The Scale Resource

NEWS, REVIEWS, INFORMATION TO USE

April / May 2022
Volume 8 No. 4

New Tracks: Where Mentors Help Modelers Build
Shuffle Off to Buffalo: NASG Convention
Levers for an Interlocking Plant
River Raisin Airslide Hopper
A Pedestrian Walkway
GRS Type SA Signal
SLA 3D Printing
And So Much More...

THE S RESOURCE
NEWS, REVIEWS, INFORMATION TO USE
SCALE

Published Bi Monthly

The Model Railroad Resource LLC
407 East Chippewa Street
Dwight, Illinois 60420
815-584-1577

April/May 2022
Volume 8 No. 4

Owner / Publisher
Amy Dawdy

Managing Editor
Daniel Dawdy

Advertising Manager
Jeb Kriigel

Welcome to the online S Scale Resource magazine. The magazine is presented in an easy to use format. The blue bar above the magazine has commands for previewing all the pages, advancing the pages forward or back, searching to go to a specific page, enlarging pages, printing pages, enlarging the view to full screen, and downloading a copy to your computer.

Front Cover Photo

Overland Models SD-60 that Randay Wilson modified with a ratcheting hand brake from the production cast brake wheel arrangement.

BILL OF LADING

2 Bill Of Lading

3 From the Publisher's Desk

6 News You Can Use - New Items of Interest

7 Shuffle Off to Buffalo: 2022 NASG Convention
By Jim Martin

13 SLA 3D Printing
By Dan Dawdy

27 Modifying the River Raisin Airslide Hopper
By Randy Wilson

28 GRS Type SA Signal Stories
By Chris Rooney

33 Levers
By Jas Millham

37 New Tracks - Modeling with Mentoring from Talented Model Builders and Even from Modelers in Other Hobbies
By Contributing Editor Jim Kellow MMR

70 What's On Your Workbench?
By Jay Mellon

73 MORE: What's On Your Workbench?
By Gaylord Gill

78 Scene Around the Layout
By Joe Hohmann

80 Reader Classifieds

81 Shows

82 Classified Ads

82 Advertiser Index

From the Publisher's Desk

Whoever said March comes in like a lion and out like a lamb was not from the Midwest. After a few 70 degree days, we may have snow by Thursday March 31st! Oh well, back to the basement.

Again we normally don't publish articles that also appeared in *The O Scale Resource Magazine,* but we felt this was worth doing as not everyone reads both magazines. It's the second of our 3D printing articles. This time I get into the wild and wonderful world of stereolithography (SLA) printing. It's a wild ride and I am by no means an expert only having the equipment since last October. Many of you have been printing for a long time, and I suspect you still get a surprise once in awhile. We'll cover the basics this time and delve deeper next time.

We are looking forward to the NASG convention coming up this August 2nd through 6th, 2022 in Buffalo, New York. This issue features an article by Jim Martin talking about the convention and what it offers. It looks to be a great time.

Chris Rooney works on some new signals and those will be available early this summer so stay tuned. There are lots of new things coming.

Of course, we have the New Tracks article in both the O and S Scale Resource magazines and I want to mention their weekly Zoom meet-up. It's Wednesday nights and live on YouTube stating at 6pm CDT. Check their Website, NewTracksModeling.com and sign up to get their Emails for the show. While I am not normally on the Zoom part, I do watch the weekly shows and learn a lot; and yes, there is some scale S content from time to time. We also sponsor the My Build segments where you as a modeler can show off your projects. Again all the information is on their Website.

I will be wearing a new hat soon as I have agreed to be the editor of the NASG bi-monthly magazine *The Dispatch.* Nothing will change here, but I am looking forward to making *The Dispatch* the best it can be and making changes that will keep all the NASG members happy.

So, what all have you been working on? We did get a lot of article ideas since our last issue, but we always need scale S content. We know you are out there, so drop us an Email and let's work together. I firmly believe that people coming in from the smaller scales will take a hard look at S, and we need to help them make that decision by showing them great layouts, as well as, kit building and bashing.

Happy Reading & Happy Modeling,

Amy & Dan Dawdy

NEWS YOU CAN USE

Steve Wolcott says: Pre-Size Model Specialties adds to their line of car ends for the modeler.

Two hopper/gondola heap shields, a 3/3/3 Dreadnaught end, a 4/4 Inverse Dreadnaught end, a 3/3/3 Inverse Dreadnaught end without rivets, an Art Deco C&O end and a Pullman Standard Builders end. See these on their website at https://pre-size.com/products/SscaleFreight_Car_Parts.php

3/3/3 Dreadnaught

4/4 Inverse Dreadnaught

Art Deco C&O

3/3/3 Inverse Dreadnaught w/o rivets

Pullman Standard Builders

We are also carrying the T-section Bettendorf trucks made by Miniatures from the North. See these on the website at https://pre-size.com/products/SscaleTrucks.php

Tru-Color Paint continues to bring new colors to their fantastic line up. Here's the new product information for the 3D Printed & cast resin paints and aerosols for April/May 2022.

Tru-Color Paint
When you need TRU-Color

April 2022
Aerosols
4045- Navy Gray #5- 1939

As always, Tru-Color Paint is open to new ideas for paints. March will end all of the 3D Printed & Cast Resin paints we have scheduled, and April ends all of the aerosols so scheduled. If you or your readers have any suggestions for new colors, email us at tru.colorpaint1@yahoo.com or tcpmodelpaint@gmail.com.
If we can find enough information on the color, we could put it in the next year's product schedule.

See their full line up at their Website!

Shuffle Off to Buffalo: Don't miss this year's NASG Convention

By Jim Martin

This August 2nd to 6th marks the 2022 Buffalo CanAm NASG convention, hosted by S scalers in Western New York and southern Ontario

We obviously don't have to sell the charms of S scale to Resource readers, but for those of you who have never attended a National Association of S Gaugers convention, make this your year.

Why? Well, if for no other reason than it's a chance to find multiple vendors in one place. These conventions are a great big hobby shop. No need to guess about an online product. Here, you can hold it in your hands. But it's much more than that.

It's also a great way to make important social connections both with fellow hobbyists and the dealers and manufacturers who make our minority scale possible. One of the endearing charms of living in our small S scale bubble is that the manufacturers are not just our suppliers, but also our friends. Conventions like the one coming up this August are a great way to renew old friendships and start new ones.

Add in the display layouts, tours, train rides, food and merriment, and it's easy to see why, for many, conventions such as these are the yearly "must attend" event on the S scale calendar.

Organizing these conventions takes a lot of work; more so when it must be postponed by a year as was the 2021 convention. Organizer Darby Marriott and his crew have used the extra time to polish the event even further. What would have been a memorable event last year will be a stellar one this summer.

Before breaking down the list of events, let's look at the host city itself. Buffalo, New York has a rich industrial history: a manufacturing hub where the rails of many roads intertwined and transloaded cargo with ships in its busy port district. Milling, food processing and production, manufacturing, steel… Buffalo had it all. Buffalo remains an important economic hub while more recently reinventing itself as a city of recreation, culture, Art Deco architecture, and fine food. There is much to see, more than we can tell you about here so be sure to click on the link at the end of this article for more specific information on the convention and how to register.

The convention will be held at the Buffalo Marriott hotel (marroittonlinereservations.com) close to the airport and still only minutes away from the downtown attractions. The hotel will be at the core of the convention, home to the kickoff icebreaker, the exhibition hall with multiple vendors and display layouts, including the visiting S Scale Workshop. (This will be their fourth convention appearance, since Scranton, PA in 2013.) Multiple modeling clinics are planned, and the adjacent contest room will feature hand crafted models to inspire the rest of us. The closing banquet on Saturday night will conclude with the annual Jamie Bothwell auction, a raucous yearly favorite where 3/16th treasures can be found at great prices. Be sure to bring some cash as well as some of your own stuff for Jamie to ridicule and sell. Through all this, the hotel will be buzzing with a steady stream of informal get togethers as old friends meet and ideas are exchanged.

Western New York in the summer is a great place to be, and the organizers want you to get out and about by signing up for the convention tours. These are all detailed on the website, but here is a brief sampling of the experiences up for grabs.

One can't visit Buffalo without taking in Niagara Falls. That tour will also include the chance to visit the ruins of a historic power plant, and later that same day a historic carousel factory.

The next day take in the rural countryside aboard the New York and Lake Erie railroad. (nylerailroad.com) A matched set of Alco FAs will take you on a scenic ride to the locations of some memorable movie shoots. After lunch, tour a local brewery with a fabulous layout inside.

Niagara Falls, American side
Photo by Carol M. Highsmith

Above: NY&LE FA
Photo Credit the New York and Lake Erie Railroad

Left: Hamburg G scale layout.
Photo by Bud Rindfleisch

The following day, there will be a scenic bus and boat tour of the city's Art Deco architecture including the magnificent Buffalo Central Terminal, a visit to the rejuvenated waterfront and a cruise through the historic Silo City, a monument to the city's industrial past. (Buffaloriverhistorytours.com)

Above: Buffalo's restored waterfront
Photo by Darby Marriott

Below: Buffalo Terminal:
Photo Credit hhlarchitects.com

A final non-rail themed tour will take you to East Aurora's Roycroft Campus, (roycroftcampuscorp.com) the home and incubator of America's Arts and Crafts movement. That same tour will take in Vidlers, a "five and dime" store that is unlike anything you have seen before.

Seven notable local layouts will be open for the layout tour, three of them S scale. Dan Malkiewicz's 18 by 50-foot transcontinental layout features both standard and narrow gauge. Ron Kemp has been working hard to recreate the Buffalo-based Belt Line on his 12 by 46-foot layout. And Gregg Mummert will host visitors to his 13 by 17-foot layout. Again, there is much more information on the convention website.

Finally, if you would like to put a little more "Can" into the "CanAm", Canada beckons just across the Niagara River from Buffalo. Bring your passport and plan to put a few extra days into your convention schedule to make a proper holiday of your visit. Adjacent Fort Erie boast two rail museums, and the Niagara Peninsula is home to many fine layouts. Toronto, North America's 4th largest urban center, lies just ninety minutes north of the border. It boasts too many attractions to mention, but you will want to explore the Roundhouse Museum (torontorailwaymuseum.com) with its attached brewery, and the newest attraction, Little Canada in the heart of Toronto (little-canada.ca). This "must see" attraction is a series of vast Canadian dioramas linked by model rails.

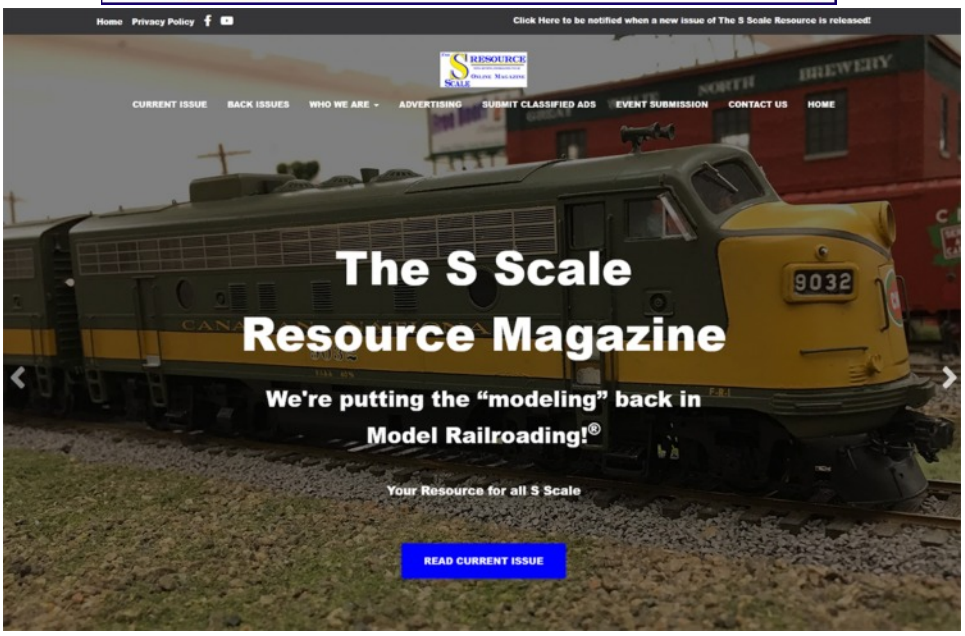
Toronto Railway museum.
Photo courtesy of Toronto Railway Museum

