HAVING FUN WITH TRAINS

AUGUST 2018 | FREE

MRH

MODEL RAILROAD HOBBYIST

ALSO:

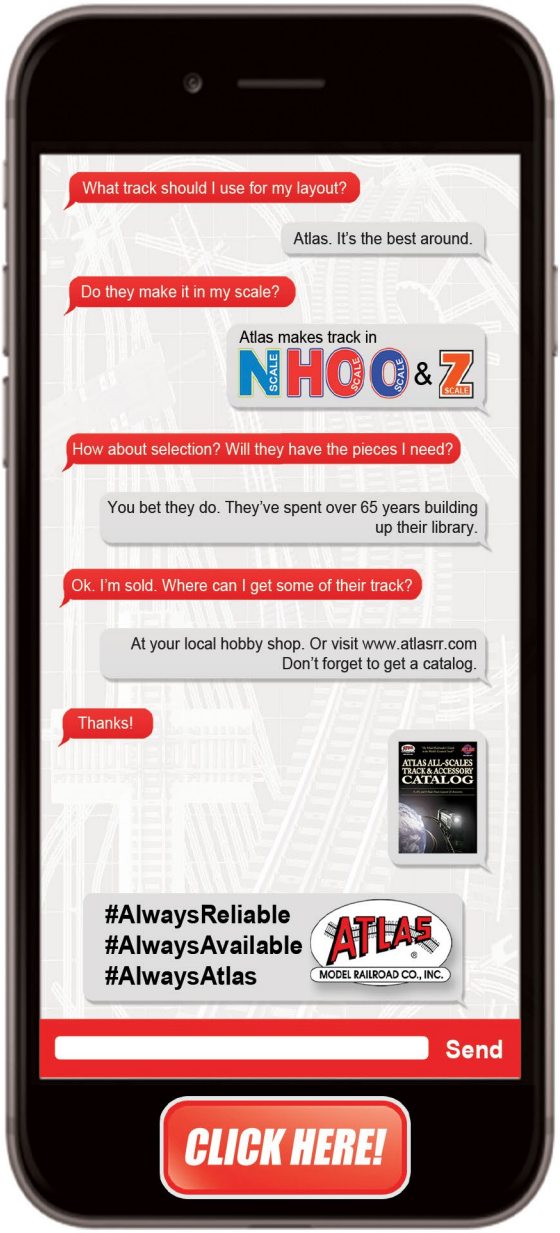
- Speakers for DCC sound
- Modeling a real railroad
- Run trains like a pro
- Modeling pulpwood loads
- The team track as an industry

... and more inside!

Ken McCorry's Conrail Buffalo Division

▶ READ NOW

Get the Track Everyone is Talking About!



FOR MORE INFORMATION OR TO LOCATE A DEALER, PLEASE VISIT WWW.ATLASRR.COM.
ATLAS MODEL RAILROAD CO, INC. • 378 Florence Ave., Hillside, NJ 07205

STAFF CREDITS

HAVING FUN WITH TRAINS
MRH
MODEL RAILROAD HOBBYIST

Model Railroad Hobbyist | August 2018 | #102
(Updated 07/29/18)

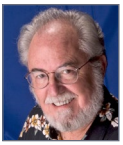
RATE THIS ISSUE

ISSN 2152-7423

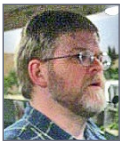
Editorial Staff


Joe D. Fugate, Publisher and Editor


Patty Fugate, Pasteup and Layout


Richard Bale, News and events


Jeff Shultz, News and events, Tech Assistant


Joe Brugger, Copy Editing


Mike Dodd, Copy Editing

Advertising

Les Halmos, Account Manager
Daniel Nava, Advertising Assistant
Jean-François Delisle, Marketing Assistant

Columnists

Larry Smith, Narrow Gauge/Shortlines
Bruce Petrarca, DCC
Ken Patterson, Reporter at large

Rotating Columnists

Jack Burgess, Getting Real column
Nick Muff, Getting Real column
Mike Rose, Getting Real column
Tony Thompson, Getting Real column

Rob Clark, Imagineering
Dave Meek, Imagineering
Ray Dunakin, Imagineering

Issue password: Aug2018

Published for the glory of God. What's this?

MRH SPONSORS

A – D

Vendors: Get your clickable logo here ...

MRH Sponsors | 2

E – R

When talking to hobby vendors, please remember to mention MRH.

Vendors: Get your clickable logo here ...

S - Z

scaletrains.com

soundtraxx.com

sodigi.com

sbs4dcc.com

tamvalleydepot.com

tonystrains.com

trainteklllc.com

walthers.com

yankeedabbler.com

Vendors: Get your clickable logo here ...

Table of Contents

Model Railroad Hobbyist | August 2018 | #102

FEATURES

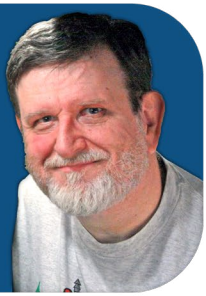
Table of Contents | 2

COLUMNS

NEWS and EDITORIAL

ALSO:

PUBLISHER'S MUSINGS



Model Railroad Hobbyist | August 2018 | #102

RATE THIS ARTICLE

Joe Fugate says a sad goodbye to DCC columnist Bruce Petrarca and announces the new *Electrical Impulses* replacement ...

DCC Impulses columnist Bruce Petrarca's first column with MRH was October 2011. MRH has been greatly honored to have Mr. DCC do a regular monthly column for us.

Very few match Bruce's depth and breadth of DCC knowledge and his reputation in the hobby. As a huge bonus, Bruce has a real knack for taking a complex technical subject and expressing it so even non-techies can understand it.

Bruce's writing is also entertaining, making it a fun read. That's quite an accomplishment for what is ordinarily pretty dry technical stuff.

As of Bruce's final column in this issue, he has written a total of 74 columns for MRH. The combined page count of all these columns exceeds an amazing 1100 pages! The amount of DCC and electrical insight Bruce has given MRH readers is huge.

Bruce's columns regularly get high ratings, not infrequently in the top 5 for the entire issue. Even when Bruce's columns haven't made the top 5, they've almost always been rated a 4.5 or better, which we rank as a "very good" rating.

We've been considering perhaps putting Bruce's columns into paper-back form by topic, and Bruce has been looking at making updates

to the material. Maybe we will do something and maybe we won't. Updating 1100 pages of material is a huge effort, so we'll see. Above all, we want to respect Bruce's time as he "retires" to do more with his model railroading hobby.

In any event, Bruce will be sorely missed in the pages of MRH.

Bruce is also proving to be very difficult to replace. So I've decided to take lemons and make lemonade.

The new *Electrical Impulses* column

We've decided to broaden the DCC column into an "all-things-electrical" recurring series I'm calling *Electrical Impulses,* to indicate it's a successor to Bruce's *DCC Impulses* column.

Diesels

EMD SD50

REFRESHED TO RUN

GREAT SOUND, SUPERIOR VALUE

THE NEW RTR EMD SD50 DIESELS FEATURE ECONAMI SOUND

In an effort to keep up with a changing marketplace, the fuel crisis of the late 1970s, and competition of that era, EMD responded with the SD50. Generating 3600 horsepower from a 16 cylinder 645F3 prime mover. The principle of fewer cylinders equating to fuel economy was a lesson learned with the GP39-2. EMD scaled this approach to the larger six-axle SD50. As several railroads jumped on board with the SD50, these workhorses can still be found rebuilt and running today. The Athearn Ready to Roll SD50 has been refreshed with factory installed sound, enhanced detail, while maintaining superior RTR value.

- Separately applied wire grab irons
- New rubber MU hoses
- Separately applied coupler cut levers
- Fine scale handrails molded in engineering plastic
- Etched metal windshield wipers
- Detailed fuel tank
- New tooling HTC trucks Hyatt or Timken roller bearings (per prototype)
- With Sound version features Econami Sound by Soundtraxx

Econami™

VISIT ATHEARN.COM FOR COMPLETE LISTING OF ROADNAMES AND PRICING

HORIZON HOBBY | VISIT Your Local Retailer | CLICK Athearn.com | CALL 1.800.338.4639 | SERIOUS FUN®

Publisher's Musings | 3

What's different about this column is there will be no columnist per se. We are targeting some regular contributors for this column, but also any general article submission that covers an electrical topic well is a candidate.

I'm also talking with DCC and electronic vendors to see if they will author an installment of *Electrical Impulses* now and then telling us how to use their product. I'm not looking for marketing hype here – I'm looking for genuine how-to-use-it examples for the product(s) they're making.

There's nothing like getting the skinny on a product straight from the maker!

The scope of *Electrical Impulses* is much broader than just DCC. Here are a few examples that just begin to scratch the surface of what we can cover in this new column:

NOW HEAR THIS!
NEW SOUND VALUE 2-8-0 HAS ARRIVED

Consolidating its position as an important locomotive in our HO line, Bachmann now offers a DCC sound-equipped Baldwin 2-8-0. It includes our Sound Value *SoundTraxx*® steam package with authentic prototypical chuff, short and long whistles, bell, air pump, steam release, and blower—all in 16-bit polyphonic sound. This model also features fine-scale detailing and *E-Z Mate*® Mark II couplers. Visit your favorite hobby dealer to hear more about the new Consolidation today!

Features include:

- DCC sound-equipped
- dual-mode NMRA-compliant decoder
- precision motor
- operating headlight
- die-cast chassis
- completely hidden drive train
- detailed cab interior
- separate sanding lines
- metal side rods
- builder's plate
- die-cast, fine-scale driver spokes
- crew figures
- *E-Z Mate*® Mark II couplers, front and rear

DCC® SOUND VALUE ON BOARD

PENNSYLVANIA #7748
Item No. 57902

NEW YORK CENTRAL® #1137
Item No. 57903

Click for more info

UNION PACIFIC® #730
Item No. 57904

SANTA FE #2508
Item No. 57905

SHIPPING NOW!
MSRP $349.00 each

Bachmann Industries, Inc. • 1400 East Erie Avenue • Philadelphia, PA 19124 USA • www.bachmanntrains.com

Click to learn more.

- Installing feeders
- Electrical debugging tips
- Battery power
- Signaling and detection
- Structure lighting with LEDs
- Layout lighting ideas
- Complex trackwork wiring
- Non-DCC control (e.g., RailPro)

Of course, we will be covering DCC as well, but with multiple authors providing columns, we will be able to draw on experts from many different areas of the DCC arena and broaden all our understanding of DCC as well.

The first *Electrical Impulses* column debuts next month in the September issue.

Grand Central Terminal article delayed

We have pushed off the Grand Central Terminal article until the September issue to make room for Jeff Shultz's time sensitive First Look.

ScaleTrains was kind enough to send us a sizeable collection of their rolling stock for us

to check out, so Jeff gives you the skinny. Jeff's First Look includes more than 50 photos, with many close-in detail shots. But these cars are selling fast, so if you're interested, get your order in to ScaleTrains.com.

Train Control Systems' Keep-Alive®

Last issue, we published a DCC column that I wrote about using stay-alive capacitors to help solve contact issues with locomotives.

In that column, I inadvertently used the registered trademark of Train Control Systems "Keep-Alive®" as a generic term for the uninterruptible power supplies provided by DCC vendors using super capacitors.

The proper generic term is "stay-alive capacitors," and the term "Keep-Alive®" is a registered and protected trademark of Train Control Systems.

We also went back and updated the July issue to use the correct generic term "stay-alive" except when referring to TCS. For TCS products, we used the term Keep-Alive® to be consistent with their registered trademark for the stay-alive term.

New layout design contest coming

In the September issue, we will be launching our annual layout design contest, except this time we're going to make it very open-ended and simply say keep it under 500 square feet.

You provide the room shape and design anything you like. It can be any scale as long as it's a model railroad.

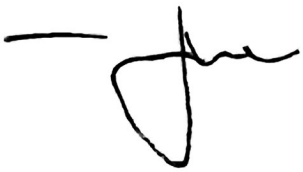
You don't need to make it a TOMA layout – you can make it anything. We're calling it "the no rules layout design contest." Oh yes, and as a bonus, the MRH staff will critique your design and we will

publish our critique along with your layout plan if it's chosen. The categories chosen as "winners" will be:

- Best attempt with minimal MRH staff critique needed
- Best attempt with most MRH staff critique needed
- Most adaptable concept in opinion of MRH staff
- Most clever concept in opinion of MRH staff
- Smallest track plan with the most promise

Winners will each get $500, paid upon publication. ☑

P.S. We'll have a booth at the Kansas City NMRA convention train show from August 10-12. I will have the first two TOMA modules from my Siskiyou Line 2 on display in the booth (benchwork image below). They will have track with skirting and lights – and you can run things around, but no scenery to speak of just yet. Come say hello and run a train on SL2!



Last issue's ratings

The five top-rated articles in the July 2018 issue of *Model Railroad Hobbyist* are:

4.8 Imagineering: Breaking the rules
4.8 Farmhouse for Goff Brook
4.8 July 2018 news
4.6 Modeling Rock Island U25B #250
4.6 Modeling a Frisco USRA 2-8-2

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. Thanks! ■

MRH ... Questions, Answers, Tips

Model Railroad Hobbyist | August 2018 | #102

compiled by Joe Brugger

RATE THIS ARTICLE

3D printed HOn3 railer

Q. I have had a problem with putting my HOn3 locomotives and cars on the track. On my standard gauge railroad, I use a plastic rerailer ramp. The narrow gauge equipment has a bit more of an overhang, so you can't easily grab the trucks to rerail them.

A. I heard that there was a commercially made HOn3 rerailer ramp available, but I haven't seen one in many years. So, I went to work with my computer-assisted design tools and drew one up [1].

I have uploaded it to Shapeways now at www.shapeways.com/product/M54VV6YUT/hon3-rerailer?optionId=64950... Some changes were made to minimize the amount of materials used and therefore to reduce its cost.

—Michael Graff

Carlo – Switzerland: This is a handy 3D object. Thanks for sharing. I am modeling Swiss alpine railroads and would like to adapt

1. Michael Graff designed this railing ramp for HOn3 in Fusion 360 and printed it in PLA thermoplastic resin material on his Wanhao Duplicator 4S. It works well. There are YouTube videos at: youtu.be/jgubiwklbvY and youtu.be/KNjXFsis_j4.

it to HOm, which is just slightly broader than HOn3 (10.5mm, 0.413"), at 12 mm gauge. Would / could you make the revisable file available to me, so that I could try to adapt it to 12 mm gauge?

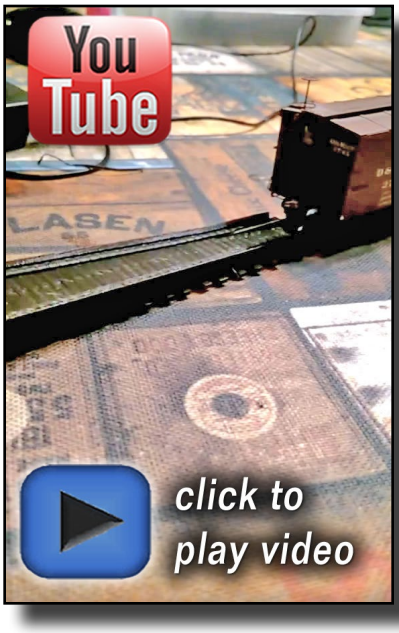
Michael Graff: I converted it to HOm and TT. I hope it will work. I changed the gauge to 12.1 mm and the back-to-back wheel clearance measurement to 10.2 mm. Look at www.shapeways.com/product/3RCW7NNYX/hom-rerailer?optionId=649506... There is a test video at www.youtu.be/hxgWEdhsbIM.

Read the thread and comment at mrhmag.com/node/32753.

Future for a patched PFE

Q. I'm trying to start up ops and need to renumber some cars that have been on my layout for years. Also, I've heard about people using something called "Future" with decals. How does it work?

—Graham Line



A. "Future" (as modelers refer to it, and its name several years ago) is a clear acrylic liquid available in hardware and home-improvement stores, among the cleaning supplies. Look for "SC Johnson Pledge Floor Care Multi-Surface Finish." Military modelers have been using it for years as a tough clear coating. Future can help to prep the surface when patching with decal lettering on rolling stock.

Our club runs a busy operation session every month, with more than 800 freight cars available. Live staging is done using a "mole," in which cars are stored on shelves until it is time for them to be built into a train.

Repeated handling means that highly detailed cars with separate ladders and other appliances will sustain damage. They are

2. It happens. Staging operators spied two examples of UPFE 457603 – an Athearn factory number – while making up a train during an operating session at the Willamette Model RR Club. One of the offenders was sent to the car shop for renumbering. *Text and photos by Joe Brugger*

delicate, so we rely on the sturdy kits from Accurail, Athearn, Atlas, some of the simpler Exactrail, Scale Trains "Classic" and "Operator" series, Walthers, and others.

Some of these cars aren't sold with multiple numbers, or the additional numbers are sold out and no longer available.

UPFE 457603 is a good example. Athearn must have made thousands. Two of these Athearn 57-foot reefers have been on the club railroad for several years, but it was only recently that they were noticed, coupled together in the same train.

3. Lightly scrape weathering off the area where the patch will be applied so the patch panel will be flat and smooth. Use a square-edged blade like a #17 X-Acto and drag it lightly over the surface a couple of times, until it feels smooth. Future is most effective on a flat, smooth surface. It will not soften a decal to "snuggle down" over ribs, louvers, and other irregular surfaces. Microscale Microsol is a solvent that will soften decals, so apply that first and let it dry thoroughly, then apply Future.

Please tell your buddies about MRH!

We rely on word-of-mouth to grow and a bigger circulation means MRH is more likely to stick around for a long time to come!

The duplicated number had gotten past the car inspectors, and it was time to fix that. One car was lightly weathered. The other carried a heavy load of the exhaust grime that diesel generators for the refrigeration systems tended to deposit on those cars.

The mission is to patch out the old numbers with Microscale Trim Film, add new numbers on the sides, and repeat the process with the end numbers. Because our freight cars are stored on shelves with the end facing out, these end numbers are important and must be pieced together.

4. Cut out the numbers and letters you will need from the decal sheet. Cutting ahead of time and keeping them in a safe place saves fumbling and hurrying later.

5. Flow a small amount of Future in the spot where the new numbers will be applied. The clear acrylic gloss is self-leveling and will pull the lettering down onto the surface of the model, to eliminate silvering caused by air trapped under the decals. It also helps waterslide decals adhere to unpainted plastic.

6. Soak the decals off their backing papers and transfer them to the car side. Slide a #17 hobby knife blade under the decal to pick it up, then use a blunted toothpick to ease the lettering off the backing and onto the car. When the lettering is positioned, a small dry paintbrush will wick away any extra water.

7. Let the lettering dry completely before brushing or spraying a light coat of Future or other clear gloss acrylic to blend the new work into the existing finish.

8. After the acrylic has cured, spray the car lightly with a clear matte finish to knock down any shiny reflections, and return the car to service.

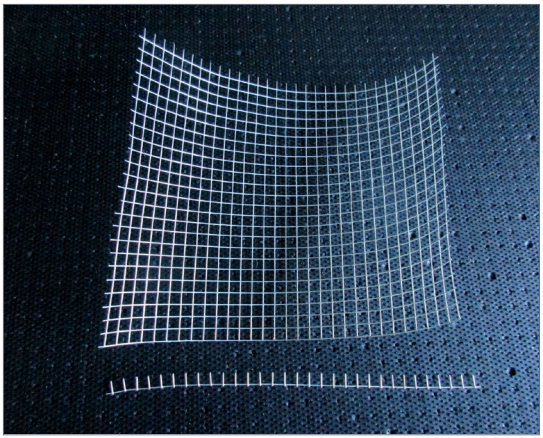
Materials:

- Microscale TF-10 Orange Trim Film decal
- Microscale RH-17 PFE Mechanical Reefers decal
- Two hobby knives, one with a new #5 blade, and one with a #17
- Pledge Floor Care Multi-Surface Finish
- Metal straightedge
- Round toothpicks with blunted tips
- Clear water, distilled or from the dehumidifier tray
- Krylon #1311 Matte Finish

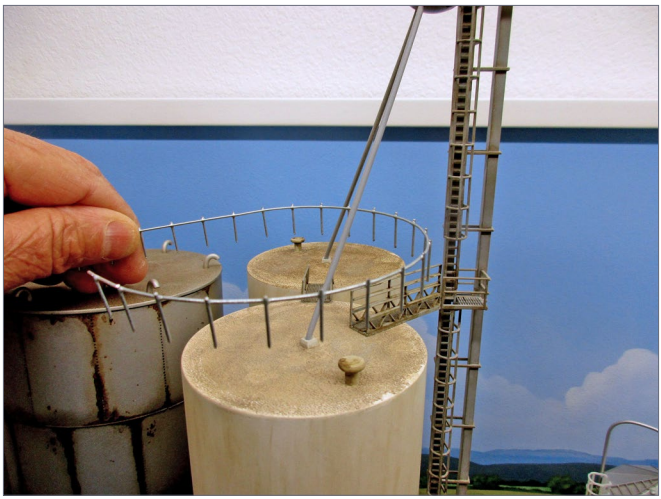
A good set of step-by-step instructions on using Future with decals can be found at www.nscale.net/forums/showthread.php?29123-Applying-decals-with-Future.

Tips

Easy wire railing



9. Cut off one row from a sheet of ½-inch screen wire (1/4 for N scale, ¾-inch for S, 1-inch for O, etc.) to make a HO railing about 30-36 scale inches high. Two rows, with a little trimming, could be the support for a chain link fence. Ace Hardware will sell the screen material by the inch.
Tip and photos by Michael Whiteman



10. The raw material and technique can be adapted to build industrial railings, safety cages for ladders, and other applications.

$ Get paid for your tip

We pay $25 per tip we publish, or $40 each if the tip also includes a photo or finished drawing.

Click here and select article type TIP. ■

DONATE*

Donations help pay contributors for more excellent articles and videos, and help keep MRH free to all your fellow modelers.

* Donations for hobby publications are not tax-deductible.

VIEW READER COMMENTS
click here

DCC IMPULSES column

Model Railroad Hobbyist | August 2018 | #102

Bruce Petrarca MMR

DISCUSSES SPEAKER TECHNOLOGY FOR DECODER INSTALLATIONS ...

As was mentioned in my June column, this will be my last hurrah as the regular DCC columnist for MRH. It has been a fun run – almost seven years. This is my 74th column.

Thanks to you, the readers. Without you and your encouragement and support, this column wouldn't have lasted and prospered.

Thanks to the MRH staff, including two Joes. Joe Fugate, the publisher, probably didn't know what he had agreed to when he accepted me as the DCC columnist for his baby. Joe Brugger has been more than just my copy editor. He has been a sounding board, coach, and cheerleader. Both Joes have suggested topics and directions for the column over the years.

This has not been my column, but, rather, our column. That is the Joes, Patty (who does the paste-up), the readers, the advertisers who pay the bills and me.

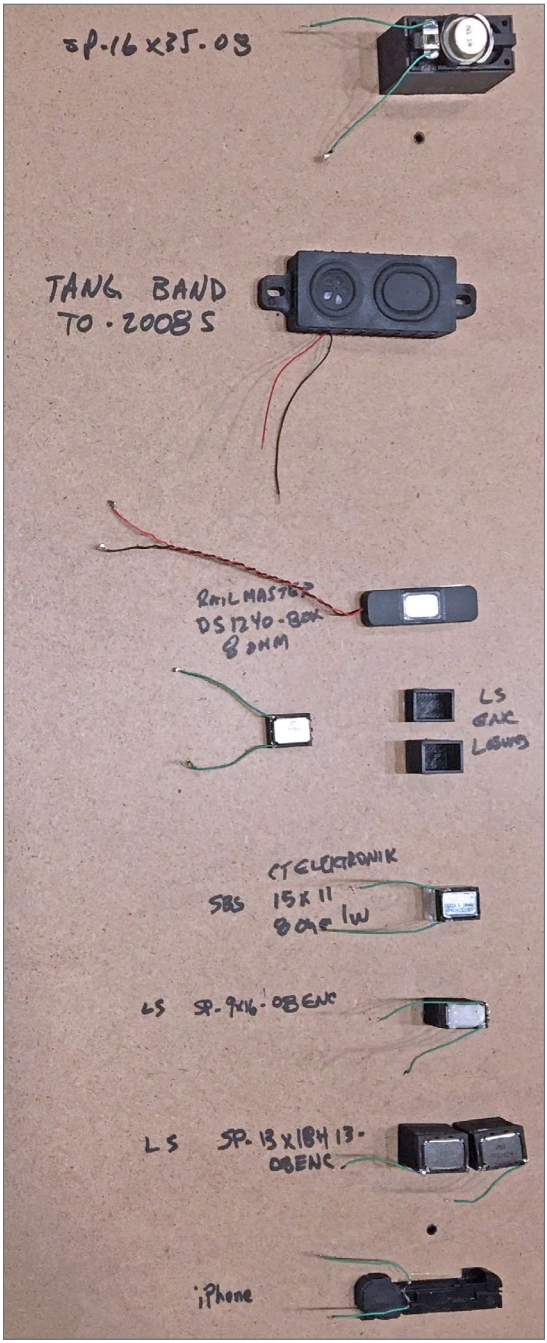
Long-time readers know the passion I have for good sound. One of my early goals was to share my "How Do I Get the Sound Out?" concept. I got folks to think outside the box in my August, 2012 column: mrhmag.com/magazine/mrh-2012-08-aug/dcc_impulses. You might want to circle back on that column before you move on with this one. It will help establish us all on a common footing. The companion video is a good thing to review (youtu.be/j4kgLeDltxg), as well. Wow! Has it been six years since I wrote that? I did the original clinic more than a decade ago.

True to that pedigree, my final words will deal with getting good sound out of your models, or at least as good as possible for various situations. The two designs that I'm going to discuss here are "inside the box," speakers with sealed enclosures. I still prefer an unboxed speaker installation because it presents the most open sound to my ears. But there are times where a baffled speaker just isn't possible. You just gotta go with a box.

Many folks are trying to install sound in smaller and smaller spaces. Thus, there is lots of work being done on trying to overcome the "nothing beats cubic inches" maxim. "Good sound from small speakers" is the backbone of the smart phone, tablet, and notebook computer world. It is natural for us to look to those sources for good sounding small speaker systems for our models.

Understand that with boxed speakers, there is still an onus on the installer to plan for and enhance, wherever possible, the path from the speaker to the listener's ears. Not doing so can result in muffled or muddy sound.

These small speakers are very sensitive to the physical environment around them. Play music on your smartphone or tablet and cup your hand around the speaker opening. You can "tune" the sound by the way you cup your hand. The locomotive shell and



mechanism and other parts surrounding the air path from the speaker to your ears will color the sound. This makes the planning and experimentation phase more important, not less.

Much of perceived sound is subjective. I'm reporting on what I hear and like. Your mileage may vary.

About these little buggers (sugar cube or iPhone speakers). Soldering to them is tricky. Have your best soldering skills working on the day you try or get some help from a friend.

Sugar cube speakers

These guys broke onto the scene a few years ago. I've dabbled with them, but never found one that lit my fire. So,

1. This test board was created to compare speakers side by side.

let's compare a bunch of them and see how they relate to each other and how they stack up to traditional speakers. I created a test board [1] with samples of several speakers I've collected over the years. Not all of them are currently offered. However, they represent a cross-section of the product.

Sugar cubes are designed to be enclosed. I'll be looking at them that way. Perhaps in the future, I'll try some "out of the box" and work with them, but that's not now.

This board has my "go to" small speaker, the 16x35mm unit, set up so that it can be in the box or out of the box, for comparison purposes. I drove all these speakers with a first-generation Tsunami decoder with EMD 567 motor sounds. I listened to the horn, bell, and motor (at idle and at notch 8).

While most of the evaluation was subjective, I did do some sound pressure level (SPL) measurements. I'm not going to bore you with these numbers, but I used them to rank how loud various speakers are.

Given the size of these little guys and the technology of 3-D printing, many folks buy the naked speaker and build their own enclosure. This allows maximum design creativity and enclosure size. My fiddling shows that the larger the enclosure, the better (more open and louder) the sound. I'm sure there is some optimum size, but that will probably vary from one model of speaker to the next.

Based on my measurements, sugar cube speakers are quieter than my reference 16x35mm speaker (-10dB). However, the increased power of modern decoders can compensate for the loss of efficiency. The trick is getting the speakers to accept the power from the beefier decoders.

To handle the new higher-power decoders, some dealers are working on 4-ohm speakers. Two of these in series will yield the 8-ohm impedance most decoders seek. Being wired this way will double the power-handling capability.

For more information on multiple speakers, see my January 2014 column: mrhmag.com/magazine/mrh-2014-01-jan/di_dcc-multiple-speakers.

Does it seem complicated? Yes, I think so, and I'm an electrical engineer. Let's not worry about that and just listen to some speakers.

13 x 18mm 4-ohm speaker

Jack, who bought Litchfield Station (litchfieldstation.com) from me, has been working to directly import speakers and mate them with 3-D printed enclosures. One of his latest versions is known as SP-13x18H12-04ENC. Being 4-ohm, 1-watt speakers, a single unit will work marginally with current generation decoders. However, putting two of these speakers in series will provide an 8-ohm load and 2-watt power handling capability, better matched to the current crop of decoders.

He provided to me, for evaluation, one of the speakers and two enclosures of different heights [2] to create sugar-cube-sized speakers.

2. Litchfield Station SP-13x18-04 speaker with 12mm and 6mm high enclosures.

Of the sugar cube speakers that I evaluated, I liked these the best. They were the most efficient (loudest sound for the same input power) and provided the cleanest sound to my ears. The taller enclosure provided a bit more detail to the sound (especially the bass) and a bit more volume than the shorter one.

CT Electronik sugar cube speaker

Bryan at Streamlined Back Shops (sbs4dcc.com) provided a CT Elektronik [3] speaker for me to evaluate a while back. Bryan has since been working on his own line of sugar cube speakers (sbs-4dcc.com/sugarcubespeakers.html).

I thought the CT offering was slightly inferior to the 13x18mm Litchfield Station speaker [2]. The clarity of sound was comparable to the best sugar cubes, but the CT was a bit quieter for the same input sound level.

If Bryan is working against the foundation of this fine performing speaker, I expect his privately branded offerings to be stellar. He is offering, by far, the most extensive collection of enclosure options I have seen. There are many configurations for larger air volume enclosures (better bass) and multiple speaker arrangements. The tinkerers in the crowd should be well pleased. For more data, scroll down on Bryan's web page (sbs4dcc.com/sugarcubespeakers.html). Perhaps one of his enclosures will work for your needs and obviate the need for your own 3-D printed enclosures.

Interesting how one item (the CT speaker) can lead to the discovery of a whole array of new ideas. Thanks, Bryan.

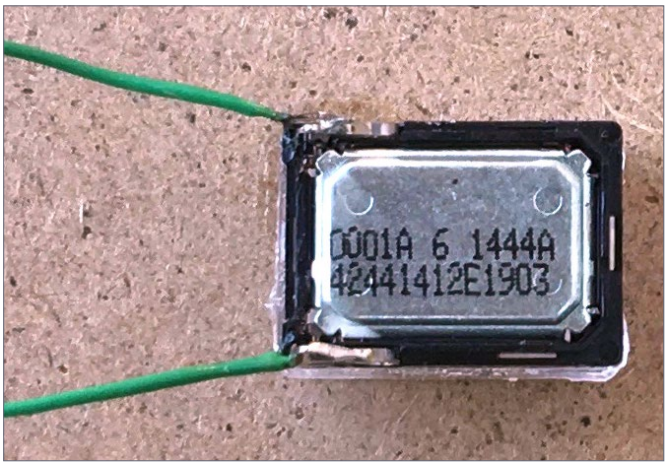
Litchfield Station SP-09x16-08ENC sugar cube speaker

An older offering (SP-09x16-08ENC) from Litchfield Station came in third in the sugar cube evaluation [4]. While it provided equally

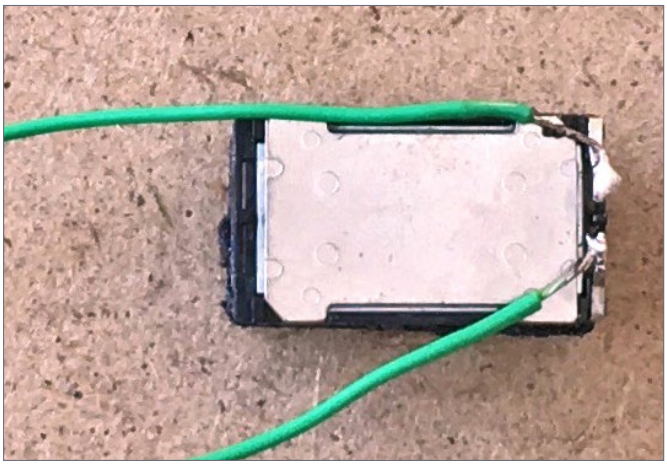
clear sound, the smaller size limits its ability to make louder sounds. Again, with that cubic inch argument.

Railmaster DS-1240-Box

The only sugar cube style speaker that didn't impress me was this particular unit from Railmaster [5].



3. CT Elektronik sugar cube speaker.



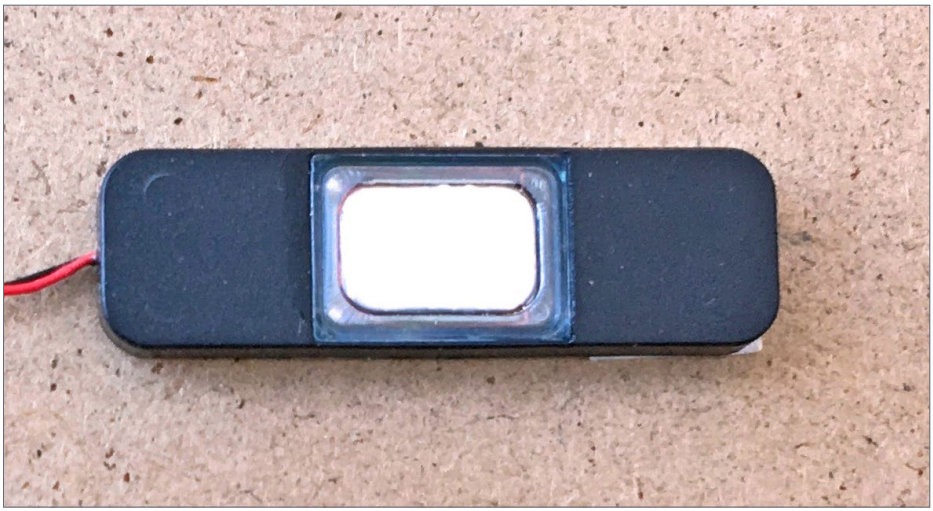
4. A smaller sugar cube from Litchfield Station is the SP-09x16-08ENC.

