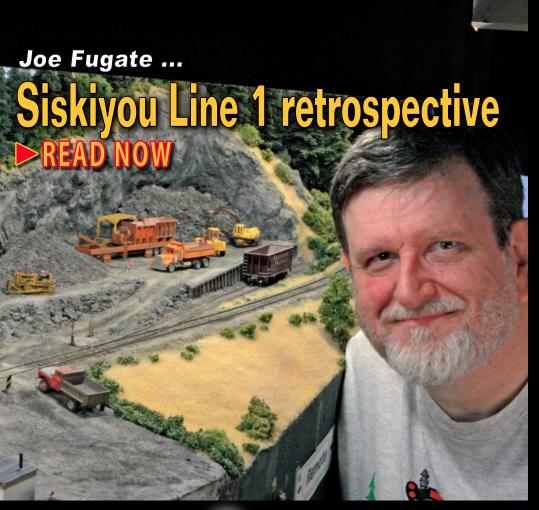


ALSO:

- Quad-servo decoder 2 circuit
- Making more realistic trees
- Prepping PECO turnouts for DCC
- Learning from others' mistakes ... and more inside!

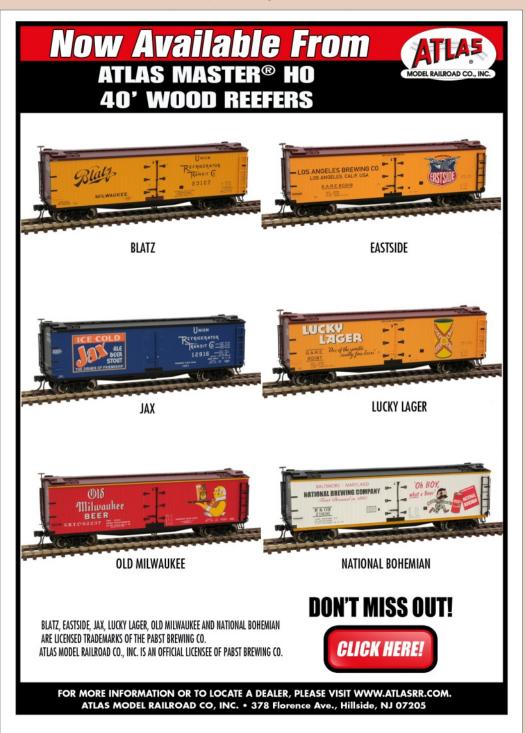


Hard-coded wide PDF version of MRH magazine

The facing pages in this PDF have been merged into a single wide page, making them landscape.

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INDEX

TABLE OF CONTENTS

MRHMAG.COM

INDEX

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MRH Sponsors | 2

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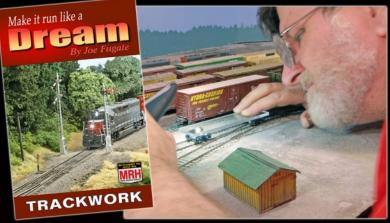


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Table of Contents | MRH

June 2022



Publisher's Musings: Learning from others' mistakes ...JOE FUGATE



MRH Website this month: Mainline To The Gulf, ... Compiled by JOE FUGATE



What's Neat: Making realistic trees, ... KEN PATTERSON



Quad servo decoder monitor DR. TERRY CHAMBERLAIN



Siskiyou Line 1 retrospective

JOE FUGATE



First Look: Make it run like a Dream: Trackwork

JEFF PALMER



Savvy Modeler online: Preparing PECO Electrofrog turnouts

Compiled by the MRH STAFF



June 2022 news and events RICHARD BALE and JEFF SHULTZ

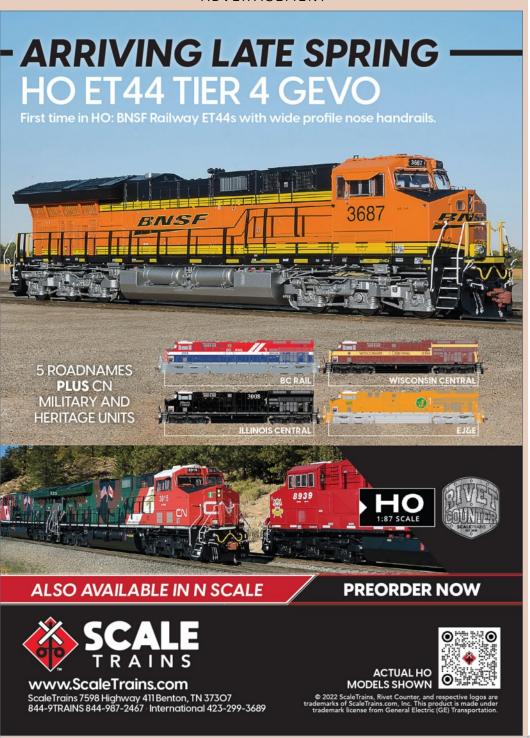


INDEX

TABLE OF CONTENTS

MRHMAG.COM

INDEX





Model Railroad Hobbyist | June 2022

JOE FUGATE: LEARNING FROM OTHER PEOPLE'S MISTAKES



THE LAYOUT DESIGN SPECIAL INTEREST GROUP (LDSIG) HAS A SAYING: Make only new mistakes.

The idea is to learn from other people's mistakes, if someone figured out a certain approach was a mistake, then why repeat it?

This reminds me of the saying I used to tell my kids:

Good judgment comes from experience ... and experience comes from poor judgment.

I would add – there's no need for that poor judgment to be your poor judgment. Learn from other people's mistakes so you don't have to make the same mistakes yourself.

For example, people have learned that sticking your finger in an empty light socket is not a good idea – you don't need to make that mistake yourself to know you need to avoid making that mistake. And so it goes.

Pay attention to other people's learnings and advice from others, especially from those who have developed an expertise in an area.

I would go on to tell my kids to be aware of what an expert is. An expert is someone who kept making mistakes in a given topic area but who would not stay down. They kept getting up

Publisher's musings 2

and trying again and again until they racked up at least 5 years of mistakes on a given subject area and earned the topic of "expert." Knowledgeable experts are highly sought after, but really they're just folks who refused to quit and kept trying until they got it right.

Moving your train collection

Given our move to Tulsa, Oklahoma (we're now in Tulsa, by the way) means all the ins and outs of moving a train collection is fresh in my mind right now.

One of the things I decided to do was store as much as I could in containers with rollers. That meant moving stuff around as needed was as easy as rolling it across the room or into another room as needed. No need to stress my back.

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INDEX

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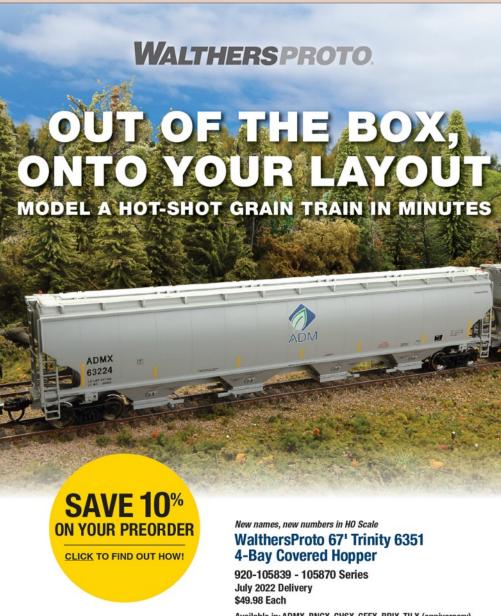


TABLE OF CONTENTS



INDEX

TABLE OF CONTENTS



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Publisher's musings | 3

In this month's *Running Extra* Aha Moment, I talk about how I stored all my locos and rolling stock.

I got plastic containers with shelves and rollers, then stored my modeling materials and tools in them. I also got several carts and relegated each cart to a given category, like one cart has my power tools, drills, and related items.

I have another cart with trackwork, wiring tools, and related materials. I use the cart to store flex track, rail joiners, rail, turnout tools/materials, along with wire, wiring tools, soldering tools, and so on. I can easily wheel this cart out to do trackwork, and then wheel it back to a storage location out of the way when not in use.

The most tricky thing to store and move was the structures and bridges. They're all sort of odd shapes and often too long for many plastic containers with shelves and wheels. In that case, I can stack them on an appliance dolly, which allows me





Publisher's musings | 4

to roll them around as needed. My basic rule has been to make sure everything will roll.

One note on the rollers under Tupperware or Rubbermaid storage units – they're not very robust. They serve to roll the container around for short distances. But if you think you can roll the container outside down the sidewalk or down the driveway, think again. The rollers will jam quickly doing that.

If you're planning to move these containers with rollers out to a moving van and into your next home, think again. For that kind of a long-distance move, make sure you wrap those storage units in plastic cling wrap both around the container side-to-side and around the container front-to-back to keep the container from coming apart and to keep the drawers from flying open.

And plan on moving them with a hand truck, don't rely on the rollers to hold up to such abuse.

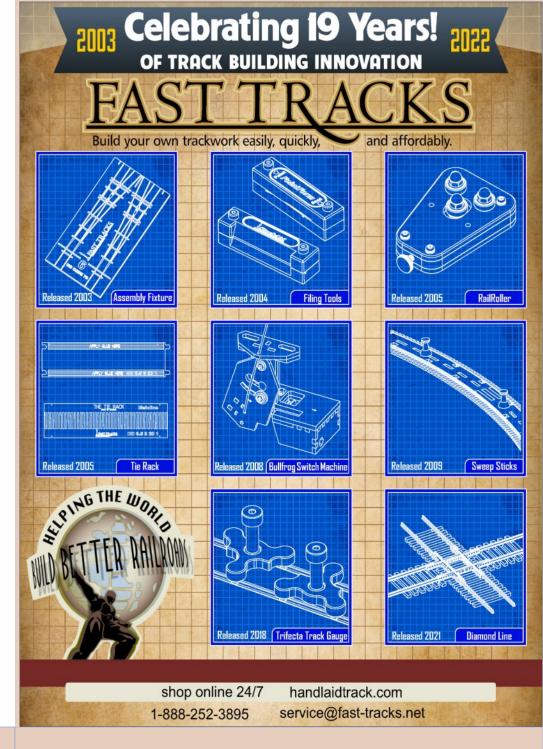
One other note: when assembling these containers when you first get them home, use 5- minute epoxy to glue the rollers into their mounting holes. Don't rely on a press fit to be sufficient to hold the rollers in place.

A benefit of the MRH Forum

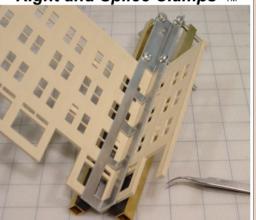
One benefit of the *MRH* Forum is there's thousands of modelers who frequent the forum who have lots of experience. That means you can pose a question to them and get some solid answers.

One of the *MRH* staff jokes: when you post a question on the *MRH* Forum, you can expect to get an answer within a few hours, but the right answer usually takes longer!

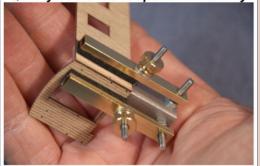
You get the joke, right? Being eager to help doesn't always equate to having the best answer. That's okay, we applaud the *MRH* Forum's members desire to help. But do give your question a bit to make the rounds and get several answers. The beauty is eventually you'll generally get some very good answers, sometimes even with step-by-step photos!



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Publisher's musings | 5

Run like a Dream series

While we're talking about learning from other people's mistakes and discovering expert best practices to help us avert having to always learn things the hard way, I would be remiss if I didn't discuss the Make it run like a Dream book series.

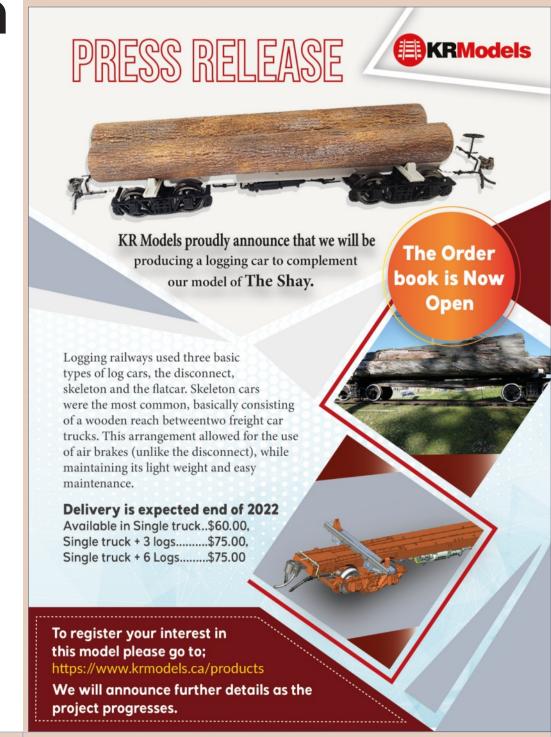
While I'm the supposed author of these books, in many cases I simply have collected other best practices I've come across and collected them into a single place.

The books cover the golden triad of operational items: trackwork, rolling stock, and locomotives.

The first two books have been published, the last book on locomotives is roughly a quarter done, with the final publication date now looking to be early 2023.

(Preorder customers get periodic sneak peeks, allowing you to see how the book is coming, along with giving you an opportunity to request topics be covered.)

Regular MRH author, Jeff Palmer, reviews the



Publisher's musings | 6

Trackwork book in this issue of MRH. The words are Jeff's, we made no attempt to sway Jeff one way or the other on his assessment of the first book.

If I put on my modelers hat and speak purely as a fellow modeler for a moment, I can tell you I would have given my eye teeth to have had these books back when I was starting my layout back in 1991.

I would have avoided many mistakes, which brings us back to the original idea of learning from others' mistakes and not remaking them again.

Looking back and looking ahead

In this issue, I take a nostalgic look back at my first Siskiyou Line. Now that we're in Tulsa, I'm starting to look forward to Siskiyou Line 2 (SL2) development moving into high gear.

The discussion of the Make it Run like a Dream Trackwork book is particularly relevant here, because it has a lot of best practices that play into layout design and how you do your trackwork. I'm excited that I now can take almost 30 years of learning and apply them to a fresh start with SL2.

We have purchased some wooded hillside property in Skiatook Oklahoma, so we have some work ahead of us before we can move into our new place. Meanwhile, we're living in a onebedroom apartment and have most of our belongings in storage, pending the day our property is finally ready and we can move in.

We have purchased a manufactured home and we also plan to put up a prefab steel building to act as the MRH office, TMTV studio, workshop, and of course layout space. But given the current supply chain delays, we don't know for sure when everything will finally be done and ready for us to move in.

In the meantime, I'm getting a pretty good idea what SL2's new home is going to look like as to its available space. So in the meantime, I'll be doing a lot of blue skying and testing











The Pacific Great Eastern/British Columbia Railway received 1,785 of these boxcars from National Steel Car between 1971 and 1974, making them more numerous than any boxcar on the railway. They were seen all across Canada and the United States in lumber service. From 1989 they were rebuilt for pulp service and many have continued in service with CN.

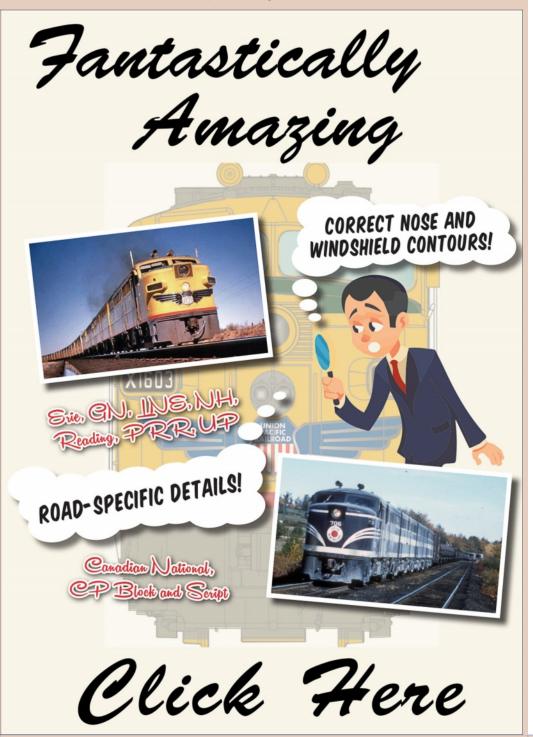
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Publisher's musings | 7

ideas of what might fit in the new space. Once I have some of that more solidified, I plan to do another article updating you on where Siskiyou Line 2 is going.