Above: Ron Kemp layout. Photo by Ron Kemp

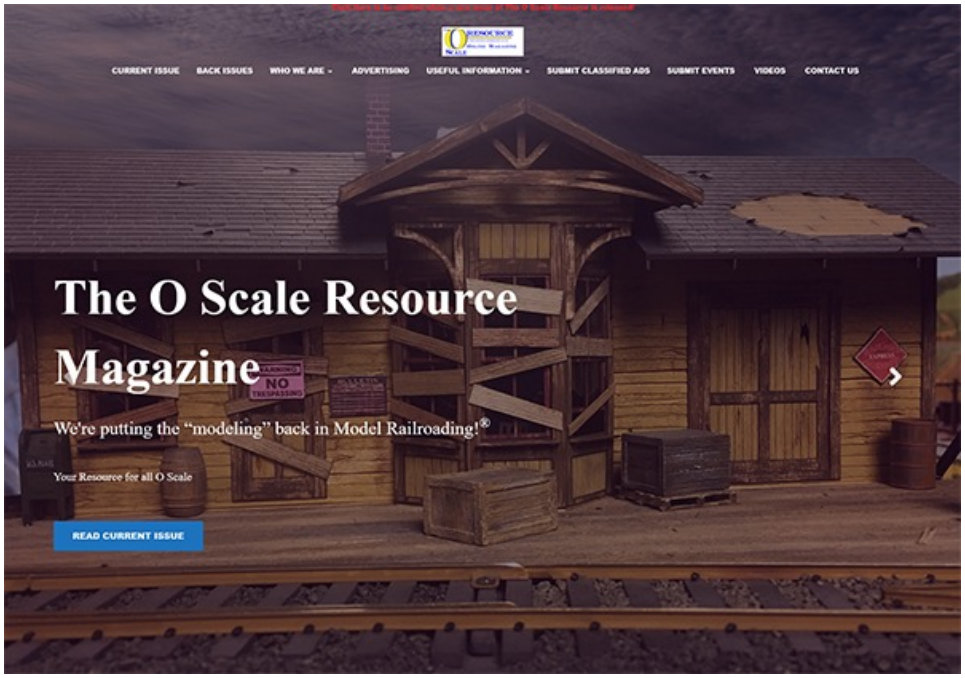
Left: Dan Malkiewicz's hi-rail layout. Photo by Dan Malkiewicz

This article touches only lightly on what awaits you in Buffalo this summer. Be sure to visit the CanAm website for full details and to register.

About the author: Jim Martin is assisting with publicity for the Buffalo CanAm. He lives just 30 minutes from the border on the north shore of Lake Erie. He plans to have his S scale Port Dover Branch open for visits around the time of the convention. It will be profiled in the next edition of the S Scale Resource Magazine.



Check out our new Websites. All back issues are available in HTML5



The Wonderful Frustrating, Exasperating, Maddening, Awesome World of SLA 3D Printing

By Dan Dawdy

In the January/February 2022 issue of The O Scale Resource Magazine Glenn talked about Drawing for 3D Models: The Issues and Considerations You Need to Watch Out For. If you are designing models and have not read that yet, do it now.

I was not sure how to proceed with this article. I am no expert, having only been printing since last October. There are many of you who have been doing this for a few years. So I'll break this down into a few articles and start at the beginning, walking you though my experiences. I will also reference many good YouTube videos on specific subjects that really helped me. There is no reason for me to try and reproduce their information here. And to be clear, we are talking about SLA or resin printing and not filament printing.

Here is a great Website that shows how a resin printer works. If nothing else, it will give you all the parts and what they do. You don't need to understand everything, but do need a basic knowledge of what's going on.

In the January/February 2022 issue of The O Scale Resource Magazine, Glenn talked about Drawing for 3D Models: The Issues and Considerations You Need to Watch Out For. If you are designing models and have not read that yet, do it now.

There are many good printers out there and getting into a discussion of them is like the old Ford vs Chevy debate. Do your research and buy one. I bought the ELEGOO Saturn. I have two great Internet friends, one who has the ELEGOO Mars and the other has the Saturn. I figured if I needed help ,I had backup.

I went with the Saturn because of it's larger build volume of 192*120*200mm / 7.55in x 4.72in x 7.87in vs the Mars of 89.6mm*143.36mm*175mm / 3.53in x 6.65in x 6.89in. Now, there are even larger versions on the way like the ELEGOO Jupiter which could print a 40' O scale car in one shot!

OK, so once you have selected as printer and it's on the way, now what? Mine came with the basic accessories, but yours may not, so let get all that out of the way. I'll list what I bought and link to Amazon for some items. I do not do affiliate links so it does not matter to me where you purchase your items.

Safety first, so you will need nitrile gloves. You can buy a box of 100 at many drug stores. I ended up really liking the Kirkland brand from Coscto, but any brand will do. You don't want the resin to come in contact with your skin. It's not going to burn you, but it can cause irritation.

Safety Glasses are a must especially as you weed (cut the supports from the printed model) the parts after printing. Bits of uncured resin can and will go flying all over. If your eyes are extremely sensitive, you might want to consider goggles.

Masks maybe needed depending on where you are printing. I have a large open area and the resins I have used so far have very little odor, but again, to play it safe, use a mask. I also bought these small ELEGOO Mini Air Purifiers which work well for me. Some resins are much smellier than others, but so far it's not been an issue with the resins I have used.

OK, now we need some tools. A good sprue cutter for weeding off the supports is a must. Many of you already have one of these, but buy one just for printing as it will get dirty and sticky.

A regular metal paint scraper to remove the print from the build plate. It's better use an extra-wide knife to remove the model from the build plate.

Plastic spatula putty knife. This is a must as sometimes your print doesn't stay on the print bed, and you need to remove it from the FEP sheet in the vat.

A silicone mat for a work surface. Because silicone is completely non-reactive, you can cure the resin directly to the mat and crack it off when it is safe. I use a DogBuddy Dog Food Mat as it's much less money that some brands that are made just for printing. My printer is sitting on one and I have another for weeding.

Filter or funnel for pouring unused resin back into it's bottle. Simple paint filters work well, but I bought a funnel with removable strainer. You must filter this as there could be small bits of hard resin that broke off your print job. If you allow those back in the vat and begin a print that small hard piece of resin will damage your FEP.

Clear Screen Protector is an absolute must. If your FEP, we'll talk more about the FEP later, breaks or is punctured by a hard piece of resin, it will leak all over the top and down the sides of the printer. If it gets on the glass screen under the vat, it will be hard, if not impossible, to save it. If it leaks around the glass and into the printer, all bets are off. I ran for three months without one and luckily I had no issues, but it's better to be safe than sorry. Some people use a standard 8" IPad tablet screen protector.

Lint free wipes are needed to clean the FEP. Paper towels may be to harsh and cause scratches. Paper towels and glass cleaner are fine for the screen, but NOT the FEP.

So, if you looked at the link showing how your printer works, and if you did not, do it now! The FEP or Fluorinated Ethylene Propylene film is used on the bottom of resin printing vats. The material is a transparent non-stick material that allows the UV light to pass through and expose the resin. Because the FEP is non-stick, the resin has a stronger adhesion to the build plate so the print will release from the FEP film while staying attached to the build plate. The FEP is rather delicate, and you must use only the plastic spatula to remove failed prints that may stick to it. There is a picture of one of my failures later in this article. You can, and should, have extra FEP material so if/when yours breaks, you can replace it.

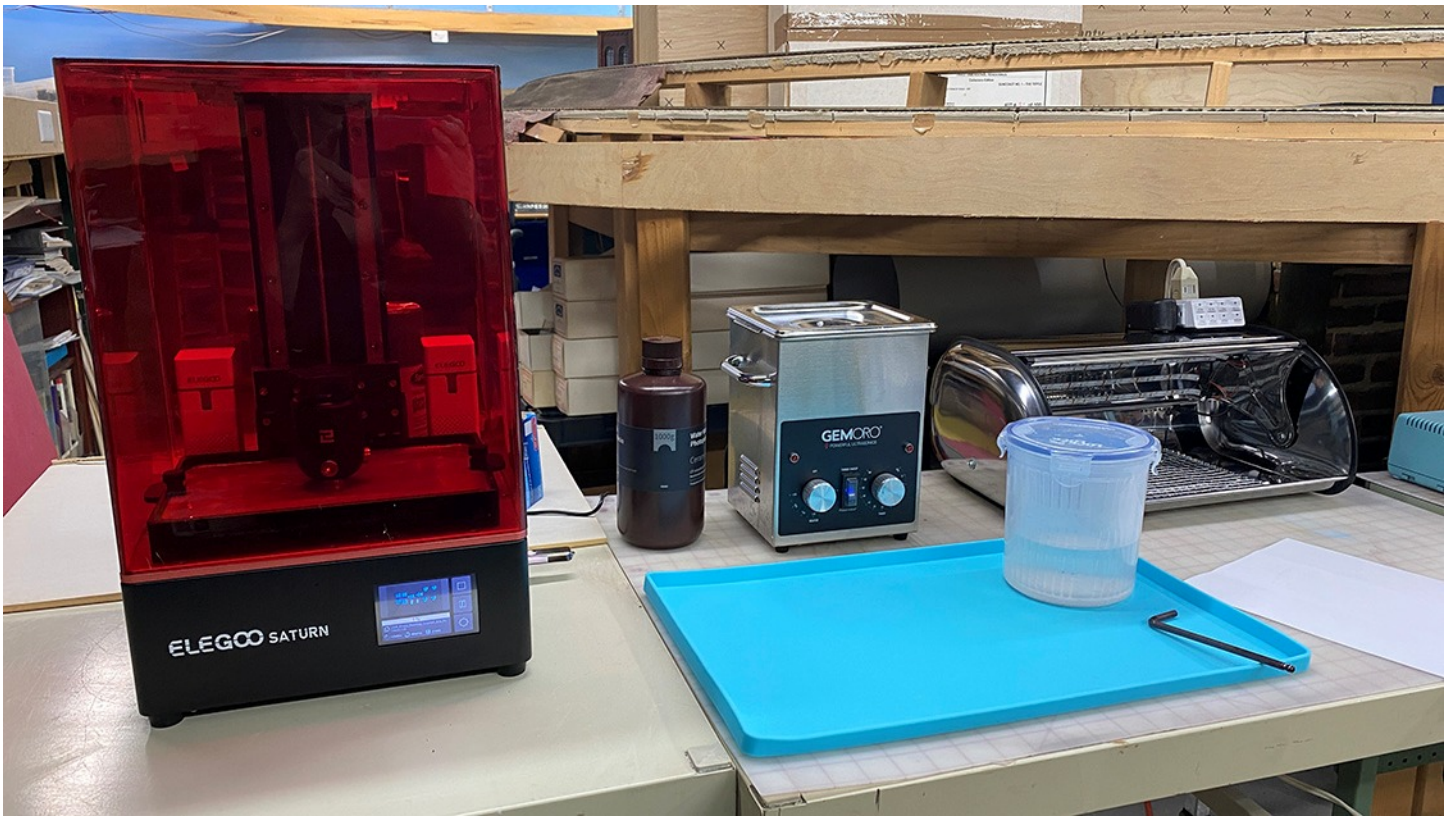
Paper towels, paper towels and more paper towels. Might as well buy the cheap ones, because you will go through them really fast!

OK, so let's talk about process and resins before software and workflow. I started with ELEGOO Water Washable 3D Printer Resin as I did not want to go the Isopropyl Alcohol route for cleaning. After you make a print it needs to be washed thoroughly to remove excess resin. Water washing is cheap. For smaller pieces you can use these Pickle Containers.

In place of pickles, add your parts along with water and swish the inner basket for about 10 minutes. Remove the parts and brush with a soft brush like an acid/flux brush. Once cleaned, set them aside to air dry or you could use a hair dryer if you are in a hurry. They must be fully dry before curing or you will see white spots on the parts. After drying, the parts need to be cured under 405nm wavelength UV light. Now if you live in an area that is very sunny you can simply take the parts outside and let them cure in the sun. This is not an option for us here in the Midwest during winter. I watched a video on building my own curing oven. Here is the video https://youtu.be/etLOLUowvPI and parts list.

Here is my completed oven from the video. It worked well and was not that expensive.

So I got set up fairly cheap right? Not so fast… the water resin I was using is very brittle and for longer flat items will curl. Remember we are not printing little monsters or fairy figures, but model railroad parts like truck side frames and boxcar doors. And to add to the mix, I was going to produce masters for Glenn to make molds for use in brass casting. So I needed to switch to a less brittle resin, and was also looking at isopropyl alcohol cleaning. There had to be a better and cheaper way. This video and others like it gave me the answer. I would also suggest you subscribe to Uncle Jessy on YouTube as his videos are very well done and offered a lot of help to me. Once answer was Mean Green cleaner. It is less then $6.00 a gallon at Home Depot. That's way cheaper then IPA. The only downside is the parts were just a bit sticky after the Mean Green so my workflow became,



My original set up. I also had an ultrasonic cleaner to help with cleaning.

