered that with a layer of 3/16″ lauan plywood. I also make my roadbed from lauan and spackle the edges to form ballast shoulders.



I paint the table tops and sift sand into the paint. I use MicroEngineering code 83 flex track nailed to the roadbed. I predrill each nail hole and lay the track directly onto the sand-embedded painted surface.

In spots where the sand is too thick, I use a putty knife to level it.

SOME BACKGROUND HISTORY



I have a background in geology and worked as a geologist in rural Nevada and Utah prior to heading to graduate school. The area that I model covers roughly the 90-mile distance from Tonopah to Beatty, Nevada in 1905.

At that time, a capitalist with a mining interest built a railroad and created a city in the middle of nowhere. Prior to this, the location had little outside access other than by pack mule and an occasional rather difficult stage ride.

Two railroads converged and interchanged at Beatty: the Las Vegas and Tonopah RR (LV&T) and the Bullfrog Goldfield RR (BG RR).

The LV&T climbed a steep grade out of Beatty for roughly six miles to the silver mines of Rhyolite and Bullfrog. The line then proceeded north roughly 60 miles to the gold mines in Goldfield, finally continuing another 30 miles to the silver mines in Tonopah.

2. Floor plan of the full garage showing the railroad area, the work bench area, and the useable garage.

The BG RR interchanged with the Tonopah and Tidewater RR (T&T), connecting with their track that ran south to the borax mines at Death Valley.

From there, the BG proceeded south to cross the tracks of the San Pedro and Salt Lake (Union Pacific) route at Crucero. Finally, the BG terminated at an interchange with the AT&SF at Ludlow, California.

3. The layout room with the modules frames in place, before adding the the top skin and center-of-the-peninsula backdrops.

4. Roadbed and spackle with the first backdrop added for the city of Tonopah.

This southern BG route opens up connections to Los Angeles – and to the mid-west and east beyond – crossing the continental divide at a typically snow-free low elevation – a real operational plus.

From a modeling standpoint, this route could include traffic from the midwest that came by ship or river boat. The southern continental divide route could also be attractive to passengers,

5. The station at Tonopah with the Mizpah Mine in the background.

detouring around the cold and potential delays of the Rockies and Sierras farther north.

North of Tonopah, my railroad connects with the Carson and Colorado RR, serving the mines near Bishop, Nevada.

From there it connects to the Virginia & Truckee serving Virginia City, and the Southern Pacific at Reno connecting with the transcontinental route to San Francisco as well as to Salt Lake City and beyond.

REFINING LAYOUT OPERATION

A run from Beatty to Tonopah at a reasonable scale speed on my layout takes about 3½ to 4 minutes. I keep my trains short, five to six cars at most.

I use an 8:1 fast clock so every 15 minutes represents two hours, but I found the time between stations to be too short.

To solve this, I connected the mainlines of the two yards to allow running laps.

Beatty to Rhyolite is one lap, Rhyolite to Goldfield is two laps, Goldfield to Tonopah is an additional one lap. My scale time for a transfer run covering the 90 miles from Beatty to Tonopah becomes roughly 3 hours and 5 laps.

Trains don't stop while completing a lap until they arrive at the next station, other than to wait for an opposing train.

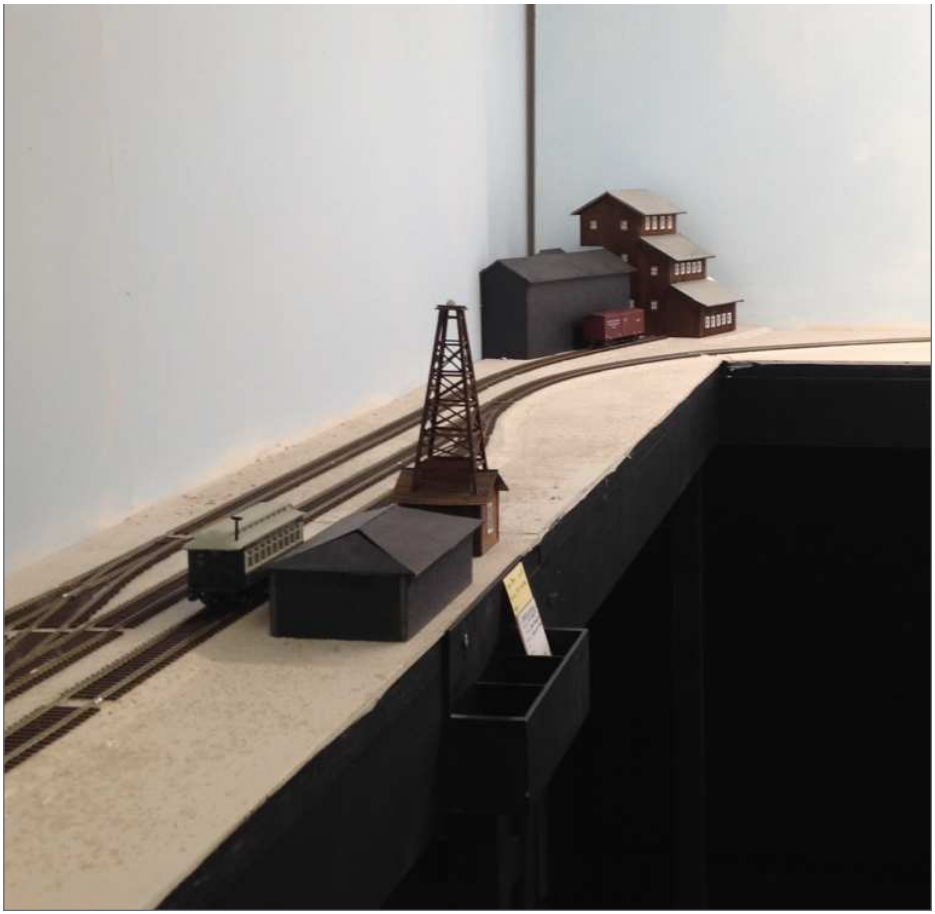
So I get double duty from the mainline by using it for laps, but I still have point-to-point operation between Beatty and Tonopah. The two yards share the turntable to turn engines.

A toggle I can throw permits me to choose either DC or DCC operation, as I have some nice old brass engines I enjoy.

I also have a battery-powered dead rail locomotive that came in handy before completing any layout wiring.

I like that my modules are reusable and movable, and since the track is only nailed in place, I have no waste if I take it up to make changes.

I also have a designated place for my workbench, plus I can still park a car in the garage! ☑



6. Goldfield with mockup of station and mine.

MICHAEL VESETH

Mike lives in Ventura, CA where he owns an insurance agency. When not working on his trains, he tries to stay active in outdoor sports, including windsurfing, cycling, and golf.

Mike has a BA in Earth Science from UC Santa Cruz, and a MS in Geology from San Diego State.

Mike and his wife have been married 26 years. ■

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Model a Ready-Mix cement plant

Model Railroad Hobbyist | July 2020

RATE THIS ARTICLE

Evan Neubee uses an on-the-fly hybrid building approach ...

On my N scale I&M Rail Link layout, I have a small peninsula depicting a Mississippi River barge loading scene.

Since the peninsula gets its support from the ceiling rather than the floor, I have a 2x4 support post near the end of the peninsula. To make the support less conspicuous, I thought building a structure around the base of the support would be just the thing.

Ready-mix cement plant | 2

Just down the road from my employer stands this concrete ready-mix structure [1]. It has unusual proportions because the configuration has the loading bins for raw materials enclosed inside the building, rather than on top of or beside it.

Being tall and narrow, it seemed to be a good fit for the location on the layout, and it fits in visually with the adjacent industries.

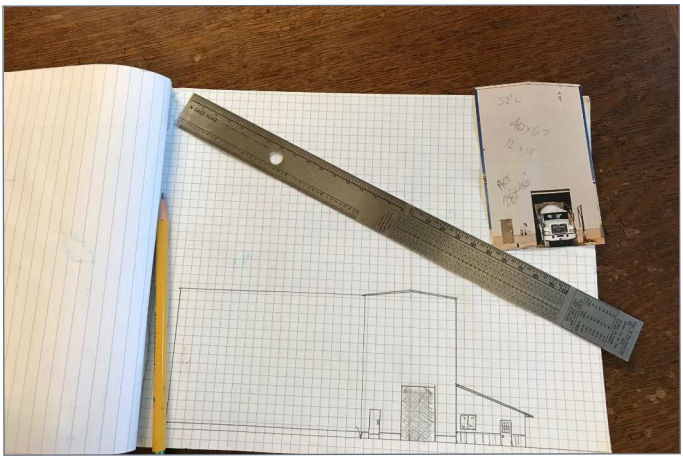
For this structure project, I used what I call a "hybrid building approach." This involves using many different building materials, including foam board, styrene, wood, and laminated photographs for some building details.

1. A unique ready-mix plant with enclosed silos is the basis for this project. The narrow and tall structure fits the bill for disguising a support post.

Follow along as I walk through the design, build, and assembly process. Sometimes on a project like this, I tend to "wing it" rather than plan everything out in advance.

This may not be the approach for everyone, but it can make the project interesting!

