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Model Railroad Hobbyist May 2019 | #111
(Updated 04/26/19)

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ISSN 2152-7423

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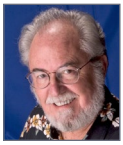
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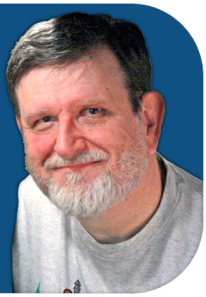

Model Railroad Hobbyist | May 2019

Joe Fugate: Keeping your track and wheels clean longer – a look at polar vs non-polar solvents

Rate this article

As part of my "Run like a dream" writing project we've been discussing here in my recent editorials, I've been pursuing an in-depth knowledge of better track cleaning. One of my goals has been to learn what causes the black gunk we get on our track and wheels, and also *how to inhibit its formation.*

If we can slow down the process that's getting our wheels and track dirty, all the better!

One story that caught my attention came from the La Mesa club in San Diego. This famous club has a fantastic layout modeling the Tehachapi Loop line of the Southern Pacific. They run trains for a good 8-12 hours daily, so if anyone is "stress testing" model railroading methods, it's this club!

According to members of this club, they were using isopropyl alcohol (i.e., rubbing alcohol, or IPA) to clean their track and wheels. Much to their dismay, they found the harder they cleaned things, the more quickly they got black gunk buildup again.

After some experimentation, they discovered cleaning the track and wheels with mineral spirits resulted in things staying clean longer.

This story reminded me of the "Wahl clipper oil" claims that

surfaced in the hobby several decades ago. The claim was cleaning the track and wheels with Wahl clipper oil actually reduced the frequency of the cleaning.

Something seems to be definitely afoot here and it cried for more in-depth investigation.

What causes the "black gunk" on wheels and rails?

Several years back, a model railroader submitted dirty track for an in-depth chemical analysis of this "black gunk" and reported the results on the MRH forum [mrhmag.com/node/3229].

Bottom line, this black gunk is mostly metal oxides formed from microarcing between the wheels and the rail. This contact point is

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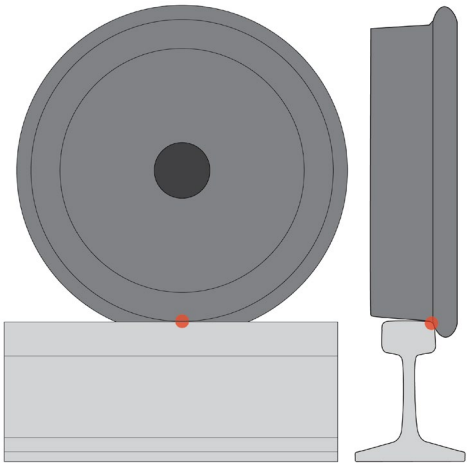
quite small, as you can see in [1]. Esssentially, the electricity flowing at this tiny contact point triggers a chemical reaction in the wheels and rails.

The electrical current in effect "explodes off" metal alloy molecules from the wheels and rails. It oxidizes these metal molecules, forming a fine dark gray powder. So the key to slowing down the buildup of metal oxide is to *inhibit the microarcing.*



1. The electrical contact between wheels & rail is on the inside rail head and quite small.

If you know something about the history of electric motors, you know they first tried copper motor brushes, but they arced badly and burnt out quickly. The solution was to use graphite because it inhibits arcing at the contact point! Interesting ...

Further discussion with a chemist who also understood electrical contact cleaning such as in relays and switches, put me on to the concept of polar versus non-polar solvents.

Once I delved into polar vs non-polar solvents, something very interesting emerged.

Polar vs non-polar

Molecularly speaking, you can use what's called the substance's dielectric constant to derive its molecular polarity.

The chemist told me that non-polar solvents work best to both clean electrical contacts and to protect them by inhibiting microarcing. Apparently, polar solvent molecules get trapped in

2. Polar, semi-polar, and non-polar solvents.

Solvent	Dielectric constant
Kerosene	1.8
WD-40 contact cleaner	1.9
CRC contact cleaner & protectant	2.0
DeoxIT D5	2.0
Gasoline	2.0
Neverstall	2.0
Diesel	2.1
Mineral spirits	2.1
Wahl clipper oil	2.1
Turpentine	2.2
Carbon tetrachloride	2.2
WD-40 (regular)	2.4
Graphite (microscopic thin layer)	1.8-3.0
CRC 2-26	4.6
Automatic transmission fluid	4.8
Rail-zip	4.8
Bachmann track cleaner	4.8
Butyl acetate	5.1
Butyl cellosolve	5.3
Ethyl acetate	6.0
Graphite (thick layer)	10.0-15.0
Isopropyl alcohol (IPA)	18.0
Methyl Ethyl Ketone (MEK)	18.9
CRC QD contact cleaner	20.0
Lucas contact cleaner	20.0
Acetone	20.7
Vinegar	24.0
Ethyl alcohol (e.g. vodka, wine)	25.0
Ammonia solution	31.6
Propylene glycol	32.0
Lacquer thinner	33.6
Glycerine	47.0
Hydrogen peroxide	60.0
Water	80.4

Non-polar

Semi-polar

Polar

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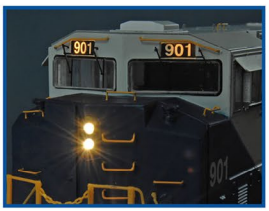

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HORIZON HOBBY

micropits of the metal surface, leaving an "electron charged" microscopic residue. This electron-charged polar residue encourages microarcing in the presence of an electrical current, quickly forming new metal oxides on the metal surfaces in electrical contact.

But non-polar solvents do the reverse. They actually "protect" the metal surfaces from forming new oxides because they *inhibit* microarcing.

In the chart [2], I list the dielectric constant for a number of solvents, contact cleaners, track cleaners, and the like. To make this chart, I assume a dielectric constant of 3.0 or less constitutes a non-polar solvent for our purposes. I assume a dielectric constant of 10.0 or more means the solvent is polar. Anything in between is semi-polar.

The best solvents for track cleaning are the non-polar ones. The worst ones for track cleaning are the polar solvents! How many of us have used IPA, lacquer thinner, or acetone for track cleaning? Bad, bad!

Also notice the "wonder cures" for dirty track are all non-polar! *Ah-hah!*

The other thing I notice is not all electrical contact cleaners are created the same. CRC Contact Cleaner and *Protectorant* (do their chemists know something here? – sure sounds like it) is CRC's lowest dielectric constant non-polar product!

While CRC 2-26 is often recommended on modeling forums for cleaning, it's actually semi-polar. It's far better than IPA or the like, but the CRC Contact Cleaner and Protectorant is better still. Notice, CRC QD Contact Cleaner is actually *worse* than IPA.

Notice some model railroad track cleaners have lower dielectric constants as well. They're on the right track, no pun intended!

From this list you can see kerosene, WD-40 Contact Cleaner, CRC Contact Cleaner and Protectorant, Deoxit D5, Neverstall, and mineral spirits are all excellent solvents to use for cleaning track and wheels.

Solvents to avoid include: isopropyl alcohol, MEK, acetone, and lacquer thinner.

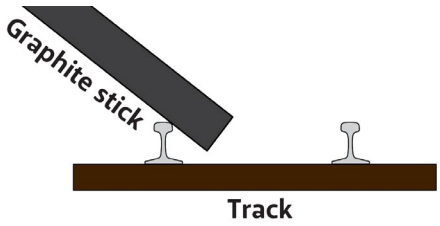
What about graphite?

Per the polar/non-polar chart, graphite is a very interesting substance.

Microscopically thin layers of graphite are actually very non-polar and greatly inhibit microarcing.

But thicker layers of graphite get increasingly polar. The "layers don't bond" nature of graphite is what makes it work so well to counter friction. The layers of graphite freely slide right over each other.

But these extra natural layers also dramatically increase graphite's dielectric constant.



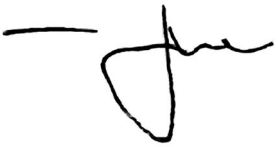
3. Applying graphite to the inner railhead.

When applying graphite to your track to help keep the rails from microarcing, *more graphite is not better!*

In fact, what I tell people is one quick swipe on the inside railhead is all you need [3]. You don't want to see it. If you can see the graphite, then you have applied way too much! Just one quick swipe with moderate pressure is plenty.

At this point, I think these non-polar versus polar solvents findings suggest a clear direction for better track and wheel cleaning, and how to reduce the amount of re-cleaning needed by inhibiting the build-up of fresh black gunk on the wheels and railhead.

It appears you want to clean your track (and wheels) with a non-polar solvent and then treat the inside railhead with graphite to further reduce your frequency of cleanings. That's about as good as it gets! ☑



VIEW READER COMMENTS

Last issue's ratings

The three top-rated articles in the April 2019 issue of *Model Railroad Hobbyist* are:

4.7 Ted York's Cajon Pass
4.7 The Los Gatos local
4.5 MRH Q-A-T: Improve pilot tracking, ...

Issue overall: **3.8**

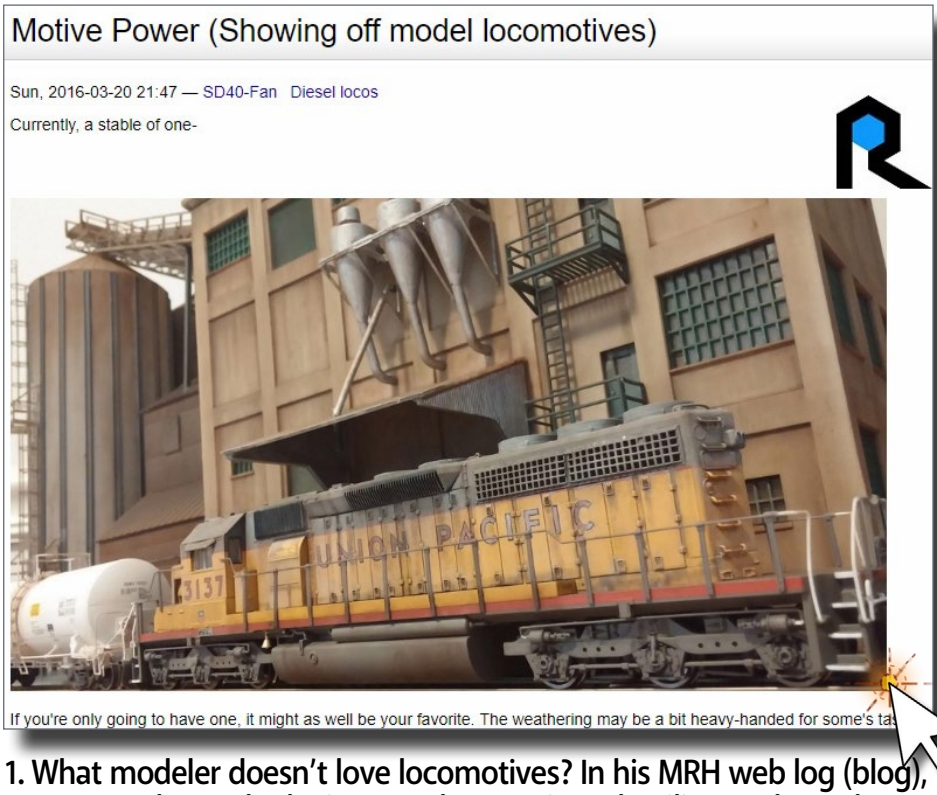
Please rate the articles! Click the reader comments button on each article and select the star rating you think each article deserves. We depend on these ratings to help us determine which articles to publish, so your rating matters! ■

Best of the MRH WEBSITE THIS MONTH

Model Railroad Hobbyist | May 2019

compiled by Joe Fugate

★★★★★ RATE THIS ARTICLE



1. What modeler doesn't love locomotives? In his MRH web log (blog), ***SD40-Fan*** shows the loving care he puts into detailing and weathering each of his locos, starting with loco one, and then two, and ...

MRH'S MONTHLY GREAT MODELER POSTS

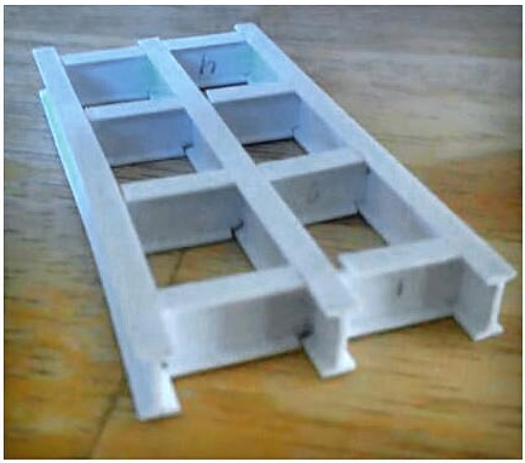
Start of bridge building

Thu, 2014-12-25 12:46 — ybandell

It has been a while since I made any updates to this blog. Life got in the way of building my module: buying a house was amongst those things that got in the way. Upside though: space to actually build modules and not have to use the kitchen floor as my workshop

Earlier this week I started with scratch building the first of several bridge segments needed. This is what the prototype bridge sections look like:

The prototype has a total of 7 of these sections. I might only do 5 or 6 due to space constraints on the nearly 4 foot long module. After about 2 hours struggling with 1/4 inch styrene I-beams and some rudimentary tools, it was done. It wasn't as neat as I wanted it to be: better tools and realizing I needed them while building it made me less patient and the result shows it:



So while being a bit disillusioned of my scratch building skills, it hit me: why not abuse the wife's Silhouette Cameo? We've had the thread on MRH about the Cricut Explore and people mentioning the Silhouette Cameo as less restricted from a

2. MRH forum member ***ybandell*** uses some clever cutting on a Cricut Explore to make a steel girder bridge out of sheet styrene. Definitely a thread worth checking out!

3D Printed Truck Bodies. *Video*

Thu, 2019-04-11 17:03 — JohnF281 Prototype information

Here are a couple vehicle projects I have been working on. Both truck bodies I actually designed for and [illegible] in a computer game. The crazy thing about 3D printing is all I needed to do was resize the models to HO scale and adjust the underside to fit a frame. The fuel service truck will make an appearance on the layout occasionally to fuel up my industry RSSX Railserve GP7 and SW1200. The Hauler was built only because I designed the bed for this model truck in Farming Simulator and the cab was so cheap. Maybe it will find a place on a farm scene on my future layout.

Here is a comparison from in game to HO scale.

3. As 3D printing keeps gaining ground, more modelers keep exploring it. Here MRH forum member ***JohnF281*** shows some HO truck bodies he's 3D printed – with video as well!

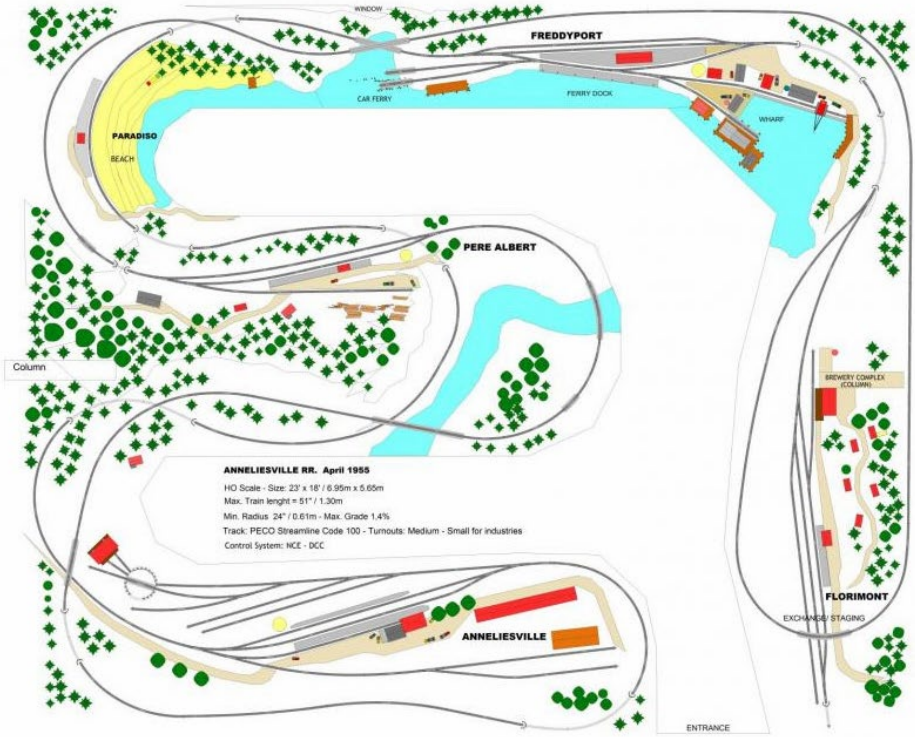
The AnneliesVille RR & Navigation Co.

Wed, 2019-03-27 11:09 — filip timmerman Personal journal (editorial or commentary)

A GENERAL FIRST YEAR BUILDING JOURNAL.

Early Mars 2018 was the actual start of the building of this new Railroad. So what's up one year later since then...

The final track plan as discussed on the first blog: The Building of the "ANNELIESVILLE RR/ LAYOUT DESIGN



filip timmerman's blog 2665 reads not spam (0) mark as spam

Comments

PHOTO JOURNAL

4. This layout MRH blog by ***filip_timmerman*** shows not only his layout track plan but he provides photo progress of his layout's first year. Definitely worth a look: see his thoughts on ships.

Weekly Photo Fun - Apr 14-20, 2019

View | Edit | Outline | Track | Clone

Sun, 2019-04-14 08:29 — JC Shall MRH Magazine general discussion Photo inspiration

Another week starts . . . post 'em if you got 'em.

-Jack

‹ Welcome! Weekly Photo Fun April 7th to April 14th ›

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this week

Sun, 2019-04-14 20:16 — Modeltruckshop

5. The Weekly Photo Fun thread always makes for delightful viewing each week. Forum regular ***modeltruckshop*** recently kicked things off with this cool photo ...

VIEW READER COMMENTS

WHAT'S NEAT column

Model Railroad Hobbyist | May 2019

Ken Patterson visits Gerry Glancy's HO/HOn3 layout, Michelle Kempema looks at railroading in Wyoming, Austin Allard and Rand Hood talk about layout design, and much more ...

★★★★★ Rate this article

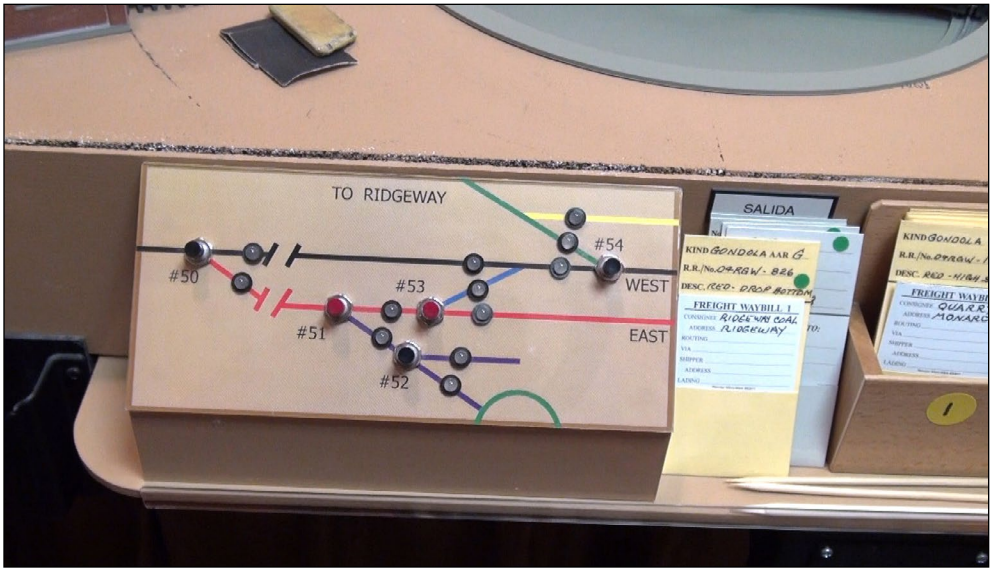
This month we have six segments in the May

2019 "What's Neat" video show. World-famous model railroad artist Rand Hood interviews our very own Austin Allard from the "What's Neat This Week" video podcast about his ideas of designing his future layout. It's interesting to watch his ideas unfold with Rand's guidance. We look at Gerry Glancy's HO/HOn3 dual-gauge layout. Drayton Blackgrove supplies us with fantastic drone footage in "Modeling Ideas from Above" with footage from Jackson, Michigan in Norfolk Southern territory. "On the Road with Michelle Kempema" covers railroad-related things to do while visiting Wyoming. Robert Simmons shows us the Western Kansas N Scale modular layout, and Tim Blackwell, editor of the *Cowcatcher,* describes his success in the publishing business. ☑

▶ PHOTOS AND VIDEO OF SUPERB MODELING

Gerry Glancy's dual-gauge layout

1. (Above, top right, bottom right) Dr. Gerry Glancy can be found working at Caboose model railroad shop in Lakewood, Colorado, because he has a passion for model railroading. Gerry shares with us his fantastic HO scale layout. It has three levels with the lower level modeled in standard gauge, the middle level in dual gauge, HO and HOn3; and the top level is narrow gauge modeling scenes in vignettes from areas in Colorado. Gerry has modeled the Monarch quarry branch of the Rio Grande complete with the rotary dumper setting up loads to travel to Pueblo, Colorado. Salida depot is represented on his layout. The colors and textures of his layout represent the Rocky Mountain railroading of Colorado perfectly. Operation is also a favorite aspect of the hobby with Gerry. He builds mini control panels for each switching area. The turnouts line up with a simple throw of a switch, showing the routing with green and red LEDs. The panels also have a stationary decoder built in so Gerry can route turnouts with his hand-held throttle through his DCC system.



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

WATCH NOW »

Austin Allard's layout design evolution, real time ...

2. (Above) Rand Hood interviewed Austin Allard in Rand's home in front of a very famous steam photo of the Denver & Salt Lake railroad. Austin came to visit in Colorado with a lot of HO scale mainline experience. He and his father built a layout in Pacific, Missouri, south of St. Louis. Their benchwork is solid as are all the double track mains laid on cork roadbed. The track is the smoothest I have ever seen, all 2000 feet of it.

3. (Top right) It's code 83 with #10 turnouts to ensure smooth fast mainline freight service with trains being no shorter than 75 cars each.