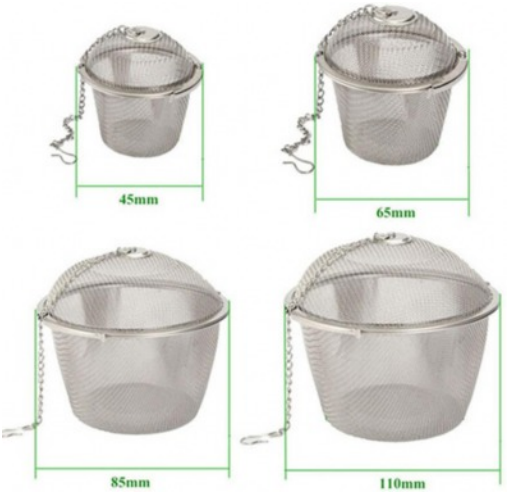
wash in Mean Green, rinse with water and then dunk in a small container (Pickle Container) of IPA and then dry.

This worked well, but was getting cumbersome. You may not need to do this, but with the amount of printing I knew I would be doing, I broke down and bought an ANYCUBIC Wash and Cure Machine. This will wash, and once dry, cure the parts with UV lights all in one machine.

I know… more money, but a time saver. Again, you do not need this. My cure oven and pickle containers worked well, but took a long time and they have their size limits. I can fill the ANYCUBIC tube with a gallon of Mean Green and dump all the parts in, set the timer and let it do its thing. If I did go back to a water resin, I simply pour the Mean Green back into it's container and fill the tube with water. **IMPORTANT: I have to assume you have read your instructions on whatever machine you bought but… after washing resin print in water, IPA or Mean Green, DO NOT DUMP IT DOWN THE DRAIN!** You can use it over and over, but once it gets really dirty you will need to change it out. There are some good videos about disposal. Here is one, and if you search on YouTube for "resin ipa disposal" you will find many more.

OK, back to my journey. So now my full workflow for parts is 1) removing from the platen; 2) do the weeding now rather than after washing and curing; 3) dump parts in the Mean Green and let it spin for 10 minutes; 4) rinse parts with water; 5) place parts into the IPA and brush the parts; and 6) set on a towel to dry.

If I have small parts like the O scale truck parts for Central Locomotive Works shown below, I found a tea infuser on Amazon that works really well. I can simply dump the small parts into one these tea balls close the latch and toss the whole thing into the washer. So now you are probably wondering what did with my homemade curing oven. I found a great use for it curing all the supports and bad parts. Remember all the supports need to be cured before tossing them into the trash. You should not be deposing of any uncured resin!



Junk resin ready to be cured.

Therefore, I take all the junk resin and move it to the end of the mat and then slide that into the curing station and close the lid. I set it for a half hour or so and then toss the junk resin after it has cured.

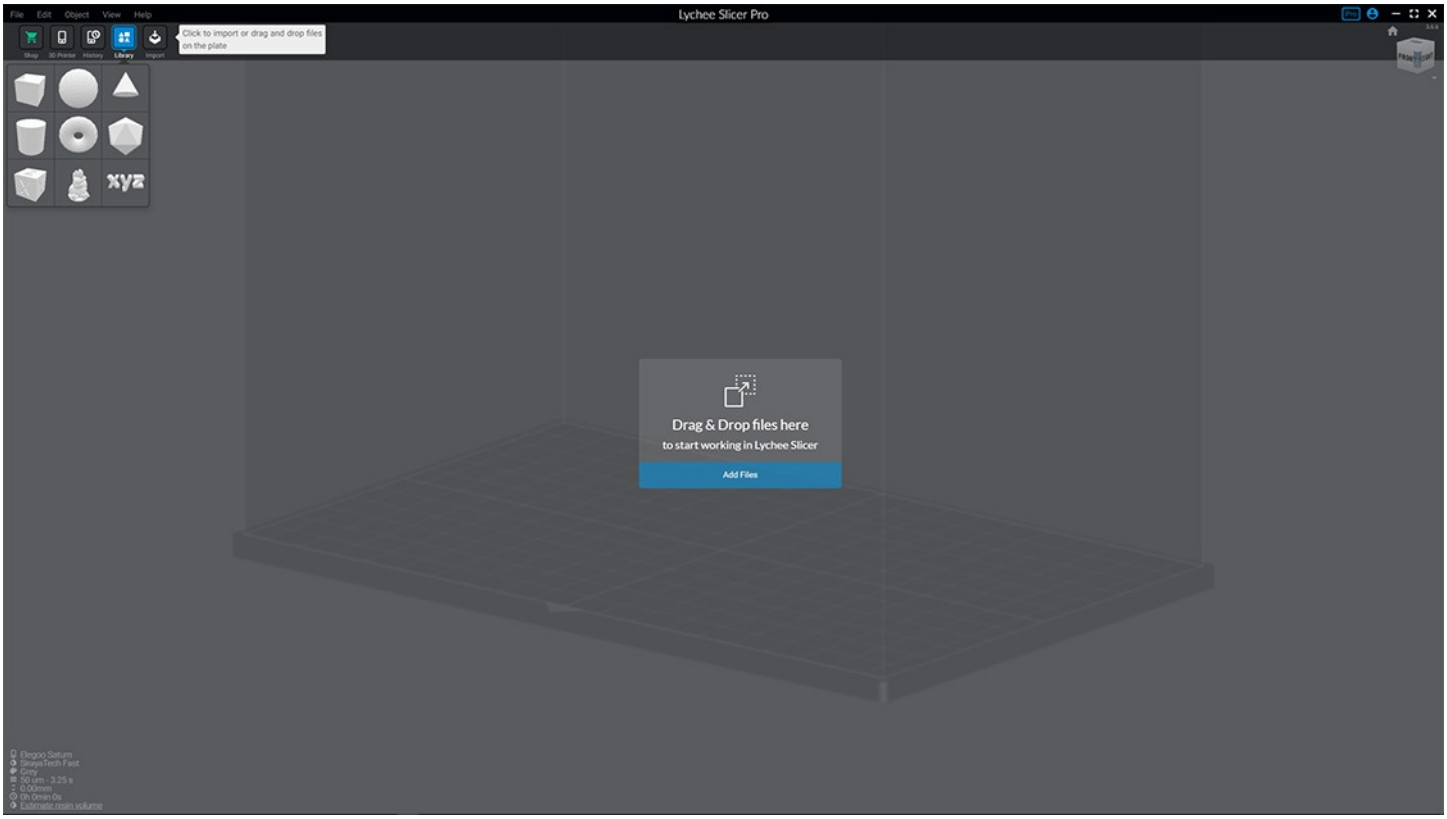
OK, enough talk – let's print something! Your machine should have come with a thumb drive. Mine contained the instructions, a sample piece to print and the machine parameters (en).gcode for the printer. I had seen many reports of the ELEGOO and other drives being extremely unreliable. They may stop reading while printing. I used mine for awhile, but then bought two from Amazon. Any good drive 32GB or smaller will work. So while one is in the printer, I can work with the slicing software and have the extra drive in my office. Also you need to format the drive for FAT32 if you are on a PC.

Now we need to install and run the slicing software. Mine came with CHITUBOX so that's what I installed. There is a free version, as well as a paid version with more features. The paid version is over $200 per year at the time of this article. I'll cut to the chase here, CHITUBOX was a mess on my machine and Glenn's. Glenn made the mistake of saving an STL file to the desktop which caused the video card to start flashing and lock the machine. I was able to duplicate that so a word of warning here – don't save to the desktop! There were also other issues, so I looked around and found Lechee by Mango 3D. Lechee slicer also has two versions and I used the free version for a few weeks and then paid for the extra features. Their subscription in only $65.99 per year and I find the interface much cleaner, and I have had no issues with the software. All the upcoming screen shots and options will use Lechee, but if you use another slicer, and there are a few, you will still be able to follow along.

So what is a slicer and why do I need it? The slicer tells the printer how to print the object, as well as all the parameters like slice size, speed of the print platen, exposure time, bottom layers and so much more. Here is a great overview of the Lechee slicer and one on CHITUBOX.

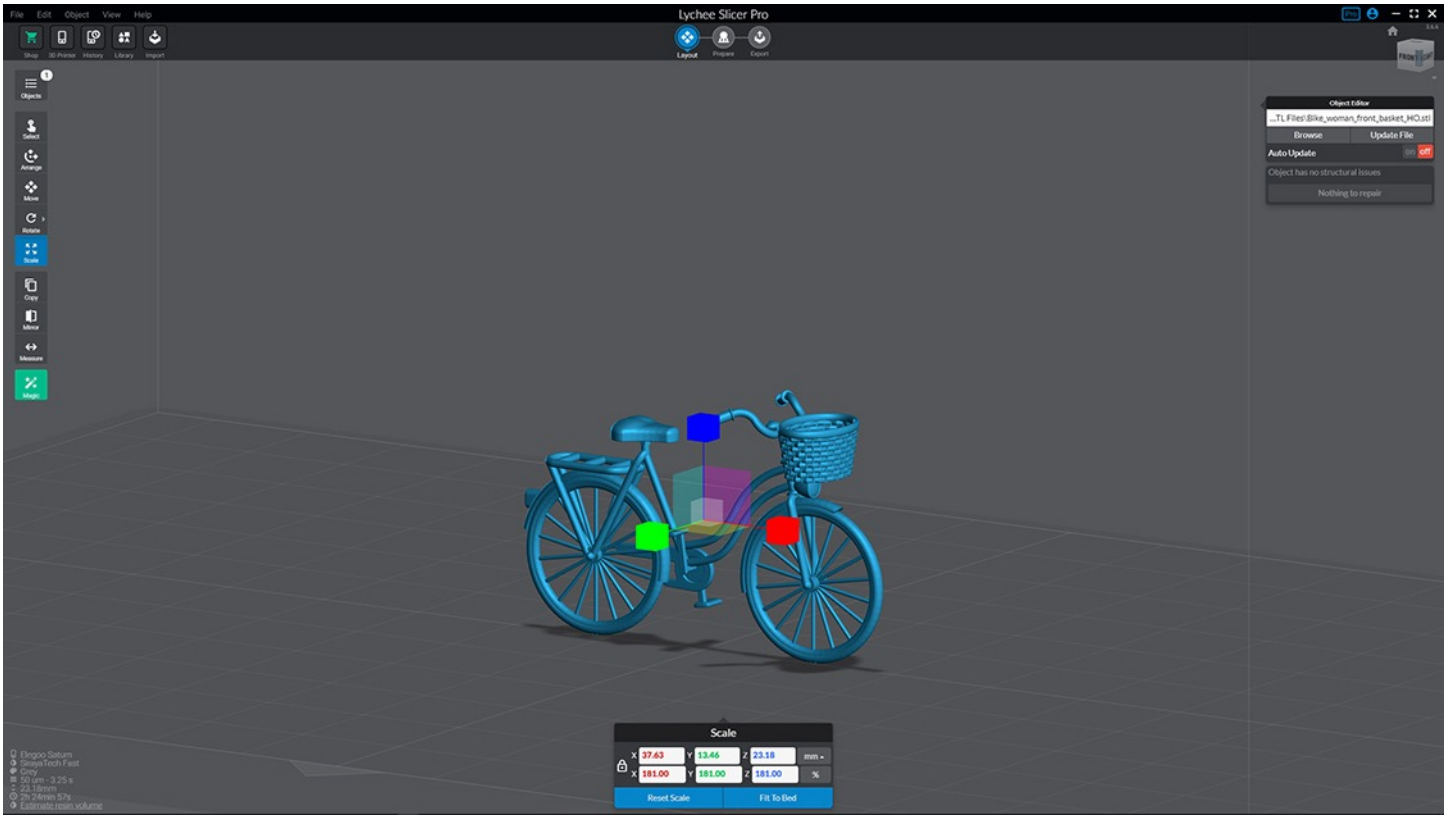
So what this means is we are normally printing in 5 microns or 0.005 millimeter slices. Every time the platen goes down into the resin vat and the LED's come on, only 5 microns on the X axis are hardened. This is not a lot of material. And this material is is a viscous state until the light hits it. Supports are important because if you have a now hardened 0.005 millimeter slice and there is nothing holding it to the platen or another already hardened piece of the model, it will simply float away and cause damage as the platen comes back down for the next pass.