The enclosure is long and thin to fit into a locomotive more easily than others might. The speaker is upside down compared to comparable designs. This exposes the cone side of the speaker, allowing magnetic particles to be picked up and rattle against the cone. Conventional designs have the cone inside the box, protected from contamination.

I felt that the sound was muffled and indistinct in comparison to the units mentioned earlier. Sound volume was a bit weaker, too.

But, the installer doesn't have to solder to the tiny and delicate terminals. That has been done in the assembly process and is inside the box. Which is why the cone side of the speaker faces out, I'm sure.

To be fair, this particular speaker has been in my "to do" box for quite a while and may not reflect the current state-of-the art of what Jeff offers. I present it here, not to denigrate Railmaster, but to show what can be done with various enclosure designs, as food for thought and experimentation.

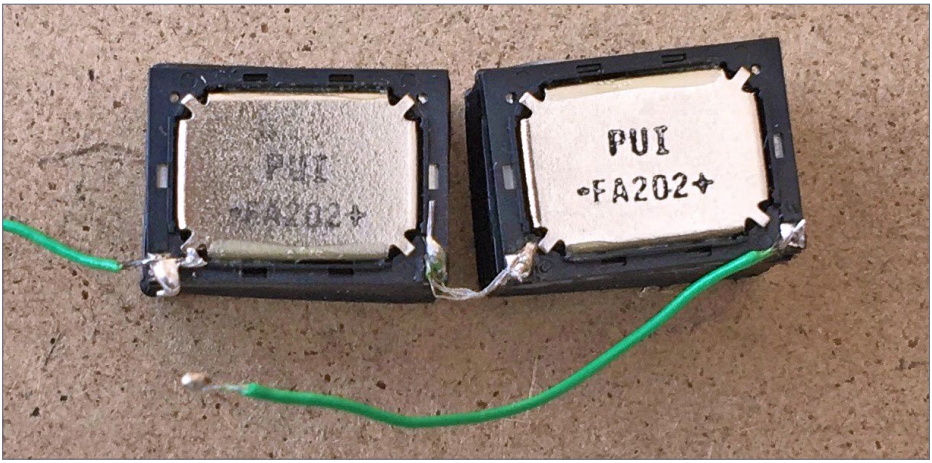


5. Railmaster DS-1240-Box speaker has an innovative enclosure size and shape.

Multiple sugar cube speakers

I made a "line array" of two SP-13x18H13-08ENC speakers to verify the advantages of two speakers side by side [6]. These are an older offering from Litchfield Station that I happened to have a pair of. Singly, or in pairs, they had a muffled sound to me, reminiscent of the Railmaster offering above. But, again, they are older items in this rapidly moving market sector.

The line array was successful. It enhanced the bass response and provided more power handling capability than a single speaker. Since they are 8-ohm speakers, they will create a 16-ohm system when they are wired in series. The 4-ohm speakers discussed earlier would create a more desirable 8-ohm load when configured this way.



6. Two SP-13x18H13-08ENC speakers as a line array. They are wired in series, so the impedance doubles to 16 ohms and the power handling capacity doubles as well, to 2 watts.

I didn't have enough speakers or enclosures to try a line array of two of four of the better sounding speakers. There is more experimentation to do here.

Sugar cube speaker summary

In table [7], I've summarized my experience with these samples of sugar cube speakers.

Speaker	Motor	Horn	Bell	Comments
SP-13x18H12-04ENC	clear	clear	clear	A bit more depth to the motor than the small box
SP-13x18H6-04ENC	clear	clear	clear	
CT Electronik	clear	clear	clear	
SP-09x16-08	clear	clear	clear	
SP-13x18H13-08ENC	closed	muffled	muffled	sound very closed
DS-1240-Box	muffled	distant	clear	speaker exposed

7. Sugar cube speaker summary, shown in order of decreasing loudness.

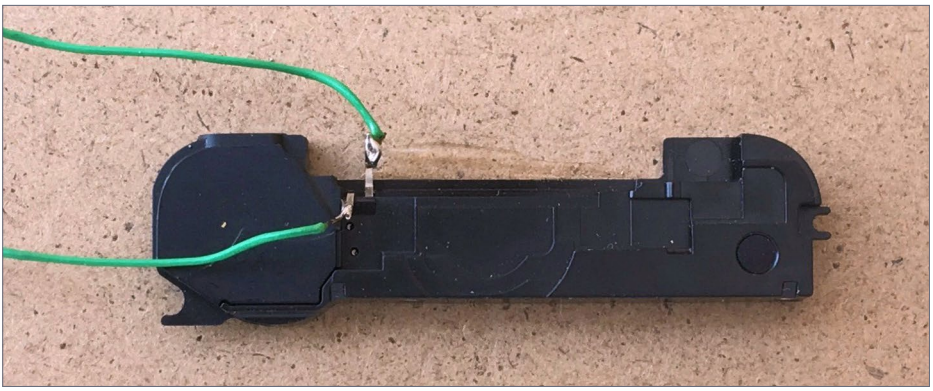
iPhone 4s speaker

I heard good things about iPhone 4s speakers. I found that MRH reader Bill Brillinger has them for sale on his Precision Design Company web site. Go to: pdc.ca/rr/catalog/products/railpro-and-accessories/13 and select where in the world you are. The catalog will open and there they are. Being in the USA, I was able to get them at four for $6 with free shipping. A buck and a half per speaker. Can't be good for that price, right? What the heck, I bought a four-pack anyway.

When I got them [8], I found them to be an engineered sound assembly with amazingly good results for such a small item. They are about 50% longer than the pair of 13x18mm [6] speakers but about half the thickness. The shape is funky because they are engineered to fit in the bottom of an iPhone 4s and still meet acoustic design parameters.

The proof is in the listening. For starters, they were about twice as loud as the sugar cube speakers (+3 dB). What got me was the sound was amazingly clean. Wow, not at all what I was expecting. There was no sugar cube that I tested that performed better, or even as well.

I must admit, I don't have a power handling specification on these speakers and didn't try to operate them on a higher power



8. iPhone 4s speaker assembly.

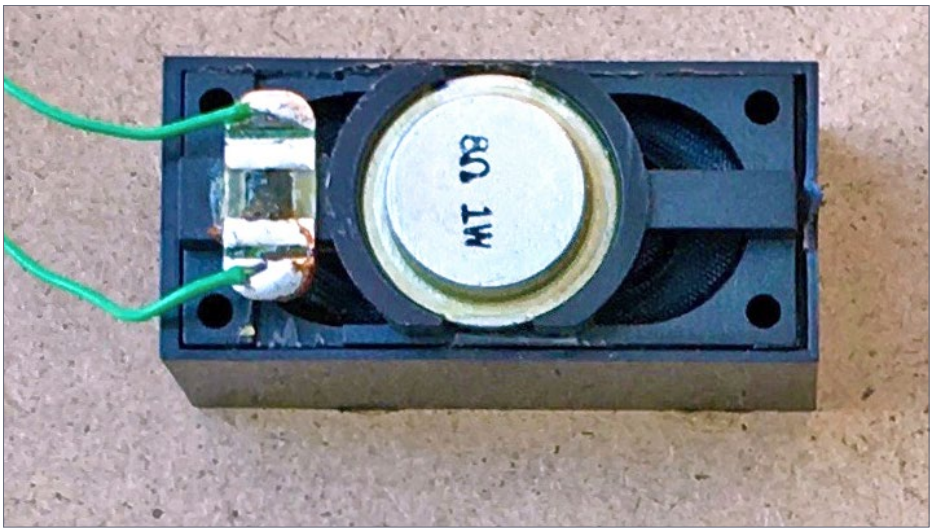
decoder, like a Tsunami2. However, they provide clean renditions as tested. Just keep the volume level under control.

Conclusions about the small speakers

I had thought that sugar cubes were over-hyped. I learned that they can make some sweet sound. The thin bass is a function of the size. You're gonna pay for what you get. Better bass needs a bigger speaker. Bryan (sbs4dcc.com) is offering some ingenious enclosures for them. So, I find there are some places where they might save an installation.

If possible, I'd use an iPhone 4s speaker instead of a sugar cube. Lower price and better sound, both quality and quantity.

None of them come close to my 16x35mm traditional speaker [9] in terms of clarity and volume of sound. So, if the 16x35 will fit, that's still my choice.



9. 16x35mm traditional speaker. My choice if it can possibly fit, preferably without the box, as discussed in my August 2012 column.

10. Tang Band TO-2008S speaker module will provide amazing sound in places where it will fit. If you have more space, larger versions are available. The speaker is the round item on the left in this photo. The oval is the passive radiator, which has more cone area than the speaker.

Two 4-ohm versions can be put in series for wonderful sound with an 8-ohm impedance and a 2-watt power handling capacity.

Now, let's end talking about bigger speakers.

Passive radiator modules

Starting in 1946, what is now known as JBL was called James B. Lansing Sound, Inc. Early on, they focused on professional speaker systems. They built a solid reputation based partially on passive radiator bass designs. These systems rely on a sealed enclosure with a normal woofer and a same size passive radiator (a woofer without wiring). When the enclosure is properly sized, the pressure off the rear of the woofer couples to the passive radiator, effectively doubling the cone area of the woofer. If properly designed, a passive radiator system will have an extra octave of bass over the woofer by itself. For example, bass down to 35 Hz, instead of ending at 70 Hz.

A Chinese company, Tang Band, makes passive radiator speaker systems today. The company, sometimes referred to as TB Speakers, call them speaker modules. These modules do it all: great sound for their size, capability to handle the power coming out of modern decoders, impedance (4 ohms to 8 ohms) to match the amplifiers in modern decoders. The only drawback is that they don't do it in a size that is small enough to readily fit in HO or smaller locomotives. The smallest version might fit in some HO steamer tenders or a covered wagon dummy.

I learned of the TB Speakers from Kevin Leyerle during Prairie Rail this winter. Thanks, Kevin. Everyone that I've demonstrated them to has been very favorably impressed.

In this evaluation, I looked at the smallest version that is available through their primary USA vendor, Parts Express. The TO2008S

module [10] is 55 x 24 x 10mm (2.17 x 0.95 x 0.4 inches). They can be found (parts-express.com/tang-band-t0-2008s-speaker-module-2-5-32-x-1--264-943) on the Parts Express web site. Frequency response is rated at 200 Hz - 20 KHz.

A larger version (T1-1942S) will be going into the garden loco that I discussed in my June column (mrhmag.com/magazine/mrh2018-06/dcc-impulses). Another garden loco, a Santa Fe F7A & B set, will get a pair of these behemoths (5-¼ x 2-⅛ inches). The frequency response is rated at 78 Hz - 20 KHz.

I've put a T1-1925S, intermediate sized module (2-½ x 1-⅛ inches), in my 1:20.3 scale Bachmann rail truck with equally satisfactory results. The frequency response is rated at 150 Hz - 20 KHz.

I am sold on these modules for model railroading. If they fit, I'm using one. By the way, the mounting tabs can be carefully sawed off to reduce the footprint a bit. Just remember to engineer the acoustic path from the speaker face to the listeners' ears.

Goodbye for now

That concludes my last DCC Impulses column. As I'm writing this, the future for the column is not clear. Joe Fugate jumped in with a few topics as I was phasing out. He won't be able to do that very often and still publish MRH.

As for me, I plan to travel more. I may get to meet more of you at conventions or operations weekends or in your communities or homes.

As I come across situations or ideas, I will probably write about them. I just don't want the pressure of a monthly column going forward.

We'll be discussing topics from this column on the blog. Please share your ideas with us all. I'd love to hear what you think. Just

click on the Reader Feedback icon at the beginning or the end of the column. While you are there, I encourage you to rate the column. "Awesome" is always appreciated.

Once again, I thank you all for being part of this great run. I wish you green boards in all your endeavors as we all go forward on this great adventure called life. ☑

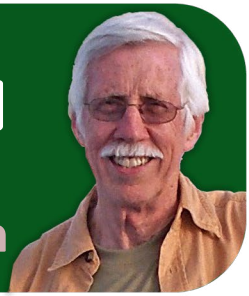
DONATE*

Donations help pay contributors for more excellent articles and videos, and help keep MRH free to all your fellow modelers.

* Donations for hobby publications are not tax-deductible.

VIEW READER COMMENTS
click here

GETTING REAL column



Model Railroad Hobbyist | August 2018 | #102

Tony Thompson examines loading and unloading freight at the "universal destination" ...

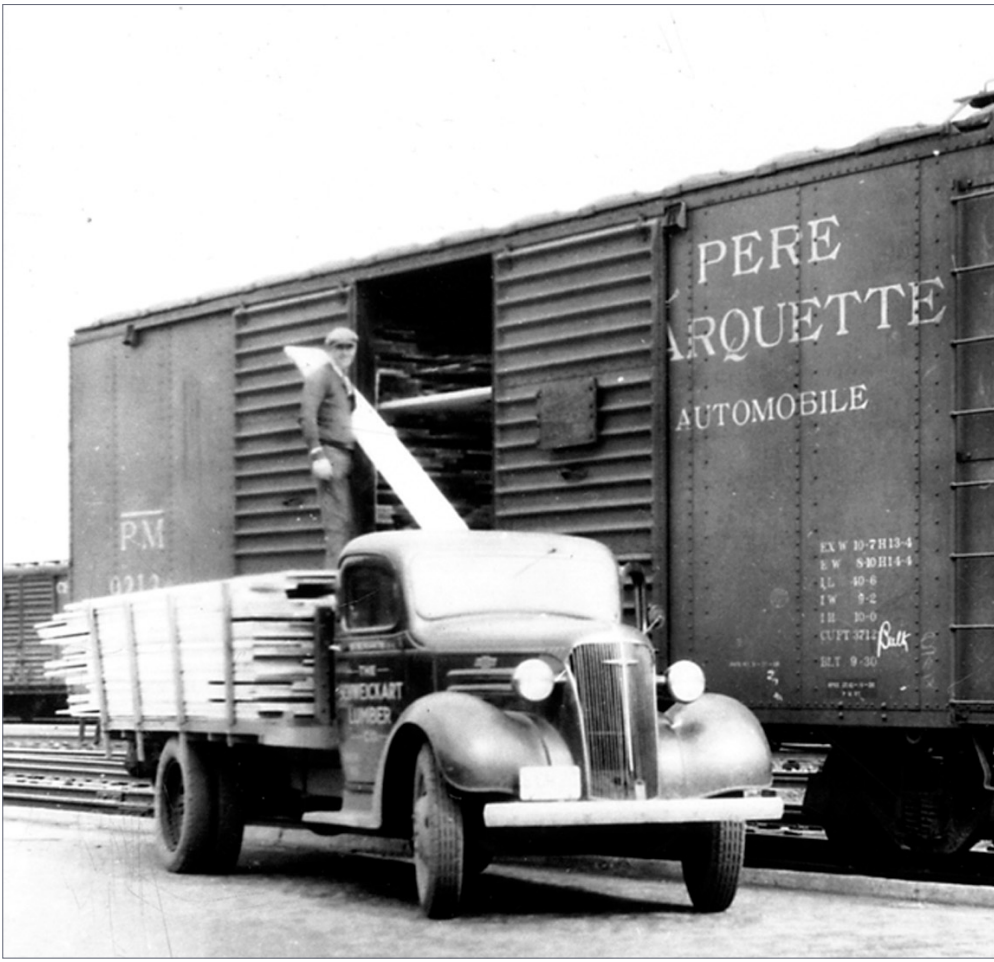
The team track was and is a very versatile facility for any railroad, because of its flexibility of use. It is also a great convenience for many shippers and receivers of goods, who need not have their own railroad siding but can simply pick up or deliver cargo at the railroad's team track.

Moreover, it is important to recognize that practically any cargo can be loaded or unloaded at a team track. Conventional cargo in boxes, barrels, cartons or sacks is already packaged and readily moved. Cargo like lumber can be loaded or unloaded, though more laboriously. Even liquids and bulk cargoes like cement, sand or coal can be loaded or unloaded at team tracks, given the right equipment to do so.

As one example, lumber in box cars would have been unloaded board by board [1]. Finished or milled lumber was usually transported in box cars, while the modeler's typical lumber load on a flat car would usually represent rough or unmilled lumber. An

automobile car, with double doors, was preferred for ease of loading and unloading lumber.

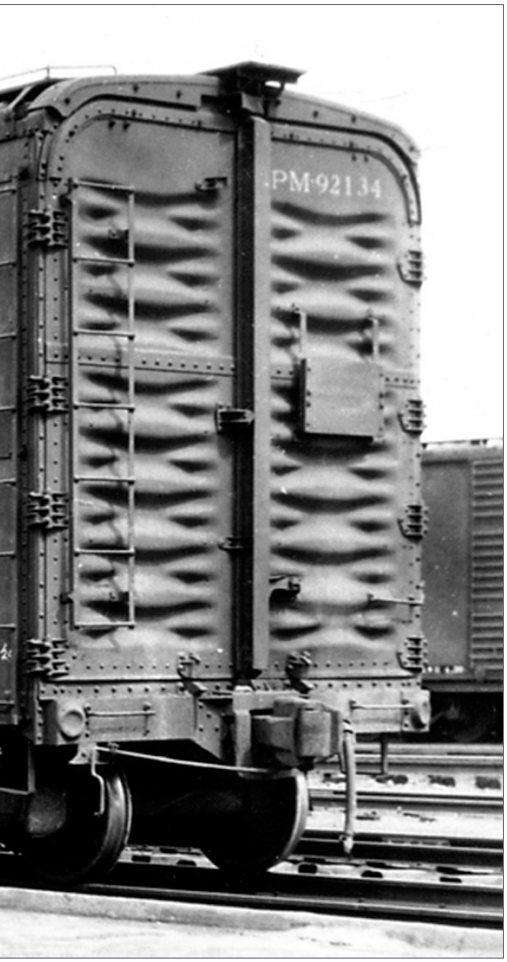
To illustrate handling of liquids, one example would be using a truck with onboard pumping equipment, or perhaps only gravity unloading. Milk unloading [2] is one instance of this. Bulk



1. Lumber is unloaded board by board from a 40-foot automobile
Kentucky, about 1940. A single employee of Schweikart Lumber is
can be seen the lumber remaining in that end. *C&O Historical Socie*

materials could also be handled at team tracks, though without an unloading trestle, it would require hand labor to do so [3] if the railcar had no special unloading capability such as drop-bottom doors.

Naturally, *loading* of freight cars was equally practical at a team track, requiring only transporting the cargo to the siding, and some means of getting the cargo into the car(s). This would be simplest with a cargo that was discrete units, instead of bulk material [4]. And if an area produced perishables but did not have a long enough harvest season or was not busy enough to have a packing house, it is amply documented that farmers would come to a team track to deliver their crop directly into refrigerator cars [5].



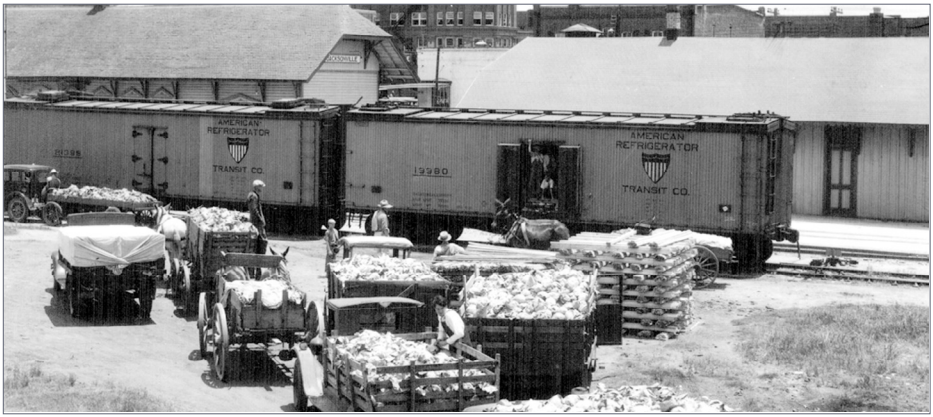
car on a team track at Ashland,
loading the truck. Inside the car
ety

Some of the photos shown here as examples are clearly related to rural areas. But it was also true that most big cities had extensive team track facilities. All kinds of cargo was unloaded at such places, and of course could also be loaded there. Big cities usually had a produce terminal which was largely of a team-track character, as in the New York example shown in [6].

2. One of the famous Borden's "butter dish" milk cars is being unloaded into a truck alongside a team track, in this view from New York. The milk trailer has all that is needed for this job. *New York Central photo, courtesy Jim Seagrave*

3. Even bulk materials could be unloaded at team tracks, as in this photo of workmen shoveling sand out of gondolas into trucks alongside. Date and location unknown but age of the trucks suggests late 1940s or thereafter. *Richard Hendrickson collection*

4. Cargo could also be loaded at team tracks, of course. Here cable reels are about to be loaded into a box car, on the team track at Novato, California, in March 1960. This trailer was called a "Hi-Lo" by its owner, Pacific Motor Trucking, a Southern Pacific subsidiary. *Southern Pacific photo*



5. This photo from the 1930s shows farmers, some with mule teams (thus the term "team track"), bringing lettuce for loading at the team track by the International-Great Northern depot in Jacksonville, Texas. (I-GN was a Missouri Pacific subsidiary.) Lettuce is being loading directly into the American Refrigerator Transit Co. reefers. For more about A.R.T.'s cars, see the Maher, et al. book in the Bibliography. *Gordon Higgins photo, Tony Wilson collection, courtesy Gene Semon*

A team track can involve nothing more than a track segment bordered by a parking area of dirt or paving, and when team tracks are near depots, that is usually how they are arranged. But when a team track is located some distance from a depot or freight house, it may be desirable to provide a platform to facilitate unloading, and sometimes even a small freight shelter.

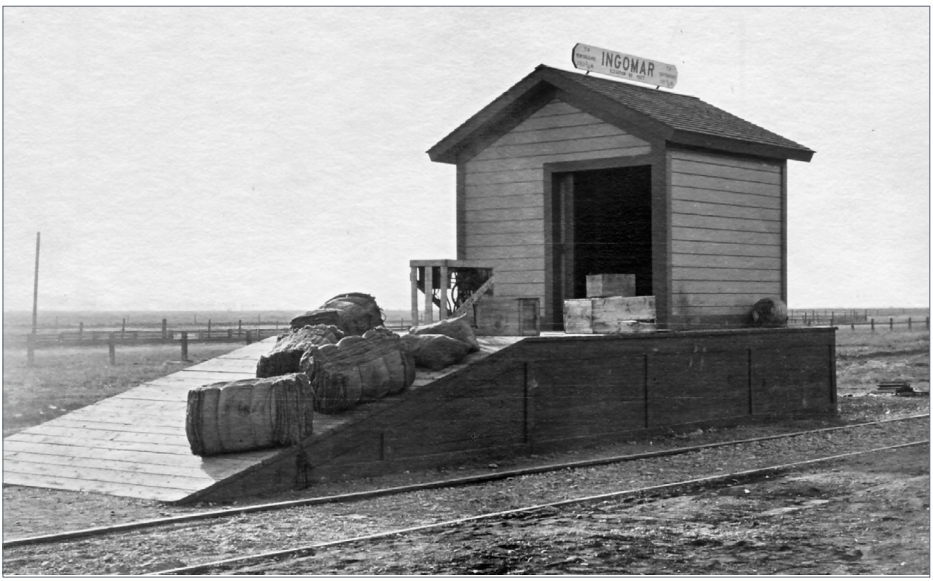
On my railroad, I provided a team track in each town I modeled. Two of them are near depots and thus would have no separate platforms or shelters. An example is shown later in this article. But in one town, the team track is some ways from the depot. I decided I should add a platform and shelter to provide better service to customers.

I model Southern Pacific, so I would like to model an SP structure. Some good examples of SP small shelters like this can be found in

6. These team tracks, paired with driveways on both sides of the tracks, were at New York Central's 30th Street yard in New York City in 1957. Note that the nearer pair of tracks at photo center contain all produce-type refrigerator cars, while the track beyond them is filled with meat reefers. detail of a *Jim Shaughnessy photo*

Henry Bender's book about SP depots (see Bibliography). Some of them were truly small structures atop platforms little bigger than the shelter.

Let me show some examples. In several cases, the SP small freight depots were something like 10 x 10 feet, often on a platform not a great deal bigger. One example, the facility at Ingomar, California, [7], was an 11 x 11-foot shelter structure on a platform about 14 x 20 feet (exclusive of the ramp). Another one [8], at Los Guilicos, was of similar size. Both look quite dark inside, suggesting that they had no windows.



7. This example of a small SP freight shelter was at Ingomar, California, in the Central Valley north of Los Banos. The edge of the sliding door is just visible inside the door jamb. This photo is from Chapter 3 of Bender's book (see Bibliography), which covers standard SP freight house designs. *SP photo, Vernon Sappers collection, Western Railway Museum*

I decided to scratchbuild one of these simple structures and freight platforms. To do so, I used techniques similar to the ones I described and illustrated in my column about an SP depot, in *Model Railroad Hobbyist* in the issue for November 2012 (see Bibliography).

Materials

Like many Southern Pacific structures, these small freight sheds are sheathed with what SP called "rustic siding," similar to modeler's commercial shiplap siding, offered by Evergreen among others. One of the Evergreen sheets of this kind is 0.040 inches thick and has siding widths of 0.083 inches (thus the part number, 4083). That board width translates to about 7.25 inches in HO scale, close enough to the SP prototype's use of 8-inch siding.

These structures also had shingled roofs, as were applied to many SP structures. I used the large Pikestuff sheet, part 1015. Last are the trim boards at the corners and around the doorway. Scaling from the photograph shows that these sheds have about 1 x 6-inch trim boards.

For the freight platform, I chose scribed styrene for this kind of loading dock, which is built of planks. For this platform, I selected Evergreen sheet styrene No. 4100. This is a V-groove material, 0.040 inches thick and with 0.100-inch groove spacing. This is about 3 scale inches thick and about 9 inches wide, a realistic size.

The V-groove in this material is an exaggeration, since the prototype would not be grooved, but it helps provide definition to the planks, and also can be used to show the wear of such planking, often notable at plank edges. The platform material will be distressed to indicate use.

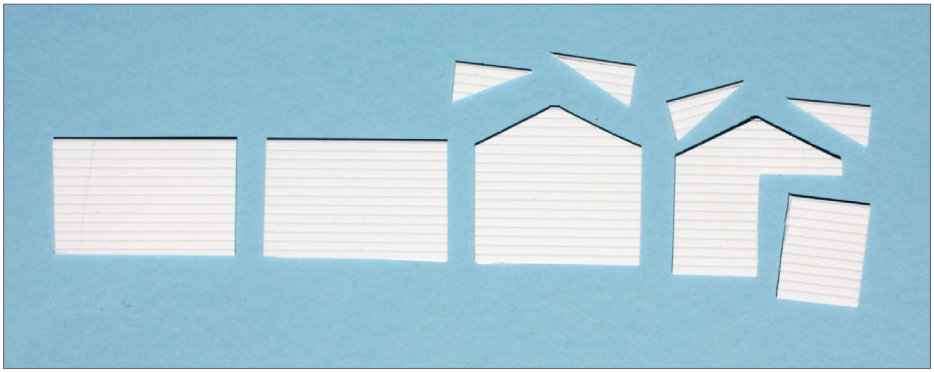
Platforms of this kind are typically between three and four feet high. I chose a scale height of 3 feet, 8 inches high. The photos [7, 8] show

trim boards at top and bottom of the platform, but photos of SP loading docks in later years often show that one or both of these trim boards were missing. I decided to do the same, and omit bottom trim.

Southern Pacific docks often had an incline or ramp to facilitate use by vehicles which might need to move onto the dock. My study of SP prototype loading dock ramps shows them to have a slope of anywhere from 1:3 to 1:5. I chose an intermediate ratio of a bit less than 1:4 here.

In addition to the sheet material, I used several sizes of Evergreen styrene strip in this project, primarily 1/8-inch square strips for corner reinforcement, and scale 1 x 6-inch trim, but also a few other sizes as are noted in the sections below on construction and assembly.

8. The freight shelter at Los Guilicos, California, north of Kenwood on the Santa Rosa Branch, in a 1912 photo from Bender's book. This 10 x 12-foot shed stood on a 16 x 20-foot platform, not counting the ramp. *SP photo, Shasta Division Archives*



9. These are the side and end walls of the freight shelter, cut from Evergreen Novelty Siding, sheet 4083. The roof corner pieces may appear to be scrap, but will be used as roof formers when the roof is constructed. The door opening in one end is evident.

Though I don't have a drawing for this shed, I do know the footprint from information about the Ingomar and Los Guilicos examples [7, 8]. The side walls scale out to about 7 feet, 6 inches high, and the height of the peak of the front and back walls scales out as 10 feet. Moreover, the proportions match well with the drawings for a standard SP section tool house and several other small SP structures of a similar kind. For examples, see the Petty volumes listed in the Bibliography. Other details, such as roof pitch, roof overhang dimensions, and so forth, can also be gleaned from these drawings.

Construction

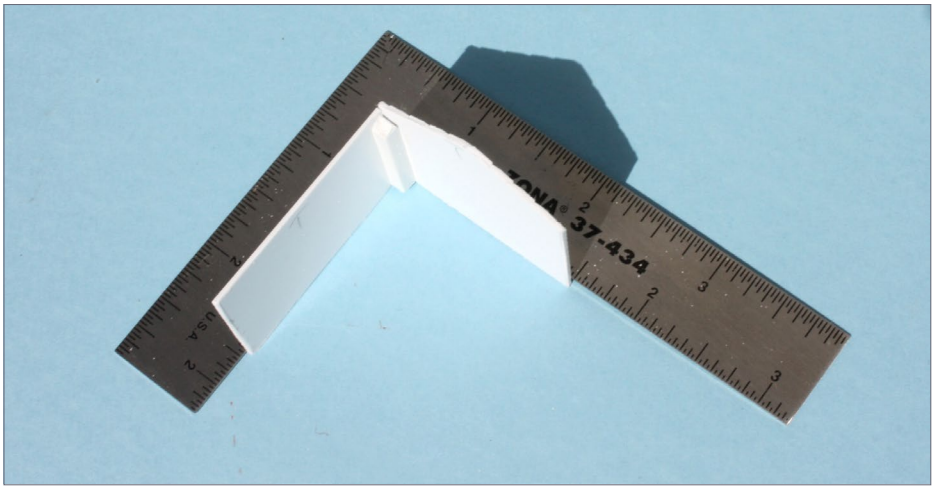
For structures like this, I like to work in styrene, with 0.040-inch thickness making a good self-supporting building. Both my freight shelter and its dock were built with material of this thickness.

I laid out wall sections of the shelter on the back of the Evergreen Novelty Siding 4083 sheet. Scribing the layout lines with a hobby

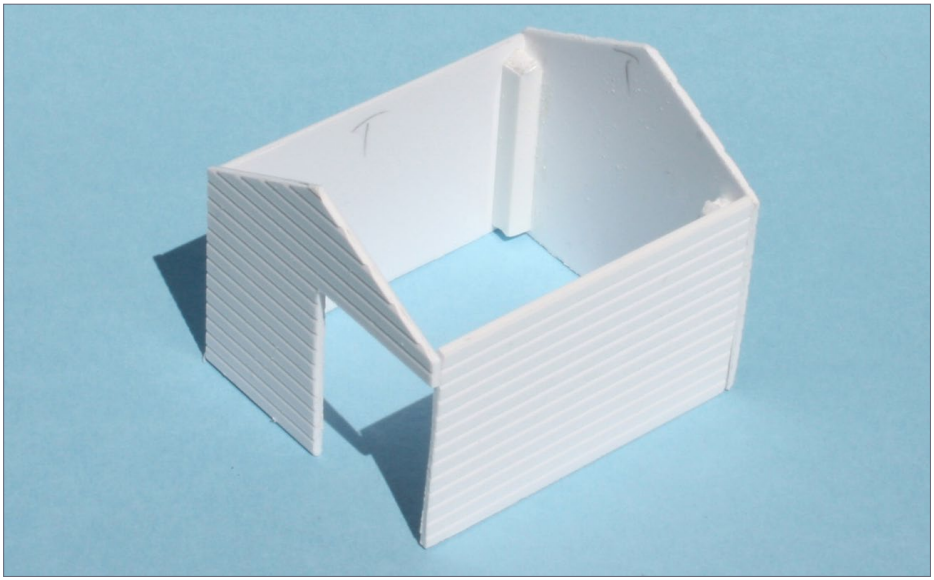
knife blade and then snapping the pieces apart was quick and easy. An accompanying photo [9] shows the first parts, which were quite close in dimensions to my description of the Ingomar shed. I laid out five pieces: two ends, two sides, and the freight door that goes on the front wall.

The roof pitch in small SP structures like this varies from as low as 1:4 upwards to 1:3 and sometimes steeper. I chose a steep pitch like the photos [7, 8]. I chose to model a sliding door, which is what appears to have been used on the Ingomar shelter [7]. This door, of course, could be modeled as an open door, or partly open, or closed.

For structures like this, I like to use square styrene strip inside the corners to strengthen them and help to get them square. I often use Evergreen 1/8-inch square strip for this. A small square is essential in getting each corner correctly joined [10].



10. Here the back end and one side wall of the freight shelter have been joined, using styrene cement and a piece of 1/8-inch square strip inside, to strengthen the corner and assist in making it a 90-degree corner. A small square is a vital tool for assembly of each corner.



11. The entire freight shelter is shown, with reinforcement styrene strip in three of the corners. The front corner at the right of the door opening will receive an additional board to form the door jamb.

Once all four walls are joined, the structure is ready for paint. I will address painting in a following section. But note in [11] that the corner by the door opening has no corner reinforcement. Instead, I added a piece of 0.040 x 0.080 strip to that location.

Sliding doors that Southern Pacific applied to depots, section houses, motor car sheds, and tool houses all had the same general design. They were board-built with cross-pieces attached. A door for this structure was built that way too.

The roof of the shelter relies on the Pikestuff shingle material as the structural base, as it is fairly thick. Photographs of SP small structures like this, such as section houses or motor car sheds, and drawings where available (see Bibliography), show that typical practice was about a 12-inch overhang front and back, and

about a foot on the sides. Knowing this, one can take one's structure and simply measure accordingly to create a roof with those characteristics.