Meanwhile, we're looking forward to the NMRA National Convention/Train Show in St. Louis this August. It's only a 5 hour drive from Tulsa, which we're totally thrilled about.

I'm giving clinics on Wednesday, and of course we have a booth at the National Train Show. See some of you there a couple months from now in St. Louis? ✓





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INDEX

TABLE OF CONTENTS

MRHMAG.COM

INDEX

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LAST ISSUE LIKES

Most liked articles in the **May 2022 issue** of *MRH* are:

1st Weathering a bulkhead flat

2nd Publisher's Musings: MRH is moving to Tulsa

3rd Quebec Iron & Titanium Railway

Most liked articles in the May 2022 issue of Running Extra ...

1st All about making finger-flicking turnouts

2nd Modeling the Ideal Cement Plant

3rd Getting Real: Railroad Prototype Meets are back

If you want more of this type article, then like the article! Click the *Give us a like* or *comments* button on each article and press the like button on the article's forum page if you want to see more articles like these. ■

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Compiled by Joe Fugate



Meet The KC&G: Mainline To The Gulf

MRH forum member **laming** (Andre M.) maintains a blog with regular updates about his layout. Andre describes his railroad rationale as: "It runs from Kansas City to the Gulf of Mexico via the port at *New Orleans. I created a plausible (to me)* diesel roster and dieselization history for the **VIEW READER** KC&G." COMMENTS

Check out Andre's blog for lots more!

View the full thread on the MRH website

► MRH'S MONTHLY GREAT MODELER POSTS



INDEX

TABLE OF CONTENTS

MRHMAG.COM

INDEX

BEST OF THE MRH WEBSITE 2



1. MRH forum member **erikclindgren** posted photos of his utilty poles. Such modeling examples can help the rest of us with forming our own scenes.

Let's see your utility poles

MRH forum member **Deemiorgos** (Robert DeMeros) asked for others to post good examples of their utility poles. Forum member **erikclindgren** (Erik L.) responded with photos of his utility poles. Erik says:

"My layout is a portable and I'm modeling in 1:48 O scale."

Another forum member, **GT Mills**, made this insightful comment:

"It's surprising how many power utility poles have no yard arms, pay attention and you'll see them all around the place.... I've often thought most layouts I see in photos have far too few utility [poles]."

Check out the full thread for lots more.

View the full thread on the MRH website

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2. *MRH* forum member **RE#1** has been posting the progress of his latest depot diorama, featuring some excellent modeling!

Depot diorama

MRH forum member **RE#1** has been posting about his latest diorama progress, with step-by-step photos:

"I'm building a two story depot that will have a complete interior with lighting. I'm also putting two tracks in front of the depot."

RE posted photos of the kit he's using for the depot: Model Masterpieces resin Division Point Depot kit based on the circa 1896 Minnesota & Northwestern Railway depot in Minneapolis, Minnesota.

The most fascinating part of this build involves all the supporting details RE is adding to the scene such as the platforms and staircases. Follow along for even more inspiring detail ideas!

View the full thread on the MRH website

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3. *MRH* forum member **cduckworth** updated this reefer kit to bring it into the 1950s and be more appropriate for his layout era. Charlie gives the details of what he did in his thread about the project.

Branchline Northwestern wood reefer

MRH forum member and MRH author **cduckworth** (Charlie Duckworth.) recently posted his lastest rolling stock project. Charlie updated the older 1920s paint scheme to move it into the 1950s and be more consistent with his layout era. Charlie explains:

"This was a factory painted Northwestern reefer in gray and red but the 1928 as built scheme was too early for my 1950's layout. I stripped the sides and repainted to CNW early yellow and green colors. Odd Ball decals were bought off ebay. Car basically built out-of-box except I replaced the hand grabs on the sides and roof with wire. These cars were out shopped in 1952 in the lightweight passenger train colors, so it hasn't been in service long enough to get to weathered unlike the Katy boxcar."

Check out Charlie's thread for still more photos and background.

View the full thread on the MRH website

BEST OF THE MRH WEBSITE | 5

Weekly photo fun threads

The weekly photo fun threads always get some fun and inspiring photos. This month's threads are no exception ...

View the full post on the MRH website

4. MRH forum
member rjthomas909
(Robert T.) this
photo of loco
#1216 pulling a
mixed freight
around a curve on
his scenic
Crawford &
Cheroke layout.



5. Mark Mathu also posted this eye-catching photo. The Southern Pacific double-headed San Joaquin Daylight, train No. 51/52, over the Tehachapi Mountains using their Class MT-4/5 locomotives on an almost a daily basis in the late 1940s.







INDEX

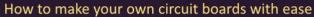
TABLE OF CONTENTS

MRHMAG.COM

INDEX

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Jim Six's steam loco weathering methods Why a bigger layout may not be better

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COMMENTS

Ken Patterson covers:

- **HOW TO MAKE REALISTIC TREES**
- MODELING FROM ABOVE / KEDDIE WYE
- 3D PRINTING WITH THE ANYCUBIC VYPER
- NEW PRODUCTS FROM BACHMANN ...



click to play video

PHOTOS AND VIDEO OF SUPERB MODELS

THIS MONTH JENNY KIRK SHOWS HOW TO USE PLASTIC ARMATURES and seafoam to quickly create realistic trees, Ken demonstrates the new Anycubic Vyper filament 3D printer, Dan Schiedell takes us to the Feather River Canyon, and Larry Harrington and Doug Blaine of Bachmann show off some upcoming products.

Jenny Kirk makes realistic trees



1. Jenny Kirk demonstrates how to make realistic trees quickly by using commercially available armatures and seafoam, also known as seagrass. It resembles the SuperTree material found in the USA.



WHAT'S NEAT 3



2. Jenny cuts off individual branches of seafoam and superglues them to the tree trunk.



3. In a few minutes a tree can be assembled. Color doesn't matter at this point.



4. When the superglue dries, Jenny uses a textured spray paint on the tree. Spraying from about 18 inches away, the dusting of paint gives the tree a unified color and a bark texture.



5. Ground foam is selected to match the color of the tree you desire, using a mixture of two or more colors.

What's Neat | 5



6. Jenny uses static grass layering spray as glue, but other glues or even extra-hold hair spray will work.



7. Using a box to contain the spray glue and loose ground foam, Jenny applies the glue to the tree structure.



8. Different colors and textures of ground foam are layered onto the armature and seafoam.



9. Multiple layers of glue and ground foam results in a naturally random looking tree.

What's Neat | 7



10. After drying, the trees can be applied directly to the layout. Also shown is a wire armature tree and a small tree using just the seafoam.

Modeling from above: Keddie Wye



11. Drone pilot Dan Scheidell follows a BNSF train through the Keddie Wye and onto the BNSF Gateway Subdivision towards Oregon in Modeling from Above.

WHAT'S NEAT 8

3D printing with the Anycubic Vyper



12. Ken demonstrates the Anycubic Vyper 3D printer, from unboxing to a finished print.



13. James Regier unpacks the Vyper from its shipping box. In his right hand is the printing tower, with the base/print bed next to his left hand.

WHAT'S NEAT | 9



14. An LCD screen is used to control the printer, from autoleveling the bed to selecting the file to print.



15. The printer came with a demonstration print of two owls, which took about two hours to complete.



16. The printer feeds the filament off a spool and into the printhead, where it is heated up to 500° Fahrenheit (260° Celsius) before being deposited onto the print.

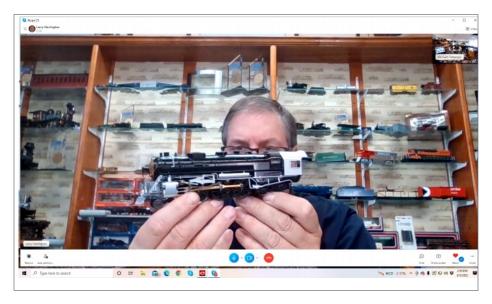


17. Ken describes the detail level as very high, as is shown by the owls.

What's Neat | 11



18. Larry Harrington of Bachmann Trains joins Ken via Skype.



19. Larry shows off a test sample of the upcoming HO scale New York Central Hudson (4-6-4) locomotive. To be released in four road numbers, it will also be available in as-delivered Roman and later Gothic lettering.



20. The model will feature TCS WOWSteam sound & DCC with Chuffinity and its Keep-Alive capacitor system. A drop-coupler pilot will be available as an option.



21. Doug Blaine, Bachmann's Vice-President of Marketing also joined Ken via Skype.

WHAT'S NEAT | 13



22. Doug shows off a test sample of "Ryan," which is part of Bachmann's HO scale Thomas & Friends collection. Based on a Great Northern Railway class N2 tank locomotive, Ryan is an 0-6-2.

To see all the details of Jenny's tree building segment, the full Modeling from Above video, as well as more information on the Anycubic Vyper and the new products from Bachmann, check out the video linked at the beginning of this article. ✓

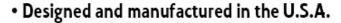




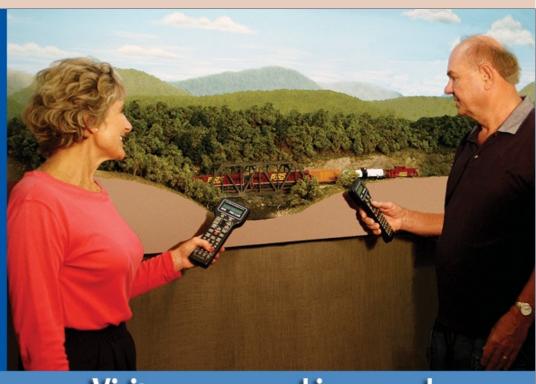
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INDEX

TABLE OF CONTENTS

MRHMAG.COM

INDEX



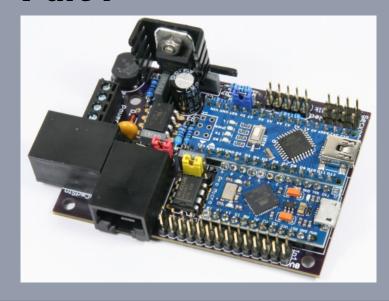
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Quad Servo Decoder-Monitor Part 1





Model Railroad Hobbyist | June 2022

1. Quad Servo Decoder-Monitor – two modules on one printed-circuit board.



Dr. Terry Chamberlain shows us a DCC

ACCESSORY DECODER WITH FEEDBACK ...

SOME READERS MAY REMEMBER (AND POSSIBLY HAVE BUILT) MY QUAD Servo DCC Decoder (QSDD), as published in Feb/Mar 2021 Model Railroad Hobbyist: online.fliphtml5.com/buups/wpwb/index.html#p=49 and online.fliphtml5.com/buups/hfkw/index.html#p=51.

This little unit acts as a standard DCC accessory decoder controlling four servos, each of which can switch a turnout. In setup mode, the QSDD provides precise control over the throw and rate of movement of each servo arm (and the linked turnout)



INDEX

TABLE OF CONTENTS

MRHMAG.COM

INDEX

- which was the main reason for designing and building the QSDD in the first place. This short video shows the setup process: youtu.be/0x-X1uAWssc).

My brother Derek has a large layout, operated using NCE DCC. He was keen to use QSDDs to control around 80 turnouts.

He also wanted feedback from each turnout to verify a DCC switch command had been acted upon, and he wanted the current position of each turnout shown on an indicator panel or mimic diagram on a computer screen. He ultimately wants to fit block occupancy detectors to all sections of the layout track to display where all his locomotives and rolling stock are at any given time.

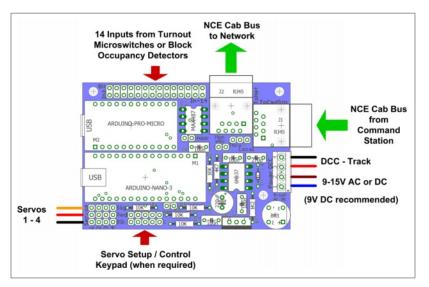
NCE Auxiliary Input Units (AIUs), each of which can handle feedback from up to 14 individual turnouts or occupancy detectors, could provide this feedback monitoring function. However, Derek found the cost of the commercial kits discouraging, so he turned to me for a cheaper DIY solution to match the proposed set of QSDDs.

I had come across the Arduino NceCabBus library developed by Alex Shepherd, and one of his example applications was for an AIU. Using this as a starting point, I developed a sensor similar to an AIU.

I had hoped to simply expand the functionality of the Arduino Nano module at the heart of the existing QSDD design, but I discovered that the Nano is inadequate for the AIU requirements. I needed an Arduino Pro-Micro instead.

I could have built my AIU look-alike as a separate unit to monitor and report all feedback status, but expanding the size of the QSDD printed-circuit board (PCB) to incorporate the additional Pro-Micro module was a tidier solution. I could fit and connect only one unit instead of two. The result: the Quad Servo Decoder-Monitor unit (QSDM) [1].

Quad Servo Decoder-Monitor Part 1 | 3



2. Quad Servo Decoder-Monitor - layout connections.



The two sections of the QSDM are functionally independent, and share only the on-board 5V voltage regulator. The QSDD section, using an Arduino Nano module and farthest from the camera, operates in the same way, and has the same setup procedure, as the original stand-alone unit, driving up to four servos in response to commands received over the DCC (track) bus.

In the foreground is the Monitor section, based around an Arduino Pro-Micro module, a cut-down version of the Arduino Leonardo, but not to be confused with the Po-Mini module which is based on a completely different processor.

The Pro-Micro can use its serial port independently of the USB interface to transfer the state of up to 14 inputs (from turnout switches or block occupancy detectors) directly to the NCE command station's cab bus. The cab bus connection is implemented using cheap and available Ethernet CAT5/CAT6 cables with 8-pin RJ45 connectors rather than the normal – and more expensive – NCE 6-pin RJ12 cables.

The two QSDM sections operate independently. If you already built one or more of the original QSDDs, it would be feasible to fit only the Monitor section components to the expanded PCB (with voltage regulator) and use the unit as a direct substitute for an NCE AIU.

A computer application exercises control over the functions of both QSDM sections. You can use either the JMRI suite, which runs on a variety of computer systems, or my own A-Track application running on a Windows PC, both with a USB connection to either an NCE Interface Unit for Power Cab systems, or a USB-to-Serial converter for Power Pro systems.

While JMRI works fine with a Power Pro command station, it appears to be unable to handle feedback from the QSDM Monitor section (or from standard NCE AIUs) when using even the most up-to-date Power Cab system. I cannot claim to be any form of JMRI expert so, if anyone would like to tell me differently, I will be happy to learn.

Quad Servo Decoder-Monitor Part 1 | 5

CONNECTIONS

All the connections to the QSDM are shown in diagram [2].

For best results, power the QSDM from a separate 9VAC or DC power supply with up to two amps of current to power several servos simultaneously. While the QSDM can operate on DCC layout power or with up to 15V external power, 9V will be far less taxing on the system's voltage regulator and its attached heat sink.

1. Supply power to the QSDM and attached servos through terminals 1 and 2 of the 4-position terminal block. The DCC track power connects to terminals 3 and 4 to provide DCC signal and commands to the QSDD section of the QSDM module, but not power in this configuration.

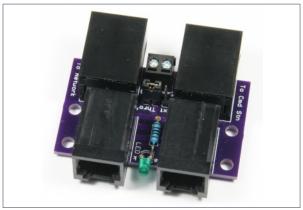
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You can supply power to the QSDM module via the DCC bus by bridging terminals 1 to 3, and 2 to 4. However, the higher DCC input voltage will increase power dissipation in the voltage regulator, which will require a larger heat sink.

