



SHORT LINE

Sierra Division * Pacific Coast Region * National Model Railroad Association

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Steve Harvath

Master Builder - Structures

Congratulations to Steve Harvath for his successful completion of the NMRA AP Certificate for Structures. If you've been attending the Sierra Division meets, either live or ZOOM, you will recognize Steve and his handy work as a structure modeler.



Steve Harvath Proudly Displays His Impromptu Creation



We're not certain of this, but it's possible that Steve submitted this special purpose structure for judging—a two-story outhouse.

Steve constructed this masterpiece during a whimsical scratch building "clinic" at our August 2018 meet in Elk Grove. We were all given a small bag of unrelated materials including styrene and strip wood, along with a single-edge razor blade and access to glue and paint. Everyone had an hour to construct something.

It's been over three years since we held this clinic. Perhaps it's about time to repeat it.

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sion.

Articles, photos, tips, or ideas are
heartily encouraged and will be enthu-
siastically accepted! The preferred
format would be in Rich Text Format
(RTF), with photos as JPEGs, but we
will accept any format (from a PC or
Mac; MS Word, Simple Text, typed, or
handwritten). Send it to your editor by
regular mail to **Short Line**, 2260
Cherry Glenn Ct., Chico, CA
95926 or by email to :

chipmeriam@comcast.net If e-
mailing put EDITOR in the sub-
ject line.

From the Superintendent

The Tyranny of Perfection

Test your track work. Unless you can shove twelve cars around the entire railroad, in both directions, without a derailment, your track is not as good as it should be.

The 60' flatcars need additional weight, whisker couplers, clean wheels, and God knows what else to keep them on the rails. Until you can get them to run, forget everything else.

The MDC ten-wheeler and the MDC Consolidation always run off the rails in certain places. Tinker with them until they are flawless, and don't run any other trains until they're fixed.

These are all stalling points I have encountered over the past several years. I used to be much worse; much worse to the degree that I came dangerously close to giving up the hobby. What I missed was that I had built some really good stuff, that almost everything worked as it should, and that this railroad was never going to be flawless or perfect. In other words, I almost let my pursuit of perfection drown my enjoyment of the hobby.

Despite all this angst about having everything perfect, I've remained in the hobby. I attribute this, in large part, to my active involvement with the NMRA. Although I've been a member for nearly thirty years, it has only been since early 2015 that I have been participating in Sierra Division and Pacific Coast Region activities. Through this participation, I've come to know many fellow modelers, witnessed some excellent modeling, and visited layouts from small shelf type to club size. What I've observed is that nobody achieves perfection. It seems we all suffer from the same foibles and "gremlin attacks." In other words, it's perfectly OK to not be perfect—which is the perfect antidote for the tyranny of perfection.

Our next live meet is February 12, 2022 in Sacramento. The fellows at the Sacramento Model Railroad Historical Society have graciously agreed to host us, once again, for a morning operating session. This is always a fun time for everyone. If you're thinking about becoming more active in the NMRA, this is a great opportunity for you to get started.

Following our visit to SMRHS, we'll be meeting at the First Christian Church on Folsom Blvd. This will be our usual format of a brief business meeting; contests in modeling, photography, arts and crafts; a show and tell; and a door prize drawing. I'll be looking for someone to present a clinic as well.

You can find more details about the February 12 meet, including maps, on page 5. I hope to see all of you there.



From the Editor



This is, technically, the first issue of the new year, 2022. But for the editorial staff here at the **Short Line**, it's the final edition of 2021—going to “press” just before Christmas.

All of us here thank you very much for the opportunity to bring you, throughout this past year, model railroad news, modeling techniques, ideas, and (hopefully) inspirational articles.

From those of us behind the scenes, to you, our readers -



**Merry Christmas
And
A Joyous New Year**



SIERRA DIVISION

Next Meeting: February 12
Sacramento

9:00 AM
OP Session at SMRHS
1990 Grand Avenue

1:30 PM - 4:00 PM
First Christian Church
3901 Folsom Blvd.

SEE MAPS ON NEXT PAGE

February Contest Categories:

Modeling: Weathered Locos - Steam, Diesel, Electric,, Gas . Up to 3 per entrant

*Photo: Favorite RR Pic
(limit of 3 photos - at least 5 X 7 but not over 8 X 12)*

Railroad Arts & Crafts



TIMETABLE

Feb 12, 2022
Sacramento

May 14, 2022
Colusa

Aug 13, 2022
To be determined

Oct 8, 2022
To be determined
(may be Rail Fair)



August 7 - 15, 2022 Gateway 2022

Marriott Grand Hotel, St. Louis,
800 Washington Ave,
St. Louis, MO USA

SHORT LINE

Mar 10 for the Apr Issue

Jun 10 for the Jul Issue

Sep 10 for the Oct Issue

Dec 10 for the Jan Issue



Mark your calendar! Registration for the 2022 PCR Convention, Return to the Redwoods, will open April 24, 2021. Sign up early and get a \$20 discount on a Full Fare Registration.

REGISTRATION UNDERWAY!

<http://www.pcrnmra.org/conv2022/registration.html>

The convention will be held April 21-24, 2022 at the beautiful Doubletree Sonoma Wine Country in Rohnert Park. With ample room for clinics and displays and easy access from Highway 101, this is the perfect spot for PCR/ NMRA members to gather once more. A full three-day program is planned including over 40 clinics, layout tours, operating sessions, contests, vendor exhibit/sales, a member swap meet and a full non-rail program. And of course, there will be excursions including the ever popular, Sturgeon's Mill.



August 22 - 25, 2023 Texas Express 2023

Gaylord Texan Hotel, 1501 Gaylord Trail, Grapevine, TX

Sierra Division continues to have online meets via ZOOM. Future online meets will be held the second Saturday of each month when an in-person meet is not scheduled.

UPCOMING ONLINE MEETS

(all beginning at 10:30 AM)