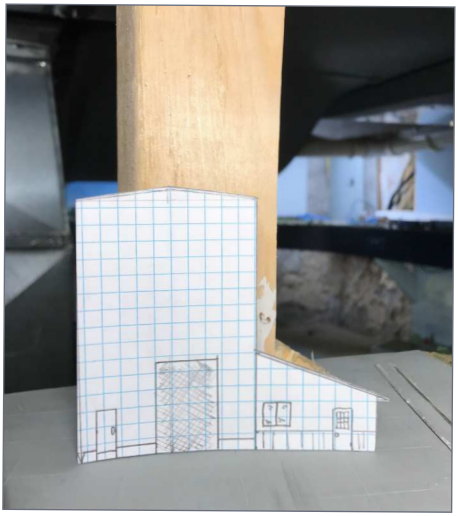
2. I made this initial mockup structure as small as possible without modifying the support post. After creating the mockup, I used quick-set drywall mud to model the concrete pad surrounding the building. I painted the pad with a custom blend of economy acrylic paints I had on hand.



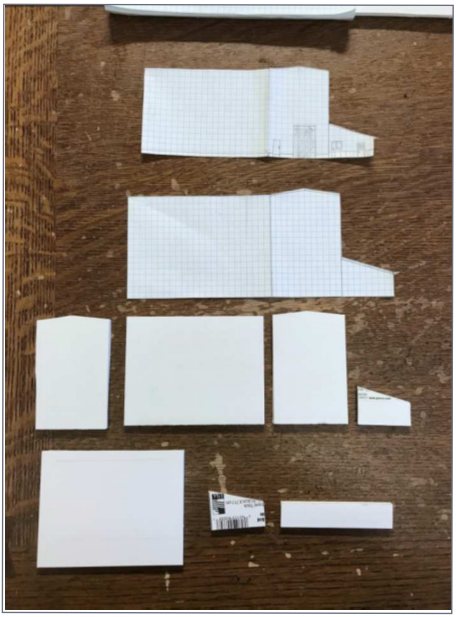
3. Being happy with the initial concept mockup, I sketched some scale drawings. I estimated the building size using an assumed garage door width of 12 feet, and proportioned everything else from there using photos.

4. After creating scale drawings, I realized the original mockup was way too big, and the post was going to have to be trimmed to get a better representation of the structure. I used a jigsaw to trim the post. Have a helper hold a shop vacuum nozzle up close to reduce flying dust while cutting.

5. I had to hand-trim the bottom of the post with a chisel because the jigsaw wouldn't cut down this far. A hand saw would also work here. Since I had already made the concrete pad (poor planning on my part), I had to be careful not to get into the plaster and chew it up. Of course I had mixed a custom color for the cement, so touchup would have been difficult. More poor planning!

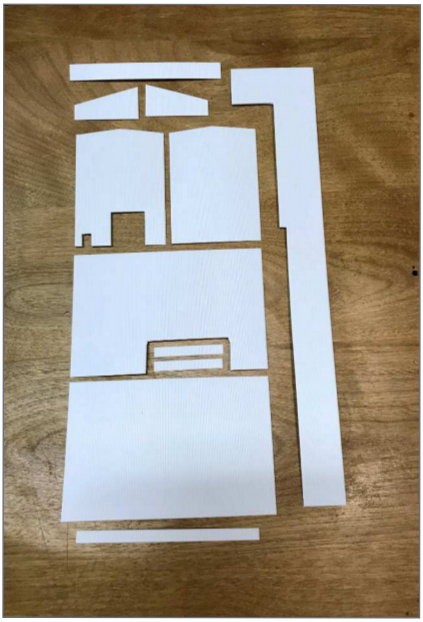


6. Next, I mocked-up the scale drawing with the post. Interestingly, the shape of the building fits the trimmed post shape quite nicely. The building is on a skew with the post, so the actual size of the building was a touch small. I also planned to use foam-core for the building structure, so an additional 3/16" on each side was necessary to clear the post. I opted to scale-up the building slightly to address these issues.

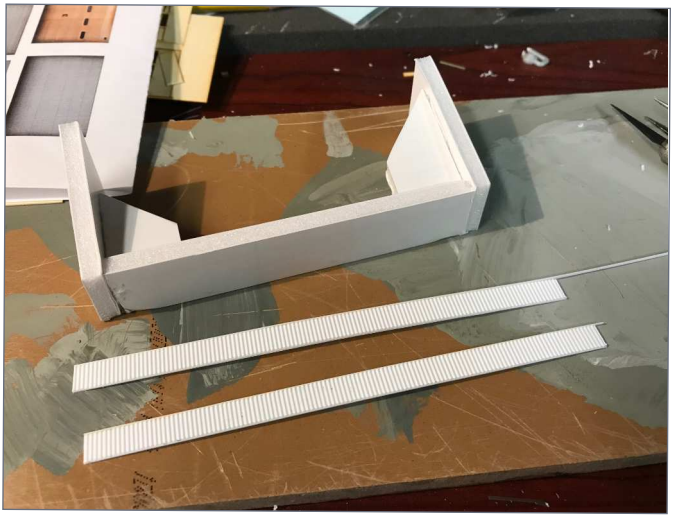


7. At the top is my original 1:160 scale drawing, and below that the revised drawing with a size increase. Under that are the foam-core components of the main structure. A note on cutting foam core: I use a hobby knife, but I always cut with a fresh sharp blade. A dull blade will tear and pull the foam out in chunks, leaving a poor-quality cut. Final assembly would have to happen after all of the wall detailing and painting was complete.

8.Next, I used a hot-glue gun to assemble the foam-core wall sections. I made various gussets from foam-core scrap to strengthen the corners and keep them square. I found it a bit tricky to determine the best way to assemble this around the post. I opted to split the lean-to section off with one main wall section, and put the other three wall sections of the tall building together in a “C” shape.



9. Originally, I had planned to overlay the foam with printed photos of the actual building. I am not the most fluent with Photoshop, so switched instead to using Evergreen #4526 0.040" corrugated styrene sheet. Things worked out nicely with minimal waste material, and all building siding components came from a single sheet.



10. For the wainscoting around the office lean-to section, I topped strips of the corrugated siding with 0.010" x 0.030" styrene strip. After the glue dried, I cut these sections to the proper length.

11. I painted the siding components with Ace brand spray paint, matching the colors as closely as possible with colors I had on hand. Next, I glued the siding components onto the foam-core shell using an Elmer's School Glue Stick. I find using this glue to be easy. It applies in a purple color, allows for some final adjustment after the parts are applied, and dries strong and clear.

12. For the details on the lean-to structure, I opted for photo cutouts of the real structure, printed with a color laser printer on label paper. The three windows on the side are all identical, but appear different because of various blind and screen configurations, adding some interest. I also printed out the electrical panel, which looks decent, but lacks depth. After applying the air conditioner sticker, I decided it looked to fake, so I took it off.

13. Here is the final lean-to section, fastened to the main wall with hot-melt glue. This section is ready for installation on the layout. You can see the additional end doors, also made from photos and labels.

14. For the main building details, I used conventional detail items. The personnel door came from Tichy, and the overhead door from an RS Laser Kits #3984. I had to splice an additional panel to this door to get the correct height. The base of this structure has an exposed concrete footing. I made this from painted water color paper, cut in appropriate height strips. This provided a little more texture than plain styrene, a tip I picked up from an old *Model Railroader* article. The square panel on the side wall needs a cutout for the material feed conveyor.

15. This photo shows my final building mockup. After placing the two building sections on the layout, I created two roof template sections from paperboard, and with trial and error, developed the cutouts for the post.

16. With some patience and several tries, I created templates for the roof panels that satisfied me. I traced these profiles onto corrugated siding sheet for the final roof panels. I painted them white.

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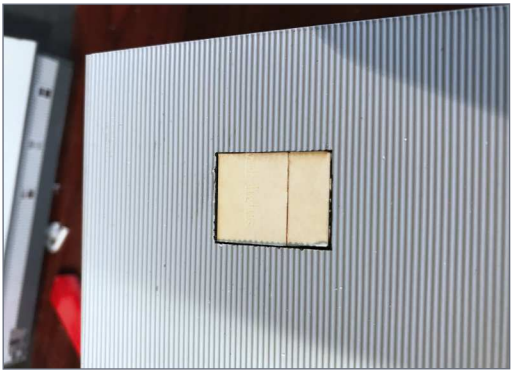
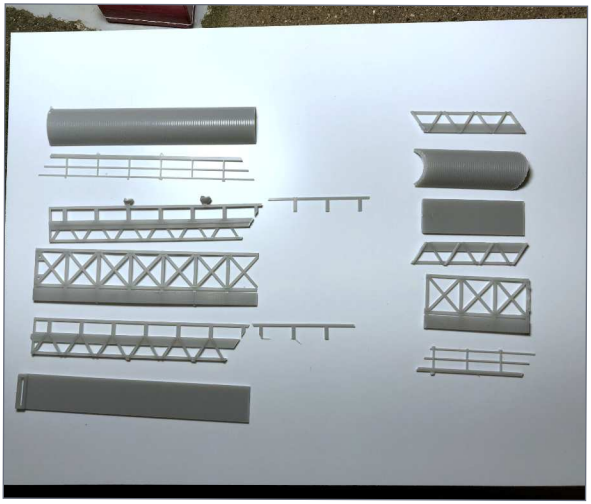
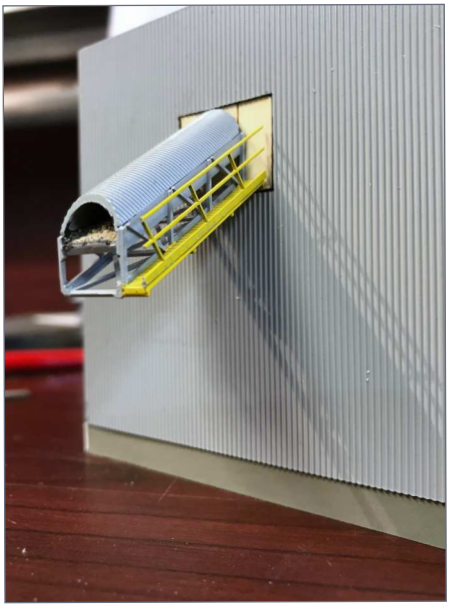


17. The inlet panel where the conveyor protrudes out of the main building is covered with what appears to be plywood on the prototype structure. I cut the opening after mocking-up the building, which proved a little tedious. For the wood, I used some edge scraps from the RS Laser-door kit. This material has adhesive on the back, making installation easy. After trimming and sanding, I stuck them in place onto the foam-core. Prior to installation of the wood inserts, I painted the edges of the opening black.