View reader comments

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

WATCH NOW »

4. (Top two) Upon seeing John Parker's HO scale layout in Colorado, his ideas of model railroad fun sort of changed. He no longer wants the double track "race track," but instead a single main line with long passing sidings and lots of industries to switch. Austin had planned to do urban Kansas City or St. Louis scenery as "cornfields and the plains of the Midwest are boring." Rand quickly seized on this comment to let Austin

know that no scenery is boring and that some great modeling has been done depicting the cornfields of the Midwest or the prairies of Kansas. It was interesting how the interview went. Weeks later Rand commented on the podcast that Austin made him think that a double track main line is not boring. Any outfit with a dispatcher running 21 trains, on the NS In his example, in 82 miles of double track is not going to be boring. In fact, it can be very interesting and Rand may change his railroad from single track to double. The conversation will continue until both Rand and Austin build their first benchwork.

On the Road with Michelle Kempema

5. (Above, top right) This month Michelle tells us about railroad theme places to visit in Wyoming. Michelle interviews Abigail Martin, the domestic partnership manager, Wyoming Office of Tourism, along with Jill Pope of the Visit Cheyenne Convention and Visitors Bureau. Abigail tells us about the renovated roundhouse in Evanston, Wyoming, along with the historic city center redeveloped with the influence of the national Main Street program. Jill tells us about tours offered by the Cheyenne Depot Museum (with the Clear Creek HOn3 layout built by Harry Brunk upstairs) and the fact that the Big Boy is scheduled to visit May 4 on its way to Ogden, Utah, on May 9, according to the official Union Pacific website. Jill also describes the Big Boy, one of eight in existence, that is on display in Holliday Park in Cheyenne, just north of I-80. There is also the Sherman Hill Model Railroad club in a local mall which displays David Trussell's (founder of the Colorado Model Railroad museum) original modular layout which toured the country in train shows in the 1980s and early '90s.

Tim Blackwell's *Cowcatcher* magazine

6. I interviewed Tim Blackwell, the editor of the *Cowcatcher* magazine, at the Rocky Mountain Train Show in Denver. He describes his colorful magazine that is full of beautiful ads from all the major manufacturers. He says that after 16 years of building the publication all things seem to keep growing in readership and sponsorship alike, bucking the trend we often hear about due to the internet. The *Cowcatcher* owes its success to following Rule #1 – to simply promote the hobby in a positive way for the greater good of the hobby. Tim says he plans to continue doing what he has been doing with some additional internet coverage through social media. The magazine is available in hobby shops, or online through subscription at www.cowcatchermagazine.com.

Rate this article

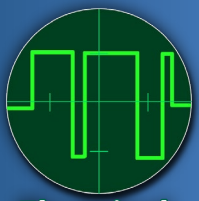
Richard Simmons' N scale Western Kansas Rails

7. (Top and bottom above, top right) This month, Richard Simmons shares with us the Western Kansas Rails modular layout in N scale. They model Kansas just as it is, to educate the viewer unfamiliar with the territory of the plains. Full-sized grain elevators for long-term storage measure more

than six feet long and a scale 128 feet tall, with dozens of 28-foot diameter silos. It's amazing to see this in model form as the freight cars look like ants compared to the overall structure. The city or town scenes are modeled from prototype businesses seen in Garden City, Kansas. The layout is sectional and goes together the same way at each show. The main line has a minimum radius of 27 inches with code 55 rail, making the main lines look very prototypical. He says they set up the layout at six to eight train shows each year to promote N scale to modelers interested in a scale where scenery is king, yet super-detail is very attainable.

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

More stay-alive insights



Electrical Impulses

1. Size comparison of the old KA2 (left) to the new KA2 (right). For relative size, they're shown with a US 25 cent piece. This new much smaller KA2 now makes it even easier to fit stay alive into a loco. Also see [3].

Model Railroad Hobbyist | May 2019

Marcus Ammann & the MRH Staff

delve into adding stay alive to 8- or 9-pin decoders ...

★★★★★ Rate this article

One of the best DCC advancements in recent years is stay-alive.

If you haven't heard of stay alive, it uses capacitors to keep your loco running over dirty spots without missing a beat.

On top of dirty track/wheels, plenty of other things can contribute to a power loss and intermittent contact, like:

- Dead frogs on turnouts or crossings
- Turnout points relying on contact-only for power
- Short loco with few wheels and pick-ups
- One loco side picks up one rail and tender picks up other rail
- Tender drawbar contact intermittent
- Tender bolster contact intermittent
- Sintered metal wheels less reliable contact than plated wheels
- Loco weight unbalanced, affecting traction and pick up
- Rough or uneven spot in trackwork

To see stay alive in action, here is a demo video [2] by *MRH* DCC columnist emeritus Bruce Petrarca from back in March 2013:

2. Bruce Petrarca's demonstration of DCC stay alive in action from the *MRH* 2013 issue.

Stay alive options

In the July 2018 issue of MRH [mrhmag.com/magazine/mrh2018-07/dcc-impulses], Joe Fugate did a column on solving electrical pickup woes, and included information about the various stay-alive options available from DCC decoder manufacturers.

Some of the best stay-alive add-ons come from Train Control Systems in the form of 21-pin motherboard replacements with TCS's trademarked Keep-Alive included.

If you're planning to go the sound decoder route, the TCS motherboard replacements are a superb option. They're a drop-in replacement for the motherboard that's already in the locomotive – just add a 21-pin sound decoder and you're all set – you get stay-alive automatically!

But in this article, we're looking at 8- or 9-pin decoders, either non-sound decoders or older pre-21-pin sound decoders. How do you add stay live to them?

Adding stay-alive to 8- or 9-pin decoders

Newer decoders have solder pads for stay alive, which makes adding stay-alive a fairly straightforward process. But with older non-21-pin decoders, you will need to do some minor board surgery and/or careful on-board soldering to add stay-alive. That's what we're going to cover here.

To get a stay-alive circuit, you can either buy a ready-made one, or you can build one yourself. In next month's column, we'll cover building your own stay alive using super capacitors.

For this month's column, we use TCS's new down-sized KA2 Keep-Alive.

Adding stay alive risks

Adding stay-alive to an older 8- or 9-pin decoder without stay-alive solder pads may void your decoder warranty, so be aware of that. If you prefer to avoid this, then 21-pin non-sound decoders are appearing on the market – or get a newer 8- or 9-pin decoder with stay-alive solder pads.

The beauty of 21 pin decoders is they have pins devoted to stay-alive, and mounting them in a Keep-Alive motherboard from TCS or in a Decoder Buddy 21-pin motherboard replacement (covered in last month's "Electrical Impulses" column) with a TCS KA2 attached works great and won't void any warranties.

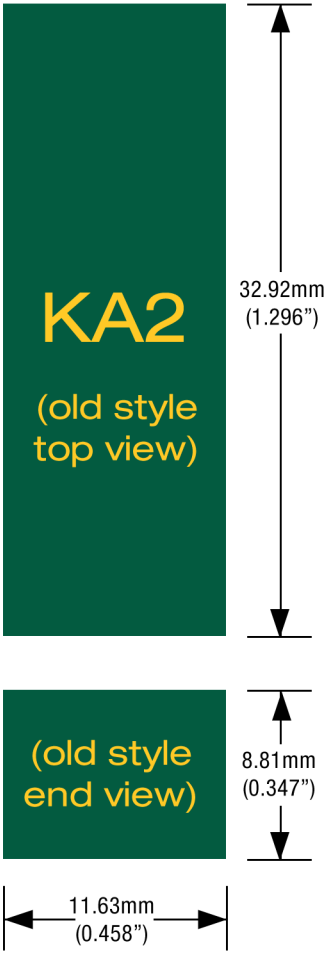
TCS recently did a dramatic downsize of the KA2, making it even easier to fit inside locomotives[1, 3]. This new stay-alive board provides 2-6 seconds of power, and is available for less than $40 from MRH sponsors that sell DCC products.

By contrast, the old larger KA2 provides 6-15 seconds of power, which frankly, is overkill.

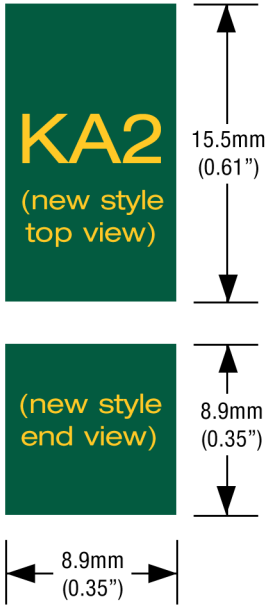
Long stay-alive durations make it too easy for a locomotive to overrun dead sections such as at lift-outs, and end up on the floor! We prefer the shorter duration and the smaller size. Two seconds will run over most any dirty spot.

The KA2 has two wires, a blue wire and a black-and-white striped wire. The blue wire connects to the +12V feed, and the B&W striped wire connects to ground (or negative).

As mentioned, some newer decoders have solder pads and/or sockets for stay alive, which makes adding stay alive a fairly



Typical stay alive time:
6-15 seconds



Typical stay alive time:
2-6 seconds

Relative sizes of old and new TCS KA2 Keep-Alive™

3. Diagram showing the size and stay-alive differences between the old TCS KA2 and the new much smaller KA2. Narrow hood diesels have about 18mm of width inside, which means the new KA2 can go in the shell sideways! Also, the clearance above the motor inside typically is 8-12mm in spots.

straightforward process. But for older decoder designs, you'll need to locate the +12V and the ground (or negative).

Finding the negative/ground

Here are the stay-alive connection points for a couple of common decoders.

TCS T1: Cut off the decoder shrink-wrap covering with a sharp X-Acto blade and make these connections for the KA2 wires:

- Connect blue wire to the function common blue wire (+12V)
- Connect the black-and-white striped wire to the negative connection of the decoder's bridge rectifier [5].

Replace the shrink-wrap.

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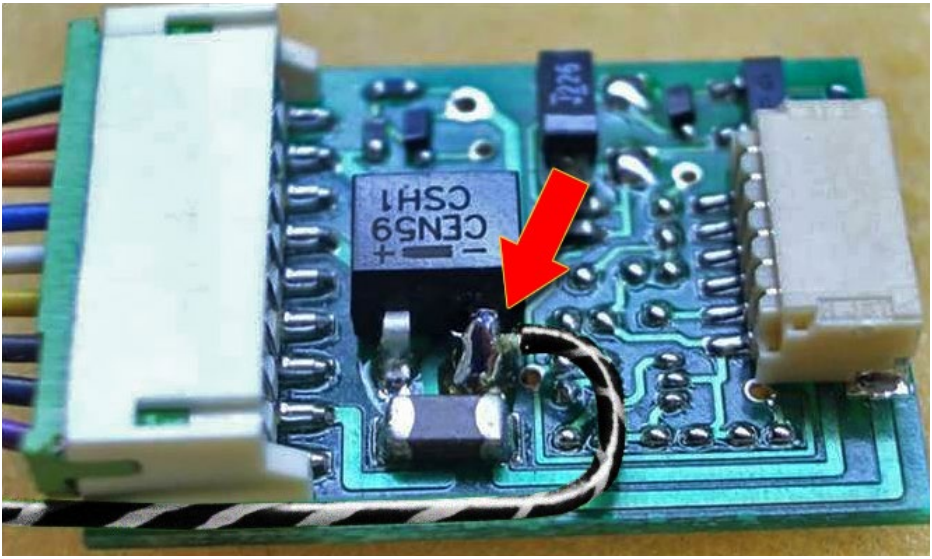

5. TCS T1 negative (ground) connection location on the decoder circuit board (shrink-wrap has been removed). *Photo by Marcus Ammann*

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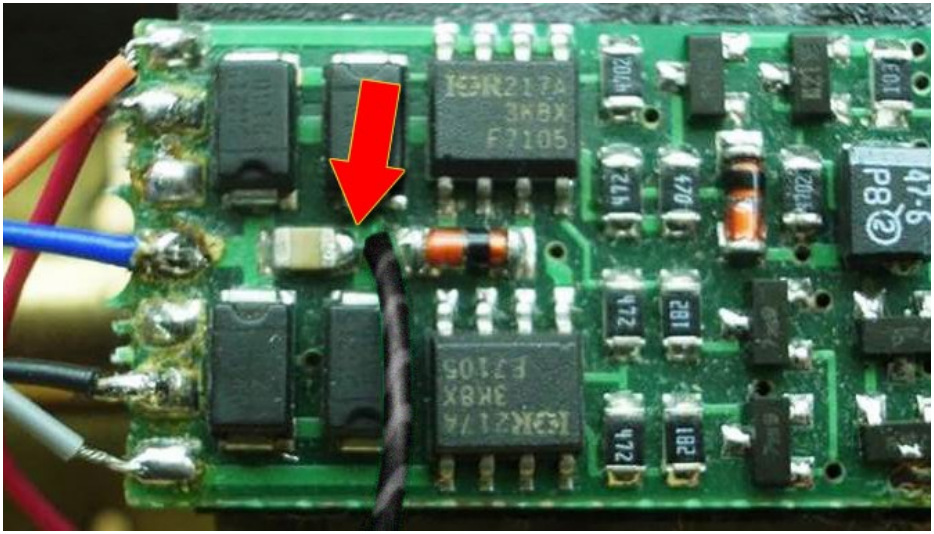

6. NCE D14SR negative (ground) connection location on the decoder circuit board. *Photo by Marcus Ammann*

NCE D14SR: Make these connections for the KA2 wires:

- Connect the blue wire to the function common blue wire (+12V)
- Connect the black-and-white striped wire to diode/capacitor junction as shown [6].

Finding the negative ground on any decoder: With a multimeter and a bit of probing, you can find a negative ground connection point on any decoder.

Here's the process.

- Set your meter to read DC volts in the 12V range.
- Power the decoder. Either plug the decoder into a DCC socket and place the loco on the track with the DCC power on, or plug the decoder into a decoder tester that's powered.

- Using the positive multimeter probe, connect it to the blue wire function common (+12V).
- Using the negative multimeter probe, explore around an orange or brown block (a capacitor) until you find the negative end.

That negative location is where you connect the *black-and-white striped wire* (negative ground).

Some stay-alive considerations

As long as the loco is still receiving DCC commands, you can stop it immediately if you need to. Stay-alive doesn't affect that at all.

7. Demo 1: Gerry Hopkins demos stay alive with a Tsunami and a TCS WOWSound decoder in this video.

But locos will keep running when encountering unpowered track such as near a removed lift-out bridge. You need to take this into consideration when you use stay alive!

When a stay alive is enabled, it can be difficult to read back CV values on the programming track. You may need to disconnect the stay alive in order to get the decoder to program properly on a programming track.

Programming on the main is not affected. That still works just fine, even with stay alive installed.

8. Demo 2: Replace the Tsunami with a WOWSound.

Belt and suspenders

As recommended in Joe Fugate's July 2018 column on solving electrical conductivity woes, adopting a "belt and suspenders" approach is the most effective.

First, add extra wheel or track wipers to the loco to improve pickup from the rails. Then add stay alive as extra insurance. When this is done, the loco power pickup becomes bulletproof. Joe has run locos over a full weekend at a show on layout modules, and found locos so-equipped never stalled or faltered even once!

The other thing we've noticed is we don't need to clean the track or wheels nearly as often as before. It used to be Joe had to clean the wheels and track before every monthly operating session. Now every four-to-six op sessions works fine.

If you use non-polar track cleaners (see this issue's

"Publisher's Musings") and treat the inner railhead with graphite, the thorough cleaning sessions may be even fewer and farther between.

But at some point, the locos might keep running but seem to be sluggish in responding to throttle commands. That means the wheels and track are finally getting so dirty it's time to clean them up.

Next month, we'll discuss building your own stay-alive circuits for a fraction of the cost of commercial stay-alive products. ☑

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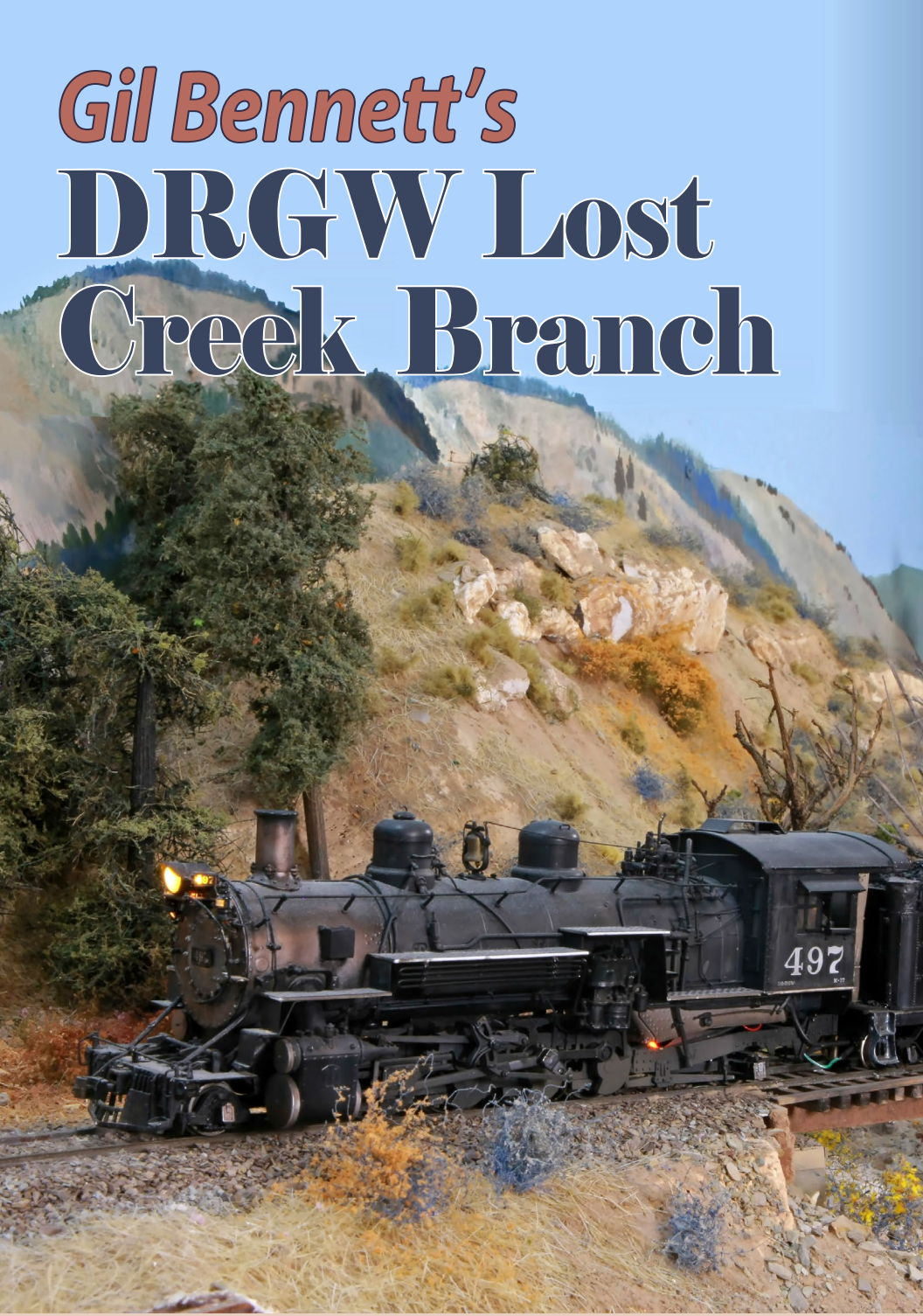
Gil Bennett's DRGW Lost Creek Branch



MRH visits this Sn3 line built by an accomplished railroad artist …

Also on TMTV!

Visit Gil's layout at the Salt Lake City NMRA convention this coming July.

1. Accomplished railroad artist Gil Bennett models a freelanced branch of the Denver & Rio Grande three-foot narrow gauge in Sn3. Here K-37 #497 rolls out of Salina, Utah and climbs south toward Terill Pass.

MRH: Gil, how did you get started in the hobby?

Gil Bennett: When I was two years old, I got my first American Flyer train and it was a 4-4-2 Atlantic. And according to my brother, I didn't run it for a while because I was too afraid to do so. But I started in model railroading at the age of two!

MRH: Tell us a bit about your journey in the hobby.

Gil: After the train set at two, my brother and I built an American Flyer layout and that lasted for a while. My brother decided to go into true S scale, and he wanted to abscond with all the American Flyer locomotives and cars too, which left me with nothing.

He asked me what I liked and I said, "I like the trains in Durango. Those were the first steam engines I remember seeing."

He said, "Well then, why don't you go narrow gauge?" So in 1972, I became an official Sn3 modeler.

MRH: If someone comes into your space, what are they going to find? How would you describe your layout to a visitor?

Gil: This is the Lost Creek branch of the D&RGW plus Utah Power and Light. It's a fictitious line meant to haul coal from the

2. Gil models the late fall, just as the trees have lost most of their leaves and the first snowfall could come at any time.

Lost Creek / Lost Lake area in Southern Utah and transport it to Salina on the Marysville branch of the D&RGW

MRH: And you modeled this how?

Gil: I model in Sn3, and I'm modeling the late era of narrow gauge around 1963-1964, depending on the automobiles I can find. And it's mainly right before they standard-gauged the branch so they could pull out more coal.

MRH: Why did you pick this to model?

Gil: The other places I considered modeling didn't work as well for me. There was a lot of untapped coal in Southern Utah – so

much so that the Union Pacific wanted to rebuild the Marysville branch to haul the coal out of the area. There were a lot of rumblings about that, but they were busy pulling coal out of the Powder River basin.

The coal in southern Utah has very low sulfur and very high BTU, making it ideal for power plants all over the United States. But nothing ever materialized.

I teach a watercolor class in Utah's Capitol Reef National Park area occasionally. The area has mountains, great sagebrush, and a lot of steep terrain that's just perfect for narrow gauge, which is what I wanted to model. And fictitiously, I wanted the Utah Power and Light to build a railroad in the 1909-ish era, when the D&RG was broke after building the Western Pacific.

I'm postulating they built a fictitious line using scrap D&RG narrow gauge materials and it's lasted until 1963 when they're finally going to standard-gauge the line. I haven't seen anybody really model this kind of mountain desert narrow gauge with sagebrush and pine – and that's something I've always wanted to do.

3. One major yard on the layout is Loa, shown here with its prominent coaling tower, and a turntable and roundhouse in the distance.

MRH: Why that particular era and not some other era?

Gil: I model 1963 to 1964 because I built and modified a K-28 steamer, and I liked

4. At the northern end of Loa is this extensive oil dock. Gil postulates the region hosts some oil field pipelines making for this significant industry that takes up to a dozen oil tank cars at a time.

5. Gil has good loco fleet of PBL locos, such as 2-8-0 Rio Grande Southern C-19 #40 and 2-8-2 Rio Grande K-28 #473 here in Loa.

how it looked in 1963. So that became my benchmark. I also like the end of the D&RG narrow gauge era because they had converted standard gauge cars to haul pipe, which interests me.