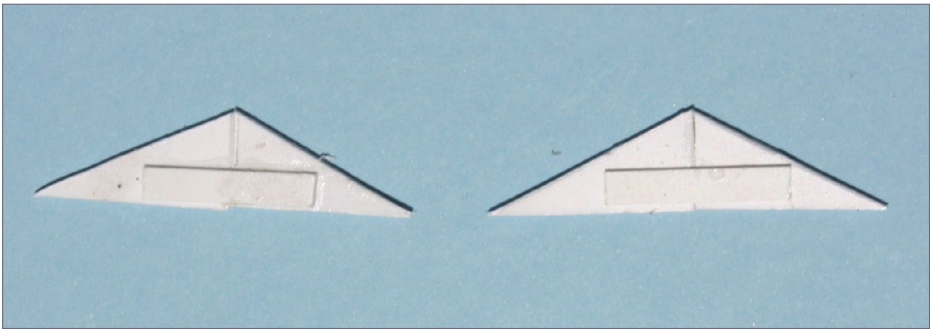
As I usually do with roofs, I made formers for the inside to ensure that the roof angle matches the structure end angles. I use the left-over triangles of styrene remaining after the building ends are cut [9]. These are glued back to back and reinforced with a small piece of styrene strip [12].

Formers are also valuable if the roof is to be removable, though this one need not be. If it is not removable, would it not be simpler to just glue the roof sheets to the building? Yes, but with a separate roof structure, as shown in [13], it is easy to paint its own color. The roof edges seen in [13] need not be refined, as they will be covered with 1 x 6-inch trim boards.

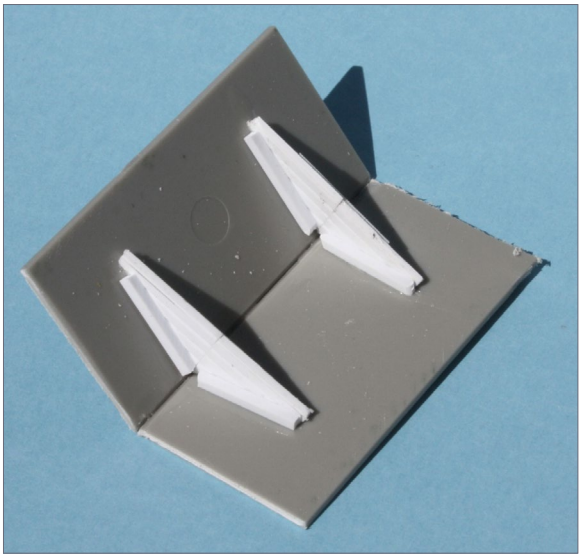
Next, the loading dock itself. The Evergreen no. 4100 V-groove sheet was made into dock parts by the same scribe-and-snap method, resulting in the pieces shown in [14]. Note that the incline or ramp support portion was made by first cutting a rectangle of appropriate length and height, then dividing it diagonally to make the two ramp supports.

The process of dock construction is much like the shelter building already shown. I connected the sides and end, reinforcing the corners with the use of a small square to ensure right angles [15]. Then the platform was added [16], followed by the ramp sides. The technique here is to glue the ramp sides to the bottom of the ramp, then set the dock on a flat surface to ensure that the bottom of the ramp sides will align with the platform sides.

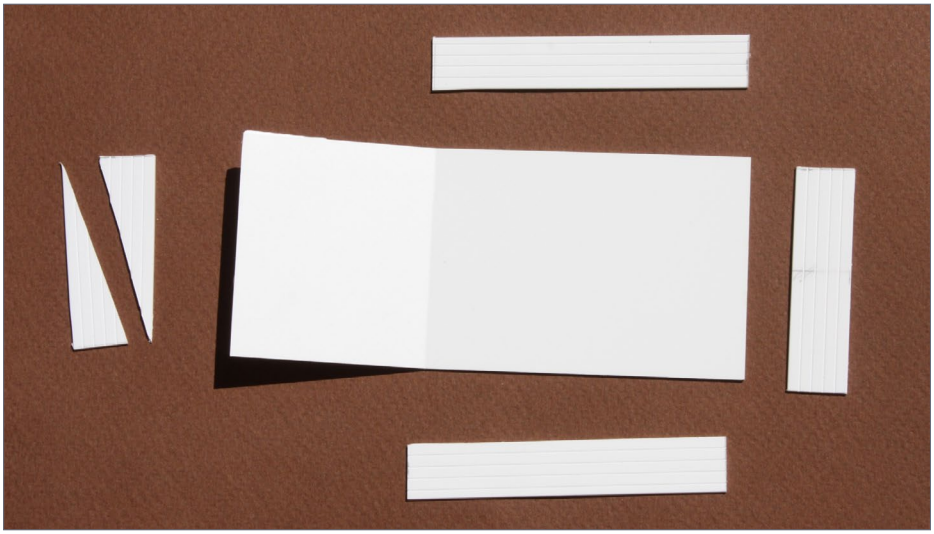
I did feather the end of the ramp so that it will appear to rest on the ground. The dock at this point is shown in [17]. It's worth mentioning that the exact dimensions here are flexible, and a dock of any size could be made.



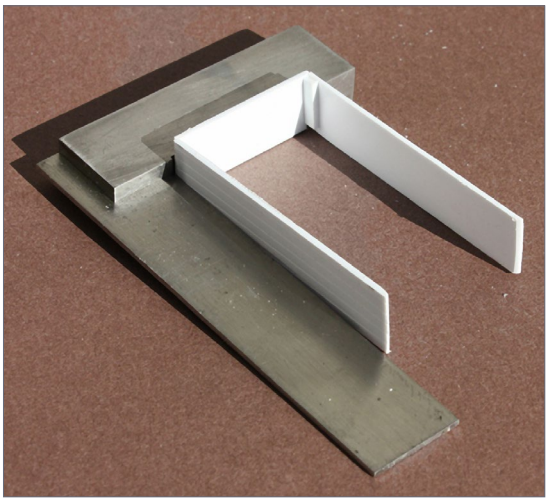
12. Roof formers, made from the triangular off-cuts from the shelter end pieces. They are butt-glued together and reinforced with a length of styrene strip.



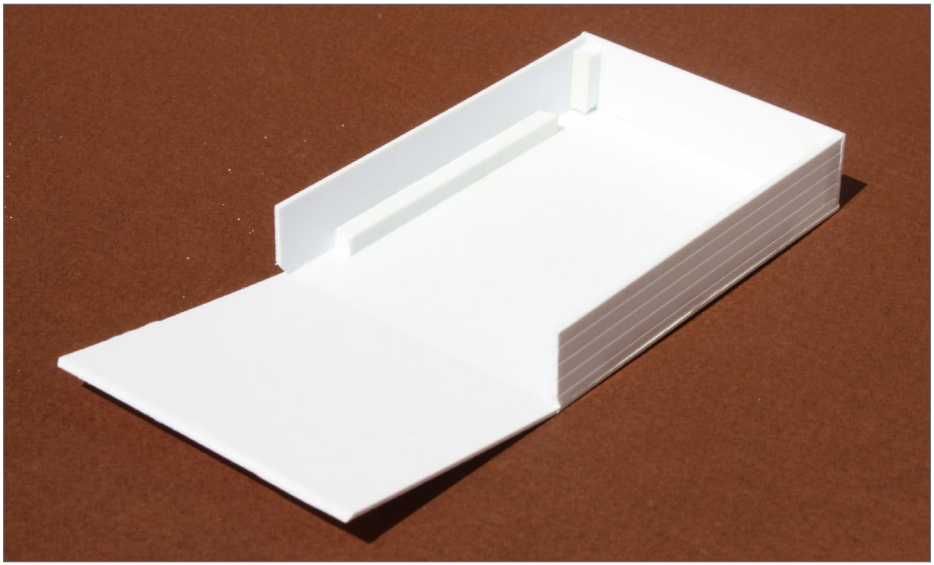
13. The roof formers shown in [12] have been glued inside the roof sheets of Pikestuff shingles. Short pieces of scale 6 x 6-inch styrene strip have been used to reinforce the joints between the formers and the roof sheets. This arrangement ensures a correct angle of the roof sheets. The 6 x 6 reinforcements are on the opposite side of the formers from the splice strips seen in [12]. Because the roof material appears to be ABS rather than styrene,they were glued to the roof with Plastruct “Plastic Weld” cement.



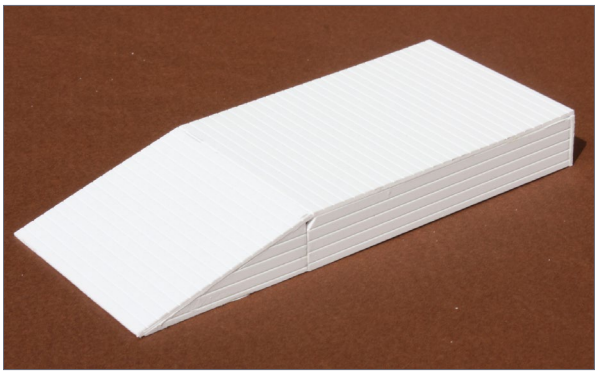
14. The loading dock parts, all cut from Evergreen 4100 sheet: two rectangular sides, an end, the inclined ramp sides (the triangles), and the top of the platform and ramp. Notice that the platform and ramp are all one piece, lightly scribed and gently bent to shape.



15. Assembling the sides of the dock to the end, again with corner reinforcement strips of styrene and using a small machinist's square to make sure corners are at 90 degrees.



16. With the sides and end assembled, the platform can be attached, using corner reinforcements as before. This makes a solid construction for the dock. Ramp side supports remain to be added. It isn't necessary to make the ramp and platform all one piece, but it simplifies a good match at what would otherwise be a very visible joint.



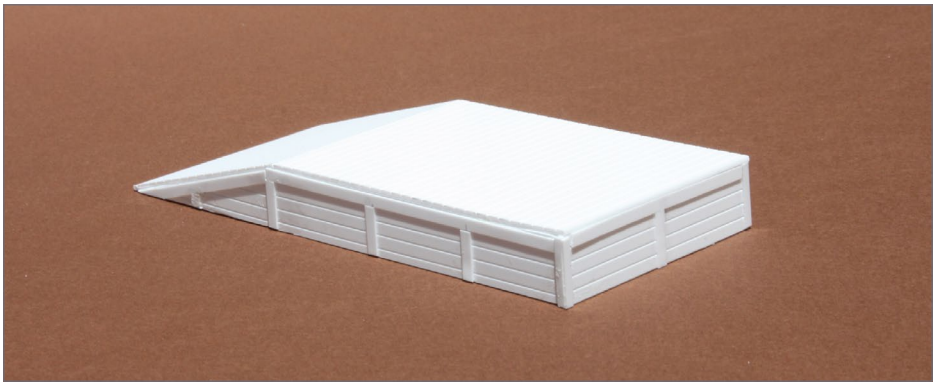
17. The assembled dock, with ramp bent down and glued to the ramp support triangles. A splice plate is glued inside the joint of the side and the ramp triangle. Vertical trim boards will be applied, including one that will cover the joint at the side-ramp junction.

My last construction step for the dock was to add the trim boards, which are very evident in the prototype photos [7, 8]. These appear wider than the trim boards on the shed which are known to be 1 x 6-inch boards, so my choice for the dock trim boards was scale 1 x 8-inch styrene strip.

Finally, I distressed the platform and ramp by gouging and scraping the surface, and by dragging the corner of a razor blade in some of the plank grooves to widen them. I also nicked some of the board ends. The surface was lightly sanded to remove burrs, then gone over with coarser sandpaper to give texture to the surface. This completed the basic dock [18].

Painting and final assembly

I have touched on assembly of the basic parts of this structure above, but final assembly was postponed until after painting. Accordingly, that aspect is treated next.



18. The trim boards were added to the loading dock in the form of scale 1 x 8-inch styrene strip. Some SP prototype docks have the same 1 x 6-inch trim boards as the building usually does. The bottom trim board was omitted, as was true in many cases in later years for SP structures.

19. The freight shelter structure was spray painted with Colonial Yellow. You can see the reinforcement strip that was added inside the building corner by the door. This definitely stiffened the building.

In the transition era, Southern Pacific structures like this that were used by or visible to the public were painted in a standard scheme of Colonial Yellow as a body color, with a color called Light Brown for trim boards. Roofs of SP buildings were usually shingled and painted Moss Green. These colors are described in an appendix to Henry Bender's book (Bibliography).

All three colors have been produced by Tru-Color Paint with the guidance of surviving SP Color Drift panels for those three colors. The SP Colonial Yellow color is also very close to the Star Brand Paint called "R.G.S. Depot Buff," and that could be used if desired. See the Materials list for details. Another point is that an acceptable version of Light Brown can be made by mixing a dark brown (for example the old Floquil "Roof Brown") with white, two parts of brown to one of white.

My first painting step was to airbrush the shelter building, as it is, without any trim boards, with Colonial Yellow [19]. Whatever kind of door has been chosen should also be painted Colonial Yellow at this time, as a base color.

Then I sprayed Light Brown on not only the dock sides and end, but also on some Evergreen scale 1 x 6-inch styrene strip to use as

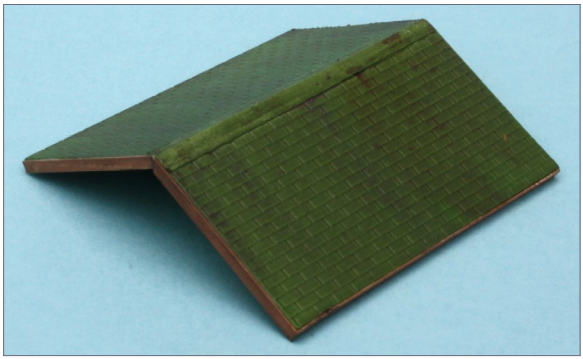
trim boards. A small point to observe: all the trim boards at the corners and periphery of the structure, around the door, and at all roof edges adds up to a considerable length. I sprayed two full 14-inch lengths of the Evergreen 1 x 6-inch styrene. Here is the dock at this point [20].

There is no need to paint the platform or ramp of the dock at this point. SP dock platforms normally were not painted, but of course the exposure to weather and dirt did alter their look from the original fresh-wood appearance. I used the technique I use for flatcar decks, beginning with an overspray of clear flat so that water-base paints won't bead up on the surface, then using a mix of acrylic tube paints in Neutral Gray, Black, and Burnt Umber on a palette, varying the ratios of the mix in different areas of the dock [21].

I added a narrow paper strip along the ridge of the roof to represent flashing and of course, cover any gaps between the two roof

20. Southern Pacific Light Brown was used to paint the sides and end of the loading dock, as was usual SP practice. The top of the platform and ramp were left unpainted and are to be weathered much like a flatcar deck, using acrylic tube paints.

21. The top surface of the loading dock platform and ramp was weathered with acrylic tube paints mixed in varying ratios of Neutral Gray, Black, and Burnt Umber, so that the color varies from place to place.



22. The completed roof, with ridge flashing strip made from paper, and Light Brown trim boards all around. The shingle material is a Pikestuff product (see Materials list). Light weathering has been added.

sheets. I use canopy glue to attach this because its tacky nature helps to position the piece. Then I painted the assembled roof Moss Green, using the Tru-Color version. Usually SP roof painting included any flashing, giving an overall uniform roof color.

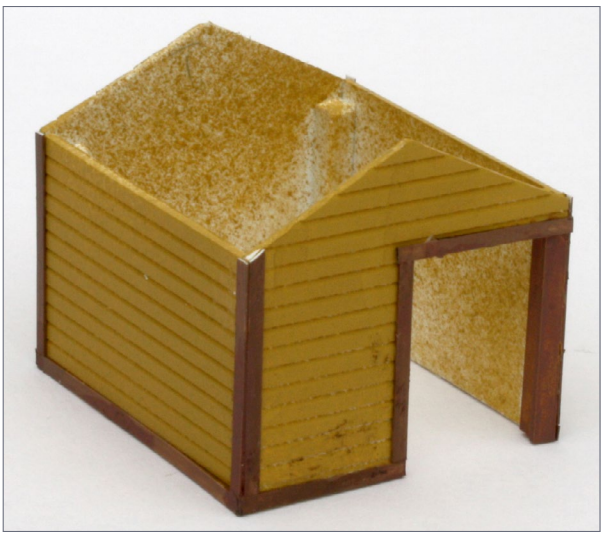
Trim boards cover the entire perimeter of the shed roof, as can be seen in the prototype photos [7, 8]. On rafter ends, this is usually called a fascia. In SP practice, the underside of rafter ends was

closed (making a soffit) only when climate was adverse enough to require that. In temperate locations, soffits were omitted. In the model, of course, soffits would be hard to observe and could certainly be omitted regardless of location. I added the Light Brown 1 x 6-inch trim boards around the roof edges [22].

Next, the Light Brown trim boards need to be fitted to each of the building corners and around the door, and glued in place. I like to use canopy glue for this, not only because it doesn't attack paint, but also it is tacky right away and helps with quick attachment of trim boards. The same tacky quality was helpful for assembly of the paper flashing on the plastic roof sheet, prior to painting.

Note in the prototype photos [7, 8] that the trim along the bottom of the walls was installed first, and the building corner trim is above it. One of the prototype sheds has trim boards at the tops of walls, under the roof overhang; the other appears not to have them. I chose to omit them.

With the trim boards in place, it was evident that the door jamb surfaces needed to be touched up with Light Brown, along with



23. In this view, the trim boards have been installed and the door jamb touched up with Light Brown. A little dirt has been added also. The interior has not yet been painted dark gray.

the edge of the door. This was done with a brush after all trim boards were in place. The completed trim board placement, along with the door jamb touchup, can be seen in [23].

The door was made like the doors on many SP depot and other structures, with trim boards around its perimeter and at the half height of the door. To see this style in prototype and model form, you may wish to look at my *MRH* article from November 2012.

I decided to model the sliding door of this shed as partly open. This is easy to do, as the door, once completed with its trim boards, is simply glued (once again, with canopy glue) behind the end wall, with the desired amount of opening. I show this arrangement of the door in [24] and have also painted the visible interior wall dark gray, so it is not attention-getting when viewed.

In use on the layout, this partly open door would help justify the presence of a model figure of a workman, along with boxes, barrels, or other freight on the platform.

The shed, when complete, can be glued to the platform and the roof can be glued on. If some flexibility is desired in arrangements, such as freight items to be located near an open door, the shed can be left unglued and simply placed on the platform as desired. I chose not to glue it down. The entire assembly, as I plan to use it, is what is shown in [24].

The prototype photos [7, 8] show one of the sheds with a name board along the roof ridge, and the other one without. I would surmise that the name board was unnecessary in an otherwise well recognized locality, but if the shed was located away from a town or depot, it might need to have an identifying name. Since on my layout this shed is in a switching area, I conclude that it needs no name board, and I didn't make one. But these boards are easy to make, using the dimensions given in the drawing I included in my article on building an SP depot.

In use, this freight shelter is alongside the team track area in my layout town of Shumala, specifically in the switching area called East Shumala [25]. The depot is not in this area, so the shelter is appropriate for this location. This team track has a parking area alongside the highway and thus an area for trucks to load or unload at this location.

My other towns have more conventional team track arrangements, being located near the town depot [26]. This was common on the SP.

Concluding comment

This small shed and dock project provides a logical shelter for freight unloaded at my team track, when the load is not destined to the care of the agent in the depot. The same could be true for any layout team track which might need one, and provides more of

24. The completed dock with the freight shelter in place. Dock sides as well as the shelter itself have been weathered a little. This view of the model was chosen to resemble the prototype photos [7, 8].

25. The completed freight shelter alongside the team track at East Shumala. This team track is some distance from the Shumala depot and thus merits a freight shelter of its own.

26. This is a conventional team track, separated from the house track and depot loading platform by a paved space for trucks. Since it is adjacent to the depot in my layout town of Ballard (out of view to the right), it needs no shelter or separate platform.

a railroad presence at such team tracks. The Southern Pacific prototypes might well serve the needs of modelers of other railroads, in the absence of information about specific structures used by those roads. ☑

BILL OF MATERIALS

- Evergreen styrene sheet, Novelty Siding, no. 4083.
- Evergreen styrene sheet, V-groove, no. 4100.
- Evergreen scale 1 x 6-inch strip styrene, no. 8106.
- Evergreen scale 1 x 8-inch strip styrene, no. 8108.
- Evergreen scale 6 x 6-inch strip styrene, no. 8606.
- Evergreen styrene strip, 1/8-inch square, no. 186.
- Rix Pikestuff shingle roof sheet, no. 1015.
- Tru-Color Paint, TCP-153, "SP Depot Colonial Yellow;" or Star Brand Paints, no. STR-07, "R.G.S. Depot Buff"
- Tru-Color Paint, TCP-163, "SP Depot Trim Brown"
- Tru-Color Paint, TCP-164, "SP Depot Moss Green" ■

Bibliography

Bender, Henry, *Southern Pacific Lines Standard Design Depots,* Signature Press, Berkeley and Wilton, CA, 2013.

Maher, Stuart T., G.J. Michels, Gene Semon, *American Refrigerator Transit,* Signature Press, forthcoming.

Petty, Bruce, *Southern Pacific Lines Common Standard Plans,* Volume II, Steam Age Equipment Company, Dunsmuir, CA, 1993 [tool house plans, page 62 ff]. Other volumes of this series contain plans of other small SP structures.

Thompson, Tony, "Imaginary Branch Lines and a New Depot," "Getting Real" column, *Model Railroad Hobbyist,* November 2012. mrhmag.com/magazine/mrh-2012-11-nov/gr_a-new-depot

Thompson, Tony, "Freight Loading Docks and Platforms," blog post, March 20, 2015; link below: modelingthesp.blogspot.com/2015/03/freight-loading-docks-and-platforms.html ■

• INDEX • TABLE OF CONTENTS

WHAT'S NEAT column

Model Railroad Hobbyist | August 2018 | #102

RATE THIS ARTICLE

Ken Patterson tours the Rio Grande Southern, visits Mike Budde's wrecking yard, adds jointed rail sounds to his own railroad, and Ron Pare spray paints structures ...

This month we look at Rick Huntrods' HOn3 RGS layout, Mike Budde shows how to make freight cars and autos look wrecked using foil.

Dave Davis and I notch out nine feet of mainline with a Dremel to replicate the sound of jointed rail. Steven M Conroy shows us the UP 1943 "The Spirit of the Union Pacific" in the mountains and fog of California, pulling a business train.

Ron Pare shows how to paint brick buildings with shake-the-can spray paint. We also look at Pete Doty's wonderful Seattle port HO scale layout, and that's the lineup for this month's video, still photos, and text for What's Neat. ☑

PHOTOS AND VIDEO OF SUPERB MODELING

Pete Doty's Seattle Great Northern wharf layout

1-4. (Above, and to the right) In this month's video we visit Pete Doty in Colorado, to view his HO scale layout in a three-minute segment. He calls his railroad the Seattle Terminal Railway District. It is a port terminal layout set in Seattle circa 1948 with plenty of postwar Great Northern freight switching operations working day and night.

The wharf front has scratchbuilt buildings built at an angle to follow prototype photos of the time. The track and turnouts run through the streets with perfect looking pavement built around the track. All the buildings are built and weathered with interior and exterior lighting. Pete has a good eye for adding details to his structures. The entire layout is surrounded by a painted backdrop with distant hills and a wonderful sky.

Pete operates the layout with a card system, using a large board covered with train orders. It takes four operators and a dispatcher to successfully switch the port and the surrounding industries for one four-hour operating session. All the track work is code 100 rail with Peco turnouts. Pete says for him the best thing about the hobby is the people he meets and the friends he operates, who make the hobby "rich" for him.


Diamond Cold Storage
HOTEL


RIPLEY
UNION PACIFIC

Mike Budde foil wrecks

5. This month, Mike demonstrates his basic process for modeling wrecked freight cars and automobiles, using aluminum foil as the modeling medium. In this example, he simply wraps the foil around a diecast van to form the basic shape of the car's metal panels. Then he cuts out the diecast car's section where he wants to represent the wrecked area. The bent or wrecked foil panel is glued into place on the diecast model where he cut out a section. This replacement panel is then painted to match the automobile or freight car. Mike has many photos to share how well this technique works.

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

WATCH NOW »

6. This sunlit shot displays Mike's VW scrap yard diorama. The cars all have some form of damage using this foil technique, along with fence panels made from foil, with Elmer's glue applied to the back to add strength to the panel

7. This is Mike's load of vans on an auto rack that was involved in a wreck. The vans cannot be driven from the car, so the car was moved to a location to remove the vans by way of torches.

8. This Southern Pacific beer car was side-swiped by another train, which peeled the Southern Pacific car's side right open. He pressed aluminum foil to emboss the foil and replicate the car's side, then bent it up, painted it, and glued into place, replacing the plastic side of the car.

9. Using a diecast car from Mini Metals, Mike cut out the corner and rear of the model and replaced it with painted foil. He shaped plain foil to represent the smashed bumper.

10, 11. These two photos show a station wagon with a side impact to the doors. The green paint was matched to the car's original paint. The blue car has the trunk lid open to reveal a second layer of foil on which Mike modeled the sheet metal X-pattern in the trunk's stamped metal deck. That's amazing.

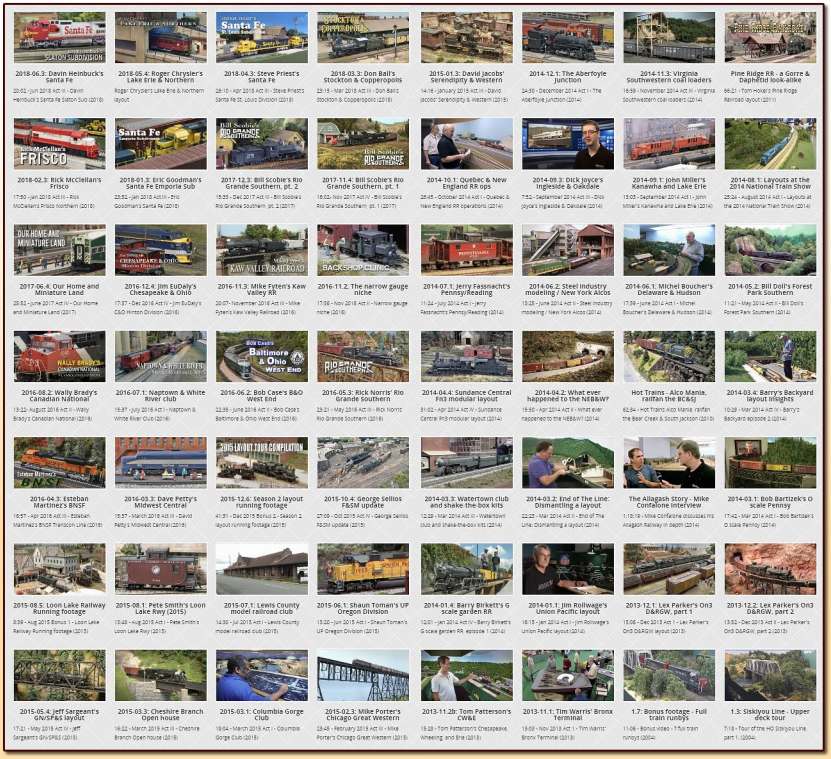
12. (Above) Mike made corrugated panels to form the outside skin of the Quonset hut in the background of this photo. He pressed aluminum foil on a plastic corrugated wall section from a scrap building to make the sheets to cover the building. This photo diorama was used to shoot the Bachmann advertising for its HO scale side-rod switcher eight years ago.

13, 14. (Right, top & bottom) This month, Dave Davis – our local track expert – and myself got the idea to modify a nine-foot section of main line through my home laundry area to make the sound of jointed-rail track. This is the sound of a freight train running across track that is laid with staggered 39-foot sections of rail. This track has a specific sound to it, like a song you heard long ago and forgot until you heard it again, modeled. To achieve this effect, we used a Dremel with a cut-off disk and notched the top of the rail at 39-foot intervals, staggering the joints. As the freight train's metal wheels roll across the joint, the sound in the room is increased two-fold from the many cars on the many joints, in a rhythm that changes as the freight car lengths change. A string of 40-foot cars has a different rhythm than longer cars from a more recent era. It is fun, and it works.

Jointed rail sound

RATE THIS ARTICLE

Inspirational LAYOUT TOURS!



2018-06.3: Davin Heinbuck's Santa Fe
20:02 - Jun 2018 Act II - Davin Heinbuck's Santa Fe Station Sub (2018)

2018-05.4: Roger Chrysler's Lake Erie & Northern
Roger Chrysler's Lake Erie & Northern layout

2018-04.3: Steve Priest's Santa Fe
28:10 - Apr 2018 Act III - Steve Priest's Santa Fe St. Louis Division (2018)

2018-03.3: Don Ball's Stockton & Copperopolis
23:19 - Mar 2018 Act III - Don Ball's Stockton & Copperopolis (2018)

2015-01.3: David Jacobs' Serendipity & Western
14:16 - January 2015 Act III - David Jacobs' Serendipity & Western (2015)

2014-12.1: The Aberfoyle Junction
24:30 - December 2014 Act I - The Aberfoyle Junction (2014)

2014-11.3: Virginia Southwestern coal loaders
16:59 - November 2014 Act III - Virginia Southwestern coal loaders (2014)

Pine Ridge RR - a Gorre & Daphetid look-alike
66:21 - Tom Hoban's Pine Ridge Railroad layout (2011)

2018-02.3: Rick McClellan's Frisco
17:50 - Jan 2018 Act III - Rick McClellan's Frisco Northern (2018)

2018-01.3: Eric Goodman's Santa Fe Emporia Sub
25:52 - Jan 2018 Act III - Eric Goodman's Santa Fe (2018)

2017-12.3: Bill Scobie's Rio Grande Southern, pt. 2
15:33 - Dec 2017 Act III - Bill Scobie's Rio Grande Southern, pt. 2 (2017)

2017-11.4: Bill scobie's Rio Grande Southern, pt. 1
16:02 - Nov 2017 Act IV - Bill Scobie's Rio Grande Southern, pt. 1 (2017)

2014-10.1: Quebec & New England RR ops
28:45 - October 2014 Act I - Quebec & New England RR operations (2014)

2014-09.3: DICK joyce's Ingleside & Oakdale
7:52 - September 2014 Act III - Dick Joyce's Ingleside & Oakdale (2014)

2014-09.1: John Miller's Kanawha and Lake Erie
13:05 - September 2014 Act I - John Miller's Kanawha and Lake Erie (2014)

2014-08.1: Layouts at the 2014 National Train Show
25:24 - August 2014 Act I - Layouts at the 2014 National Train Show (2014)

2017-06.4: Our Home and Miniature Land
20:52 - June 2017 Act IV - Our Home and Miniature Land (2017)

2016-12.4: Jim EuDaly's Chesapeake & Ohio
17:07 - Dec 2016 Act IV - Jim EuDaly's C&O Hinton Division (2016)

2016-11.3: Mike Fyten's Kaw Valley RR
20:07 - November 2016 Act III - Mike Fyten's Kaw Valley Railroad (2016)

2016-11.2: The narrow gauge niche
17:56 - Nov 2016 Act II - narrow gauge niche (2016)

2014-07.1: Jerry Fassnacht's Pennsy/Reading
11:34 - July 2014 Act I - Jerry Fassnacht's Pennsy/Reading (2014)

2014-06.2: Steel industry modeling / New York Alcos
13:20 - June 2014 Act II - Steel industry modeling / New York Alcos (2014)

2014-06.1: Michel Boucher's Delaware & Hudson
17:09 - June 2014 Act I - Michel Boucher's Delaware & Hudson (2014)

2014-05.2: Bill Doll's Forest Park Southern
11:21 - May 2014 Act III - Bill Doll's Forest Park Southern (2014)

2016-08.2: Wally Brady's Canadian National
19:22- August 2016 Act II - Wally Brady's Canadian National (2016)

2016-07.1: Naptown & White River club
15:37 - July 2016 Act I - Naptown & White River Club (2016)

2016-06.2: Bob Case's B&O West End
22:35 - June 2016 Act II - Bob Case's Baltimore & Ohio West End (2016)

2016-05.3: Rick Norris' Rio Grande Southern
28:21 - May 2016 Act III - Rick Norris' Rio Grande Southern (2016)

2014-04.4: Sundance Central Fn3 modular layout
31:02 - Apr 2014 Act IV - Sundance Central Fn3 modular layout (2014)

2014-04.2: What ever happened to the NEBAVY
15:50 - Apr 2014 Act II - What ever happened to the NEBAVY! (2014)

Hot Trains - Alco Mania, railfan the BC&SJ
62:54 - Hot Trains Alco Mania, railfan the Bear Creek & South Jackson (2013)

2014-03.4: Barry's Backyard layout #Sights
10:39 - Mar 2014 Act IV - Barry's Backyard episode 2 (2014)

2016-04.3: Esteban Martinez's BNSF
16:57 - Apr 2016 Act III - Esteban Martinez's BNSF Transcon Line (2016)

2016-03.3: Dave Petty's Midwest Central
15:37 - March 2016 Act III - David Petty's Midwest Central (2016)

2015-12.6: season 2 layout running footage
41:51 - Dec 2015 Bonus 2 - Season 2 layout running footage (2015)

2015-10.4: George Sellios F&SM update
27:09 - Oct 2015 Act IV - George Sellios F&SM update (2015)

2014-03.3: Watertown club and shake-the-box kits
12:28 - Mar 2014 Act III - Watertown club and shake-the-box kits (2014)

2014-03.2: End of The Line: Dismantling a layout
22:25 - Mar 2014 Act II - End of The Line: Dismantling a layout (2014)

The Allagash Story - Mike Confalone interview
1:15:19 - Mike Confalone discusses his Allagash Railway in depth (2014)

2014-03.1: Bob Bartizek's O Scale Pennsy
17:42 - Mar 2014 Act I - Bob Bartizek's O Scale Pennsy (2014)

2015-08.5: Loon Lake Railway Running footage
8:39 - Aug 2015 Bonus 1 - Loon Lake Railway Running footage (2015)

2015-08.1: Pete Smith's Loon Lake Rwy (2015)
13:49 - Aug 2015 Act I - Pete Smith's Loon Lake Rwy (2015)

2015-07.1: Lewis County model railroad club
14:36 - Jul 2015 Act I - Lewis County model railroad club (2015)

2015-06.1: Shaun Toman's UP Oregon Division
13:20 - Jun 2015 Act I - Shaun Toman's UP Oregon Division (2015)

2014-01.4: Barry Birkett's G scale garden RR
12:01 - Jan 2014 Act IV - Barry Birkett's G scale garden RR episode 1 (2014)

2014-01.1: Jim Rollwage's Union Pacific layout
16:15 - Jan 2014 Act I - Jim Rollwage's Union Pacific layout (2014)

2013-12.1: Lex Parker's On3 D&RGW, part 1
15:06 - Dec 2013 Act I - Lex Parker's On3 D&RGW layout (2013)

2013-12.2: Lex Parker's On3 D&RGW, part 2
13:52 - Dec 2013 Act I - Lex Parker's On3 D&RGW, part 2 (2013)

2015-05.4: Jeff Sargeant's GN/SP&S layout
17:21 - May 2015 Act IV - Jeff Sargeant's GN/SP&S (2015)

2015-03.3: Cheshire Branch Open house
16:22 - March 2015 Act III - Cheshire Branch Open house (2015)

2015-03.1: Columbia Gorge Club
18:54 - March 2015 Act I - Columbia Gorge Club (2015)

2015-02.3: Mike Porter's Chicago Great Western
23:49 - February 2015 Act III - Mike Porter's Chicago Great Western (2015)

2013-11.2b: Tom Patterson's CV&I
15:28 - Tom Patterson's Chesapeake, Wheeling, and Erie (2013)

2013-11.1: Tim Warris' Bronx Terminal
13:00 - Nov 2013 Act 1 - Tim Warris' Bronx Terminal (2013)

1.7: Bonus footage - Full train runbys
11:06 - Bonus video - 7 full train runbys (2004)

1.3: Siskiyou Line - Upper deck tour
7:10 - Tour of the HO Siskiyou Line, part 1. (2004)

• INDEX • TABLE OF CONTENTS

HOn3 Rio Grande Southern layout by Rick Huntrods

15, 16. In this month's video, we take four minutes to talk to Rick Huntrods about his beautiful RGS layout. The scenery and all the colors are masterfully blended to form the Colorado Rockies in the gold-rich days of the last quarter of the 1800s. Horses and wagons labor up the hills as Rio Grande Southern trains haul the ores from the mines. Rick has modeled Vance Junction, the Ophir Loop and bridge 45A, [16] along with Ridgeway, the RGS northern connection point to the Rio Grande railroad.