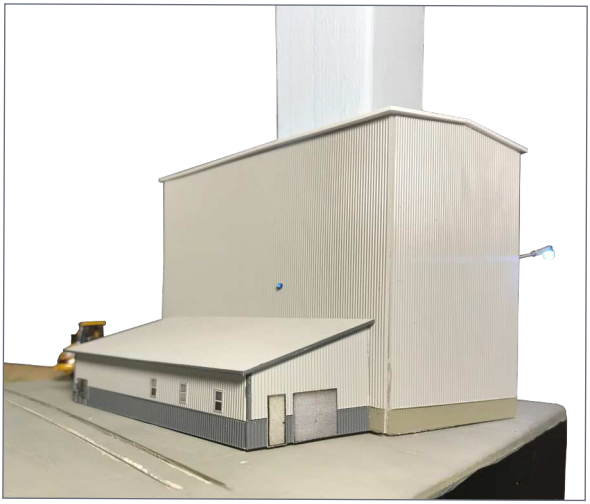
18. For the conveyor, I opted to model just a short section since this side of the structure is very close to the fascia. I used a conveyor section from Walthers #3247 Western Flood Loader kit. I cut all of the pieces to length, and mitered them using the side lattice structure pieces as a guide for the angle. I'm using the parts on the right for the model.



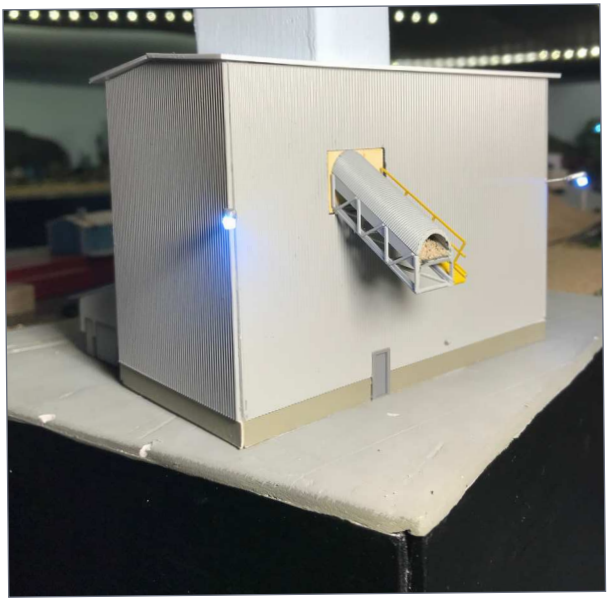
19. I assembled the main conveyor section and painted it gray, leaving the railing off prior to painting. Next, I masked and painted the walkway and railing piece safety yellow. To add some interest, I applied some goopy black paint onto the conveyor, and sprinkled it with fine gravel sifted from my driveway. Then I installed the railing and glued the whole assembly onto the building with CA.

20. As an afterthought, I decided to install security lights on two corners of the building. I had recently found some 1:150 scale working lamp posts on eBay for a great price, so I modified these. I removed the LEDs and cut the lamp post base off as shown. Then I straightened the neck a little, and reinstalled the LED. Next, I used some clear sprue material left over from a kit to fashion the conical lenses common on this type of light.

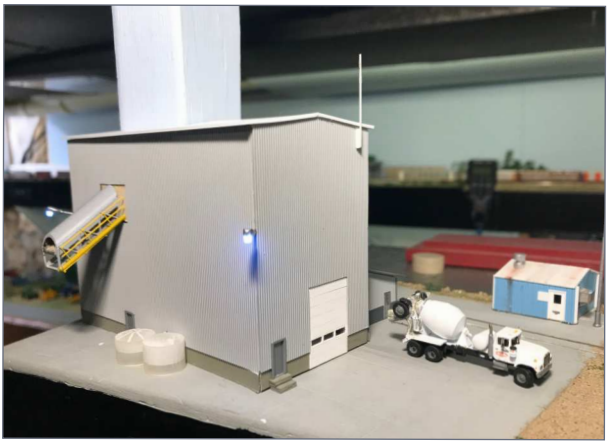
21. I drilled small holes through the siding and the foam-core and carefully inserted the lights. I also drilled a small hole in the layout base for the wiring. I purchased a power supply from Digi-Key, cut the end off, and wired all the connections. Also notice I painted the post sky-blue to match my backdrop.



22. I hot-glued the two vertical joints and carefully assembled the building. Hot glue doesn't give you a lot of work time, but it's easy to redo if it isn't perfect. I used hot glue for the roof section as well. If you look closely, you will see a glue blob still sticking out of the joint. I trimmed this off after the glue cooled.



23. To better hold the building in place, I cut the heads off small brads, and inserted them into tiny holes drilled in the foundation. I pressed the building down onto the brads, pushing them into the foam-core centers of the walls.



24. Here you can see the front final assembly view. Final detailing includes front steps made from balsa, a radio antenna made with styrene rod and leftover parts from a BLMA tower kit, and two 3D-printed water/chemical tanks used for different concrete blends. I fashioned the mixer truck from a combination of 3D-printed parts and a GHQ kit.

25. Wrapping a support post with a structure is not a new idea. It provides greater visual interest while keeping the post from detracting from the overall layout experience. Overall I am pleased with how this turned out.

26. I used the N scale version of these door images. I chose not to use the overhead door on the front of my building, but this is what it looks like. Other doors I have photographed are also included. Visit the bonus downloads [mrhmag.com/magazine] and give the “hybrid building” approach a shot! ☑

Evan Neubee

Evan Neubee derives his pen name from his hometown railfan headquarters, the Avenue B Crossing on the CNW mainline. Originally a CNW modeler in HO scale, he has reentered the hobby after a 15-year hiatus, this time putting his efforts toward the I&M Rail Link in N scale.

"N scale for me was an obvious choice – space was somewhat limited, and starting fresh, I wanted to be able to run longer trains than what HO permits in my space", says Evan.

Evan finds factory-painted items in the IMRL paint to be few and far between.

"I enjoy the painting, patching, and weathering of rolling stock. It's a fun challenge to see what I can find for acceptable pre-painted models that are appropriate for patched-out IMRL units."

The I&M Rail Link (IMRL) was a short-lived regional railroad in the Midwest, operating from 1997 to 2002. Its owner, Washington Corp, shares the same paint scheme as sister road Montana Rail Link.

Evan says, "Montana Rail Link was one of my favorite roads, but living in the Midwest as a teenager, I had little hope of ever railfanning there. When IMRL came along, it was sort of a dream come true. I spent many hours railfanning the IMRL along the Mississippi." ■

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RATE THIS ARTICLE

Get perfect radius curves with ME flextrack

Youtube modeler **InvertLogic** demonstrates a clever way to get precise curves in MicroEngineering flex track. ME flex track has been notorious among modelers for being difficult to bend into curves. Well, no more! Watch this demonstration video to see how easy it is to do. This method works best in the smaller scales such as S scale or smaller. Broad curves (60″ radius or more) in O scale may be more of a challenge with this method. ■

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JULY NEWS column

Model Railroad Hobbyist | July 2020

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

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INDUSTRY NEWS

M.T.H. Closing

Mike Wolf, president and founder of **M.T.H. Electric Trains,** has announced plans to close his company and retire in 2021. New items featured in current MTH catalogs will be available through April 2021 and will carry a limited one-year warranty supported by M.T.H. and its Authorized Service Centers. After May 2021, plans call for the network of Authorized Service Centers to provide warranty coverage through April 2022.

Mike Wolf entered into the train business at the age of 12, when he began assembling and selling trains for Williams Trains, which had begun producing reproductions of vintage Lionel equipment in the early 1970s. By 1980, a thriving mail order business operating as Mike's Train House was selling Williams trains and parts out of Mike's bedroom in his parents' home. When Williams decided to end its line of Lionel reproductions, Wolf bought the tooling and continued

building the replicas. M.T.H. also sold Lionel products and by the early 1990s had become one of the largest mail-order Lionel dealers in the nation. In addition to O gauge models, M.T.H. later offered HO, S, and G scale products.

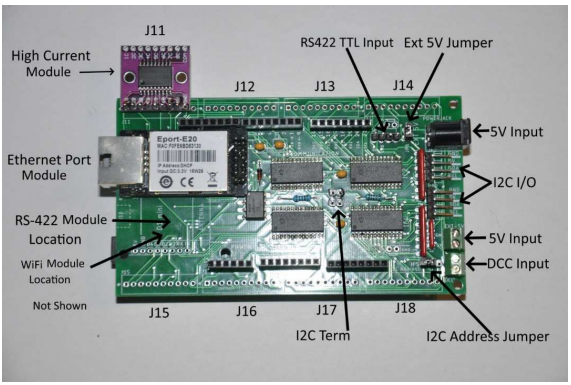
Over the years Wolf and his company have survived court battles with Lionel, Samhongsa, Korea Brass, Quantum Sound Industries, and the Union Pacific Railroad. Wolf indicated he is considering various options and buyers for his company including the possibility of a new company organized and owned by current MTH employees.