I'm doing pipe trains now because there's oil and gas in my modeled region too. I'm running the pipe trains from Salina to Loa and the area around where they're doing the drilling and building the pipelines.

The coal goes in the opposite direction, coming out of Loa and the Lost Creek area. So we have loads going both ways. Then we have cattle, sheep, dry goods, and a few other things also going back and forth on the railroad.

MRH: Sounds busy! How did you develop the track plan? Was it easy or did it go through a lot of iterations?

Gil: We built this house, and it started out that I was going to have the whole basement plus my studio where I paint. But then my wife wanted an office down here as well. So I gave her a generous amount of space, and we also have storage rooms.

I had to put a wall up for my studio, and the contractor would not take out the windows in the basement because they were required by code. I didn't want any windows behind the layout, so I had to design around the windows, which is mainly covering them up somewhat.

I was left with about 900 square feet. I thought, well, I can do a double-deck layout because it will be on an incline. And this layout climbs in both directions. Actually, there's a summit, it doesn't just go from deck-to-deck. It climbs up a grade going out of Salina and also a slight upgrade going out of Loa – so there are grades both ways.

I wanted to run helper locomotives, and I'm using live loads, so the coal is going to take two of the big K class locomotives. Coming out of Salina, it may take a K class locomotive and a C class locomotive to get the trains up the hill – or if it's a big K class locomotive and the train's short enough, I could probably use one engine.

I haven't figured out the dispatching yet, but it's narrow gauge, so everything goes slowly.

Going uphill, the fastest you go is maybe 10 miles an hour, and downhill everything is eight miles an hour or slower. With the amount of track I have, it's going to take a long time to get from one point of the layout to the other. Plus some switching along the way in the yards.

MRH: When did you start construction?

Gil: I started construction around 2014. Before that, I finished the basement, and then I tried to design something I could visualize, something that would work. I came up with a few different plans but ended up on this one because it gave me the most running room.

MRH: What do you think of multideck?

Gil: I actually like the multideck. I prefer it because you get a longer linear run and you really don't notice the

6. Rio Grande 2-8-0 class 70 C-19 #340 and Rio Grande 2-8-2 K-27 #463 sit on the sand house and coaling tower lead in Loa.

upper deck unless something's moving along it. I have more of a shadow box going, and I would have done that if I had only a single deck.

I like it, but I do have to paint twice as much backdrop as I would otherwise! Since I paint all day as my profession, I really don't like painting backdrops at night, but I do it once in a while anyway. The good news is I can do it pretty quickly – I've learned some tricks as a professional railroad artist.

MRH: Did construction go like you're expected, and is it progressing as fast as you would like?

Gil: Nothing progressed as fast as I would have liked.

7. As the south end of the Loa yard, we find the caboose track and a couple spurs with some miscellaneous rolling stock parked on it.

When I started off, I was inventing everything new – so I invented a floating-shelf benchwork method – and the floating shelf would have worked perfectly had my walls been totally plumb. But there is some wave in the drywall and so it wasn't a perfect 90 degrees perpendicular to the floor. I had to work around some snags here and there.

And after I tried the floating benchwork, which is mainly most of the upper deck, I went to conventional benchwork for the lower deck, and for transitioning between the decks.

MRH: Did it go well?

Gil: I probably should have played around with the floating deck a bit more. That was really fast to construct and went up quickly. But, again, there were some drawbacks to it – the conventional benchwork and scenery is more sturdy and easier to wire.

You don't have to drill through two inches of foam and fish wire through, which I didn't really like, but it worked. I do like the newer conventional benchwork and plaster scenery – it's sturdy and it works.

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

Gil: My wife likes me to spend time with the family. I have four sons, and she likes me to be up with them, but my art studio's down here. I start here at eight in the morning and I'll easily work till six and then go have dinner and come back down and work on the layout until 10 or 11. She calls me "the basement dweller."

Instead of being in the basement all the time, it's important to go up and do things with the family, which is fine. I mean it's a hobby,

and I don't want to lose family time due to a hobby. Some of my sons will help, other times they will not. But if I drag them in to help, they'll come and help.

But as the layout progresses more, my wife likes to show it off to people too. But we're not quite to that stage yet: she's only showing it off to a few of her friends right now.

MRH: Did you have any challenges that came as a surprise?

Gil: I had no surprises whatsoever. Everything has gone as planned. I make my own track, the switches, the turnouts and things. I have also tried some of the new products that have come out in the last few years.

There are some products I like and some I don't. I'm finding sometimes the turnouts work really well and other times they don't; I just have no idea why.

MRH: What kind of track are you using?

Gil: I use MicroEngineering flex track. I've had Tomalco from past layouts – Tomalco flex track. I also handlay a lot. I build all my switches to custom-fit the area.

MRH: How many feet of main line?

Gil: My main line is 160 feet from Salina to where the Lost Creek mines will be.

MRH: What's your minimum radius on this layout?

Gil: My minimum radius is 32 inches. And the switches I use, my minimum is number seven.

8. Here is a closer view of the Loa sand house and coaling tower. The coaling tower chute actually operates, as does the coal elevator in the back of the tower.

MRH: What do you like most about this layout?

Gil: I love that it works. I love the way it looks. I've used non-conventional scenery methods. Since I built my first layout back in the 90s, the way to make scenery has changed. And I'm glad I waited a little longer because today's methods are much easier and the materials are much easier to work with.

I like getting the helpers together and moving stuff out of the roundhouse. Turning a loco on the turntable and taking it up to the coaling dock. The coaling dock works, the buckets go up and down and the chute goes up and down.

I can go over to the water tower (the spout goes up and down on that too) and fill up the tender with water and then go on the front

of a train, and do a brake test. Everything's programmed, everything's DCC with sound and we operate it like a real railroad.

MRH: What do you like least about the layout?

Gil: The layout is not finished. Since I'm working in my studio daily, I have the basement broken up. Two-thirds of the basement is the layout and the other third is my studio – but the layout will be encroaching into my studio very soon.

I don't have all the track work done. I have the Salina yard and the Lost Creek mines that I still need to get going on.

And the layout is too high. At the summit, I think its 67 inches (five feet, seven inches) off the floor. I'm six-one, and a lot of people are shorter than I am. To work on the layout at that height, I need to build a bit of raised floor or have little stools for people to stand on.

That part just turned out to be too high because it was a design flaw by me. I wanted to have grades in both directions, so I needed more height.

Another mistake I made when building this house. The builder said, "We can build an eight-foot ceiling or a nine-foot ceiling, it's going to be the same price." And I said, "Well, from my architecture classes to have things cozy and warm, you want a lower ceiling."

So I opted for the lower ceiling and that was a mistake. Another foot of elevation would have been fantastic in here.

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

Gil: The first thing I would have done when I planned the house, I would have excavated the garage and had them put the garage

9. In this closeup view of the Loa ashpit, we see gondola #859 is almost ready to be hauled off for dumping, and replaced by an empty gondola.

over the basement. That would have given me another 800 square feet and I wouldn't have had to go into my studio for part of the layout, plus I could have longer yards.

I did talk to a contractor and said that he could tear up the garage and excavate for another $5000 and have it all finished off. I'm still thinking that through, but I have to get my wife on board. To get where I am now has taken a while and it's enough for right now.

I would like a longer yard so I could have trains up to 20 cars. The typical train I'll be running instead is between 12 and 15, which for narrow gauge is actually pretty good. And for live loads, that'll probably max-out the locomotives pretty good.

MRH: Why did you select the height that you did?

Gil: When I was designing the layout, I wanted three-and-a-half percent grades. I also wanted the lower deck to be high enough that I could work underneath it without hitting my head.

I started off with the lower level. I set it at 42 inches because I knew that I didn't want to spend time under a layout much lower than that. I wanted easy access. I'm not a small person by any

means. I'm six-one and my wife says I'm fairly broad. I weigh a seventh of a ton. Fitting that under a smaller layout would be a pain, I thought. At this layout height, I can comfortably sit under the layout and work underneath if I need to.

I wanted a 42-inch level on the bottom but it turned out to be 43 because I made a mistake in the design – I started the benchwork at the height the track was supposed to be which made the track level an inch higher than planned. It's not bad and looks nice. It was a happy accident.

10. A closeup view of the south side of the Loa coaling tower.

MRH: What are the heights of the two levels?

Gil: The lower level is 42 inches and the upper level goes from a height of 50 inches to 67 inches.

MRH: Why did you pick the grades you picked?

Gil: Most double-deck layouts have a flat bottom and a flat top, or they'll have a transition grade between one or the other. I have a summit area which I started to build because I knew I wanted to do the lower part after the upper

part and I wanted to run grades both ways, so I could have helper locomotives going out of Salina and also out of Loa.

The ruling grade out of Salina up to Terill Pass is 2% and from Loa to Terill Pass it's 4%. It was supposed to be 3.5% but I miscalculated. Prototypical grades were 4%, sometimes a little steeper.

I wanted 3.5% just because the locomotives don't buck going downhill at 3.5%. Using the CAD plans, I built it to the elevation I thought it was supposed to be. However, when I put it on the grade meter, I had some 3.9% to 4% parts of the grades, and the locomotives still were fine going up and down. So the slightly steeper grade turned out to be no problem, and it is still prototypical.

Narrow gauge also has tight curves. I have a 32-inch radius curve, which in S scale is prototypical for narrow gauge.

MRH: What kind of DCC control system do you use?

Gil: I use the Digitrax Super Chief. I like radio control, and being hands-free following the locomotive around. I was using the PBL systems in DC with the sound, and with the PBL system, you have cylinder cocks, and you also had a drifting if you wanted to. This was back in the 1990s so I could drift going downhill.

My brother and Ted York picked up the Super Chief Digitrax system. And I thought, well, that worked out really well for their layout. I thought I'd do the same thing, hoping that when they came to operate on my layout, they would bring their own throttles. But I got the duplex system because they didn't make the Super Chief systems as they had. And so their throttles won't work on mine. I had to buy all new throttles anyway.

But I like wireless DCC because it works so well. Ted York says he has instantaneous control with all his locomotives when using wireless throttles. So I like that a lot.

11. The maintenance-of-way spur in Loa, with several pieces of MOW equipment parked on it.

MRH: What kind of decoders do use and why?

Gil: I am using Econami and Tsunami2s. I have some old Tsunamis in my locomotives too, and I have some TCS WOWSound decoders.

When I first started out with the sound, I used the PBL sound system and it had drift. When the sound decoders first started coming out, they didn't have drift. I wanted drift and cylinder cocks like the PBL sound system had.

It wasn't until the Econami, the Tsunami2, and the second generation WOWSound that they now have the cylinder cocks. And now I can drift downgrade. I didn't like trains chuffing down a 4% grade!

With the Tsunami2 and the Econami, you can just hit a button and you're into drift, and it drifts all the way down the grade. You have braking application too. And, of course you have the cylinder cocks when you're starting out. Just makes it more fun and more realistic!

So those are the decoders I'm using now.

MRH: How do you program the decoders?

Gil: I program them with JMRI. There's an Sn3 modeler up in the Seattle area, Dale Kreutzer, and he sent me a bunch of files of his locomotives. I've used them and adapted them. I've tweaked them to work for how I want them to work.

MRH: What's your least favorite part of doing a layout?

Gil: Painting the backdrop is my least favorite part. As I said, I paint every day for a living and it's tedious to go from painting six-eight hours on a painting, and then for a hobby, "Oh joy, I get to go paint some more."

And a lot of times, the projects I paint are really exciting and I can't wait to get up and work on the painting. But after six to eight hours of painting all day, it gets a little tiresome.

Painting the backdrop is actually the biggest pain. Everything else is really fun.

MRH: Any secrets to a motivating yourself to do it anyway?

Gil: I look at the backdrop and I say it needs to be done, and really I can probably crank out a backdrop that's five, six feet long in an hour. It's just getting started.

My secret is I turn on "Scheherazade" by Rimsky-Korsakov and that lasts almost an hour. It's one of my all-time favorite tunes. I can sit down and paint and listen to the Scheherazade theme and then when that's over, I'm done painting.

I would listen to TED talks and a few other things too, but often TED talks only last 10 or so minutes. It's a pain to keep getting up and changing the recording.


J. Fugate

TED Talks

TED stands for Technology, Entertainment and Design and it's a presentation that's 18 minutes or less in length. TED is a nonprofit that organizes these talks. You can find many of them on YouTube – just search for "TED talk" and you will find talks covering many topics. Here's a link to a number of TED Talks on transportation topics including some specifically on railroads: ted.com/topics/transportation.

12. In this closeup view of the Loa MOW spur, we can see (from left-to-right) a tie-and-rail car, flanger OF, and kitchen car 04268.

MRH: What are your thoughts on layout size? Can a layout be too big?

Gil: Depending on what you want to do with the layout, I don't think any layout can be too big. It's just the time you have to work on it. For me, I have a space constraint and a wife constraint, so I can only work on it so often. I like working on it, but I'm finding that it goes a lot slower than I had anticipated.

But what I've done I think has turned out to be pretty neat. So I like it.

MRH: What are your thoughts on doing layout scenery?

Gil: Back in say 1975, Paul Scoles did a bunch of articles for the *[Narrow Gauge] Gazette* about scenery. I really liked how that process worked. So I tried to do the same thing using real dirt and

13. At the other end of the Loa MOW spur, we find this exquisite and nicely weathered model of a Jordon Spreader.

materials that are on hand. Since the 1970s, the materials have changed and have gotten so much easier.

My dog tore up his bed, and I found that the foam they were using in his bed to be the best out there! I use that to make my sagebrush. It turned out to work really neat and I haven't found any other foam that works quite that well.

MRH: Wow … I guess we need to go get a dog, then!

Gil: Or at least get a dog's bed! When I started this, I knew I would need a lot of sagebrush. One of my favorite shots is of a helper locomotive of coasting past Lava water tank in Colorado on the way back to Alamosa. It's a tank just out in the middle of nowhere with sagebrush as far as the eye can see.

Since the area I'm modeling is on the same high desert plain, I knew I would need sagebrush and there was no commercial sagebrush out there. So I had to figure out how to make good sagebrush in quantity.

Also, back in the early nineties, I discovered a way to make aspens really easily. Since then, I updated it to have exfoliated aspens, which is aspens without any leaves.

So I'm pretty proud of those – I haven't seen them available commercially – at least in the US – and they look pretty neat.

MRH: What time of year are you modeling?

Gil: I am modeling late fall, which is difficult to model, and may be a mistake. I was going to try and use photo backdrops, but the window I'm modeling lasts about two weeks – and I never got out to take pictures.

At the time I'm modeling, some of the aspen trees still have leaves, but most of them do not.

Back in 1992 I went on an excursion out to Chama with some friends, and the night before it had snowed. But by mid-morning most of the snow was gone except in patches. And that was late fall.

I just really, really liked how that looked, and no one else had modeled it. So that's why I chose it, even if it is harder to model!

MRH: Interesting. What kind of locos do you use and do you have a preference?

Gil: All my locomotives are brass and everything is PBL. My first locomotive was an HO locomotive where I narrowed the wheels so it would run on the Sn3 track. That was back in the 70s before anything else was available.

I got my first real brass locomotive in 1978 from PFM. I still have that locomotive but I still need to put a decoder in it. Other than that, they're all PBL locomotives.

MRH: What type of rolling stock or do you prefer?

Gil: My rolling stock is PBL kits. And as Charlie Getz says, "Once you open the box of a PBL kit, you can't put everything back in the box, and so you have to build the car." That's actually very true!

I've also scratchbuilt some, and I had friends who have scratchbuilt cars for me where PBL has not yet come out with a kit. So my rolling stock is either scratchbuilt or PBL kits.

MRH: Okay. What about structures?

Gil: I have mainly scratchbuilt structures. I scratchbuilt the turntable, the roundhouse, and the sand house. The coaling tower is a PBL import that operates,

14. The water spout on the water tank at Terill Pass also operates, complete with proper sounds of lowering, raising, and filling the tender with water.

and the section house up on Terill Pass is a kit. Other than that, everything else was scratchbuilt.

MRH: How do you do your bridges?

Gil: Another guy, just 20 minutes north of me, has an Sn3 layout also. I told him I was going to make some bridges, so he said, "Well, I'll cut you the timber forms."

He spent one or two nights and he cut all the bents and cut all the stringers. I had to put everything together, but he gave me all the wood pre-cut. I have a box of pre-cut bridge wood I can use.

MRH: What about tunnels?

Gil: When I designed my layout, I had no tunnels on it. My wife wanted a tunnel on here, but I did not want a tunnel because if anything is going to go wrong, it's going to happen inside a tunnel.

Then I found out I had made a little mistake coming off the upper level down to the lower level and I had to put in a spiral.

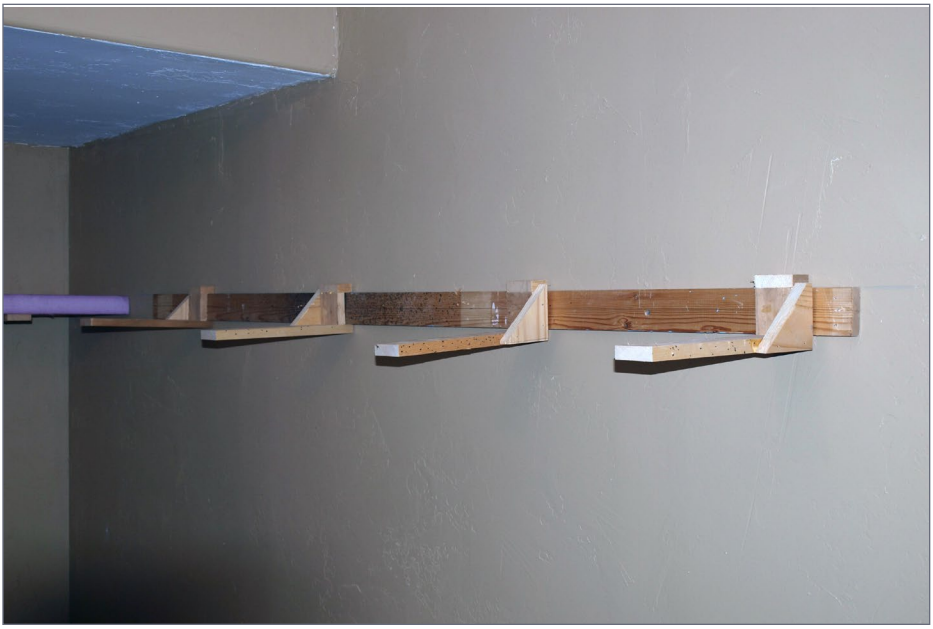
That came to me because I was working on a painting for a guy in Canada of the Selkirk going up Kicking Horse Pass where the spiral tunnels are.

To transition between the lower level and the upper level and to keep the radius at the 32-inch minimum, I had to encroach upon some of the space of the upper level, which lead to a tunnel.

So I have a tunnel, which my wife is happy about. I'm not thrilled about it, but it's there.

MRH: Do you host regular operating sessions?

Gil: I do have people to come over to run trains. I'm building the layout so that it will operate. I figure about eight to 10 people could run it comfortably.



15. Gil used a method he calls "floating benchwork" to hold up the lightweight upper deck of his layout. Because the upper deck is made of extruded pink foam insulation, this simple frame nicely supports it and allows a minimal deck depth.

Since the layout's not totally complete, I don't have formal operating sessions yet. But there are people who want to come operate.

MRH: When you do operate either on this layout or on some of other layout, do you the vision of yourself as being the engineer or do you think of yourself more as a railfan?

Gil: On the layouts I operate, I've usually been an engineer, which I enjoy. Up at Ted York's, he sticks me in the dispatcher hole, so I don't get to run anything. I just have to call trains and send them out.

I like actually running trains from point A to point B when I get the opportunity. And this layout is set up so I'm running live loads. I'll have the Lost Creek area. We'll have live loads coming out of the mine.

I'll have a rotary dumper down in Salina, and it will be a continuous feed of coal. That's going to be more or less a game to see how many loads of coal we can get from the mines into the rotary dumper.

MRH: You obviously like Sn3, but is there an alter ego that would like a different scale or gauge?

Gil: I really like narrow gauge. I have an outlet for standard gauge in my brother's layout. And Ted York's Cajon Pass layout is close.

16. Gil is just starting the scenery on his spiral loop that connects the lower deck to the upper deck. This also houses the only tunnel on the Lost Creek branch.

I also get to paint large steam locomotives for people all over the world. So my standard-gauge fix is mainly on canvas, really. I do narrow-gauge paintings too. But most of everything I do is standard gauge.

I also get to do the big diesels, and I have painted things they've never manufactured. So that gets my fix on the standard gauge.

I like the narrow gauge because realistically the 4% grade and my 32-inch radius curve are prototypical and a 10-car train is prototypical for narrow gauge. Let's face it, running a Big Boy with a 10-car train just doesn't cut it in my book.

MRH: What's your philosophy on doing a layout well?

Gil: Do the best you can do by learning from other people. I was once told you learn what you can with your mind, and steal what you can with your eyes.

Every time I go to see someone else's layout, I see what they've done and I can pick up to either use or modify. If I see something that could be useful, I'll just ask. And they're usually helpful, and they'll explain, "Yeah, this is how I've done that."

So just do the best you can. We all have different abilities.