A standard Ethernet cable connects the monitor section of the QSDM to the command station cab bus via one of the 8-pin RJ45 sockets (J1). The cab bus continues in daisy-chain fashion to the next QSDM (or AIU or other NCE device) from the second RJ45 socket (J2). You can only make connections to the cab bus after setting up the QSDM software and address, as will be described in Part 2 of this article.



3. RJ12-RJ45 link.



4. RJ12-RJ45 panel.

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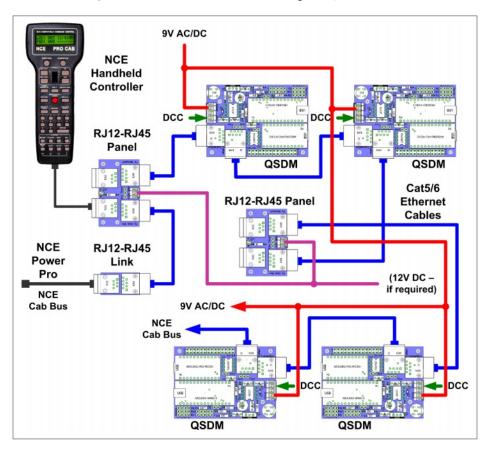
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CAB BUS NETWORK

The NCE cab bus connects the command station to all attached handheld controllers and other NCE devices (including AIUs), and the QSDM uses it to feed status information regarding turnout positions and block occupancy (where implemented) to the command station. Whatever computer application you are using can then fetch the status data from the command station.

The standard cab bus uses 6-pin RJ12 connectors, though in the case of the QSDM, I converted it to use 8-pin RJ45 connectors so I



5. Possible configuration for a cab bus network.

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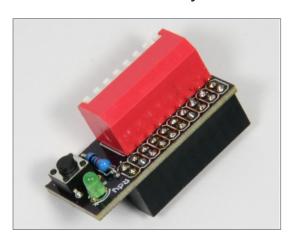
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could use cheap CAT5/CAT6 Ethernet cable for the cab bus network. Along with digital information, the cab bus carries power from the NCE command station at a nominal 12V DC to supply any connected handheld controllers or AIUs.

To link to the Ethernet cables, I created a couple of simple PCBs. The RJ12-RJ45 Link provides a straight-through connection from an RJ12 socket to an RJ45 socket [3], and the slightly larger RJ12-RJ45 panel interconnects two of each [4]. I have provided a diagram to demonstrate how you might connect the various units together in a functioning system [5].

You can extend the cab bus daisy-chain to incorporate up to 62 devices (each needs a unique address) over a span of up to 1000 feet. However, the excessive voltage drop of very long cables may prevent handheld controllers plugged into the end of the cable from working properly. This does not affect the QSDMs as they use an independent power supply, but for cable runs more than 40-50 feet, you should add 12VDC auxiliary power units to the cab bus [5].

The scheme in [5] only works with the RJ12-RJ45 panel if the NCE command station is connected to the left RJ45 socket as shown above. Auxiliary power routing will not work if the command station is connected to any of the other three sockets on the panel.



6. Plug-in module to set Monitor Address.

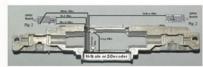


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7. Set Address module plugged on to the QSDM 14x2 header.

If auxiliary power is not required, you can connect the command station to any socket.

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INDEX

TABLE OF CONTENTS

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INDEX



8. Status View module plugged on to the QSDM header pins.

ASSIGNING A CAB BUS ADDRESS

The monitor section of each QSDM must have a unique NCE cab bus address. The NCE AIU has a package of eight dual-inline switches fitted to its PCB for this purpose. The switches only see occasional use, so to keep the QSDM as small as possible, I decided to create an additional module for these switches that I could plug into the QSDM only as needed [6, 7].

The Set Address module is fitted with a 10x2 header plug that fits on to the first 10 pairs of pins of the QSDM 14x2 header. Just like the NCE AIU, you enter the desired cab bus address for the monitor section as a binary number using switches 1 to 6. Full details on how to set up and use the Set Address module will be given in Part 2.

AN OPTIONAL QSDM FEATURE

Unlike the commercial NCE AIU, the QSDM lacks the 14 LEDs that clearly show the present state of the inputs to the device. Such LEDs are helpful in providing an immediate check that the wiring from a particular layout element to the AIU input is correct.

Unfortunately, the Arduino Pro-Micro module used in the QSDM Monitor section does not have enough pins to drive an LED for each of its inputs, but its operation can be modified to provide a

Quad Servo Decoder-Monitor Part 1 | 11

partial solution which can assist when initially setting up connections to the QSDM Monitor inputs.

You can program the five pairs of pins of the QSDM 14x2 header nearest the RJ-45 socket as outputs to drive an LED each, and plug a small, five-LED module (Status View) onto these pins [8].

Setting switches 7 and 8 of the set address module when programming the monitor cab bus address, allows you to enable display of the state of either the leftmost or the rightmost 5 pairs of header pins selected from the remaining 9 pairs.

Assuming we have a sensor such as a microswitch on a turnout servo, or a block occupancy detector connected to one of the selected groups of header pins, the state of the sensor will be indicated immediately by whether the corresponding LED on the Status View module lights up or not (when power is applied to the QSDM, of course).

Once you are sure all your sensor connections are sound, you can unplug the Status View module, ready for use on the next QSDM. Full setup details are coming in Part 2.

Interested in building your own QDSM? See the following link. (*mrhmag.com/magazine/mrh2022-06/bonus-extras*) ☑



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Dr Terry Chamberlain



Terry Chamberlain got into model railroading almost by accident in the 1990s when he responded to a request from some modelers in California to build a DCC system based around an Atari personal computer – and he had to build a simple layout to prove that it all worked. Eventually the project evolved into A-Track,

a Windows application to provide full computer support for the complete range of NCE DCC systems, with facilities like JMRI's Decoder Pro and Panel Pro.

Terry is a professional electronics engineer and spent most of his career in the UK defense industry designing, and managing the development of, large real-time computer systems for the Royal Navy. Now that he is fully retired, he is beginning to make progress building the small logging and mining layout he has been planning for many years (after several visits to Colorado). But he keeps getting distracted by new computer and electronics projects for model railroading. ■







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INDEX

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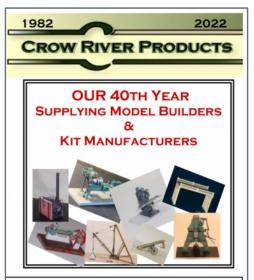








MRH Marketplace | 2



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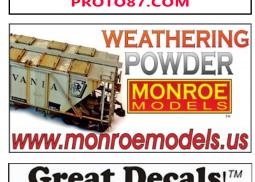


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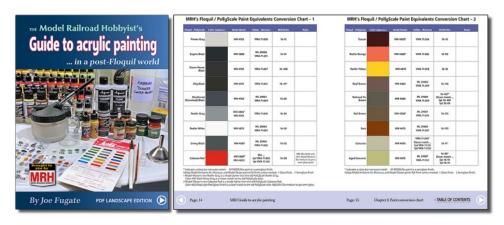
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INDEX TABLE OF CONTENTS

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INDEX

TABLE OF CONTENTS

Model Railroad Hobbyist | June 2022



AS OF APRIL 2022, the Siskiyou Line 1 (SL1) finally is no more. I started dismantling my SL1 back in 2018, but it's been a long process that's taken three distinct phases of dismantling, with the last being April 2022. I can tell you that 1100 square feet of layout, a third of which is on two levels, is a lot of layout!

Note: In this article, I'm including many never-before-published photos of Siskiyou Line 1. Enjoy!

WHY DISMANTLE THE LAYOUT?

When I turned 60 in 2015, we had a family meeting to discuss our coming retirement years. I want to keep doing *MRH* and TMTV for many years to come yet, but we agreed as a family we would like to relocate to some rural location and be near each other as a family. As for the timing of this move, we currently were disposing of my elderly mother's property and moving her in to live with us – and I said we're not relocating until she passes because that would stress her too much.

This meant my Siskiyou Line layout in the basement had to go, since you can't sell a house with a model railroad filling the basement. I held the last operating session in early 2016, and we spent the next year-and-a-half disposing of my mom's property and remodeling our house so she could live with us. Once that was done, I began dismantling the layout in early 2018. More on that in a bit.

My mom passed in February 2021 at age 92. After grieving her loss, we had another family meeting several months later and I

SISKIYOU LINE -1 RETROSPECTIVE 4

BACKGROUND ON THE SP SISKIYOU LINE



2. Siskiyou Line route that I modeled in southern Oregon. My Coos Bay branch routing to Roseburg was protofreelanced – the actual Coos Bay branch starts in Eugene.

My HO layout modeled the prototype Southern Pacific Siskiyou Line in Oregon, but with a twist. I am freelancing the Coos Bay coast branch so it comes out of Roseburg, Oregon instead of out of Eugene, Oregon as on the prototype.

Freelancing the Coos Bay branch out of Roseburg adds more interest to my layout given the yard at Roseburg is a focal point. It's actually not much of a stretch since the real Coos Bay line started out of Coos Bay toward Powers, OR and was named the Coos Bay, Roseburg, and Eastern in the late 1800s. They even surveyed the route and plotted it out on a 27-foot linen!

It was only after the Willamette Pass route over the Cascades in the late 1920s relegated the Siskiyou route to secondary status that the railroad changed the branch destination to Eugene instead of Roseburg. My Coos Bay branch routing, therefore, shows what almost was and lets me scratch a proto-freelancing itch.

The Siskiyou Line 2 will continue to follow this identical theme and prototype. ■

noted we were now free to execute on our relocation plans. The one question now: where did we want to move?

After several months of considering options, in March 2022, we met again as a family and decided on Tulsa, OK as our new home, a 2000-mile move from Portland, OR.

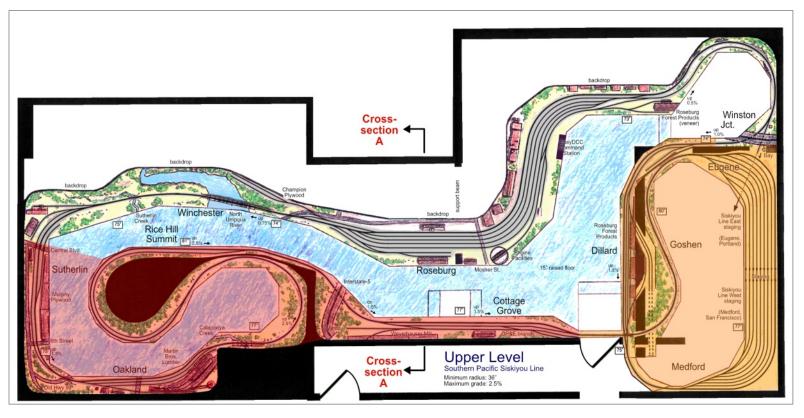
DISMANTLING IN PHASES

I did not dismantle the entire layout all at once, but instead did it in phases. Because I wanted to save buildings, bridges, and vegetation, just taking a Sawzall to the layout for rapid demolition was not an option. I needed to take a more deliberate, careful approach.

SISKIYOU LINE -1 RETROSPECTIVE | 6

Also remember, my Siskiyou Line 1 used a mushroom benchwork configuration [5], which allowed me to have two opposite-facing decks in the middle, but have each side appear single-decked since the upper deck has a raised floor. The raised floor allows the upper deck to be a similar relative distance from the floor, making it appear to be a single deck.

Even though my room space was only 810 square feet, the mushroom double deck configuration allowed me to get 1100 square feet of benchwork into that space. In other words, if my layout were all single deck, it would need an 1100 square foot room in order to fit.



3. I show the first two phases of dismantling here. Phase I removed the lower-right portion with Dillard, Goshen, and staging. It also removed the helix shown on the lower deck track plan [4]. Phase II removed Cottage Grove, Rice Hill summit, Oakland, two-thirds of Sutherlin, as well as the raised floor in that area. See [5] for the cut-away cross-section view A-A.



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INDEX TABLE OF CONTENTS

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INDEX

TABLE OF CONTENTS

Dismantling phase I: You can see from [3] and [4] which portions of the layout I removed when. I removed staging, the helix, as well as Dillard and Goshen area in the fall of 2018. As I removed parts of the layout, I carefully categorized items off the layout and saved them in various plastic bins [6]. I also saved as many bushes and trees as I could [7].

The phase I dismantling basically freed up my shop area so I could begin experimenting with Siskiyou Line 2 module sections [8]. I removed all of staging and the three-tier 40" radius helix that connected the upper deck with the lower deck.

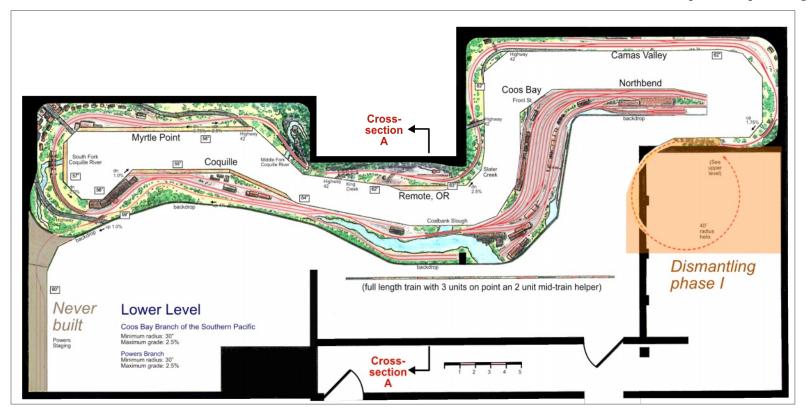
I also began taking all the equipment off the track and storing it into plastic roller bins with drawers [9]. I lined each drawer with acid-free archival paper so it would not attack the paint finish on

SISKIYOU LINE -1 RETROSPECTIVE | 8

the rolling stock and locos. Using these bins made it easy when it came time to move – we just wrapped each bin in pallet plastic wrap to protect it and loaded it into the moving truck.

Dismantling phase II: The following summer of 2019, my son and grandson helped dismantle more of the layout, this time the shelf with Cottage Grove, the Rice Hill peninsula, as well as the Oakland shelf and about two-thirds of the Sutherlin shelf. We also removed all the raised floor around the back of the Rice Hill peninsula. That gave me enough room to set up my new Siskiyou Line 2 test modules and work with them [10].

Dismantling phase II created enough debris that I rented a dumpster. It was a good thing I did that because the raised floor with all the carpet and padding created a lot more debris



4. On the lower deck plan, phase I dismantling removed the helix. The Powers staging on the left was never built. See [5] for the cutaway cross section view A-A.





INDEX TABLE OF CONTENTS

Siskiyou Line - cutaway view (A-A) Cottage Grove Remote West Coquille 15" raised floor

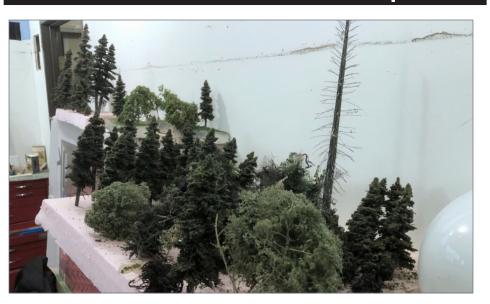
5. This cross-section diagram clearly shows the double-deck down the middle of my layout's mushroom benchwork.





6a, b. As I dismantled the layout, I saved the various parts in plastic bins and plastic tubs.

SISKIYOU LINE -1 RETROSPECTIVE | 10



7. I also saved as many trees as I could. The new layout will have the same theme, so I can use all the trees I can get.



8. Dismantling the helix and staging in the shop area as part of phase I gave me enough shop space back I could construct Siskiyou Line 2 experimental module sections.



9a, b. I stored my rolling stock and locos in these bins with drawers. The bungee cords kept the drawers from flopping open when moving the bins. The bins have rollers, which work for moving them a short distance indoors, but are not rugged enough for rolling long distances across a sidewalk, driveway, or pavement.