January 8, 2022

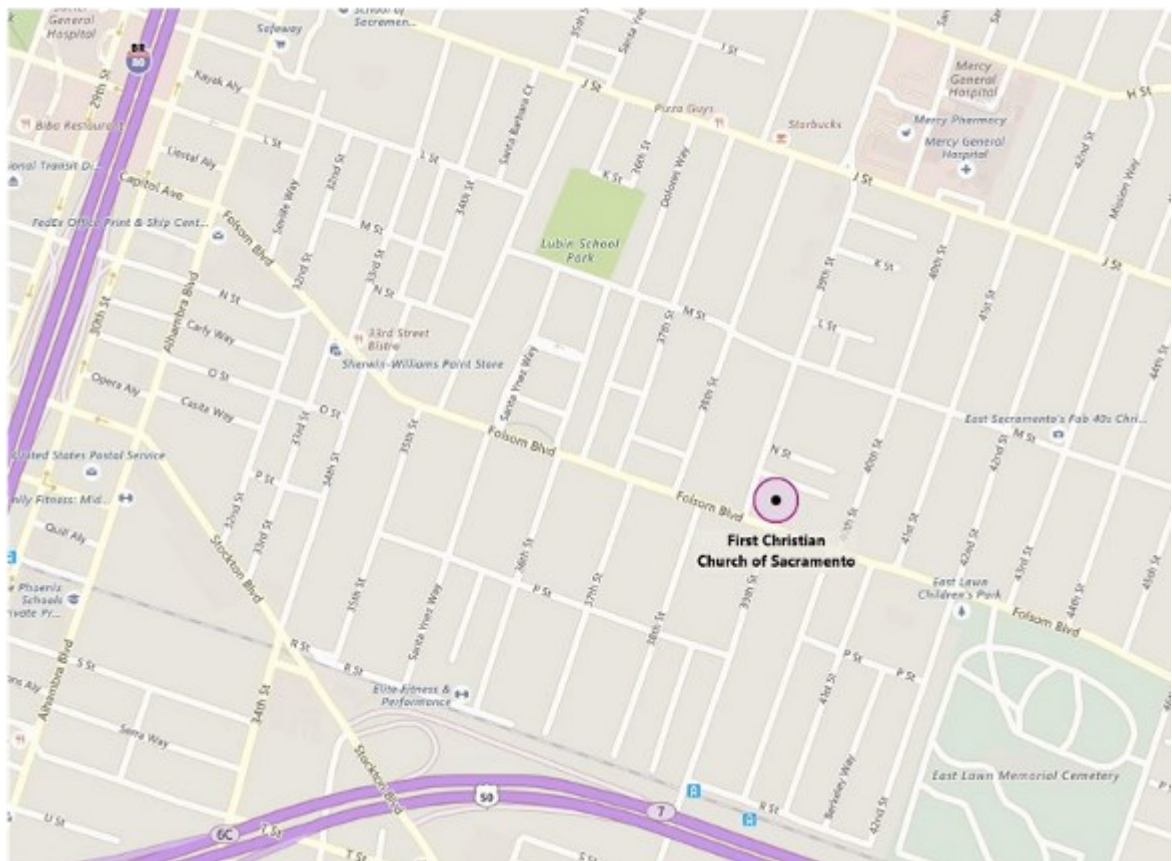
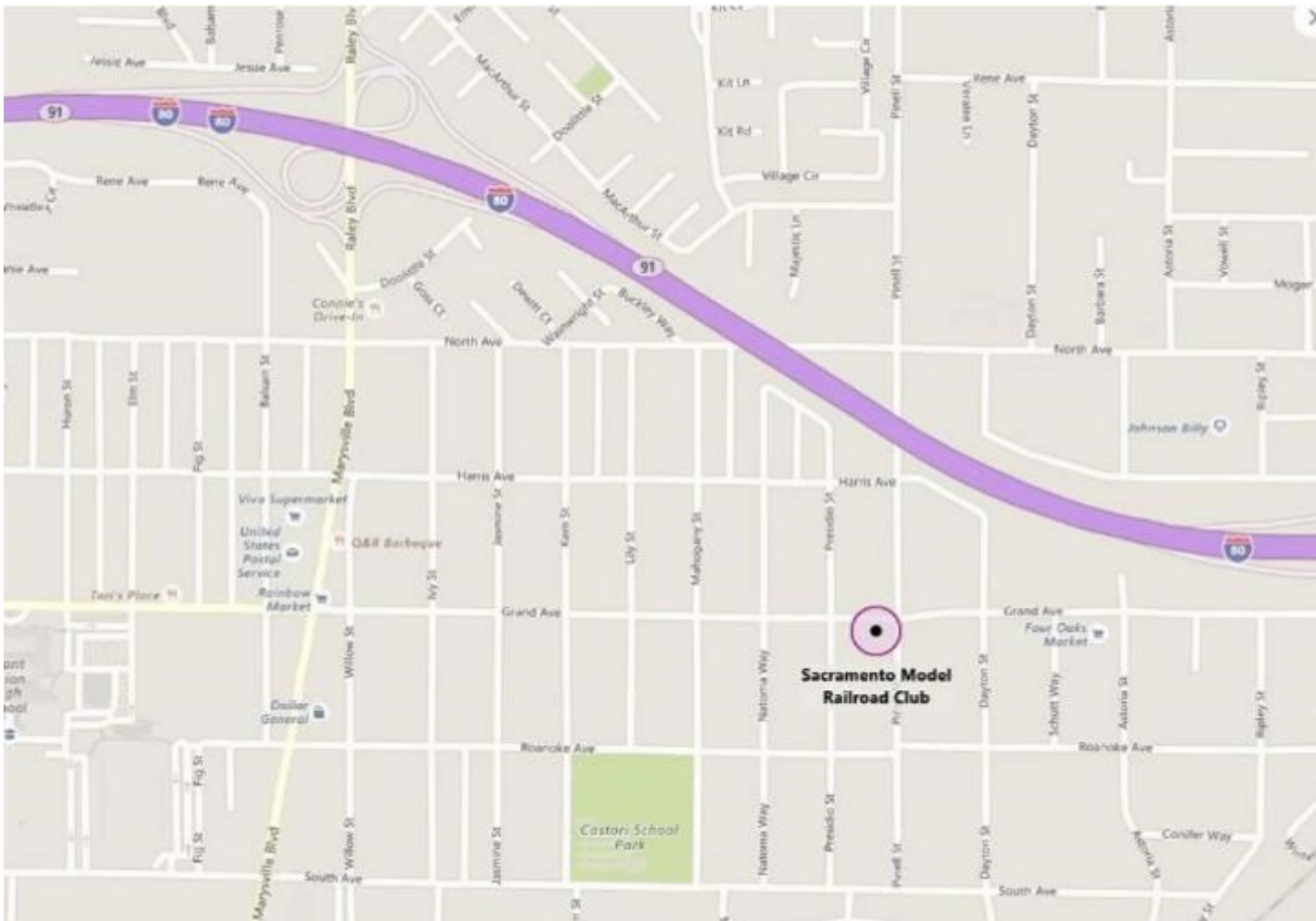
March 12, 2022

April 9, 2022

June 11, 2022

July 9, 2022







Return to the Redwoods PCR 2022

The first in-person convention in three years is shaping up to be one of the best ever. We have 20 confirmed clinics with more pending, and it appears we will have over 20 layout tours. Several vendors have committed to our two-day Vendor Show, the excursions are filling up, and we have 19 tables so far for the swap meet on Friday evening.

We realize Covid is still a concern and we will follow whatever mandates are in place from state, county and the hotel. If needed, we will limit room capacities and even repeat clinics so that everyone feels comfortable attending. For this reason, we need everyone to register as soon as possible so we have enough time to make the necessary arrangements. Register here: <https://pcrnmra.regfox.com/pcr-nmra-2022-convention> There is lots of merchandise to commemorate this convention. We have the traditional polo shirt, a denim shirt, a cap, and a mug! And of course, the beautiful Roma Wine Car as the convention car. All of these items are available on the registration site. If you have already registered and need assistance adding these items to your registration, please contact registrar2022@pcrnmra.org



**This convention will only be successful if you attend.
Come join your fellow modelers in Rohnert Park.
Register today!**



Clinicians Still Needed!

Great clinics are the key to great conventions and we want **Return to the Redwoods** to be fantastic. Although we have had great response and have confirmed 20 clinics, we are only half way to our goal of offering 40 or more clinics at the 2022 PCR Convention.

Have you found a better or easier modeling process?

Have you uncovered some little-known history of a local railroad?



Have you developed a technique or skill you could share a hands-on clinic?

Do you have a story to tell about building your layout that others can learn from?

We hope you will consider sharing your knowledge and expertise. Laptops and projectors will be provided and presentations should be approximately 45 minutes in length.

Never presented before? Don't worry! We have lots of experienced clinicians who will be happy to assist you. And remember, clinic presenters earn credit toward Author or Association Volunteer under the Achievement Program.