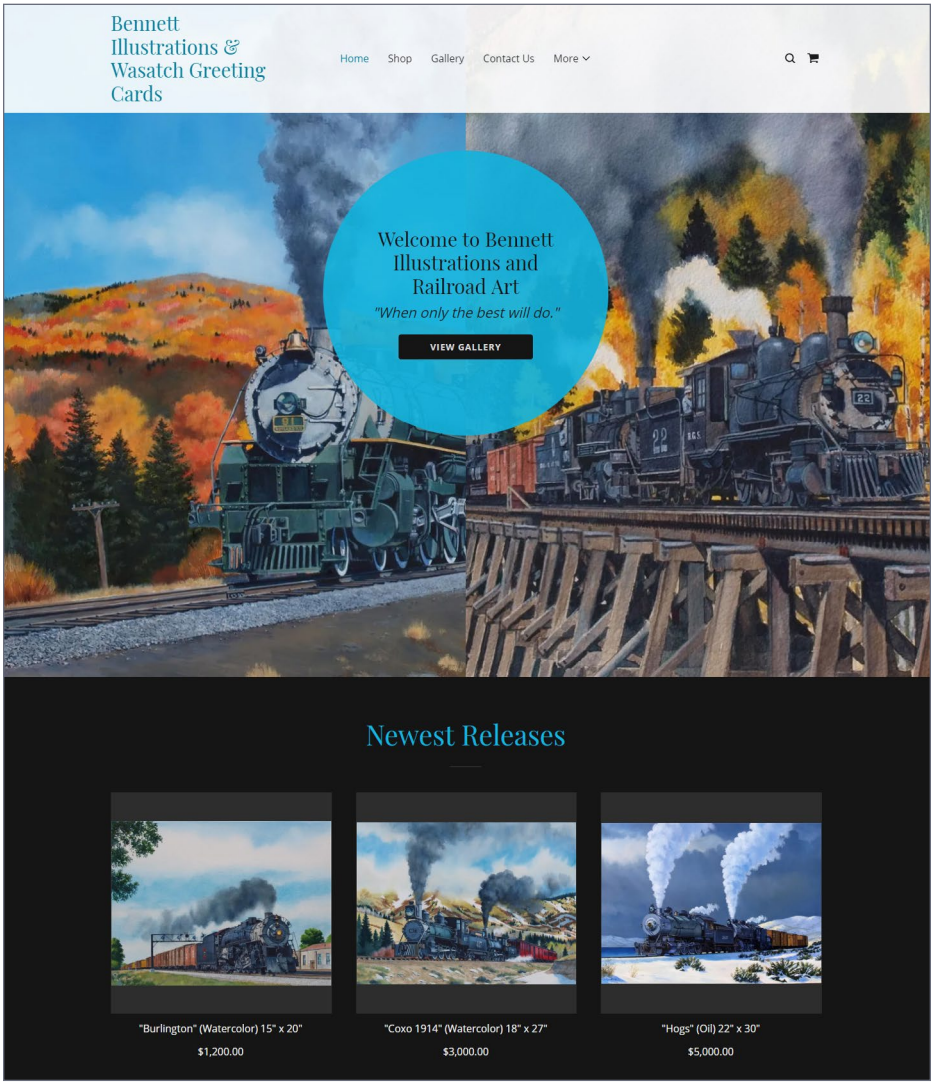
MRH: What advice would you give to someone who's just starting out in the hobby?

Gil: Just take in as much as you can. See different layouts, ask people about different scales. I'm dyed-in the-wool Sn3 because I love the heft of the locomotives and what they can do.

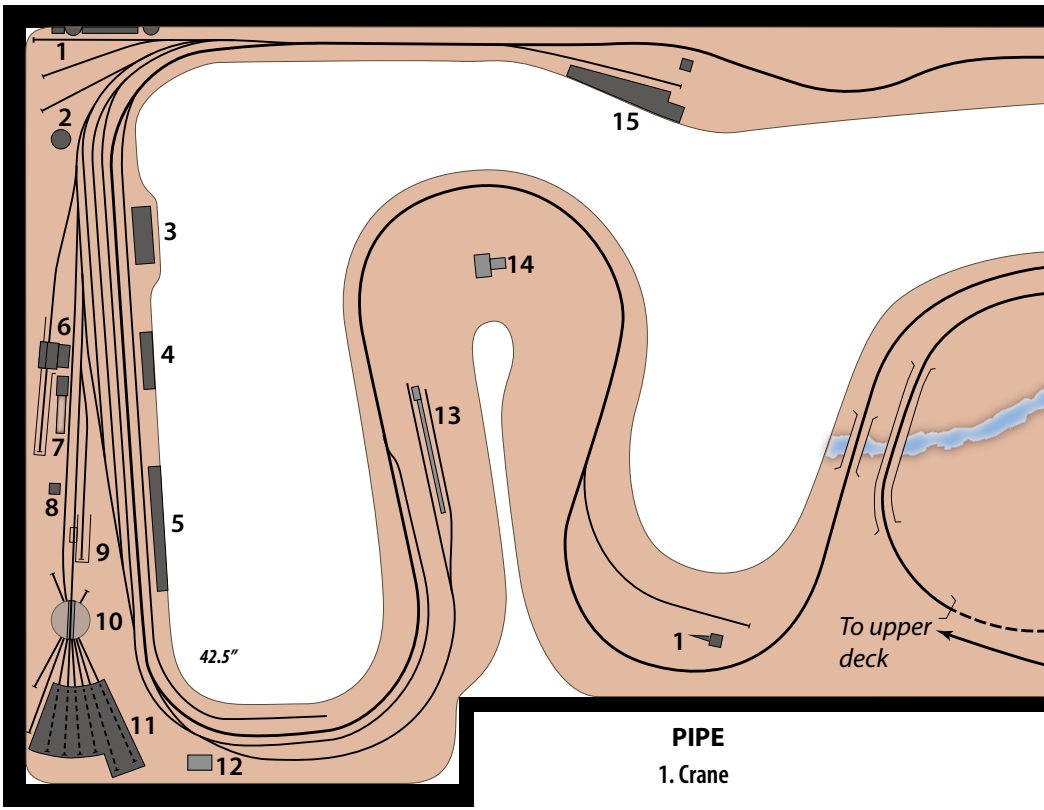
Get to know what you like as part of a hobby. I see some N scale layouts that I think, wow, that's really, really neat. I don't think I could get anything to run that well in N scale, but some people can. My hat's off to them.

MRH: And what do you hope convention-goers get out of this layout?

Gil: When they come to see the layout, they'll see I'm modeling the mundane, I'm modeling something that is not spectacular. I'm modeling sagebrush in an area that is void of population and people. That's what I hope they capture, is that here is a train running through pretty much nothing. And that's what I'm aiming for. ☑



17. Do check out Gil's website: gilbennett.com. You will find it loaded with superb paintings of railroad subjects.



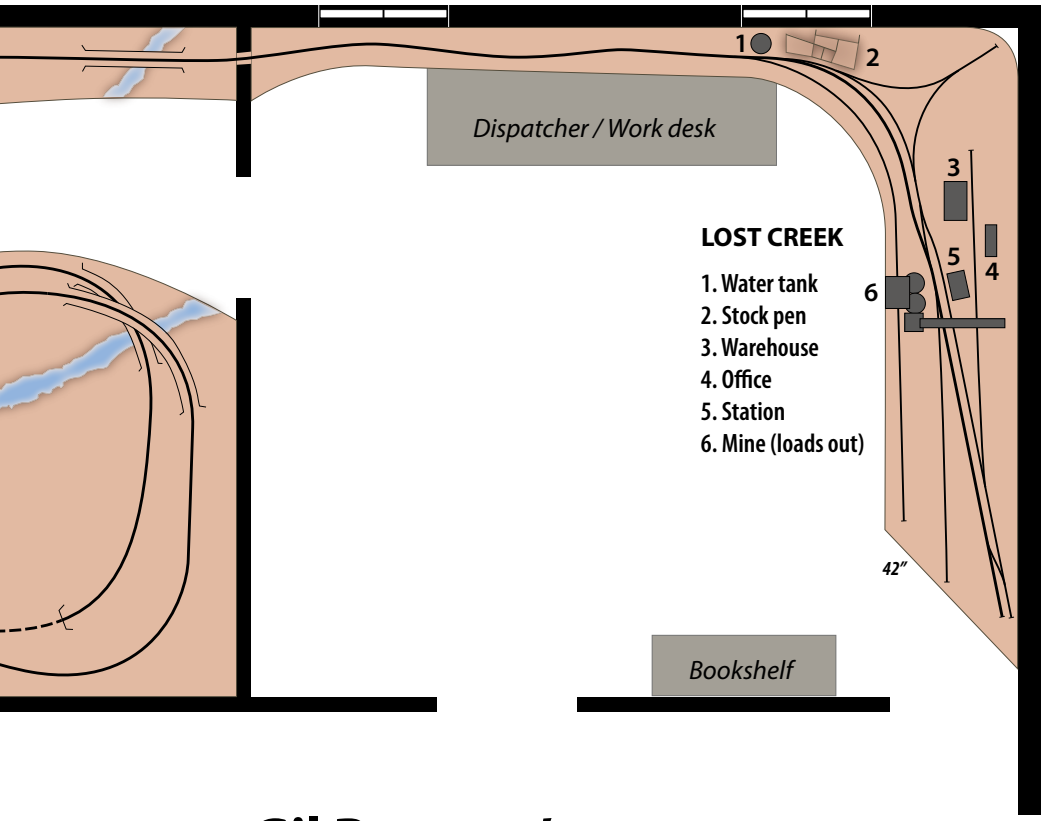
PIPE

1. Crane

LOA

1. Flour mill
2. Water tank
3. Station
4. Warehouse
5. Warehouse
6. Coal tower
7. Sand house
8. Fire shed
9. Ash pit
10. Turntable
11. Roundhouse
12. Yard office
13. Oil dock
14. Gas station
15. Turkey packing plant

L

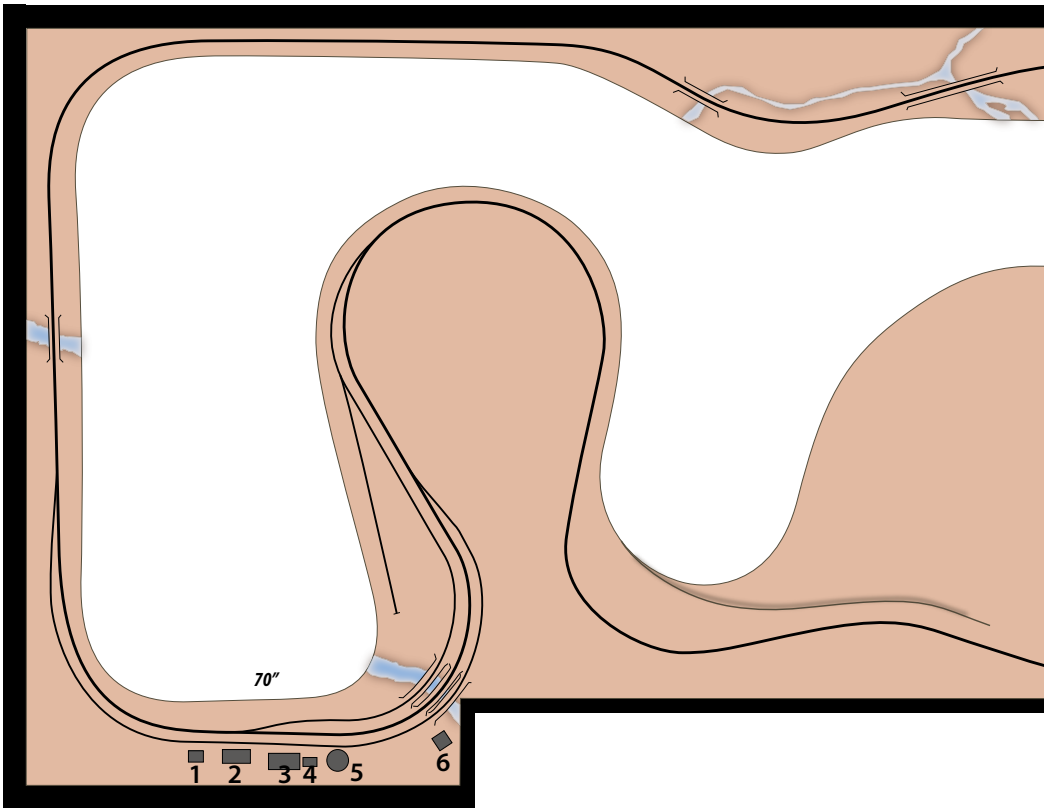


Gil Bennett's

OST CREEK BRANCH

of the Denver & Rio Grande

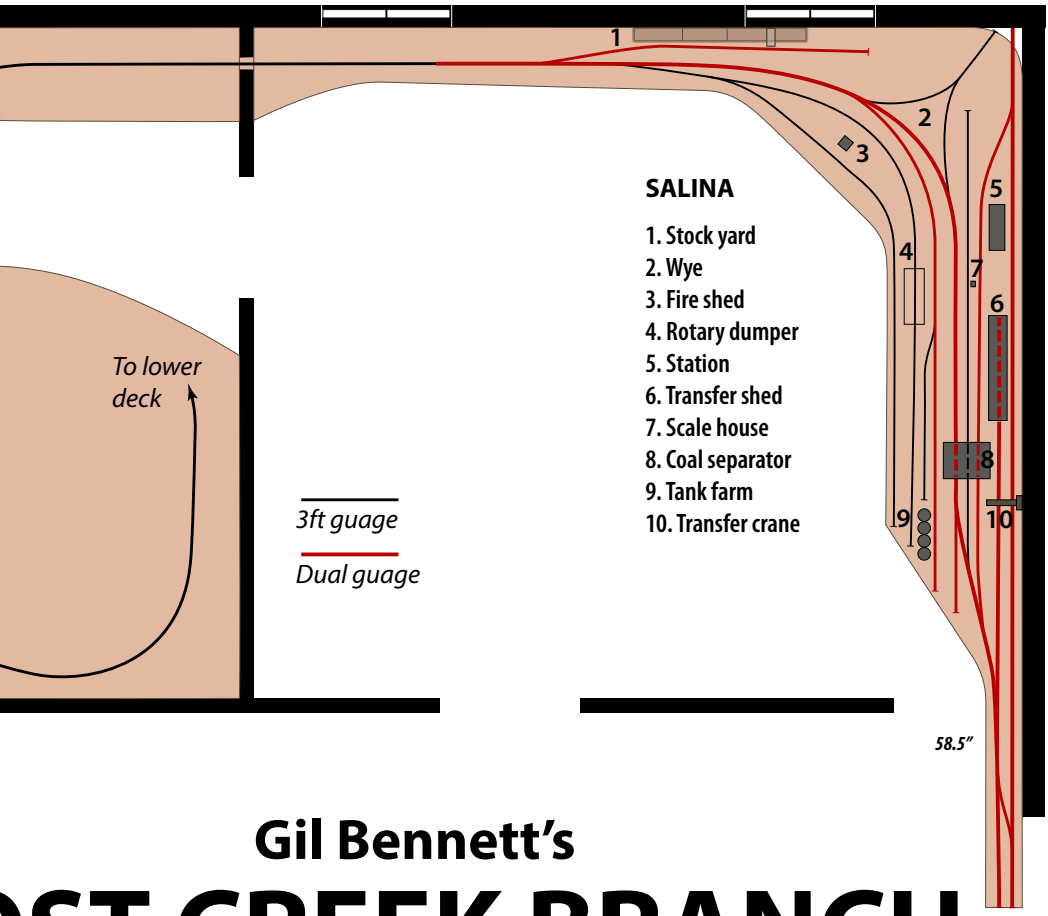
LOWER LEVEL



TERILL PASS

1. Tool shed
2. Hand car shed
3. Section house
4. Out house
5. Water tank
6. Pump house

LC



Gil Bennett's

OST CREEK BRANCH

of the Denver & Rio Grande

UPPER LEVEL

Jack Burgess improves a scratchbuilder's basic tool, the Chopper ...

I started scratchbuilding structures, bridges, and railroad equipment over five decades ago when I got back into model railroading after abandoning it in my youth. Sometime in the 1970s, NorthWest Short Line (NWSL) introduced the Chopper tool [1]. I bought one because my scratchbuilding efforts were continuing to expand.

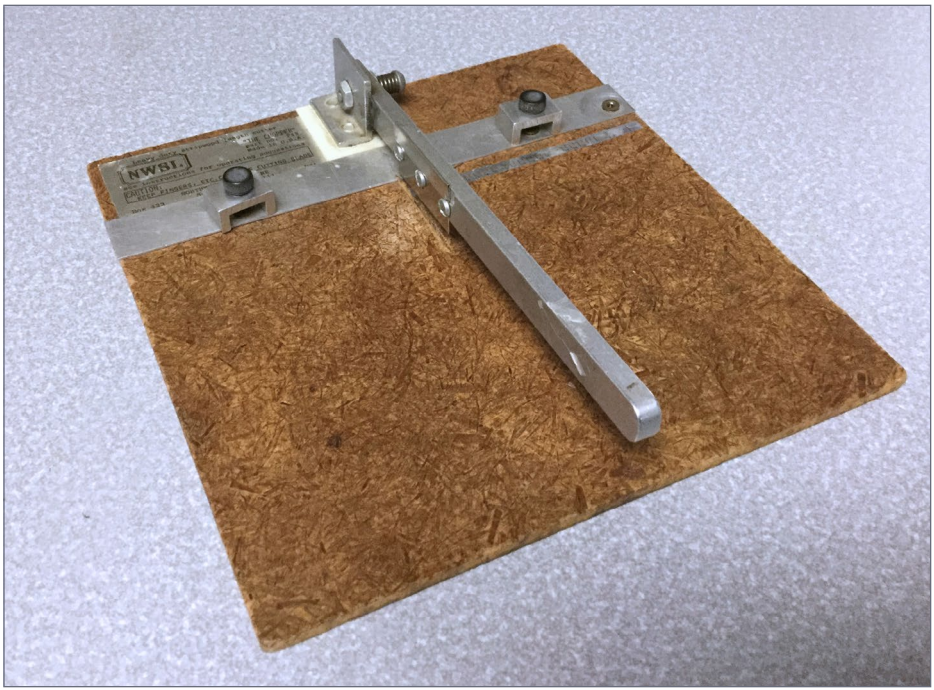
The NWSL Chopper is a basic tool that most scratchbuilders probably own. It allows one to "chop" or cut any number of pieces of stripwood or styrene strips to exactly the same length.

Set a "stop" to the desired length, push the stripwood or styrene strip tight to the fence, slide it to the stop, and cut the piece to length along with all the other pieces you need. Unlike its competitor, the NWSL Chopper is completely manufactured in the USA, including the razor blade.

One obvious problem with the first version of the Chopper was that the base for the tool was a square of Masonite. The surface of that Masonite tended to deteriorate from years of the razor blade cutting into it. The result was that the styrene or wood piece being cut would be pushed into the depression in the Masonite, compromising the cut.

The NWSL solution was the Chopper II [2]. Unlike the first version, this model used a cast metal base plate which incorporated a self-healing cutting mat. I purchased the Chopper II as soon as it was released, although I tend to use the original model with some of my own modifications.

I've also modified the Chopper II and have built three Chopper clones.

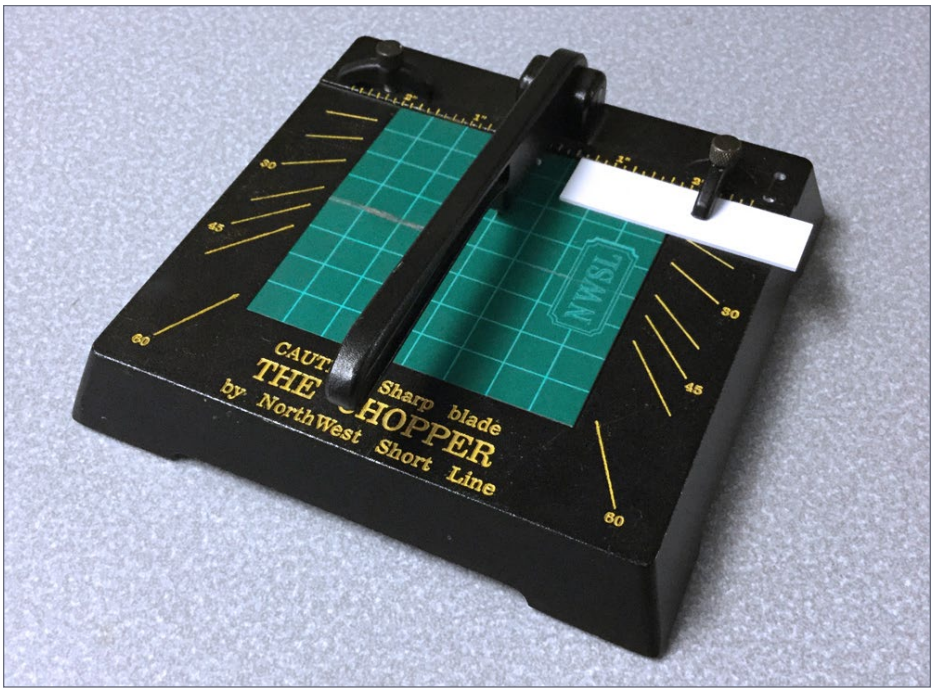


1. My original Chopper with a riser added under the handle mounting as part of my first modification project. This tool shows its decades of use!

Modifying the original Chopper

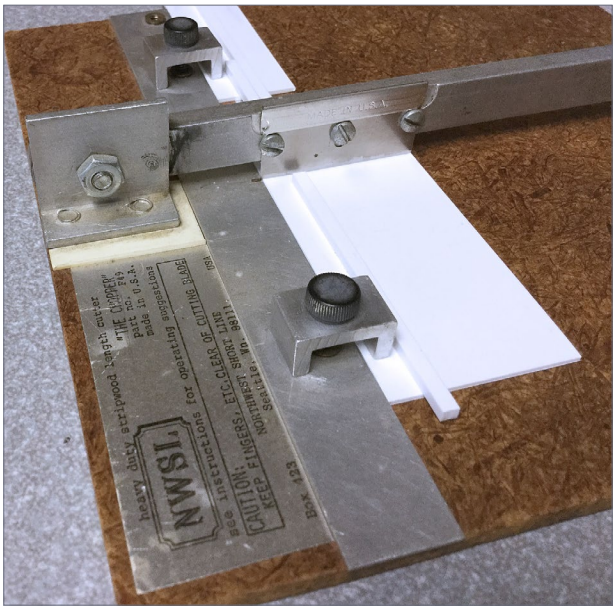
Long before the Chopper II was released, I realized that the Masonite base deterioration was causing problems. My solution was to make a new cutting surface for the Chopper blade which also included a new fence.

I planned to use a piece of 0.040" styrene for the new cutting base. This meant the Chopper cutter needed to be raised 0.040" so the razor blade would be flush with the new cutting base. I cut a piece of 0.040" thick styrene and drilled it to fit under the base of the cutter [3].



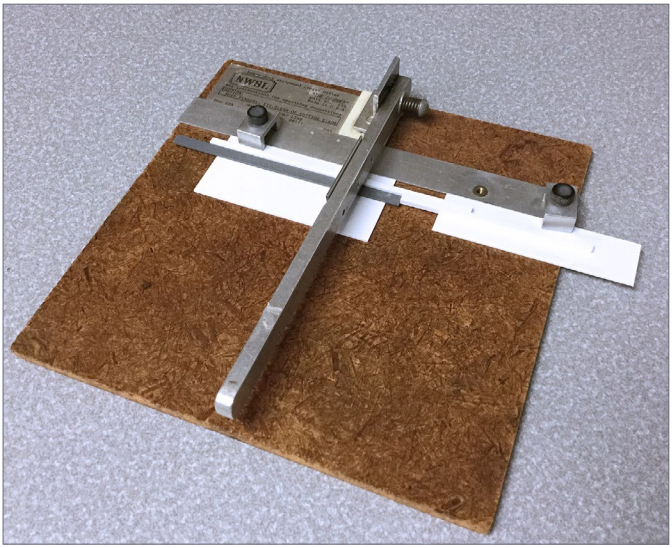
2. My Chopper II with the worn cutting map already turned 90 degrees due to use.