17. His railroad is 12 x 15 feet with a walkaround feel to it. He started work in 2008 and has published many how-to articles in the model press. The benchwork is built to a height of 42 inches. Rick claims to be a lone wolf modeler; he built the railroad not to operate with other folks, but rather to spend many private quiet nights at work. He superdetails buildings and horse-drawn wagons to a level that takes lots of time to achieve. The scenery, trees and backdrops make for a wonderful environment to run slow freights through the mountains of Colorado.

18. He built this model of Bridge 45A board by board using the railroad's plans. It is scaled down a little to fit the location as it brings trains into the Ophir Loop mining area.

Ron Pare on brick structure colors and details

RATE THIS ARTICLE

19, 0. (Left top, bottom) Ron Pare came by to visit my studio and share how he colors brick buildings made from wood. Ron did an article in *Model Railroad Hobbyist* magazine in November 2017 where he showed [18] this five-foot-long train station colored with spray paint, then covered with light gray acrylic paint to make the brick mortar effect. This building was built from a limited-run Imagine That Laser Art kit. Only seven kits were produced. It has full interior detail.

21. (Above) For the video, Ron also shows the All-State Factory from ITLA Scale Models. He painted this kit with Blazer Orange spray can paint. He likes to spray a coat of lighter paint on the model, to give the brick some variation in color.

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

WATCH NOW »

22. (Left, top) In the video, he paints vents and brick roof details with acrylic paint, custom-mixed for a specific tone on a 12x12 tile. Ron assembles all his buildings with Weldbond glue, as it dries strong but not brittle. He uses fast-drying super glue for small detail parts.

23. (Left, bottom) In this last photo, Ron adds details to the roof of this kitbashed building flat, using the upper floor extension kit to make a five-story tall building. ☑

MRH Marketplace


Real Easy
Railroads
1 2 3

Ken McCorry's Conrail

Robert Schleicher explores modeling a prototype, using Ken McCorry's massive Conrail-based home railroad as an example …

Model Railroad Hobbyist | August 2018 | #102

1. The Northumberland coaling tower is a modified Tichy kit. The roundhouse is a combination of Vollmer kits and the sanding facility is Bachmann. The water tanks are Precision Scale brass and a Tichy kit. The green diesel in the lower left is an ex-Reading Atlas MP15, the grey and maroon unit an ex-Erie-Lackawanna Proto 2000 SW9 model.

Ken McCorry has created what is likely one of the largest home model railroad layouts on the continent. He started construction on a massive 31 x 79-foot two-deck project in 1992 but then expanded the dedicated building to 32 x 102 feet in 1998.

The layout fills two decks with visible tracks. Portions of two

more decks are filled with with staging and interconnecting-deck trackage. Ken has recreated all the significant scenes and places on Conrail's Buffalo Division in northern Pennsylvania and southern New York.

Because Conrail is the result of several mergers, the railroad includes routes that were once Pennsylvania, Reading, New York Central, Erie-Lackawanna and Baltimore and Ohio Railroad mainlines.

The 1450-foot long main line runs south from the Buffalo terminal area to the Enola and Harrisburg hidden staging yards on the lower level. The lines to Wilkes-Barre, Clearfield, Shamokin, Brooksville and Tyrone add another 900 feet to that total of mainline trackage.

2. The Northumberland yard is on the lower deck, with Portville and State Line on the upper deck.

3. Larabee is on the upper deck with SF Tower on the lower deck.

The layout design follows the design dictum of having just one track in each scene – if there are two or three it is because two or three railroads paralleled one another in that area of Pennsylvania or New York.

The sole exception is the location of the Lackawanna Works in Buffalo. The real blast furnaces were about 20 miles away from their location on the layout but the mainline track simply runs by the scene – the furnace is sited about the correct distance from the HO scale version of Buffalo.

The layout is built on typical open-grid benchwork but most of it is cantilevered from the oversize studs on the walls, so there is a minimum number of legs.

The sub-roadbed is ½-inch plywood with Homasote roadbed and Atlas track with code 100 rail. Most of the mainline turnouts are

#8s and the minimum mainline radius is 36 inches to accommodate the largest modern era 40-car trains.

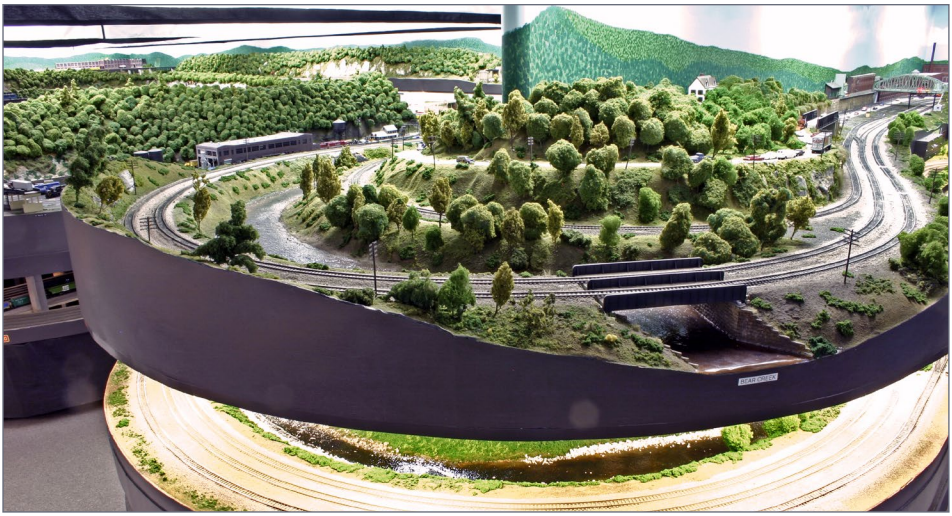
The layout is controlled with NCE DCC and includes some 200 locomotives.

Ken has amassed enough locomotives and rolling stock to recreate three distinct eras; Conrail in the 1977-1982 era seen in these photos, early Penn-Central in the 1964-1972 era, or late-steam/early-diesel pure Pennsylvania Railroad in the 1956-57 era.

That earlier-era equipment was the basis for Ken's first layout, in his basement in the '80s.

4. The west end of Northumberland Yard is on the lower deck and Hinsdale and Olean are on the upper deck. The end of the Larabee/Turtle Point peninsula is visible at the far left.

5. Turtle Point is on the left on the upper deck and Millersburg is at the end of the aisle on the lower deck. West Milton and Montgomery are on the lower deck.



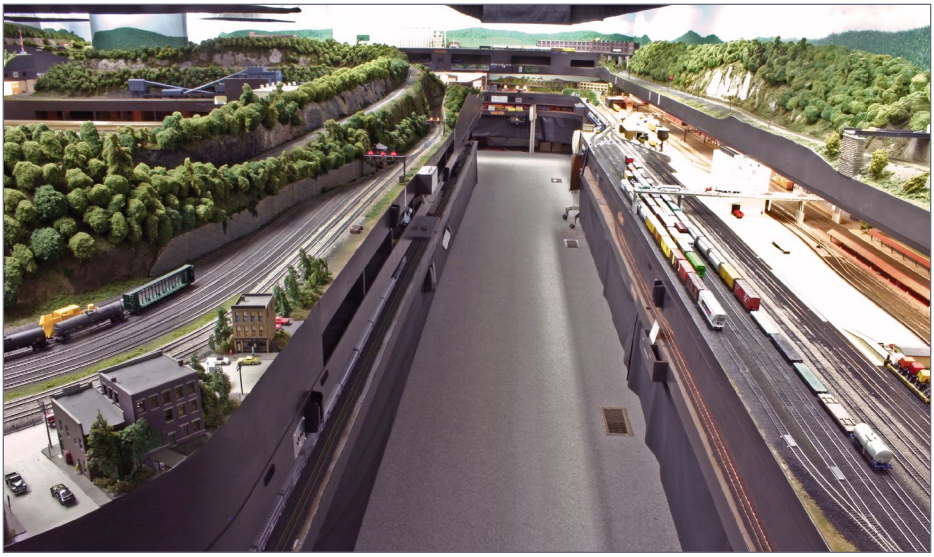
6. Hinsdale is on the upper deck to far right, with East Allens on the lower deck. Renovo's engine house is on the upper left, with Falls Creek just visible in the far upper left about 60 feet away.

1. Why did Ken select this particular real railroad(s)?

He grew up in the northeast and his first layout was pure Pennsylvania Railroad set in the late steam era. Ken has friends and operators who worked for Conrail (and the Penn Central).

In the 1980s, Ken realized that his favorite railroad was leaving his town and he wanted to keep it alive. He already had knowledge of Conrail's equipment and operations, thanks to conversations with his operators who were railroad professionals, so Conrail was an easy choice for the expanded railroad.

7. Port Allegheny is on the upper deck to the left, with Selinsgrove Junction on the lower deck. The curved end of the five-track Harrisburg hidden staging yard is visible on the right with the Enola hidden staging yard behind the black valance just above Harrisburg.



8. The Needham mine complex at Frenchville is visible in the upper left, with the hidden staging at Enola and Harrisburg on the two lower levels at left. The entrance to the Duncan yard is on the middle deck to the left, with the five-track Enola staging yard on the lower deck to left. The Williamsport yard is on the lower deck on the right, with Falls Creek on the upper deck in the far upper right.

2. How did Ken determine which portion of the real railroad to model?

The books he read on Pennsylvania included photos of the Shamokin iron ore trains and he had a great grandmother who lived in Shamokin.

When Ken started operating with one of the more dedicated operators in the east, Charles Carangi and his recreation of busy Northeast Corridor operations, he became fascinated with modern mainline railroading.

An article on the Northumberland yard inspired him to recreate it and the tracks that fed it. He eventually realized he wanted to model most of the Buffalo Division, all 300 miles of it from Harrisburg to Buffalo in the Conrail era.

9. The bridge to Falls Creek is in the distance on the top deck, with Falls Creek on the far right. The Delevan staging yard is on the middle deck to right, with Lock Haven and West Allens on the lower deck.

10. The Williamsport Yard is on the lower deck to the left, with East Allens on the upper deck in the center. Part of the Turtle Point steel furnace complex is visible on the upper deck to the far upper right, with the Driftwood Branch heading to the topmost deck in the right center. The hidden staging areas at Enola and Harrisburg are on the two lower levels to the right.

3. How did he decide on which era or eras to recreate?

Ken has enough equipment and can choose from three eras: (1) he can operate of 1977-1982 era Conrail as he is now, or (2) temporarily backdate operations on the existing layout to 1964-1972 (late Pennsy and Penn Central), changing only the symbols and using only older cars and locomotives, or (3) he can replace some of the structures, all of the equipment and all of the vehicles to operate pure Pennsylvania Railroad in 1956-57 era.

11. Wrights is on the lower deck to the right. Port Allegheny is on the upper deck along the far right, with Turtle Point in the distant upper right. Selinsgrove Junction is on the lower deck to the right.

12. Port Allegheny is on the upper deck to the left, with the Selinsgrove Branch on the far lower left. Harrisburg is on the upper deck, with Keating Summit on the topmost deck in the far upper right.

4. What type of freight and passenger operations did he recrate?

Ken operates using a slightly modified Conrail timetable to compensate for sites no longer in operation. His revised timetable is based on what existed in 1945, to provide more industrial switching opportunities than exist today.

The Pennsylvania Railroad's CT1000 book listed all the sidings on the line in1945 but most of those sidings would be long gone by 1976. The Conrail employee timetables provide the necessary inventory of trains and how they were routed over the Buffalo Division.

The layout includes several yards, so the Conrail transfer runs of shifting cars from one yard another can be recreated. Buffalo has three separate yards: the arrival and departure yard, the car-sorting yard, and intermodal yard with at least 100 feet of track between any of three yards.

5. What were the most important factors Ken considered when designing the layout to fit the space?

Most important was a minimum four-foot-wide aisle with most aisles six feet wide or more. Placing the tracks on shelves narrow enough to be reached easily makes the railroad one that is truly comfortable to operate.

13. The Port Allegheny intermodal yard is on the upper deck to the left, with the Port Allegheny station in the distance. Stoney and Rockville are on the lower deck to the left.

6. What are the defining signature structures?

The coaling tower and roundhouse at Northumberland, PA and the two steel mill furnaces at Buffalo (Turtle Point), NY, and the street-running trains through Sudbury, Pennsylvania are the most visible "signature" structures.

The massive yard at Northumberland and the steel furnaces at Turtle Point define the railroad's locale. The frequent coal trains help to identify the line as a conduit from the Clearfield district of central Pennsylvania to power plants and export terminals in Philadelphia or Baltimore.

14. Ebenezer Yard is on the upper deck, and Dauphin is on the middle deck with the Altoona staging yard on the lowest deck on the left. Port Allegheny is on upper deck to the right, with through tracks on the middle deck and Vail on the lowest deck. The signature structures at Port Allegheny are the Walthers Cornerstone #2903 Modern Coaling Tower in the upper right and the #2904 City Station in the center.

Research for the locomotive fleet

Ken used the Pennsylvania Railroad booklet MP229 that listed the specific locomotives that were rostered at each terminal on the Pennsy. Published photos and friends who worked for Conrail provided the information for the rosters that are accurate for each of the three eras he is modeling.

Ken has examples of each class and variation of all of the locomotives that the Pennsylvania Railroad, Penn Central, and Conrail operated over the division in the 1956-57, 1964-1972 and 1977-1982 eras.

15. Ebenezer is on the upper deck along the far left, with Dauphin on the middle deck and the Altoona staging yard on the lowest deck. The Port Allegheny intermodal yard is on the upper deck to the right, with Stoney on the middle deck and Vail, just outside the Altoona staging on the lowest deck.

Building a balanced freight car fleet

Most of the freight car roster fulfills needs on the online industries. In addition to that, there was a lot of through freight.

Most of the boxcars in any of the eras he is modeling were loaded with automotive related parts – the Ford stamping plant in Buffalo has 4-door 86-foot cars assigned, while most Canadian lumber imports came in 60-foot box cars or on centerbeam flat cars, depending on the era.

16. A transfer run near Montgomery on the ex-Pennsylvania Buffalo Line crossing the Susquehanna river heading for Williamsport. The track on right is Reading Railroad's West Milton. The diagonal crossing on the diamonds is the Catawissa Branch of the Reading.

There were also frequent trains of covered bi-level autoracks from a Chevrolet truck plant in Canada. Ken looked at probable sources of traffic to pick cars and foreign roads like the N&W for southern shipments.

Most useful re search sources

- Morning Sun Books, www.morningsunbooks.com
- A & R Productions, www.classicrailroadvideos.com
- Green Frog Productions, www.greenfrog.com

The latest, from Ken McCorry

This is the second version of the Buffalo line that Ken has built since 1981. The first was in a townhouse basement measuring 16 x 32. He built it using all-plywood construction as a double-decked railroad. A grade on a central peninsula connected the two decks.

That railroad was operated from 1983 until its end in 1991. It taught me many important things that I have applied to the current and much larger version. After operating sessions on the original version, I would write down what things I would do differently to make the railroad operate better and provide a nicer place for crews to operate in. Wider aisles were always the answer I wrote down!

In 1991, I was fortunate to be able to move to a larger home. However the house was built in 1813 and the basement was unsuitable for a model railroad. This was a much larger property and at one time had been a dairy farm. The remains of a large dairy barn existed not far from the house. All that was left standing was some of the first-floor walls.

I paced off what remained and determined that the original barn had been a 50' by 120' structure. I did not plan to build

17. The coaling tower is an Overland Imports brass model of the tower at Larabee, PA (the west end of the steel mill that is on the opposite side of the peninsula in [9]).

18. The Lackawanna Works in Buffalo existed until the mid-'80s. Ken's model is scratchbuilt with Plastruct fittings and is about four times the size of the Walthers kit.

something that big, but I did settle on a 32' by 80' structure where the original barn had been.

The second floor would be dedicated to the railroad with a 10-foot ceiling. Building with 2x6 stud walls and no windows gave me room for extra insulation for easier climate control during cold northeastern winters.

I could place the stairs away from the exterior walls to allow benchwork to be located against the walls instead. Downstairs I could have a garage with a workshop and a crew lounge.

For benchwork, I would use all B-C ¾" plywood on both levels. In fact, I ended up using not even a single piece of dimensional lumber in the layout's construction.

19. A recreation of the Sunbury, PA station, on Market Street. The Rite Craft Company is a kitbashed Vollmer model.

20. Ken used a now out-of-production Walthers kit for the shop at Renovo, but the Walthers Cornerstone "Modulars" modular building kits have similar window and door styles.

The lower deck is open grid construction with 1/2" plywood under Homasote roadbed. The upper deck is also open grid but attached to the 2 x 6 studs for support. Support legs extend down from the bottom level benchwork to the floor.

This makes for a very strong and stable cantilevered upper deck, which in a few places extends four feet from its support walls. After 26 years I have noticed no issues with this method of construction.

For the layout design I used an improved version of the original townhouse railroad. Basically, I had two levels around the outside walls with a central peninsula to connect the two decks.

The grade from deck to deck would duplicate the real Buffalo line grade over Keating Summit, which is a 2.6% grade. All other grades on the railroad would be no more than 1%.

On the original townhouse railroad, I modeled from just east of Sunbury, PA to just west of Williamsport, PA. For the new railroad I modeled from Enola staging at the east end to Delevan at the west end.

Delevan is about 30 miles east of Buffalo, NY. The total mainline length was about 750 feet from end to end.

I began construction in February 1992, with the golden spike driven in April 1993 to complete the mainline. I had promised to be open for the 1993 NMRA convention in Valley Forge, so a deadline had been established before construction had begun.

It is amazing what a deadline can do to one's work ethic! We had the mainline operational at the convention. The yards were not

21. The Needham Complex (fictitious) in Frenchville, PA. Ken kit-bashed structures from the Walthers Cornerstone number #3017 "New River Mining..." kits, with some additional scratchbuilt structures and conveyors.

yet in service, and neither were a number of branch lines I was also modeling.

At the time, I elected to model the late PRR in the 1962-1968 time period. Over its current 26-year life, the railroad has always been the Buffalo line, but it has seen a number of eras modeled.

I went from the late Pennsylvania Railroad to Penn Central, then to Conrail. Then back to the late PRR, then to a 1956 steam-era PRR and now back to the late PRR/PC era.

I do suffer from era-itis! I find it helps to keep the railroad operations fresh due to the era changes. Much easier than tearing it all down and building another railroad!

The next big change physically to the railroad came in 1998 when I added a 23' by 32' extension to the original barn, turning the building into a L-shaped version.

This addition allowed me to have a longer helper district over Keating Summit and to add Harrisburg terminal at the east end of the Buffalo line. This also allowed me to model some of the east/west mainline traffic from Harrisburg west to Altoona/Pittsburgh and east to Baltimore and Philadelphia.

Unfortunately, after operating this segment for a few years, I realized that I had built a whole different railroad operation than the Buffalo line!

After a few years I tore this out and simply extended the Buffalo line to its original Enola staging but with more run and locations south of Sunbury. This also gave me additional staging at the east end with the addition of the Harrisburg staging located under the Enola staging and connected by a helix at Rockville.

I did install an upper deck over what had been the Harrisburg terminal area, which allowed an increase in the size and operations in the Buffalo terminal area.

Dispatching and car forwarding

The railroad is controlled by two dispatchers located downstairs in the garage area. The Kase dispatcher controls from the Enola/Harrisburg stagings to East Allens, just east of Williamsport, PA. The Lyco dispatcher controls from East Allens to Lake, just east Of Delevan.

A Renovo block operator controls the Drury and Drocton interlockings at Renovo where the helper crews are based.

Train control is DCC by NCE. During a normal operating session, I have a crew of 32 people – 29 of which use NCE radio handsets. Paul Zimbicki of TDP products established signal control by using hardware he designed for use on his N scale PRR railroad.

Paul's system is similar in design and operation to Bruce Chubb's CMRI.

We accomplish crew communications using a railroad phone system and FRS radios. Once the signals went in service, verbal communication dropped significantly, making the FRS radios much easier to use.

3x5 card system

I have used 3 x 5 car cards for about 38 years on two railroads. My good friend and fellow PRR modeler, the late Charlie Carangi, developed the system.

Each card has 9 vertical columns for locations on and off the Buffalo line. There are 6 horizontal columns on the right side, with the combination giving up to 54 movements of the car during operating sessions.

A computer program by Fred Alston, also a layout operation regular, allows me to make new cards and replace those that have been completely filled out. It usually takes a number of years to fill one out completely.

The horizontal columns also have numbers from 1-6 at the top, allowing the car to be used for up to six different industries at any one location. On the back of the card, I include car ownership, date in service, and any shop dates for repairs or wheel cleaning.

A hole punched at the top left corner allows the use of a shower curtain ring to combine a train header card, a loco consist card, and the car cards plus any blocking cards required.

The shower curtain ring means if the car pack is dropped, you don't have to play card pickup and remake the car cards for the train.

Crew sign-up

A sign-up board posted on the stair landing allows the crews to sign up for their trains. It gives the start times for the first six to nine trains, spread over a 30-minute time period so the railroad builds traffic slowly at first.

After that, when the crew is done with their train, they take the next available train after checking the extra board first.

When the yards on the railroad which originate traffic need a crew, they post the train symbol and location on the extra board and the next available crew will take that train.

I do have a few assigned crews for passenger, mineral, ore, and grain traffic. I also have assigned crews for locals out of various yards.

I currently have 59 people on my crew call email list and normally can get the needed 30-32 people to staff the railroad during operation. I have had to cancel sessions due to crew shortages, but normally have sessions from 8-10 times per year.

22. When Ken was modeling the Conrail era circa-1976, that was early enough many of locomotives would still wear the constituent road's paint. These ex-Reading switchers are one such example, modeled using an Atlas MP15 and an Athearn SW1500. The Geeps behind had been recently repainted in Penn Central black.

23. A pair of Atlas MP15 units in new Conrail paint pull a transfer run on Ken McCorry's layout from the time when he was modeling the early Conrail era.

In the area where I live (suburban Philadelphia) there are a large number of operational layouts competing for crews.

The Conrail era

Bob Schleicher's photos are from when I modeled the Conrail era, which covers 1976 to 1982. That's before the Conrail Quality era.

This era allowed me to have Alcos and early GEs and EMDs running around in patch paint schemes. I discovered I liked that era, as it was much more colorful and the equipment used covered a wider year spread.

When I added the addition in 1998, it allowed me to add the Harrisburg terminal area which also included the electrified portion of Conrail at that time.

As I said above, after building the Harrisburg terminal, I discovered that I had built a whole new railroad in addition to the Buffalo line. This had grown beyond my original idea of the Buffalo line, so the Harrisburg terminal had a short two-year life of operation.

The Conrail era has allowed me to include the D&H operations on the Wilkes Barre branch with the D&H traffic to both Enola and Pot Yard. The ex-Lackawanna/EL Bloom branch from Taylor yard in Scranton to Northumberland became the North Shore short line as in real life.

Modeling the Conrail era lasted for about six or seven years after which I changed back to the late PRR and Penn Central era. I have sold off almost all the Conrail era equipment, but there is always the chance that a new Conrail era could return in the future! If it does, it will include a fictitious operator of the Buffalo line called the Northern Central Railway. We'll see what the future will hold!

When talking to hobby vendors, please remember to mention MRH.

Your resource guide to an accurate Conrail model railroad

Books on Conrail:

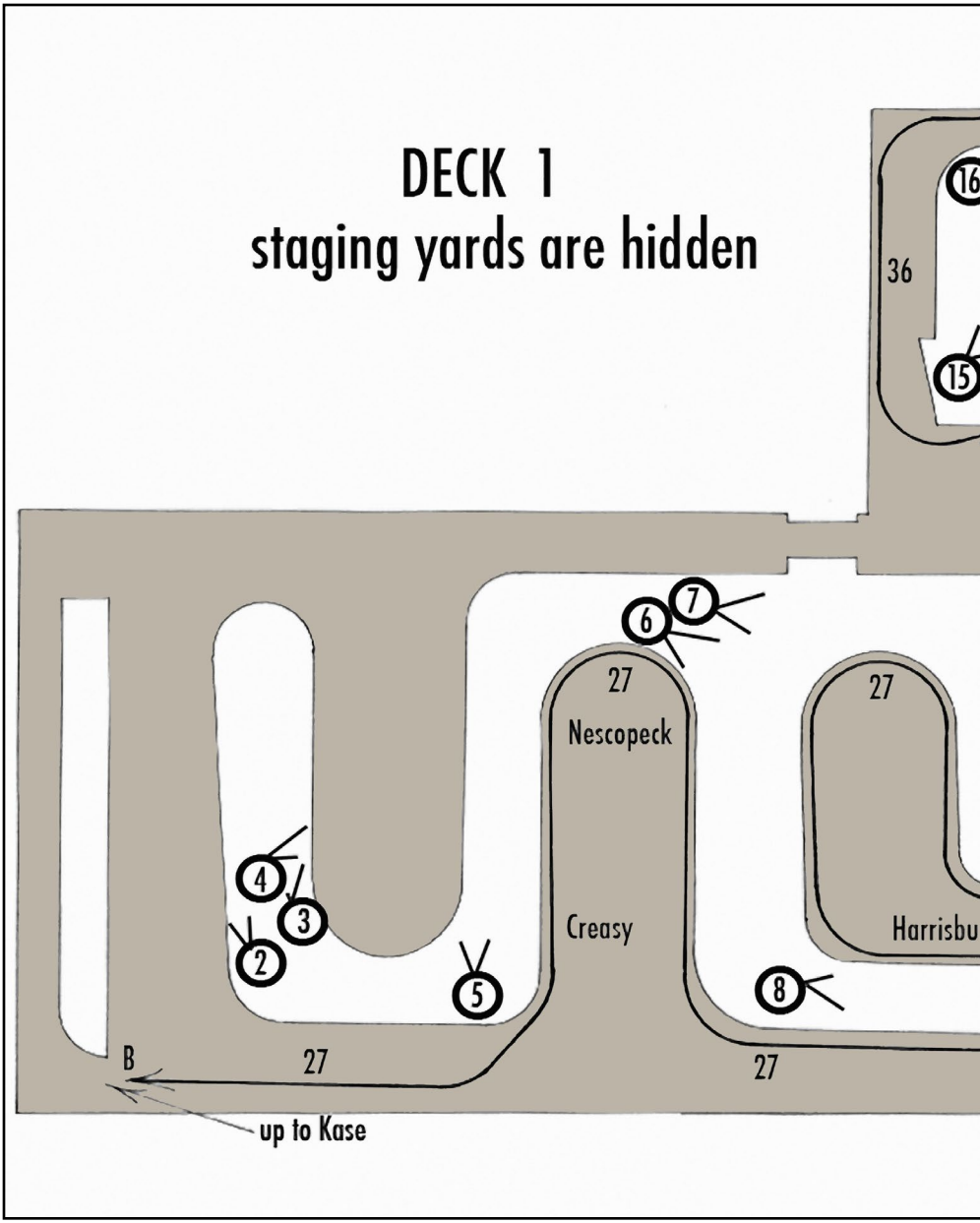
- MBI Publishing, www.motorbooks.com
- Morning Sun Books, www.morningsunbooks.com
- Railroad Avenue Enterprises, 198 Fairview Ave., Long Valley, NJ 07853 (see www.walthers.com)
- The Weekend Chief (see www.walthers.com)
- Withers Publications, www.witherspublishing.com

Videos on Conrail:

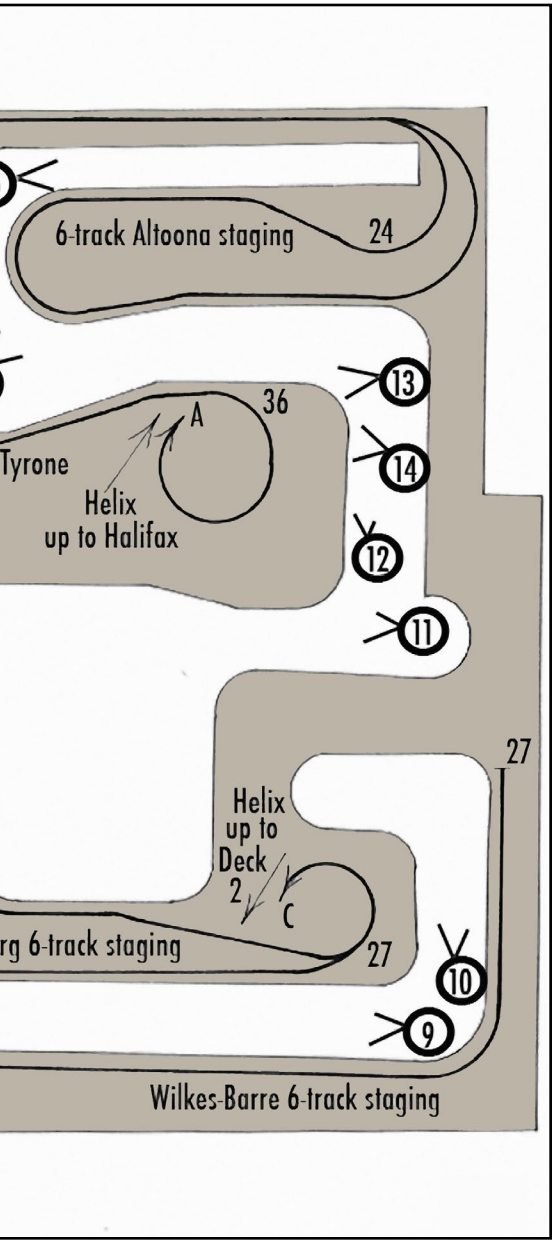
- A & R Productions, www.classicrailroadvideos.com
- Green Frog Productions, www.greenfrog.com

Conrail websites:

- www.thecrhs.org
- The NERAIL North American Railroad Photo Archive, naphotos.nerail.org



DECK 1: This deck is only about two feet above floor level and contains two six-track staging yards with reverse loops



Notes on the track diagrams

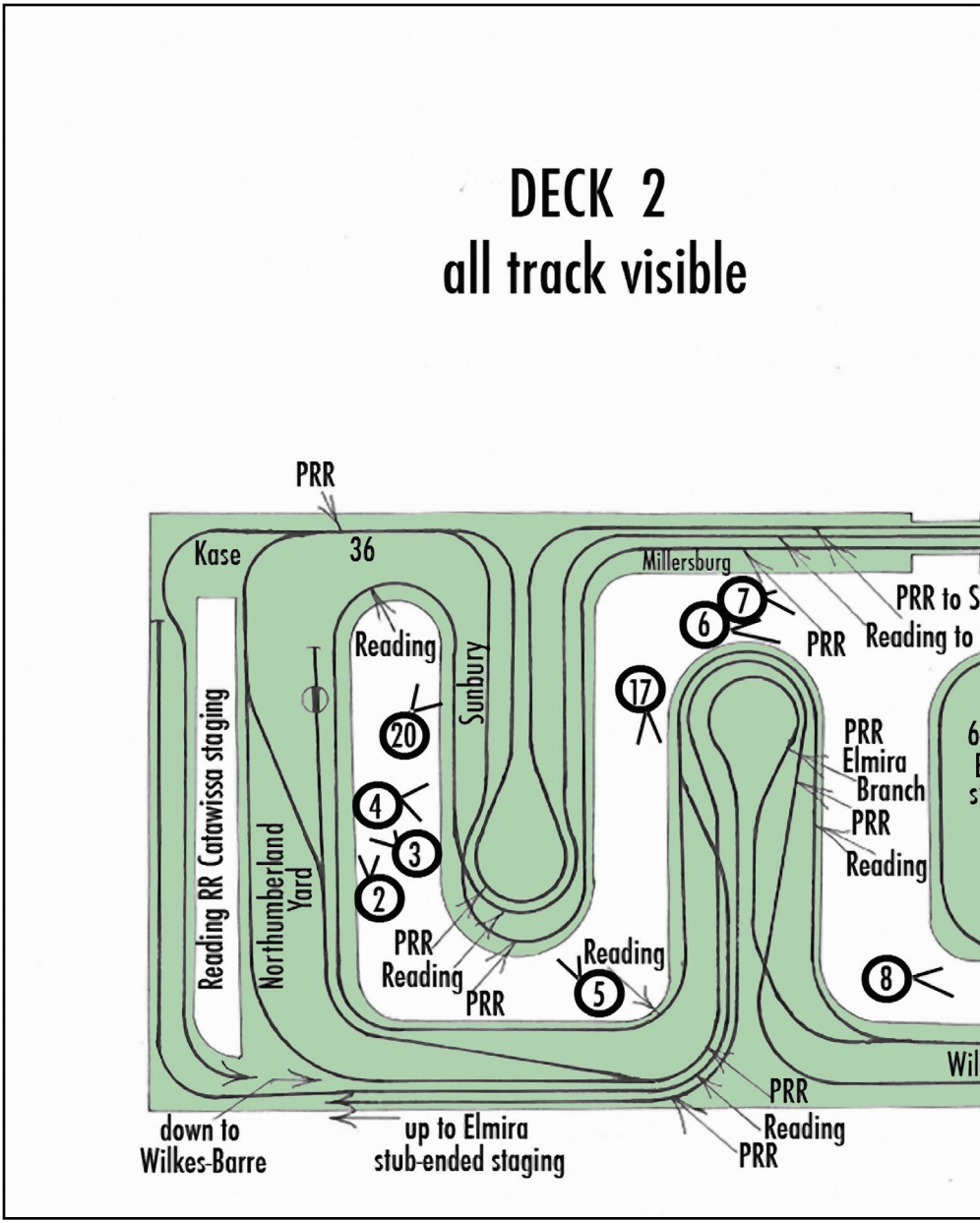
All of the layout drawings are single-line schematic diagrams of the route of each mainline, with no double-track or other parallel tracks or sidings shown. If there are two railroads running side-by-side, those two tracks are shown. The drawings do not illustrate where minor tunnels or bridges may be placed or any other scenic details.