CLUB CARS

The **Chesapeake & Ohio Historical Society** is offering a limited-edition George Washington 7-car set in N scale. The premier passenger train on the Chesapeake & Ohio Railway, the George Washington was one of the first trains with all air-conditioned cars. Produced by Micro-Trains Line, the N scale heavyweight cars are suitable for the postwar version of the George Washington. The set includes a mail baggage car, a baggage car, a paired-window coach #725, a 10-1-2 sleeper Jack Jouett, a 12-1 sleeper Marquis Lafayette, diner Gadsby's Tavern, and a 3-2 open observation car named American

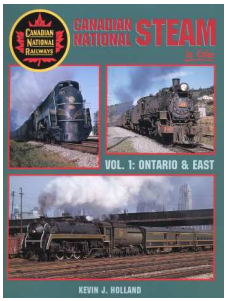
Revolution. A booklet on the train by the C&O Historical Society is included. For more information visit the C&O Historical Society at chessieshop.com.

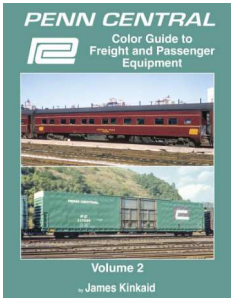
NEW PRODUCTS FOR ALL SCALES



Model Railroad Control Systems has introduced a new CPMega Node with a DCC Accessory Decoder option running C/MRI. The CPMega uses an Arduino Mega running C/MRI with 56 built-in input/output lines. An available option board named the Mega-I/O Card has 64 additional I/O lines allowing for a total of up to 184 I/O lines per node. There is also an optional High Current Module capable of handling 50V at 500ma. The CPMega can be controlled via Ethernet, RS422, or WiFi and is supported in JMRI Version 4.21, Visual Basic 6, C++, and other programming languages. The DCC Accessory Decoder option can run C/MRI or a DCC Accessory Decoder, controlling up to 184 turnouts per node. For more information visit modelrailroadcontrolsystems.com.

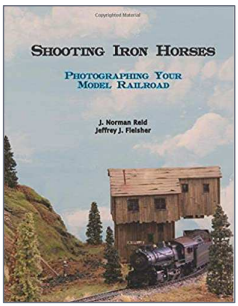
New publications from **Morning Sun Books** include *Canadian National Steam Volume 1,* which covers the final decade of CN steam as seen through the eyes of some of North America's most talented color photographers. In this volume editor





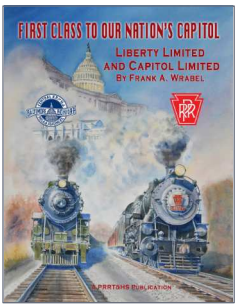
Kevin Holland focuses on steam operations in Newfoundland, New England, Quebec, and Central Ontario.

Also new is *Penn Central Color Guide to Freight and Passenger Equipment, Volume 2,* by James Kinkaid. This second volume features rare and obscure passenger and freight equipment, including PC-era cars from the PL&E, B&A, IHB, P&E, and T&OC. For additional information contact a dealer or visit morningsunbooks.com.



Norman Reid and Jeff Fleisher have released a book titled *Shooting Iron Horses: Photographing Your Model Railroad.* Intended for model railroaders who want to take better photos and videos of their layouts, the book includes information on setting up photos, avoiding common mistakes, composing effective scenes, lighting trains, and other useful techniques. Detailed instructions on using focus stacking to achieve a photo that is in focus from front to back are included. The 75-page full-color paperback book is available from www.amazon.com.

New from the **Pennsylvania Railroad Technical & Historical Society** is *First Class to Our Nation's Capitol – Liberty Limited and Capitol Limited.* Written by Frank Wrabel, the book covers the competition in first class travel between Chicago and

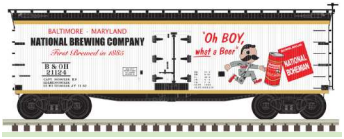


Washington DC between the PRR and B&O. For more information visit the PRT&HS website at prrths.com.

MULTI-SCALE PRODUCT NEWS

BPH Enterprises, after a four-year hiatus, is re-introducing its line of SceniKing Roll Outs interconnectable photo backdrops. "Senior" Roll Outs are 6' x 16.5", with 15 N scale, 54 HO scale, 19 S scale, and 32 O scale scenes available. All scenes are digitally printed with long-life inks on glare-free 24-pound paper with identical sky-top coloration. Sky scenes with clouds and deepening color are available to extend the backdrop upward. Structures on the backdrops are scale-sized, so they can be used as trackside structures. New "Junior" Roll Outs, available in HO scale, are 6' x 8" and include series such as "Farm Belt" that can be used to created continuous one-crop fields or multiple crop areas. For more information visit sceniking.com.

O SCALE PRODUCT NEWS



Atlas O has announced a Summer Beer program covering beer cars and tractor trailers in multiple scales. Delivery is planned for the first quarter of next year. The O scale model is based on 40' wood refrigerator cars built by Pullman for the Northern Refrigerator Car Co. in 1930. Decorating schemes include Old Milwaukee, National Bohemian, Lucky Lager, Jax, Eastside, and Blatz Beer. The model will also be available decorated for Producers Produce, Marshall Kirby Frozen Eggs, Milwaukee Road Ice Car, ART Ice Service, MKT, and Rath's Black Hawk Bacon.

Features include rooftop ice hatches, USRA-style fish belly underframe, vertical brake shaft, separately-applied door hinges, handles and latches; operating doors, and 40-ton Bettendorf-style sprung plain-bearing trucks with metal wheels.

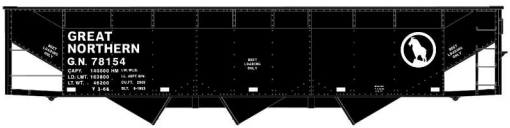
The release includes O scale 40' steel refrigerator beer cars with plug doors. Features include see-through running boards, and separately applied ladder, brake wheel, and brake lines. Decorating schemes will be National Bohemian, Old Style, Rainier, Schaefer, Schlitz, and Pabst Blue Ribbon Beer.

Atlas' beer program includes O scale 45' Pines trailers decorated for Stroh's, Pabst Blue Ribbon, Old Style, Old Milwaukee, Lucky Lager, and Schlitz Beer. For additional information contact a dealer or visit atlasrr.com.

Nick & Nora Designs has introduced new products in their line of O scale Peel & Stick Shingles. New designs include diamond pattern shingles, scalloped shingles, and half-cove shingles. Each style is available in dark gray, steel gray, brown, burgundy, and black. For more information visit nickandnoradesigns.com.

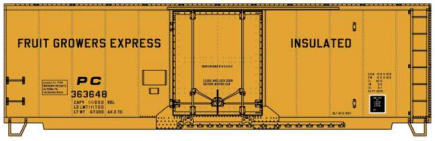
HO SCALE PRODUCT NEWS

New rolling stock kits released by **Accurail** include this 36' Pittsburg Shawmut & Northern Fowler wood boxcar. The HO scale model is based on a prototype built in 1930.

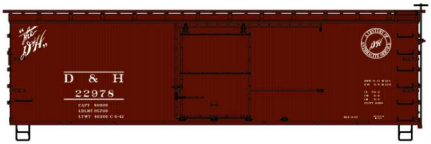


The Great Northern Railway stenciled Beet Loading Only on the side of this 70-ton triple-bay hopper. Accurail's model represents a steel car built in 1953 with offset sides.

The decorating scheme on this 36' D&RGW double-sheathed wood boxcar includes a Royal Gorge Route herald. According to the data under the herald the car was built new in 1913.



This HO scale 40' insulated steel boxcar decorated for Fruit Growers Express/Penn Central is based on a prototype built with plug-doors in 1957.



The slogan inside the round herald of this 36' Delaware & Hudson double-sheathed wood boxcar proclaims, A Century of Anthracite Service.

Accurail's HO scale kit for this 40' Delaware Lackawanna & Western steel boxcar has a white stripe on the right hand door indicating the car is equipped with special loading racks.

For HO modelers wanting to do their own decorating, Accurail offers this 41' steel gondola painted gray with data only. All Accurail HO scale kits include Accumate knuckle couplers and appropriate trucks with plastic wheelsets. For additional information contact a dealer or visit accurail.com.

New HO scale **Athearn** models recently shipped to dealers include Union Pacific ICC cabooses, high-cube boxcars with double plug doors, 40' ballast cars, and FMC 4700 covered hoppers. New locomotives include RS3, SDP40F, and GP39-2 diesels, and Union Pacific's 4-8-8-4 Big Boy.

Athearn's May 2021 production schedule includes General

Electric's P42DC passenger diesel unit in four Amtrak decorating schemes including Heritage Phase II (above) introduced in 1974. The thin white pinstripes were eliminated in the 1976 Heritage Phase III scheme (below) and the red and blue bands were separated by a reflective white band.

The Heritage IV scheme (left center) with a wide blue band and two thin red stripes was introduced in 1993.

Amtrak launched a new logo and new paint scheme in 2000. The thin red reflective stripe at the bottom of the body and the wide blue band at the top became known as Phase V. Only Amtrak's Genesis locomotives had the wavy bottom on the blue band.

The 2021 release will include a VIA Rail Canada locomotive. Via units feature a unique nose-mounted spotlight as well as prototypical standard and emergency horn sets. Amtrak units will have either the as-built or the rebuilt (bolted on) nose, and several different styles of antenna arrays, ranging from the simple as-built version to the complex arrangement of the Illinois service units. All versions of Athearn's P4DC will have LED lighting, operating ditch lights, and red marker lights.