The new .040" styrene cutting base is about 3.25 by 1.5 inches.



The fence on the replacement base needs to be positioned so that the Chopper clamps can hold it in place. I used 0.125" x 0.100"

3. A closer look at the 0.040" riser that elevates the handle assembly to match the new 0.040"-thick cutting base.

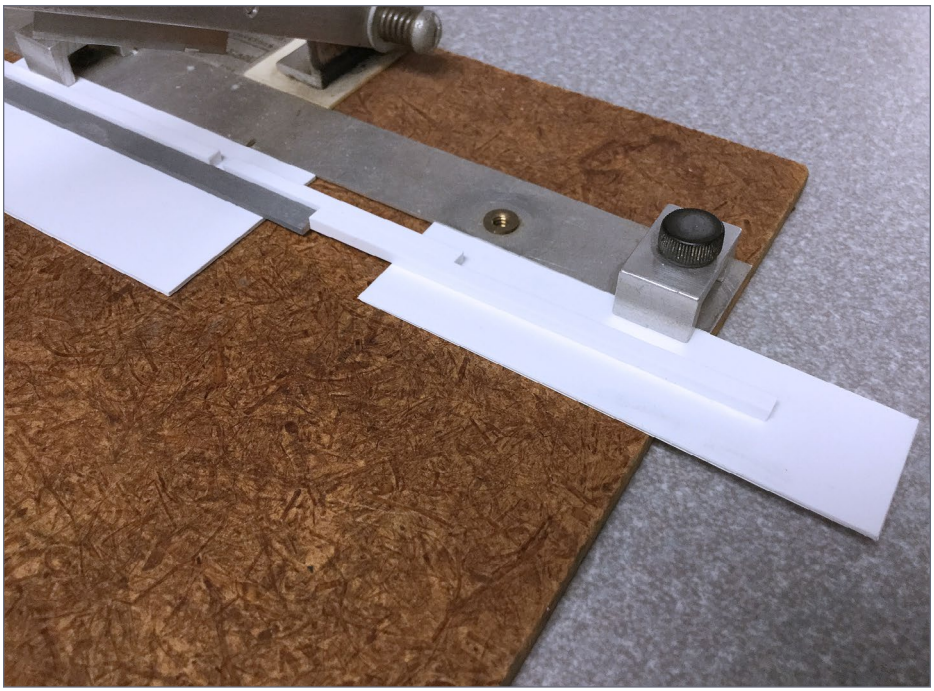


4. My Chopper with the new cutting board under the blade and new stop on the right. Note that I am using a large piece of gray painted stripwood for these photos so it is more obvious.

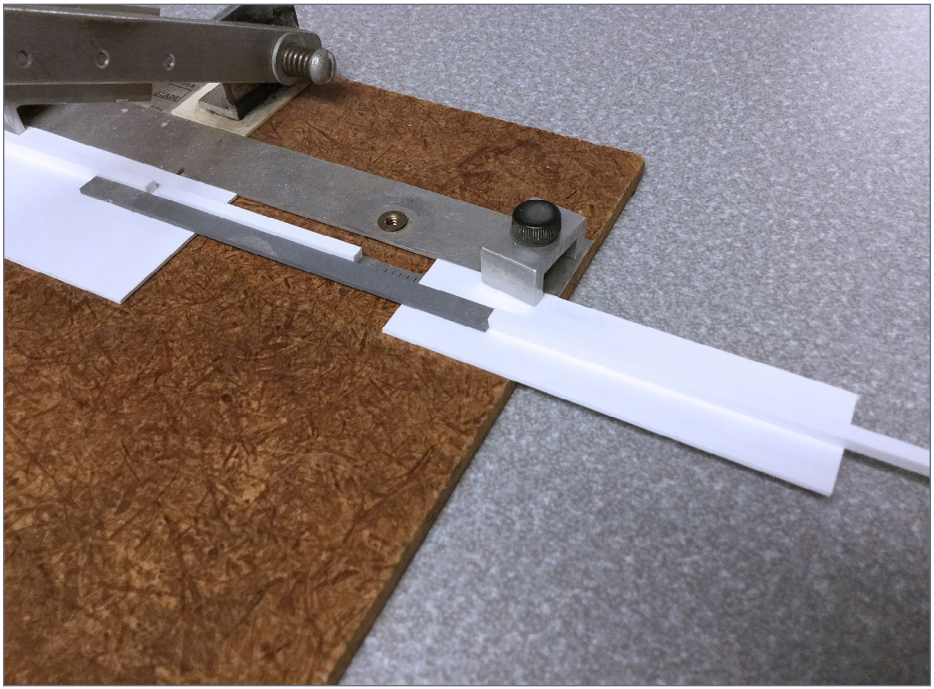
styrene (1/8" wide) for the fence and positioned 1/8" from the back edge of the base and parallel to that back edge [4].

While it would be easy to have the movable "stop" be a simple piece of styrene, I designed it so that the "stop" is long enough to push all of the way up to the razor blade to allow very short pieces of material to be cut to length [5].

It is also reversible to accommodate longer pieces of material to be cut to length [6]. While the photos show how the design works, dimensioned plans for the parts are available in the bonus extras: download the bonus extra here.



5. Here is the reversible stop step for cutting shorter pieces of material.



6. Now the stop has been turned end-for-end and is positioned to cut longer pieces of material.

Additional cutting bases

Over the years, I have made many special bases and fences for my Chopper for special projects. One such task was to cut several ceiling joists to a fixed length with the same eave cut-off angle on each end. Simple!

Take another piece of 0.040" styrene and fabricate another base/fence assembly using the roof eave cut-off angle. A stop was added to the fence [7].

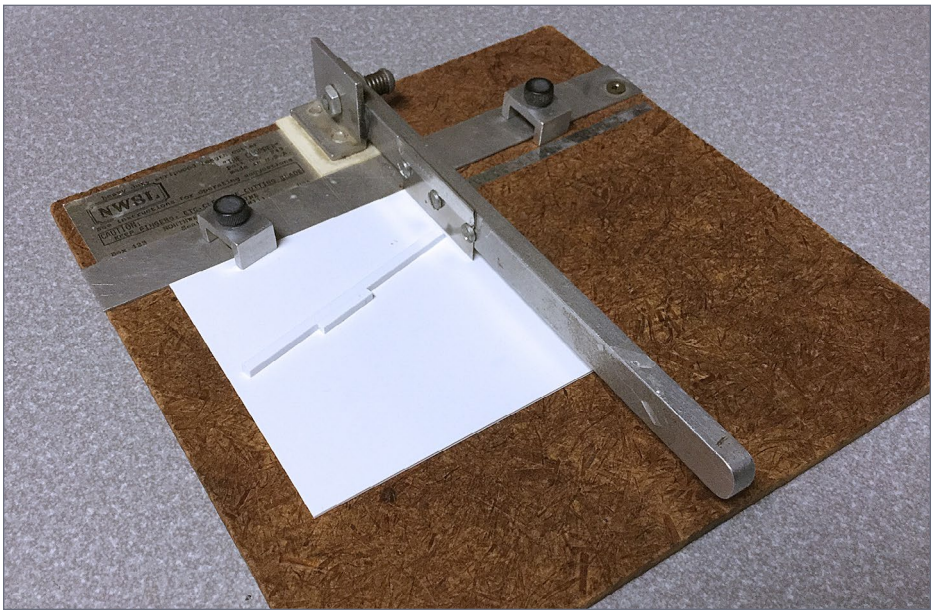
Cut the first piece of styrene or stripwood to the correct eave angle by holding it to the backside of the fence and cutting

off the end [8]. Then move it to the front of the fence, turn it end for end, push it to the fence, and cut it to length [9]. Check the flipped piece before cutting to be sure the cut ends will be parallel.

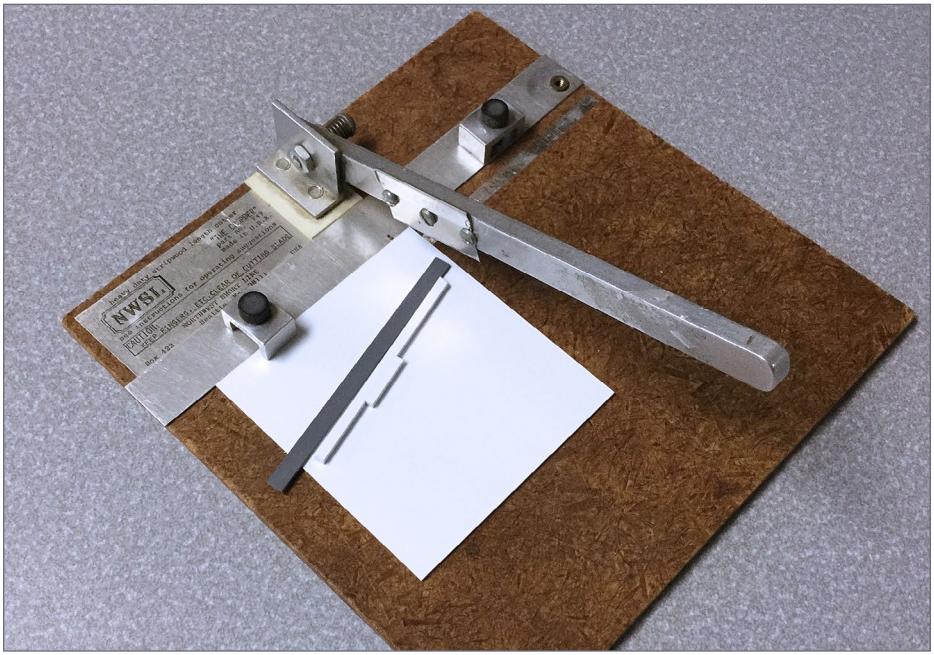
If the rafter is too long or too short, simply slide the base/fence assembly closer or farther from the blade to result in the correct length.

Another tool

The Chopper was designed to cut a number of pieces of stripwood or styrene strip to the exact same length. But sometimes



7. This is a custom cutting base for making angled cuts. The fence glued to the cutting base is at the angle required. A stop is bonded to the cutting base to result in multiple parts with both ends cut to the desired angle.



8. The stripwood to be cut is placed on the back side of the fence for the first cut.

all you need is to cut a single piece of stripwood or styrene strip to a marked length with a square end.

You can certainly do that with either the original Chopper or the Chopper II. That often means cleaning out a spot on my work-bench to place the Chopper to make this simple square cut.

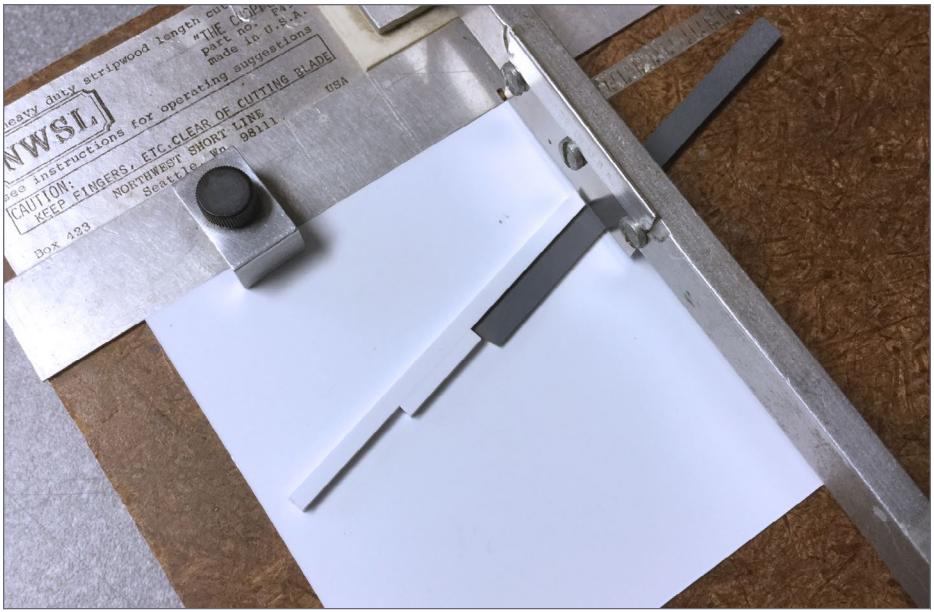
My solution is a simple version of the Chopper [10]. The NWSL handle assembly for the original Chopper is available as Item 4914-4. I mounted this assembly on a piece of 0.125" styrene measuring about 2½" wide by 4" long. I held a drafting square up to the razor blade while bonding the fence in place to make sure that they were perpendicular to each other [11].

Now when I need to cut a piece of stripwood or styrene strip with right angle ends to a certain length, I use this tool. It is easy to clean a space for it on my cluttered workbench.

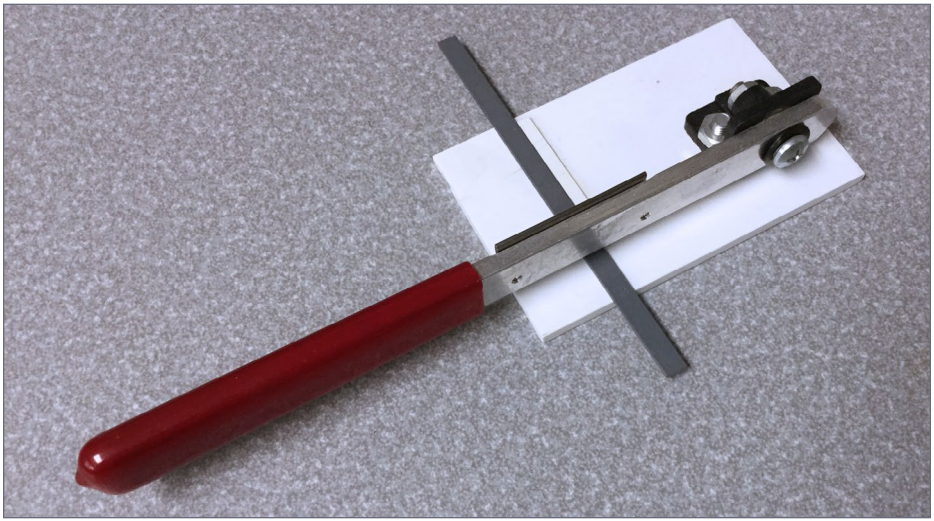
Note that the small base of the tool makes it more effective in cutting thin pieces of styrene or stripwood. If you try to cut thick material, the back end of the tool will tend to rise.

And another tool

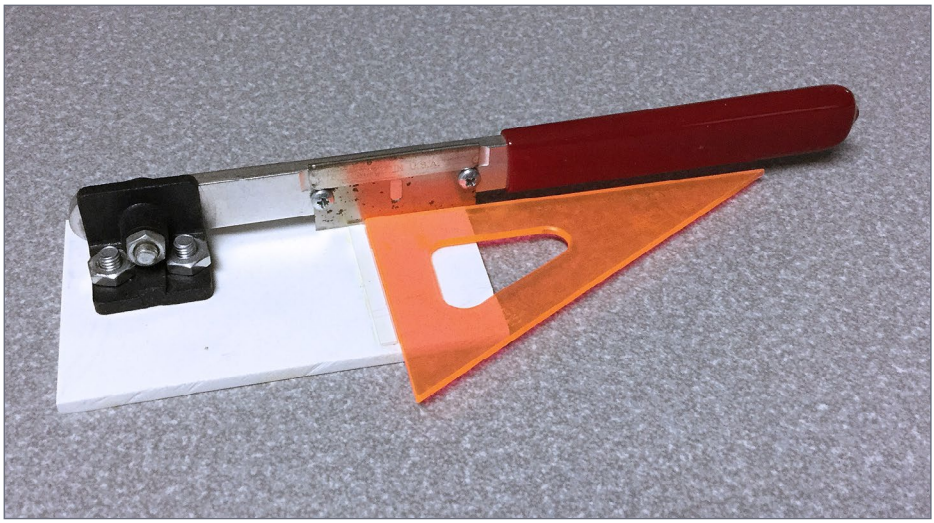
The way that the stop is held down by the piece of aluminum U-channel and a screw (Chopper I) or a casting and a screw (Chopper II) has long frustrated me.



9. It is then reversed and the cut end slid up to the stop for the next cut. The piece can then be turned over and pushed up to the stop for the next cut.



10. This tool to just cut a single piece of material to a desired length.



11. This shows how to ensure that the fence is at a right angle to the razor blade.

I often mark the cut position on a piece of styrene or stripwood, set the stop, and cut it -- to find out that it is a couple of thousands too long or too short. That means that I need to loosen the screw holding the clamp assembly down tight and slide the stop ever so slightly forward or backward.

While most might overlook such a trivial error, I can't ignore it. I sometimes end up resetting the stop multiple times to result in the exact part length I need. What I needed was a stop design that could be clamped down and then still be moved slightly to make small adjustments.

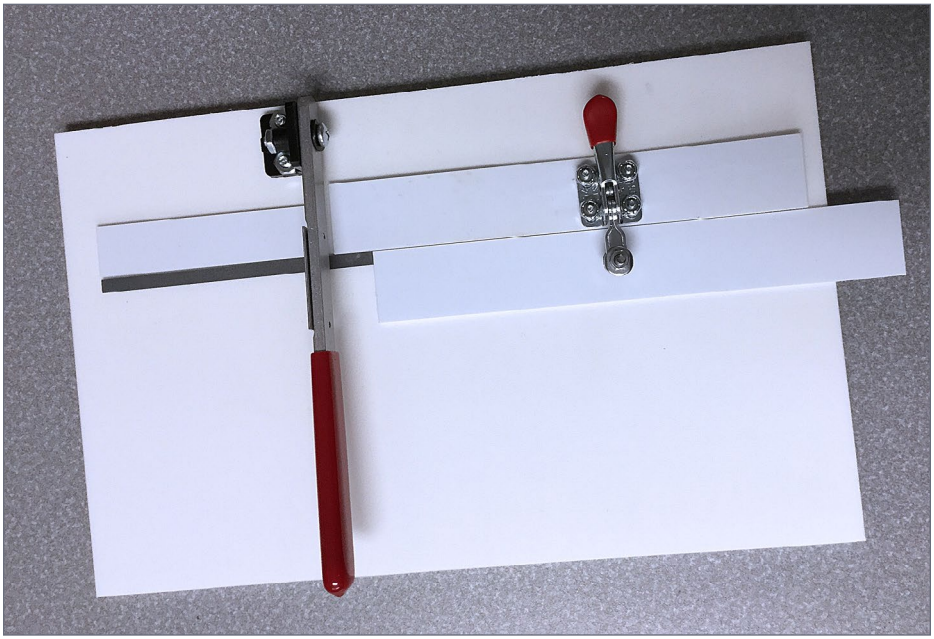
My thinking migrated to somehow incorporating a cross slide on which the handle assembly could be moved left or right up to 0.010" after locking the stop.

Since I couldn't come up with a workable design using a cross slide, I began thinking about a completely different approach. If a piece of 1/4" wide styrene (a slider) could be held in place between the movable stop and the fence, it might be possible to slide it only slightly, solving the problem. That would require a different type of holding clamp since it needed to be only long enough to only to the movable stop.

The base for this tool is a 7" by 12" piece of white Star Board cut to size by TAP Plastics. The fence is 0.060" thick styrene, 3/4" wide to the left of the NWSL handle assembly and 1" wide to the right [12].

The clamp for the moveable stop is a hold-down toggle clamp, item No. 5128A63, purchased online from McMaster-Carr (www.mcmaster.com). I had to add spacer washers between the red rubber stop and the arm to get enough pressure on the moveable stop [13, 14].

Unfortunately, that design detail didn't work out since the slider wasn't held tight enough to the fence. However, the use of the



12. This experimental tool is set up to cut a piece of stripwood. The moveable fence is held in place with a hold-down toggle clamp. Holding a piece of 1/4" material (a slider) between the stop and the fence didn't work out.

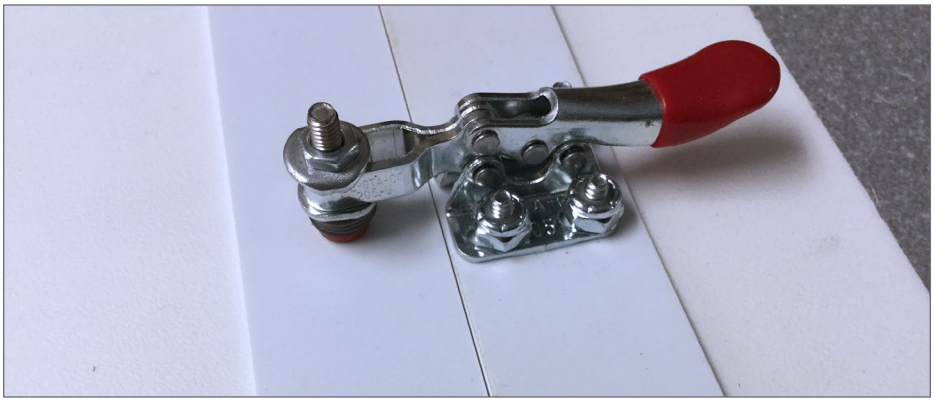
hold-down toggle clamp was very successful, which led to another variation.

Modifying the Chopper II

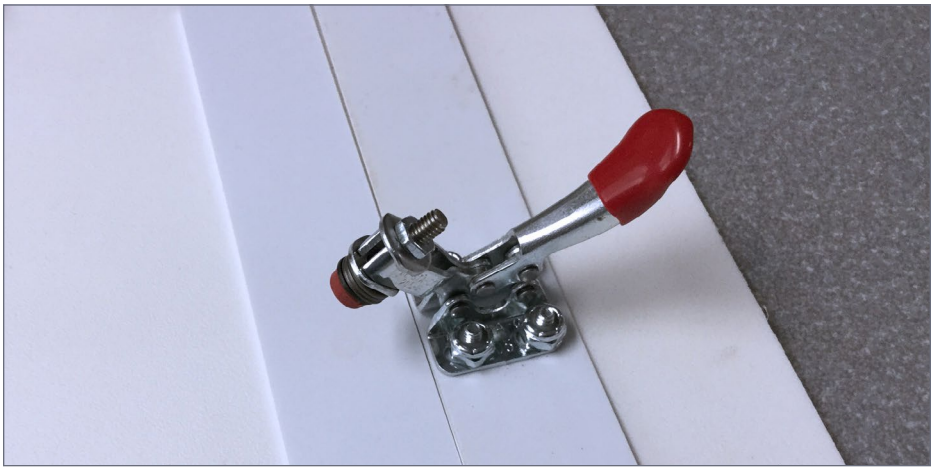
It was relatively easy to replace the factory clamp on a Chopper II with another hold-down toggle clamp. I drilled the hole for the screw for the factory clamp for a 6-32 bolt, mounted the hold-down clamp, and then drilled holes for the other three bolts. Spacers are needed under the rear of the clamp due to the short fence. This has worked very well [15, 16].