Our goal is to make this convention a pleasant and valuable experience for all attendees and presenters. The schedule for the 2022 Convention is being revised to address many of the concerns attendees and presenters have mentioned over the years. All clinics will be presented in the mornings and evenings with afternoons free for layout tours, excursions, vendor show and contests.

Please contact us today and tell us about your clinic. We can't wait to hear what you have to share.

Denni and Cliff Baumer
Clinics2022@pcrnmra.org

Vendor Show

Hello folks. Mark Poggendorf here to bring you up to date on the Vendor Show.

We have three vendors signed up so far for a total of seven tables. I have reached out to past vendors and have not received any commitments as of this time. Some vendors are concerned about the Covid situation.

An earlier phone conversation has netted two potential vendors from the Lodi area and there are two other potential vendors waiting in the wings. I am confident we will get additional vendors and have a great vendor show for all attendees.

Thanks, and that is all for now
Mark Poggendorf
Vendor Coordinator



More on page 8



The planned Non-Rail activities for the 2022 PCR convention include:

The Non-Rail Networking Center and Sewing Collective

This will be the “nerve center” for all Non-Rail participants to come and meet other people, relax for a while, sign up for various activities, work on puzzles and games, and choose books from our library of donations! In addition, many people will bring their sewing machines and work on projects for donation to various charities.

The Networking Center will be open in the Santa Rosa room as follows:

Wednesday	4:00 PM - 7:00 PM
Thursday	9:00 AM – 9:00 PM
Friday	9:00 AM – 9:00 PM
Saturday	9:00 AM – 5:00 PM

Tour of the Luther Burbank Home and Gardens in Santa Rosa, with visits to the Gift Shop and Carriage House

Tours include the Home with its original furnishings, the Greenhouse, a portion of the Gardens, and a summary of Burbank’s life and achievements here in Santa Rosa. More than an acre of gardens includes many of Luther Burbank’s horticultural contributions.

Shopping Expedition to the Petaluma Village Premium Outlets

Petaluma Village Premium Outlets is an outdoor shopping mall that offers impressive savings all year round at 60 outlet stores, including clothing, shoes, accessories, and edible treats.

Tour of the Charles M. Schulz Museum and Research Center

Come and experience the Schulz Museum, which offers a video about the museum, various self-guided exhibits throughout the various collections of themed comic strips, and a peek into a replica of Charles Schulz’ studio. Across the street you will find the Warm Puppy Café, Snoopy’s Home Ice Rink and the Museum Gift Shop.

Saturday Fabric Shop Hop Tour

Another longtime PCR Convention event, this will involve a group shopping expedition to various quilting and sewing stores in the greater area. Participants can sign up to carpool (either as drivers or as riders) and maps will be provided as our Non-Rail Shop Hop Expert leads the participants on their own personal “treasure hunts”!

Thursday Night At The Movies

This year’s movie will be comprised of some of the episodes from the BBC sitcom “Oh Doctor Beeching!” Come and watch the adventures of the people at the Hatley Railroad Station, and check out the LMS Ivatt Class 2 2-6-0 No. 46521 from the Severn Valley Railway, which was used on the film set. (This event is open to all convention attendees and guests.)

Friday Night Bingo – a PCR Convention tradition since 2001

This event is open to all attendees at the convention and their guests, so come and join in the fun! The Bingo game will be held in the hotel and will feature many prizes.

Look for a more complete schedule, list of events, and updates on the 2022 convention web site. In addition, a welcome newsletter will be sent to all Non-Rail registrants about a month before the convention.

Note: some planned Non-Rail activities may require a nominal fee to cover admission and/or docent-led tours. Also, please be aware that at this time, masks are required in all public areas and many restaurants require proof of COVID-19 vaccination for indoor seating..

More on page 9

Great Layout Tours in 2022
David Grundman – Layout Tours Chair

We have had a great response to our invitation to host a layout for the 2022 PCR Convention. A number of the layouts were on the 2018 Layout Tours and many of those have been added to or significantly improved. There are also several new layouts available in 2022 and more layouts will be added as information arrives. Layout tours will be open in the afternoon on Thursday, Friday and Saturday of the convention. The schedule as well as maps, directions and site conditions will be available at the convention Registration Desk.

Here's a preview of the layouts that have already signed up:

- Vern Alexander (HO) *Colville, Republic and Palouse*
- Peter Barnes (HO) *Bummelgwnn set in Germany and Austria*
- Gerald Bretag (Garden) *Colorado Southern*
- Gus Campagna (HO) *California Western*
- David Grundman (HO) *Great Northern*
- Ed Jameson (HO) *Central Valley SP and Santa Fe*
- Ron Kaiser (HO) *Western Pacific*
- Bill Kaufman (HO) *State Belt*
- Ron Learn (HO and O) *Northwestern Pacific*
- Ed Merrin (HO) *Northwestern Pacific*
- North Coast Historical Model Railroad Society (HO)
- Jim Providenza (HO) *Santa Cruz Northern*
- Richard Schoenstein (3-rail 'O") *RS*
- Dave Sheber (HOn3) *The King Delta & Valley Junction Railway*
- Tom Swearingen (HO) *The Cal Pacific*
- Paul Weiss (HO) *Central Vermont Railroad Southern Division*





You are an important part of the PCR convention and we need your help!

Every attendee is important at a PCR convention. The ones that truly make it a success are those that offer to help. If you are attending a clinic, you can volunteer to introduce the presenter (and score a good seat). If you enjoy viewing models and/or photos, you can provide security in the Contest Room or become a contest judge (and get a free lunch). There are so many little ways you can contribute to the success of our convention.

For more information go to <http://www.pcrnmra.org/conv2022/volunteers.html>

And remember, Contest Judges earn Association Volunteer credits. So please consider signing up today by sending an email with your interests and availability to volunteers2022@pcrnra.org



Last call for Contest entries at “Return to the Redwoods”

Giuseppe Aymar, MMR

Sponsoring Committee Contest Manager

Today we ordered the Contest plaques from Crown Trophies; lo and behold there is not a single name attached to these plaques. The reason is that one has to have an entry to have their name affixed to the plaque. NO ENTRY , NO WIN It's that simple. Let me remind you that the Convention's logo that goes on the plaques is quite stunning.

A reminder to all that anyone can enter the “ Novice” category in models as opposed to “open” or “kit”. The exception is the modeler that has won first place in a specific category already cannot enter as Novice again in that category. Just enter a model in a different category. Oh!, just remembered, “ Best of Show” winners are not eligible either. Wonder why?

The time to start working on Contest material is now. The place is “Return to the Redwoods” next April.

Looking forward to attach your name to the plaque(s).

Merry Christmas and Happy Holidays to all.