The thicker lines are track center lines, the thinner lines are the exterior walls and the inner edges of benchwork.

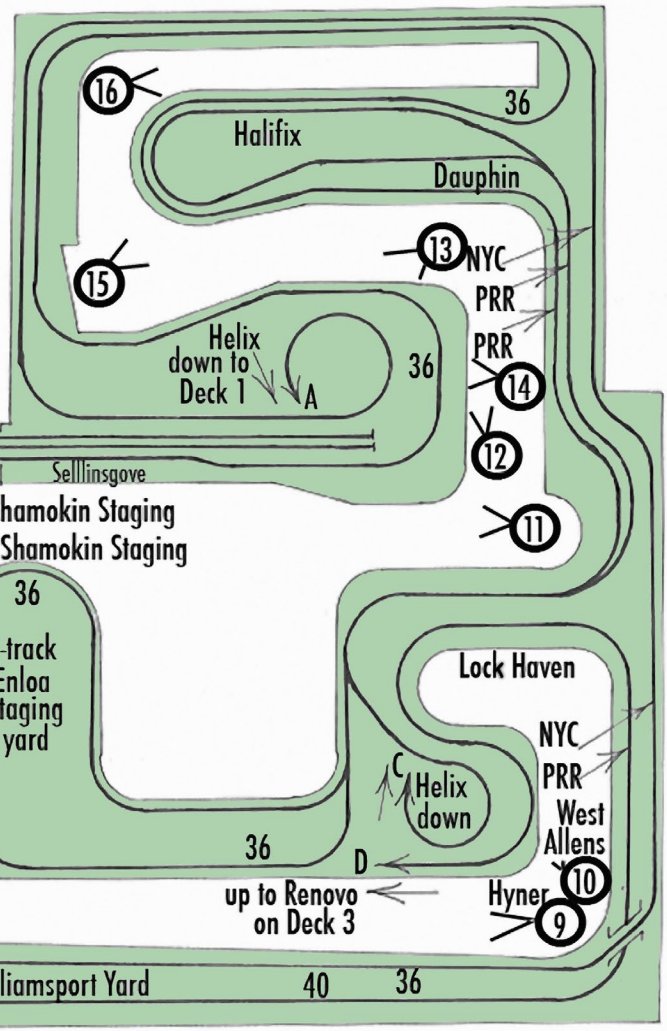
The circled numbers indicate where the photographs were taken.

The underlined numbers are the elevation of the track above the floor. The individual capital letters are in pairs to help identify where the track disappears and reappears, sometimes on another deck.

at Altoona and Harrisburg with a stub-ended staging yard at Wilkes-Barre.



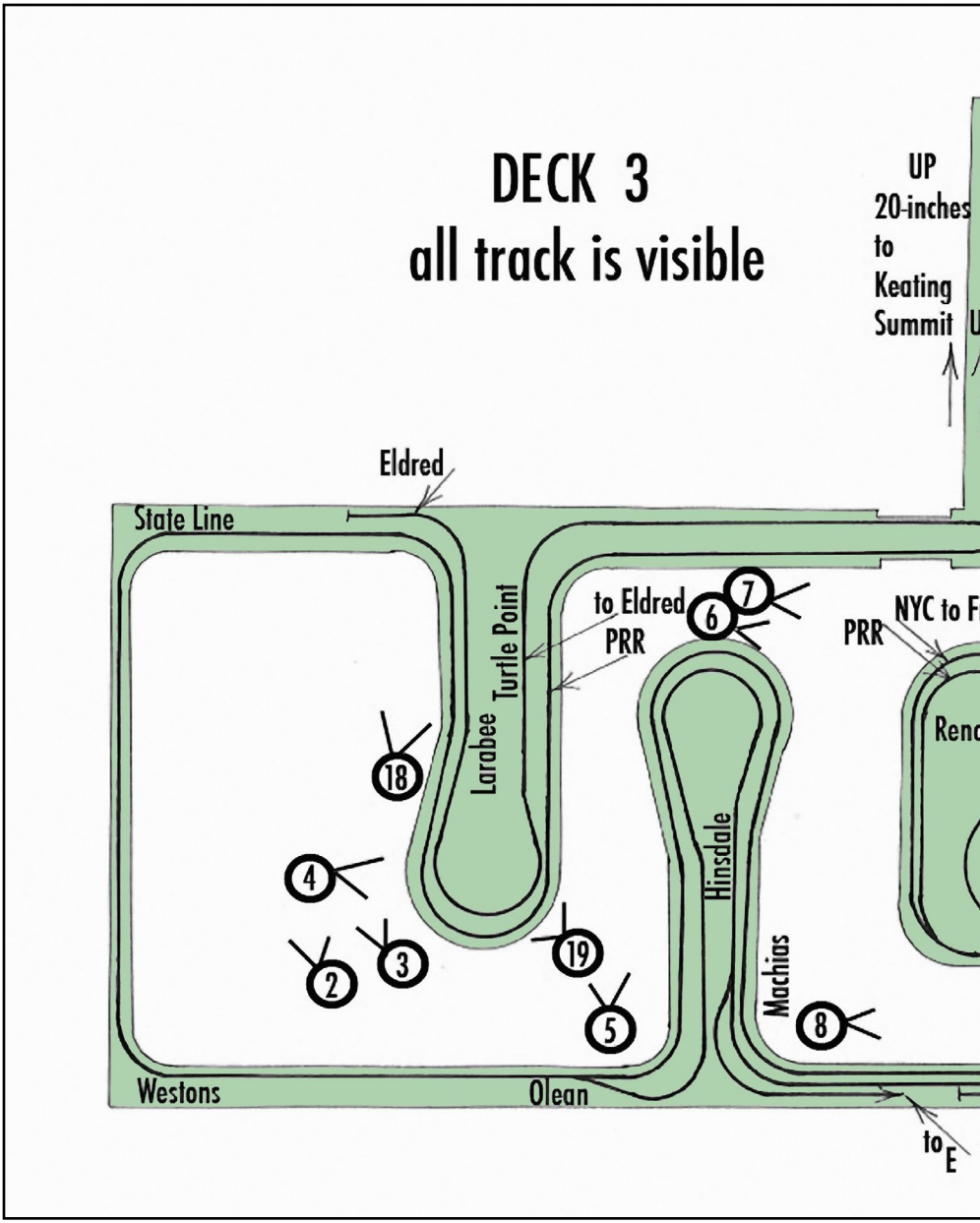
DECK 2: The layout includes Pennsylvania Railroad (PRR), Reading and New York Central (NYC) routes that were absorbed



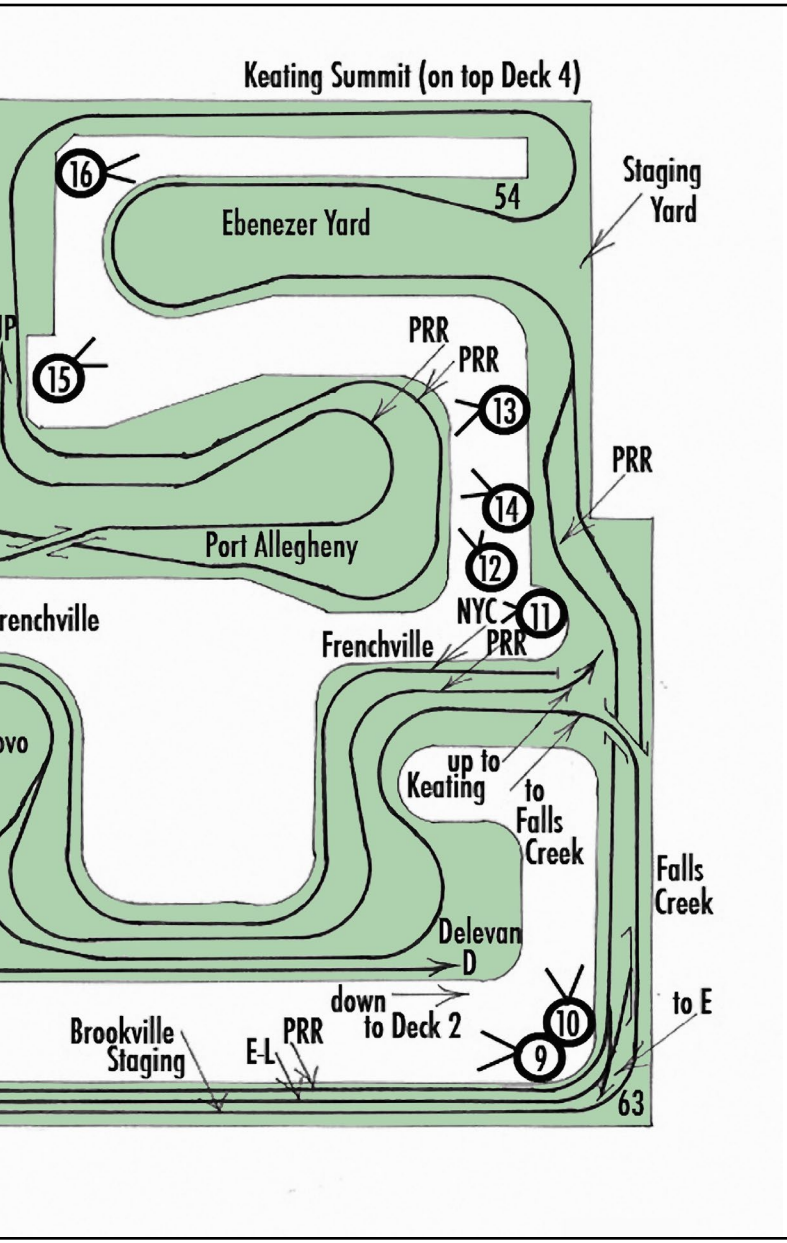
SEEING KEN'S LAYOUT

I first visited Ken's layout in 1993 at the Valley Forge NMRA convention as part of the LD SIG layout tours. I'll never forget how the layout seemed to go on forever – and that was before Ken added the expansion years later! I visited again years later after the expansion and was again blown away.

into Conrail. The Enola six-track staging yard and reverse loop is hidden, but all other tracks are visible on this deck.



DECK 3: With exception of the stub-ended staging yard for Brookville, all track on Deck 3 is visible. There is a fourth deck



around the walls behind Ebenezer Yard that is the site of Keating Summit. ☑

Robert Schleicher

Robert was editor of Railmodel Journal for 19 years and, prior to that, editor of Model Railroading magazine. He has also authored over a dozen model railroad books including the *Tyco Model Railroad Big Book of Model Railroad Track Plans* and three books for Lionel. Bob has been a consultant to several manufacturers and helped to kick-start the Railroad Prototype Modelers concept. He is modeling the standard gauge Colorado & Southern in northern Colorado circa 1959 in HO scale. ■

Ken McCorry

Ken grew up in Berwyn, PA near the PRR Philadelphia to Harrisburg Main Line, so his exposure to the PRR started early. The family oil business had a rail siding, and starting at the age of 7, he helped to get cars ready to unload into the oil company's tanks.

He raced Corvettes in the mid '70s in SCCA and IMSA and was involved with NARCOA (North American Rail Car Owners Assoc.). He had a Fairmont M-19 and two hi-rail trucks for a number of years. During those years he had the ability to travel on the rails of a number of the branch lines that he models on his Buffalo Line. His current layout is his sixth layout based on the PRR, and Ken is now a retired oil man. ■


Real Easy
Railroads
1 2 3
CONRAIL
6391

Special Supplement!

RATE THIS ARTICLE

ROBERT SCHLEICHER discusses how to accurately model a prototype railroad ...

TODAY, THE SIMPLEST PATH TO GETTING THE most satisfaction from the hobby is likely to model a well-represented prototype railroad – going from the prototype, as opposed to creating fictitious railroads and places.

Here are some thoughts for how to model from the prototype in case you're new to this approach to the hobby.

Shift from freelancing to prototype modeling

For most of the last half of the 20th century, model railroaders were generally constrained to one choice: create a freelance model railroad. Yes, you could buy imported brass replicas of most of the prototype steam locomotives, but few ran as well as an Athearn diesel.

Then Roco, Kato, Atlas, and others progressively upped the ante on HO scale diesel locomotive performance. Even today, if you want to model the steam era on a particular prototype railroad accurately, you may have to search for long-out-of-production brass models.

1. Walthers steel mill kits have made it easy to recreate the steel industry and made it possible with just simple kitbashing to come very close to matching a specific prototype like this complex on Ken McCorry's Conrail layout.

If you are interested in any of the periods from about 1960 to the present, however, you can find almost every diesel that operated on any prototype railroad in model form in HO and N. Often, you can find them painted and lettered for your road and era of choice.

So at the most, you need only change the road numbers to fill out a diesel roster. And there's a similar selection of accurate freight and passenger cars.

My outlook on model railroading changed dramatically when I first saw Dorothy Newell Deane's book *The Sierra Railway* published in 1960. Here were freight trains no longer than 10 cars pulled mostly by compact 2-6-0 and 2-8-0 steam locomotives and, later Baldwin S12 diesels, and even a 2-6-6-2 articulated (made famous in brass by PFM, later in metal and in plastic by Tyco and Model Power).

2. Nearly a dozen friends pitched in to help Ken McCorry complete his two-deck 31 x 79-foot Conrail, Buffalo Division layout.

3. The "Books-Videos-Railroadiana" section of the Walthers catalog includes hundreds of books and dozens of videos that can make it easier for you to pick the real railroad as the prototype for your layout.

Until that vision of putting the Sierra Railway on a tabletop filled my imagination, I was doing what most modelers of the 1960s were doing: recreating John Allen. I realized that real life was a better creator than even John Allen or I could ever hope be.

Prototype modeling without scratchbuilding

When I speak of modeling from the prototype with model railroaders, many reply they are model railroaders, not scratchbuilders – so modeling a strict prototype is simply out of the question. After, all you'd have to scratchbuild everything to accurately model from the prototype.

That was true in the previous century, but not nearly so much today. Your locomotive roster, along with your freight and

passenger car fleet, can mostly come ready-to-run right out of the boxes.

For many prototype railroads, the "signature" stations are available as either plastic kits, resin kits or among the range of laser-cut wood kits. Yes, you might have to scratchbuild a freight station and, perhaps, some unusual grain elevator or warehouse, but styrene plus window and door castings make scratchbuilding almost as easy as kitbashing.

The outsourcing option

These days, you can choose to focus on only the aspects that interest you if you wish. The time-honored method has been to do it yourself, all of it – and all by yourself.

In truth, the layout in this story is not solely the work of the owner. Much of the work has been done by the owner's friends or hobby acquaintances.

You'll discover, in talking to local modelers in your area at meets or at a club, that there really are model railroaders who prefer installing electrical wiring more than any other aspect of the hobby. Others are in the hobby to fulfill their desire to recreate scenery.

Many model railroads get built by a team. It is that same team that gets together at the planning stage, the benchwork stage, the trackwork stage, the wiring stage and the scenery stage. And, yes, the group sticks around and joins in with operations generally.

There is always a chance that you will not find enough like-minded individuals to help you carry out your dreams of empire building. Or, perhaps, you'd really rather do it alone.

Even if you lack the skill or the time, there is the "outsourcing" solution that is being used by more and more model railroaders today. Any part of the layout design and building process can be

4. Double and triple-track signal bridges are signature scenes on Conrail. This modified Oregon Rail Supply bridge on Ken McCorry's layout serves as the eastbound home signal for East Allen.

"outsourced." Spend your money, not your time, and have your layout built by a pro.

You can have a 2 x 8 layout complete with the structures of your dreams, or fill a basement. There are hundreds of professional modelers who offer their services to build any portion of your model railroad, or to build it all. One strategy is to pay for a pro to do some of the work you like the least, and then do the part you enjoy most yourself.

So, pay for the perfect plan, have a custom layout builder create your dream layout, select the "signature" structures you need to make the scene real, have the professional model railroad artist create the scenery, or just select the areas of the hobby you would prefer to avoid and order them.

You can have a complete operating signal system designed and/or installed. You can order a complete model railroad almost as easy as ordering a pizza assuming you have a well-researched "menu" for the ingredients. But you do have to put the locomotives and cars on the track and turn on the power!

You can do this

I have photographed hundreds of prototype-based model railroads. None of the layout owners claims to have been born with the ability to create the perfect prototype-based layout, but each has developed the skills and abilities, over time, to create their railroads.

Learning is, in essence, a process of imitating – so soak up insight from other prototype modelers such as these as a "model" for your modeling.

Building your dream layout

Today, you can go directly to the prototype as inspiration for your model railroad. There is no longer the need to invent or recreate what John Allen did. You can recreate what the Pennsylvania Railroad or the Union Pacific or the Sierra Railway did.

Does that mean that you have to release the dream of creating your own world on a shelf? It depends on your definition of dream. If watching the Broadway Limited gliding through Elizabeth, NJ is a dream to you – you can bring that dream to life on a shelf.

If watching a narrow gauge-size 2-8-0 pulling two 35-foot passenger cars with truss rods around tight curves and over wood trestles out of Jamestown, California on the Sierra Railway is your dream, you can have that instead.

5. Combinations of double-track truss bridges are one of the many "signature" scenes on the Conrail Buffalo Division. Ken McCorry used Walthers Cornerstone bridge kits for this span over Long Lake Run.

You can, indeed, recreate virtually any scene from any real railroad in your own home with less effort than attempting to build the previous generation's freelance model railroad.

This is your hobby. The joy of model railroading is that any of these layouts can be the absolutely perfect example of what you feel is best about the hobby. ☑

YES ... IT'S A MODEL

Model Railroad Hobbyist | August 2018 | #102

compiled by **Joe Fugate**

RATE THIS ARTICLE

1. Greg Baker built this 2"x2" HO scale mini-scene diorama of a section crew replacing an angle bar on a weedy branchline. Greg recently became infatuated with building a few of these HO scale mini-scenes, honing his skills both in hand-painting and in modifying HO scale figures. The tiny and meticulous work can be challenging, but Greg finds it to be really fun.

MRH'S MONTHLY PHOTO ALBUM

2. CN 2182 was originally built as an 8-40CW for the Atchinson Topeka & Santa Fe Railway in May 1992. It was painted in the red and silver "Superfleet" scheme and was numbered as 841. It was sold to CN in late 2011, given a few quick patches, and renumbered to 2182.

Jürg Rüedi took this photo on a swamp diorama built for him by Stefan Foerg. Kevin Packard built the stunning loco for Jürg a couple of years ago. Look closer at that water surface, and you'll see it has some very convincing swamp sludge and pollution floating on top!

GET PAID FOR YOUR PHOTO

We pay $40 per photo we publish. If you'd like to get your modeling in our photo feature, just start posting your photos on the MRH website, especially in the Weekly Photo Fun thread created each week.

See mrhmag.com/help for more on how to post an image. You need to be an MRH subscriber to post photos to our website, and becoming a subscriber is free, just fill out this form here. ■

DONATE*

Donations help pay contributors for more excellent articles and videos, and help keep MRH free to all your fellow modelers.

* Donations for hobby publications are not tax-deductible.

VIEW READER COMMENTS
click here

Please tell your buddies about MRH!

How to operate like a pro!

Model Railroad Hobbyist | August 2018 | #102

Tim Garland introduces the new ProtoThrottle from Iowa Scaled Engineering ...

As someone who started out in model railroading 40 years ago, I can honestly say this is by far the most fascinating time to be in the hobby. Advancements in technology, modeling methods, and materials have taken the hobby to a whole new level of realism that was unheard in the late 70s and early 80s.

Today a modeler can have a highly detailed ready-to-run locomotive equipped with computer chips and miniature speakers that can create authentic sounds and mimic prototypical operations while pulling highly detailed and weathered ready-to-run freight cars through scenery with materials so realistic it can easily fool most non-modelers into believing they are looking at the real thing.

And now things have taken another huge step forward. We have the ability to control and operate our locomotives just like a professional.

Introducing the ProtoThrottle from Iowa Scaled Engineering

The ProtoThrottle is in fact, a miniature control stand based on a North American diesel-electric locomotive prototype control stand. However, unlike the prototype, the ProtoThrottle can easily fit in the palm of your hand.

As a professional locomotive engineer, I jumped at the chance when the guys at Iowa Scaled Engineering asked if I would become a beta tester for their new product. Finally, someone had invented a way to control a model in the same fashion as I operate the real thing. Follow along as I show you how you can use the new ProtoThrottle and operate your trains just like a pro.

Ultimate realism in the palm of your hand

Unlike other controllers, the ProtoThrottle is designed to look and feel just like the real thing, except it is much smaller. But

don't let the small size fool you. I found I can operate my models very similar to how I operate the real thing (see sidebar, "Day in the life of a railroader").

The ProtoThrottle comes with many of the same features found on a prototype control stand. Besides a nine-position throttle (notch 1 through 8, plus idle), it also includes a brake lever, reverser lever (to control direction), headlight selector knobs, bell (push button), and horn handle. It also has some auxiliary buttons to control additional functions found on many decoders today.

1. Two former BNSF EMD SD40-2s work Griffin Yard on my Seaboard Central. Using the ProtoThrottle to control trains on my layout, especially switching operations, is extremely fun!

The ProtoThrottle is wireless and operates via a receiver that connects to your DCC system. It works with major DCC brands such as Lenz, NCE, ESU, and Digitrax. Note – with Digitrax a separate LNWI must be purchased from a Digitrax dealer. For a complete, up-to-date list of supported systems, see the Iowa Scaled Engineering website (www.iascaled.com).

2. ProtoThrottle front panel.

Setting up the ProtoThrottle

Setting the ProtoThrottle up with my NCE system was very simple. I simply plugged the receiver into the cab bus and installed two AA batteries in the ProtoThrottle by unscrewing four screws from the front of the face-plate.

In a matter of minutes, the ProtoThrottle became active. Using the four buttons at the corners of the LCD screen, I was able to dial up a locomotive. It also can control a multiple-unit consist by dialing up the lead locomotive.

The ProtoThrottle is designed to be easily held by sliding a finger or two between the back of the case and the "love handle" strap on back of the controller (included with each ProtoThrottle) or using a lanyard that can be attached to the bottom edge of the controller.

I prefer to hold the throttle with my left hand and work the controls with my right hand. I have found the lanyard attachment a useful addition whenever I am operating by myself.

Decoders make the difference

The ProtoThrottle is designed to work with newer decoders that include a brake function, such as the Soundtraxx TS2, ESU LokSound with Full Throttle, and TCS WOW Sound decoders.

The brake function on these decoders must be active for the ProtoThrottle to work properly. Also, just like any controller, this function will work best when all the decoders used in a consist are from the same manufacturer due to the way each brand addresses the brake function.

As a matter of personal preference, I chose ESU LokSound decoders for the entire roster on my Seaboard Central, due to the Full Throttle features and the LokProgrammer ability to reassign function values.

I knew that take full advantage of the ProtoThrottle, I needed to program my decoders to allow better control of my lighting functions. The table below shows my new decoder function standard.

Decoder Function Assignment Table

F00 – Front Headlight
F01 – Bell
F02 – Horn
F03 – Front Dimmer
F04 – Front Ditch Lights
F05 – Drive Hold
F06 – Independent Brake
F07 – Dynamic Brake
F08 – Sound On/Off
F09 – Coupler Clank
F10 – Rear Headlight
F11 – Rear Dimmer
F12 – Rear Ditch Lights

My experience with the ProtoThrottle

I operated a few times with a transitor momentum throttle that a modeler friend built many years ago, but I found it to be more of a novelty than something especially compelling. I have to say using the PT *with a sound loco*, however, is a game changer for me. I'm hooked!

Assigning these decoder functions to the ProtoThrottle is easy using the menu on the LCD screen. To access the menu, press the

upper-left button next to the LCD screen until you reach CONFIG FUNC. With this selection, you can assign each of your decoder functions to the correct location on the ProtoThrottle. To save the settings, press the lower-left button next to the LCD screen.

The next change I made was to assign new values to each notch. I use 28 speed steps on my decoders, and my aim was to simulate a prototypical response with each notch increase. (The changes in speed between each notch setting are made more gradual by increasing the acceleration delay Control Variable, which will be discussed later.)

Accessing the menu, I was able to update the notch settings using the NOTCH CFG selection. The table below shows each notch value and their corresponding scale mph according to my Accutrack Speedometer.

By making these changes, I was able to get the increase in RPM noise level to create a very realistic experience with the increase in each throttle notch.

Note – your results may vary, depending on decoder brand and sound file.

Decoder Function Assignment Table

Notch 1 = 06 Speed = 2.3 mph

Notch 2 = 15 Speed = 6.2 mph

Notch 3 = 26 Speed = 11 mph

Notch 4 = 34 Speed = 16 mph

Notch 5 = 41 Speed = 20 mph

Notch 6 = 48 Speed = 24 mph

Notch 7 = 58 Speed = 31 mph

Notch 8 = 68 Speed = 40 mph

Momentum Settings

To enable your models to take on a more realistic characteristic of the prototype, changes need to be made to your default decoder settings. Two of the most important settings are found in CV3 and CV4, which address acceleration and deceleration delays respectively.

Increasing these two CV settings will give your models a sense of mass, and greatly enhance the realistic effect.

First, I changed CV4 to its max setting at 255. This allows my models to coast when the throttle is in idle. If I need to stop, I apply the brake. On the ProtoThrottle, there is an emergency brake feature

3. An early EMD switcher works Tate Yard on Thomas Klimoski's Georgia Northeastern Layout. *Thomas Klimoski photo used with permission*

that can be activated if the brake lever is fully applied. This comes in handy for newcomers, or to prevent a disaster.

This feature can be deactivated, which is how I have my throttle set up so it better represents an independent brake like the prototype. With my brake set up this way, the faster the speed, the more distance it takes to stop, which is exactly like the real thing.

Acceleration delay is controlled by CV3, and to get the most realistic experience, not every model should be the same. On the prototype, some units will start moving much more quickly than others. All units have some kind of delay before they move after the throttle is advanced from idle and the brakes are released.

Early EMD units load quickly, moving anywhere around two or three seconds after the throttle is advanced. Early General Electric units load slowly, taking five to six seconds to move after the throttle is advanced.

A good example is a consist of two EMD GP38s and two GE U23Bs. The two GP38s will strain to get the two U23Bs moving, doing their best to drag them along. Eventually, the U23Bs will catch up and they will be more speed matched.

By adjusting CV3, it is easy to simulate these same characteristics. This table shows the value of CV3 for some sample locomotive types to get the most realistic experience from your models (see the CV3 table).

Auxiliary Functions

Besides the horn, bell, throttle, reverser, brake and headlights, the ProtoThrottle has three additional buttons that can be used for auxiliary functions. One is a large auxiliary button located near the top-left, which, like the bell button, is latched to make it easy to remember when it is on or off.

CV3 Table Values

Model	CV3 value	Delay (28 speed steps)
EMD SW series, MP series switchers	80	2.5 seconds
EMD GP38, GP40, SD40, SD45	90	2.9 seconds
EMD GP38-2, GP40-2, SD40-2	100	3.2 seconds
EMD GP50, GP60, SD50, SD60	110	3.5 seconds
EMD SD70 series	140	4.5 seconds
GE U-series, Dash-7 and 8 series	160	5.1 seconds
GE Dash-9 series	140	4.5 seconds
GE GEVO (BNSF and UP)	110	3.5 seconds
GE GEVO (CSX, NS and UP EH44AC)	130	4.2 seconds

Note: For a consist of four or more units, add a one-second delay to the above totals to allow for the additional delay in releasing the brakes before movement. Example: Four GP60 locomotives consisted together would need to have CV3 values of 140 per unit.

I use this button in particular for the ESU Full Throttle Drive Hold function. Drive Hold allows the user to lock-in the speed step of the current setting when activated.

This is a way to artificially simulate the overall mass of the train. I can move the throttle to notch 2 and let the speed slowly begin to increase. As the slack is stretched, I can hit the Drive Hold button to lock-in the speed step. I can continue to increase throttle notches, and the locomotive seems like it is straining hard to get the cars moving.

When I press the large auxiliary button again to release Drive Hold, the speed begins to increase or decrease to match the current notch setting.

This feature also comes in handy while traveling at the same speed for long stretches. I can lock in the speed step and then increase the throttle up or down, and the speed will remain constant.

The PT has two other auxiliary buttons located to the right of the LCD screen. I use the top-right button for the dynamic brake, and

4. The ProtoThrottle is a miniature control stand that fits in the palm of your hand, and allows you to control your trains just like the prototype. Here I am ready to depart the yard office with two EMD SD40-2s running "light engines" to the yard.

the bottom-right button for the coupler clank. Your choices may vary depending on what decoder functions are important to you.

The ProtoThrottle can be easily customized, especially since it has used open-source technology from the beginning.

How to use the ProtoThrottle like a pro

With the decoders and the ProtoThrottle set up for realistic operation, follow along and I'll show you just how to operate it like a pro.

The following are two scenarios where I use the ProtoThrottle on my Seaboard Central layout similar to how I operate the prototype mentioned in the "Day in the life of a railroader" sidebar article.

Scenario #1 – moving "light engines"

In the first scenario, we need to move two engines from the yard office, through an open track in the yard to reach the other end where we will begin our work. Our locomotives for today are two EMD SD40-2s [4].

To make this move on the ProtoThrottle, first I make sure my headlight is on, displaying DIM.

Next, I activate the bell, move the reverser to the desired direction of travel, release the brake, and increase the throttle to notch 3.

As the speed increases to 10 mph, I will press the large auxiliary button to engage Drive Hold so I can lock-in the speed step. Once locked-in, I reduce the throttle back to notch 1, and deactivate the bell.

While I am traveling down the track with Drive Hold still active, I may notch up to 2 or down to idle to simulate how I would maintain speed on the prototype.

Nearing the end of the yard and about five car lengths from where I need to bring the engines to a stop, I decrease the throttle to idle and disengage Drive Hold by pressing the large auxiliary button. Because I have CV4 set at max, the locomotives will coast from this point.

To stop the movement, I gradually apply the engine brakes by moving the brake lever to the right [5]. Once stopped, I center the reverser.

Now that the conductor has lined the switch so that we can couple the locomotives to the first track of cars, I need to

5. With my left thumb on the brake, I can slow the locomotives to make an easy coupling with the cars.

move the locomotives approximately three car lengths to the coupling. To do this, I move the reverser, release the brake and increase the throttle to notch 3.

Once the locomotives pick up speed, I reduce the throttle back to idle and coast the remaining distance.

If I have estimated correctly, I will have enough momentum to make it without notching back up to keep from stalling.

Or if I let it get too fast, then worse, I will slam into the cars and my HO scale engineer will probably be thrown from his seat!

To bring the units to a stop and gently couple to the cars, I gradually apply the brake. Once stopped, again I center the reverser.

Scenario #2 Pulling on the cars

In the last scenario, we will stretch the cars and pull them out of the track with our two SD units. This track contains 15 cars consisting of four loads and 11 empties.

We will need to pull the entire track of cars completely out of this track to double it over to another track to build our transfer run to the interchange.

First I move the reverser to my desired direction of travel, next I release the brake, then I increase the throttle to notch 1.

Once movement begins, I engage Drive Hold by pressing the large auxiliary button. I want to simulate the weight of the cars and their affect on the locomotives.

With Drive Hold engaged, I increase the throttle to notch 2. Two seconds later, I increase to notch 3.

Now I disengage Drive Hold for one second and then re-engage it. With it re-engaged, I increase the throttle to notch 4. I disengage Drive Hold for another second and then re-engage it. Then I increase the throttle to notch 5.

Now that I have overcome the weight of the cars, I reduce the throttle to notch 3 and disengage Drive Hold. At this point I should be doing about 10 mph.

Five car lengths from my planned stopping location, I reduce the throttle to idle and coast. To get the movement stopped, I slowly apply the brake and then center the reverser.

6. With the coupling made, I can fully apply the brake, center the reverser and give my conductor three-step protection to lace the air and release the hand brakes before pulling the cars from the track.

Summary

As you can see, the new ProtoThrottle has the ability to provide an experience with your models like before. Just like sound and DCC, this product is revolutionary. Take it from a professional, once you experience it for yourself, it will provide you with a whole new layer of realism you never thought possible. Soon, you will be operating just like a pro! To see more of this outstanding product or to order one for yourself, be sure to visit www.protothrottle.com or iascaled.com.

While there, be sure to check out a realistic operating session filmed live on my Seaboard Central featuring me and a professional conductor as we use the ProtoThrottle to control the trains. Until next time, stay safe and happy model railroading! ☑

Day in the life of a railroader

1. NS Train G35 waits to depart Chamblee, GA one early spring morning for a transfer run to the other side of Atlanta. *Tim Garland photo*

The alarm goes off at 2:30 am, and I quietly slide out of bed and get ready for work. Thirty minutes later, I am out the door for the 45-minute commute around the outer perimeter that circles metropolitan Atlanta, Georgia. Four hours from now, this same commute can take up to two hours, which is one reason I choose to work this time of day.