DCC sound equipped versions of Athearn's P4DC will have a Soundtraxx Tsunami2 sound decoder and dual 28mm speakers. The ditch lights will alternate when the horn is activated. The marker lights will be independently-controlled and directional.

A Genesis GP15-1 road switcher is listed on Athearn's May 2021 production schedule. A spotting feature of the 1,500 horsepower GP15-1 is the large radiator intake section similar in appearance to the system EMD developed for the Southern Pacific and D&RGW SD40/45T-2 tunnel locomotives.

Road names for the GP15-1 will be Union Pacific, SLSF Frisco, Chicago North Western, BNSF (two schemes), and GMTX Locomotive Group (ex-CR).

Regional connector roads include Ventura County Railroad (ex-CNW), California Northern (in both green and orange schemes), and San Joaquin Valley Railroad (ex-CR).

Features on the Genesis series GP15-1 include uncoupling levers, flexible rubber MU and trainline hoses, cab interior, walkway tread, Celcon handrails, windshield wipers, lift rings, wire grab irons, sander lines, LED lighting, and a detailed fuel tank with fuel fillers, fuel gauges, and breather pipes. DCC models will have a SoundTraxx Tsunami2 decoder and dual cube speakers. DC models will have a 21-pin NEM connector to facilitate installation of an aftermarket DCC decoder.

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VIEW READER COMMENTS

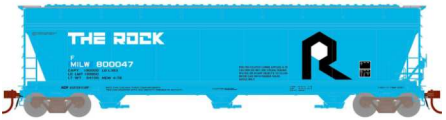

R. Bale

CenterFlow Covered Hopper

American Car & Foundry introduced the three-bay CenterFlow covered hopper in the mid-1960s. The design was targeted to railroads in need of replacing their aging 40' grain service boxcars with a hopper car that could operate within the tighter Plate B clearances of light branch lines and industrial spurs. AC&F's Centerflow filled the bill with an innovative rounded body that provided structural strength, eliminating the traditional center sill, and making gravity unloading easier. Centerflow hoppers of various capacities were developed with the 4600 cubic foot version being one of the most popular.

New Athearn products scheduled for availability in May, 2021 include a Genesis series ACF 4600 cu. ft. covered hopper. Athearn will offer the 4600 in three body styles: early version with high side ladder and brake wheel and a single side stiffener; mid production with the brake wheel mounted low, short side ladders at both ends, and a single side stiffener; and a late post-1971 version with double side stiffeners.

Road names will be Burlington Northern, The Rock, SSW-Cotton Belt, Chicago & Eastern Illinois, Family Lines System, and Missouri Pacific. Ex-Rock cars will be available patched for Milwaukee Road and FURX. Road name variants include outlet fixtures and round or trough-style hatch covers.



Additional features on this Genesis HO scale model include a photo-etched metal roof walk,

separately applied wire grab irons and stirrup steps, separate brake cylinder, valve and air reservoir with wire brake plumbing; and 100-ton trucks with 36'' machined metal wheels and rotating roller-bearing caps.

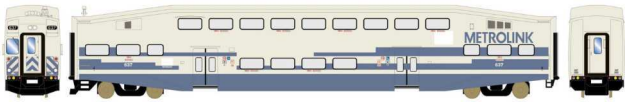
Athearn's May 2021 delivery schedule includes ICC steel bay window cabooses decorated for CSX and B&O Chessie System. The feature-laden models will be available with optional DCC, lights, and sound. Three CSX cabooses are in this release with each having unique details. Two road numbers will be available for CSX with Operation Redblock emblazoned on one side and Operation Lifesaver on the other. CSX removed the window screens, generator and markers on these cabooses and used them as shoving platforms. An early 1990s CSX caboose will be decorated in the Spirit of Grafton paint scheme.

ICC cabooses from the 1974–era decorated for B&O Chessie System will feature a Dayco axle generator with notched underframe, angled window screens, reflectors on end platforms, and an overhanging X-panel roof. Chessie C-3771 caboose with Safety Is Not A Part Time Job slogan will be decorated in gold and silver paint.

Features on all road names on this Genesis ICC caboose include a toilet drain, ash pans, an axle-driven generator, interior seating for crew figures, see-through end platforms and steps, flush window glazing, formed wire grab irons, etched metal coupler

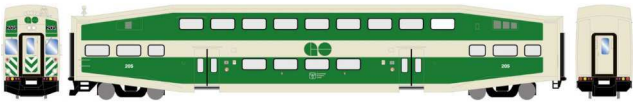
platforms, coupler lift bars, trainline and brake hoses, and full underframe detail including air brake reservoir, control valve, and brake cylinder with plumbing and brake rod details.

Lighting features include LED interior lights, single or dual roof markers or end-mount marker lights as appropriate to the prototype road and era. Sound equipped cabooses will come with a Soundtraxx Tsunami SoundCar decoder. Depending on the practice of the prototype road being modeled the cabooses will have 33'' machined metal wheelsets fitted to plain-bearing or roller-bearing trucks with rotating bearing caps.

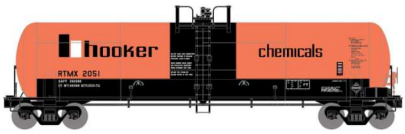


Athearn has scheduled another release of Bombardier Commuter Cars for next May. Decorating schemes will include Los Angeles Metrolink in standard paint as well as the distinctive Stay Alert-Stay Alive, and Bikes promotional wraps.

Additional road names include Utah Frontrunner, Altamont Commuter Express, and Altamont Corridor Express.



Canadian schemes include Montreal's Agence Métropolitaine de Transport and two Toronto GO Transit schemes. Noteworthy details include tinted windows, weathered grilles, diaphragms, and Bombardier trucks with outside brakes. A minimum 22'' track radius is recommended.



HO scale 20,000 gallon acid tank cars, based on a prototype built by Richmond Tank Car, are included in Athearn's May 2021 production schedule.

Decorating schemes will be Hooker Chemicals\British Columbia Rail, Union Tank (two schemes), TILX/Dupont (two schemes), and Allied Chemical.

Athearn's Ready-to-Roll HO scale tank cars will have 70-ton or 100-ton roller-bearing trucks with 33''or 36'' machined metal wheelsets depending on the practice of the prototype being modeled. For additional information contact a dealer or visit athearn.com.

Atlas has announced plans for a Summer Beer program covering beer cars and tractor trailers in multiple scales. Delivery is expected during the first quarter of next year. For HO modelers, a series of 40' wood beer reefers will be available decorated for Old Milwaukee, National Bohemian, Lucky Lager, JAX, Eastside, and Blatz.

Additional wood reefers will be available for Producers Produce Co, and Marshall Kirby Frozen Eggs. Reefers designated for ice service will be available for ART and Milwaukee Road.

The release includes 40' steel refrigerator beer cars with plug doors decorated for National Bohemian, Old Style, Rainier, Schaefer, Schlitz, and Pabst Blue Ribbon.

Steel reefers will also be available for Cotton Belt, Fruit Growers Express, Burlington Northern, Chicago Great Western, Western Maryland, and Jersey Central Lines.

Steel reefers will also be available for Cotton Belt, Fruit Growers Express, Burlington Northern, Chicago Great Western, Western Maryland, and Jersey Central Lines.

In addition to Stroh's Beer, HO scale Ford tractor cabs detailed with rubber tires and square fuel tanks with built-in steps will be available decorated for Schlitz, Pabst, Old Style, Old Milwaukee, and Lucky Lager.

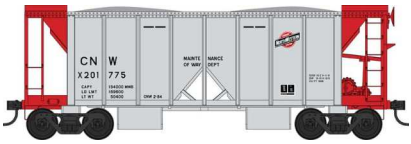
Atlas's beer program includes 45' Pines trailers decorated for Lucky Lager, Old Milwaukee, Old Style, Pabst Blue Ribbon, Schlitz, and Stroh's Beer. For additional information contact a dealer or visit atlasrr.com.

Berkshire Valley Models has introduced three new models in its line of HO scale wagons. The laser-cut and white metal kits include a buckboard, a stake wagon, and a water/sprinkler wagon. Horses and drivers are available separately. For more information visit www.berkshirevalleymodels.com.

Bowser has announced plans to produce a 70-ton ballast car with side discharge gates. The HO scale model is based on a

1958-era covered hopper that has been modified with shortened roof sections and the installation of four ballast chutes. Bowser is producing the HO scale model with closed and open sides.

Ballast cars with closed sides will be available for Milwaukee Road, Alaska Railroad, Conrail, Grand Trunk Western, Penn Central, Burlington Northern, and Wisconsin & Southern.



Cars with open sides include Chicago North Western, Detroit, Toledo & Ironton; Bessemer & Lake Erie, and CSX. Reservations are due by July 10, 2020 with delivery scheduled for early next year. For additional information contact a dealer or visit bowser-trains.com.

R. Bale

IDENTIFYING EMD'S F3 AND F7 DIESELS

Spotting features of the F3, built from 1946 to January 1949, are the chicken wire grilles covering the air intakes along the top of the body. The F7, which began production in February 1949 and continued until the end of 1953, can be identified by the four square louvers between the portholes and the steel grille, supplied by the Farr Corporation, that extends across the top of the side. Both the F3 and F7 had two portholes on each side.