Going beyond the Chopper II

Several decades ago, I received an unsolicited, large 24" x 24" chopper table which featured a way to cut both square and

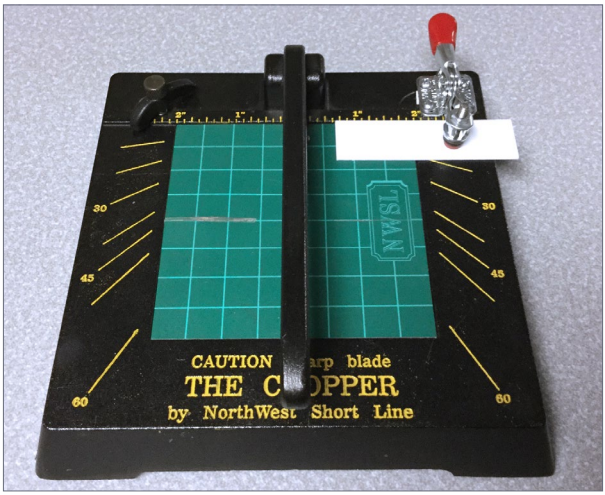


13. A close-up of the hold-down toggle clamp in the clamped position.

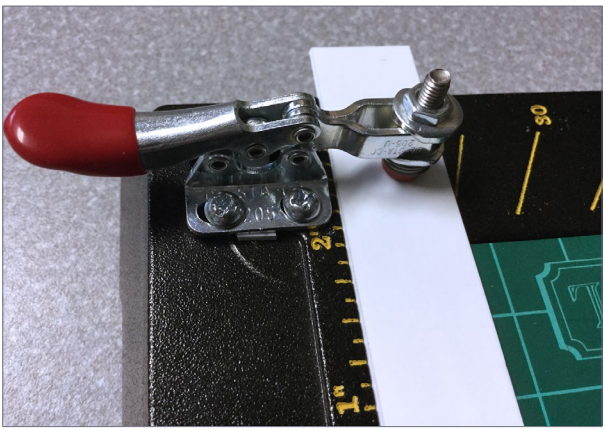


14. Here the hold-down toggle clamp is in the released position.

angled pieces. While innovative, it was much too large to fit into the space that I had in my workshop at the time and I set it aside. But a couple of years ago, I realized that the unique fence and stop on this tool could become the main element of a "new and larger" tool [17].



15. A hold-down toggle clamp retro-fitted to my Chopper II.

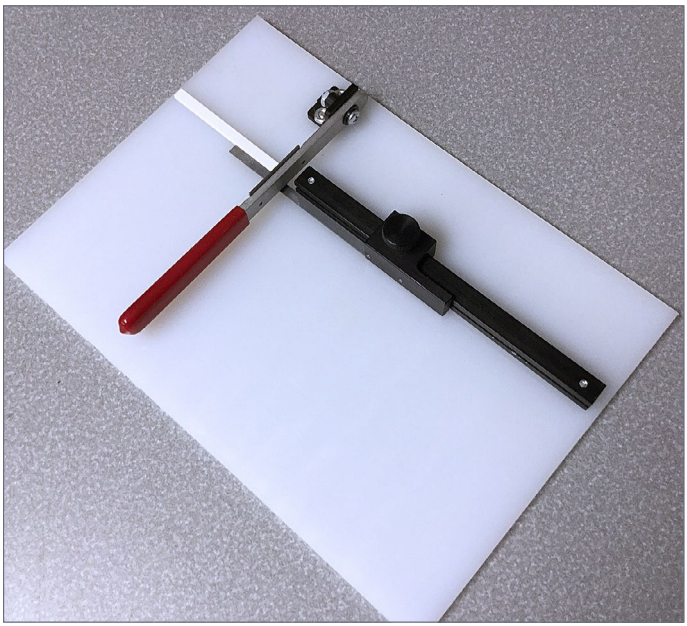


16. A close-up of the hold-down toggle clamp.

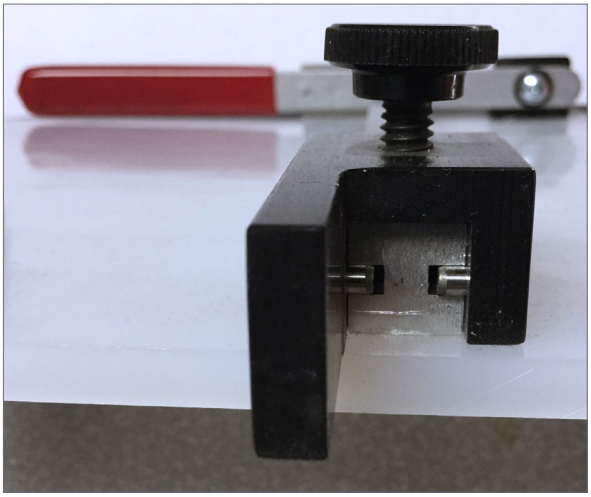
This fence is a piece of ½" x ½" aluminum H channel. The sliding "stop" features a pair of pins which engage the slots of the H channel [18]. The result moves very smoothly and provides an easy way to position the stop for cuts and to make very small adjustments [19].

I used a 12" x 12" piece of 1/4" thick UHMW (Ultra High Molecular Weight Polyethylene) from Amazon for the base of my new tool. This material is resistance to damage from the cutting blade and should last a very long time. The blade assembly is another NWSL handle assembly. It was attached to the base using the provided bolts and nuts.

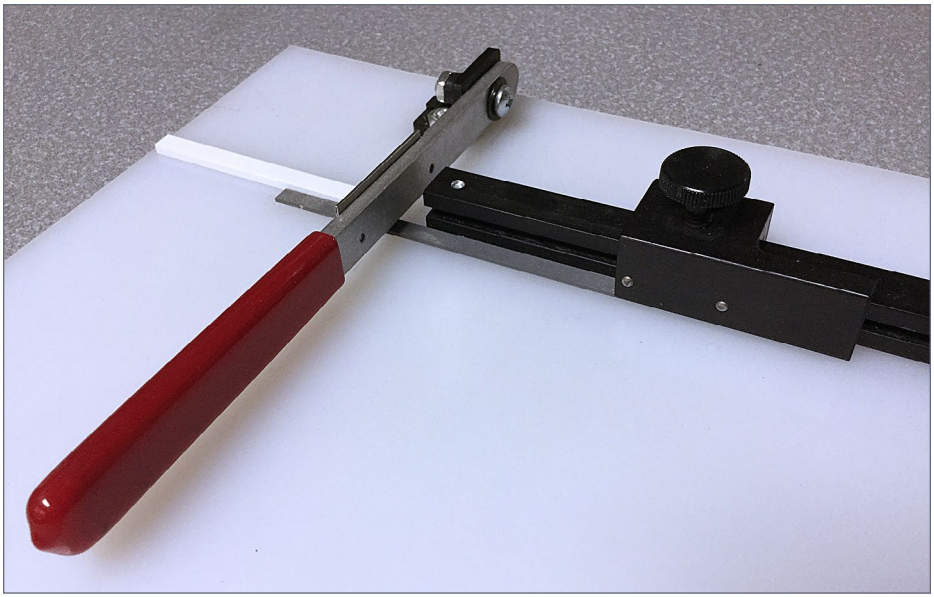
The H channel was attached to the base using 6-32 flat head bolts inserted from below. Holes were drilled through both ends of the H channel and tapped for these bolts.



17. My "going beyond" tool.



18. This close-up shows the sliding stop pushed beyond the right end of the tool. The two pins on the black sliding stop engage the aluminum H channel which is partially visible below the lock bolt. Turning that lock bolt will lock the sliding stop in place.



19. A closer view shows the fence and the sliding stop. You can see a piece of painted stripwood under the razor blade and up against the stop.

A piece of Evergreen .125" x .250" styrene strip was used for the fence to the left of the razor blade. Rather than glue it to the UHMW base, I used the same industrial-strength 3/4" wide double-sided tape I mentioned in my article on El Portal in the February 2018 MRH. It is made by Bron Tapes and called Killer Red. It is available from eBay by searching for "Bron Killer Red Tape".

This tool is a pleasure to use since it is so easy to set the position of the stop. I will often use my digital calipers to measure the actual length of a piece I need to cut, and then set the stop on the tool with my calipers by measuring from the face of the razor blade.

But even with these modifications, I still use my original Choppers to make angled cuts and with special jigs for certain projects. ☑

NOTE: North West Short Line has announced that, after 60 years in business, they will cease operations effective August 30th, 2019. The company will continue to take orders for in-stock products until July 1st, 2019. If you want to purchase any NWSL handle assemblies, you will need to do that before July 1.

Disclaimer: I love good tools and don't hesitate to invest in them.

Savvy Modeler Online

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Tarped loads for gondolas

This month in *Savvy Modeler Online*, we have this superb 13-minute how-to on making some simple but realistic-looking tarped gondola loads by YouTube modeler ***DansRailroad2011***. This is just one of the many videos Dan has done – and if you're worried there's no young guys in the hobby, think again! ■

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GREAT MODELER VIDEOS ON THE WORLD WIDE WEB

MAY NEWS column

Model Railroad Hobbyist | May 2019

Richard Bale and **Jeff Shultz** report the latest hobby industry news

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INDUSTRY NEWS

Craig Walker and John Sheridan join Rapido

Craig Walker and John Sheridan, two thoroughly experienced members of the model railroad industry, have joined the staff of **Rapido Trains.** The announcement was made by Jason Shron, founder and president of the Canadian-based company. Craig Walker's background includes more than 20 years in the model railroad industry, including both marketing and product development at Athearn and Microscale. Craig will focus on increasing Rapido's penetration in the American market. John Sheridan has been consulting in the model railroad industry for many years and is responsible for the design of several models currently on the market under a variety of brand names including Rapido. Now that he is a full time employee at Rapido, John will concentrate on product design and development ...

THE LATEST MODEL RAILROAD PRODUCTS, NEWS & EVENTS

Aztec Closing

John Claudino, founder of **Aztec,** has announced his retirement and the closing of his track cleaning car business. John launched Aztec (which stands for A to Z technology) as a precision machine shop in California's Silicon Valley. In 1987 Aztec began producing N scale freight cars in unique paint schemes. The original Track Star track cleaning car, which uses a large free rolling abrasive wheel set an angle to the track, was introduced in 1991. The mildly abrasive roller scrubs the rail heads clean as the train is moving. The company moved to Carson City, Nevada in 1996 ...

Stephen Priest

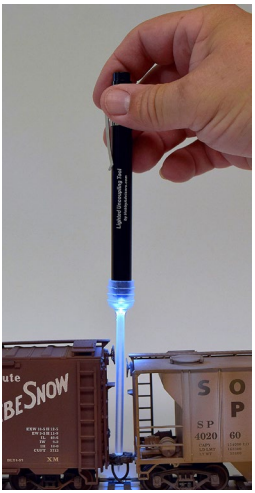
Stephen Priest, who resigned his position as editor of *Railroad Model Craftsman* in December to become marketing manager of ScaleTrains.com, has decided the move was not to his liking. In early April ScaleTrains.com announced that Priest had changed his mind and would be returning to his home in Missouri. Meanwhile, Otto Vondrak, who had been associate editor of *Railfan & Railroad Magazine*, has replaced Priest as editor of *Railroad Model Craftsman* ...

NEW CLUB CARS

The **Southern Pacific Historical and Technical Society** is selling an HO scale ready-to-run model that replicates the 1957 version of Southern Pacific's

Pullman Standard PS-2 twin-bay covered hopper. The model, produced for SPHTS by Kadee, represents the March 1957 as-delivered version of the class H-70-16 prototype which featured red lettering. The real cars saw service throughout the SP system until the end, and some still exist today in Union Pacific Maintenance of Way service. To order go to sphts.myshopify.com/collections/models/products/1957-h-70-16-rtr-hopper-cars.

The South Shore Model Railroad Club of Hingham, MA, is selling an HO scale gondola decorated for ASWX-American Steel & Wire. The model replicates a Bethlehem 52-foot 6-inch 70-ton riveted prototype. Five road numbers are available for the HO scale ready-to-run model that was produced for SSMR by Tangent Scale Models. For more information visit www.ssmrc.org/clubcars.htm.

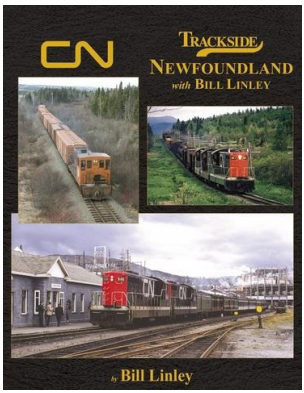


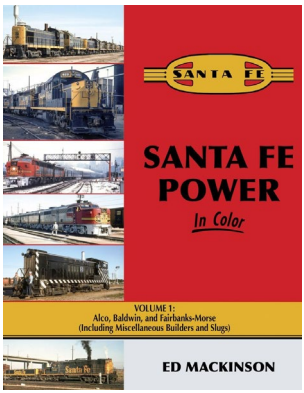
NEW PRODUCTS FOR ALL SCALES

HobbyAdvisors is selling a lighted uncoupling tool suitable for use with N, HO, S, and O scale equipment. The device consists of a molded translucent coupler pick that transmits light directly onto the coupler. With the pick in position, a slight twist will uncouple most popular knuckle couplers. The handle has a push-push switch, battery compartment,

pocket clip, and screw-on translucent pick attachment. Power is supplied by two AAA batteries (not included). To purchase, search eBay for HobbyAdvisors.

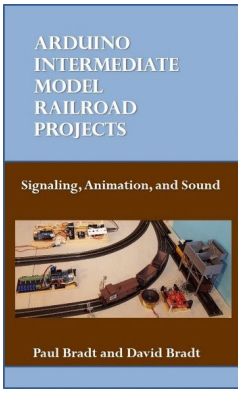
Labelle-Lubricants Division of Con-Cor International, has reformulated (and repackaged) Labelle 430-107 hobby lubricant. Although the primary application of Labelle 107 synthetic lubricant is for the model train market, some of the shafts of newer drones and other radio-control hobby products run at very high temperature. To meet that need, Labelle 107 has been reformulated for temperatures ranging from -45F to +500F. The viscosity remains unchanged. Labelle 107 is available at Ace Hardware and most hobby dealers. For additional information visit con-cor.com.





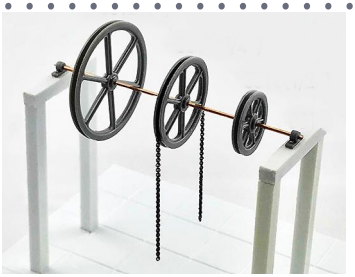
New titles from **Morning Sun Books** include *CN Trackside in Newfoundland* by life-long Canadian railway photographer Bill Linley, who captures the history and variety of the main line, branches, locomotives, and rolling stock. A comprehensive diesel roster and pictures of the railway's ferries and coastal boats are included. Also new from Morning Sun is *Santa*

Fe Power in Color Volume 1, edited by Ed Mackinson. This volume covers Santa Fe's diverse and fascinating diesel power including Alco, Baldwin, & Fairbanks Morse. For more information contact a dealer or visit morningsunbooks.com.



P&D Analytics has announced the availability of *Arduino Intermediate Model Railroad Projects.* Providing detailed information on several model railroad projects that include the Arduino, projects include Automatic Block Signaling, animation, servo turnout control, and adding sound to railroad activities. Primary authors are Paul and David Bradt, with contributions and examples provided by Dennis Drury, Steve Spence, and Tom Ward. The book is available in softcover and Kindle from www.amazon.com/Arduino-Intermediate-Model-Railroad-Projects/dp/1794564144.

In response to a high rate of repair work on decoders due to improper soldering techniques, **SoundTraxx** has posted a free how-to video titled *Soldering to PNP Decoders.* Damage to the circuit board can be caused by using the wrong solder, the wrong flux, or a soldering iron that is too powerful. The video can be accessed at view.bbsv1.net/bbext/?p=land&id=866AED7F535129B7E0530100007F6794&vid=1936fdb5-94bf-4df9-ba4d-38979da4c39a.



Tichy Train Group is selling spoked sheaves in .5, .75, and 1-inch diameter. The sheaves come with pillow blocks which are also available separately. The sheaves are typical of those used to handle cable or chain in mines, on

cranes, barges, lifts, pile drivers, and other industrial equipment. The sheaves and pillow blocks are molded in gray styrene and are cored for .032 wire. For additional information contact a dealer or visit tichytraingroup.com.

LARGE SCALE PRODUCT NEWS

Ozark Miniatures is selling a 1:20.3 scale kit for a Denver, South Park & Pacific waycar. The wood body kit includes truck components, wheelsets, link & pin couplers, and decals. For details visit ozarkminiatures.com.

O SCALE PRODUCT NEWS

Aspen Modeling Company offers a selection of O scale figures including this cowboy pulling on his boots. The website includes a tutorial on painting the figures. For additional information visit theaspenmodelingcompany.com.

Atlas O has released an ACF 60-foot auto parts boxcar. Features on the O scale Master series model include sliding doors and separately applied ladders, door handles, end safety platforms, and 70-ton diecast sprung roller-bearing trucks. Road names are Baltimore & Ohio, Rock Island, Grand Trunk Western, Union Pacific, Canadian National, Conrail, Norfolk &

Western, White River Foodservice, Detroit & Toledo Shoreline, and Western Maryland. An undecorated model is also available.

Also new is a Trainman series triple-bay PS-2 covered hopper inspired by a prototype introduced by Pullman Standard in 1952. The O scale model features roller bearing trucks with rotating bearing caps, separately applied ladders, and brake line detail. In addition to Illinois Central Gulf shown, available road names are Erie Lackawanna, Burlington Northern, Chessie System (C&O), and Jack Frost. An undecorated version is also available. All Atlas O models are available for either 3-rail or 2-rail operation. For additional information contact a dealer or visit atlaso.com.

HO SCALE PRODUCT NEWS

Accurail has released several new kits for HO scale freight cars including this Chicago Great Western PS 4750 cu. ft. triple-bay covered hopper. The model is based on a prototype built by Pullman Standard in 1966.

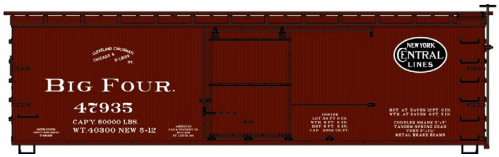
Also new from Accurail is a kit for this Canadian Pacific Railway 50-foot welded steel boxcar with a combination of plug and sliding doors.

The prototype of this 36-foot Fowler wood boxcar decorated for Toledo, St. Louis & Western 'Clover

Leaf Route' was built in December 1914. Accurail's HO scale kit includes period trucks and a horizontal brake wheel that mounts on a vertical shaft.

Accurail's HO scale version of this 40-foot Michigan Central single-sheathed wood boxcar follows a prototype built in February 1919. The car has wood doors and ends.

The prototype of Accurail's HO scale kit for this 40-foot Swift Live Stock Express stock car was originally placed in service in 1928.



Completing Accurail's list of new HO kits is this 36-foot double-sheathed wood boxcar decorated for Cleveland, Cincinnati, Chicago & St Louis "Big Four". The HO scale kit replicates the wood doors, wood ends, and fishbelly steel underframe of the 1915 prototype. All Accurail HO scale kits come with appropriate trucks and AccuMate knuckle couplers. For additional information contact a dealer or visit accurail.com.

Development work on the HO scale version of EMD's SD90MAC-H Phase II locomotive is underway at **Athearn** with delivery expected in March 2020. This will be the first model released in Athearn's recently announced Genesis 2.0 series

of products that feature several road-specific details. The initial release will include an EMD demonstrator unit of the SD90MAC-H Phase II locomotive. Genesis 2.0 features on the demo include three fans on the radiator housing, a window in the nose door, pilot-mounted ditch lights, and a unique demo fuel tank.

A Canadian Pacific version of the SD90MAC-H Phase II will have cab side rain gutters rather than sun shades, raised walkway grates for snow service, CP-specific roof antennas, a window in the nose door, and CP designated locations for the MU receptacles.

Features unique to the Union Pacific version will include an antenna dome on cab roof, no window in the nose door, and extended sun shades on the cab windows.

A SD90MAC-H Phase II operating in Australia is included in Athearn's initial release. In addition to being repainted for FMG-Fortescue Metals Group, modifications to the former Union Pacific locomotive to meet Australian standards include the addition of a safety rail in the middle of handrails, FMG electrical junction boxes on the pilot, and special dual train line air hoses.

All road names of the SD90MAC-H Phase II will have rubber MU hoses, train line air hose, see-through cab windows, detailed cab

interior, Celcon handrails, windshield wipers, lift rings, wire grab irons, fuel tank fillers, fuel gauges, breather pipes, sander lines, and LED lighting. Additional Genesis 2.0 features include etched see-through walkway steps, illuminated number boards, and illuminated ground lights. DCC sound models will come with sugar cube speakers and a full-feature Tsunami2 sound decoder with EMD 265H prime mover sounds by SoundTraxx.

Genesis models coming from Athearn next March include a group of EMD GP39-2 diesel units. Road names will be MKT, Burlington Northern, Soo Line, D&H Guilford, CSX, and Santa Fe in two schemes.

The Burlington Northern version represents Phase IIb GP39-2 units with a ratchet hand brake in the 88-inch nose, 3600 gallon fuel tank, and Blomberg-M trucks with leaf springs.

The ATSF versions represent Phase 1 GP39-2 production. They will be available decorated in the Kodachrome scheme as well as in Santa Fe's standard blue and yellow livery. Road specific details include switcher steps, a low plow at the front, an illuminated Stratolite beacon, a 2900-gallon fuel tank, and Blomberg-M trucks.

Delaware & Hudson versions are former RDG Phase 1 GP39-2 units. Spotting features include a large Sinclair antenna, cab rain gutters, a 2600-gallon fuel tank, and Blomberg-B trucks. A patched

CSX model represents a former Guilford D&H ex-RDG unit with the same road specific details as the D&H version. Genesis GP39-2 locomotives will be available for DC operation with DCC-ready plug-and-play technology for installation of an aftermarket DCC decoder. GP39-2s with factory installed DCC feature SoundTraxx Tsunami2 sound.

Ready-to-Roll models coming from Athearn next March include a 40-foot boxcar modernized with shortened ladders, and running boards removed. Road names will be Chicago, Burlington & Quincy; Minneapolis, Northfield & Southern; Delaware & Hudson, Santa Fe, Ontario Northland, Seaboard Coast Line, and US Air Force.