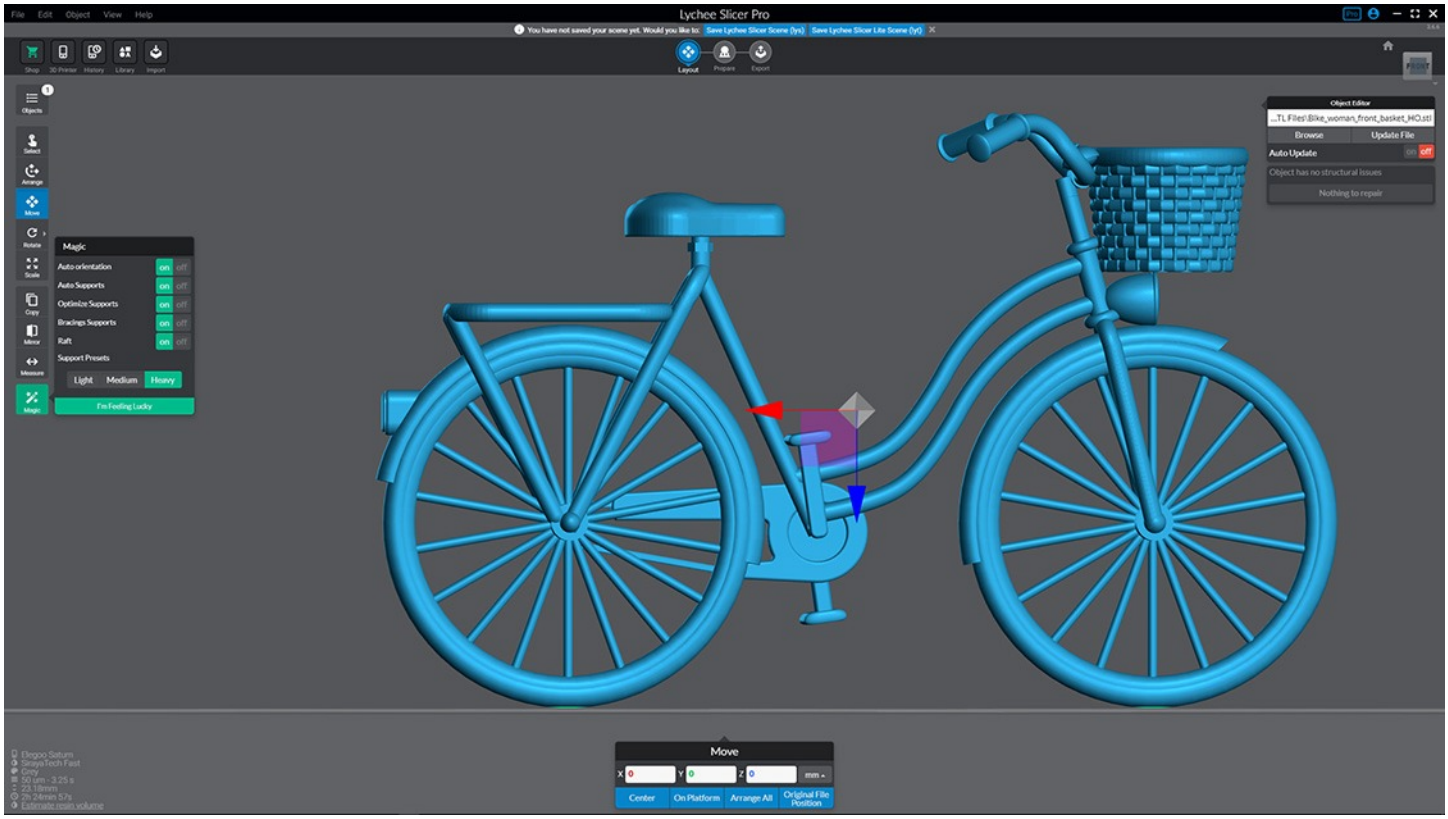
Learning to properly support a model is an art form on to itself. Many videos have been made about this and this one is one of the best. The sliders for moving through the print are also on Lychee and most other slicer programs.



Above: Lechee slicer open and ready to import an STL file. AN STL file is normally created from some type of 3D modeling software. Read more here. So you have to create a 3D file or there are many places that allow downloading of free and paid STL files to get you started. Check this page for many sites.

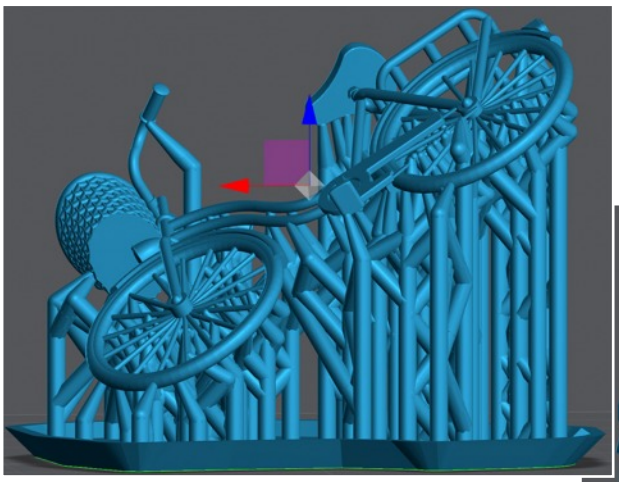
Below: I found a free bike on thingiverse.com, but I did "tip" the designer as it was nicely done. It's HO so we need to scale it up to O or S. I did this in O so the resize scale is 181%. Yes, if you read Glenn's article this resizing is a no-no, but for some simple items, it's fine.

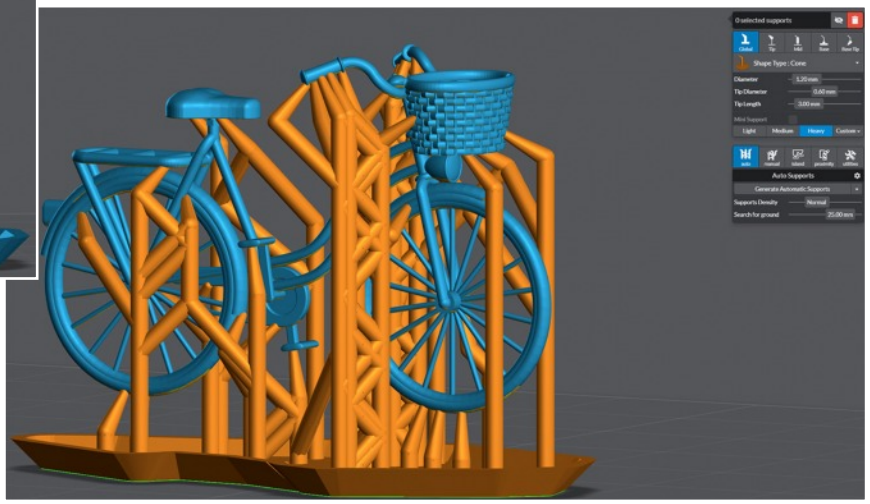




Above: One of the cool features is the magic button. Selecting the model and using that button Lychee will orientate the model, support it, set the raft, which is the bottom layers touching the platen, and more. Now no slicer is perfect at auto generating supports and most people will tell you not to use it, but hey, we are learning. At least let it do its thing and see what it comes up with.

Below left: Here is the result. It angled the part (we'll go down that rabbit hole in the next installment), added the supports and support bracing. Because we don't want a part like this to print directly on the platen, Lychee raised it and placed in a raft. At this point, we can take this and process it into a file for the printer. Your other option is to allow Lychee and others to auto support the model for you without the angle being sent and bracing. The image on the bottom right shows what it came up with. I told the program to auto support using heavy supports, with a normal support density and other default settings. This looks a lot less crowded than the magic version even with the different angle. But for learning, I like to auto support to get started. Now we can export this bike to our printer.

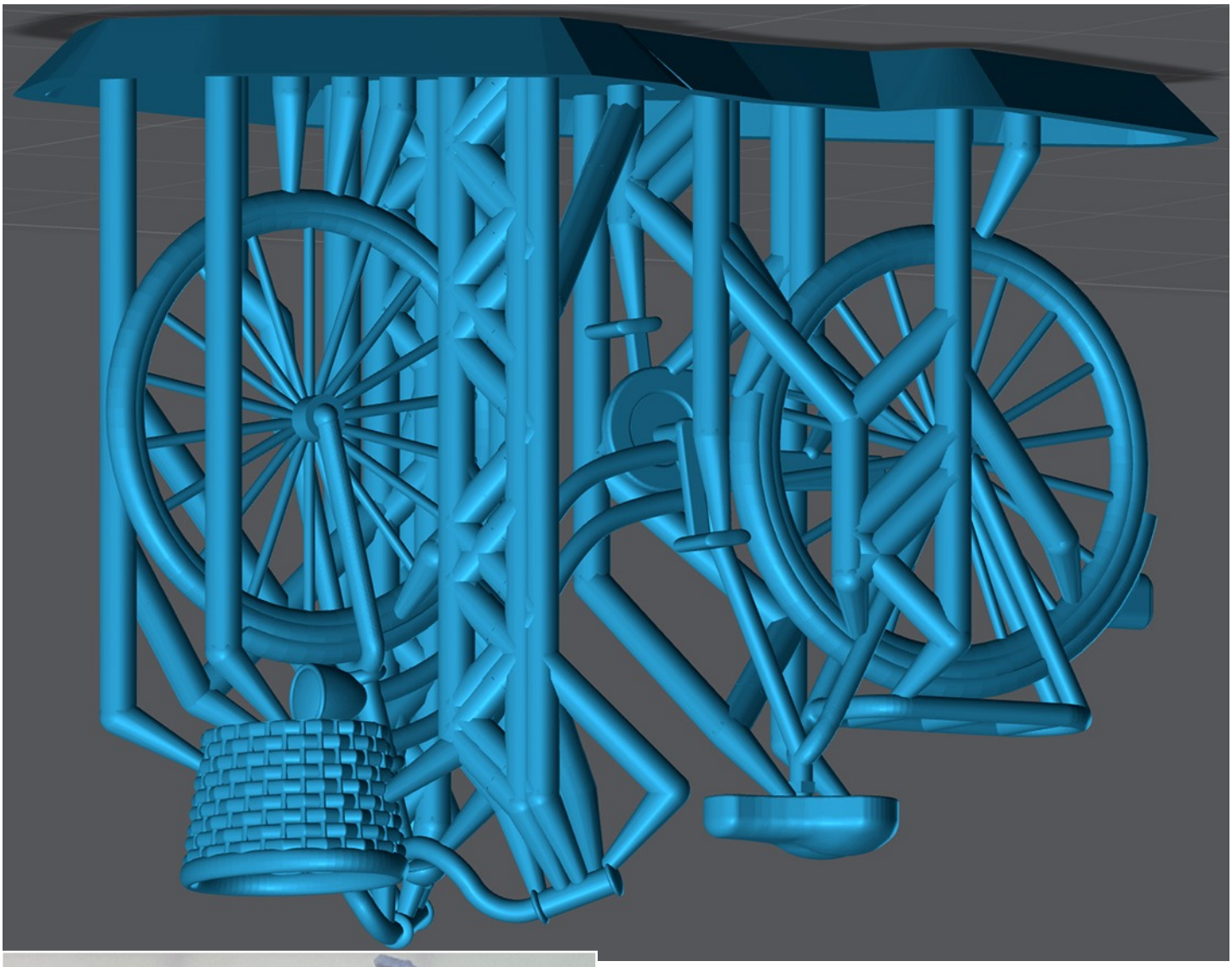




If you watched the video you will have set up your printer and resin. Resin exposure times can be tricky, but looking on the manufacture's Website, you will find a good starting point.

One cool thing with Lychee is you can look up the resin and see what other users have reported as settings for your printer and resin combination. Most all slicer software will show you the approximate print time, as well as, resin usage and cost if you put in that information for your resin.

Now is great time for a reminder... You are printing upside down!

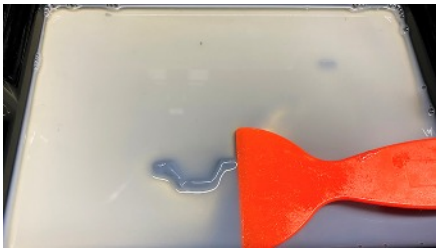


My very first print using auto supports.

So now maybe the supports make more sense. Let's print this. When going to build the print file, you have many new options. From the resin manufacturer's Website you will find an exposure time based on printer type. Let's stay at the defaults for most of these. As an example, if we want to use Fast by Siraya Tech, we can go to their Website and see a Google sheet like this. It will give us a starting point for our printer. So plug those numbers into the settings page of your slicer and give it a try. That was what I did on my first print. I found a few free STL files and ran them through the slicer and onto the thumb drive. Once at the printer, all you really need to is level the platen. The printer came with a piece of paper or cardboard for leveling. Do that following your printers instructions. This is very important, and because my table is on wheels and I can move it when not printing, I always level before each printing session.