Broadway Limited has released HO scale models of EMD's iconic F3 and F7 diesels in several classic decorating schemes. Road names for the F3 include Pennsylvania Railroad, Santa Fe (Warbonnet), Chicago, Burlington & Quincy, Southern Pacific (Black Widow), Union Pacific, and Great Northern.

Road names for Broadway Limited's F7 include Southern Pacific (Bloody Nose), Santa Fe (Warbonnet), Baltimore & Ohio, Denver & Rio Grande Western, New York Central, Northern Pacific (Loewy design), Pennsylvania Railroad (single stripe), and Milwaukee Road.

Buying options include individual A units, A units paired with an unpowered B unit, and individual powered B units. In addition to the road names mentioned, undecorated models are available for both the F3 and F7.

The HO scale model come with Paragon3 sound with Rolling Thunder that functions in both DC and DCC environments. For more information contact a dealer or visit www.broadway-limited.com.

Con-Cor is selling an HO scale track cleaning system consisting of a Bachmann heavyweight track cleaning chassis with metal wheels, a Con-Cor 40' boxcar body, and a 1 ounce bottle of

Labelle's 105 Track Cleaner. Ten road names are available including Pennsylvania Railroad, Burlington Northern, REA Express, Denver & Rio Grande Western, Delaware & Hudson, Hormel, Soo Line, Union Pacific, and two Santa Fe schemes. For additional information, including suggestions on how to maximize use of the system, visit www.con-cor.com.

Fos Scale Models has released two new HO scale craftsman-type structure kits. River Bend Chapel includes a church with a distinctive aged copper bell tower, and a small cemetery complete with a coffin and 11 engraved tombstones. The chapel structure features laser-cut walls and windows, and metal detail parts. The scenery and figures in the illustration are not included in the kit.

The second new HO scale kit from Fos builds into a 28' Work Barge and a small Ferry boat. The work barge features a pilot house and steel hull, along with numerous details to clutter the deck. The waterline kits feature laser-cut wood hulls, laser-cut parts, and metal and plastic detail parts. Vehicles and figures not included. For additional information visit fosscalemodels.com.

New HO scale models from **InterMountain Railway** include 10'6" modified 1937 AAR 40' boxcars.

Road names include Rock Island, New York Central, Fort Worth & Denver, Missouri Pacific, Erie, Erie Lackawanna, Southern Railway, Union Pacific, Chicago & North Western, Canadian Pacific (two schemes), Missouri-Illinois, Gulf, Mobile & Ohio; Toledo, Peoria & Western, Duluth, South Shore & Atlantic, and Soo Line.

The ready-to-run model comes with metal knuckle couplers, and 50-ton Bettendorf trucks with 33" machined metal wheels. For additional information contact a dealer or visit intermountain-railway.com.

New HO scale models available from **Kadee** include this 50' PS-1 boxcar decorated for Grand Trunk Western. The car displays GT's The Good Track Road slogan.

Kadee is selling this unlettered 50-ton AAR twin-bay coal hopper with offset sides. The HO model features Wine latches on the doors of the discharge bays. The ready-to-run model is painted black and comes with a coal load. The same model is available with Enterprise latches. For additional information contact a dealer or visit www.kadee.com.

Monster Modelworks, closed since early 2018, is back in business on a limited basis. Known for its laser-etched structures and structural details, company founder, Jimmy Simmons, has advised that he will slowly reintroduce new items as well as many of the popular products previously offered by Monster Modelworks. A 12''x 4'' laser-etched sheet of HO scale Old Brick is currently available. For additional information visit www.larkspurlaserart.com.

R. Bale

USRA Boxcar

As they attempted to deliver goods to congested eastern ports during the early years of World War I, American railroads found themselves desperately in need of additional, serviceable rolling stock. To solve the problem quickly, the federal government nationalized the railroads under the United States Railway Administration, or USRA. One of the first tasks assigned to the USRA was to develop common designs for new freight cars. Among them was a 40' double-sheathed wood boxcar with a deep fishbelly steel underframe. Starting in 1918, nearly 25,000 copies of the double-sheathed boxcar were built and delivered to 24 railroads throughout the country. The USRA boxcar proved to be a sound design with many continuing in regular service into the 1950s. In later years many were updated with their KC brakes being retrofitted with the newer AB-brake system.

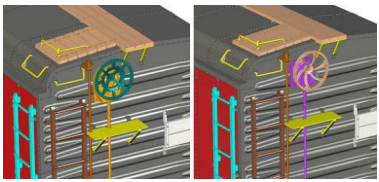
Rapido Trains has released an HO scale model that accurately replicates a USRA double-sheathed boxcar. The ready-to-run model features full underbody detail with separate brake rods and piping, and Andrews trucks with in-line brake shoes and blackened 33'' machined metal wheels.

Models decorated for Boston & Maine, Spokane, Portland & Seattle; and Toronto, Hamilton & Buffalo will be equipped with AB brakes.

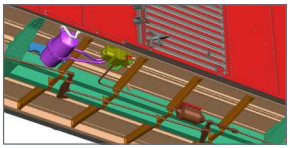
KC brakes will be on cars decorated for Santa Fe, Chicago, Burlington & Quincy: Rock Island, Lackawanna, Great Northern, Minneapolis & St, Louis, Missouri Pacific, New York Central, Pere Marquette, Frisco, and Wabash. Since brake equipment on the prototype cars was not updated all at once, Rapido includes the other style of brake gear with each model. The cars are available individually and in 4-packs with different road numbers.

1943 BUILDER'S PHOTO OF PRR X31A, PHOTO COURTESY OF TED CULOTTA.

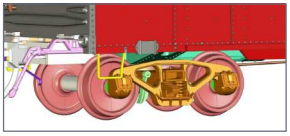
Rapido is booking reservations for a new Pennsylvania Railroad X31A boxcar that promises to be one of the most authentic and highly detailed HO scale freight car models available to date. The new Rapido model is based on one of the most common boxcars seen in America from its introduction in the mid-1930s until well into the 1960s. Nine PRR decorating schemes will be available: five for single doors and four for E31A boxcars with double doors.



Both early Ajax and Equipco brand brake wheels and brake gear housings will be available on Rapido's X31A boxcar.



Rapido's PRR model is based on an early group of X31A cars that had a transverse-mounted main air reservoir.

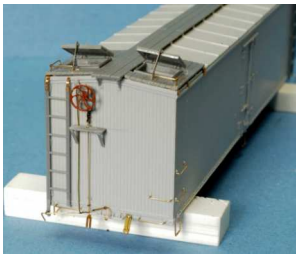


For its new X31A boxcar, Rapido is developing a PRR type 2D-F12 freight truck that has both coil and leaf springs. Decorating schemes and ordering information is available at rapidotrains.com/products/ho-scale/freight-cars/ho-scale-prr-x31a-boxcar.

Rapido is also working on an HO scale version of a Southern Pacific exterior post B-100-40 boxcar as built by Pacific Car & Foundry in 1976. Rapido plans to replicate all of the cars features including full Hydra-Cushion underframe, 12' doors, Car Pac loaders, and the iconic half-height waffle sides. Road names and ordering information is available at rapidotrains.com/products/ho-scale/freight-cars/ho-scale-b-100-40-boxcar.

Most of the original B-110-40 boxcars are still in service today on SP successor Union Pacific as well as on many regional and short lines. For additional information contact a dealer or visit rapidotrains.com.

Resin Car Works has released a new craftsman-style kit for an HO scale reconditioned Pacific Fruit Express R-30/40-9 wood reefer. PFE continued rebuilding older wood reefers through the 1930s with many retaining their original underframes and KC brake systems. Resin Car Works new kit is based on prototype cars bearing the Western Pacific emblem. WP had over 2,600 R-30-9 class cars operating to 1952. They were rebuilt again with almost 900 continuing in service to 1963.



RCW's kit features a one-piece car body and numerous detail parts. Trucks and couplers are not included. For additional information including ordering instructions visit resincarworks.com.

Showcase Miniatures has a 1:87 scale kit for a contemporary U.S. Postal Truck. This kit features a resin body, cast pewter frame and details, etched stainless steel doors and mirrors, water-slide decals, laser-cut glazing, and detailed instructions. The doors can be positioned opened or closed. For additional information visit www.showcaseminiatures.net.

Summit Customcuts has introduced a Modern City Bank Building in HO scale. Including all building parts and signs, the building is laser cut in white and

clear acrylic and self-adhesive micro-plywood. Assembly instructions include photos. The size of the finished kit is 10 9/16" x 6 3/8" x 6 ½". For more information visit www.summit-customcuts.com.

R. Bale

Radial-Course Tank Car

At the conclusion of World War I, production of oil and petroleum products in America had increased significantly thanks to the combination of war-related and consumer demands. In order to move both industrial and consumer products, tank car builders quickly developed innovative new designs. One of the most successful was an 8,000 gallon non-insulated tank car introduced by General American Tank Car. The new design was fabricated with overlapping steel plates resulting in a stair step appearance. The cars are readily identified by the notably different heights between courses and the circumferential rivets that surrounded the tank body. The assembly method was known as radial-course.

Tangent Scale Models has released another production run of its highly-detailed GATC 8,000 gallon general service radial-course tank car. Features of the ready-to-run HO scale model include cast see-through supports above the bolsters, dimensionally-correct hazardous placards, separately applied tank handrail and tank strap details, Kadee couplers, and ASF spring-plank trucks with separate brake beams and 33'' machined wheels.

Decorating schemes include the 1919-era DMSX-Dunbar Molasses & Syrup Company shown at the top, and

the brightly colored GATX-Union Starch & Refining car from the 1950s.