Athearn's March 2020 production schedule includes the release of Ortner five-bay rapid discharge hopper cars. Cars in this run will include removable loads, wire grab irons, and appropriate trucks with machined metal wheelsets. In addition to the Santa Fe unit shown, road names will be Swindell-Dressler Energy, Union Pacific,

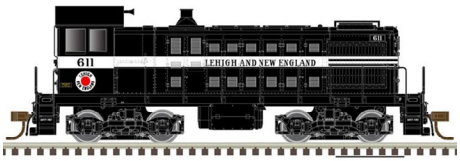
R. Bale

Ortner Cars

The unit train concept was pioneered by Ortner Freight Car Co. in 1960 as an effort to streamline bulk cargo unloading. Robert Ortner, developer of the rapid-discharge door system, targeted unloading a train of rapid discharge cars in 30 minutes to an hour. Previously this same task would take four hours or longer. Unit trains shuttle back and forth between mines and power plants eliminating dwell time in yards. The rapid discharge concept has become common practice for modern railroads.

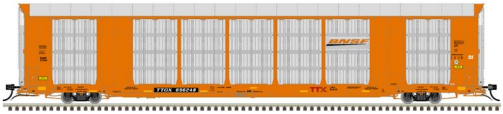
Burlington Northern Santa Fe, Southern Railway, and CSOPU-Colorado Spring Public Utilities.

Carrier names available for new 20-foot containers coming from Athearn next March include Florens, Blue Sky Intermodal, Matson, Hapag-Lloyd, CAI, COSCO, and SITC. The containers have corrugated sides and roof. They will be available in three-packs with different numbers. For additional information contact a dealer or visit athearn.com.



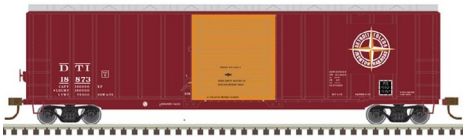
Atlas is quoting a 2019 fourth quarter release for an improved version of its HO scale Alco S-2 diesel switcher. Upgrades include accurate body panel details for the S-2, optional horizontal or vertical radiator shutters, and redesigned truck frames with separately applied detail. The chassis has also been redesigned to accommodate optional DCC with sound. Features include directional LED lighting, and separately-applied grab irons, coupler cut levers, air hoses, and piping.

Road names will be Canadian National, Chicago Great Western, Frisco (ex-NEO), Erie, Lehigh & New England, Maine Central, and Southern Pacific. Atlas Silver series DC units come with an NMRA-compliant socket for installation of an aftermarket DCC decoder. Atlas Gold series DCC locomotives come with a factory installed LokSound Select Dual-Mode decoder.

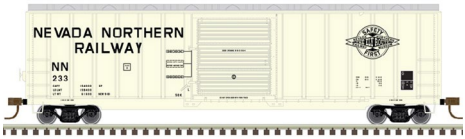


Atlas has scheduled the release of its newly-tooled HO scale Gunderson 89-foot Multi-Max auto carrier for the fourth quarter of this year. The revolutionary feature of the Multi-Max is the ability to change from two-level to three-level loading and back without adding or removing a deck.

Road names on this Atlas release will be BNSF, CN-GTW, CP-Soo, and Kansas City Southern.



Atlas's fourth quarter delivery schedule includes a 50-foot Berwick boxcar shown here decorated for Detroit, Toledo & Ironton.



Additional road names for the HO scale Atlas Master series model will be Grand Trunk Western, Ferrocarriles Nacionales de Mexico, Nevada Northern, Chicago & North Western, GATX-Warwick Railroad, and NOKL-Northwestern Oklahoma Railroad.

Built by American Car & Foundry in the late 1960s and early 1970s, the ACF 60-foot auto parts boxcar was designed to service automobile assembly plants and component suppliers across the nation. The cars were equipped with either single or double doors.

Atlas's HO scale ready-to-run version will be available for Detroit & Toledo Shoreline, Canadian National,

Conrail, SSW-Cotton Belt, Norfolk Western, CPAA-Canadian Pacific, Chesapeake & Ohio, and Western Maryland. An undecorated model is included in the release. For additional information on all Atlas products contact a dealer or visit atlasrr.com.

Bowser has announced road names for a new production run of 40-foot boxcars scheduled for release next January. Three road numbers each will be available for NJI&I-Wabash (Flour loading), Atlantic & Danville, CP Rail (green scheme), Genesee & Wyoming, Lehigh Valley (Flour loading), Linde Liquefied Gases, Louisville & Nashville-DF2 Dixie Line, Maine Central, Mississippi Central-The Natchez Route, Missouri Pacific-Eagle Merchandise Service, Ontario Northland, Seaboard Air Line (beer car with heart logo), NYSW-Susquehanna, Canada Southern, and Wellsville, Addison & Galeton.

Cars with double doors will be available decorated for Canadian National (noodle scheme) and Great Northern. The ready to run HO scale models will feature metal wheelsets and knuckle couplers. For more information contact a dealer or visit bowser-trains.com.

Broadway Limited Imports is selling several versions of a Reading T1 4-8-4 steam locomotive. In addition to the standard in-service livery shown above, the HO scale ready-to-run model

is available decorated for Chessie Steam Special No. 2101, Iron Horse Rambles excursion locomotives No. 2100 and No. 2124, and in the American Freedom Train scheme (middle photo).

The model is also available as Delaware & Hudson 4-8-4 Centennial Locomotive No. 302 with smoke deflectors.

Construction of the BLI locomotive and tender consists of a plastic shell mounted on a diecast metal chassis. Features include variable smoke synchronized with chuff exhaust sound, golden white LED head and rear light, flickering firebox glow, and factory installed engineer and fireman figures. The locomotive features BLI's Paragon3 with Rolling Thunder sound and DC/DCC control system. A Rolling Thunder transmitter is on board the model; the receiver is sold separately. For additional information contact a dealer or visit broadway-limited.com.

New 1:87th scale vehicles available from **Classic Metal Works** include this 1954 Ford Hi-Rail railroad service truck. It is available decorated for Erie-Lackawanna, Southern Railway, and Denver & Rio Grande.

Also new is this 1941-46 Chevrolet tow truck decorated for Sunoco, Standard Oil, and Phillips 66.

In addition to Pioneer Heating, this 1960 Ford tank truck is available from Classic Metal Works lettered for Dixie Gas, and Ciardelli Heating Co. For additional information contact a dealer or visit classic-metalworks.com.

Fos Scale Models has released an HO scale craftsman kit that builds into an impressive three-story, L-shaped apartment building. The street level facades model a range of storefronts including a dry cleaner, driving school, textiles dealer, and a furniture auction. Arched entrances at the center of each façade incorporate steps leading to the apartments on the upper levels. At the rear of the structure, the L-shaped plan offers a multitude of detailing opportunities.

The kit comes with numerous details including a multiple electric meter casting, TV antennas, sewer grates, fire call box, laser-printed clothes for the clothes line, fire escapes, a rooftop billboard, and several signs of various types and sizes. Structural components include laser-cut walls and sidewalks, plastic windows and doors, detailed instructions, and assembly templates. The completed structure has a footprint of 8 x 8 inches plus one inch for the sidewalks. For additional information visit fosscalemodels.com.

Frenchman River Model Works has a 1:87 scale kit for a 68-foot Steam Freighter. Called Clyde Puffers, small coastal freighters of this type were built from the 1850s through 1920 to carry freight into and around the coastal waterways of Scotland and other North Atlantic ports. Many were still in use into the 1950s. The name Puffer comes for the distinct puffing noise produced by its steam engine. Basic structure components cast in resin include a one-piece wheelhouse, one-piece superstructure, and a one-piece hull with riveted steel plate details. Additional detail parts are laser-cut or cast in lead-free pewter. The completed model is 9.25 inches long. Additional kits available from Frenchman River include HO and O scale railroad tugboats. For more information visit frenchmanriver.com.

Highliners has a limited quantity of HO scale kits that can be assembled into any EMD FP7 Phase I or Phase II (including the Canadian variants) units as well as U.S. and Mexican FP9s. The kit includes all the parts in the standard Highliners A unit kit, minus the standard-length A unit shell. Included instead is an Athearn one-piece FP body shell with pre-cored hand rail & grab iron holes and additional parts trees from Athearn and Highliners. As noted on the web page, some additional parts are required to create a Canadian FP9.

Highliners continues to offer HO scale state-of-the-art kits for EMD F series A and B units. For additional information visit highlinersonline.com.

Interaction Enterprises has added four Model-T trucks to its lineup of HO scale vehicle kits. The new models are based on Ford prototypes from the 1911-1912 era. The models include a depot hack, a panel van, a closed cab truck (above), and a flatbed truck (below). The kits are composed of laser board, basswood, and 3D printed parts.

Kits for a 6-1/2 ton 1905 electric moving van and a 1973 motorhome continue to be available. For additional information visit interaction-hobbies.com.

A review of **InterMountain Railway's** production schedule reveals that several popular models are on hold pending receipt of sufficient reservations to warrant production. The list of critical HO scale items needing more reservations include Santa Fe refrigerator cars, 10,000-gallon tank cars, ACF 8,000-gallon Type 27 riveted tank cars, USRA gondolas, 40-foot wood refrigerator cars, and X-29 boxcars. HO scale models that have surpassed minimum reservation levels and are currently in production include Evans 100-ton coil cars, ACF twin-bay covered hoppers, PFE wood refrigerator cars, and ACF 4650 triple-bay covered hopper cars. To learn more

about the status of certain InterMountain models contact a dealer or visit intermountain-railway.com.

Kadee has scheduled the release of a Norfolk & Western 40-foot PS-1 boxcar next month. The HO scale ready-to-run model closely follows prototype car No. 53124 built by Pullman Standard in 1953. Both the model and the full-size boxcar were fitted with 8-foot Youngstown sliding doors.

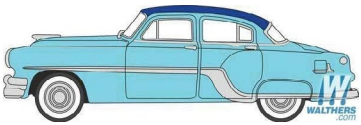
Kadee's June production schedule includes an HO scale version of Conrail's No. 878390 PS-2 twin-bay covered hopper. The prototype was built in 1956 and repainted with light gray alkali-resistant paint in July, 1977. All Kadee ready-to-run models come with Kadee knuckle couplers and two-piece self-centering trucks. For more information contact a dealer or visit kadee.com.

KatoUSA has added more Chicago Metra locomotives to its lineup of HO scale EMD F40PH locomotives. The current release includes three versions of the Chicago Metra locomotive decorated for Fox River Grove (above), Ravina, and Village of Schaumburg. The ready-to-run models are available for DC operation and with a choice of factory-installed DCC or with ESU LokSound DCC.

HO scale Pullman Bi-Level commuter cars decorated for Metra and for Chicago & North Western have been reissued by Kato. The Bi-Level gallery cars feature interior detail and green-tinted windows. The Cab-Coach cars are equipped with golden white LED directional headlights and taillights which can be switched on and off for mid-train operation. Kato Kinematic knuckle couplers that expand and contract as the cars move around curves are included. They can be installed with a Phillips screwdriver. An interior lighting kit is sold separately. For more information contact a dealer or visit katousa.com.

Mine Mount Models has anounced Plazer's Plumbing Supply in HO scale. Measuring 11.75 x 7.25 inches, the multi-building kit employs Mt. Albert Scale Lumber, Tichy windows and doors, and BEST Trains metal castings. The kit includes laser-engraved sidewalks and random stone, concrete, and brick textures. Newly designed pipe racking, shake shingles, and standing seam "metal" roofing is also included. For more information visit minemountmodels.com.

New HO scale automobiles coming later this year from **Oxford Diecast** include a 1954 Pontiac Chieftain four-door

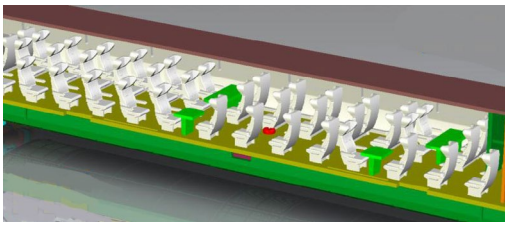


sedan with Deluxe side trim, white wall tires, and painted with San Marino Blue over Mayfair Blue.

This white on black 1968 Dodge Charger R/T features alloy wheels and Bumblebee stripes across the trunk.

Oxford's version of this 1957 Dodge D100 Sweepside Pickup is finished in two-tone green. For additional information contact a dealer or visit walthers.com.

Rapido Trains plans to make another production run of HO scale VIA Bombardier LRC cars. In addition to significant upgrades in the five-year old tooling, this production run will include a new Business Class car (above) with correct window arrangements and 2+1 seating to match cars rebuilt in 2013.



All of the LRC models will have full interior details, track-powered interior lighting and marker lights, etched-metal end gates, and roller bearing wheelsets. Decorating schemes on this run will include original (1981-1998), Canada scheme (1998-present), and Green rebuilds (2010-present). VIA40 cars and Canada 150 cars with three different city name groups are

under consideration pending receipt of sufficient advance reservations prior to the deadline of June 24, 2019.

Photo courtesy Richard Yaremko

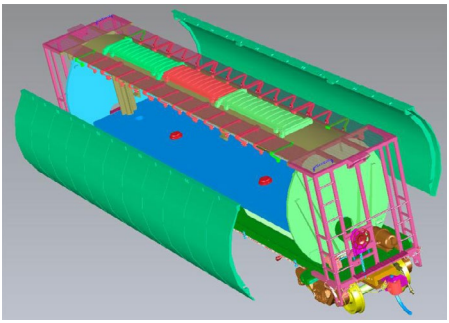
Reservations are also being taken for an ACF PD3500 FlexiFlo covered hopper. Rapido is basing the prototypically accurate HO scale model on a pressure-differential design American Car & Foundry introduced in the mid-1960s. To avoid any warping or shrinking in the final model, Rapido has designed the tooling to produce the car body in sub-assemblies rather than a one-piece body. Where appropriate to the road name being modeled, the ready-to-run car will come with newly designed 125-ton Barber S-2 trucks.

In addition to MDTX, road names will include SHPX-FMC Chemicals, NYC, PC (billboard repaint), PC (ex-NYC patch), CR (two schemes: FlexiFlo and billboard repaints), NAHX Lafarge, SYSX-US Systems, and PC/CR. An undecorated kit will be available with details to assemble all versions of the car.

Rapido has scheduled another run of HO scale Northern Pacific 10000-series double-sheathed wood boxcars. This will be a limited production run with quantities based on pre-orders received by August 12, 2019.

Rapido is also booking reservations for a second production run of a 100-ton 3800 cu. ft. quadruple-bay cylindrical hopper. To control dimensional stability and eliminate warping issues,

the original one-piece body is being retooled as a multiple-piece component.



Features on the HO scale ready-to-run model will include round or trough hatches, Dofasco S-2 100-ton trucks, etched walkway and brake platform; and full undercarriage and end cage detail. The model will adhere to Marine Industries or National Steel Car prototype details depending on the road name being modeled which will include NCHX, UNPX-Alcan Chemical Products, UNPX-Indusmin, CP Rail, and Canadian National.

Dealers recently received delivery of a new version of Rapido's HO scale 52-foot, 6-inch mill gondola. Modifications from the original release include either Z or hat-channel side bracing as used by the railroad being modeled. Other details include wire grab irons, wire retainer valve handles, full underbody detail, positionable end doors, and appropriate trucks with metal wheelsets.

Road names include two versions of Ontario Northland, Algoma Central, Canadian Pacific (three schemes including MOW), British Columbia Railway, Canadian National (four schemes including MOW), Union Carbide, and Toronto, Hamilton & Buffalo.

Depending on the road name being modeled, some of the gondolas will be fitted with Rapido's 70-ton trucks that have roller bearings retrofitted into the journal boxes. The trucks, which have metal wheelsets, are also sold separately. For additional information contact a dealer or visit rapidotrains.com.

ScaleTrains.com is booking advance reservations for a second production run of Thrall carbon black covered hopper cars. The Rivet Counter HO scale model will be available this fall in three versions of the prototype, including 1970 and 1980 cars of 5750 cu. ft. capacity and 4727 cu. ft. cars manufactured in the 1990s. The original 1970 version of the prototype will be available decorated for Cabot, Columbian Chemical, Witco/Continex, and Sid Richardson. Models representing Thrall's 1980 production include Cabot, Sid Richardson, and FURX.

Road names for the 1990 4727 cu. ft. cars will be Columbian Chemicals Company, Sid Richardson, CTNX-Continental Carbon, and TCMX-Transportation Company of America. For more information visit a dealer or scaletrains.com.


R. Bale

Carbon Black Cars

During the 1970s, Thrall Manufacturing Co. introduced a new 51-foot, 70-ton triple-bay hopper car specifically designed to handle carbon black. Unlike traditional covered hopper designs, where the end slope sheets are plainly visible, these cars featured an enclosed end that housed special air bags. When inflated the bags pushed the fine-grained carbon black toward the outlet gates. Additional spotting features included 16-inch tight-sealing round roof hatches. Most cars had 22 hatches but some had as many as 28. Other features included sampling spigots on the car sides and butterfly-type outlet gates.

Tangent Scale Models is selling several versions of an HO scale Bethlehem 100-ton 3600 cu. ft. quad-bay open hopper car. The models are based on a car built in the 1970s for Union Pacific. Models currently available include UP's original H-100-19 as delivered in 1979 (above) and five variations on the Union Pacific's black and yellow scheme from the post-1989 period.

Also available is a DT&I clone that is close in appearance to the original UP quads. For additional information visit www.tangentscalemodels.com.

Walthers has scheduled a new production run of an HO scale EMD SD50 diesel for release in late December. The Mainline series model will feature an all-new drive mechanism including newly tooled power trucks and HT-C side frames.

The body shell is being updated with open gratings on the steps and molded drill starter points for grab irons (sold separately in EMD SD50-60 Diesel Detail Kit #910-256).

Road names will be Chessie System (B&O), CSX, Denver & Rio Grande Western, Kansas City Southern, Southern Pacific, and Union Pacific. An undecorated unit is also in the release. Walthers Mainline series SD50 will be available for standard DC operation as well as equipped with ESU sound and DCC decoder.

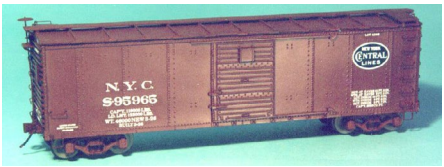
A new production run of Walthers Mainline series FGE 50-foot insulated boxcars is scheduled for release this month.

Road names will be Burlington Northern, Bangor & Aroostook, BC Rail, Canadian National, Canadian Pacific,

Chicago & North Western. The ready-to-run model will have appropriate trucks with 33-inch machined metal wheelsets.

Available now from Walthers SceneMaster is a new United Parcel Service® Delivery Van. Fully painted, the van is based on smaller delivery vehicles used by UPS. The model is fully assembled except for the side mirrors, which are installed by the modeler.

Walthers plans to release an HO scale kit for this Cornerstone series Modern Suburban Station in June. Details include a ticket vending machine, station signs, platform access ramp, gas meter, electrical panel, safety and security posts, a rooftop air conditioner, and several printed signs. The assembled model has a footprint of 10.44 x 6.5 inches. For additional information on Walthers products contact a dealer or visit walthers.com.



Westerfield Models has upgraded several of its HO scale resin kits. The popular #2900 series of USRA 40-foot steel boxcars now feature a one-piece body. Upgrading of the decal art has been completed on Westerfield's #4500 series of GRa gondolas, and #5900 series A-50-6, and B-50-20 50-foot SS steel auto boxcars. For additional information visit westerfieldmodels.com.

Wheels of Time has two HO scale kits based on an Allis-Chalmers model HD-21 tractor produced by A-C from 1954 to 1969. The kits are for an HD-21 Crawler (above), and HD-21 Dozer with blade (below). Components in the kit include a one-piece body, and left and right treads cast in resin; and a 3D printed exhaust. The Dozer kit also has a two-piece blade assembly and 3D-printed hydraulic cylinders.

The models are also available fully assembled and decorated. For more information visit wheelsotime.com.

N SCALE PRODUCT NEWS

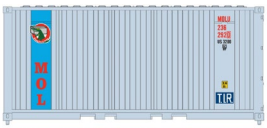
Athearn has announced plans to introduce N scale models of the distinctive GATX TankTrain cars. Athearn's N scale version represent the 23,000-gallon GATX TankTrain cars from the 486 number series built in 1977, and the 282 series built in 1982. The models replicate the differences between the two prototype series including variations on the tank saddles, walkways, manways, and brake rigging. Additional features on the all-new model include correct transfer plumbing on the A and B ends, full underbody plumbing and rigging,

and soft vinyl transfer hoses that bend as the car negotiates curves. The models will be available in three-packs decorated in both the early (above) and late (below) paint schemes. Delivery is planned for March 2020.

R. Bale

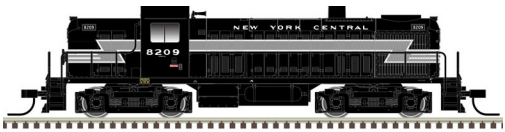
The TankTrain

The GATX TankTrain made its debut in the 1970s. The TankTrain concept solved the problem of long load/unload times for unit train shipments of liquid commodities. A standard unit train of tank cars can take significant time to load or unload, with the need for workers to attach the necessary hoses and other fittings to each individual car, coupled with the necessary time to load or unload the commodity from each car. TankTrain cars are interconnected with a large-diameter, flexible hose between each car, which allows the commodity to be siphoned off at a single point at the end of a set of cars while being "pushed" at the opposite end with inert nitrogen gas. Using this method, TankTrains can be loaded or unloaded at a rate of approximately 3,000 gallons per minute, allowing a train of 90 cars to be loaded or unloaded in under five hours. One of the most successful applications of the TankTrain concept was Southern Pacific's crude oil operation from Bakersfield, California, to a Shell Refinery in Carson, California.



Athearn's N scale production schedule for next March includes both 20-foot and 40-foot containers. In addition to Mitsui OSK Lines (pictured) the corrugated 20-footer will be available decorated for American President Line, Australia-New Zealand, K-Line, Linea Mexicana, SSI Container Corp, Waters AG, and Hanjin.

Athearn's 40-foot N scale smooth-side container will be available for American President Line, K-Line, Mitsui OSK Lines, Neptune Orient Lines, Nippon Yusen Kaisha, and Orient Overseas Container Line. Both of Athearn's new N scale containers will be sold in three-packs with different numbers. For additional information contact a dealer or visit athearn.com.



Atlas plans to complete a new production run of its N scale Alco RS-2 diesel locomotive during the fourth quarter of this year. The model will be available decorated for New York Central, Chicago Great Western, Delaware & Hudson, Frisco, Lehigh & New England, and Spokane, Portland & Seattle. An undecorated version will also be available. The Master series model will be available in both DC and DCC versions.