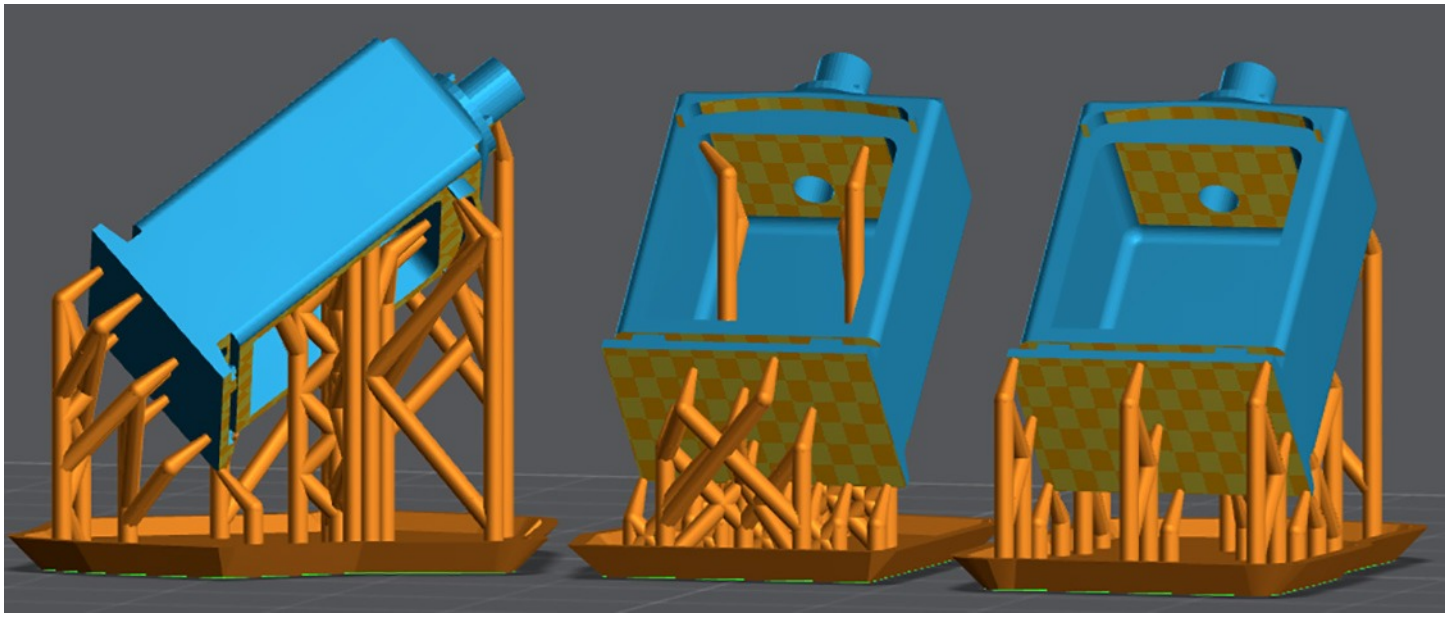
So the bike turned out well and I was all happy and ready to begin printing masters for Glenn to make molds from. Using Glenn's drawings, I supported each part remembering what I learned on the videos. Now we wait and see. You never know what's going to emerge from the goop until it's finished.

Wow, the picture above showed my next run. Signal cases in S scale from Glenn, along with a test underframe and a soft drink machine I found on-line. These were mostly auto supported and I thought this was fantastic! Then, as happens so many times, reality hits home… what the heck went wrong below?

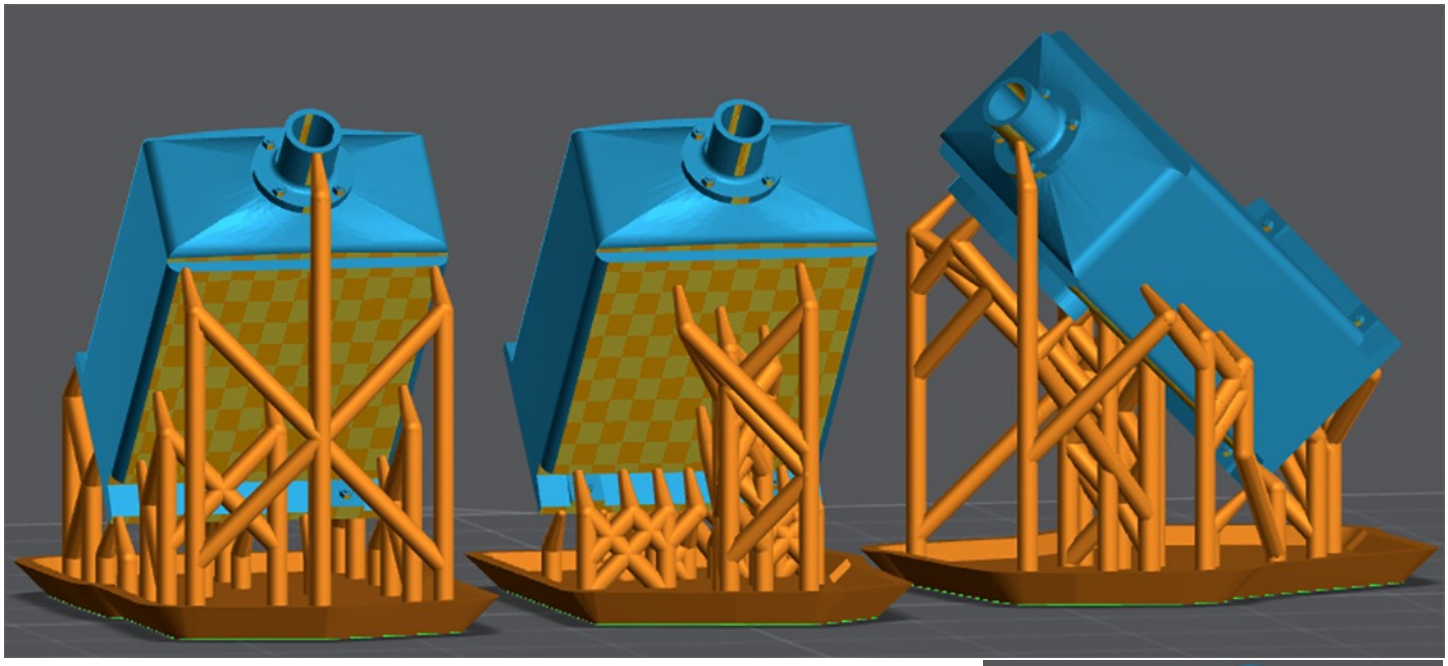


Some of you may look at the previous picture and scrape off the mess and try again, but it's better to do a post mortem and see what we can learn. I was playing around with supports and angles. What I sometimes do is let Lychee auto support with heavy supports. Then, I'll switch back to manual supports and remove supports I don't think are necessary, make some supports medium or light as we move away from the platen, and even add supports to places I think need them. The image on the top left shows that the door broke away from its supports, ended up on the bottom of the vat.

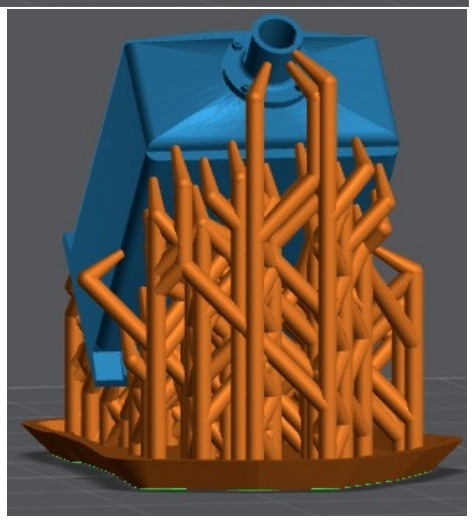
The side frame shown on the left also broke away from its supports. This is when you very carefully use your plastic scraper and remove the left overs from on top of the FEP. Why did it break away? Well, I printed flat to the platen with supports. If I were to have printed directly to the platen it may have not broken from the platen, but there is something called elephant's foot where the bottom layers spread out. We'll cover that in upcoming articles. The point here is that as the platen when comes down, exposes the 0.005 millimeter slice and then begins to go back up, you have tremendous suction forces at work. Think of wearing boots and walking through a muddy wet hole about six inches deep. If you yank hard and pull your foot up, the suction will probably hold the boot while your leg flies up and you fall over. Now think of lifting your foot very slowly and allowing the muddy water to flow back under your boot. You will get your leg and boot back. The same principal is at play here. The suction on the door as it begins to print with all the surface area in the resin will cause the part to simply break off. This is why it's recommend to print flat parts at an angle. What's the best angle, well we'll get into that next time, but for now 20 to 30 degrees will work. You also want the best side down as the supports will then be toward the platen. After weeding, you may see some marks where the supports attached to the part. We want to be careful where these end up to keep the post production of sanding and sealing to a minimum.

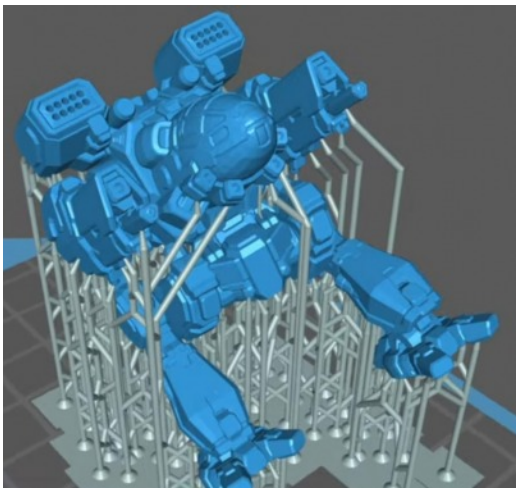


Let's look at the image above and the one on the next page. This was done in Lychee with the far left part using the Magic setting where Lychee did everything. The middle part was me setting the angle to 45 degrees and the using auto supports. The far right image was again 45 degrees, but I manually added the supports. If you use CHITUBOX, you will not have magic but you can run auto and then a manual support model. Look at the differences. The Lychee Magic setting is very bizarre. Will it print properly? Not really. Same with the center auto supported. I know now from a few failures that the bottom of the case will not print properly. In my experience, if you have flat part with corners, you must support those corners. The center part has lots of supports on the bottom but none on the corners. This will lead to round or sagging edges. If we add too many



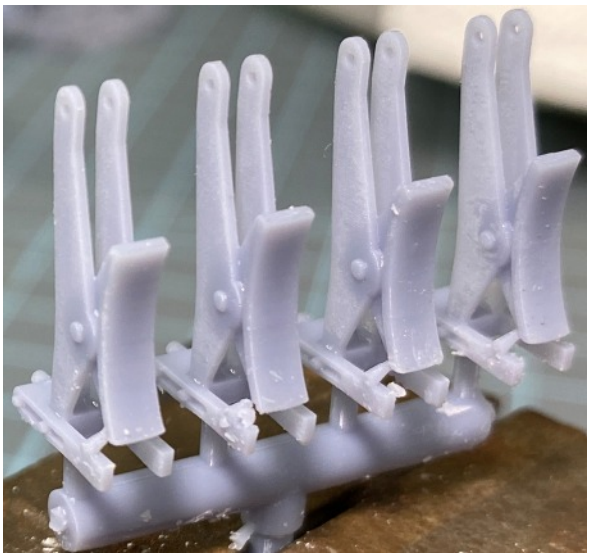
supports to a small area, we can get resin bulges where the supports contact the print. Look at the center part that was auto supported. There are rear supports, but no corner supports. Why does it do that? Well, we can tell Lychee to add support density and then auto support again. Let's try that. Wow look at the image on the right, it is now supporting just about everything it can and there will be a lot of damage on the back of this part because of all the supports. So why is my version hitting the proper areas without going overboard? Well, other than the learning curve, I went through it the way the programs do their auto supporting.





You have to remember that 90 percent of the people printing in resin are building monsters, fantasy creatures and the like. For the most part they don't have the issues we have when making parts. Oh they have issues… Imagine trying to support this (whatever it is) on the left.

But our models are of real things, and we know what they should really look like. For all the beautiful parts like the brake assemblies shown to right, we still have issues and need to learn from our failures like the one on the left.



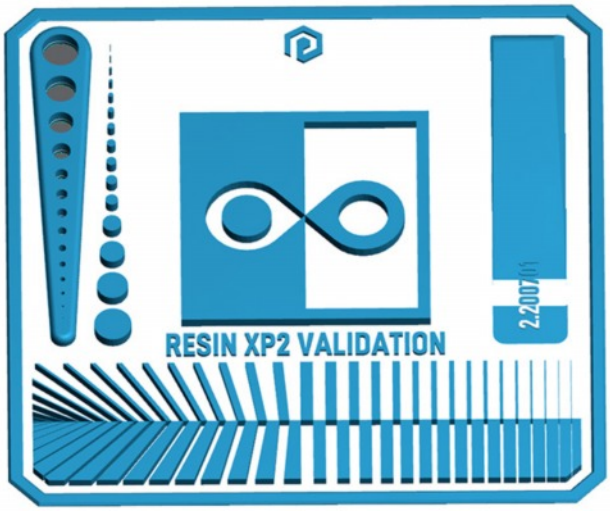
One thing you must keep in mind is if you have a failure and you begin looking for solutions, be cartful not to go in willy nilly and start changing settings wholesale. Changing many variables at once will always get you confused and in trouble. Temperature plays a major factor in resin printing. Each resin type will have its temperature range printed on the bottle. 20-30°C (68-86°F) is a very general range for many resins. So printing one day at 70°F and the next at 80°F many cause issues. We'll look at this in then next article. For now, let me show you some free test files to help you dial in your settings.