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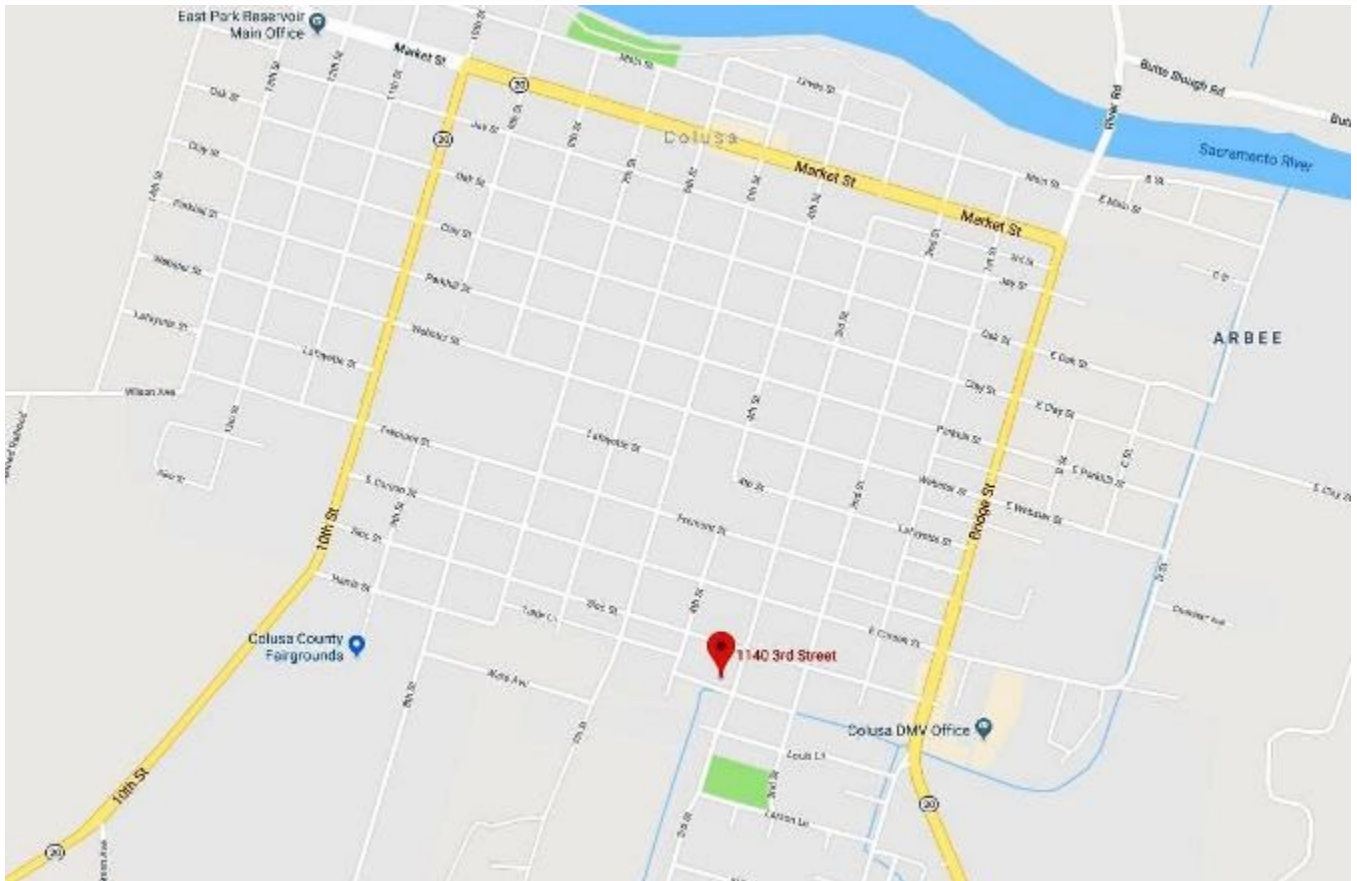
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NOTHING IS GOOD ENOUGH

By Mike Hamm

Scratch-Building Fences

We've all heard the expression "You have the patience of Job." Hopefully we model railroaders don't have all the ailments, afflictions, and responsibilities of owning and tending to thousands of animals as Job did, but all my life I have been accused of having the patience of Job—particularly when people look at my model railroad. I know many of you model railroaders, especially scratch builders, get this same reaction from non-modelers the first time they set foot into your train room. After watching their mouths drop from seeing a scale model railroad, and not just a toy train, we've all heard them say, "How in the world could anyone have the patience and time to build something like this?" Observers forget about the knowledge and many skills necessary to pull the whole thing off, not to mention the time factor - which is usually a lifetime. You fellow modelers know what it takes and, so do I. While guts and glory may not enter into it, I'm sure patience is a key ingredient. My Glacier Mountain Railroad, served by the Great Northern Railway, will never be finished in my lifetime. As I pass 70 years of age this gives me great comfort because if I were to finish it I'd be in big trouble with nothing to do in my retirement years. It can never be completed for two reasons: One is its size, running indoors and outdoors, in a 30x40 foot area. Two is the amount of detail I wish to achieve thanks to my "NOTHING IS GOOD ENOUGH" philosophy. Time is not a factor as I am retired and have no other hobbies.

As scale modelers we may, at times, attempt a project that is not beyond our skill level, but is beyond our level of patience. One of the following four scratch-built fences falls into that category, but I did manage to complete at least a part of it. I'll describe it first. There are many styles and types of fences in the prototypical world and here are four examples for scratch building: barbed wire, split rail, privacy, and chain link. These were all modeled in "O"scale.

THREE STRAND BARBED WIRE

This is a typical country fence used by farmers and ranchers to keep livestock in. My back pasture has three strand barbed wire fences that have been there since the 1950's, so I had good prototypes to look at and measure. A typical strand of barbed wire is two heavy gauge wires twisted together with two short pieces of wire, a few inches long, placed in between and perpendicular to the main strands and twisted to form four barbs. The tips of the barbs are cut at an angle so that they are sharp, and will help to persuade animals to stay in. These barbs occur about every 8 to 10 inches along the main strand between metal T posts, split rail wood, or 4x4 wooden posts spaced eight feet apart. I realize that scale model barbed wire fencing is available in different sizes, but when "Nothing is good enough", I chose to make my own out of real metal, which I knew would be a lot of work.

My wife, Marsha, is into arts and crafts. Years ago, she gave me a big bag of what appeared to be small little green fence posts, pointed on one end with a short strand, perhaps 2 to 3, inches of real wire attached to the end of the post.



Three-Strand Barbed Wire

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She thought they might come in handy on the model railroad because they looked like a small fence. Boy was she right, because they were exact "O" scale size and even had woodgrain molded in the plastic. Marsha told me later that they are called "florist picks". The pointed end is poked into blocks of green florist foam and the wire is used to secure the plants in place. These florist picks are available at Michael's stores. Once the pointed end is removed, the picks leave a scale length of perhaps 4 to 5 feet (depending on how deep the dirt is on your layout). What remains is a nice scale fence post with one wire attached to the top of the post. If your benchtop is foam you can leave the point on and press it right in to your required depth. Since each florist pick has only one wire you can either remove the wire from one pick and twist it with another to make a two-wire, twist two florist picks together, or use a roll of florist wire to use on your fence, which is probably the best way to go. Don't forget to add the barbs as you twist the wires together, as I did, or you'll have to start over! Place two tiny wires at scale spacing as you twist the main strands together and make sure the tips of the barbs are cut at an angle and are sharp.

You may be shocked at how long it will take you to complete one eight-foot section of fence, but you will also be amazed at how real it looks. After it's painted it gets even better. Before painting, make sure the barbs on the first strand don't line up with the other two and are staggered. I don't know how anyone could do this fence in HO or N scales, but if you do, you're a more skilled modeler than I (or have more patience).

Once you have as many sections of fence as you need, it's time to paint and weather. Spread your fence out on newspaper and shoot it with a very light coat of medium flat gray paint or primer so as not to hide any detail. Be sure to use paint that's safe for plastic. When dry, paint the posts with brown acrylic paint. I used bark brown art paint from Walmart. A stick of white chalk, like one for blackboards, is used to lightly hit the high spots of the post. Finally, weather random areas, including barbs and wire, with a rust model paint. Your 3-wire barbed wire fence is now ready to install. When "NOTHING IS GOOD ENOUGH" you can have lots of fun reinstalling real wood fence posts because the plastic ones aren't realistic enough! (No wonder my layout will never be finished).