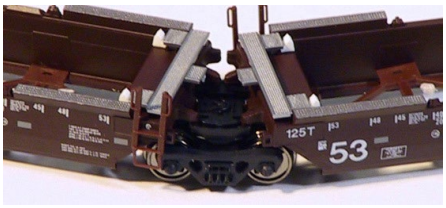
Based on a Milwaukee Road prototype, Atlas has announced a 45-foot logging flat car in N scale. The Master series model features side stakes in groups of two at each end and inward slots on the cars so that scraps and bark falling off the load can drop through without damaging the car. Road names announced include Milwaukee, St. Maries River, Burlington Northern, Great Northern, Northern Pacific, and British Columbia. Included are free-rolling trucks, a detailed brakewheel, and knuckle couplers.

Additional new N scale models coming from Atlas during the last quarter of 2019 include this 60-foot auto parts boxcar. The Master series model is based on a prototype built by American Car & Foundry in the late 1960s and early 1970s. Atlas's N scale version features positionable doors, 70-ton roller-bearing trucks, and AccuMate operating knuckle couplers. Road names will be Canadian National, Conrail, SSW-Cotton Belt, Norfolk & Western, White River Foodservice, CPAA Canadian Pacific, Chesapeake & Ohio, Western Maryland, and Detroit & Toledo Shoreline. For additional information contact a dealer or visit atlasrr.com.

Several N scale projects are on hold at **InterMountain Railway** pending receipt of sufficient reservations to justify production. Desirable N scale models currently in need of additional reservations include ACF 8,000- gallon Type 27 riveted tank cars (above), Bathtub coal gondolas, 4785 cu. ft. PS2-CD covered hopper cars, R-70-20 refrigerator cars, and GP10 Paducah locomotives. Contact a dealer regarding reservations or visit intermountain-railway.com.

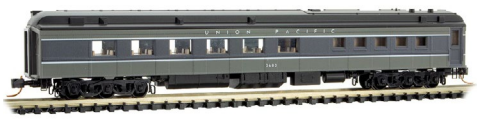
KatoUSA has released three-car sets of N scale Gunderson MAXI-IV well-cars decorated for BNSF, AOK, and TTX. Each set of well cars comes with six

removable 53-foot containers that have a magnet and a metal plate to hold it to the well-car bottom or to the top of the lower container. Kato's use of steel-compound plastic in producing the well-cars is said to assure stable operation with or without a load of containers.



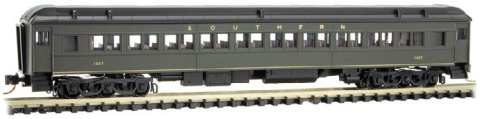
The cars are equipped with Kato's Kinematic trucks that remain closely coupled on straight track and flex for smooth operation on curved track. For additional information contact a dealer or visit katousa.com. A video showing the proper linkage and mounting method for the trucks on these new N scale MAXI-I and MAXI-IV double-stack well-cars can be viewed at www.youtube.com/watch?v=7ZjkhO1ndpI.

Kato has introduced N scale suburban platform sets to the American market. Although the packaging is currently Japanese, assembly instructions are in English. Also new is a lighting system that can be added to both the one-sided platform (above) and the island style that serves tracks on both sides of the platform. Kato has posted a video that offers step-by-step instructions on the platforms and lighting system. To view the video visit www.youtube.com/watch?v=6nY7I7BnAnU.



Micro-Trains has released several new N scale ready-to-run models including this

80-foot heavyweight diner decorated for Union Pacific. The diner is painted in UP's standard postwar two-tone grey scheme.



A 78-foot heavyweight paired-window coach decorated for the Southern Railway has also been released by Micro-Trains. The N scale model is based on a 1920s car rebuilt in 1948 with air conditioning and reclining seats. The model wears classic Pullman green paint with gold lettering.

New freight equipment from Micro-Trains includes 70-foot Gunderson Husky-Stack well-cars decorated for Santa Fe. The car can handle containers up to 48-feet long in the lower well position.

Micro-Trains N scale version of this IC 50-foot steel box car has an 8-foot plug door. The model represents a prototype built in 1967 that has been updated to remove the running board and lower the ladders. The model features Bettendorf-type trucks and body mounted couplers.

Completing our listing of new Micro-Trains cars is a USRA 40-foot Northern Pacific single-sheathed wood boxcar. For additional information contact a dealer or visit micro-trains.com.

Tangent Scale Models is selling several versions of an N scale Bethlehem 100-ton 3600 cu. ft. quad-bay open hopper cars. The models are based on a car built in the 1970s for Union Pacific. Models currently available include UP's original H-100-19 as delivered in 1979 (HO model shown above) and five variations on the Union Pacific's black and yellow scheme from the post-1989 period.

Also available is a DT&I clone that is close in appearance to the original UP quads. For additional information visit tangentscale-models.com.

New N scale **Walthers SceneMaster** items coming this summer including two types of HVAC units. The heating, ventilation, air conditioning units come in an eight-pack (four of each type) and can be used for either roof or ground-mounted installations..

Additional new N scale SceneMaster detail items include these modern trash cans. The trash cans are unpainted and come in a package of 24. For additional information contact a dealer or visit walthers.com.

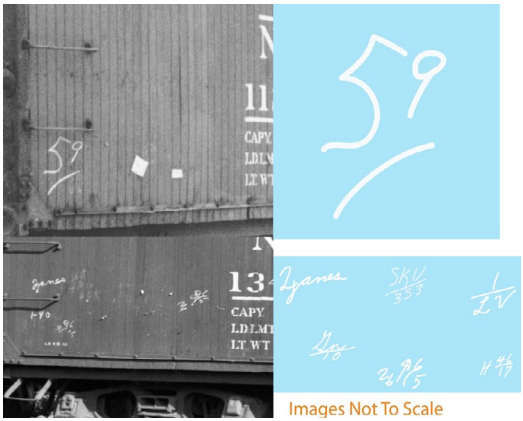
Wheels of Time has scheduled a second run of its N scale Pacific Car & Foundry 50-foot 70-ton exterior post insulated boxcars. They are expected this summer. Road specific details will include Keystone cushioning details and either Youngstown or Landis plug doors depending on the practice of the road being modeled.

Additional features include a detailed undercarriage, body-mounted knuckle couplers, proper ride height, and appropriate trucks with metal wheels. Multiple car numbers will be available for Conrail, CSX, Union Pacific, Texas & Pacific, and Denver & Rio Grande Western. For more information visit wheelsotime.com.

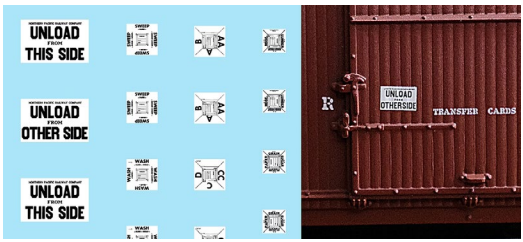
NEW DECALS, SIGNS AND FINISHING PRODUCTS

ICG Decals has introduced a new water-slide decal set that provides correct white lettering for Illinois Central 53- and 60-foot GSC flatcars painted brown or black from 1957 forward. Lettering set ICG-91 contains sufficient material to decorate three flat cars.

Note that ICG Decals has a new website at icgdecals.com. Email correspondence should be directed to Dan Kohlberg at dan@icgdecals.com.

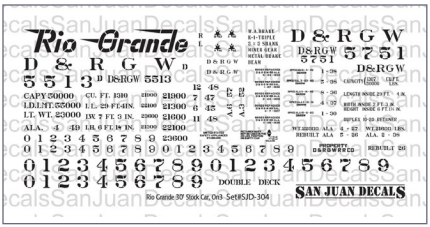


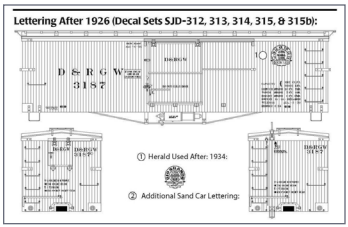
The Northern Pacific Railroad Historical Association has developed chalk mark decals for Rapido's HO scale NP 10000 series boxcars. Each decal sheet includes material for lettering one NP car, plus a selection of unique stencils, common placards/forms, reweigh/lube stencils, and paint patches.



These are high quality water-slide decals printed in Italy by Cartograph. Although intended for NP, many of the chalk marks and labels are suitable for most steam-era railroads.

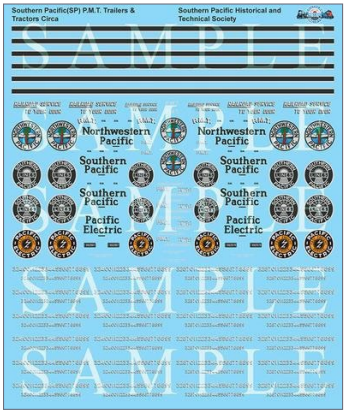
The NPRHA store also sells the Rapido model. For additional information visit store.nprha.org/modeling/cars.





San Juan Model Company has HOn3 water slide decals for D&RGW narrow gauge steam locomotives (left) and D&RGW

3000 series boxcars (right). Additional decals are availble for most D&RGW narrow gauge freight cars. For more information visit sanjuanmodelco.com.



The Southern Pacific Historical & Technical Society has HO scale decals for Pacific Motor Trucking tractors and trailers painted in the SP Daylight scheme. The lettering set has both the early and later version of the Southern Pacific medallion, as well as the Pacific Electric, and Northwestern Pacific heralds that were used in PMT service before 1955. For information visit sphts.myshopify.com/collections/models/products/pacific-motor-trucking-decals.

VIEW READER COMMENTS

DISCLAIMER .....

The opinions expressed in this column are those of the writer and do not necessarily reflect the opinion of *Model Railroad Hobbyist* or its sponsors. Every effort is made to provide our readers with accurate and responsible news and information, however, neither *Model Railroad Hobbyist* or the writer of this column can be held responsible for any inaccuracies or typographical errors that may inadvertently appear in this column.

Briefly noted at press time ...

Atlas will release a new N scale 50-foot wood single-sheathed WWI-era automobile boxcar during the 4th quarter of 2019. Also due from Atlas late this year are N and HO scale versions of GE U23B diesels ...

KatoUSA has announced plans to issue a run of its HO scale Gunderson MAXI-IV Double-Stack well-cars with new numbers late this summer. Paint schemes will include TTX (both new and traditional logos), BNSF (early and Swoosh schemes) and Pacer Stacktrain ...

Walthers next Proto series HO scale name train will be the Twin Cities Hiawatha. All of the signature cars of the memorable train will be offered in orange and maroon, as well as the later yellow and gray paint scheme. Both liveries will be available in a deluxe limited edition of the cars with LED interior lighting and Preiser figures. Walthers will debut a new Proto FP7 diesel appropriately painted and detailed to lead the famous Twin Cities Hiawathas. The project includes a deluxe edition of The Cannonball, the Milwaukee-Watertown commuter train as it appeared from 1956 to 1972 ...

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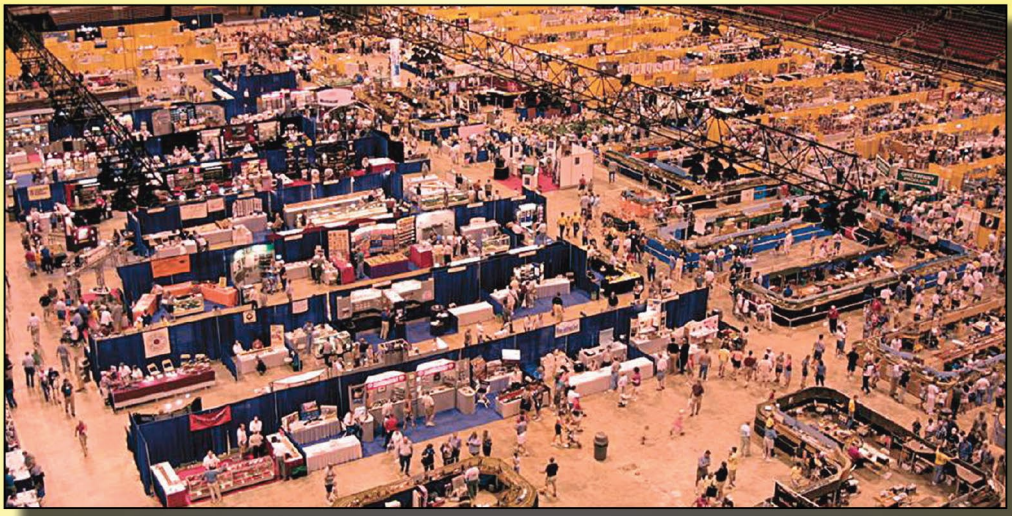

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SELECTED EVENTS

May 2019

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

CANADA, BRITISH COLUMBIA, BURNABY, May 3-5, Railway Modellers Meet of British Columbia, at Simon Fraser University, Burnaby Campus, West Mall Centre. Info at railway-modellersmeetofbc.ca.

CANADA, BRITISH COLUMBIA, CRANBROOK, May 29-June 2, NMRA Pacific Northwest Region Convention, at Western Cranbrook Hotel, 1019 Cranbrook Street N. Info at www.kootenayexpress2019.ca.

CANADA, QUEBEC, DORVAL (metro Montreal), May 25-26, Montreal Model Train Exposition, at Dorval Arena, 1450 Dawson Avenue. Info at montrealmodeltrainexposition.com.

CALIFORNIA, McCLELLAN PARK (metro Sacramento), May 2-5, NMRA Pacific Coast Region Convention, at McClellan Conference Center, 5411 Luce Avenue. HQ at Lions Gate Hotel, 3410 Westover Street. Info at pcrnmra.org/conv2019.

CALIFORNIA, SAN PEDRO, May 18-19, Belmont Shore Model Railroad Club Open House, 3601 South Gaffey Street, Bldg 824. Info at belmontshorerr.com.

CALIFORNIA, SANTA CLARA, May 23-25, O Scale West, S West, and Narrow Gauge West combined meet, hosted by O Scale West, at Hyatt Regency Hotel. Info at oscalewest.com.

CONNECTICUT, FARMINGTON, May 31-June 1, New England-Northeast Railroad Prototype Modelers Meet, at Farmington Marriott, 15 Farm Springs Road. Info at nerpm.org.

MASSACHUSETTS, WAKEFIELD, May 18, Model Railroad Flea Market, sponsored by North Shore Model Railroad Club, at Lakeside Inn, 595 North Avenue. Info at nsmrc.org.

NEW ZEALAND, MOSGIEL, May 11-12, Dunedin Model Train Show, Taieri Bowling Club, 12 Wickliffe Street. Info at www.dunedinmodeltrainshow.nz.

NORTH CAROLINA, DENVER, May 31-June 2, Glenfest 2019 Modular Layout Display sponsored by the Sipping and Switching Society of North Carolina, at Salem United Methodist Church. Request info from Glen Frix at gafrix@charter.net or visit www.facebook.com/events/603669826749316.

NORTH CAROLINA, SPENCER, May 18-19 National Train Day Celebration at Historic Spencer Shops. Info at www.nctrans.org/Events/NTD.aspx.

OHIO, HILLIARD, May 18-19 (setup on 17th), 11th Annual Central Ohio NTrak N scale Weekend Train Show, at Franklin County Fairgrounds, 4100 Columbia Street. Info at www.centralohiontrak.org/p/central-ohio-ntrak-n-scale-weekend.html.

PENNSYLVANIA, LANCASTER (Strasburg), May 15-18, Pennsylvania Railroad Technical & Historical Society 2019 Annual Meeting, Wyndham Lancaster Resort & Convention Center, 2300 Lincoln Highway East, Route 30. Info at www.prrths.com/conventions/PRR_Annual.html.

TENNESSEE, JOHNSON CITY, May 31–June 1, Scale Model Train Show & Sale, sponsored by Mountain Empire Model Railroaders, at George L. Carter Railroad Museum, East Tennessee State University. Info at memrr.org.

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

UTAH, PROMONTORY, May 10-11, 150th Anniversary Celebration of the Golden Spike. Info at www.nps.gov/gosp/planyourvisit/2019-150th-anniversary-of-the-completion-of-the-transcontinental-railroad.htm.

WISCONSIN, LA CROSSE, May 17-19, NMRA Thousand Lakes and Midwest Regions joint convention at Days Inn, 101 Sky Harbor Drive. Info at www.thousandlakesregion.org/2019-tlr-mwr-con.

VIRGINIA, FISHERSVILLE, May 5, 33rd Annual Shenandoah Valley Model Train & Railroading Show, Sponsored by Augusta Country Railroad Club. Augusta Expo 277 Expo Road (Interstate 64, Exit 91). Info at www.acmrrc.org/annual-model-train-show.

June 2019, by location

AUSTRALIA, QUEENSLAND, TOOWOOMBA, June 1-2, Model Trains & Hobby Expo, sponsored by Toowoomba Model Railway Club, at Toowoomba Showgrounds, Glenvale Road. Request info from Ted Freeman at tmrcexpo@gmail.com or visit www.facebook.com/pg/toowoombamodelrailwayclub/events/?ref=page_internal.

CALIFORNIA, CROCKETT, June 8-9, Carquinez Model Railroad Society Open House, at 645 Loring Avenue. Request info from Dave Tateosian at davetateosian@sbcglobal.net or visit cmrstrainclub.org.

CALIFORNIA, RICHMOND, June 15, San Francisco Bay Area Prototype Modelers Meet, at St. David's School Hall, 871 Sonoma Street. Info at www.bayareaprototypemodelers.org.

ILLINOIS, ROSEMONT, June 26-30, National N Scale Convention at Crowne Plaza Hotel at O'Hare, 5440 North River Road. Info at www.nationalnscaleconvention.com.

TEXAS, FRISCO, June 27-30, Texas Special NMRA Lone Star Region Convention, at Drury Inn & Suites, 2880 Dallas Parkway. Info at www.2019TexasSpecial.com.

WISCONSIN, WAUPACA, June 15-16, Strawberry Fest Train Show & Model Contest, at Waupaca Recreation Center, 407 School Street. Info www.wamrltd.com.

Future 2019, by location

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

CALIFORNIA, McCLELLAN (metro Sacramento), July 10-14, National Summer Steamup (small-scale live steam), at Lions Gate Hotel, 3410 Westover. Info at www.steam-events.org.

CALIFORNIA, SACRAMENTO, September 4-7, 39t National Narrow Gauge Convention, At the DoubleTree by HIlton, 2001 Point West Way. Info at www.nngc2019.org.

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

MARYLAND, LINTHICUM HEIGHTS (Metro Baltimore), September 19-22, Mid Atlantic RPM Meet, at DoubleTree by Hilton, BWI Airport, 890 Elkridge Landing Road. Info at marpm.org.

MICHIGAN, TROY, November 7-10, NMRA NCR North Central Region Convention, at Troy Community Center, 3179 Livernois. Info at www.div8.ncr-nmra.org/ncx-2019.

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

OHIO, CAMBRIDGE, October 20, NMRA MCR Division 6 Swap Meet, at Pritchart Laughlin Center, 7033 Glenn Highway. Info at div6-mcr-nmra.org/TimeTable_Page.html.

OREGON, PORTLAND, August 27-31, 35th National Garden Railway Convention, hosted by Rose City Garden Railway Society, at DoubleTree by Hilton Hotel, 1000 NE Multnomah Street. Info at www.ngrc2019.org .

UTAH, SALT LAKE CITY, July 7-13, NMRA National Convention and National Train Show. HQ at Little America Hotel. Info at nmra2019slc.org.

WASHINGTON, BATTLE GROUND, September 28, 46th Great Train Swap Meet, sponsored by Southwest Washington Model Railroaders at Battle Ground High School Gymnasium, 300 West Main Street. Request info from Larry Sprenkel at Larry.sprenkel@gmail.com.

Beyond 2019, by date

MISSOURI, ST. LOUIS, July 12-18, 2020, NMRA National Convention and National Train Show. HQ at Hilton St. Louis at the Ballpark. Info at gateway2020.org.

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

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

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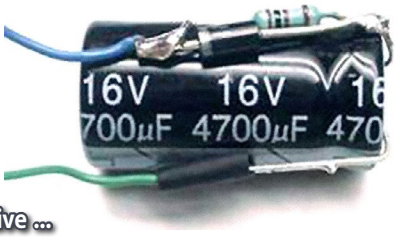

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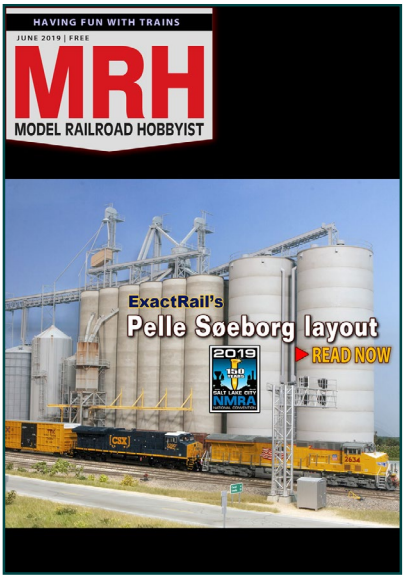

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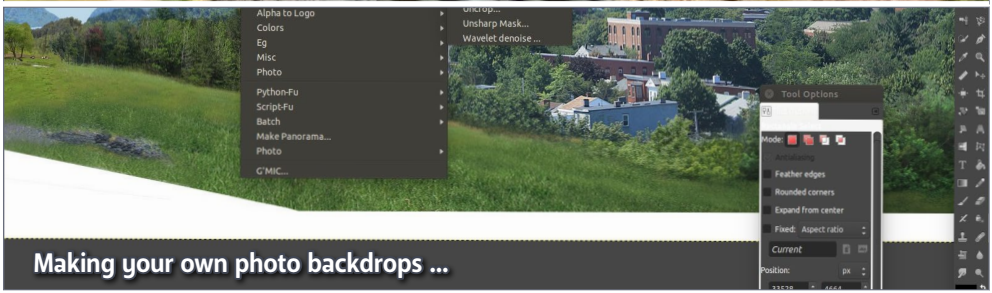

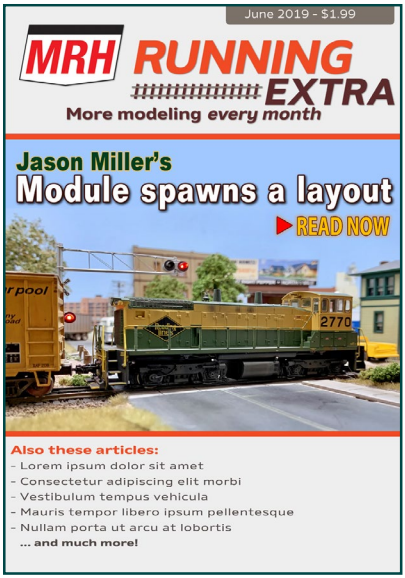

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