Siraya Tech Test Model V5

Siraya Tech has one of the best test models and you can find it here. By using the resin manufacturer's suggested settings for your printer and then printing this file, you can see if you need to add or subtract exposure time. They provide a set by step guide of how to read the results.

Another good test is the resin xp2 validation matrix. A very good video can be found here on using this test and understanding the results.

The last test I would recommend is one that is easy to read and understand, but takes longer to do. The Cones of Calibration from TableFlip Foundry is a newer test and here is their video telling how to use and download it.



Resin xp2 validation matrix

Now I can hear you already… It's going to take hours to dial in the proper exposure making these tests. And you would be right! But once done, you will have settings for your printer and resin combination. Again, start with the resin manufacturer's setting and go from there. You may only need to run two or three tests and you're good to go.

OK, so we have covered the basics, and next time we'll get into many of the settings that the slicer software allows to really dial in your prints.

We'll also cover the art of supports and orientation. Look at the two tanks bellow. The one on the left was the first time I printed it. Look at all those lines running up and down.

Cones of Calibration

The one on the right is much smoother, and that was accomplished with the help of ARCTAN numbers or the formula of Orientation angle(º) = arctan (layer height/pixel width). So study up on your trigonometry boys and girls!

Also we'll discuss islands and how to find them along with what all these settings below are and what they mean.

Elegoo Rapid Beige

Brand: Elegoo | Name: Rapid | Color: Beige | Comment

Burn In Layers

Number of Layers	5
Exposure Time	12 s
Transition Layers Count	10
Light-off Delay	14 s
Lift Distance	8 mm
Lift Speed	40 mm/m

Normal Layers

Layer Thickness	0.05 mm
Light-off Delay	14 s
Exposure Time	2.8 s
Lift Distance	9 mm

Speed

Lift Speed	70 mm/m
Retract Speed	70 mm/m

Scene Scale compensation

Scale X	100 %
Scale Y	100 %
Scale Z	100 %

Compensation

Burn in Layers	0 mm
Normal Layers	0 mm
Support resin compensation	on / off

Price

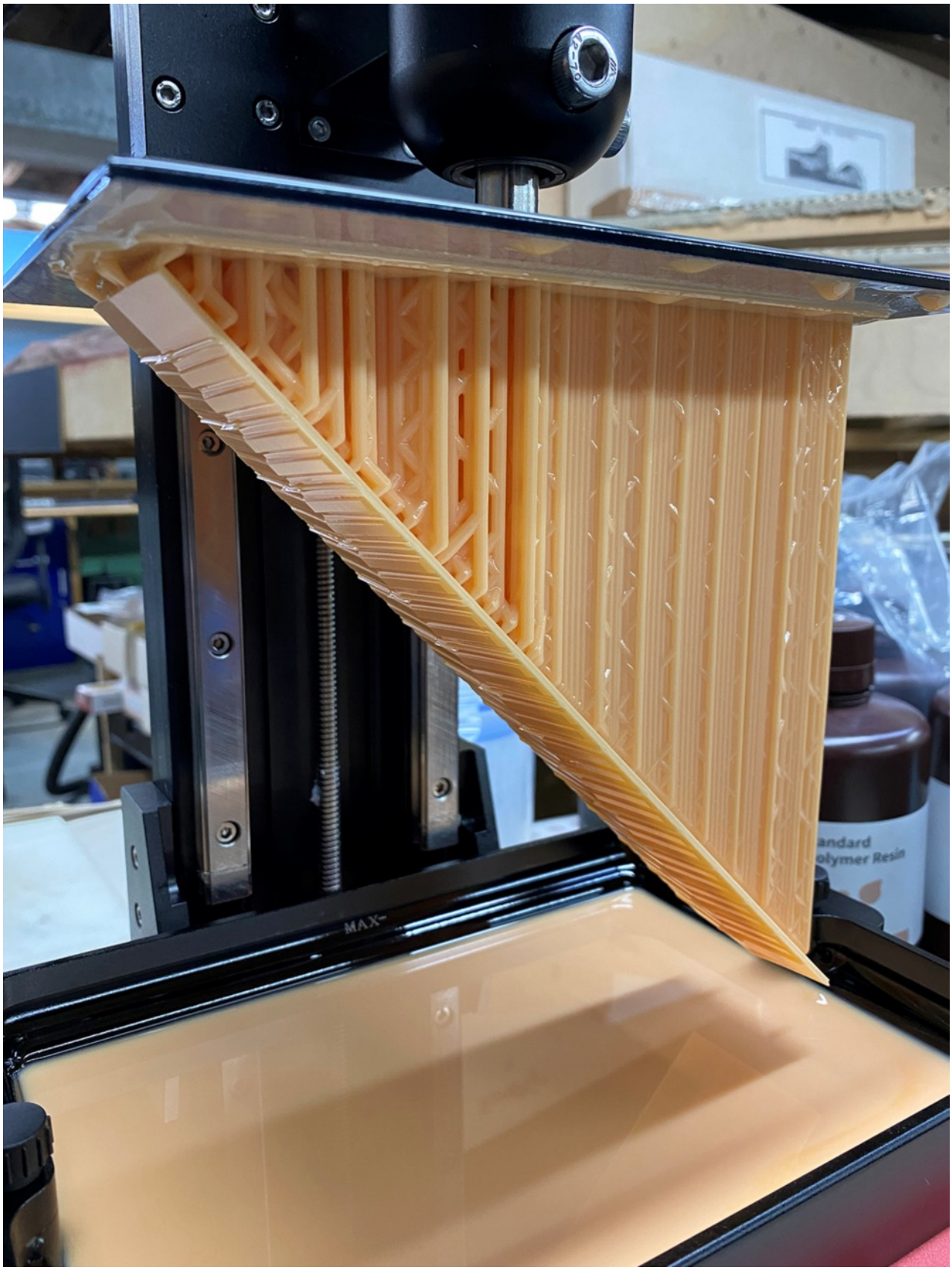
Bottle Price	32.99 USD
Bottle Capacity	1000 l

Print Time Override on / off

Time per Burn in layer	0 s
Time per layer	0 s

That's it for this time. If you have any questions or comments, please remember that I am NOT an expert, but I'll be happy to try and answer any questions you may have. In this case, Google and YouTube are your friends. Look up specific printers along with issues you may be having.

And, if you are on Facebook check out 3D Printing for Model Trains and 3D Printing and Model Railroading.



It feels to good to wake up after a 16 hours print and see that it actually works as it should! This a test of an S scale roof that would be used for casting as you would never want to print it each time. There is more resin volume in the supports than the roof itself.

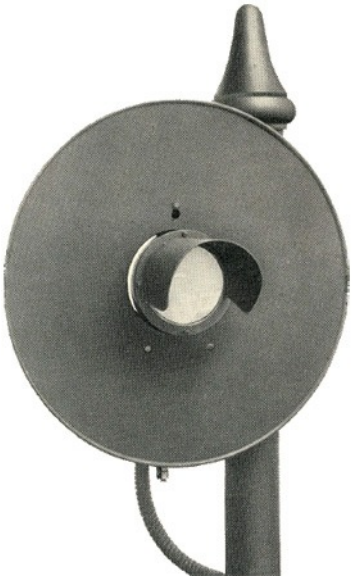
Modifying the River Raisin Airslide Hopper

By Randy Wilson

When River Raisin brought out their excellent brass Airslide Hopper cars, I got two of them, striped the clear coating off the cars and removed all the grab irons. I went about making replacement grab irons using .012" diameter brass wire (3/4" in S scale). After soldering all the new grabs on the models, I applied Scalecoat paint with the Southern Pacific car getting a darker shade than the Chicago North Western car.

The bulk of data needed to letter these models came from the Microscale 1:64 decal set 64-83 Norfolk Southern Freight Car - 50' Airslide Hopper set. This set was later bought up by the late Ron Sebastian of Des Plaines Hobbies and is currently listed on page 3 of their S scale decal sets. I believe the CNW emblem was cut from the CNW SD-60 diesel set, Des Plaines # SSADC&NW3 on page 4 of the list. After decals were complete, I added a flat clear coat to accept weathering powders. I used cheap make-up powders from a nearby dollar store applied with wedge shaped foam sponges to get inside the hopper end frames. I also used fairly stiff bristle brushes to add variations to the wheel fling zones where dirt, grime and rust get picked up and flung.

The last step in the transition was to change out the wheelsets with NorthWest Short Line code 88 tread wheels for PROTO:64.



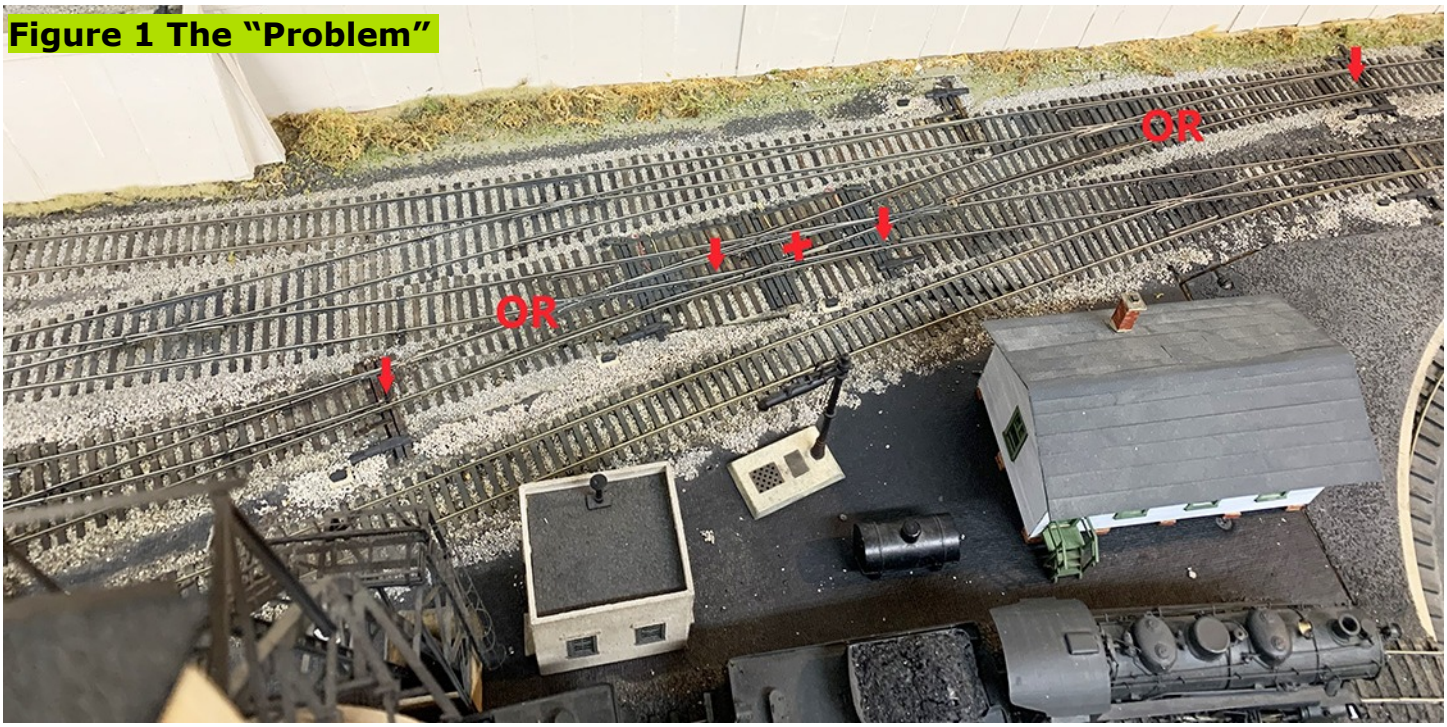
GRS Type SA Signal Stories

By Chris Rooney

A couple weeks ago Glenn Guerra stopped by and exhibited a sample of the General Railway Signal Company type SA signal that he and Dan Dawdy had been working on diligently for weeks as a new enhancement to O scale, and in this case, S scale. I managed to talk him into "loaning" one to me to solve a problem that plagues operation of the HY Tower interlocking near Handley Yard on the Attic Subdivision of the C&O.