This UTLX tank car represents lease equipment from the mid-1920s. A 1958 black repaint is also available. Undecorated RTR black cars are available as well as undecorated, unpainted kits. For additional information visit www.tangentscalemodels.com.

R. Bale

Trinity 39' Covered Hopper Cars

Trinity's short 39' twin-bay covered hopper car is designed specifically to transport heavy, high-density materials such as bentonite, cement, and sand. The cars were introduced in the 1990s with seven side panels (two narrow and five large). Their overhanging, arched roof profile, heavy top reinforcement chord, and folded jack pads at the bolsters distinguish them from earlier twin-bay covered hopper designs.

Walthers is scheduled to release a group of Trinity 39' twin-bay covered hopper cars this month. The HO scale ready-to-run models feature separately applied brake gear, running board, discharge gates, inlet hatches, and end ladder cages. The models come with knuckle couplers and roller-bearing trucks with 36'' machined metal wheelsets.

Road names will be NRLX-NorRail Ciment Quebec, BCAX-Circle Cement, CITX-Cit Group, CRDX-Chicago Freight Car Leasing, HWCX-Haliburton, CSX,

Norfolk Southern, and Union Pacific. For additional information contact a dealer or visit walthers.com.

Woodland Scenics has announced several new products to arrive soon. The first is a collection of twelve modern vehicles, including two coupes, two vans, two pickup trucks, four sedans, and two sports cars. Two of the sedans are a taxi and a family vacation sedan with a roof rack and luggage.

Also announced are gum trees, part of the eucalyptus family, that are found in sunny, dry climates around the world. The trees come in packs of three and come with planting pins and optional bases for temporary placement.

The Shaper Sheet Learning Kit will include everything needed to learn how to create and color a customized terrain formation. The kit will include an 18x24″ shaper sheet, 18oz of shaper sheet plaster, three colors (4ml each) of earth colors liquid pigment, Earth undercoat (10ml), a foam brush, and a craft stick.

Lastly, Woodland Scenics is introducing a Utility System consisting of single and double-crossbar Pre-wired Poles and a Transformer Connect Set. Designed to work together, installation involves drilling holes and placing the poles in place. For more

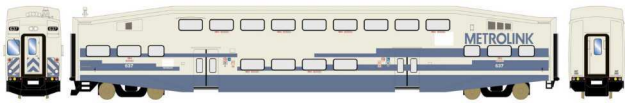
information on any of these products, see your dealer or visit woodlandscenics.com.

Yarmouth Model Works is nearing completion of an HO scale kit for a 40′ D&RGW Pressed Steel Car boxcar. Five versions of the prewar car with 4/5 ends are planned.

Options will include wood, Apex, Gypsum, or Morton running boards; etched ladders, Duryea underframe parts, and Tahoe trucks. Newly developed details include 3D printed tack boards, route card holders, and 3D printed slack adjustor and brake levers.

There will be two versions of the postwar car with the IDE ends and Apex or Gypsum running boards. Kits for cars with 6′ doors will have either Superior or Youngstown doors. A 15′ dual door version will also be available. For additional information visit: www.yarmouthmodelworks.com.

N SCALE PRODUCT NEWS



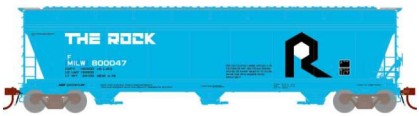
Athearn has announced a May 2021 release date for the next run of N scale Bombardier commuter cars. Decorating schemes will include Los Angeles Metrolink in standard paint as well as the distinctive Stay Alert-Stay Alive, and Bikes promotional wraps.

Additional road names include Utah Frontrunner, Altamont Commuter Express, and Altamont Corridor Express.

Canadian schemes include Montreal's Agence Métropolitaine de Transport and two Toronto GO Transit schemes. Noteworthy details on all versions include tinted windows, weathered grilles, diaphragms, and Bombardier trucks with outside brakes. A 15'' radius is recommended for the N scale models.

Additional new N scale products Athearn has scheduled for release next May include an ACF 4600 cu. ft. covered hopper.

Road names will be Burlington Northern, The Rock, SSW-Cotton Belt, Chicago & Eastern Illinois, Family Lines System, and Missouri Pacific. Ex-Rock cars will be available patched for Milwaukee Road and FURX. Road name variants include outlet fixtures and round or trough-style hatch covers.



Additional features on this N scale model include a photo-etched metal roof walk, separately applied wire grab irons, body mounted couplers, and screw-mounted 100-ton trucks with rotating roller-bearing caps and 36'' machined metal wheels. For additional information contact a dealer or visit athearn.com.

Atlas has released to dealers a new production run of 4180 cu. ft. Airslide hopper cars. The prototype Airslide hoppers were used primarily for high-value dry commodities such as sugar, flour, and certain types of virgin plastic.

The well-executed Atlas N scale model represents a double compartment car introduced in 1962. Slightly modified versions continued in production until 1980. Atlas is offering four road numbers for models decorated for Denver & Rio Grande Western, Chicago & North Western, Northern Pacific, and Santa Fe.

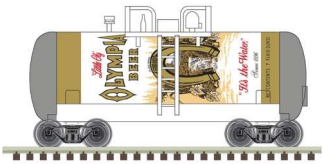
Atlas has announced plans for a Summer Beer program covering beer cars and tractor trailers in multiple scales. For N scale modelers, a series of 40' wood beer reefers will be available for Old Milwaukee, National Bohemian, Lucky Lager, JAX, Eastside, and Blatz Beer.

Additional non-beer reefers will be available for Producers Produce Co, and Marshall Kirby Frozen Eggs. Reefers designated for ice service will be available for ART and Milwaukee Road.

The beer program includes 40' steel refrigerator cars with plug doors decorated for National Bohemian, Old Style, Rainier, Schaefer, Schlitz, and Pabst Blue Ribbon Beer.

N scale steel reefers will also be available for Cotton Belt, Fruit Growers Express, Burlington Northern, Chicago Great Western, Western Maryland, and Jersey Central Lines.

The Atlas beer program includes a group of N scale beer-can tank cars.



In addition to a generic beer car, decorating schemes on the unique models will be Stroh's, Schlitz, Primo, Pabst Blue Ribbon, Olympia, Lone Star, and JAX Beer.

This N scale Ford tractor truck will be available for Stroh's, Schlitz, Pabst, Old Milwaukee, Lucky Lager, and Old Style Beer.

As a companion to the Ford truck, Atlas plans to release 45' Pines trailers decorated for Lucky Lager, Old Milwaukee, Old Style, Pabst Blue Ribbon, Schlitz, and Stroh's Beer. For additional information contact a dealer or visit atlasrr.com.

VIEW READER COMMENTS

R. Bale

USRA 2-8-2 Mikado

Among the many locomotives ordered by the USRA during WWI were light and heavy 2-8-2 Mikados. The first USRA light Mikado was delivered by Baldwin in July 1918. One month later American Locomotive unveiled the initial USRA heavy Mikado. Both light and heavy USRA Mikados utilized the same cylinders, running gear, and 63'' drivers, but the diameter of the boiler on heavy Mikes was 10'' greater. The result was 10 percent more pulling power, but it also put 19,000 more pounds on the drivers and rails. The USRA Mikados were designed as coal burning, superheated locomotives. They proved to be effective performers with a good balance between the boiler size, grate area, and running gear. After the war many railroads ordered virtual clones of USRA designs including the two Mikados. Ultimately, more 2-8-2s were built than any other type of steam locomotive with a trailing truck.

Broadway Limited Imports has released N scale models of both heavy and light USRA 2-8-2 Mikado locomotives. In addition to the Western Pacific engine shown, the N scale model will be available for Central of New Jersey, Louisville & Nashville, Milwaukee Road, Santa Fe, Missouri Pacific, and Southern Railway.

Light editions of the USRA 2-8-2 Mikado will be available decorated for Nickel Plate Road, Maine Central, New York Central,

Rock Island, Pennsylvania Railroad, Seaboard Airline Railroad, Union Pacific, and Canadian National, which qualified for USRA equipment through its Grand Trunk subsidiary.

Specifications include a diecast body and chassis, traction tires, LED lights, separately applied handrails, and Micro-Trains compatible couplers. Broadway Limited's N scale steam locomotives come with Paragon3 Sound and Operation System with Rolling Thunder that functions in both DC and DCC environments. These N scale locomotives require a minimum track radius of 9.75 inches. For additional information contact a dealer or visit www.broadway-limited.com.

New N scale models from **InterMountain Railway** include 10'6'' modified 1937 AAR 40' boxcars.

Liveries include Rock Island, New York Central, Fort Worth & Denver, Missouri Pacific, Erie, Erie Lackawanna, Southern Railway, Union Pacific, Chicago & North Western, Canadian Pacific (two schemes), Missouri-Illinois, Gulf, Mobile & Ohio; Toledo, Peoria & Western, Duluth, South Shore & Atlantic, and Soo Line.

The ready-to-run models come with 50-ton Bettendorf trucks with 33'' machined metal wheels. For additional information contact a dealer or visit intermountain-railway.com.

Ipswich Hobbies has released a new craftsman kit in N scale, the Rockport Freight House. Formerly used by the Boston & Maine, the still standing freight house is located in the MBTA passenger yard in Rockport, Maine. It is constructed of laser-cut basswood, scribed interior floor, and peel-and-stick shingles, with details for the loading dock. The assembled model measures 2.5'' x 6.5''. For more information or to purchase, visit www.ipswichhobbies.com.