I have been an employee of Norfolk Southern Railroad Corporation for the last 22 years, 12 of which as a locomotive engineer. It is a profession I only dreamed of when I first got into trains and model railroading over 40 years ago.

The train I currently hold down is NS G35 [8], a road switcher based out of Chamblee, Ga that goes on duty Monday through Friday at 4 am. It is responsible for transferring cars between the yards at Chamblee, located about 10 miles north of Atlanta, to the yard at East Point, located just south of downtown Atlanta near the Hartsfield-Jackson airport.

Besides beating traffic, another reason I prefer this particular train is that it usually ranks three EMD SD40-2 locomotives [9], one of my all-time favorite locomotives to operate.

After arriving at the Chamblee yard office, I lace up my boots, grab my bag, and head inside the office to log onto the computer. Here I normally print the dispatcher bulletins for my

2. Three EMD SD40-2 Locomotives prepare to depart East Point, GA for the return trip to Chamblee on NS Train G35. *Keith Armes photo used with permission*

Day in the life of a railroader *Continued ...*

conductor and me. Then after a job briefing with the night-shift Trainmaster, I am out the door to get the locomotives ready while the conductor gets his paperwork.

In the quiet of the early morning, I climb aboard what will be my lead locomotive for the first part of my trip, and unlock the door. I open a cabinet door on the back wall of the cab to flip up all the breakers and the battery knife switch. Then I'm out the back door and down the walkway to a set of doors just past the dynamic brake blister.

3. In July 2014 while working the mainline, I had a leased CIT Rail Corp ES44AC in the lead of NS train 153 rolling south through Flowery Branch, GA with a mile-and-a-half-long train. *Chip Allen photo used with permission*

Here is where the starter switch is located on these second-generation EMD units. I check the water level and then prime the engine for about 20 seconds. I turn the switch the opposite direction to start the unit. At the same time with my right hand, I push on the layshaft.

Soon the auxillary generator kicks in and the big turbocharged 645 engine comes to life. With it started, I close the doors and start the next two units. Occasionally, I will need to add an additional unit to the consist if there are not three units already MU'd together. MU is short for multiple-unit, and to add one means that a large jumper cable needs to be connected along with multiple air hoses between the locomotives.

The air brake valves on trailing units can be cut out and set up in trail, and the jumper cable is used to send electronic information that allows the trailing units to operate the same as the lead unit.

Once all three units are running, I walk around the locomotives and perform the daily inspection. I then sign the daily inspection cards located in the cab of each locomotive in the consist. It normally does not take long for the air compressors to fill the main reservoirs located just above the fuel tanks. With the main reservoir filled, I can release the hand brakes and, with the conductor on the ground watching the brake pistons, perform an air brake check to ensure all locomotive brakes in the consist are operating as intended.

After the locomotive air brake test has been completed, we can depart from the yard office to start our work assembling the train. In this case, we will need to make a reverse move or shove the engines from the yard office down the yard lead to the entrance to the yard. This type of procedure is called moving

Day in the life of a railroader *Continued ...*

"light engines" since we are not coupled to any cars. The conductor boards the end of the trailing unit and provides instructions via hand signals or his handheld radio, stating how many car lengths is seen to be clear. On the railroad a car length is considered as a standard 50' boxcar, and the conductor uses his best judgment in estimating the distance with this in mind.

To get the three units underway, I first check and make sure my headlights are displaying dim on both ends of the consist. Rules require headlights to be on dim within the yard or when stopped on the mainline. We will also dim the headlights when meeting

4. In October 2014 I was in charge of NS Train 238 with two General Electric Dash 9-44CW units rolling through Gainesville, GA as the sun was setting after a rain shower.
Jordan Hood photo used with permission

another train, as long as we are not approaching a grade crossing as a consideration for the crew members of the passing train.

With the headlights on, I activate the bell prior to movement to warn anyone near the locomotives. The bell is used when starting or when passing people or equipment near the tracks or in adjacent tracks. It is not necessary during constant back-and-forth switching moves.

Since the conductor has radioed that I am clear for 10 or more car lengths, I know I have enough distance that I can get the locomotives up to the 10 mph maximum track speed on the yard lead. Unless otherwise stated, 10 mph is the maximum speed allowed in all yard and industrial tracks on NS.

I now move the reverser handle to the desired direction of travel, increase the throttle to notch 3, and release the brakes. The big SD40-2s generally take about three seconds before the wheels begin to turn. In a consist of four or more, it will take four or five seconds, due to the extra time it takes for the brake cylinders to release.

Once underway, it normally does not take long to get these EMD units up to speed – one reason why they are among my favorites. To keep from exceeding 10 mph, I will have to notch back down. Sometimes it may mean that I will need to go back to idle and even add a little engine brake to control the speed, especially if moving on a slight decreasing grade.

At 4:30 am it is still pretty dark outside and the lights from the surrounding structures and light poles adjacent to the yard lead offer limited sight distance for my conductor. He continues to provide updates over the radio for the distance seen to be clear. All moves made in the yard must be at restricted speed and the

Day in the life of a railroader *Continued ...*

movement must be able to stop within half the range of vision short of any obstruction, be it an improperly lined switch, standing or approaching equipment from the opposite direction, or even a supervisor with a big banner stretched across the tracks with the words – STOP, OBSTRUCTION.

The Federal Railroad Administration (FRA), which governs railroad safety compliance, requires Railroad supervisors to conduct a specific number of safety banner checks on a regular basis. Typically, it is not unusual that I will get banner-checked at least once a month.

5. Back in June of 2013 I had a General Electric CW40-8 in charge of a northbound freight. These ex-Conrail Dash-8 locomotives are the worst-riding and slowest-loading locomotives on the entire NS roster. *Photo by Ed Painter used with permission.*

At around five car lengths to a stop and moving 10 mph, I drop the throttle completely out of power to idle, and coast the remaining distance. Prior to reaching the switch, I slowly apply the independent brake. If I sense the units are slowing too quickly, I will bail them off, which will release the brakes. I may need to add power by throttling back up a notch or two to keep moving. To come to a complete stop, I fully apply the independent brake.

Once stopped, I center the reverser. For many newer units, this causes the prime mover to drop to a low idle, and helps to conserve fuel. NS expects all engineers to comply with this procedure, as fuel costs are second behind labor costs for the company.

With the switches now lined to the proper track to pick up our first block of cars, the conductor radios, "switch lined, shove five cars to a coupling." Rules require that I ask him to double-check our route to make sure all switches are properly lined. He looks at the points and states "double-checked," and we are on our way again.

I now move the reverser, notch up the throttle to 3, and release the brake. As soon as I get the engines moving and have enough speed to coast to the coupling, I will drop the throttle back to idle. The conductor will provide car distances for each car length remaining to the coupling when under five cars. At one car length, he will narrow it down to half a car, 20 feet, 10 feet, five feet and then "that'll do."

If my timing is correct, I will try to make the coupling around 2 mph. Hitting the cars 'light engines' at a speed over 3 mph can give a good jolt inside the cab. If I know I have miscalculated my speed, or I have a newer conductor who is not that great with providing a proper estimate of car lengths, I brace myself for impact!

Day in the life of a railroader *Continued ...*

Once coupled to the cars, the conductor will often instruct me to stretch the slack out of the cars to ensure that the coupling is good and that the track of cars is solid. To stretch the cars out, I move the reverser forward, release the brake and go to notch 1, then notch 2.

If it is a good coupling, the conductor will radio "that's good" and then ask for three-step protection. Note: some railroads refer to three-step protection as "red zone" protection. This is a safety request to allow the conductor to go between the cars to lace the air hoses and release the hand brakes.

To grant proper three-step protection, I first make sure the independent brake is fully applied, then add a sufficient amount of train brake, center the reverser handle and open the generator field switch on the console.

This three-step protection has three levels of safety to prevent accidental movement during this highly dangerous procedure.

With the air hoses laced, the air cut-in and the hand brakes released, the conductor releases his three- step protection and issues instructions to pull ahead to double the cars to another track in the yard. To pull the cars, I move the reverser forward, release the brake and slowly notch up on the throttle. The reason for slowly notching up on the throttle is so that the slack between the couplers can be stretched out slowly. This is the same procedure in starting a train on the mainline.

I get the engines and cars up to speed, not exceeding 10 mph and then notch down to maintain the speed. Depending on the number of cars and their weight, it may mean I need to go up to notch 5 to get everything rolling at a decent clip.

When the conductor starts counting me down to clear the switch, I use my judgment to know when to notch completely off and coast before applying the brakes. If the cars are light, consisting mostly of empties, and I am not holding onto too many, I may be able to use the independent engine brakes to bring the movement to a stop.

To do this I slowly bunch the slack in by gradually applying the brake. If I apply it too fast and too hard, I could cause a derailment. For heavy cuts of cars, especially in instances with loads placed behind empties, I will often use the train brake to bring the movement to a stop. ■

Tim Garland

Tim has been a model railroader for 40 years and been a prototype railroader for 25 years. He has worked as a conductor, supervisor and locomotive engineer.

Tim's Seaboard Central layout is set in the spring of 2015, and is a freelanced railroad that runs between Birmingham, AL and Savannah, GA. You can see more of it on Tim's Seaboard Central Youtube channel and his Seaboard Central Facebook page.

Tim is married to Katia, who fully supports his hobby. They live in northwest Georgia. ■

RATE THIS ARTICLE

The Amherst Railway Society Railroad Hobby Show

Our 2019 Show will be

January 26 & 27, 2019

Save the dates!

Click to learn more ...

AMHERST RAILWAY SOCIETY

RAILROAD HOBBY SHOW

Modeling pulpwood loads

Model Railroad Hobbyist | August 2018 | #102

David Bott goes from the backyard to the freight car in four easy steps ...

Pulpwood has been a rail-carried commodity since early in the 20th century. Carrying wood for papermaking has been a small but constant part of the railroad business for more than a century. Although pulpwood "racks" — the specially-designed flatcars with V floors —dominate on Southeastern and mid-Atlantic railroads, pulpwood loads also traveled in box cars, flat cars, gondolas, and chip hoppers. See the sidebar "Moving

1. Pulpwood loads on their way to the paper mill on the Four County Society of Model Engineers' modular layout (www.fcsme.org).

pulpwood by rail" for more of the prototype background on hauling pulpwood by rail.

In this article, I will describe how to build an inexpensive but visually-appealing pulpwood load for the specially designed flat cars that have carried pulpwood during the post-WWII era through to the present.

Atlas pulp rack

I use one of Atlas' popular and beautifully detailed HO scale GSC pulpwood racks as the car for this load. The tools and techniques would work on any scale model that carried log form pulpwood.

Although the resulting load appears intricate and fragile, this method is simple, and the load is durable and visually appealing. After you learn how simple my method is and compare my loads to the molded load Atlas provides with its car, I bet you will want to try this yourself!

Getting started

I model in HO scale, but the method I use should work in all larger scales. In N scale, you may need to find other woody plants to yield "logs" of the proper diameter. I personally would not try to build a piece-by-piece pulpwood load in Z scale, though I'm sure someone will try it!

Tools:

I find these tools useful for creating pulpwood loads.

- Garden shears (for harvesting twigs)
- 1-gallon sealable plastic bag (to store twigs)
- Northwest Short Line Chopper or Chopper II (to cut twigs to size)
- Sealable plastic container in quart or larger size (for storage)
- Cookie sheet (for prepping cut twigs)
- Clear plastic cling wrap (for protecting car and making load removable)
- Scale model pulpwood rack (i.e., bulkhead flat car)
- Yellow carpenters, or Aileen's Tacky, or Canopy Glue (for securing load)
- Tweezers (for handling scale pulpwood logs)

2. Pine trees in the author's backyard are a perfect source of load-making raw material.

Making the load

Find a relatively mature conifer tree. These trees often have small dead twigs on branches low to the ground, This makes the raw material extremely easy to harvest.

Be picky! You only need branches that have the right diameter. Conifer trees grow practically everywhere. While a tree may look like it has few useful branches (especially those in a manicured yard), you can find plenty of branches to harvest.

I recommend picking the twigs on a low branch. Branches on the ground are often wet, decayed, or full of bugs trying to find a meal or a bed! The branches on the ground may also be muddy,

3. Here are the eastern white pine trees in my backyard. Similar pines grow all over the US. Even with lower branches trimmed for mowing around, the remaining branches sag to catch sunlight and will be easy to reach.

4. When looking for suitable branches, be selective and look for dry, needle-free branches still on the tree. In my experience, these produce better scale logs and are plentiful. The shears I use make a flat cut, but any garden shears will do. Try to cut only the branches the diameter you need so you have less waste material.

5. Collect the branches and store them in a large plastic bag. These twigs came from just the few branches you see in photo [4].

don't have enough bark to look realistic, or have bark that falls off during heavy handling. Ground branches also tend have a weathered gray core instead of the more realistic buff-colored wood core of real pulpwood.

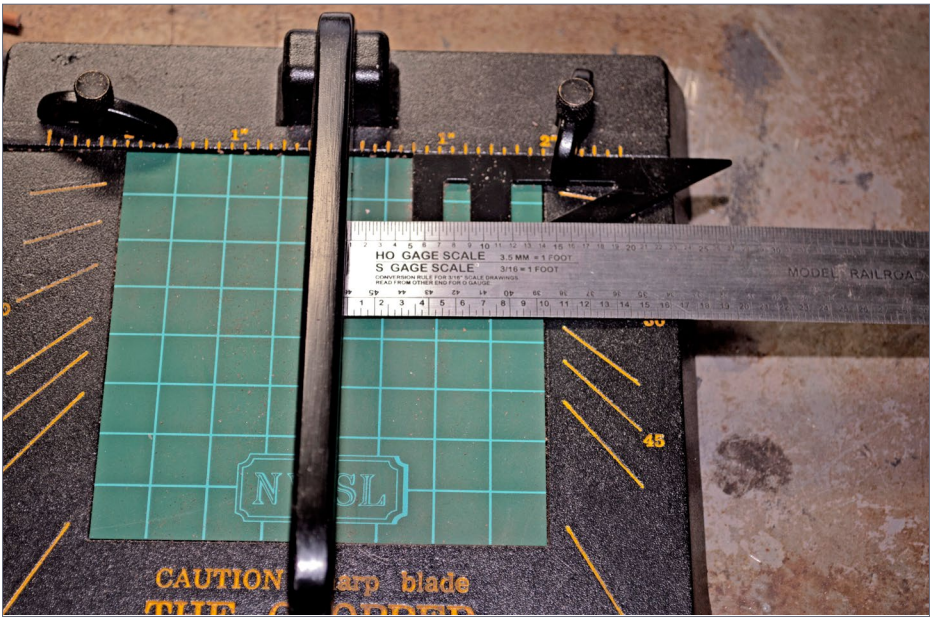
Real branches can vary tremendously in diameter along their length when HO scale is used as the measurement guide. Even so, one tree can provide a lot of useful twigs. The handful shown in [5] all came from the branches in [4]. Collect a lot of twigs, as there will be some waste. I often fill 1 or 2 one-gallon plastic bags with 4"-12" lengths of branches.

6. All you need to make the loads — logs, clear plastic wrap, glue, and tweezers (I use a curved version to avoid glue when dipping and placing logs). The cookie sheet catches the "crumbs" from the cutting process and is used to bake the twigs to kill any "critters" that may be living in the twigs.

No matter how careful you are harvesting them, you'll find that some twigs when cut will show a "heart wood" that looks right, and some twigs will crumble apart when you try to cut them. Some will be too large in diameter: all reasons to collect more than you think you may need.

Using a Northwest Short Line Chopper or Chopper II, set a stop five scale feet from the razor blade. Fortunately, NWSL provided the screw clamp to position the stop where you want it. With the stop, you can stick the twig under the razor blade until it hits, then cut it quickly to a standard length.

I put the Chopper on a cookie sheet to catch the debris from the cutting process. The cookie sheet doubles as an ideal work surface



7. Set a stop five scale feet from the blade to ensure proper length for the pulpwood "logs."

that is durable and catches all the debris from cutting, sorting, and gluing twigs [6].

Place, chop, slide the twig, and repeat as long as you can. The logs not good enough to be selected for a load can be used as scenery. Variation in log diameter is okay – it's common on the prototype.

I usually throw the "logs" onto the cookie sheet if I can do the next step right away, or I toss them in a plastic container that can be sealed with a lid for use later. After I cut enough "logs" to length, I either place them in a "critter tight" container or continue to the next step.

Fill a cookie sheet with a single layer of "logs" [9]. Then place the sheet with the pine logs in the oven at 200°F for an hour or two.

8. Sealable plastic container with a screw-on lid. It once held pretzels, but now it stores "logs" for the future.

This is a pleasant part of the process and another reason I like pine, because the baking brings out a wonderful scent.

Prepare these around Christmas time for the family to look most favorably on this aspect of the hobby. Make sure you don't use too high a temperature or leave them in the oven for too long as you can blacken your logs and waste the batch.

When they have been baked enough, take them out of the oven and let the logs and pan cool to the touch. You can either use them immediately or store them for later [10].

Now that you have a large pile of nicely dried and inert pulpwood logs, all you must do is turn them into a load.

9. Baking cut twigs will kill any "critters" and reduce the moisture content. Bake at 200°F for an hour or two – pine smells great! The pan can double as a work surface after it cools too.

Choose a model pulpwood rack flatcar and line the interior with clear cling wrap. This allows you to shape the load to the car but ensures that any glue will not keep the load from being removed for empties in, loads out (or vice versa) operations on your layout.

With the car lined, place a single layer of logs on the deck without glue [6]. Make sure that the logs are flat and tight against the car ends (there will be load shrinkage even after baking the logs). Some people suggest you drizzle glue on the first layer, then lay the second. I prefer to use tweezers to grab a log on one end, dip the log into a puddle of glue, then place the log in an appropriately sized location [11].

10. Once the cookie sheet has cooled, I use it as a work surface for building a load. Here I have some logs, plastic wrap, a pulpwood bulkhead flatcar, and some tweezers.

Use prototype photos to guide you as you model your loads. In some photos, you see a load with many small diameter logs; in another there may be a mix of large and small diameter logs – and

11. Place the plastic over the car to protect from glue. Lay the first layer of logs without glue.

12. Dip each log for the second and following layers so that the inside end and bottom get glue. A little glue goes a long way.

13. Once the glue has been applied, place the log on top of the previous layer. Try to fit large and small diameter logs into appropriate spaces as you go so the logs fit tightly. Choose the next log from your pile, dip, place, and repeat again to build the load to its full height.

14. Press with your fingers to keep the load face flat, but have it form a downward V in the center and a good fit against the bulkheads.

in yet another the large diameter logs will be on the bottom of the load and the smaller diameter at the top.

Remember to let the logs overhang the car side. Keep the load neat with the sides relatively flat, and make sure the V of the floor is visible in the top of the load to best match the prototype. Use your fingers to press in and down to make sure the load seats well and has a noticeable downward V dip in the center [14].

A load can be partially built to represent a car in the process of being loaded. A partial load may not be as solid and durable as a full load, but it would make a nice vignette at any rural team track or siding. Pulpwood loading happened all along rail lines.

15. This finished load will do justice to any 1950s era layout!

The loads you make will reflect the care taken in selecting the twigs, cutting them, and placing the scale "logs" on the car. A little care will result in an impressively detailed and realistic load [15]. ☑

Moving pulpwood by rail

On Southern Railway bulkhead flats loaded with pulpwood – you can see the inward slant of the wood toward the center of the car. Photo by U.S. Forest Service posted on Mississippi Rails website (www.msrailroads.com).

Until the 1980s, most pulp used to make paper came from "round wood" delivered to the paper mill and chipped on site. Round wood is an industry term and means short, unsplit logs, often from a softwood tree like spruce or pine, although hardwood trees could be used as pulpwood. The loads I make are based upon soft pulpwood in round wood form.

Early in the 20th century, round wood was carried in boxcars because the house car and manual labor were dominant on railroads. This did not allow for visually attractive open loads. But a boxcar carrying pulpwood is easy to model with the doors closed!

By the end of WWII, railroads created special flat cars, called pulp racks, that could carry these small logs in a safer manner than a regular flat car, and were easier to load and unload manually than a boxcar or gondola. During the 1950s and 1960s and even into the 1970s, the round wood form was transported by rail on these pulp racks or in gondolas. For some reason (my guess is due to mechanical loading), railroads in the north and Midwest more often used gondolas.

In this article, I focus on loads of short logs on pulp racks with V-shaped floors and a bulkhead end. These loads had two transverse rows of short logs with one end of the log at the middle of the car and one end just hanging over the edge of the car's sill.

Early pulpwood racks were converted from old freight cars – the Southern Railway converted old steel-underframe boxcars into pulp racks by cutting off the sides, cutting down the ends, and adding steel or wood supports to the remainder to contain the loads. The Norfolk & Western tried another option by recycling old light rail, bending it into a wide shallow U to contain the loads and adding other straight vertical rail at the ends to reinforce.

These conversions usually had a piece of steel running longitudinally down the center of the car deck to shove the first layer of pulpwood against (loaded from each side of the car separately). To keep the logs from sliding out, cars either had the rails or raised sides along the sill so that the end of the log in the middle of the car was lower than the end of the log hanging over the car's edge.

Moving pulpwood by rail *Continued ...*

Cars originally built as pulp racks, and some conversions, used a V shaped floor to create the angles of the logs. These angles kept the logs from slipping out (a common problem for trains carrying pulp racks) and were a unique visible trait for these loads.

Even with mechanical loaders replacing manual labor, proper loading of the logs was a subject of many training documents and movies. If the logs hung out too far, they could easily damage rail equipment on adjacent tracks, hit buildings near the tracks, or kill someone.

In addition, these loads could shift since they were only secured by the ends, sloped floors, and gravity. Any train with loaded pulp racks was limited to slow speeds. For safety and efficiency, pulpwood rack loads were relatively neat, and they give the model railroader one more excuse to slow down the train and increase the apparent travel time between stations on our compressed layouts.

Pulpwood logs were specified to be five feet long so they did not hang too far off the side. The diameter of logs could vary from a minimum of four inches to a maximum of 15 inches. Therefore, you often see loads with a relatively flat face created by identically long logs, but with the visual characteristic of various diameter logs.

There are photos with evenly sized log diameters, with larger diameter logs at the bottom, with larger diameter logs at the top, and some with mixed diameters top to bottom.

I think that southern loaders tended to rely upon manual labor and large diameter logs would not be easily lifted to the top of the load. In any case, variety is another key visual trait of a pulpwood load. ■

David Bott

The family's passion for trains and their Lionel set under the Christmas tree interested David in trains as a child. He built over 350 styrene models of armor and aircraft as a Revell Master Modeler, but railroads became his most persistent interest.

David has a small 4x8 HO scale layout and has been a regular member of clubs over the years. He started with the University of Illinois Urbana-Champaign Illini Railroad Club, became an emeritus member of the Connecticut Valley Model Railroad club, and is an active member of the Four County Society of Model Engineers (FCSME.org) in Maryland.

David's passion is the Southern Railway and especially its subsidiary, the Atlantic & Yadkin Railway in North Carolina. He has been researching these prototypes for 25 years (southern-railway.railfan.net/ay). His aspiration is to promote and model the A&Y in the way Jack Burgess has promoted and modeled the Yosemite Valley.

David's wife loves rail travel. He has put his scenery and model building skills to work helping his two daughters with school projects and a Diamond Derby race car. David also loves reading American history, science fiction, and the occasional murder mystery. ■

You're the kid.

Welcome to the candy store.

- 180,000 square feet of "candy"
- The world's best known manufacturers
- 44,000 square feet of modular layouts
- "Ask the Collectibles" appraiser
- Trains, accessories, collectibles & more
- Hands-on demonstrations

CLICK HERE FOR ALL THE DETAILS!

www.nationaltrainshow.org

August 10-12, 2018

Kansas City Convention Center
301 West 13th St.
Kansas City, MO

Sponsored by

nmra.org
We make it more fun!

THE NATIONAL TRAIN SHOW®

First LOOK column

Model Railroad Hobbyist | August 2018 | #102

RATE THIS ARTICLE

Jeff Shultz takes a closer look at cars in HO and N, both Rivet Counter and Operator levels ...

ScaleTrains.com has been shipping a lot of new rolling stock in its HO and N scale Rivet Counter and Operator lines out recently.

ScaleTrains.com provided *Model Railroad Hobbyist* magazine with a variety of these models, and I had the fun of photographing them. The detail available on modern models is simply amazing, and I decided to feature that here. Some of the photos are deliberately overexposed to show details.

Gunderson 5188 cu. ft. covered hopper:

The HO scale Rivet Counter Gunderson 5188 cu. ft. covered hopper is shown here in three versions – BNSF 485283 was built in 2007 in Mexico and has a Version 2 car body with 10 intermediate panels of varying widths, two horizontal stiffening ribs, and roping eyes mounted on the underside of the car bolster. BNSF 488549 was built in 2010 in Mexico and is a Version 3 car body with 10 intermediate panels of the same width and roping

▶ IN-DEPTH LOOK AT RECENT PRODUCT RELEASES

eyes mounted to the side sills of the car body. Both cars feature metal roof hatches and ATP 30 x 30 Gravity Outlets. Also included are photos of AOK 66639, which features 10 intermediate equal-width panels, roping eyes mounted on the underside of the car bolster, and fiberglass roof hatches.

BNSF 485283 ...

1. The B end of BNSF 485283, Version 2 car body, 10 intermediate varying width panels.

2. BNSF 485283, Detail view of B end side with ATP 30 X 30 Gravity Outlet.

3. The B end of BNSF 485283.

4. BNSF 485283, Detail view of B end with brake equipment details.

5. BNSF 485283, Detail view of metal roof hatches.

6. AOK 66639, Detail view of fiberglass roof hatches.

RATE THIS ARTICLE

7. AOK 66639, detail view of Miner AutoLok II Gravity Outlets and very small legible printing.

8. AOK 66639, detail view of B end with bolster mounted rope eye and road number printed on truck.

9. BNSF 488549, Version 3 body, equal-width intermediate panels, roping eyes mounted to the side sills of the car body.

10. BNSF 488549, A end side view.

11. BNSF 488549, Underside view.

12. BNSF 488549, Detail of top corner of B end.

RATE THIS ARTICLE

13. BNSF 488549, closeup of roof text on the corner of the B end. The text is smaller than I can measure.

14. BSNF488549, closeup of truck with road number and other printing. Wheelsets are also blackened and dished.

The Rivet Counter Gunderson 5188 cu. ft. covered hoppers include ASF Ride Control Trucks with raised foundry data and separate bearing caps, diecast metal semi-scale Type E lower shelf knuckle couplers, photo-etched stainless steel see-through roof walk with metal grab irons, and one of three styles of outlet gates: ATP 30 X 30 Gravity Outlets, Miner AutoLok II Gravity Outlets, Miner SaniLok Gravity/Pneumatic Outlets. There are metal or fiberglass roof hatches and colors are matched to Tru-Color Paint colors. The weight of the Rivet Counter Gunderson 5188 cu. ft. covered hoppers is 4.4 oz. The model has been released in AOK, BNSF, CMO/Building America, CSX, GAXC, Greenbrier/GBRX, Iowa Interstate, Kansas City Southern/Belle, KCS/gray, KCS/gray with red logo, and Union Pacific. Several road names are sold out at ScaleTrains.com but may be available at dealers.

The Operator brand also includes HO scale Gunderson 5188 cu. ft. covered hoppers, and our example is KCS 67461. Operator brand models have a lower level of detail and are better able to stand up to regular use in operations on a model railroad. They are also more economically priced, assisting the modeler in building up fleets of cars as needed.

15. KCS 67461 from overhead, showing off the metal-style roof hatches and plastic roof walk.

16. KCS 67461 side view, showing the single body style used for the Operator brand 5188 cu. ft. covered hoppers.

17. KCS 67461, view of B end with brake details and plastic end cage.

18. KCS 67461, view of A end.

The Operator brand Gunderson 5188 cu. ft. covered hopper includes molded end cages, one-piece ASF Motion Control trucks, metal roof hatches, ATP 30 X 30 outlets, basic brake hardware and simplified rigging, a molded trainline pipe, and semi-scale couplers. The model weighs 4.3 oz and is available in BNSF/Wedge, CMO/Building America, CSX, Kansas City Southern/Belle, KCS/Gray, Norfolk Southern, Norfolk Southern/Horsehead, and Union Pacific. A separate detail kit that includes metal grab irons, plastic grab irons, coupler cut levers, trainline hoses, air reservoir lines, a control valve line, and vertical brake linkages is also available.

Carbon black covered hoppers:

One of the less common car types that ScaleTrains.com has released recently is the carbon black covered hopper. Carbon black, a product of the incomplete combustion of heavy petroleum products, is used widely as a reinforcing filler in the rubber industry, with 70% of its production going to vehicle tires and most of the rest used in rubber belts, hoses, and other rubber goods.

ScaleTrains.com has released three different carbon black covered hoppers in both their HO and N scale Rivet Counter brand: a 4727 cu. ft. car produced in the 1990s and two different 5750 cu. ft. cars, one produced in the late 1970s and the other in the 1980s. All cars were built by Thrall.

The HO scale Rivet Counter Thrall 4727 cu. ft. carbon black covered hopper ...

19. DCBX 2065, ¾ side view, B end.

20. DCBX 2065, Close-up of B end & side.

21. DCBX 2065, closeup of brake piping, air tank, and discharge hatch.

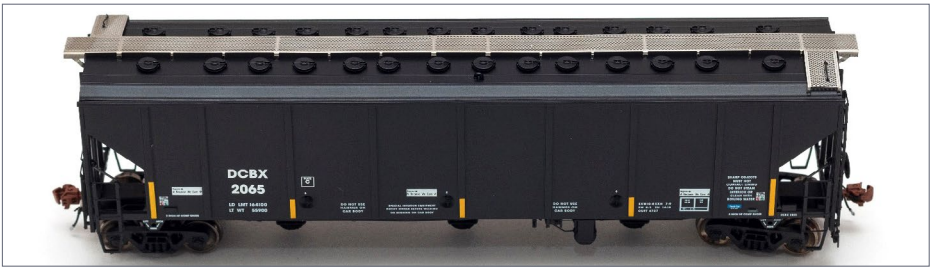
22. DCBX 2065, detail of B end, overexposed to show details.

23. DCBX 2065, A end detail.
24. DCBX 2065, undercarriage with brake piping and hopper.

24. DCBX 2065, undercarriage with brake piping and hopper base detail.

25. DCBX 2065, detail of hopper bin and COTS stencil.

26. DCBX 2065: Close-up detail of COTS stencil, text, and graphics on car side.



27. DCBX 2065, overhead view of roof walk and hatches.

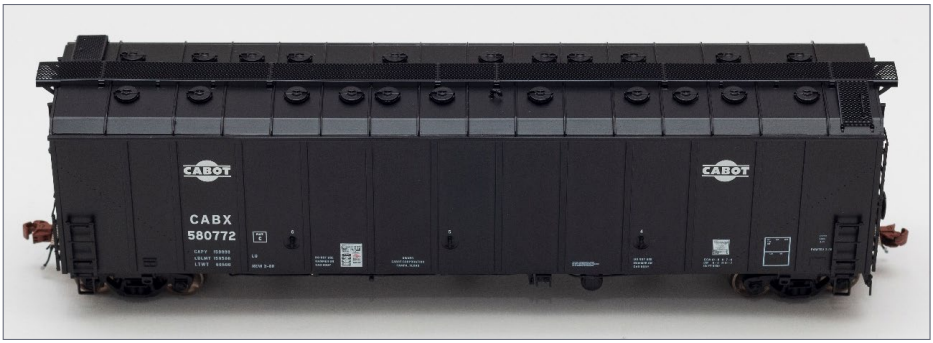
The HO Scale Rivet Counter 4727 cu. ft. covered hopper includes Barber S-2 70-ton trucks with rotating bearing caps, separate brake beams and side bearing detail, diecast Kadee compatible metal semi-scale Type E knuckle couplers, 22 or 28 roof hatches as appropriate for the prototype, and many other separately applied details. The model weighs 4.7 oz and comes decorated for Columbian Chemicals, Degusssa/DCBX, Carbons/ECQX, and Sid Richardson/SRCX.

The HO scale Rivet Counter Thrall 1980s 5750 cu. ft. carbon black covered hopper:

28. CABX 580772, ¾ B side view.

29. CABX 580772, Hopper and brake piping details.

30. CABX 580772, Full underside.

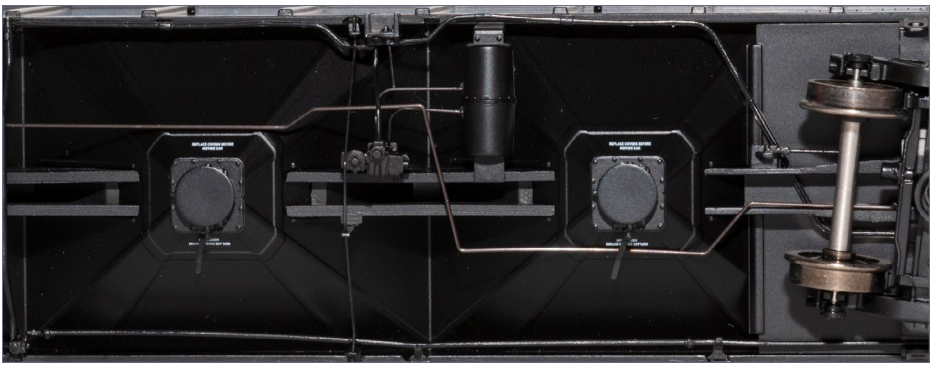


31. CABX 580772, top view.

32. CABX 580772, A end detail.

33. CABX 580772, B end detail.

34. CABX 580772, closeup of technical details.



35. CABX 580772, closeup of brake and underframe details.

The Rivet Counter HO scale 5750 cu. ft. co The Rivet Counter HO scale 5750 cu. ft. covered hopper comes with ASF Gould cast 70-ton Ride Control Trucks with raised foundry data, rotating bearing caps, separate brake beams, and side bearing detail, 22 or 28 hatches as appropriate, and many separately applied details. The model weighs 4.7 oz and is available decorated for Cabot/CABX, Columbian Chemicals/CCX, and GACX. At the writing of this article, JM Huber/JHMX is sold out at ScaleTrains.com but may be available at dealers.

The 1990s era Thrall 4727 cu. ft. and 70s era Thrall 5750 cu. ft. carbon black covered hoppers are also available in N scale.