Specifically, the presence of a single slip switch at the junction of the yard leads and the mainline produces a multi-level logic sequence that is proving hard for the tower operator and engineers to cope with – particularly the tower operator (me) was routing switch moves into opposing turnouts with alarming regularity despite signal indications on the panel – there are just too many darned possibilities.

Figure 1 The "Problem"



The above visual is a sort of graphic "truth table" as the signal designers like to say. For a locomotive or train coming from the lower left on the ladder track of the yard the arrows indicate "issues": (1.) the lead to the first track must not be in reverse or diverging position; (2.) OR the mainline single slip switch must not have BOTH (+) of its points in the through position for the mainline; (3.) OR the rightmost switch must not have its points in the through position for the mainline – easy peasey – not so much.

The answer is to put a signal before these "fouling points" that will sort this out in the three dimensions seen above and alert the feeble human mind that it should stop. Obviously, the signal is the first item of business. The castings provided by Dan and Glenn were the inspiration, and by sheer luck, the other answer was lurking in the parts drawer in the form of an S Scale America SSA #920 Single target trio of pieces. So the obvious route was to put these together into a signal the components of which are shown in Figure 2.

Figure 2 The "Answer"

Figure 3 The Materials

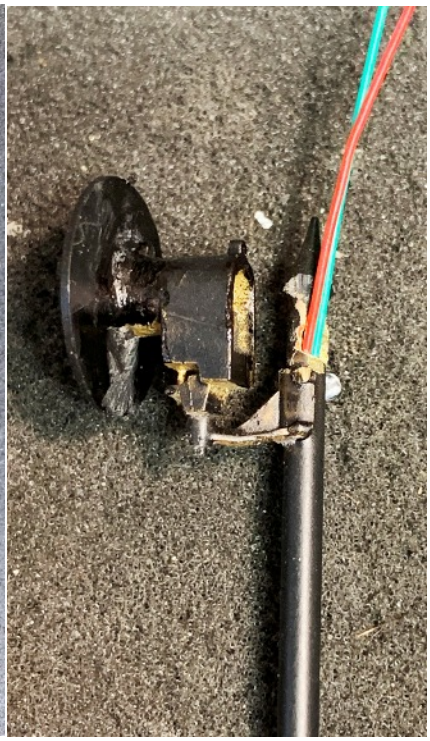


Figure 4 The Detail

The components of the casting set are the relay case base including a General Railway Signal insignia and part numbers and the door plus the bracket for the signal indication lighting box and a back cover for the box. See Figure 3.

The tubing is standard 7/64 inch O.D. (7" in S scale) nested tubing available from K&S and other sources. Assembly is straightforward, requiring the modeler to cut the casting sprue off the bottom of the relay box and drill a clearance hole through the bottom of the relay box where the casting sprue was attached. Here is a hint in that regard. If you use a smaller diameter drill and drill down through the cast clearance hole in the top of the relay box to and through the bottom of the box, you will have true alignment to push the nested tubing all the way through the relay box and allow a suitable length, say 1½ inches to pass through the roadbed to mount it. This will have the benefit of making it easier to run wires all the way from the signal head to the area of the roadbed underneath the signal without having to worry about fishing them through the relay box.

Assembling the signal after drilling out the bottom consists of soldering the bracket onto the tubing and then the lighting box onto the bracket. In this case, I made the signal mast shorter than a mainline signal since it was to be used as a dwarf signal raised for visibility. See Figure 4.

Figure 4 LED Installation green wire soldered to cathode

You will want to nick the tubing in the vicinity of the LED to permit wiring with the least amount of wire showing.

Next, you'll want to make use of the SSA 920 signal target or the target you are using. For this application, I removed the boss on the back of the target because the brass lighting box was much nicer. I then slightly chamfered the back of the target hole and glued it to the lighting box with ACC cement.

Figure 5 Polarity Reversed

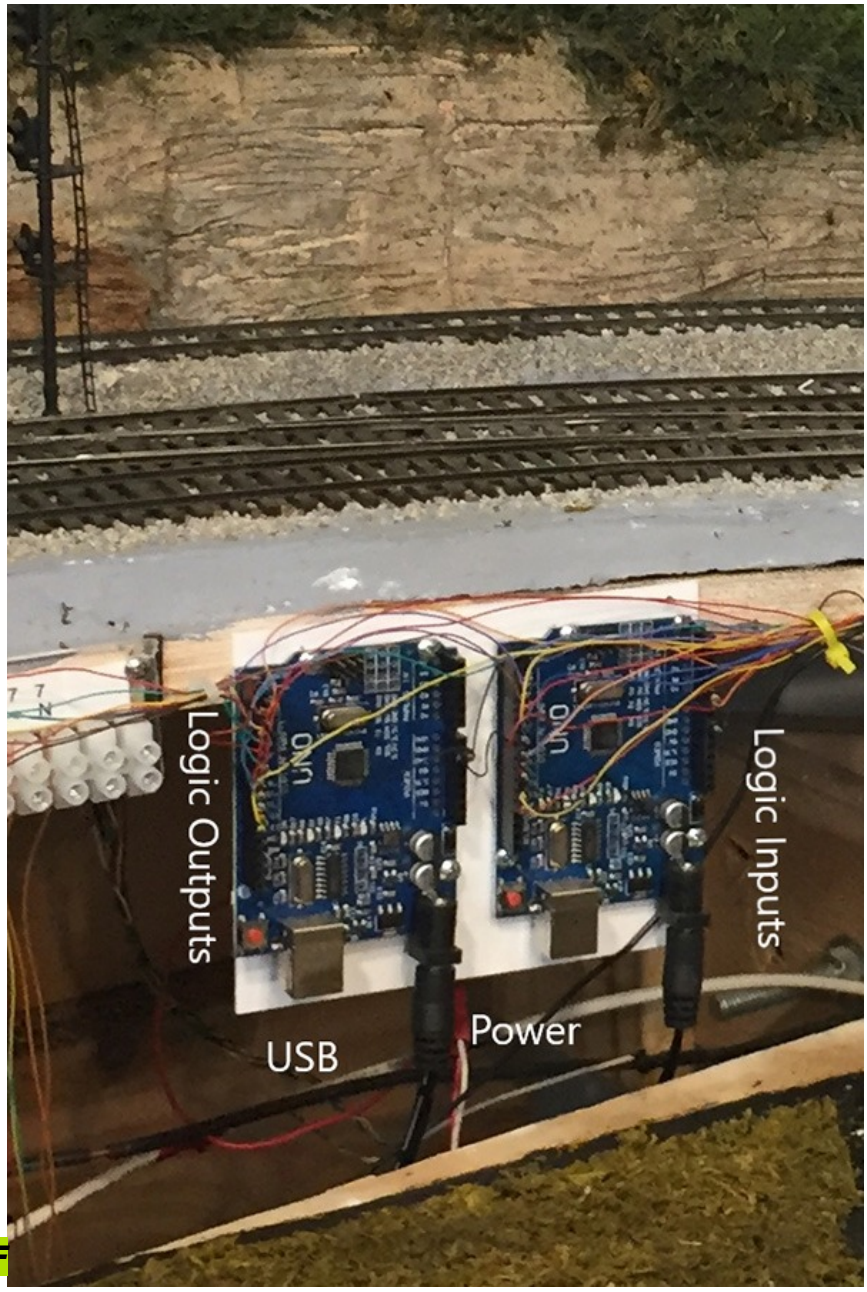
The lighting box will accommodate a 3 mm LED as it is cast. In this case, you will want to use a bipolar LED so that at a minimum you will have a red and green signal option from the one signal head. These LEDs are set up so that positive current (no more than 1.5 volts) is introduced to the anode which is the long lead on all LEDs to produce red and the negative or ground is attached to the cathode or short lead of the LED as in Figure 4, where the negative or green has been soldered and the red has not yet been attached. Use the smallest wire you can procure, typically 30 gauge, as the LEDs require only 10-20 milliamps of current.

When the polarity is reversed and the positive current flows to the short cathode lead, the signal will show green. Many LEDs have an increased diameter boss at the back of the LED and I chose to leave this exposed to avoid the prospect that the LED leads could touch the inside of the brass lighting box. That necessitated cutting down the casting that forms the back cover of the lighting box – not an optimal decision, but prudent. Figure 5 shows this compromise and the polarity reversed to produce a green signal. It is worth noting that all LEDs require protection of a resistor, but the bicolor aspects make selection a bit trickier. Red LEDs will look best with resistance set at 1.5 k ohms and down to 1 k ohms, while the green aspect works best with 390 ohms. Approximately 680 ohms seems best, attached to the cathode (green) lead.

At this point, you can attach the door to the relay cabinet. The door is a snug fit so ACC cement seems to be the ideal way to affix the door without resorting to soldering at this late stage.

Next comes painting. You'll want to remember to mask off the front lens of the LED before painting because it will be impossible to remove paint from inside the signal head.

***Figure 6* Arduino Ports**



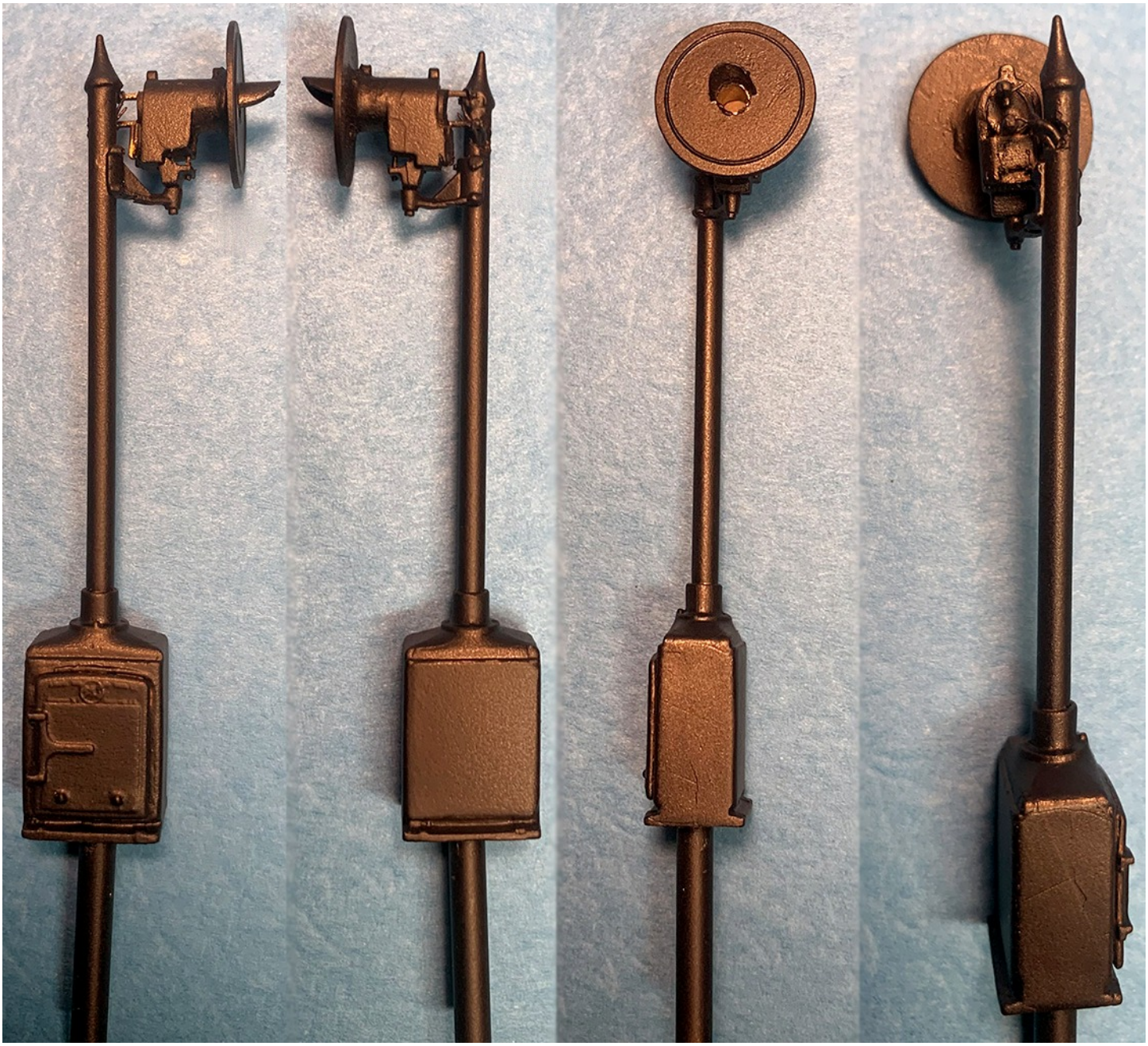
As the whole LED body illuminates, it will be necessary to make the back of the LED opaque. This can be done with a touch of Liquid Tape or Black Gesso.