SPLIT RAIL FENCE 2 OR 3 RAIL

This type of fence is usually not very good at keeping anything in, or out, but is more decorative. At best, its used to define property lines. It's been an American classic since the colonial times. It looks beautiful on model railroads, as you can see from the photographs. This is a simple scratch-built project that can be done in a few evenings or a weekend with just basic tools and materials. Here is all that you will need:

Materials

1/8" and 1/16 wood skewers (sometimes called cake testers)
Wood Stain
Elmer's Glue, white or yellow

Tools

Razor Saw
Hobby or Utility Knife
Drill

These wood skewers are for suitable O scale, but other sizes can be found for other scales. Sticks of two different sizes are used (larger for posts and smaller for rails. This looks better than having everything the same size. My neighbors' prototypical fence is that way.

Start with the posts. Cut the larger skewers to a scale length of perhaps 3 to 4 feet. Most split rail fences are not very tall. While holding the posts upright, split the sides off to make a four-sided post. Use a fresh #11 blade or a utility knife with a new blade. The posts should be about 4" to 6" scale inches square. Next, cut the smaller sticks to a scale length of 7 or 8 feet. Hold them upright and split them in half and then into two, three-sided rails. Carve a very small point on to the end of each rail so they will easily plug into the posts. Drill two or three 1/16" holes, evenly spaced on each side of the posts. I used yellow Eimer's glue for assembly and stained my fence with Micro-Mark Age-It, Easy Brown #81528. All painting was done on my workbench before installing. For an older looking fence, finish with some Micro-Mark Age-It Easy gray #80873 or a black wash.



Split Rail Fence

Wooden cake testers from the kitchen were never cleaned, and appear to be weathered. The post on the right was weathered. Which looks best??



Scratch built cottage with day porch. My wife once owned a 1949 Ford just like the one shown here. Also, a hand-carved putty tree trunk but, more important, a three-rail split rail fence along the driveway.

PRIVACY FENCE

As seen in the photos, this fence is designed to keep people and animals out, children and pets in, and provide excellent privacy. Since part of my railroad is located outdoors, I built this prototype fence around my property (prototype photo).



Scale Model Privacy Fence



Prototype Privacy Fence

Continued on Page 15

The following is what you will need to build one 8-foot section of a privacy fence. For HO, scale reduce the lumber size with your scale ruler.

Materials 'O' Scale

Round wood skewers (cake testers) or dowels to a scale diameter of 9" to represent large posts.

Scale Lumber 2"x6" inch
Basswood Micro-Mark #80016

Scale Lumber 2"x4" inch
Basswood Micro-Mark #80015

Scale Lumber 1"x4" inch
Basswood Micro-Mark #80004

Elmer's Glue, White or Yellow

Sheet of netted small stone bathroom tiles

You can also use foam insulation board to simulate real concrete retaining wall blocks

Optional - small bricks
available from Hobby Lobby Builders Supply

Start by cutting all scale lumber to proper length. For an 8 foot length of privacy fence, you will need five eight foot scale 2"x6"s, four of which are cut at a 45° angle on both ends, two eight foot scale 2"x4"s, both cut at 45° angles, 20 scale 1"x4"s six or seven scale feet long (depending on the height of your fence), two 9" scale diameter dowels (3/16" for 'O' scale) 6 or seven feet long, five or six stone tiles, miniature bricks, or large Roman bricks to resemble retaining wall blocks.

The fence is most easily built at the workbench. Put down some wax paper first. Place two of the 2"x6"s and one of the 2"x4"s face up (short side) spaced evenly with the 2"x4" placed 6 scale inches closer to the top for more esthetic beauty. The bottom 2"x6" rail is placed at the height allowing for the top thickness of the bricks, and the top rail 6 scale inches from the top. You could place the rail flush with the top, however the fence seems to have more character, just as with my prototype, with 4" sticking up. Place the two round posts on top of the 45° cuts of all three rails (see photos) and fasten with Elmer's glue. Let dry thoroughly.

Place twenty 1"x4"s on top of all three rails vertically with a one inch scale overlap (vertical clapboard). Glue everything in place and let dry. When making multiple 8-foot panels, alternate the direction of the overlap for better appearance. First right to left then left to right, as seen in the photo.

Close up the fence panel by gluing the remaining three rails on top of their corresponding rails over the top of the 1"x4". Cut quarter-round curves on each end of the last 2"x6". Cap the top of the fence and glue in place. When dry, the fence is ready to be finished with the stain of your choice, with or without weathering.

Tools

Razor Saw and Miter Box

Scale Rule



A Privacy Fence In Progress

I chose dark mahogany for the rails to simulate pressure treated lumber and Micro-Mark Age-It Easy brown for the posts and clapboard siding to represent cedar tone. Use a regular #2 pencil. I drive track tacks into my plywood benchtop, then cut the heads off leaving 3/16" sticking up. I place a puddle of white Elmer's glue over the nails and gently tap the fence posts into place with a small wooden mallet. To finish, place the five or so large bricks, depending on size, directly under the two bottom rails. These bricks protect the two bottom rails from dirt and moisture, just like in the real world. As noted before, you can also substitute foam blocks.

CHAIN LINK FENCE

This type of fence won't win any beauty contests, but what it lacks in good looks it more than makes up for by its durability and longevity. Some chain-link fences have been around for fifty to one hundred years and they can be seen in all parts of our country. In Texas, where I am from, they were always called cyclone fences, maybe because of our tornados. So far, I only have one chain-link fence on my layout. It is located at my oil pumping site for Shell Oil. Once again you could buy ready-made chain-link fence kits in HO and O scale, but it's more fun to make your own!

I made mine from an old ping pong net I found at my neighbor's yard sale. I sprayed it with gray primer. The posts and cross rails I got from a very old roll of no-climb horse fence. The top and bottom strands of this wire are larger in diameter than the mesh. I used the larger ones for the posts. The roll of wire was over thirty years old and had been sitting out in the weather. Mother nature's weathering is definitely "good enough" and better than anything I could do. The small clips to hold the chain-link mesh to the cross rails and posts were made from strip metal cut from the lid of a tuna fish can. The gate lock was handmade from brass bar stock and the keep out sign is there to discourage kids from taking a ride on the horse head walking beam oil pump! Don't laugh, this was great fun growing up in Texas.



Chain Link (cyclone) Fence

This only covers a small sample of the types of fences you will see in the prototypical world. The variations are endless, and each builder seems to put their own individual touch on their project, which I really enjoy studying. For Job, I'm sure he would have chosen barbed wire fence to solve his problems with all the critters he was trying to manage. Barbed wire hadn't been invented back then, but I wonder if he would have had the patience to build a model of it! Regardless, I'm sure he would have had more than enough patience to be a model railroader.

A NOTE FROM GARY

We received this communiqué from Gary Ray right before going to press:



I attended the Lone Star Region Division 1 Christmas dinner Saturday night, the first division event for me. They had a novel idea. They are trying to recruit new modelers; they have commissioned a thirty-second ad about model railroading to be shown in the Dallas/Ft. Worth movie theaters. “Shotgun” Tom Kelly is an avid modeler and is doing the voice-over for free. If it goes over well after a 6-month trial, they’ll take it national. The ad contains a QR code that takes them to the NMRA membership site. Interesting idea.