R. Bale

EMD SDP40F Diesel Locomotive

When it assumed operation of America's passenger trains in 1971, Amtrak relied on a variety of inherited motive power including E8, F7 and some GG1 locomotives. Almost immediately Amtrak began working with GM's ElectroMotive Division to develop a new passenger locomotive. The result was the SDP40F. The 150 SDP40Fs EMD built in 1973–1974 became the backbone of Amtrak's long-distance passenger fleet, heading trains from San Diego to Washington DC and from Seattle to Miami.

KatoUSA has announced plans to make another production run of its N scale SDP40F. Delivery is expected to begin in November for DC units with DCC and sound equipped models following about a month later.

Amtrak locomotives will be available in both Phase I and II paint schemes. The models will represent as-built units that lacked front railings. They were equipped with a steam generator, nose headlight, and forward mounted 4-chime air horns.

Modified freight versions will be available decorated for Santa Fe and in BNSF's Maersk scheme. They will have front railings, a notched nose, additional roof antennas, and rear facing 3-chime horns. Cab air conditioning units and headlight position will be as appropriate to the road being modeled.

For additional information contact a dealer or visit katousa.com.

Micro-Trains Line has released this 78' heavyweight single-window coach decorated in the mid-1950s red and black New Image paint scheme of the New Haven Railroad. The heavyweight steel coach rides on Commonwealth 4-wheel passenger car trucks. The N scale model follows a prototype built in 1929.

This new N scale 50' boxcar from Micro-Trains reflects a prototype built in 1957 with a 10' Youngstown sliding door and equipped with a Hydra-Cushion underframe. Boxcars of

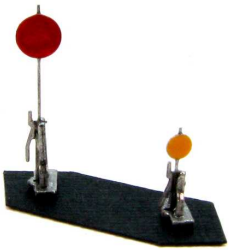
this design saw heavy revenue service into the early 1990s.

Owned and lettered for TTX, this yellow 89' tri-level enclosed autorack is currently in universal use by most railroads hauling new vehicles.

This N scale three-dome tank car is decorated in silver with red lettering for Ambrose Wine Co., a reseller and distributor of inexpensive wines. For additional information on Micro-Trains models contact a dealer.

Showcase Miniatures has released a new N scale kit named R. Perez & Sons Car & Carriage Works. The structure kit features tab and slot construction with laser-cut parts, peel–and-stick windows, detailed pewter metal castings, and step-by-step assembly instructions. With signage and creative details this interesting building could be adapted to represent a variety of businesses.

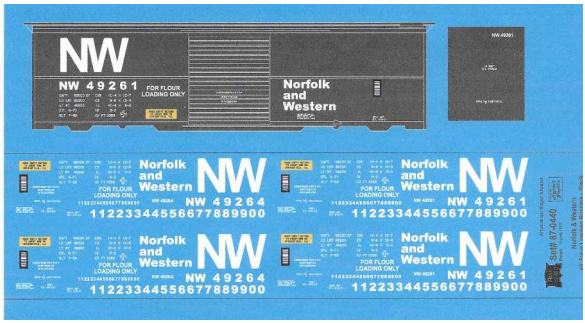
Also new from Showcase Miniatures is a kit for N scale switch stands. The design is based on a Southern Pacific Common Standard. Two high and two low stands can be made from the



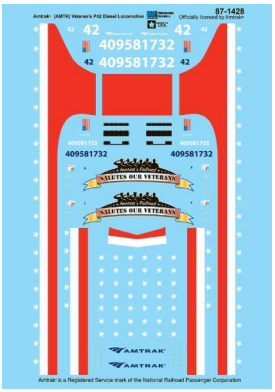
etched fret. The frets include both round and diamond shaped targets. For additional information visit www.showcaseminiatures.net.

NEW DECALS, SIGNS AND FINISHING PRODUCTS

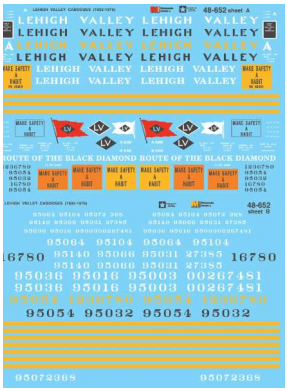
New water slide decals from **Mask Island** include two sets that convert ART cars to Norfolk & Western food product loading. The set shown is for a blue car and includes the big hamburger logo.



Mask Island's second NW food service decal is for black cars. Each decal has sufficient material to correctly letter two cars. For additional information visit www.maskislanddecals.com.



New water slide decals from **Microscale Industries** include Amtrak Veterans Locomotive No. 42, left, and Union Pacific specially decorated Spirit of the Union Pacific locomotive. The UP decal is available in HO and N scale, the Amtrak decal in HO only.



Also new from Microscale is an O scale decal for all Lehigh Valley cabooses in operation from 1932 to 1976. For additional information contact a dealer or visit microscale.com.

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BRIEFLY NOTED AT PRESS TIME ...

In anticipation of the release of its N scale 4180 Airslide covered hopper later this year, **Atlas** has released a video that outlines the features and details of the new model. To view the video go to www.youtube.com/watch?v=DZOYa9LGEF4&mc_cid=6e14a9a0e5&mc_eid=6bff0ec9ce

Arrowhead Models is developing what promises to be a highly-accurate HO scale model of an ACF 4600 cu. ft. covered hopper. A firm date has not been announced but the initial release is expected this year. Road names will be Union Pacific, Missouri Pacific, Chicago & North Western, Rock Island, Burlington Northern, and BNSF.

Hartland Locomotive Works, a producer of G scale locomotives and rolling stock, has announced that due to difficulties in its overall business, plus the Covid-19 pandemic,it has ceased all production. The Indiana-based firm will remain open to ship existing inventory, but no new production is planned. Warranty work, parts, and service will be handled by Phil Jensen at (402) 571-2933.

If sufficient interest is indicated, **Sylvan** will produce a limited rerun of a Canadian National 45' wood express refrigerator car with four ice hatches. The HO scale kit will include a one-piece body with additional detail parts, less trucks and couplers. Interested parties should contact mesagkits@gmail.com.

Tangent has released its ICC steel bay-window caboose in eight new era-specific decorating schemes for Baltimore & Ohio, Chessie System (B&O), and CSX. We'll have full details and images next month. ■

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SELECTED EVENTS

July 2020

Due to the uncertainty surrounding the COVID-19 pandemic and its associated lockdowns, Selected Events will not be published this month. Please check back next month for future events. ■

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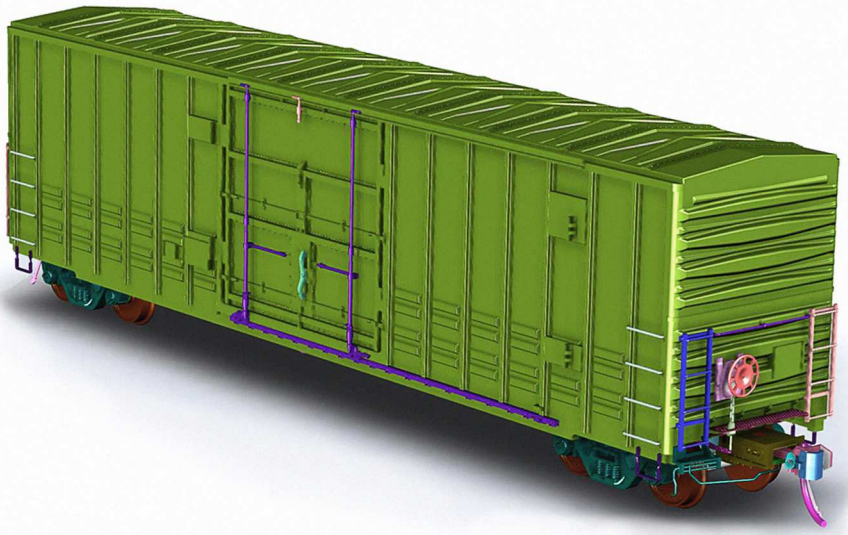

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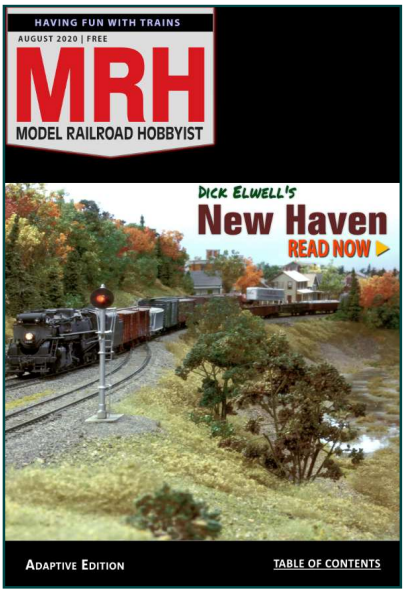

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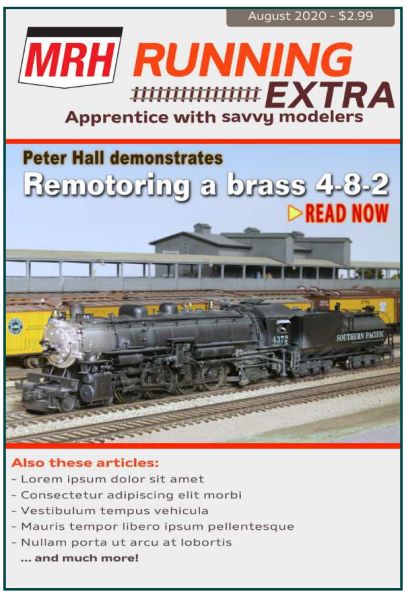

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