10. With the dismantling of phase II done, I had room to set up my Siskiyou Line 2 test module sections.

SISKIYOU LINE -1 RETROSPECTIVE | 12



11. Not only did the dismantling involve a lot of layout debris, but the raised floor with its carpet and pad generated even more bulky debris.

than the layout alone [11]. One of the biggest disadvantages of a mushroom configuration is all the material that goes into a well-constructed raised floor. I found that also applies to dismantling the layout – you get a lot of extra debris from a raised floor.

DISMANTLING PAUSE

As the spring of 2020 approached, I was planning on dismantling the center peninsula and leaving the Coos Bay branch from Myrtle Point to Camas Valley as somewhere to do

vendor demos until I had more of my Siskiyou Line 2 modules in place.

However as we all know, the pandemic completely changed everyone's plans. For us, that meant a big downturn in business at first, and scrambling to lay off folks yet still keep *MRH* operational. Fortunately, once everyone got used to the "new normal" we were able to cut costs and keep things going until we could re-hire again in 2021. Then my mom passed in February 2021, so we started to seriously look at relocating as a family. Throughout 2021, we spent time training the new *MRH* staff members.

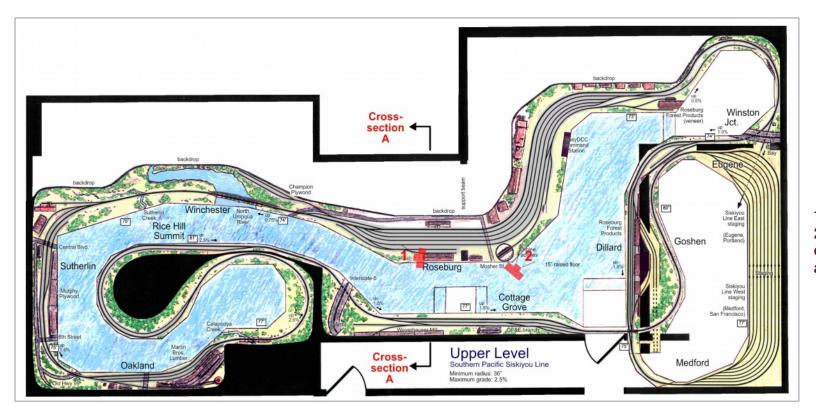
By the spring of 2022, we settled on a our new location (Tulsa, OK) and kicked things into high gear to prepare for a move 2000 miles across the country.

SISKIYOU LINE -1 RETROSPECTIVE | 14

RAPID FINAL DISMANTLE IN 2022

Given our moving plans now had a deadline, it became vital to get the rest of the layout dismantled quickly so we could put our house on the market. I hired some construction/demolition contractors to quickly remove the rest of the layout once I had removed all the structures, bridges, and vegetation that I wanted to keep. In three days, the entire great room in the basement contained only debris and all the stuff that had been stored under the layout.

When we moved my mother out of her property to stay with us in 2018, we stored a lot of her things under the layout just in case she wanted to see any of her treasured possessions while



12. The red camera 1 and 2 icons show the location of the camera for views 1 and 2 seen in [14, 15].



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INDEX TABLE OF CONTENTS

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INDEX

she was staying with us. A lot of those things still remained. Once the layout was gone, the stuff that remained had to be dealt with: trashed, given away, or taken to Tulsa.

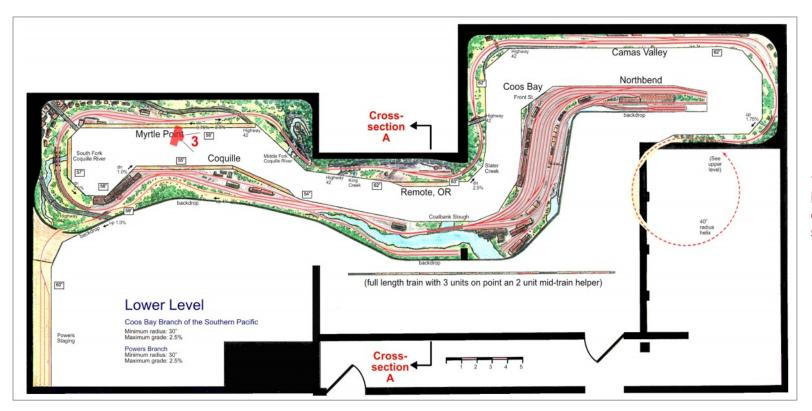
As a comparison, let me show you some before-and-after photos of the layout room. They show basically the same location, but the ones taken on the raised floor of the layout represent a higher viewpoint than when the raised floor has been removed in the bare room.

View 1 Before/After: View 1 [12, 14] shows the east end of Roseburg yard and the crossing over the North Umpqua River in the before photo. I took this photo on the raised floor at an op session about 10 years ago.

SISKIYOU LINE -1 RETROSPECTIVE | 16

The after photo shows roughly the same location in April of this year after the rest of the layout had been dismantled, but of course now taken from the room floor perspective. All that piled stuff either went to the dump, was given away, or got packed for Tulsa. Probably 80% of it went to the dump since about half of it was my deceased mom's items.

View 2 Before/After: View 2 [12, 15] shows Roseburg yard and a bit of the Dillard mill complex in the back. You can see the track meanders into an alcove in the far distance, curves around, and runs along the Dillard shelf through a hole in the wall. I took this photo at an op session about eight years ago, standing on the raised floor.



13. The red camera 3 icon shows the location of the camera for view 3 seen in [16].



INDEX

SISKIYOU LINE -1 RETROSPECTIVE | 18





14a, b. Before and after photos of the view 1 location in my layout room. See [12] for camera location.





15a, b. Before and after photos of the view 2 location in my layout room. See [12] for camera location.

In the after photo, you can clearly see the hole in the wall at Dillard and the alcove. I'm now standing on the room floor, which lowers the perspective somewhat. There are more railroad goodies piled in this photo, so maybe a third of what you see went to Tulsa.

View 3 Before/After: View 3 [13, 16] shows the signature high steel trestle scene on my Coos Bay Branch. I took this photo in the early days of the layout some 20+ years ago. This is one of the first scenes I finished so I could give folks an idea of what I hoped the entire layout would eventually look like. That's Mark Brown in the photo and his SP locomotives. Mark's great-looking locos helped me settle on modeling the 1980s SP on the layout.

What a stark difference in the after photo. You can see the corner on the left where the tunnel was located. In the far distance you can see the wall were the Dillard shelf ran, just above the red toolbox. Most of the stuff in this photo went to Tulsa.

A LOOK BACK AT THE LAYOUT THAT WAS

At this point, Siskiyou Line 1 finally is no more. I had about 60% of the layout remaining until it became clear we were moving, so the rest had to come out quickly. I now have a good idea of what the new layout's space will look like now that we're in Tulsa, and I will cover Siskiyou Line 2's new design in a few months.

Do I have regrets? Not really. I enjoyed the layout a lot, but it also had some thorny issues that irritated me. The layout was going on 30 years old, and I have learned a lot over the years about how to do the hobby. I have compiled my layout track design best practices in my Run like a Dream: Trackwork (see: store.mrhmag.com/store/p131/ebook/run-like-a-dream-trackwork.html for more). Frankly, I'm thrilled to have a chance to learn from my mistakes and do it better on a new layout.

SISKIYOU LINE -1 RETROSPECTIVE | 20





16a, b. Before and after photos of the view 3 location in my layout room. See [13] for camera location.

Let's walk down memory lane and take a fun look back at Siskiyou Line 1 through a series of (mostly) unpublished photos and captions.





17. Here's the scene that started it all – the tall steel trestle on my Coos Bay branch. I started the layout in May 1991 and by early 1993 I had finished this scene, since I was eager to see how the rest of the layout would eventually look. This canyon represents the middle fork of the Coquille River and goes back almost four feet into the corner, making this one of the deepest scenes on my layout. I used over 25 pounds of plaster modeling these hills and canyons! Two GP40s and a TEBU slug unit roll across the bridge – the actual prototype Oregon coast branches used this power combination often in the 1980s. I have prototype photos of a TEBU and GP40 mothers in Coos Bay, so I know they did run down the Coos Bay branch.

SISKIYOU LINE -1 RETROSPECTIVE | 22



18. Here's a more dramatic low shot of the steel trestle scene. This angle is about two feet below my eye level, so unless you're a lot shorter than I, you won't see this view without crouching down. I added the cross bracing on the underside of the girder spans so a view at this lower angle would look correct. The railroad used SD9Es as common power on the coast branches in the 1980s. The six-wheel trucks of the "Cadillacs" (as the crews liked to call them) handled the branch line track dips and bumps gracefully, making them some of the smoothest-riding locos to regularly run down the Oregon coast branches, hence their nickname, "Cadillacs."



SISKIYOU LINE -1 RETROSPECTIVE | 24



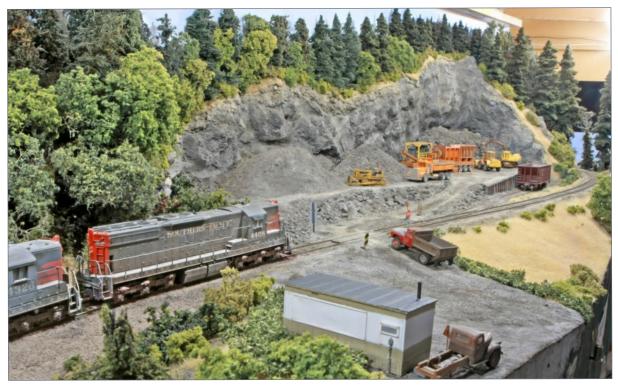


19. (Top left) Here's the other side of the tunnel you see on the right of [17]. That tunnel is about two 50-foot freight cars long, so it's just enough to provide a view separation. The bridge here goes over King Creek and Highway 42, the highway to Coos Bay on the Oregon coast out of Roseburg. Highway 42 and the railroad route basically follow the Coquille River canyon up through Camas Valley and then on to Roseburg. Again, we can see the GP40 mothers and the TEBU slug unit between, a common power consist for Oregon coast branch trains in the 1980s.

20. (Bottom left) Just past the King Creek bridge in [19] we encounter the Remote, OR gravel pit. The prototype has a truck-served gravel pit here, so I took some proto-freelancing license and added a railroad spur to the gravel pit assuming this would be true had the Coos Bay branch actually ran through here. Note the SD9E Cadillacs pulling this train, the eastbound Coos Bay Hauler, which runs from Coos Bay to Eugene by way of Roseburg. The Southern Pacific calls slow long-distance mixed freight trains "Haulers" – meaning they're in no hurry to get anywhere but they're often long and loaded down with lots of through freight.



SISKIYOU LINE -1 RETROSPECTIVE | 26



21. (Top left) Here's the same scene as [20] but shot from the other direction looking eastward. You can see the gravel pit here at Remote, complete with the mobile-home office and all the rock crushing and excavation equipment working the gravel pit. I modeled the look of the rock here after the actual prototype gravel pit near the real-life town of Remote, OR.

22. (Bottom left) Moving the camera farther down the line at Remote and looking back westward toward the King Creek bridge, we can see more of the eastbound Coos Bay Hauler as it rolls through Remote, OR. The train is climbing a 2.5% grade at this point. This was the last scene I finished on the layout just before dismantling began. Operationally, the gravel pit spur would have been switched by the Camas Valley local switcher, which we never implemented. I love this scene with the dump trucks, the rock crusher, and the excavation equipment. I modeled the wood piling retaining wall after one I found on the SP in Eugene yard.





SISKIYOU LINE -1 RETROSPECTIVE | 28





23. (Top left) As SD9E 4408 rolls east through Remote, it heads onto Slater Creek trestle. I used a lot of furnace filter conifers to capture the heavily forested look of the region in this scene. Slater Creek is a real location on Highway 42 farther up the Coquille River canyon above Remote. My mother, who was living with us until she passed, grew up on Slater Creek and told many stories about her teen years playing dirty tricks on travelers along Highway 42. For example, she would wrap very ripe cow pies in attractive gift-wrapped boxes and leave them on the sides of the road for travelers to find!

24. (Bottom left) Moving on around the corner at Slater Creek, we see the entire curved trestle, which I modeled after similar curved trestles on the Tilamook, OR coast branch. This location is the summit of the 2.5% grade out of Coos Bay. From here the railroad drops into Camas Valley before attacking the final grade up over Camas Mountain and into Roseburg. Camas Mountain is actually the 1.75% helix out of Camas Valley to the upper deck at the west end of Roseburg. The 2.5% grade to the summit at Slater Creek trestle is the ruling grade on the coast branch. I did this deliberately - I figured if a train could make it up the visible 2.5% grade, then it should have no trouble climbing the hidden 1.75% grade of my 40" radius helix to the upper deck at the top end of the Coos Bay branch.



SISKIYOU LINE -1 RETROSPECTIVE 30



25. After rolling under a Highway 42 overpass eastbound, the line drops down into Camas Valley. I never finished the scenery in Camas Valley, but on the east end of Camas Valley the line rolled through this scene at Ten Mile Creek, and I did finish this scene. In fact, I made the Ten Mile Creek scene the subject of my Siskiyou Line videos volumes 4 and 5 (still available as video downloads here: store.mrhmag.com/store/p27/tenmile-creek-series-download.html). This scene taught me you can do a lot with very narrow benchwork. The scene on average is less than 12" wide, with some of it as narrow as 9" from fascia to backdrop. The GP40/TEBU set here is pulling a Coos Bay Hauler westbound down the branch toward Coos Bay.

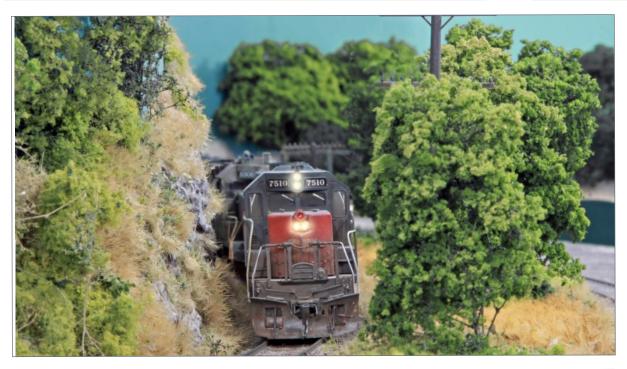






26. Once you got to the upper deck, the Coos Bay branch joined the Siskiyou Line main just railroad west of Roseburg. This scene shows the railroad west line about to enter Roseburg. I didn't photograph this location much, so you're viewing a seldom-seen area of the old layout. In this shot, an SD45R, an SD40T-2 snoot tunnel motor and an SD40 are in a power lashup. If you love big SP diesel power as I do, the Siskiyou Line was a dream come true in the 1980s.

SISKIYOU LINE -1 RETROSPECTIVE 32





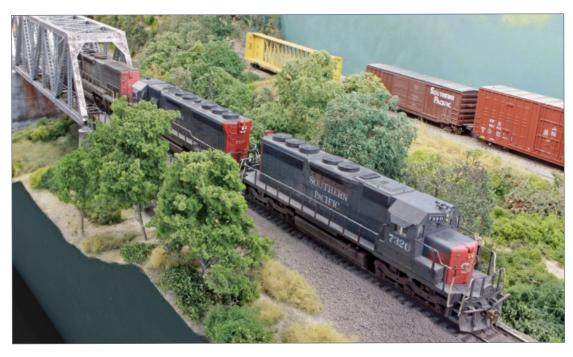
27. (Top left) Here's a shot of SD45R 7510 rolling into the west end of Roseburg yard. I modeled this after photos I had of the actual west end of the yard, with its vertical lava rock cut along the railroad line as it headed west out of Roseburg. Deciduous trees lined the side of the line opposite the rock cut. Since the prototype Siskiyou Line was originally the mainline through southern Oregon, the line followed mainline construction practices such as using heavy rail and superelevated curves. Here I modeled that using code 83 rail with the curve superelevated. I also employed a lot of static grass and silflor grass to model this scene.