VIEW READER COMMENTS
click here

N scale Thrall 4727 cu. ft. carbon black covered hopper:

36. DCBX 2065 – N scale Thrall 4727 cu. ft. carbon black hopper.

37. DCBX 2065 – N scale Thrall 4727 cu. ft. carbon black covered hopper, A end detail.

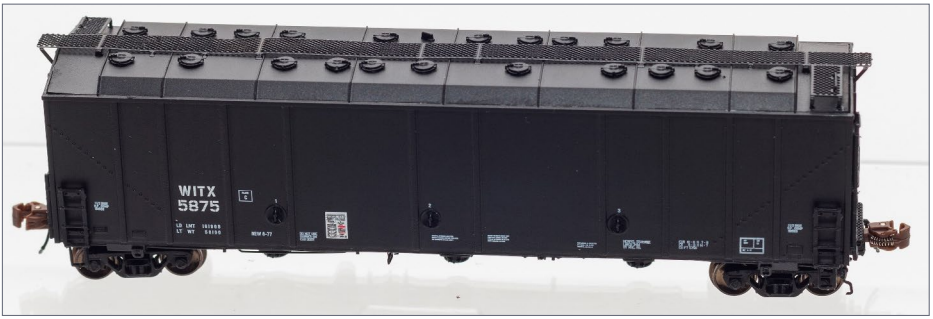
38. DCBX 2065 N scale Thrall 4727 cu. ft. carbon black covered hopper, B end detail.

The N scale Rivet Counter Thrall 4727 cu. ft. carbon black covered hopper is equipped with Barber S-2 70-ton trucks with raised foundry detail, semi-scale plastic Type E knuckle couplers, separately applied end ladders, and photo etched stainless steel roof walks and end platforms.

The car weighs 1.1 oz and is available decorated for Orion/ECQX, Degussa/DCBX, and Columbian Chemicals/CCX. As of this writing, Sid Richardson/SRCX is sold out at ScaleTrains.com but may be available at dealers.

Late 1970s N scale Thrall 5750 cu. ft. carbon black covered hopper:

39. WITX 5875, N scale 5750 cu. ft. carbon black covered hopper.

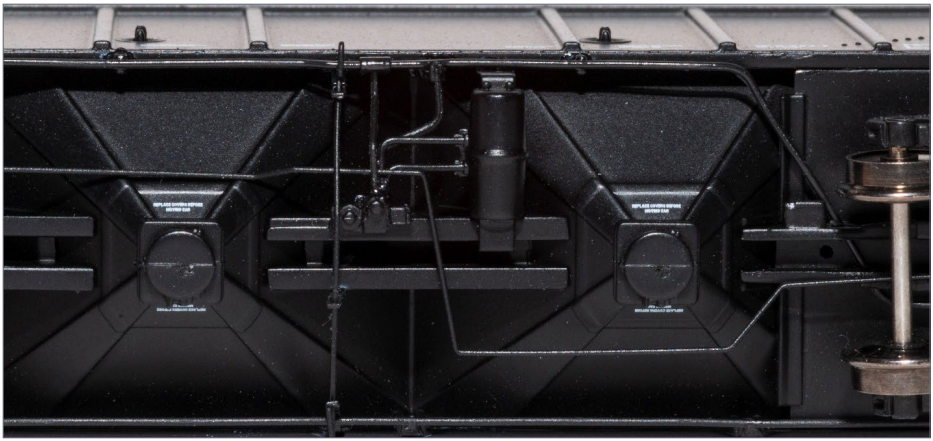


40. WITX 5875, N scale 5750 cu. ft. carbon black covered hopper, top view.

41. WITX 5875, N scale 5750 cu. ft. B end detail.

42. WITX 5875, N scale 5750 cu. ft. printing detail.

43. WITX 5875, N scale 5750 cu. ft. brake equipment, piping, lettering, and underbody detail.



44. WITX 5875, N scale 5750 cu. ft. underbody detail.

45. WITX 5875, N scale 5750 cu. ft. Printing on lower edge of hopper bin.

The N scale Rivet Counter Thrall 5750 cu. ft. carbon black covered hopper features ASF Gould cast 70-ton Ride Control trucks with raised foundry data, photo-etched stainless steel running boards and end platforms, and many other separately applied details. The model weighs 1.2 oz and is available decorated for Sid Richardson/SRCX, Cabot/CABX, Columbian Chemicals/CCX, and Witco/WITX.

UP Rivet Counter HO water and fuel tenders

ScaleTrains.com modeled the fuel tenders for its GE gas turbine models. Because UP kept them for other uses and then eventually reassigned two of them to the steam program, ScaleTrains.com has modeled them in several of the paint schemes, details, and numbers they've held over the years. They are available in both HO and N scale, and the HO scale Steam Excursion Pre-2006 Water Tender Set is seen here:

46. UP water cars 907857 and 907856 as they were between the 1980s and 2003, when they were renumbered.

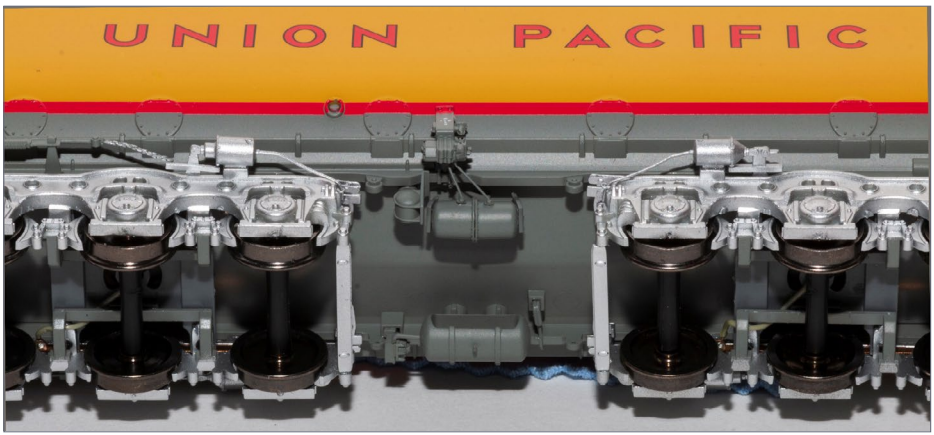
47. UP water cars, B end ¾ view.

48. UP water cars. Top view of A end.

49. UP water cars. B end view. The light on each end is an LED.

50. UP water car 907856, detail view of the B end.

51. UP water car 907857, B end detail view.



52. UP water car, underside detail.

53. UP water car 907856, A end detail view.

54. UP water cars with lights on.

The Rivet Counter UP water cars come with directional front and rear LED lighting, a two-function DCC decoder, Commonwealth 3-axle trucks with SKF bearings, diecast metal semi-scale Type E knuckle couplers, brake beams, and many factory-applied details.

The models weigh 5.5 oz each and come in several versions, including the pre-2006 water tender set seen here, a post-2006 water tender set, a 23C fuel tender, a 24C fuel tender, and water tender #907853 in black. Several of these versions are sold out at ScaleTrains.com but may be available from dealers. ☑

38TH NATIONAL NARROW GAUGE CONVENTION

2018 TWIN CITIES

Minneapolis/St. Paul, Minnesota
Sept. 5th – 8th, 2018

Convention Features

100 Clinics by 50 Clinicians

50 Selected Layouts
- 30 Home Layouts (10 Narrow Gauge)
- 6 Garden Layouts
- 5 Club Layouts
- 8 Modular Layouts at Convention Site
- Operating Sessions

Model & Photography Contests

Vendor Show
- Over 75 Manufacturers & Vendors

Optional Rail Activities
- Private Steam Charter – Historic Consist
- St. Croix Live Steamers
- Two Excellent Railroad Museums

Non-Rail Activities
- Mall of America
- World-Class Arboretum
- Sport Fishing Close to Hotel
- Major League Sports

Convention Registration

Registration $99 ($125 after June 1, 2018).

No refunds after August 1, 2018.

Registration forms for attendees & vendors on website: www.nngc-2018.com

USPS: NNGC Registration
18015 33rd Place N
Plymouth, MN 55447

Convention Hotel

Hotel & Convention Center are in the same building

DoubleTree by Hilton Bloomington – Minneapolis South

7800 Normandale Blvd., Bloomington, MN 55439

$129 per night, group rate. To make reservations call 1-866-271-8967 and reference the "Narrow Gauge Convention."

FREE Parking & WIFI ★ FREE Shuttle – 10 minutes to MSP Airport, Mall of America, & Light Rail Station. Restaurants & fast food locations adjacent to hotel.

For all the details, see our website at: **www.nngc-2018.com**

AUGUST NEWS column

Model Railroad Hobbyist | August 2018 | #102

RATE THIS ARTICLE

Richard Bale and
Jeff Shultz report the latest hobby industry news

Boone Morrison 1941-2018

Boone M. Morrison passed away April 8, 2018 at his home in Volcano City, HI. He was 77 years old. A native of California, Boone graduated from Stanford University in 1963. He was active in architecture with his own practice for nearly 40 years. He was an accomplished photographer having studied under Ansel Adams. Boone was instrumental in creating two respected galleries in Hawaii: the Foundry in Honolulu and the Volcano Art Center at Hawaii Volcanoes National Park. Boone Morrison was an accomplished modeler. He was widely known amongst narrow gauge hobbyists who followed his numerous projects in the *Narrow Gauge & Short Line Gazette*. Boone's published articles on modeling clearly reflected his architectural training and expertise as a fine arts photographer. Boone was named for his great great grandfather, Daniel Boone. Boone Morrison is survived by his wife Tamara Wong-Morrison; a son, Tyler Boone Morrison; and a daughter, Janna Jesse Morrison.

THE LATEST MODEL RAILROAD PRODUCTS, NEWS & EVENTS

Lee Snover 1937–2018

Layton H. Snover Sr., passed away on June 21, 2018. He was 81. Lee owned and managed Layton's Self Storage in Belvidere, NJ. From that facility he operated LeeTown Model Service which he established in 1969 with his partner, Dr. Darryl Townsend. The focus of the enterprise was on building and servicing narrow gauge equipment, geared locomotives, and installing Micro-motor transmissions. The company became well-known for the On3 Climax locomotive it developed as well as its role in supplying parts and kits for Maine On2 modelling. Lee was a master craftsman who built numerous museum-quality brass locomotives. He was a charter member of the Mid-Atlantic Narrow Gauge Group, which was established more than 50 years ago. Lee was a former Belvidere councilman and served his country in the U.S. Army during the Vietnam War. Lee Snover is survived by Judy Swasing Snover, his wife of 56 years.

Atlas expands N scale line

Atlas Model Railroad Company has agreed to purchase all N scale locomotive and rolling stock tooling owned by Walthers, including former Life-Like tooling. Tom Haedrich, executive chairman at Atlas said, "We are committed to produce these N scale items with the latest technology, prototypical accuracy, and high quality you've come to expect from Atlas." Last year Walthers sold its tooling for N scale lightweight passenger cars to RailSmith Models. Phil Walthers, president of Wm. K. Walthers Co., said his firm will continue to offer N scale items in its Cornerstone, SceneMaster, and Walthers Controls brands.

The Leadville Shops acquires Grandt Line, San Juan Car and more

Grandt Line Products, San Juan Car Co, San Juan Decals, and American Limited Models have all been purchased by Doug Junda and Bob Stears of Lakewood, CO. The newly acquired firms will be blended into a single business operating under the name **San Juan Model Company.** Junda and Stears, co-owners of The Leadville Shops, a specialty supplier of narrow gauge models and supplies, are both experienced business operators as well as long-time narrow gauge historians and model builders. A completion date for blending the various brands and product lines has not been announced but moving and setting up SJCC and Grandt Line tooling and injection molding equipment is expected to take some time to complete. The extensive line of screen-printed water slide decals formerly produced by San Juan Decals will be combined with decals currently available from The Leadville Shops. Custom decal service will be offered. American Limited Models will continue to offer imported RTR models in HO and other scales. For additional details visit theleadvilleshops.com.

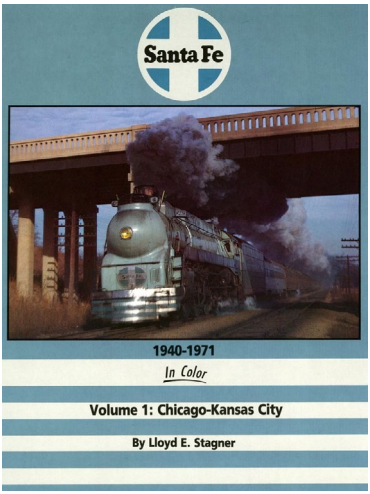
NEW CLUB CARS

The Western Maryland Railway Historical Society is selling a custom Kadee HO scale 50-foot PS-1 boxcar equipped with a cushion underframe and

a 10-foot Pullman Standard sliding door. For ordering information visit westernmarylandrhs.com/shoppingcart/product_info.php?cPath=40_41&products_id=125.

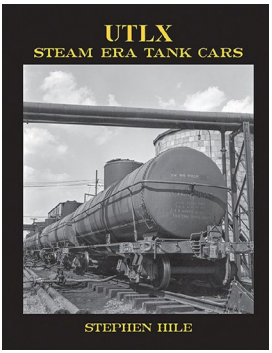
MULTI-SCALE PRODUCT NEWS

Model Railroad Control Systems has announced a Wi-Fi/Ethernet Fast Clock System. The Fast Clock supports wireless digital and analog clocks, as well as browser-based displays through its gateway system. The system comes preconfigured and connects to the railroad through an ethernet cable. Time ratios of 1:1 through 1:8 are supported. For more information see modelrailroadcontrolsystems.com.



Morning Sun Publishing is selling a digital reprint of *Santa Fe 1940-1971, In Color, Volume 1: Chicago – Kansas City.* Originally published in 1992, this is the first in a four-volume series of vintage AT&SF color photographs. Another digital reprint recently released is *New York, Susquehanna and Western In Color.* Coverage begins in 1940 and features the Suzy-Q of yesteryear - motorcars, RS1's, RDC's, and commuter trains as

well as several chapters on the more modern era. For additional information contact a dealer or visit morningsunbooks.com.



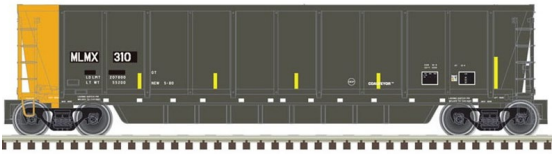
Speedwitch Media has released *UTLX Steam Era Tank Cars,* a definitive profile of the largest tank car fleet of the steam period. Author Stephen Hile profiles the UTLX fleet from the designs of the turn of the century, including the groundbreaking V and X cars of the '00s, to the insulated and pressurized welded cars of the early 1950s. The book includes over 250 photos, 11 full drawings, numerous detail drawings, and 11 tables of data.

This book is a must for serious modelers, researchers, and historians. Visit speedwitchmedia.com for additional information including ordering instructions.

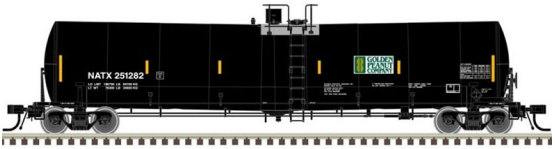
Woodland Scenics has introduced the Rustic Water Tower in O, HO, and N scales. Part of the Built-&-Ready Building line, it is equipped with LED lighting set up for use with the Just Plug Lighting System. See your dealer or woodlandscenics.com for more information.

O SCALE PRODUCT NEWS

Atlas O has released details of several new products that are scheduled for release to dealers during the first quarter of 2019.



Heading the list is a group of ACF Coalveyor Bathtub Gondolas. The ready-to-run models will have 100-ton roller bearing trucks and removable coal loads. Road names will be Albert Brothers, The Andersons, Appalachian Railcar Service, Joseph Transportation, MLMX-Metal Management, RMG Leasing, and Wilmot Transportation.



Also due from Atlas O early next year are Trinity 25,500 gallon insulated general-purpose tank cars. The ready-to-run model features prototypical jacket seams and see-through walkway and platform grating. Road names will be ADM, CHS, BRCX-Union Tank Car, Cargill, General American, NATX-Golden Peanut Co., TILX-Lake Erie Biofuels, and Trinity Industries.

A ready-to-run Trainman series 40-foot stock car is also scheduled for release early in 2018. Road names on the O scale model will be Chicago, Burlington & Quincy; Texas & Pacific, Union Pacific, Chicago & North Western, Missouri-Kansas-Texas, Canadian Pacific, Great Northern, and both brown and yellow paint schemes on Union Pacific cars. All Atlas O models are available for either 3-rail or 2-rail operation.

Atlas O has re-engineered its 24-inch turntable with a more powerful motor, a flat cogged anti-slip drive belt, additional roller bearings to support heavy locomotives, and improved electrical

contacts on the rotating bridge track. The tabletop turntable is suitable for both 3-rail and 2-rail operation. Availability has been scheduled for the first quarter of 2019. For additional information on Atlas O products contact a dealer or visit atlaso.com.

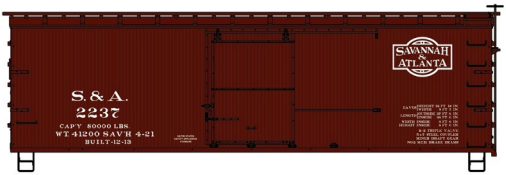
Motrak Models is now selling several different designs of O scale shakes and shingles, including octagon shakes, laser cut random width shakes, random width and length shakes, and diamond cut in shingles in slate color. All but the octagon shakes cover approximately 64 square inches; the octagon shakes cover 25.5 square inches. For more information, see your dealer or motrakmodelsusa.com.

The latest O scale detail item from **Rusty Rails** is a corner workbench. The model features a variety of items stored under the top shelf.

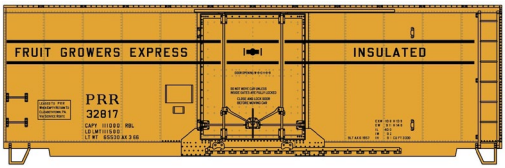
The resin castings come unpainted and some minor assembly is required. Visit rustyrails.com for ordering information.

HO SCALE PRODUCT NEWS

Accurail has released several new HO scale kits including one for this Fowler 36-foot Chicago Great Western single-sheathed wood boxcar. The model is based on a prototype built in 1914.

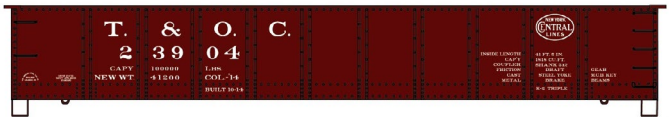


Also new from Accurail is a kit for this Savannah & Atlanta 36-foot double-sheathed wood boxcar with a steel fishbelly underframe. The HO model is based on a 1913 prototype built with steel ends, a steel roof, and a sliding National wood door.



The Accurail kit for this 40-foot insulated boxcar with a plug door is based on a FGE prototype built for the Pennsylvania Railroad in 1967.

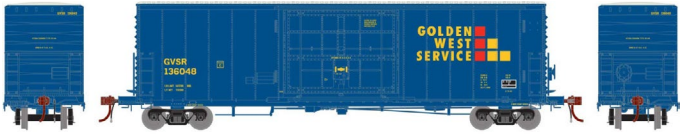
Accurail has introduced an economically priced 3-pack of HO kits for Pullman Standard 4750 covered hopper cars decorated for Terra Chemicals, Portland Gin, and Honeymead.



This 41-foot Toledo & Ohio Central gondola represents a steel workhorse built in 1914. The HO scale model is available individually and in a 3-pack with different road numbers. All Accurail kits include appropriate trucks and Accumate knuckle couplers. For additional information contact a dealer or visit accurail.com.

Athearn has announced its production schedule for May 2019. Heading the list is a new run of EMD GP50 diesel locomotives. The Genesis HO scale model will be equipped with LED lighting and rubber MU hoses. In addition to the BNSF Phase 2 unit shown, the GP50 will be available in a Phase 1 configuration decorated for Union Pacific, Indiana & Ohio, Toledo, Peoria & Western; and Illinois Central (ex CNW rebuilt as a GP40-3).

Also planned for release next May is a Genesis EMD SD75I/SD70M diesel locomotive. Road names for the HO scale SD75I will be Ontario Northland and Canadian National. The SD70M version will be available decorated as an EMD Demonstrator and as Union Pacific #3971, 3972, and 3973. Although UP owns more than 1000 SD70Ms, these three numbers are unique in that they are the only units that have Phase II cabs and the earlier flared two-panel radiators.



A Genesis PC&F 50-foot smooth side boxcar with 14-foot plug doors will be available in May with new road numbers and paint schemes. Features on the HO scale model include a detailed full-cushion underframe, separately applied door closure rods, side ladders, metal grab irons, etched metal end platforms, and 70-ton roller bearing trucks with rotating bearing caps. Road names will be North Shore Railroad, Union Pacific (ex-SP), Southern Pacific, Cotton Belt, and Golden West Service. Two additional cars, SSW and Cotton Belt ex-GWS, will be decorated in Athearn's Primed for Grime paint.

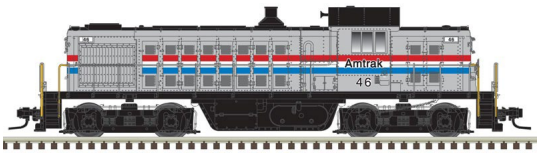
HO scale Ready-to-Roll models coming from Athearn next May include this FMC 50-foot 5347 cu. ft. steel boxcar. It is equipped with a single sliding door. Models decorated in conventional paint will be available for Toledo, Peoria & Western; Railbox, CSX, and CAI-Saratoga & North Creek. Primed for Grime paint schemes will be available for Green Mountain Railroad, Hartford & Slocomb (ex-CSX), and Union Pacific (ex-BKTY).

This 50-foot single-sheathed wood boxcar with double Youngstown sliding doors and an end door for loading

automobiles is also coming next May. Road names for the Ready-to-Roll HO scale model will be CB&Q, Missouri Pacific, Northern Pacific, and Texas & Pacific. A Santa Fe car with standard Dreadnaught ends is included in this production run.

Intermodal equipment on Athearn's May 2019 production schedule includes a group of Jindo 53-foot containers. They will be sold in three-packs with each container having a different number. Decorating schemes include Canadian Tire, DRT, White Arrow, and United Parcel Service. Containers in Primed for Grime paint will be available for COFC Logistics, CSX, EMP, and UMAX.

Roundhouse Brand models in Athearn's May 2019 production schedule include a bay-window caboose decorated for Western Pacific (three versions), Georgia Railroad (Bicentennial scheme), Southern Pacific (three schemes), Erie Lackawanna (two schemes), Conrail, and Southern Railway. The fully assembled model features clear window glazing and new Barber-Bettendorf swing-motion caboose trucks with machined metal wheelsets. For additional information on Athearn and Roundhouse products contact a dealer or visit athearn.com.



Atlas plans a new release of its Master Series Alco RS-1 diesel locomotive during the

first quarter of 2019. The HO scale ready-to-run model features a new diecast metal chassis, retooled fine scale handrails, and golden-white LED lighting. Road names will be Amtrak, Green Mountain, Long Island Railroad, Morristown & Erie, Pennsylvania, Santa Fe, Susquehanna, and Milwaukee Road. An undecorated version will come with both solid and roller bearing truck side-frames. A DCC version of the RS-1 will come with a LokSound decoder. A DC-only model will have an NMRA standard 8-pin plug for application of an aftermarket DCC decoder.

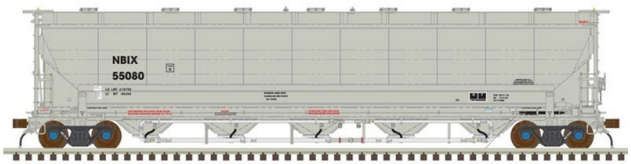
Also set for release to dealers early next year is an Atlas Master series General Electric Dash 8-40C locomotive. The HO scale version of the six-axle diesel will be available decorated for CREX, Lancaster & Chester, Pan Am, Kansas City Southern, and Chicago & North Western.

A Dash 8-40CW version of General Electric's big 4,000 hp locomotive will be included in Atlas's 2019 first quarter release. The locomotive has the normal wide nosed cab but GE dropped the corners of the nose on the CW version so the engine crew could see a person standing on the steps. The Dash 8-40CW will be available decorated for Union Pacific, Canadian National, Norfolk Southern, and Conrail. A unit decorated for CSX will come with Monon, ACL, and Chessie Heritage decals. Atlas will release Gold series (DCC with ESU Sound) and Silver series

(DC, DCC-ready) versions of both the Dash 8-40C and Dash 8-40CW locomotives.

Atlas's HO scale ACF Coalveyor Bathtub gondolas come with 100-ton roller bearing trucks and removable coal loads. Road names on the ready-to-run model scheduled for release early next year will be Albert Brothers, The Andersons, Appalachian Railcar Service, Joseph Transportation, Metal Management, RMG Leasing, and Wilmot Transportation.

The pressure differential (PD) covered hopper was introduced in 1999 by Thrall Industries. Production continues today under Trinity which acquired Thrall in 2001. The Atlas HO scale ready-to-run model of this big 5660 cu. ft. PD car features five discharge bays.



Road names in the 2019 first quarter release will be CEFX, Union Rail, General American, NBIX, Norfolk Southern, and TCMX.

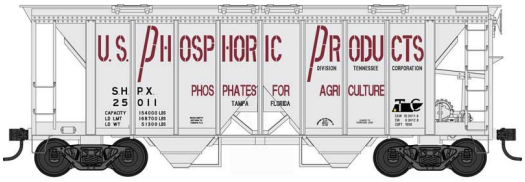
Atlas's 2019 first quarter release includes a Trinity 25,500 gallon general-purpose insulated tank car. The ready-to-run model

features prototypical jacket seams and see-through grating on the walkway and platform. Road names will be ADM, CHS, BRCX-Union Tank Car, Cargill, General American, NATX-Golden Peanut Co., TILX-Lake Erie Biofuels, and Trinity Industries.

This Trainman series ACF 50-foot 6-inch boxcar is included in Atlas's 2019 first quarter release. The HO scale model is based on an ACF prototype built in 1997. The ready-to-run car will be available decorated for Missouri Pacific, Green Bay & Western, Ontario Northland, Santa Fe, and Apalachicola Northern. The Railbox version will be available in a faded and patched paint scheme. For additional information on Atlas products contact a dealer or visit atlasrr.com.

Bachmann Trains has released its ACS-64 electric locomotive with WOWSound. The proprietary sound package provides the HO scale DCC-equipped model with horn, bell, cooling fan/power inverter, pantograph extension and retraction, coupler close/release, brake release and application, momentum, crew alert, departing and arriving station announcements, and grade crossing quill. The ready-to-run model is available decorated for Amtrak (#607 and #619, above), Amtrak (#642 Salutes

Our Veterans), Amtrak (Flag demo), and SEPTA #901. For additional information contact a dealer or visit bachmanntrains.com.



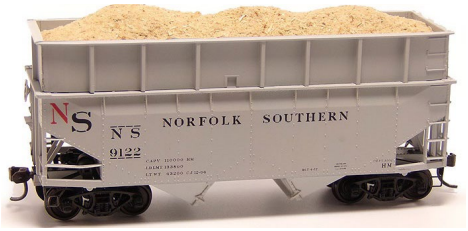
Bowser is booking advance orders for a 2019 spring release of 70-ton twin-bay covered hopper cars. The HO scale ready-to-run model features numerous separately applied details including the underframe, air tank, brake cylinder, triple valve, brake wheel, and knuckle couplers. The model rides on appropriate trucks with metal wheelsets.

Road names will be Detroit, Toledo & Ironton; CB&Q, Cedar Heights Clay, Central Soya, Delaware & Hudson, Erie Lackawanna, Grand Trunk Western, Great Northern, Haliburton, International Minerals, Mathieson, Shippers Car Line, Southern Railway, Union Carbide Linde, US Phosphoric Products, and XTRA Western Pacesetter. For additional information contact a dealer or visit bowser-trains.com.

Broadway Limited has released an HO scale version of a basic 2-8-0 Consolidation steam locomotive. The workhorse 2-8-0 was the most successful

wheel arrangement with more than 20,000 in use on American railroads. Broadway Limited's HO scale interpretation of the Consolidation features Paragon3 sound and operating system that functions in both DC and DCC environments. Road names include Chicago, Burlington & Quincy; Chesapeake & Ohio, Great Northern, MEC, Southern Pacific, Union Pacific, and Western Maryland. For additional information contact a dealer or visit broadway-limited.com.

East Coast Railroads is selling a kit for a Durham & Southern 14-panel, 70-ton, triple-bay hopper car. The HO scale model is based on a prototype built in 1959. The kit includes knuckle couplers and appropriate trucks with metal wheelsets.



Also new from East Coast Railroads is a kit for a Norfolk Southern 9100 series twin-bay wood chip hopper. The HO scale model is based on a custom Accurail kit with a chip extension. The extension, as well as wood chip loads, are available separately. For more information visit eastcoastrail-roads.com.

Fos Scale Models has introduced a complex craftsman style HO kit that builds into The Terminal, a compact assembly of loosely related businesses. In addition to the large multi-story corner building, it includes an early livery stable and a defunct trolley car barn that has been transformed into a three-bay bus

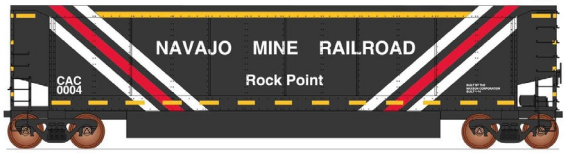
terminal. A shoe business, small auto repair shop, tavern, and meat market are all worked into the complex. The Canal Street Market building is an optional add-on purchase. This is a limited edition kit scheduled for release in September. Only 200 kits will be produced.

Fos kits available now include this small industrial structure called Burton Tool. The HO scale kit includes laser-cut scribed and clapboard walls, plastic windows and door, a large laser-cut door, rolled and corrugated roofing material, and metal detail parts. Printed instructions and color signs are included. The assembled model has a footprint of 2.75 x 4.5-inches. This is a good entry-level model for hobbyists wanting to tackle a craftsman-style kit. For more information visit fosscalemodels.com.

InterMountain Railway is accepting reservations for a rerun of Santa Fe stock cars. The HO scale model will be available as-built (above with a horizontal brake wheel

mounted on a vertical shaft), and in their 1938-1943 variant with a choice of K or AB brake systems.

Each version will be available as either a single deck or two-level car (above). A single-deck post-1960 car will also be available. The ready-to-run injection molded styrene model will have wire grab irons, metal wheelsets and knuckle couplers.



The Navajo Mine Railroad is a 13.8 mile short line that is not connected to the national railroad network. It operates from the Navajo coal mine to the Four Corners Generating Plant west of Farmington, NM. InterMountain is taking reservations for the Aeroflow II gondolas decorated for the unique Navajo Mine Railroad. The models will be offered in three six-packs for a total of 18 road numbers. For additional information contact a dealer or visit intermountain-railway.com.

The SEPTA Store is selling a limited edition of Kawasaki single-end light rail vehicle car #9111 that commemorates 125 years of trolley service in Philadelphia. The HO scale non-powered styrene model was produced for SEPTA by Imperial Hobby Productions. For additional information visit shop.septa.org/catalog/model-vehicles/septa-kawasaki-single-end-lrv-car.

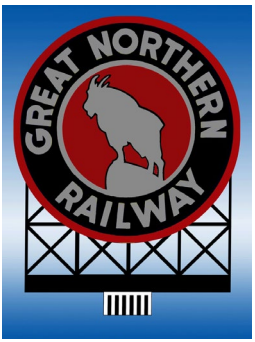
Kadee's October production schedule includes a pair of PS-2 twin-bay covered hopper cars decorated as Southern Pacific numbers 401168 and 401253. The models are based on cars built by Pullman-Standard in 1957. The ready-to-run cars feature Kadee knuckle couplers and two-piece self-centering trucks.

Kadee has introduced the design of its 2018 Christmas car. The HO scale collectible model is based on a 50-foot PS-1 boxcar with a Superior five-panel sliding door. Reservations are being taken now with delivery planned for late October. For additional information contact a dealer or visit kadee.com.

KatoUSA has expanded its selection of HO scale General Electric P42 Genesis locomotives.

Phase Vb versions numbered 91 and 150 are available now for standard DC operation or with factory installed ESU LokSound DCC. The drive system uses a pair of Kato's coreless truck-mounted motors. A three-way switch disguised as a GPS dome provides manual selection of three different lighting patterns: 1] all lights on, 2] front lights only and, 3] all lights off. The control system is particularly useful when running a consist of multiple units. For more information contact a dealer or visit katousa.com.

Miller Engineering has introduced electric rooftop signs for Illinois Central and the Great Northern Railway. The GN sign



is available in two sizes: 4.4 x 4.3-inches and 2.2 x 2.15-inches. Dimension for the two Illinois Central signs are 1.8 x 2.2-inches and 3.7 x 4.25-inches. All of the signs feature four-step sequential illumination. To see the signs in operation visit www.microstru.com/Coming-soon.html.

Motrak Models has announced the Applewood General Store and Depot, a two-building kit that is limited to a run of 150. The general store is two stories with large windows and a restaurant in one end. The depot is a small building suitable for placement next to the railroad track. A double wall kit, no bracing is required. The kit is assembled of laser-cut aged clapboard, laser-cut inner walls, laser-cut windows and doors; Tichy windows and doors; signage, and resin and metal detail parts. The basic kit includes standing seam metal roofing for the store, tar paper for the restaurant, and slate color 3-tab shingles for the depot. For more information see motrakmodelsusa.com.

Oxford Diecast has reissued HO scale models of two popular American automobiles. They include this 1955 Buick Century

hardtop convertible. The four-hole Buick is painted white over coral and has wide whitewall tires.

Also new is a 1961 Chevrolet Impala white convertible with a red interior and narrow whitewall tires. Oxford HO scale vehicles are diecast metal with rubber tires and clear window glazing. Contact a dealer for additional information.

Rapido Trains has announced several new models in HO scale, including the Alco RS-11 and its Canadian cousin, the MLW RS-18. Introduced in 1956, the 1,800hp RS-11 is a 4-axle locomotive powered by a turbocharged 251B prime mover. Rapido performed 3D scanning of an RS-11 at the Depew, Lancaster and Western RR, with additional research done on New Haven 1402 at the Danbury Railway Museum. The RS-11 will feature road-specific details such as SP lighting packages, N&W filters and battery boxes, New Haven whistles and cab signals, and PRR Trainphone antennas. Models will be produced with and without dynamic brakes and with different air filters as appropriate.