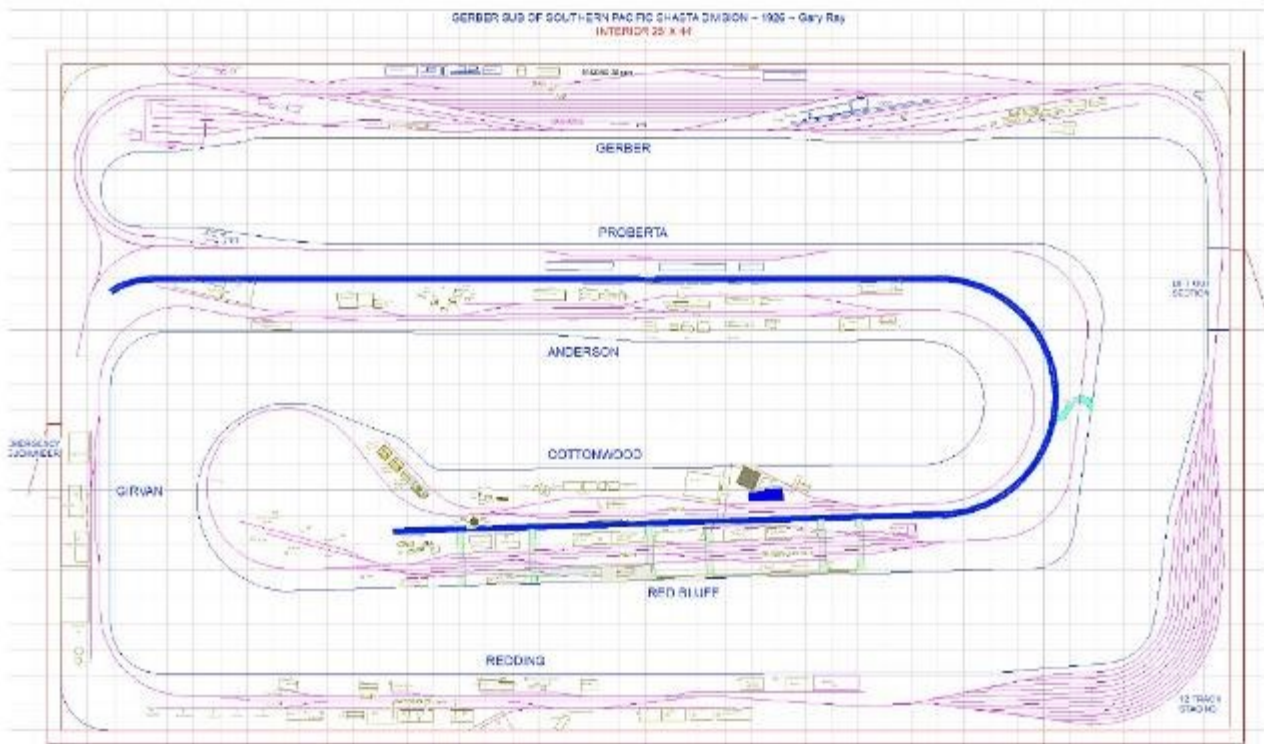
I’m getting to know a few of the local modelers. Haven’t had a lot of time. I now have a degree in iKea! Still unpacking also.

However, I have spent some time designing the new layout. The floor was poured Wednesday, and the building arrives the first week of Jan. I’m doing the CAT5 and LED wiring, and the contractors are doing insulation, sheetrock and HVAC. I’m doing final electrical (install switches and plugs to wire already there.)

Hopefully will start building new layout in February.

Say Hi to all my CA friends.

Merry Christmas,



Jim Betz and Travers (Sailsman?) suggested connecting leads to main for more flexibility. Still would use the same number of switches.

Cal Saxmith recommended eliminating the switchback to Industries in Gerber. Also adding passenger car setout at Gerber which was prototypical, just opposite end of station.

Dave Lowless suggested going from stacked reversing loop staging at each end to thru staging simplifying construction and allowing for more flexibility. Also continuous unassisted running for non-operating visitors.

Jon Panlius and Dan Miroballi suggested lengthening the yard lead by the engine house. Dan also thought the other end of yard should have a lead. It does now. I took 1.5' out of the yard to make it happen.

October Meet Sacramento

SIERRA DIVISION MEETING

The Most Recent Live Meet was October 16 in Sacramento. The morning portion of the meet was an operating session at the Sacramento Model Railroad Historical Society. Unfortunately, the Company Photographer was unable to attend, so there are no photos of our SMRHS visit. As usual, the session ran until about 11:30 and lunch was available on site for \$6.00.

The afternoon session was held at Steve Folino's home. Thanks to Steve for hosting us yet again. Following a brief business meeting, the contests were held. There was only one entry in the modeling category, a GP-35 in S scale by Michael Eldridge. As such, it took 1st Place. Three photos were entered by Walt Schedler to take 1st, 2nd, & 3rd places. There were two Show-N-Tell presentations: A scratch built engine house by Ed Powell and a small bridge by Ken Horne. Door prizes capped off the meeting and a re-visit to Steve Folino's Fungus & Mungus Railroad.

CONTEST WINNERS

MODELING CONTEST



First Place - Michael Eldridge



PHOTO CONTEST



First Place - Walt Schedler

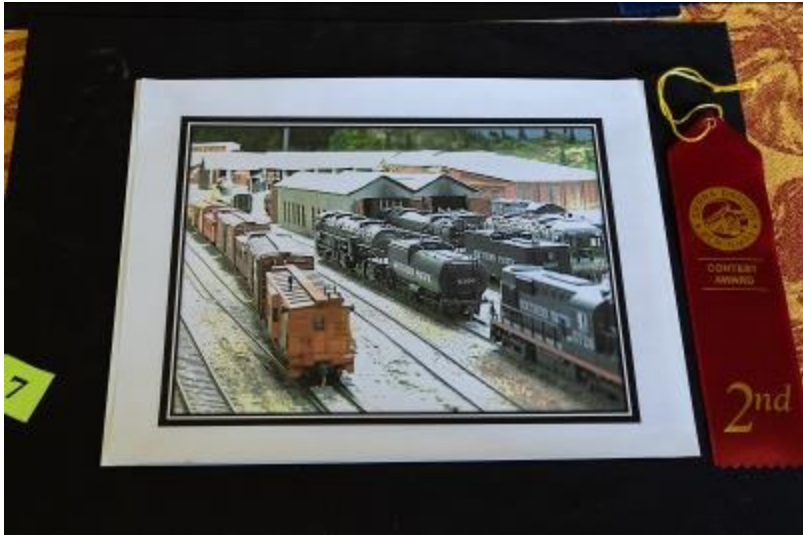


Continued on page 19

October Meet Sacramento - ct'd.

CONTEST WINNERS

PHOTO CONTEST



Second Place - Walt Schedler



Third Place - Walt Schedler



Continued on page 20

October Meet Sacramento - ct'd.

SHOW AND TELL



Engine House
By Ed Powell



Small Bridge
By Ken Horne



Continued on page 21

October Meet Sacramento - ct'd.

LAYOUT VISIT

Photos of Progress on Steve Folino's Fungus & Mungus



Looking across the Dusty Bottoms Cattle Company's loading pens, the town of Bedrock and the Fungus Mines are visible along the right side.