28. (Bottom left) Speaking of SP diesel power, here's SD40 7320 leading a train out of Eugene into Roseburg yard on the west end of town. I used a lot of Kato units on the Siskiyou Line for the SD45s and SD40s. They run like a champ and seldom if ever gave me any trouble. I weathered this one to look like a working unit in the 1980s, somewhat grungy, yes, but a locomotive with decent paint and many good working years remaining. In the background is a Champion Plywood mill spur that never did get the mill structure itself.





SISKIYOU LINE -1 RETROSPECTIVE 34



29. (Top left) Another view of photo [28]. On the left you can see the two-span truss bridge over the North Umpqua River just railroad-east of Roseburg. In back you can see the Champion Plywood spur that never got a structure. One thing about modeling western Oregon – you need a lot of trees. I did what I could to save trees and vegetation from the old layout, since I never can have too many trees!

30. (Bottom left) On my Siskiyou Line, I used what I call a "sliding decade" of the 1980s as my modeling date. Take the current date and revise it to be a date in the 1980s – for example as I write this, it's June 10, 2022. On the layout, it would be June 10, 1982 today. Using this sliding decade, I would introduce changes throughout the decade as they happened. For instance, by 1986, the pending Southern Pacific-Santa Fe merger meant the introduction of the Kodachrome paint scheme. Here you can see an SD45T-2 tunnel motor freshly painted in the Kodachrome scheme running on my Siskiyou Line.







SISKIYOU LINE -1 RETROSPECTIVE | 36



31. (Top left) Another signature scene on my layout was this Winchester two-span truss bridge scene over the North Umpqua River on the upper deck. Other than some selective compression, this scene faithfully reproduces the prototype location just railroad east of Roseburg. In the last few years of the layout, I did make progress on painting the backdrop, so you can see the grassy and wooded slopes on the backdrop here.

32. (Bottom left) Here's how the scene in [31] looked when viewed from the aisle. You can see the power set is dropping off some cars on the east end of Rosburg yard in the distance. Along the Roseburg yard fascia, you can see all the door bolts I used to throw the yard turnouts. On the far right just barely visible, you can see a work train at the east end of Rice Hill summit. I never made provision on my benchwork for attaching skirting, so it always looked like a hack. The next layout will change that.







SISKIYOU LINE -1 RETROSPECTIVE 38



33. (Top left) I love this photo taken at the bottom of the Camas Mountain grade just east of Tenmile Creek where the line pops out of the helix tunnel. This is the first scenery I did using 6mm static grass, and I found it reproduced the look of a summer golden grass field better than anything else I tried. The static grass still looks quite realistic in a closeup photo. This newer Atlas GP40 model is one of two TEBU mother GP40 locos I have, and it runs quite well.

34. (Bottom left) Another view of the high steel trestle scene on the Coos Bay branch. I will continue to have fond memories of this scene since it's the very first area of the old layout that I finished. In the early days, this scene was the only one with finished scenery. Many early photos of the old layout featured this scene.





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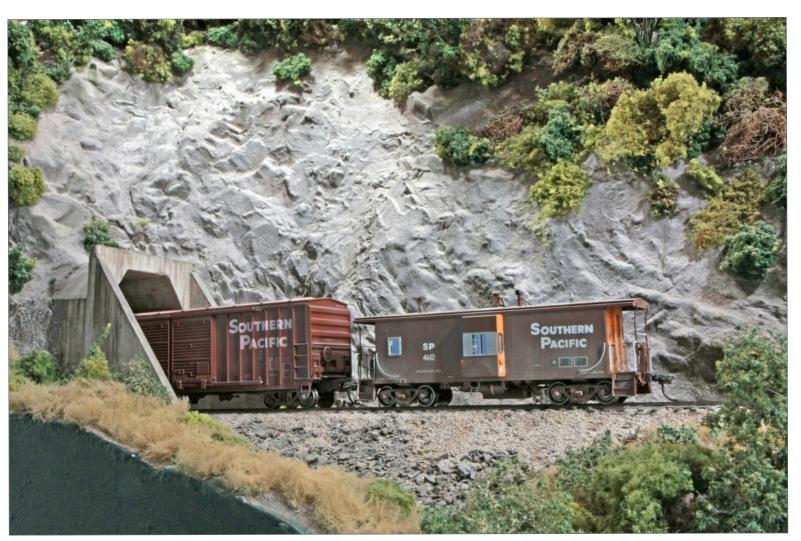
ON TO SISKIYOU LINE 2

We say our final goodbye's to Siskiyou Line 1 now that it's completely gone. I hope you have enjoyed this look back at how Siskiyou Line 1 ended its days. It's now on to Siskiyou Line 2.

SISKIYOU LINE -1 RETROSPECTIVE 40

Later in 2022, I will give you an update on Siskiyou Line 2. We'll look at its new space and how I'm using TOMA methods to build the new layout piecemeal, a module section at a time. ✓





35. The Siskiyou Line 1 layout "train" has now passed and we've watched the caboose roll off into the distance. This is one of two tunnels on the layout - the other tunnel was the **Camas Mountain tunnel** hiding the helix connecting the lower deck to the upper deck. This tunnel here between Remote, OR and Myrtle Point, OR was purely cosmetic, and served to increase the sense of distance between Camas Valley and Myrtle Point.





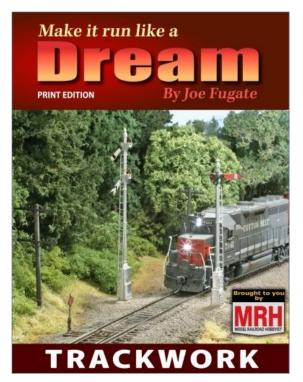
JEFF PALMER REVIEWS JOE FUGATE'S TRACKWORK BOOK ...

EVERY GROUP HAS THOSE WHO POSSESS KNOWLEDGE THAT OTHERS LACK. This institutional knowledge is generally not written down, but rather shared from person-to-person and gained through experience. In his *Make it Run Like A Dream* series of books, author Joe Fugate has written down a lot of that institutional knowledge [1].

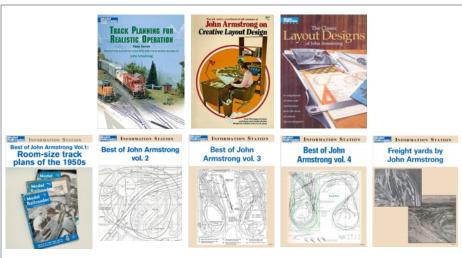
The first book in the series, *Trackwork*, came out in 2016. At the time, I was helping a friend rework his poorly performing layout that was suffering from derailments, poor electrical conductivity, and a host of other maladies associated with trackwork. Joe's book was helpful and covered a few of my pet peeves. Get out your highlighters and take notes.

Most of us are not good planners. Instead, we tend to fly by the seat of our pants. While our layouts would benefit from better planning, most of us rely on those who seem to instinctively know what to do and when to do it. It's that knowledge we want.

First Look 2



1. Cover of Joe Fugate's Make it Run Like a Dream: Trackwork.



2. John Armstrong authored many books on track planning.

FIRST LOOK 3

Joe begins his first chapter with a quote from Mike Confalone, known for his Allagash Railway: "Good performance doesn't happen by accident." He references legendary track planner and author John Armstrong extensively [2].

John not only detailed the steps for designing a layout, but he also provided hundreds of layout plans to help us get started. Carefully studying these plans provides good insight into the placement of buildings, trees, telephone poles, or other obstacles so they do not become obstacles for operators.

Few situations can ruin an operating session like snagging a sleeve on a telephone pole or bumping and damaging buildings and scenery that get in the way when you're trying to uncouple a car. Determining where you want buildings to go so they don't interfere with operators is an important part of planning trackwork, and not every inch of your layout needs to be covered with track.

Chapter 1 of Joe's book does a great job of defining "a good quality run" as being when the scenery looks appropriate and the trains are interesting to run, perform well, and rarely derail. The chapter ends with a summary of don'ts you should not miss.

The second chapter discusses the need to determine standards in planning your layout. The length of locomotives you want to operate, the track manufacturer, the code of track you want to use and where, the turnouts you want and where, and maximum grade are all important considerations. You'll also want to think about the clearances you need for runarounds, yards, bridges, structures, and curves.

In thinking about these things, it helps to first think about your layout's purpose. Are you wanting operations or a model? If you want to do operations, will your layout be focused on mining, logging, freight, or passenger?

Think about how scenery might interact with operations. Are there telephone lines, multi-story buildings, or trees that might interfere spotting or reaching in to uncouple cars? The reach

space necessary to work with cars is an important consideration in planning tracks and scenery.

In chapter 2, Joe suggests using mockups to help find answers to these and other questions. They provide a visual tool to test how structures fit on the layout and how they complement or detract from the overall scene.

Chapter 3 is a discussion of the tools you need to build trackwork successfully, starting with the NMRA standards gauge and levels. Most vendors build to NMRA standards, and the gauge is a key tool to verify that all turnouts, curves, and wheelsets comply with specs for smooth, derailment free running [3].

Levels are almost as important as the NMRA standards gauge. Slight leveling issues can cause the car to roll unintentionally when spotting or coupling. At times, the roll-aways have been so frustrating that I would carry a square toothpick to chock car wheels before trying to couple or uncouple.



3. NMRA standards gauge.

FIRST LOOK 5



4. Building a level layout can involve several level tools.

From framing to the benchwork to laying the last rail, leveling is important for building a successful layout. I use a variety of carpenters' levels and smaller levels in my construction. For checking track level in its final stages, I like to use the iHandySoft level on my iPhone or, my favorite, the Micro Mark miniature digital level (84519).

Chapter 3 also discusses roadbed materials and the advantages of spline construction. With materials such as foam, for example, I have seen the track go out of level when operators leaned on the layout near the rails.

Chapter 4, which looks at curve radius as a function of equipment length, is one of my favorites. For decades, we observed various rules-of-thumb about curve radii based on appearance. An 18" curve was not prototypical, or a 48" radius looks prototypical, but is impractical for the space most people have.

There was always a ratio involved, though it was imprecise, based on a "looks right" formula. Many modelers would bend flex track to various radii – 48", 36", and 24" – place rolling stock on it, and eyeball it. It did not take long to figure out that the greater the radius, the more prototypical the cars looked and that 48" looked best, but most people do not have space for more than 24" to 36" minimum radius curves.

Chapter 4 provides a precise formula to determine turning radius, based on maximum car length you want to use: 3X the car length is minimal, 4X will look better and provide better operation, and 5X will allow you to easily couple and uncouple on a curve.

First Look | 6

I model HO standard gauge logging and mining. A Kadee 40' boxcar is my standard for maximum car length, at about six inches including couplers. Using this formula, I can calculate that my boxcar will need a minimum radius of 18", and that a radius of 30" should be sufficient to couple on a curve [5].

The discussion of locomotives involves more thought, but it's also outlined in the chapter, along with s-curves. Joe outlines how he hand-laid curves using three-point track guides, the use of "Ribbon Rail" curve gauges and Fast Track's "SweepSticks".

The fifth chapter discusses grades and vertical curves, including couplers, loco performance on grades, and what the maximum grade should be for what you want to model. He also provides tools and formulas to calculate vertical curves, which ease the track through changes in grade.

This chapter has several charts from John Armstrong and John Allen on how grades and curves affect locomotive performance. This is prime stuff. It doesn't get any better than John Allen and John Armstrong.

Chapter 6 discusses turnouts and complex trackwork. Joe demonstrates how to address some of the most common derailment points. He expands upon the topics of closure and replacement radius, with good definitions, clarifications, illustrations, and examples to describe unfamiliar terms.

Ratio	Calculated radius for HO scale 40' boxcar
3x	18"
4x	24"
5x	30"

5. This table shows how the ratio for car performance relates to a 40' boxcar.

First Look 7



6. HO curve alignment gauges from RibbonRail.

Chapter 7 is about easements and super-elevation. Turnouts create easements as a function of their design, so their design can teach us about transitioning from a curve to straight trackage. Joe also offers methods for super-elevating curves borrowed from John Armstrong, who used 0.100" styrene strip.

Chapter 8 gets into rail alignment, which is another key issue that can differentiate between smooth operation and derailment. Joe has a section in the chapter entitled "Not all flex track is created equal," which includes a photo of the stacked ends of many popular flex track products to illustrate that matching two vendors' tracks is no trivial task.

The biggest issue is varying railhead widths, which can lead to derailments when combined. Joe recommends sticking with one product throughout the layout for consistency.

Joe also talks about expansion gaps in the chapter, highlighted in the opening photo with two business cards used to set a gap of 0.020". Be sure to take notes on how often and where to make expansion gaps. Also note how often rail joints are soldered.

I really like the section on rail preparation, which makes it easier to join two rails by filing the ends. Forcing the rails together can distort the rail joiner. Joe goes on to discuss how he handles curved track, different code rails, and staging tracks. Great chapter!

RAIL JOINERS

Rail joiners are necessary to maintain track alignment, but from an aesthetic point of view, they are ugly! Some manufacturers' rail joiners are bigger

than others, and this is one of those cases where smaller is better. I use Micro Engineering rail joiners for their low profile [7].



7. Rail joiners come in different sizes. From the top: Atlas, Peco, and Micro Engineering.

Even the Micro Engineering rail joiners are long enough to require you to remove and reshape ties to accommodate them, which is unsightly. Cutting the rail joiners in half helps minimize this distraction [7].

I use rail cutters to cut the joiners, which deforms them, so I must reshape the joiner to its original form so it will slip onto the rails as originally designed. I built a tool that makes this much easier. I soldered a piece of code 83 rail into the end of a 6" length of 1/8" brass tube and filed the end of the rail to a point [9].

I insert the pointed rail end into the joiner and work the joiner onto the rail. A piece of Masonite can help with this [9]. Once the cut joiner is on the rail, I use pliers to flatten the sharp edges [11].

FIRST LOOK 9



RAIL JOINERS CONTINUED ...



8. Side-by-side comparison of full rail joiners at top, and clipped rail joiners middle and bottom. The shorter rail joiners still do the job of keeping the rails in alignment.



9. This is the tool I made to re-shape the rail ends after cutting them in half.



10. Pushing the tool into the flattened rail joiner to restore its shape.



11. Rail joiner halves before and after repair.



Chapter 9 discusses hidden tracks and the helix. Hidden trackage is a maintenance nightmare that frequently requires crawling under the layout, removing sections of scenery, or using stools and ladders to access it.

While a long tunnel or a helix is one of those necessary evils to transition from one layer to another, you should plan them well. Joe shares the experiences from his own layout and the knowledge he gained, especially about building helixes. He also offers a unique way of tracking a train's progress through these sections.

Chapter 10 is about track wiring. The chapter starts with addressing questions of what gauge wire to use for the power bus and for feeder drops, and how often you should drop feeders. The chapter contains a wealth of information about wiring frogs and turntables, and organizing the wiring to avoid a rat's nest underneath your layout.

The real dirt of this book is in Chapter 11, "Track Maintenance: Cleaning the Rails and Tuning Turnouts." Over time, our tracks gain a layer of black metal oxide gunk resulting from micro arcs of current between the rails and locomotive wheels. Combined with dielectric contaminants like oil that attract dust, you have a non-conductive mess on your tracks that will rob your locomotives of power and DCC signal.

Everyone has an opinion about track cleaning. There are many stories about how eraser-type rail cleaners (Bright Boy) or other abrasive cleaners don't work in the long run because they cause micro scratches on the rails that attract dirt. The main problem is not the micro scratches but that these methods offer no protection from future oxidation.

Liquid cleaners like isopropyl alcohol, acetone, and mineral spirits clean well, though don't offer protection. Electronic contact cleaners such as Neverstall, CRC 2-26, and NO-OX-ID are designed to clean, lubricate, and prevent oxidation [12].

Joe details his experiences with each of these cleaners, as well as graphite sticks. The graphite sticks were new to me, so I ordered a couple of boxes of graphite 2B sticks of varying widths for

FIRST LOOK 11



12. A variety of cleaning agents that model railroaders commonly may use.

experimentation. I currently use NO-OX-ID and am happy with the results, but Joe's recommendation caught my interest.