The first run of the RS-11 is planned to include the Alco Demonstrator, Conrail (ex-NH), Conrail (ex-PRR), Lehigh Valley, New Haven, Norfolk & Western, Penn Central, Pennsylvania (above), SP (Black Widow), SP (Bloody Nose), and Undecorated. All models in the first release will have a high short hood.

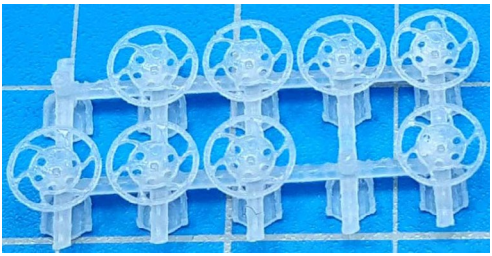
The MLW RS-18 model will be equipped with Dofasco Type B trucks or lightweight trucks as well as two frame widths, the narrow frame with outside mounted stanchions and the wide frame with stanchions mounted on the top of the walkway. The first run will consist of CN 3100-series locomotives with pass-through steam lines, CN 3150 Tempo units with HEP (see below), CN 3150 units without HEP, CN 3800 series, and CP 8700 series locomotives. The list of detail features for both the RS-11 and RS-18 is extensive, including class lights, cab control stand lights, full underbody piping, and many other details. Both the RS-11 and RS-18 will come in DC (21-pin DCC ready) and ESU LokSound sound decoder equipped versions.

Additionally, Rapido Trains has released photos of the first test samples for their new HO scale Tempo train cars. Shown from the top are a club car, café-bar lounge car, and a coach. The final models are expected to incorporate Rapido's usual commitment to detail. The Tempo was a unique Canadian National passenger train that began operations in the late 1960s between Toronto, Windsor, Sarnia and Chicago. The prototype coaches were built by Hawker-Siddeley and were the first aluminum head end power (HEP) equipped passenger cars in the national fleet. The majority of these cars still run today and are once again under the ownership of CN after operating for different carriers in recent years, including service on the Rio Grande Ski Trains.

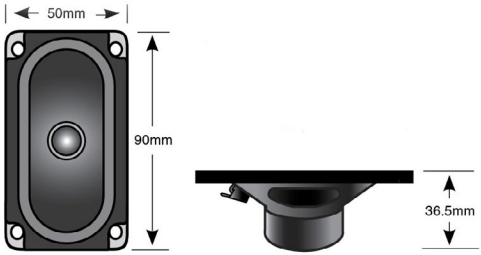
To lead the Tempo train, Rapido is preparing a special version of the RS-18. The above photo shows the first test casting with some temporary 3D printed parts. Known as the CN 3150 Tempo units and including the HEP used on the Tempo trains, they will only be available in the Tempo box sets. For additional information contact a dealer or visit rapidotrains.com.

ACF Industries photo from Hawkins-Wider-Long collection

Resin Car Works has added three more versions of the AC&F 8,000-gallon Type 27 insulated tank car to its selection of HO scale craftsman-style resin kits. The new kits represent cars built in the mid-1930s with 22-inch domes. Kits are available for SHPX-Shippers Car Line Corp., SHPX-Paluxy Asphalt Co., and SHPX-Wecoline Products. RCW kits include decals and a pair of Tahoe Model Works truck side frames.



Resin Car Works has also released Equipco brake wheel parts. 3D printed in Fine Ultimate Detail (FUD) material from Shapeways, they consist of the gearboxes and separate brake wheels. For additional information visit resincarworks.com.



SoundTraxx has introduced a new 50 x 90 mm oval speaker that has a depth of just 36.5 mm. The 8 ohm speaker can handle up to 5 watts of peak power and has an effective frequency range of 230 to 20k Hz. For additional information contact an authorized dealer or visit soundtraxx.com.

Tangent Scale Models has released another run of its General Steel Industries 60-foot bulkhead flatcars. The HO scale ready-to-run model faithfully replicates a prototype GSI introduced in 1964. Initially GSI supplied both complete cars as well as cast steel flat car bodies to its customers. Railroads that purchased only the bodies then equipped their cars with a variety of components to support specialized hauling needs. Road names on the new Tangent release include Great Northern (1969 rebuild, above), Atlantic Coast Line (as-built, black), Atlantic Coast Line (1975 repaint with COTS panels and ACI label), Seaboard Coast Line (1978 repaint with COTS panels), and Missouri Pacific (1983 red repaint).

A Burlington Northern (1988 repaint) car will also be available along with an undecorated RTR model in primer gray. The models feature detailed bulkhead ends with or without oval

cutouts as appropriate for each paint scheme. Additional features include authentic narrow draft gear, wire grab irons and coupler lift bars, air hoses, Kadee knuckle couplers, and appropriate trucks with metal wheelsets. For more information visit tangentscalemodels.com.

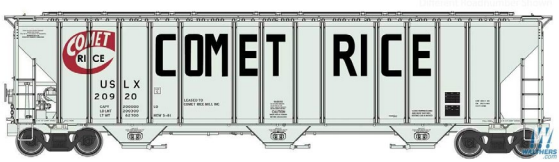
Walthers is booking advance reservations for a new production run of a GP9 diesel. The HO scale model will be based on Phase II units rebuilt with a chopped nose for improved visibility for the engine crew. The Mainline model has molded drill starter points for hobbyists wishing to add grab irons which may be purchased separately in GP9 Phase II Diesel Detail Kit item #910-258. The economy priced Mainline model will be powered by the same drive system used in WalthersProto series locomotives.

Decorating schemes will be Burlington Northern, Canadian Pacific, Chicago & North Western, Milwaukee Road, Norfolk Southern, and Wisconsin & Southern. The ready-to-run locomotive will be available for DC operation with a 21-pin DCC-ready plug or with factory installed ESU Sound decoder.

85-foot Budd dome coaches are scheduled for release by Walthers in September. The Mainline series model features tinted window

glazing, full interior detail, and appropriate trucks with 36-inch machined metal wheelsets. In addition to the Union Pacific livery shown above, the ready-to-run car will be available decorated for Santa Fe, Southern Railway, VIA Rail Canada, and Amtrak in the Phase III scheme with equal red, white and blue stripes.

A Walthers Mainline passenger car exterior detailing kit (#910-200) is sold separately.

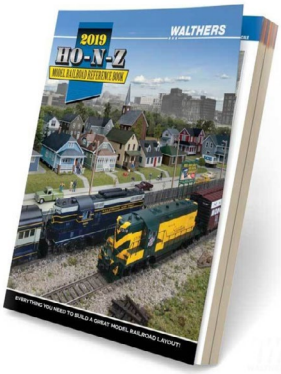


Walthers has scheduled a release date of October for a new production run of 55-foot Evans 4780 cu. ft. triple-bay covered hoppers. In addition to the USLX-Comet Rice car shown, the Proto series model will be available decorated for ADM UELX, (two schemes), USLX-Farmers Co-op Association (two schemes), and MKT-Missouri-Kansas-Texas. Features on the HO scale ready-to-run model include individual grab irons, see-through etched-metal walkways and end platforms, correct side braces, separate vibrator brackets on the discharge bays, 36-inch metal wheelsets, and knuckle couplers.

Walthers has introduced a new line of SceneMaster heavy-duty International trucks. They are available with a variety of work beds in both two-axle and three-axle configurations. The heavy duty three-axle dump truck shown above is also available with a flat bed.

This three-axle tank truck and trailer comes with a selection of gasoline related decals.

This International Durastar two-axle truck comes with a tree trimmer body that includes outrigger stabilizers and a positionable cherry picker.

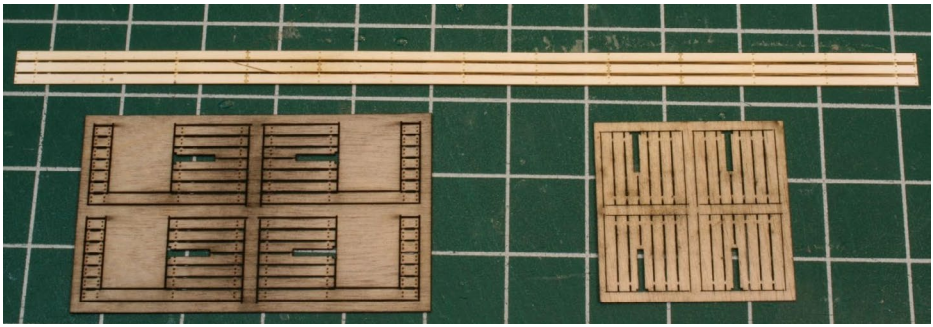


In addition to the traditional print version of its annual Model Railroad Reference Book, Walthers has announced plans to offer an app that will allow direct access to a digital edition. According to the announcement, some extra value added content will be included on the intro page of each section along with other digital-only content such as videos and rich media features. Direct product links to walthers.com will simplify ordering. The print version will itemize all HO, N, and Z scale products manufactured and sold by Walthers as well as products distributed by the firm. For additional information on Walthers products contact a dealer or visit walthers.com.

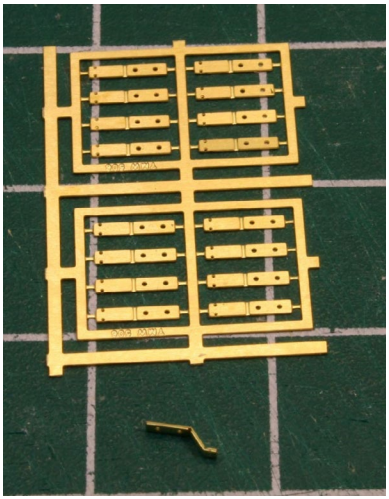
Yarmouth Model Works has added two new cars to its lineup of HO scale prototypically accurate resin kits. The first new kit is a 40-foot Delaware, Lackawanna &

Western rebuilt auto boxcar. The second item is a variation of ACF postwar boxcars detailed for Detroit, Toledo & Ironton. The model features dimples down the corners of the ACF corrugated ends. Both kits include photoetched parts, laser-cut running boards where appropriate, correct trucks, and custom decals.

In response to customer requests, owner Pierre Olive reports that the air hose brackets and cut lever bracket included in various kits are now molded on a separate frets.

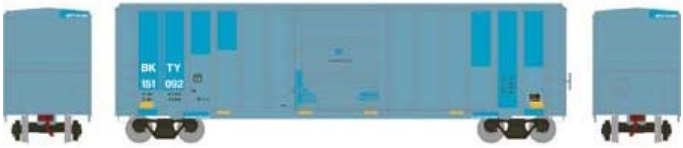


New detail parts available from Yarmouth include laser-cut running boards designed specifically for Intermountain SFRD reefers. Two styles of hatch platforms are included.



Also new are etched air hose brackets that are mounted to the underside of the car. A "U" shaped section of wire is used to clamp the air hose to the bracket in the same arrangement as used on the prototype. For additional information visit yarmouthmodel-works.com.

N SCALE PRODUCT NEWS

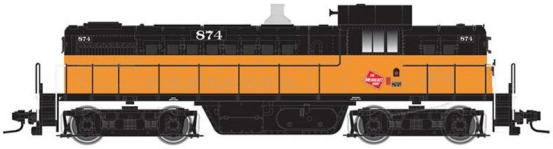


Athearn plans to release this FMC 50-foot boxcar next May. The N scale model features screw-mounted roller bearing trucks with machined metal wheels. Models decorated in conventional paint will be available for Railbox, Toledo, Peoria & Western; CSX, and CAI-Saratoga & North Creek. Cars for Green Mountain Railroad, Hartford & Slocomb (ex-CSX), and Union Pacific (ex-BKTY, above) will be available in Primed for Grime paint. For additional information contact a dealer or visit athearn.com.

Atlas continues to demonstrate its commitment to N scale products with the announcement of new 1:160 locomotives, freight cars and commuter equipment all scheduled for release to dealers during the first quarter of 2019. Heading the list is a Master series General Electric Dash 8-40C locomotive. The N scale version of the six-axle diesel will be available decorated for CREX, Lancaster & Chester, Pan Am, Kansas City Southern, and Chicago & North Western.

A CW version of General Electric's big 4,000 hp locomotive (Dash 8-40CW) will be included in Atlas's first quarter release. The locomotive has the normal wide nosed cab

but GE dropped the corners of the nose on the CW version so the engine crew could see a person standing on the steps. The CW version will be available decorated for Union Pacific, Canadian National, Norfolk Southern, and Conrail. A model decorated for CSX will come with Monon, ACL, and Chessie heritage decals. Atlas will release Gold series (DCC with ESU Sound) and Silver series (DC, DCC-ready) versions of both the Dash 8-40C and Dash 8-40CW locomotives.



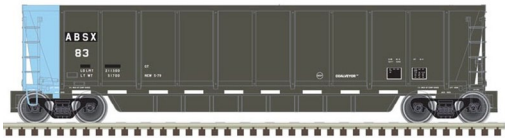
This Master Series Alco RS-1 diesel locomotive is included on the Atlas 2019 first quarter schedule. The N scale ready-to-run model features golden-white LED lighting. It will be available for DC operation only. Road names will be Amtrak, Green Mountain, Long Island Railroad, Morristown & Erie, Pennsylvania, Santa Fe, Susquehanna, and Milwaukee Road.

Atlas has added a modern ALP-45DP electric locomotive to its lineup of N scale models. The model features a positionable non-functioning pantograph, and directional LED ditch and headlights. For hobbyists wanting to install additional details, Atlas has included a package of grab irons and a drilling template. Decorating schemes include NJ Transit (above), NJ Transit #4534 100th ALP edition, AMT (below), and Bombardier demonstrator.

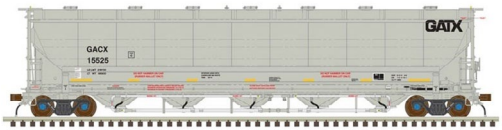
The locomotive will be available DCC-ready as well as with factory installed DCC with an ESU LokSound decoder.

N scale Multi-Level commuter equipment configured as a cab-car, coach and coach with a toilet will be available in complimentary decorating schemes.

The cab-car has directional LED ditch and headlights, red marker lights, an air horn, antenna, and lift lugs. All of the cars have interior details, lights, and rubber diaphragms.



New N scale freight cars on Atlas's early 2019 production schedule include this ACF Coalveyor Bathtub gondola. The models come with 100-ton roller bearing trucks and removable coal loads. Road names on the ready-to-run model are Albert Brothers, The Andersons, Appalachian Railcar Service, Joseph Transportation, Metal Management, RMG Leasing, and Wilmot Transportation.



The pressure differential (PD) covered hopper was introduced in 1999 by Thrall Industries. Production continues today under Trinity which acquired Thrall in 2001. Atlas's N scale ready-to-run model of this big 5660 cu. ft. car features five discharge bays. Road names in the 2019 first quarter release will be CEFX, Union Rail, General American, NBIX, Norfolk Southern, TCMX.

Atlas's 2019 first quarter release includes a Trinity 25,500 gallon insulated general-purpose tank car. The ready-to-run model

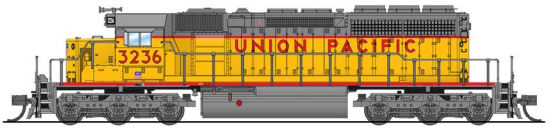
features prototypical jacket seams, and see-through walkway and platform grating. Road names will be ADM, CHS, BRCX-Union Tank Car, Cargill, General American, NATX-Golden Peanut Co., TILX-Lake Erie Biofuels, and Trinity Industries.

This Trainman series ACF 50-foot 6-inch boxcar is included in Atlas's first quarter release. The N scale ready-to-run model is based on an ACF prototype. Road names will be Missouri Pacific, Green Bay & Western, Ontario Northland, Santa Fe, Apalachicola Northern, and Railbox in faded and patched paint.

A ready-to-run 40-foot stock car in Atlas's Trainman series is also scheduled for release early in 2019. Road names will be Chicago & North Western, Great Northern, Southern, Rio Grande, and both brown and yellow paint schemes on Union Pacific cars. For additional information on Atlas products contact a dealer or visit atlasrr.com.

Broadway Limited plans to release this Pennsylvania Railroad T1 steam locomotive this month. The N scale model is based on a

series of unique 4-4-4-4 non-articulated duplex engines PRR operated in the late 1940s and early 1950s. The model is decorated as the prototype appeared in 1950 and will be available in a choice of six road numbers. The 1:160 model features Broadway Limited's Paragon3 operating system and Rolling Thunder sound that functions in both DC and DCC environments.



Broadway Limited has announced a new SD40-2 in N scale. Equipped with Paragon3 sound and DCC, it features an ABS body, diecast chassis, MicroTrains #1015 or compatible couplers, and separately applied handrails, ladders, whistle, and brass bell. Roadnames included in this release are ATSF, BN, Chessie System, CN, Conrail, CSX, NS, UP and undecorated. The models were scheduled to arrive in July 2018. For additional information contact a dealer or visit broadway-limited.com.

Centralia Car Shops plans to release a group of 10-5 sleeping cars near the end of August. In addition to the PRR Fleet of Modernism scheme shown above, the ready-to-run N scale model will be available decorated for PRR (Tuscan), PRR (Texas Special), NYC (20th Century), NYC (postwar), Baltimore & Ohio, and Santa Fe.

Additional road names include Missouri Pacific, Southern Pacific (Lark), Southern Pacific (Sunset), Union Pacific

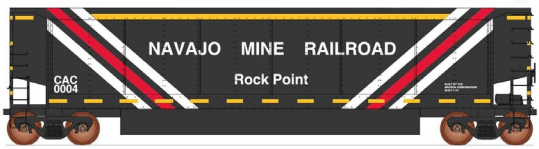
(COSF), Illinois Central (above), and undecorated. InterMountain Railway is responsible for marketing CCS products. For additional information contact a dealer or visit intermountain-railway.com.

ExactRail has announced the Johnstown America Autoflood II hopper in N scale. It features ExactRail's 100-ton ASF Ride Control trucks, MicroTrains #1015 couplers, a flood-style load, narrow-style body mounted draft box, and CNC 36-inch metal wheel sets. The model is being released in 8 paint schemes, BNSF Brown, BNSF Green, CSXT, KGLX-Commonwealth Edison – Illinois, NRLX-CIT Group/Capital Finance, UCEX-Union Electric Company, UCEX "On Track for the Cure" (above), and UCEX 'Military Veteran.' For more information visit exactrail.com.

InterMountain Railway is accepting reservations for a rerun of Santa Fe stock cars. The ready-to-run N scale models will be available as-built (above with a horizontal brake wheel mounted on a vertical shaft), and in their 1938-1943 variant with a choice of K or AB brake systems.

Each version will be available as single deck or two-level cars. A single-deck post-1960 car will also be included in the

run. The cars will have wire grab irons, metal wheelsets, and knuckle couplers.



The Navajo Mine Railroad is a 13.8 mile short line that is not connected to the national railroad network. It operates from the Navajo coal mine to the Four Corners Generating Plant west of Farmington, New Mexico. InterMountain is taking reservations for N scale versions of the Aeroflow II gondolas decorated for the unique Navajo Mine Railroad. The cars will be offered in three six-packs for a total of 18 road numbers. For additional information contact a dealer or visit intermountain-railway.com.

KatoUSA is selling N scale Union Pacific's 4-8-4 FEF-3 steam locomotives configured for freight and excursion service. The excursion version has a silver smokebox, white rimmed wheels and a gloss black finish. The freight unit is painted matte black with a graphite smokebox.

The model is based on a prototype built in 1944. They were among the last steam locomotives purchased by the Union Pacific. Although designed primarily for passenger service, the UP's large fleet of available diesels meant the FEFs were often relegated to handle

secondary passenger and fast freight service. Today, UP #844 survives to pull some of the Union Pacific's popular excursion trains. Standard DC versions of the N scale locomotives are available from dealers. Models with factory installed TCS DCC or ESU LokSound DCC are available on special order from Kato. For additional information contact a dealer or visit katousa.com.

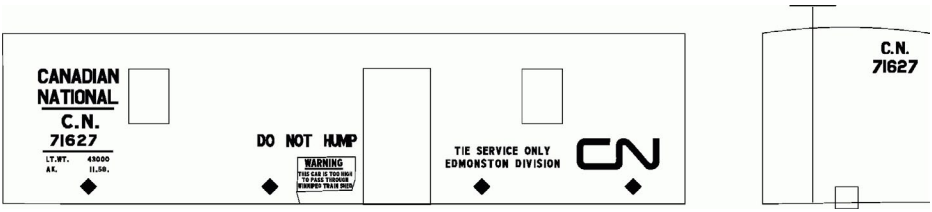
Rapido Trains has announced the "Draper Taper" GE Dash 8-40CM locomotive in N scale. Featuring a higher level of detail than the HO scale "Prime Movers by Rapido" model, the model will include many separate detail parts and road specific details, including working ditch lights and (in Rapido's words) "an insane level of underbody detail…." The British Columbia Rwy units will also include working rock lights. For more information see your dealer or rapidotrains.com.

ScaleTrains.com is offering the C39-8 in N scale. With an availability date of Fall 2018, the Rivet Counter C39-8 will come equipped with prototypical horns and operating ditch lights as appropriate. Road names for this release will be Conrail, Norfolk

Southern, and Pennsylvania Northeastern. The model will be available in both a DCC and Sound Ready and a LokSound DCC & Sound version.

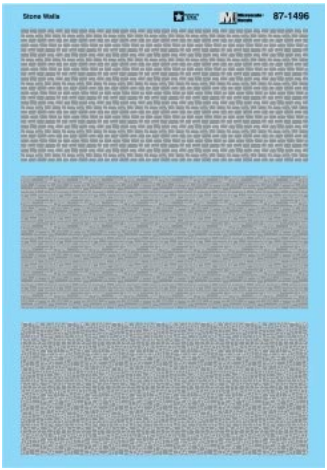
Also available in Fall 2018, a PS-4785 cu. ft. covered hopper is being offered by ScaleTrains.com. The Rivet Counter model will be available in two different body styles, loading hatches, and gravity or gravity-pneumatic outlets. Also featured are Apex slotted running boards and coupler platforms, separately applied detail parts, and low corner grab iron ladders. The first run road names will include TLCX-Cargill, Conrail, Cotton Belt, TLCX-Staley, TLDX-Highland Feeders, and Penn Central. For more information see your dealer or scaletrains.com.

NEW DECALS, SIGNS AND FINISHING PRODUCTS



Black Cat Publishing has HO scale decals for CNR work and camp cars. The set includes a wide selection of location names and car functions such as water, foreman, tool, wash shower, cook, and block and cable. Black Cat also has decals for Canadian National cabooses with horizontal wafer and no leaf. The decals are based on CNR cabooses in 1959 and 1960 that had

an orange body and brown roof and underbody. For additional information visit blackcatdecals.com.



Microscale has decals for stone wall patterns (brick, flagstone, and cobblestone). They are printed in a light grey tone and may be applied to a variety of surfaces. This decal pattern is available in N, HO, and O scale.

Microscale sells supplies suitable for finishing the appearance of decal projects. From the left, they include Micro-Sol (a setting solution that softens decals to settle on irregular surfaces), Micro Coat Flat (for a clear flat finish), Micro Coat Gloss (for a clear gloss finish), and Micro Coat Satin) for a clear satin finish. The solutions are packaged in 1 ounce bottles. For additional information contact a dealer or visit microscale.com.

Send us your product announcements

If you are a hobby manufacturer with a product announcement, just click here and submit your announcement to us. Our web site and free magazine reach continues to grow, so get on board this new media train! ▪

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 ...

New HO scale freight car kits coming from **Accurail** include a 36-foot Fowler wood boxcar decorated for Grand Trunk Railway and a 36-foot double-sheathed wood boxcar with a fishbelly steel underframe and wood ends decorated for Clinchfield ...

Chad Boas has released three new prototypically accurate kits for Canadian Pacific flat cars. The HO scale models represent 36-foot cars numbered CP 310000-311348, 42-foot cars numbered 335000-336559, and 46-foot cars numbered 300000-300499. The kits include the main body casting, wood deck, and pole pockets ...

Cannon and Company introduced several new laser-cut styrene boxcar kits at the recent St Louis/Collinsville RPM meet. Road names included SCL, Great Northern, and four Union Pacific versions ...

Look for **ExactRail** to announce a new HO scale GSI 53-foot 6-inch bulkhead flat car in the near future. Although similar to ER's previously announced GSC flats, the commonality exists only in the center sill. The sides, ends, decks and 8-foot 6-inch bulkheads will all be from new tooling. Road names on the initial release are expected to be Burlington Northern, Rock Island, Chicago Great Western, and Chicago, Burlington & Quincy ...

Dan Kohlberg has released three new sets of HO scale screened decals for Illinois Central 50-foot boxcars. They include single-door cars for 1957+, single door cushioned cars from 1963+, and double-door boxcars for 1961+ ...

ScaleTrains.com plans to release another production run of its HO scale SD40-2 diesel locomotive early next year. Operator series road names will be Conrail, Union Pacific, and Burlington Northern Santa Fe in the blue and yellow Warbonnet scheme. Rivet Counter editions of the SD40-2 will be available for Burlington Northern (green), BNSF, Conrail, and a CSX SD40-3 square cab variant with a boxcar logo ...

SELECTED EVENTS

RATE THIS ARTICLE

August 2018

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

FLORIDA, THE VILLAGES, August 18-19, Summer Rail Expo Show & Sale, sponsored by the Villages Model Train Club, at Savannah Regional Recreation Center, 1545 Buena Vista Blvd. Info at thevillagesmodeltrainclub.com.

INDIANA, SELLERSBURG, August 24-25, Model Train Show & Swap Meet sponsored by the Southern Indiana Railroad at Moose Lodge Family Center, 1040 S. Indiana Avenue. Request info from Jeff McMahan at trainnutt56@yahoo.com.

KENTUCKY, MOREHEAD, August 25-26, Model Train Show, at Morehead Conference Center, 111 East First Street.

MARYLAND, ROCKVILLE, August 22-26, 50th O scale National Convention, co-sponsored by NMRA MER, Standard Gauge, Narrow Gauge, P48, and Traction modelers; at Rockville Hilton Hotel, 1750 Rockville Pike. Info at 2018oscalenational.com.

MISSOURI, KANSAS CITY, August 5-12, 2018, NMRA National Convention and National Train Show. Host hotel is Westin Kansas City at Crown Center. Info at kc2018.org.

NEW HAMPSHIRE, CONCORD, August 19, Model Railroad Show, sponsored by Concord MR Club, at Everett Arena, Loudon Road. Request info from Rich Fifield at ehfsaf@aol.com.

OHIO, MARION, August 11, Summerail, combined train show, sale, and multi-media show, has moved temporarily to Palace Theater in Marion. Event is sponsored by Marion Union Station Association. Info at summerail.com.

VIRGINIA, LYNCHBURG, August 11, Lynchburg Rail Day, sponsored by Blue Ridge Chapter, National Railway Historical Society, at Boonsboro Ruritan Club, 1065 Coffee Road. Info at www.blueridgenrhs.org/rail-day.

September 2018, by location

CANADA, ONTARIO, TORONTO, September 29-30, The Greater Toronto Train Show, at Brampton Fairgrounds. Info at torontotrainshow.com.

CALIFORNIA, SAN DIEGO, September 12-16, NMRA/PSR Convention, sponsored by San Diego Division, Pacific Southwest Region at Marriott Courtyard Hotel Mission Valley, 8757 Rio San Diego Drive. Info at psrconvention.org/home/index.php.

FLORIDA, MELBOURNE, September 1, Train Show at Azan Shrine Center, 1591 W. Eau Gallie Blvd. Request info at 321-805-1963.

INDIANA, SOUTH BEND, September 21-22, NMRA Michiana Division Education and Training Conference 2018 "Modeling like a PROtotype," at Aloft Hotel. Info at michiana-nmra.org.

MINNESOTA, BLOOMINGTON, September 5-8, 38th Annual National Narrow Gauge Convention at Double Tree by Hilton, 7800 Normandale Blvd. Info at www.nngc-2018.com.

NEW JERSEY, MAHWAH, September 13-16, NMRA Northeaster Region Convention at Double Tree by Hilton, 180 route 17 South. Info at erielimited.org.

WEST VIRGINIA, RANSON, September 29, Train Show sponsored by Bunker Hill Train Club at Ranson Civic Center, 431 W. 2nd Avenue. Info at bunkerhilltrainclub.org.

Future 2018, by location

CALIFORNIA, SAN LUIS OBISPO, October 5-7, Central Coast Railroad Festival. HQ at Sands Inn & Suites, 1930 Monterey Street. Info at ccrrf.com.

CALIFORNIA, SAN PEDRO, October 20-21, Open House & Swap Meet at Belmont Shore Railroad Club, 3601 South Gaffey Street. Info at belmontshorerr.com.

FLORIDA, PLANT CITY, October 11-13, NMRA Sunshine Region 2018 Convention at John R. Trinkle Center. HQ at Holiday Inn Express 2102 N. Park Road. Info at sunshineregion.org.

ILLINOIS, LISLE, October 18-20, Railroad Prototype Modelers Conference Chicagoland, at Sheraton Hotel and Conference Center, 3000 Warrenville Road. Info at rpmconference.com.

MARYLAND, ROCKVILLE, October 4-7, NMRA Mid-Eastern Region Convention, at Hilton Hotel, 1750 Rockville Pike. Info at Potomac-nmra.org/MER2018/Main/index.html.

MICHIGAN, ANN ARBOR, November 25, Model Train Show sponsored by Rails On Wheels, at Washtenaw Farm Council Grounds, 5055 Ann Arbor Saline Road. Info from Walt Trancygiere at trancywj@gmail.com.

MICHIGAN, EAST LANSING, November 11. Model Railroad Show & Sale, sponsored by Lansing MR Club, at Michigan State University Pavilion, 4301 Farm Lane. Info at lmrc.org/trainshow/index.shtml.

MICHIGAN, WYOMING (Greater Grand Rapids), October 13, Fall Train Show sponsored by Grand River Valley Railroad Club, at the Home School Building, 5625 Burlingame Avenue SW. Info at grvrrc.org.

NEW YORK, ALBANY, December 2, Annual Great Train Extravaganza hosted by NMRA Hudson-Berkshire Division at Empire State Convention Center. Info at gtealbany.com.

PENNSYLVANIA, EASTON, October 7, 42nd Annual Lehigh Valley Regional Train Show & Expo, co-sponsored by Railroad Historians of the Lehigh Valley and Lehigh Valley Chapter of the National Railroad Historical Society, at Charles Chrin Community Center, 4100 Green Pond Road. Info at www.lehigh-lines.org/uploads/9/1/4/5/91456028/2018_regional_train_show_and_expo_flyer.pdf.

WASHINGTON, PORT ANGELES, October 13-14, 19th Annual Train Show & Swap Meet, sponsored by North Olympic Peninsula Railroaders at Clallam County Fair Grounds, 1608 West 16th Street. Request info from Steve Stripp at 360-582-1316.

Beyond 2018

UTAH, SALT LAKE CITY, July 7-13, 2019, NMRA National Convention and National Train Show. HQ hotel is Little America Hotel. Info at nmra2019slc.org.

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

CALIFORNIA, SANTA CLARA, 2021, NMRA National Convention. ■

Clickable advertiser index | 1

Clickable advertiser index | 2

DONATE*

Donations help pay contributors for more excellent articles and videos, and help keep MRH free to all your fellow modelers.

* Donations for hobby publications are not tax-deductible.

Clickable "other" index

Download issue

Download Portrait

Download Landscape

REVERSE RUNNING commentary

Model Railroad Hobbyist | August 2018 | #102

JOE FUGATE ON HOW HE *HATES* LAYOUT WIRING ...

RATE THIS ARTICLE

MY LEAST FAVORITE PART OF THE HOBBY IS WIRING. It's not that wiring is hard, it's just that it's tediuous and boring.

One of the most frustrating things about wiring is you can slave away for weeks on a big layout and nothing looks any different.

I've done just that, then had the guys come over for an operating session and walk around the layout to see what's new.

"Doesn't look like you worked on the layout this month ..."

Yeh, *right* (mumble, mumble).

STEPPING OUTSIDE THE BOX WITH A CONTRARY VIEW

Because wiring is so boring for me, I also can get sloppy – and not pay attention like I should. When that happens, there is a high risk of a mystery short. Talk about making the wiring even more exasperating!

The good news with my first Siskiyou Line layout is most of the tedious wiring task was behind me. Now that I've started Siskiyou Line 2 and am building my first two TOMA[1] modules for the new layout, you guessed it: I get to do more wiring!

As a self-protection mechanism, I've developed some defensive wiring techniques so I can get things over with and stand a fighting chance of being able to debug the wiring when I screw it up.

Notice I didn't say *if* – it's a given *I will* make a mistake, so I just plan ahead to make finding and fixing a mistake as easy and as painless as possible.

One thing I do is put probes on my VOM meter with clips on them, then I clip the probe leads to the track (one lead to each rail) and set the meter on continuity.

Whenever the two rails get shorted, a tone will sound, indicating that connection is causing a short. Pay attention, Joe!

I also run the power bus leads to terminal blocks every few feet, one for the red power bus lead and one for the black one (these colors match the DCC decoder track power colors, notice).

Then as I solder feeders to the track, I add a spade connector to the loose end of the feeder wire and attach it to the proper bus wire terminal block. If I mess up, the meter will sound a noise and tell me!

Later, if the layout ever develops a problem (one time a bad derailment in staging broke off a wheel and it was wedged down inside the diverging rails of a turnout frog, causing a doozy of a mystery short), all I need is a screwdriver to remove feeders until I find the short.

Neatness also counts. I've taken to adding wire ties to each feeder pair going to the track so I don't just have a bunch of loose wires hanging everywhere. At least this way I can maintain some sanity while wiring. ☑

---

1 TOMA: **T**he **O**ne **M**odule **A**pproach. Read this for more.

DERAILMENTS

RATE THIS ARTICLE

More of the world's worst railroad track

It's surprising how the track at many out-of-the-way (and not-so-out-of-the-way) places an be so extremely rough and worn. And yet, things seem to stay on the track. Check it out and be amazed at how the trains just keep rolling along without incident on such roller coaster rails! ■

VIEW READER COMMENTS
click here

BIZARRE FACTS AND HUMOR (SUPPOSEDLY)

Coming next month ...

Nick Campbell weathers and details CSX 7826 ...

Jason Miller: Walking through how I did my layout signaling ...

Modeling an ornate downtown station ...

... and lots more coming in the September MRH!