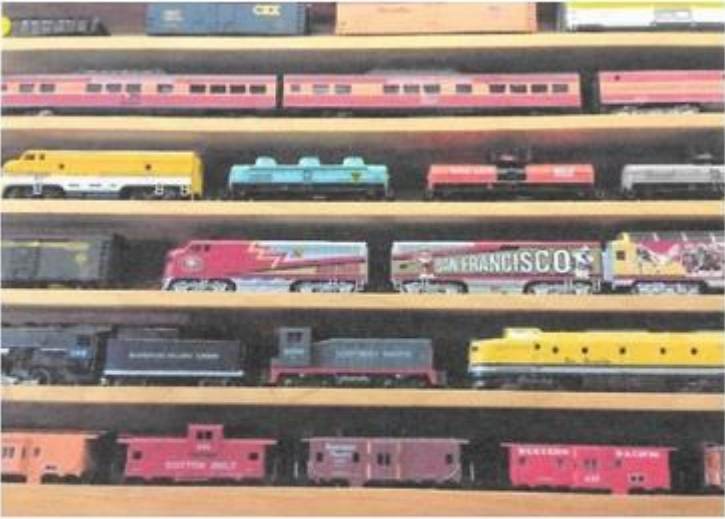
Bedrock, Colorado home of the Fungus Mines hosts Lee's Livery Stables, a blacksmith shop and the Shady Rest Hotel.



The south end of the Fungus and Mungus Railroad's Cloud's Rest yard. Visible are the coaling tower, sand house, water tower and the Wells Fargo & Co. office.



One of the switchbacks leading to the Hugh Mungus Timber Company's logging camp. Also partially visible along the left edge is the old, abandoned Pickens Place, now a HOB0 camp,



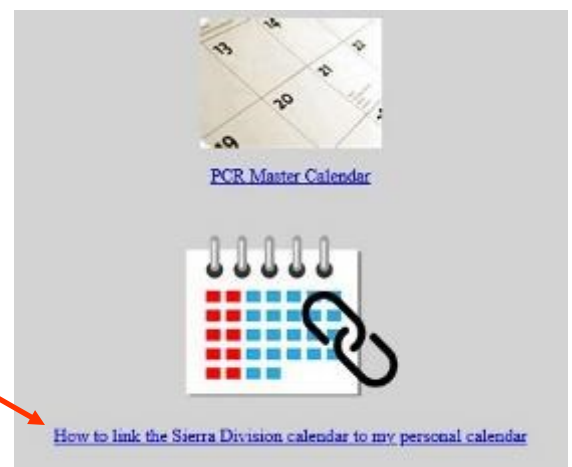
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If you would like for Sierra Division events to appear in your personal calendar, you can link to the calendar on the Sierra Division website. This will work if you use Google Calendar, Outlook, or Apple's Calendar app. Go to the Sierra Division website, <http://www.pcrnmra.org/sierra>, and click on Calendar. On the right you will see a link to a page that describes how to link to the Sierra Division calendar from your calendar. After that, when events are placed on the Sierra Division calendar they will automatically appear in your calendar also.

Questions or need help? meldridge2000@gmail.com



It's coming, it's coming....

The 2023 PCR & FRRS/WPRM Convention

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April 26 thru April 30, 2023

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Sacramento, CA 95815



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- Layout tours organized Scott Inman
- Vendor room on Thursday & Friday
- Swap meet room on Saturday
- Extra fare activities
- Separate, secure contest room



Convention wearables by Daylight Sales

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- Logo and car decals designer
- Facilities manager
- Advertising sales & door prize collector
- Timetable designer
- Clinicians and presenters



Steven R. Folino

Steven R. Folino
Sierra Division, Treasurer
2023 Convention Chair



3D resin printing for small detail parts

The new class of 3D resin printers using an LCD panel have made it very affordable to print highly detailed small parts. There are many YouTube videos describing how to print with these new printers, but I found that when printing very small parts I needed to use different settings and approaches than most of what I saw in the YouTube videos. You can see my setup for printing in the picture, and the workflow is from left to right. I am using an Anycubic Photon Mono printer and Siraya Tech resins. The basic flow is to put resin in the printer tray, send your drawing file into the printer however your printer does that, and press the print or start button. Even small prints take anywhere from half an hour to several hours to print. When the print is finished you remove the build plate and wash excess resin off of the parts, then detach the parts and do a final curing.



At the very left of the picture you can just glimpse a heater, and there is a thermometer on the back wall. The room needs to be above 20° C or the parts will not form as well, and may not stick properly to the print platform. Also on the left is a box of nitrile gloves. The resin is sticky and over time causes problems if you get it on your skin. I place the yellow box on the printer when it is printing, just one more barrier to keep ambient UV light away from the resin in the printer.

On the top shelf you can see I have several types of resin. Printers often come with a bottle of resin, and this is usually “ABS-like” resin. This prints easily, but the parts are brittle. It is excellent for making pattern parts if you are going to make a mold from them, but it is not suitable for parts you would put on a model. For this you need a more flexible

resin, and this is where my experience did not match what I saw in the YouTube videos. New types of resin for this class of printer have just started appearing. Siraya Tech is a brand known for its consistent performance, meaning that from one bottle to the next it performs the same way, so you don’t need to constantly adjust the printer settings. Siraya has a resin called “Build” that is more flexible than ABS-like resin, and they recently released a new product “Tenacious” that is very flexible. Both Build and Tenacious are clear. I had trouble printing with these. If a part formed a shelf of any kind or had a hole going sideways, the resin would always form an extra mound on the shelf or in the hole. My guess was that the UV light was shining through the layer that was being formed and cured resin above that layer.

Looking online at videos describing these flexible resins I found that people normally mix them with another resin. For example, they would mix 4 parts ABS-like resin with one part Tenacious, and come up with a flexible part. I tried this, thinking that the opaque ABS-like resin would solve the pooling and mounding problem. The parts were still too brittle. I ended up using just enough ABS-like resin to make the part slightly opaque, the reverse of the mix in the videos. I mix 4 parts Build or Tenacious with one part ABS-like. Build is somewhat flexible, good for parts that are not too thin. Tenacious is best for parts with small projections, particularly if they are going to be handled.

The other place I vary greatly from the videos and from the manufacturer’s recommendation is in the exposure time in the printer. When I used the recommended times with these flexible resins it was nearly impossible to get the parts off the build plate. The printer has a separate setting for the exposure time of the first few layers. The recommended times are generally 30-60 seconds. I set this as low as 4.5 seconds and had no problems with parts failing to stick on the build plate, but they were easy to release. I also reduced the exposure time of the main layers of the part, which greatly reduced the pooling and mounding problem.

When the parts come out of the printer they will be coated with uncured resin from the tray. This resin has to be washed off. The manufacturers recommend ethanol, which you can no longer buy in California. Most people use isopropyl alcohol. In the picture you can see I have a small plastic tub for this, and an exhaust fan right behind it. The smell of the resin doesn’t bother me at all, but the process puts a lot of alcohol fumes in the air. The container is full of 91% alcohol. I swish the build plate with the parts still on it in this bath for 30 seconds. After this I spray the parts with alcohol, then pop the parts off the build plate and put them in an ultrasonic cleaner which is also filled with 91% alcohol, and run it for three minutes. The resin manufacturers caution you not to put the parts in alcohol for more than 30 seconds, but I haven’t seen any problems from doing this. In some videos the parts go straight from the printer into the ultrasonic cleaner, but when you do that the alcohol accumulates a lot of resin in it and needs to be replaced often.