Finally, the chapter discusses turnout tuning, using the NMRA standards gauge as an aid. Commercial turnouts are supposedly built to NMRA standards, but if a specific turnout seems to be picked often, check it!

The points might not be closing properly, or a bend in the point might make it stick out just enough to catch wheel flanges. The frog point may be bent or worn. Joe does an excellent job of describing the turnout tuning process with accompanying photos.

Chapter 12, "Track Problem Diagnosis and Repair," contains fixes for a host of track issues, including kinks, bows, turnout points, solder joints, and bad track. Break out the voltmeter and get on board with Joe. Maintenance may be a pain, but it's a necessity to operate.

I started off this article talking about institutional knowledge, most of which is verbal and shared with friends. Joe has codified the

knowledge with Trackwork, available in hardcopy or electronic form. There is something in there that you don't know or have forgotten, but better, it's something you can reference and share with friends. \square

JEFF PALMER



Jeff spent 50 years developing software, and 25 years as a college professor. During that time, he was a modeler. He loves to build structures, bridges, scenery, and locos, and his interest is in logging and mining (narrow gauge). He enjoys the ruggedness of logging and mining railroads, and the

scenery and landscape. Model railroading allows him to expand his skill set, work with his hands, and share with his friends, the things he has learned.

About two years ago, he completed his MMR (Master Model Railroader) certificate from the NMRA. During that journey, he had the privilege of meeting many modelers he looked up to. He hopes to be a part of that group someday. ■











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Model Railroad Hobbyist | June 2022



Preparing electrofrog turnouts for DCC

YouTuber **Bob Wesneski** shows how to prepare a PECO electrofrog turnout for installation on a DCC layout. Bob's methods also work with the new Unifrog design.

Bob's methods ensure you will have no electrical problems later. Turnouts can be a huge electrical headache if not wired properly, so take heed to his advice and you will be glad you did. ☑



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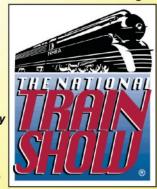
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Model Railroad Hobbyist | June 2022

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



INDUSTRY NEWS

Frank R. Brown 1932-2022

Frank Brown, inventor of the patented Xuron Micro-Shear wire cutters and numerous specialty pliers and cutters popular with hobbyists, passed away at his home in Sanibel, FL in May. He was 89 years of age. A native of New Brunswick, Canada, Brown established the Xuron Corporation in Danbury, CT in 1971. He served in the United States Army during the Korean War.

Marshall Thomson 1945-2022

Marshall Thomas Thomson, owner of Republic Locomotive Works passed away in Cathlamet, WA in March. After earning a degree in Forest Engineering at the University of Washington, Thomson worked in the wood industry until his retirement from Weyerhaeuser as chief engineer in 2008. Republic specialized in narrow gauge cars, locomotive kits and detail parts with a unique focus on Nn3 scale.

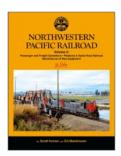
Monroe Models acquires Republic Locomotive Works
The assets and rights to continue manufacturing Republic
Locomotive Works products have been purchased by Monroe
Models, St. Cloud, MN. Bruce Monroe expects to have the

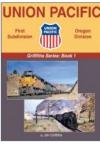
THE LATEST MODEL RAILROAD PRODUCTS, NEWS & EVENTS

June New Products all Scales | 2

acquisition relocated, organized, and all RLW items available for sale on the Monroe Models website (www.monroemodels.us) this fall.

NEW PRODUCTS FOR ALL SCALES



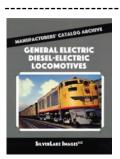


New titles coming this fall from Morning Sun Books include Northwestern Pacific Railroad. In this second volume, coauthors Scott Inman and Ed Mackinson cover passenger and freight operations, MOW equipment, and the Petaluma & Santa Rosa Railroad.

Also scheduled for release this fall is *Union Pacific, First Subdivision-Oregon Division,* which presents the photographic journeys of Hank and Jim Griffiths in the stunning Blue Mountains of Oregon. The UP is featured from Huntington to La Grande, and the last days of steam operation on the Sumpter Valley Railway.

Additional books planned for publication late this year include volume 3 of *Soo Line Power, Trackside Around Western New York 1995-2017* with Michael Zollitsch, volume 3 of *Canadian Pacific Power: Covered Wagons,* and *Penn Central MU Cars* by Robert J. Yanosey.

Info: www.morningsunbooks.com



Silver Lake Images has released *General Electric Diesel-Electric Locomotives*, a reproduction of several GE catalogs. The softcover 110-page book includes reprints of promotional material and GE publications on a variety of locomotives including 45-ton, 65-ton, and 80-ton industrial switchers; U25B

JUNE O SCALE NEWS 3

and U25C locomotives, and GE's gas turbine-electrics. Info: www.ronsbooks.com

O SCALE PRODUCT NEWS



Atlas O and its authorized dealers are taking reservations for EMD SD70M-2 and SD70ACe

diesel locomotives. Features on the O scale model include metal handrails, moveable roof fans, metal body-side grilles, a hand painted engineer cab figure, and onboard DCC/DCS decoder. LEDs are used to illuminate the number boards, cab interior, directional headlights, and operating ditch lights.



Liveries include three Canadian Pacific locomotives in special schemes honoring Army

Pride, Air Force Military Pride, and WWII Military Pride. Additional road names in this release include Canadian National, Canadian National (Grand Trunk heritage scheme), Vermont Rail, Ferromex, Kansas City Southern, Montana Rail Link, Union Pacific, BNSF, and Norfolk Southern. Both 2-rail and 3-rail versions of the O scale locomotive will be available.

Info: www.atlasrr.com



Atlas O plans to release two versions of a Russell snow plow this summer. A Russell plow decorated for Long Island Railway

will be available from Trainworld (<u>www.trainworld.com</u>). A Nickel Plate plow will be available through Mr. Muffin's Trains. Availability is expected later this summer.



INDEX

TABLE OF CONTENTS

MRHMAG.COM

INDEX

TABLE OF CONTENTS



Mr. Muffin's Trains will also be the exclusive source for an Atlas O operating Difco dump car decorated for the Monon. The car can be activated with any O gauge operating track section. Info: www.mrmuffinstrains.com



A unique Atlas O triple-bay Center Flow covered hopper decorated for Sunbeam Bread will be available later this summer from Public Delivery Track, a specialty retailer located

in Paso Robles, CA. The O scale model is based on an AC&F Center Flow prototype introduced in 1961. Both 2-rail and 3-rail versions will be available.

Info: www.publicdeliverytrack.com



Golden Gate Depot/Sunset Models has announced two new passenger trains in O scale, the D&RGW 1950s 'Prospector" and the 1937 Santa Fe Super Chief. To be

produced in aluminum, the Prospector is being sold as an eight-car set: RPO, baggage, baggage/coach combine, 2 Pullman coaches, diner lounge, 5-5-6 sleeper, and a dome observation. Extra Pullman coaches and 5-5-6 sleepers will be available. The aluminum six-car Super Chief set consists of the baggage car, an 8-1-2 sleeper, a 6-2-2 sleeper, a dorm/barber/buffet, a diner, and an observation car. Extra cars that may be ordered for the Super Chief are 8-1-2 and 6-6-2 sleepers. All cars will include full interior detail, flicker-free LED lighting,

June HO scale news | 5

ball bearing trucks, and a high level of detail.

Info: www.goldengatedepot.com

HO SCALE PRODUCT NEWS



New HO scale freight car kits from **Accurail** include a 3pack of Pullman Standard triple-bay covered hoppers decorated for Illinois Central Gulf. Details of the lettering schemes are different on each of the three cars.



The lettering scheme on this Denver & Rio Grande Western USRA twin-bay open hopper includes a Royal Gorge/Moffat Tunnel herald.



This HO scale Texas & Pacific 40' riveted steel boxcar is based on a class XM car built in 1924. All Accurail HO car

kits come with Accumate knuckle couplers and appropriate trucks with Delrin wheels.

Info: www.accurail.com





P Rala

GENERAL ELECTRIC U50 LOCOMOTIVE

By 1963, the horsepower race for diesel locomotives had reached 2,500hp and the only way to get significantly more power was by mounting two diesel

engine and generator sets on one chassis. General Electric's answer was the U50 with two 2,500hp FDL-16 diesel engines, each with a generator, full radiator, and dynamic brake setup. The U50 was 83′ 6″ long and at a height of 15′ 10″ it towered over most of its contemporary locomotives. Up front was a tall cab without a front walkway, which gave the U50 its unique blunt nose appearance. Under the limitations of traction technology at the time, eight motors were needed to convert the horsepower into axle power. This required two sets of two-axle AAR-B trucks mounted on a span bolster. The trucks were recycled from the scrapped UP gas turbine locomotives. The UP and Southern Pacific each ordered three U50s in 1963. SP's differed by having a cab door and headlights beneath the front windows. Over the next two years the UP took delivery of 20 more. By 1977 all of GE's U50s were inactive.



An HO scale Genesis version of a General Electric's U50 is at

the top of **Athearn's** production schedule for July 2023. The release will include four road names which will all feature illuminated number boards and classification lights, working truck lights, and see-through air intakes.

Three Union Pacific road numbers will be available including locomotive No. 41 which was repainted after a fire with the 1970s-era slogan *We Can Handle It.*



Like the Southern Pacific's prototype U50, Athearn's HO

version will have a headlight in the blunt nose.

June HO scale news | 7



As part of its Legendary Liveries series of offering

locomotives that did not actually exist, Athearn will release its HO scale U50 decorated for Santa Fe and as a General Electric demonstrator.



Features on the Genesis GE U50 include LED lighting.

coupler cut levers, MU and trainline hoses, cab interior details, walkway tread, windshield wipers, wire grab irons, Celcon handrails, McHenry knuckle couplers, and a fuel tank detailed with fuel fillers, fuel gauges, breather pipes, and retention tanks. The Genesis driveline is powered by a 5-pole skew wound motor with machined flywheels. Genesis DCC models will have onboard decoders with SoundTraxx Tsunami2 sound and four cube speakers.



Athearn has included a Genesis series 13,000-gallon acid tank car in its July 2023 production schedule. The model will feature etched metal walkways,

separate wire grab irons and handrails, full underbody details, and roller-bearing trucks with metal wheels and rotating bearing caps. Variations will include two body phases with different top platforms and end sills depending on the prototype being modeled.



Decorating schemes will include Grupo Mexico and GE Rail Services. Union Tank Car and Procor will be available with

tanks painted both black and white.

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EMD GP15-1 LOCOMOTIVE

EMD's GP15-1 is a 4-axle diesel-electric locomotive built by General Motors Electro-Motive Division between June 1976 and March 1982. It was generally employed as a yard switcher or light road switcher.

EMD offered the GP15-1 as an alternative to the rebuilding programs that many railroads were applying to upgrade their early road switchers. The principal users of the GP15-1 were Chicago & North Western, Missouri Pacific, Conrail and Chesapeake & Ohio. The GP15T version used a turbocharger to generate more power from EMD's relatively small 645E 8-cylinder engine. The GP15-1 used the 12-cylinder 645E prime mover.



An HO scale Genesis version of an EMD GP15T is included in Athearn's

July 2023 production schedule. Features on all road names include illuminated number boards and classification lights. Three CSX units will be available with blue and yellow frame striping, and ditch lights at both ends.



Conrail GP15-1 units will be available decorated for Operation Lifesaver and with both large and small

can opener logos. Conrail units will have front ditch lights, and small EMD plow/pilots.



Missouri Pacific GP15-1s will have small EMD plows on both ends.

Although not apparent in this illustration, the model will come with newly tooled MP-style solid handrails.

June HO scale news 9



This release will include Rock Island Rail GP15-1 No. 1106, an ex-CNW unit with a UP-style front plow

and operating front and rear ditch lights.



As part of the Legendary Liveries "what if?" series, Athearn has included two Southern Pacific GP15T

units in this production run. SP details include a cab-mounted Gyralight, nose-mounted UDE light, cab air conditioner, large snowplow, and Blomberg-M trucks.



Also Legendary Liveries models, Denver & Rio Grande Western versions of the

turbocharged GP15T will have a nose-mounted Gyralight, Nathan M-3 horn, Sinclair radio antenna, and Blomberg-M trucks.



Completing Athearn's July 2023 release of GP15T road switchers is a pair of Apalachicola Northern units

in a vibrant blue paint scheme. Like the AN prototype, Athearn's HO version will have a nose-mounted single Grya light, roof mounted A/C, and canvas sunshades.

Athearn's GP15-1 and GP15T will feature the Genesis driveline with 5-pole skew wound motor and machined flywheels. Additional features include LED lighting, coupler cut levers, MU and trainline hoses, cab interior, walkway tread, windshield wipers, lift rings, wire grab irons, sander lines, Celcon handrails, detailed fuel tank, and McHenry knuckle couplers. Both DC nonsound and DCC units equipped with DCC decoder with SoundTraxx Tsunami2 sound with dual cube speakers will be available in the July 2023 release.



Athearn will include a standard HO scale six-axle SD40 in the July 2023



INDEX

TABLE OF CONTENTS

MRHMAG.COM

INDEX

TABLE OF CONTENTS

production schedule. The list of road names begins with two Southern Pacific units in the post-1981 rebuild configuration with GRIP battery box doors, front and rear SP light package, and modified front cab windows.



Santa Fe SD40s in this release will have front and rear pilot foot boards and a Stratolite

beacon light on the roof.



Two Kansas City Southern versions of the SD40 will have 81" noses. KCS-style rock

plows, and a brake wheel mounted on the rear porch.



Western Maryland SD40s Nos. 7446, 7447 and 7448 will be included in Athearn's Iuly

2023 release. All will have EMD medium plows on each end and Flexicoil trucks with high brake cylinders.



The small letters in front of the road numbers identify this SD40 as belonging to the

Colorado & Southern Railway subsidiary of the Chicago, Burlington & Quincy. Three C&S/CB&Q road numbers will be included in this release.



Other than a roof top air conditioner and dual beacons. the Pacific Harbor Line's SD40s

in this release appear to be standard units, however, it's a different story under the hood. To meet EPA Tier 3 emission standards PHL SD40s were rebuilt in 2012 with CAT prime movers.

Features on all Athearn SD40s include bi-directional LED lighting, uncoupling bars, rubber MU hoses, photo-etched stainless steel windshield wipers, wire grab irons, see-through dynamic brake and radiator fans, 4,000 gallon fuel tank, an improved 5-pole skew wound can motor, and McHenry knuckle couplers. DCC units have a Tsunami2 DCC/Sound decoder and dual cube speakers. Non-sound models have a 21-pin NEM DCC plug.

June HO scale news | 11



An Athearn 40' Pfaudler milk car is scheduled for release in July 2023. The HO scale model is based on specialty

insulated house cars built around two 6,000 gallon glass lined tanks and a brine cooling system. Since the cars were usually routed in passenger trains, they were built with appropriate trainlines, express trucks, and were painted Pullman green.



Athearn will offer the milk cars decorated for Chicago & North Western, Pfaudler, Reid Ice Cream,

Alderney Dairy, and Merkle.



A 40' bulkhead flatcar, packaged under the revised Roundhouse brand, is the final item on Athearn's July 2023 production schedule.



The ready-to-run model will have mostly molded on details, 50-ton Bettendorf-style solid-bearing trucks with 33" machined metal wheels and McHenry knuckle couplers.



Road names will be Central of Georgia, Southern Pacific, Bangor & Aroostook, Nacionales de Mexico. Southern Railway.

Apache Railway, Chesapeake & Ohio, and Gulf, Mobile & Ohio. Info: athearn.com



Atlas has released an HO scale ACF 3560 cu. ft. four-bay Center Flow covered hopper to dealers. The

Master series model with ten 20" loading hatches features etched metal roof walks, Accumate couplers, and 100-ton roller-bearing trucks. The model is based on a prototype built between 1967 and 1972.



Decorating schemes include ACFX, ALAX, DOWX, CCBX-Union Carbide. CRDX-Interstate Seed, ADM, J.M.

Huber, and XOMX-ExxonMobil.



INDEX

TABLE OF CONTENTS

MRHMAG.COM

INDEX

TABLE OF CONTENTS

JUNE HO SCALE NEWS | 12



Atlas has also released a Trainman series 3560 cu. ft. triple-bay covered hopper to dealers.



Road names are ACFX-Cancarb, Georgia Pacific, C&O Chessie, CSX, ACFX-Kerr-McGee, Potash, and Duluth, Missabe & Iron Range.

Info: www.atlasrr.com



Bowser is accepting pre-orders through June 30 for an HO scale class H34 twin bay covered hopper.

Designed to haul heavy, dense commodities including cement, Bowser will offer the ready-to-run model with both open and closed sides.



Cars with open sides will be available decorated for Frisco, American Colloid, Ann Arbor, Central of Georgia, Great Northern, International Minerals &

Chemical, Kosmos, Lehigh & New England, Maine Central, Mathieson, and Soo Line.



Models of the H34 hopper cars with closed sides will be available for Santa Fe, Burlington, Central Soya, Erie, and Denver & Rio Grande Western.



The model will come with rollerbearing trucks with metal wheels and knuckle couplers. Availability is scheduled for summer 2023.



Also coming from Bowser next summer is a group of class X31 boxcars. The HO scale model will

June HO scale news | 13

be available in several variations including two or four Youngstown sliding doors and three types of roofs: flush round, round with inset, and turtle back.



Cars with double doors and a round flush roof will be available for Ashley, Drew & Northern; Detroit, Toledo & Ironton; Norfolk & Western, PRR with Circle Keystone, PRR with Shadow Keystone, and Seaboard Air Line with Orange Blossom Special slogan.





Bowser X31 boxcars with a single door on each side and a round flush roof will be available decorated for Norfolk & Western, PRR Circle Keystone, and Seaboard Airline with a Silver Meteor slogan.



Cars with one door and a round inset roof will be available for PRR Circle Keystone, PRR Plain Keystone and PRR Shadow Keystone.



Cars with four doors and a turtle back roof will be available for PRR with a Shadow Keystone, a Circle Keystone, and a small Circle

Keystone with a loader designation on the right hand door. www.bowser-trains.com





BALDWIN CENTIPEDE

The DR-12-8-1500/2 was the Baldwin Locomotive Company's attempt at competing with EMD and Alco for a share of the diesel electric road locomo-

tive business. The body, with the awkward baby-face, rode on two massive articulated cast steel half-frames linked at the middle with a hinged joint. Each unit was powered by two 1,500hp diesel engines. Unpowered four-wheel trucks at each end stabilized the locomotive through curves. The designers intended the units to be semi-permanently coupled back-to-back to form a 6,000hp locomotive with a total of 24 axles – and the nickname Centipede. An introductory tour in 1945 generated little interest in Baldwin's massive diesel road engine. Only the Pennsylvania Railroad, Seaboard Air Line, and the National Railways of Mexico responded with orders for a total of just 40 Centipedes. The Union Pacific agreed to buy the two demonstrators but they were never delivered and eventually scrapped. Reliability was a continuing problem for the Centipedes as they were built one at a time with each one a bit different in the placement of wiring and equipment, which complicated even routine maintenance. Initially intended for passenger service, reliability issues quickly downgraded the distinctive Centipedes to freight and backup service.



Broadway Limited plans to release an HO scale model of the Baldwin Centipede diesel electric locomotive this month.



JUNE HO SCALE NEWS | 15



The lineup will include back-to-back A-A units in Pennsylvania passenger livery with 5-stripes, and PRR A-A freight units with

a single-stripe. A PRR A1 with 5-stripes and a Trainphone antenna will also be available.



Single units will also be available decorated for

Seaboard Air Lines, Ferrocarriles Nacionales de Mexico, Union Pacific, and a Baldwin demonstrator.



The HO scale locomotive comes with the Paragon4

Sound and Control System featuring Rolling Thunder. Construction consists of an ABS molded plastic body and a diecast metal chassis.



Features include a capacitorpackage for reliable electrical pick up, and

separately controllable headlight, rear light, cab light, and number boards. Separately applied details include handrails, grab irons, horn, bell, wipers, etched metal grilles, and metal knuckle couplers.

Broadway Limited plans to release another production run of Union Pacific 4-8-8-4 Big Boy locomotives this month. The HO scale versions of UP Nos. 4007, 4012 and 4019 will be available



with an aftercooler and 25-C-100 coal tender in the as-delivered 1941 paint scheme. It will also be available unlettered and unnumbered.



Big Boys No. 4021 and 4022, upgraded with a Wilson aftercooler and 25-C-400 coal tender, are

also in this release. Big Boy No. 4014, modernized with a Challenger excursion tender, will be available in the Big Boy Tour scheme and in the Promontory Excursion scheme.



Union Pacific's twotone gray scheme will be available with aluminum lettering on Big Boy No. 4023

and with yellow lettering on No. 4024.

Broadway Limited's Baldwin Centipede and Big Boy locomotive mentioned in this report will be available with Paragon4 sound with Rolling Thunder that functions in both DC and DCC environments. For reliable pickup, the system includes a built-in capacitor pack that disables automatically on the program track for compatibility with JMRI Decoder Pro.

Info: www.broadway-limited.com



InterMountain has completed another release of its HO scale ACF 4650 cu. ft. triple-bay

June HO scale news | 17

covered hopper. The plastic injection molded model comes with etched metal roof walks, knuckle couplers and metal wheelsets.



Decorating schemes in this release include ATSF, Burlington Northern, BNSF, Southern Pacific, Chessie System –Western Maryland, Sclair,

Norfolk & Western, Western Pacific, and Montana Rail Link.



Additional road names include SSW-Cotton Belt, Great Northern, Norfolk Southern, Soo Line, French's, Lincoln Grain, Penn

Central, Wisconsin Central, and Golden West.

Info: www.intermountain-railway.com



Kadee's newest release is a PS-2 twin-bay covered hopper car decorated for Union Pacific. The HO scale model accurately represents a prototype built by

Pullman Standard in 1958. Details include eight round loading hatches, self-centering roller-bearing trucks with metal wheels.



Kadee has released another production run of its 11,000 gallon insulated tank car with a step platform. An undecorated version is currently available. The

model is based on a prototype built in the late 1940s by American Car & Foundry to carry hazardous commodities such as propane, ammonia, chlorine and gasoline. The model comes with Bettendorf-style solid-bearing trucks with metal wheels. Both of these new HO scale ready-to-run models come with Kadee metal couplers.

Info: www.kadee.com

JUNE HO SCALE NEWS | 18



Moloco is scheduling a second production run of its HO scale 50' Great Northern combination door boxcar. The 14'

opening of the cars is filled with a 6' sliding door and an 8' plug door. Moloco's HO scale model replicates a series of 500 XM class cars built in 1961 at GN's Shops in St Cloud, MN. Decorating schemes include a 1961 version featuring the Great Northern name slanted in red. A 1966 repaint has a small herald and white road name.



A 1969 repaint featuring a large Rocky herald on the right side will be available with the car body in both Glacier Green and Big Sky Blue.



A green Burlington Northern car is included in this release.



Details on Moloco's HO scale ready-to-run model include welded Stanray R3-4 ends, nailable steel floor, metal brake rods, air

pipes, and corner stirrups; rubber air hoses, Kadee couplers, and 50-ton trucks with metal wheelsets. Car number specifics include Ajax, Ellcon-National, Equipco, Klasing or Universal hand brakes. Info: www.molocotrains.com

Rapido Trains has added PC&F class B-70-69/71/75 boxcars to its offering of essential HO scale freight cars. The HO scale

June HO scale news | 19



model replicates 50' double door boxcars produced by Pacific Car & Foundry for the Southern Pacific and its subsidiary St.
Louis Southwestern (SSW-Cotton Belt) between 1972 and 1975. The capacity

rating of the B-70 was 5258 cu. ft. for standard cars, or 5119 cu. ft. for those equipped for DF Loading. All had Hydra-Cushion underframes and were delivered with either Youngstown or Superior doors. Some were later rebuilt for Golden West Service.



The models will have metal grab irons, a detailed Hydra-Cushion underframe, full brake rigging, coupler cut levers, knuckle couplers, and 70-ton trucks with 33" metal

wheels. Rapido's B-70-69/71/75 with Youngstown corrugated doors will be available decorated for SSW, SSW-DFL, Southern Pacific, and Golden West Service - Galveston Railroad.



Cars with Superior six-panel doors will be available for SSW, SP, SP patch Golden West Service, and Canadian National. A brown, unlettered model will be available with

both door brands included in the package. Each decorating scheme will be available in six numbers. Order deadline and delivery is TBA.



Rapido is currently developing an allnew HO scale

model of Canadian piggyback flatcars. The models are based on a series of prototype cars built in 1966 by Vancouver Iron and Engineering Works for Canadian National and Canadian Pacific cars built in 1972 by Marine Industries Limited. The cars received several rebuilds during their long life including a group that were reconfigured for the Southern Ontario XpressWay service with rub-rails for the circus-style loading and unloading at terminals.



The initial release will include Canadian National (1966-1976 era), and Canadian Pacific (1973 - late 1980s era) cars. Undecorated models

of both the CP and CN prototypes as-built will also be available. The models will feature photo-etched deck surfaces, wire grab irons, two styles of hitches (upright and collapsed), knuckle couplers, and Barber S-2 trucks with metal wheels.



Rapido is preparing tooling for two popular Canadian piggyback trailers: a 26' Can-Car Industries Dry-Van

and a 45' Trailmobile design trailer. Both will be available with and without side doors.

The 26 footers were widely popular with both CN and CP for package delivery services. The 45' Trailmobile trailers entered

June HO scale news | 21



service in Canada in the mid-1970s, almost a full decade before they were seen in the US.



Features of the Canadian HO scale piggyback trailers include a two-piece positionable landing gear, mudflaps, and both upright and collapsed deck hitches, The 26' trailers have two styles of front stabilizing bars.



Decorating schemes for the 26' CAN-CAR Dry-Vans will be CP Rail, CP Express, Smith Transport, Simpsons, Reimer Trucking, and Canada Cartage. Twenty-six foot trailers with side doors will be available for CN Piggyback and CN Messagerie Express. Silver 26' unlettered trailers will be available both with and without side doors.



Decorating schemes for the 45' Trailmobile Dry-Vans will be Smith Transport, CP Transport, CN SuperTherm, Taggart Trucking, and Canada Cartage. Forty-five foot trailers with side doors will be available for CN Piggyback, CP Rail, Caravan Leasing, and Wilson's Truck Lines. Silver 45' unlettered trailers will be available both with and without side doors. The order deadline and delivery dates are pending.

Info: www.rapidotrains.com



Rapido has announced that an Amtrak version of its HO scale Turbo 2.0

will be available exclusively direct from **Heartland Hobby** Wholesale. Any dealer may also order through Heartland. Reservations close this month with delivery expected in mid-2023. The HO scale model replicates the specially decorated TurboTrain that Amtrak took on a national tour in 1971. Rapido's new Turbo 2.0 corrects all of the problems that existed in initial version released in 2008. The Turbo 2.0 features a new drive system and redesigned single axle trucks with needlepoint axles and all-wheel electrical pickup. Additional features include golden-white LED headlights and sound provided by ESU LokSound V5 decoders.

Info: www.hhwonline.com

ScaleTrains is planning another production run of its HO scale Union Pacific GTEL 8,500hp Big Blow turbine locomotives. Preorders for the Museum Quality model will be accepted through June 27 with delivery planned for winter 2022/2023.

JUNE HO SCALE NEWS | 23



This release includes three new road numbers – 5, 19 and 22 – plus five previously issued numbers including

museum versions as they appear in preservation today. Both the A and B units will have an ESU designed PowerPack with dual capacitors to insure electrical continuity through dirty track. Info: www.scaletrains.com



Spring Mills Depot is shipping the long awaited DODX heavy duty flatcar models. Several versions are available in multiple

paint schemes, with cars produced by five separate manufacturers. Schemes currently available to order include GRE flat deck in both olive green and urethane green, FGE channel deck in a silver DODX Navy Materials car scheme, FGE, Thrall, Ortner, and GRE channel deck in olive green and urethane green, and FGE, Thrall, and Ortner in cascade green. See the Spring Mills website for the time periods appropriate for each color scheme and manufacturer. The cars are equipped with Kadee knuckle couplers.



Also released are tiedown chains for use with the flatcars, with a hook at one end and an anchor cleat to hook into the deck slots on the flatcars on

the other. Each package contains 20 chains.



INDEX

TABLE OF CONTENTS

MRHMAG.COM

INDEX



Finally, DODX containers, commonly referred to as Conexes, have also been released, with 20' containers, Tricons (three smaller connexes that fit in a 20' footprint) and Quadcons (four smaller connexes that fit in a 20' footprint) available in desert sand and olive green, with 20' connexes also available in marine gray, brown, and patched brown, all with appropriate markings. Info: springmillsdepot.com



Tangent Scale Models has completed a third release of its prototypically accurate HO Scale ICC B&O I-18 steel bay-window caboose. The beautifully detailed

HO scale model is available now in ten paint schemes including Baltimore & Ohio's 1965 as-delivered royal blue scheme with yellow ends and unpainted silver roof. A similar, somewhat simplified scheme, without the B&O initials, is also available.



Chessie System B&O Cabooses in the 1973 orange repaint with red stripes are available with the Chessie cat logo mounted high to clear the ACI label. A similar 1979

repaint has a waste holding tank replacing the toilet pipe. Three reruns of previously released models are available in the same orange scheme.



Safety schemes include the 1974 gold and silver combination and the B&O's 1979 red scheme.

June N scale news | 25



Tangent's current release includes a former B&O caboose decorated for New York, Susquehanna & Western in the road's 1986 yellow and black scheme.



Interior details on all versions include chairs, bunks, desks, lockers, oil heater, sink, and a toilet. The interior is lighted and is painted in two-tone green.

Underbody details include a Waugh cushion underframe, full brake system with brake rods and piping; plumbing, toilet discharge pipe or waste retention box, battery box, electrical plugs, and conduit. The small scale-sized marker lights illuminate and can be independently turned on or off at each end.

Additional details include fine etched metal window screens, see-through etched metal end platforms and steps, Apex roof walkway, wire grab irons, ladder rungs, roof hand holds, and coupler lift bars. The individual air hoses feature B&O's signature platform-level angle cock shutoff handle. All versions come with Kadee couplers and 70-ton Gould roller-bearing caboose trucks with metal wheels and separate brake beams. Undecorated kits are also available

Info: www.tangentscalemodels.com

N SCALE PRODUCT NEWS



Athearn's July 2023 production schedule introduces a Genesis series N scale model of a 13,000 gallon acid tank car. Both early and late body phases will be

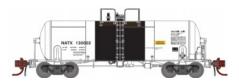
available with different top platforms, end sills, and brake systems as appropriate to the prototype car being modeled.

INDEX

TABLE OF CONTENTS

MRHMAG.COM

INDEX



All versions will feature bodymounted Type F double-shelf knuckle couplers, separately applied metal grab irons and handrails, rubber trainline

hoses, coupler cut levers, and etched stainless steel crossover platforms and top platforms. Decorating schemes will include Grupo Mexico, and GE Rail Services. Union Tank Car and Procor will be available with tanks painted both black and white.



Athearn has included a 40' Pfaudler milk car in its July 2023 production schedule. The N scale model is based on

specialty insulated house cars built around two 6,000 gallon glass lined tanks and a brine cooling system. Since the cars were usually routed in passenger trains, they were painted Pullman green and built with express trucks, and appropriate trainlines for passenger car service.



Athearn will offer the milk cars decorated for Chicago & North Western, Pfaudler, Reid Ice Cream, Alderney Dairy, and

Merkle. Features include screw mounted trucks with machined metal wheels, and body-mounted McHenry knuckle couplers. Info: www.athearn.com



Centralia Car Shops has released an N scale version of a

smooth-side 6-6-4 sleeper based on a lightweight prototype. The model features wire grab irons, and interior details including lighting. The car comes with Micro-Train trucks and couplers.