Continued on Page 25

Other videos use detergent in the ultrasonic cleaner. I tried this but it seems to have no effect at all. The two steps of alcohol seems to work best.

The parts need to be dry before the final curing. After taking the parts out of the ultrasonic cleaner I blow the alcohol off the part with a small airbrush compressor. I use a commercial UV curing station, but it is very easy to build one of your own and may actually have more UV light, so shorter curing times. Many videos and specs will recommend about five minutes, but the greatly reduced exposure times in the printer seem to necessitate longer in the curing station. I always cure the parts 30 minutes. It might be better to go even longer, but that is the maximum time on my curing station. I always let the parts sit for a couple of days before using them. I suppose I could put them out in the sun for a few hours after the curing station to get a final cure.

Printing with UV cured resin is obviously a lot more complicated than FDM (filament) printing. It requires a lot of experimenting and throwing away trial parts, but once you determine a resin mix and settings that work for you, you can make highly detailed parts for your models, some of which are not available commercially.

During our November 13 ZOOM meet we had a lively discussion about 3-D printing. One of the questions that came up was what CAD software was available and with what ease of use. It turns out that Fusion 360[®] was the “preferred choice. Below is a link to the Fusion website where a free “hobbyist” version is available.

Link to Fusion 360 hobbyist version- <https://www.autodesk.com/products/fusion-360/personal>



Thanks to Lou Anderson for providing this link.

A Rail Road With No Name

By Chip Meriam

In the not too distant past (*two years ago*) I met a new neighbor, Jason Roye. The Royes had just purchased a home about one and a half blocks west of me. I welcomed Jason to the neighborhood and explained that he would enjoy it here if he could just get used to the sound of the railroad—which runs just west of our subdivision. Jason responded, “I love the sound of the trains. My hobby is model railroading.”

BINGO.....

We talked about our hobby for awhile and I learned that Jason, his father, his brother, and Sierra Division Member, Dave Neighbors were building an HO scale model railroad in a large outbuilding near us. A little research revealed that Jason’s dad, Ken Roye, has been an NMRA member since 2003 (*Dave Neighbors since 1989*). Jason joined us in January of 2021.

This fall I had an opportunity to visit the railroad under construction. What I discovered was a large, fully finished, metal shop building with a club-sized layout in the works. The railroad incorporates many recognizable landmarks along a route running from San Diego, CA to Cincinnati, OH. Following are photos I took during my visit.



South Bay - San Diego



San Diego c. 1941



Tobin Bridge - Feather River



Loop- At Mormon Rocks

Continued on page 27



Green River, Wyoming



Cincinnati, Ohio



L-R Ken Roye and Jason Roye

When I asked Jason about the name of the railroad, he replied, “Either my dad hasn’t figured that out, or he’s just keeping it a secret”. So, for now, it shall remain the NNRR (No Name Rail Road).

Stay tuned. I plan to run a follow-up story (or two) as the railroad construction progresses.

Tips of the Trade Hobby

ZIP BALLASTING

A Clinic From Jim Collins

During our November 13 ZOOM meet, Jim Collins offered a short presentation on Zip Ballasting, a method described in an article by Joe Fugate in the July 2020 issue of *Model Railroad Hobbyist*. Jim tested this method on a module he had under construction. Follow the photos as we recap the essence of Jim's presentation.



The first step in the process was painting the track. To prepare for this, Jim masked off the roadbed, leaving just the ties and rails exposed. With Q-tips, he applied a film of 3-in-1 oil to the rail tops to prevent paint from adhering there.



Jim covered the rest of the module with plastic drop cloth material cut to fit. Then he applied the paint. Note that this was done outdoors for adequate ventilation.



With the masking tape removed from the rails and ties, Jim randomly colored several ties in a different shade. The rail tops were wiped clean, and any recalcitrant paint was removed with odorless mineral spirits. Finally, Jim used isopropyl alcohol to remove the residual oil.



Once all the paint had thoroughly dried, Jim applied Express Scale ballast using a spreading tool described in the MRH article. Jim reports that the spreader needed a little tinkering to get it to work properly, but was otherwise satisfied with its performance.

Continued on Page 29



Jim mentioned that the ballast spreader jammed up when some of the ballast got stuck under the sliding door. What he did was cut a hole to allow a screwdriver to be inserted to move the door. This seemed to work OK. Another method of clearing the jam might be a blast of high-pressure air.



Continued on Page 30



With the ballast spread, and the ties brushed off, Jim applied a solution of Ballast Bond, by Deluxe Materials, diluted with about 10% alcohol. This allowed the ballast adhesive to soak in without the need for pre-wetting.



The final result—a realistic, nicely colored and contoured section of ballasted track.

Here is the link to the original article:



<https://online.fliphtml5.com/buups/rkmm/index.html#p=97>

The Sierra Division, PCR-NMRA is making available to Sierra Division members a “kit” containing the necessary tools and instructions to complete the part 3 requirements of the NMRA Model Railroad Engineer – Civil certificate.

The included tools and templates are sufficient to create the following (you only need to construct 3):

HO Scale #5, Code 83 Right-hand turnout

HO Scale #5, Code 83 Left-hand turnout

HO Scale #5, Code 83 Single crossover

HO Scale #5, Code 83 Double crossover

HO Scale #5, Code 83 Crossing 14 degree

How the System Works:

- Reservations are on a first-come, first-served basis. All reservations will be for a calendar month. Requests must be sent to steve@fungusmungusrr.com.
- The kit will be shipped via UPS on the first day of the month. Arrival should be within 2-3 days.
- The member may use the kit for what should be, **about** three weeks.
- The member must ship the kit back, postage pre-paid by the 25th of the month. This will allow us time to check and clean the kit and still send it out again on the first of the month. Zip ties and address information will be included in the kit. **Steven Folino, 1794 Azurite Way, Sacramento, CA 95833.**
- The rental fee and deposit must be received by the 15th of the preceding month.
 - a. The rental fee for the kit is \$25.00 by separate check. This will cover the cost of shipping the kit to the member, cleaning costs and additional packaging as needed.
 - b. A deposit in the amount of \$500.00 must be included by **SEPARATE CHECK**. This check will **NOT** be deposited unless the kit is not returned. When the kit is returned, the check will be destroyed.
 - c. Both checks must be sent to: **Steven Folino, 1794 Azurite Way, Sacramento, CA 95833.**
- Be prepared. Have supplies ready and on-hand in advance of the arrival of the kit. You will need.
 - a. Micro-Engineering Code 83 NON-weathered rail, have extra, I wasted several.
 - b. Small diameter solder.
 - c. Soldering iron, min 35 watts.
- The member is responsible for loss and all damage to the contents of the kit. If you break it, or damage it beyond further use, notify us immediately at steve@fungusmungusrr.com. Be prepared to include a check in the amounts listed above to cover the cost of replacement.
- Please notify us as soon as possible if you wish to cancel your reservation so that we can offer it to another member. steve@fungusmungusrr.com

If you have questions, please direct them to Steve at steve@fungusmungusrr.com or Chip Meriam at chipmeriam@comcast.net.

Have you changed your address or other membership information?
Notify Headquarters
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Family ~ Spouse or minor child of above member in good standing; DOES NOT include the NMRA Magazine or voting rights. Name: _____ DOB: _____	\$ 9.00	\$ 18.00	
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