Road names in this release include Chicago & North Western, Erie, Erie Lackawanna, Illinois Central, Missouri Pacific, and ATSF with Santa Fe's deceptive shadow line paint scheme.

June N scale news | 27



Additional road names include Rock Island (Golden State scheme), Southern Pacific (Golden State, Lark, and Sunset

Limited schemes), and Union Pacific (yellow and Overland schemes). An undecorated version is also available.

Info: www.intermountain-railway.com



KatoUSA has added four new sets to its lineup of N scale well-car/ container combination sets. Each set includes three Gunderson MAXI-IV well-cars and six interchangeable 53'

ribbed-side containers with magnets.



The sets include three BNSF well-cars with six Florida East Coast containers, three BNSF well-cars with six Crowley Logistics containers, three TTX well-cars with six Canadian

National containers, and three TTX well-cars with six Canadian Pacific containers.

Info: www.katousa.com







Jacksonville Terminal Company has released 20' long, 8'6" high corrugated-side containers decorated in military paint schemes, with USAU in gray and

black, USMC in olive green, USFU in coyote brown, and US Army and APMU in two different camouflage schemes.



Also released are "CAT Rental Store" schemes on the new "Sign Panel side" 20' containers. Containers are available with Thompson, Ring Power, Texas First, Ohio, and Western States dealer names.



Finally, 53' corrugated containers are now available in FedEx

MultiModal, Axsun, Tigre Geant, Walmart, Elizondo, and COFC Logistics.

Info: jtcmodeltrains.com



New N scale freight cars from **Micro-Trains** include this 50' Atchison, Topeka & Santa Fe insulated boxcar with a plug door. Santa Fe used the orange

door to draw attention to the special loading equipment.



This 4,650 cu. ft. triple-bay covered hopper represents a car built for the Louisville & Nashville in 1964. The car was repainted in 1984 following the

merger of the L&N into the Seaboard System in the early 1980s.

JUNE STRUCTURES & SCENIC SUPPLIES | 29





This N scale Montana Rail Link bulkhead flatcar depicts a prototype that originally belonged to the Milwaukee Road.

This 40' Southern Railway XM class boxcar was built in the late 1940s. In a late 1970s rebuild, the running board was removed and the ladders were shortened. Info: Contact a dealer.



Rail Smith, the N scale passenger car specialist, is booking preorders for a pair of Southern Pacific lightweight Pullman-

Standard chair cars decorated in the Golden State scheme of Daylight red and silver. The chair cars, aka coaches, are named Golden Sand and Golden Ore. They will be available in the first quarter of 2023 and will be sold only as a pair.



Rail Smith is also taking reservation for an N scale version of a Missouri Pacific Eagle fluted coach. The cars were assigned to several MP premier

trains including the Colorado Eagle and the Texas Eagle.

Info: lowellsmith.net

STRUCTURES & SCENIC SUPPLIES

Athearn plans to release a well-detailed 1:87th scale Ford F-850 truck with a boom in July 2023. The truck has a positionable boom and outriggers that can be modeled in the



JUNE STRUCTURES & SCENIC SUPPLIES | 30



raised or lowered position. Additional features include a cab interior with separately applied steering wheel, clear window glazing, and rubber tires.

Decorating schemes include Santa Fe, Union Pacific, yellow MOW, Canadian Pacific, Rio Grande, and Chesapeake & Ohio. Info: www.athearn.com



Classic Metal Works has several new 1:87th scale vehicles including this International Harvester R-190 flatbed truck. The

1950s-era truck comes with a load of steel drums.



This 1:87th scale 1975 Buick Estate Wagon is also available in bittersweet brown.



Classic Metal Works 1:87th scale version of a 1955 Chevy pickup is available now.

Info: www.walthers.com



Frenchman River Model Works has an O scale craftsman-style resin kit for an Assay Office. The model was designed by Thomas Yorke. The principal components in the kit include unpainted cast resin walls, cornice, roof, boardwalk, and foundation stones; laser-cut windows, decals and signage. The

INDEX

JUNE STRUCTURES & SCENIC SUPPLIES | 31

assembled structure has a footprint of 3.2" wide x 2.375" deep. The Assay Office can be built on a flat surface or on a slope using stone foundation pieces available as a separate purchase. Info: www.frenchmanriver.com



ITLA (Imagine That Laser Art) is selling a kit for heating, ventilating and air conditioning (HVAC) ducting that is

suitable for HO or O scale models, and anything in between. Dimensionally the parts represent 24" ducting in HO applications or 12" ducting for O scale structures. The lasercut wood and LaserBoard components include flange and bracket parts, ducting, elbows, 45 degree offsets, turndowns, and access hatches. Application and painting suggestions are provided on ITLA's web page.



Also new from ITLA is a Roof Top Detail kit consisting of laserengraved and precut wood components. The HO scale kit includes a water tank, brick chimneys, roof access stairwell, air conditioning units in two sizes, configurable HVAC ducting, snorkel vents, and exhaust ventilation fans

and grilles. Labelling for AC units and a color instruction booklet are included.

Info: itlascalemodels.com

Mine Mount Models has released the McGuirk Coal kit in HO scale. Consisting of two structures, it represents a small-town coal dealer. The main scale house is $4.5'' \times 2.75''$ and the three-bay coal bin is $6'' \times 2.75''$. The kit includes laser-cut walls and roof, Tichy doors, windows, and lights, and BEST Trains castings.

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TABLE OF CONTENTS

MRHMAG.COM

INDEX

JUNE STRUCTURES & SCENIC SUPPLIES | 32



The rolled roofing material is stick-on, and a jig for assembling joists, rafters, and stairs is included. Conveyor and truck are not included, but the conveyor can be

purchased at a discount with the kit.

Info: minemountmodels.com



The newest kit from Monster Modelworks is Kessack Freight, a brick background structure with six loading docks. The assembled HO scale

building has a footprint of 14.25" wide x 5" deep. The kit includes 3D engraved brick walls, corners, downspouts and terra cotta coping. The wall bumpers, doors and windows, lintels and sills are all laser-cut. Additional components include a sign stencil, and loading dock number signs. The kit comes unbuilt and unpainted.

Info: www.larkspurlaserart.com/monster-modelworks-products



SceniKing has announced two new HO backdrop scenes. The HJ44 "Water Under the Bridge" (seen here) is a Junior Roll Out

New decals, signs and finishing products | 33

measuring $72'' \times 8''$ that can be extended from either end by more than nine other scenes. The HS48 "Down by the River" is a Senior Roll Out measuring $72'' \times 16.5''$ with more than 16 scenes available to fit on either side. Both products come with an optional $14'' \times 3''$ downward river extension that can be used to back a single span bridge.

Info: www.sceniking.com

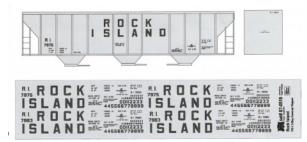


Summit-USA has a new HO scale kit that assembles into a modern IHOP Restaurant. The kit is milled in styrene and laser-cut in white and clear acrylic and self-

adhesive micro-plywood and comes with detailed assembly instructions with pictures. The component parts require painting. The assembled model has a footprint of 11.5" wide x 7.375" deep. The vehicles, scenery material and parking lot shown in the illustration are not included.

Info: www.summit-customcuts.com

NEW DECALS, SIGNS AND FINISHING PRODUCTS



Mask Island Decals

has several new HO scale lettering sets including one for a Rock Island PS-1 triple-bay covered hopper.

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INDEX

TABLE OF CONTENTS

MRHMAG.COM

INDEX



Lettering sets for a 53' SSW Cotton Belt flatcar and an Ortner 60' Rock Island flatcar assigned to Caterpillar are also available.

New decals from Mask Island for steam era freight cars include CRLX Cudahy Car Lines wood reefer, and Gulf Coast Lines single-sheathed wood boxcar built by ACF.



Info: www.maskislanddecals.com

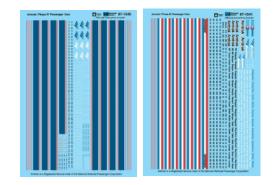






New water slide decals issued by Microscale include N, HO and O scale sets for **C&O** and Pere Marquette steam locomotives.





Also available now are decals for Phase VI and Phase III Amtrak passenger cars. Both N and HO scale sets are available.

Info: www.microscale.com

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INDEX

TABLE OF CONTENTS

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INDEX

MRH Briefly NOTED 36

•

BRIEFLY NOTED AT PRESS TIME ...

Mask Island has released new HO scale decals for Southern Railway mill gondolas, Mississippi Central Railroad 40' boxcar, Cotton Belt 40' plug-door boxcar, and a KATY early 40' flat car...

New HO scale locomotives under development at **Rapido** include a GE C30-7 and both mother and slug versions of GMDD GP9RM units. An N scale model of the Rohr Turboliner is also underway. For prototype freight car fans, Rapido has added Ontario Northland to the list of decorating schemes for its HO scale PC&F B-70-69/71/75 boxcar. We'll have details, including photos, next month ...

Walthers plans to release an HO scale Proto series 67' Trinity 6351 cu. ft. quadruple-bay covered hopper next month. Walthers will have new DCC-friendly Code 83 nickel silver curved turnouts with 24" and 36" radii ready for release by October... ■





JUNE

Please check with any organization hosting an in-person event for the latest status of the event.

Ongoing 2022

ONLINE, Zoom, dates vary, see website. Operation Special Interest Group Meetups – limited attendance available.

Info: www.opsig.org/Virtual

Archive: www.opsig.org/Virtual/Past

ONLINE, Zoom & YouTube, Wednesday & Saturday, see Facebook page. "New Tracks" Meetup, hosted by Jim Kellow, MMR.

Info: newtracksmodeling.com

YouTube: www.youtube.com/channel/

UCMA VhPb5pjdkAYTdXLceJA

ONLINE, Facebook & YouTube, dates vary, see Facebook page. "NMRAx" organized by Gordy Robinson, Martyn Jenkins, Gert Muller, Jordan Kramer.

Info: www.facebook.com/groups/nmragroup

ONLINE, YouTube, every other Saturday. 4th Division, Pacific Northwest Region, NMRA hosts online layout tours and clinics. Archive: www.youtube.com/c/4DPNRMovies

ONLINE, Zoom, Second Tuesdays, 8pm EST. "Off the Beaten Track" featuring Narrow Gauge layouts, clinics and manufacturers. Info: groups.io/g/NNG



SELECTED EVENTS | 38

AROUND THE USA, IN-PERSON, Various dates.

ScaleTrains.com Road Trip.

Info: www.scaletrains.com/roadtrip

June - July 2022

NEW ZEALAND, ASHBURTON, July 9-10, 2022. Ashburton Model Train Show. Tinwald Memorial Hall, 10 Graham Street, Tinwald.

Info: www.ashburtontrainshow.co.nz

CALIFORNIA, POMONA, July 30, 2022. Orange Empire Model

Trains Swap Meet. 894 B Garey Ave #101. Info: orangeempiremodeltrains@gmail.com

MASSACHUSETTS, ORLEANS, Wednesday Evenings July-August, Nauset Model Railroad Club Open House. Rear of Hilltop Plaza, 180 Route 6A.

Info: www.nausetmodelrrclub.com

OHIO, VAN WERT, July 23 & 24, 2022. Van Wert Railroad Heritage Weekend. Van Wert County Fairgrounds, 1055 S. Washington St.

Info: www.vwrrhw.com

TENNESSEE, NASHVILLE, June 15-19, 2022. 28th Annual National N Scale Convention, Sheraton Music City, 777

McGavock Pike.

Info: www.nationalnscaleconvention.com

WISCONSIN, WAUPACA, June 18-19, 2022. 32nd Annual Strawberry Fest Model Railroad Show. Waupaca Recreation Center, 401 School Street (Intersection of School, State, and Badger Streets).

Info: www.wamrltd.com/?action=strawberryFest

Future 2022-2023 by location

UNITED KINGDOM, CREWE, November 4-6, 2022, Crewe North Junction 2022, British Region NMRA Regional Convention. The Heritage Center, Emperor Way, Crewe Business Park, CW1 6BD. Info: convention.nmrabr.org.uk

SELECTED EVENTS | 39

CALIFORNIA, SAN DIEGO, September 7-11, 2022. Back on Track in 2022, Pacific Southwest Region convention. Four Points by Sheraton San Diego, 8110 Aero Drive.

Info: web.cvent.com/event/1474b6bc-b18a-49ec-9b4e-9f58fb4665cd/summary

CONNECTICUT, WINDSOR, September 15-18, 2022. Connecticut Yankee, Northeastern Region Convention 2022. Marriott, Hartford/Windsor Airport, 28 Day Hill Road. Info: ner-conventions.org/connecticut-vankee

INDIANA, FRANKLIN, August 27-28, 2022. NMRA CID Franklin Train Show. Johnson County Fairgrounds, 250 Fairground St. Info: www.cidnmra.org

MARYLAND, HUNT VALLEY (Timonium), October 13-16, 2022. Mid-Atlantic RPM meet. Delta Marriott Hotel and Conference Center, 245 Shawan Road.

Info: www.marpm.org

MARYLAND, TIMONIUM, October 15-16, 2022. Great Scale Model Train and Railroad Collectors Show, Maryland State Fair, 2200 York Rd.

Info: www.gsmts.com

MISSOURI, St. LOUIS, August 7-14, 2022, NMRA National Convention and National Train Show. St. Louis Marriott Grand Hotel, 800 Washington Avenue.

Info: gateway2022.org

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NORTH CAROLINA, CHARLOTTE, October 20-23, 2022. Carolina Special Look South 2022, Mid-Eastern Region Regional Convention. Hilton University Place, 8629 M Keynes Drive. Info: www.carolinasouthern.org/MER2022.html

OHIO, MIDDLEBURG HTS., 1 October 2022. The Great Berea Train Show. Cuyahoga County Fairgrounds, 19201 Bagley Rd. Info: thegreatbereatrainshow.org



SELECTED EVENTS | 40

PENNSYLVANIA, HAMBURG, September 16-18, 2022. Reading Railroad Modelers Meet X, hosted by the Reading Company Technical & Historical Society and the Anthracite Railroads Historical Society. Reading Railroad Heritage Museum, 500 S. Third St. Info: readingrrmm.com

TEXAS, GRAPEVINE (Dallas Area), Summer 2023. NMRA National Convention, Gaylord Texan Resort & Convention Center, 1501 Gaylord Trail.

Info: www.2023texasexpress.com

VERMONT, WHITE RIVER JUNCTION, October 16, 2022. Upper Valley Model Railroad Show, sponsored by the Connecticut Valley Model Railroad Club. Connecticut Valley Auto Auction Building, 1567 VT-14.

Info: cvrr.railfan.net/cvmrr

WASHINGTON, TACOMA, September 1-4, 2022. 42nd National Narrow-Gauge Convention, Hotel Murano, 1320 Broadway.

Info: www.seattlenngc.com ■

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Rapido (1)

Rapido (2)

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TAM Valley Depot

The Trainmaster Inc

TrainMasters TV (1)

TrainMasters TV (2)

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Clickable "other" index

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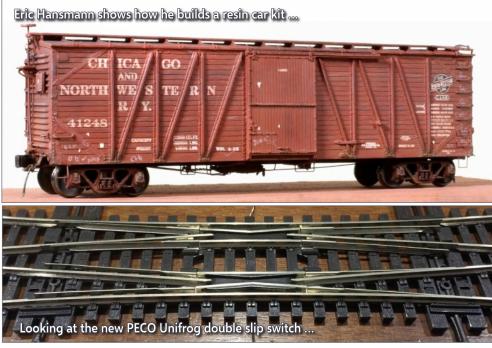


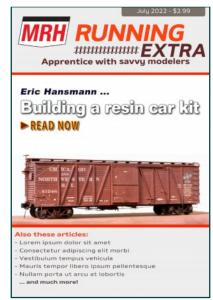


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