The end product is a highly detailed and very presentable attention grabber as a model, but there is the little matter of getting it to display the signal aspects you need.

That's where Mr. Arduino comes in. Arduino is an open source hardware and software platform developed and licensed by Interactive Design Institute, Ivrea, Italy by students and faculty who frequented the Arduino Bar (no I am not kidding).

Larry Eggering of Creaky Chair Models takes it from here to install the Arduino board and write the Arduino code, which is like early BASIC, to program the circuit driving this signal. The great thing about the Arduino family of logic boards is the programmability. The hardware itself accepts input signals in several low voltage formats, e.g. the position of switch points, and produces output signals, e.g. signal aspects. If at first you don't succeed, one of the pictures shows Larry in his biker hat of the day programming a signal circuit on the spot. Alternatively, the Arduino code can be stored as a computer file and uploaded to the Arduino by means of its USB port as many times as required, making the development and installation process completely iterative and remote-able from the workshop.

Pictures of finished signals on following page.



THE O SCALE RESOURCE

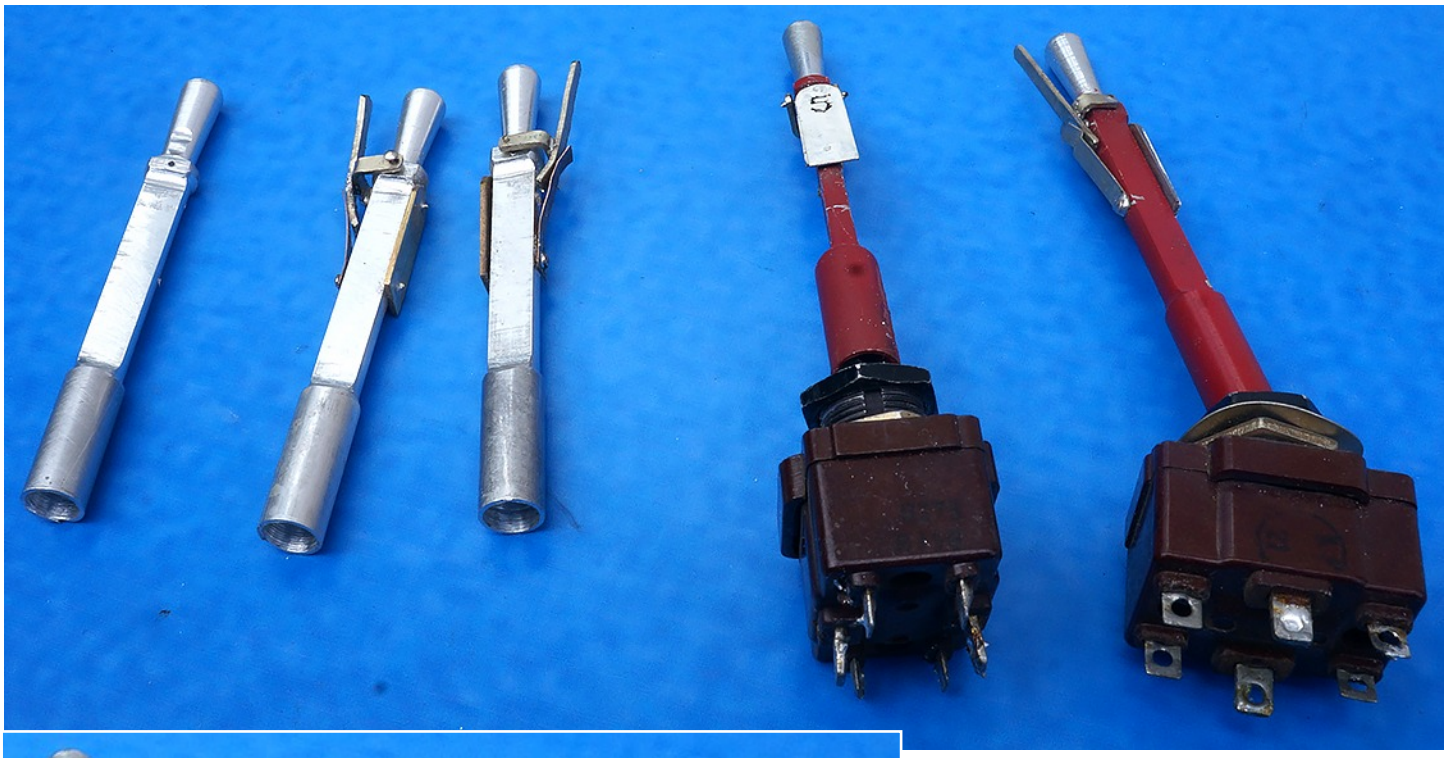
NEWS, REVIEWS, INFORMATION TO USE

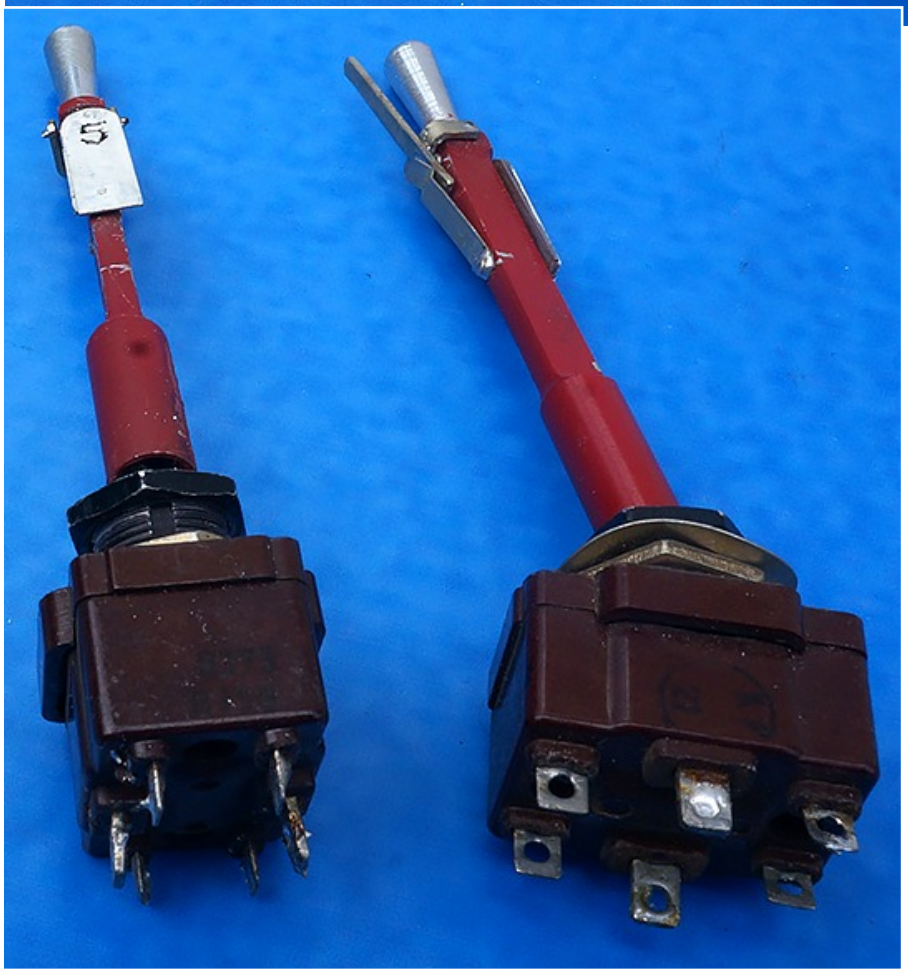
ONLINE MAGAZINE

Don't forget to read our other magazine, The O Scale Resource, for more modeling ideas.

LEVERS

By Jas Millham





The picture above shows the stages in making a cosmetic top to turn a toggle switch into a lever for an interlocking plant. The material was 5/16” dia light alloy rod. The top was turned to represent the top of the lever. The next section was stock size with a flat each side to take the catch handle. The third part was turned to ¼” dia and 1/16” milled off each side to leave a 1/8” centre. The bottom is stock size drilled ¼” to fit the dolly of the toggle switch. The catch handle is just cosmetic, but is sprung with the phosphor bronze leaf spring so that I get the effect of squeezing the catch handle to release the lever. A plate is added giving the lever a number and its function. A piece from a polythene bag has a hole pierced in it and is pushed over the switch dolly when the top is glued to the switch with epoxy resin to prevent the glue getting into the switch. It is cut off after the glue has set. The nut is large enough to pass over the catch handle

This picture above shows a completed panel, in this case having 21 levers. Red levers operate signals, black ones operate points. The blue lever is a facing point lock and the yellow is a distant (caution) signal. The white stripe on lever 20 denotes a lever released electrically from another interlocking plant or signal boxes as we call them in the UK. The use of double pole change over switches allows interlocking between levers, if the wrong lever is pulled, nothing happens. The points on my layouts are operated by old telephone relays, the coil is de-energised for the normal position of the points, switched on to reverse them. I've made around 70 of these levers for 3 different layouts.

Left: Here is the photo of the area controlled by the 21 lever interlocking junction with the main line at Bishops Yaxford.

Views of Yaxbury, the terminus of the branch line. Above the railbus is picking up the single line staff, in British practice, a train had to be in possession of a staff or token before it could enter a single line section, only one token could be issued at a time, from either end of the section, thus preventing cornfield meets.

Above: A view from the railbus entering Rookfield station, one of the two intermediate stations on the branch.

Left: Shows the hoist that links the two decks of the layout. The attic is only 18ft X 10ft. so there isn't room for a helix.

New Tracks

Mentor Definition: A Trusted Counselor or Guide

By Contributing Editor Jim Kellow MMR

Modelers who may be able to help your Modeling!

Where Mentors Help Modelers Build

"New Tracks"Announcements

Check out the new advertisement for "New Tracks" Live Zoom and YouTube shows in this magazine. It is on page 12. Thank you Amy and Dan Dawdy for your continued support.

Show us Your Modeling on our monthly Zoom "NewTracks" MY BUILD segment sponsored by The Model Railroad Resource, LLC, the owners of this magazine. These are the photos modelers shared on our recent February "My Build". Each of the participants has an email address included and would welcome your comments. You can see a video of their complete modeling presentation on our February 16th show on our YouTube channel "New Tracks Modeling".

Martin Breckbiel MMR
martinwb@oscalemagazine.com

O Scale – Scratchbuilt tool car using western red cedar.

HO Scale – Build of Conowingo Models St. Mary's Gate Lighthouse. Greg added Lighthouse Light and Foghorn Sounds kits from Evan Designs. Conowingomodels.com and evandesigns.com.
Greg Cassidy: gcassidy2@verizon.net

HO – Told a story from his childhood and build of his scratchbuilt Connecticut Valley Wrapper Tobacco Barn.
Jim Murphy: berkshireshort@yahoo.com

O – Showed progress of his New Tracks Saturday Scratchbuilding Session where he is building an Ice House using 3D printed parts and styrene
Heath Trollope: theathtrollope@gmail.com

HO – Scratchbuild of Lizard Head Pass Snowshed. Jeff used 60 feet of balsa stripwood to complete this build and utilized Testors Dullcote topped with Hunterline Stains to provide the right coloring. Hunterline.com
Jeff Jordan: jordan.jordan54@verizon.net

HO – Showed progress of his New Tracks Saturday Scratchbuilding Session where he is building an Ice House using some 3D printed parts and some more conventional materials, including a cereal box.
Fr. Ron Walters: fronw186@gmail.com

On3 – Showed off his Two Stall Engine House that was built by Jimmy Culture.
Larry MacDonald: larmac1812@bell.net

Thanks go to everyone who shared their modeling with us.

Our monthly "New Tracks" MY BUILD segments are the opportunity for viewers to have their work featured. They can show their latest project, discuss their modeling technique, show a new tool they found, or give a tip they learned that helped their modeling. Modelers can use this opportunity to engage with the "New Tracks"Modeling Community. Join us to see and discuss their modeling with these model builders. They are sponsored by Amy and Dan Dawdy owners of The Model Railroad Resource, LLC, publishers of this magazine. The MY BUILD is Moderated by Chris Course, an excellent modeler and owner of Conowingo Models.

If you want to participate in our next monthly My Build, send your model photos with a brief description and your name to Chris Coarse atrailrunner130@hotmail.com. The next MY BUILDS are scheduled for April 13, 2022, and May 18, 2022. This is the time to plan for which projects you want to share at these events. Chris will incorporate your photos into the show. When your photos come up, you will have time to share your experiences and learning from the model with the "New Tracks" community. I believe each of us has unique modeling talents and skills, and showing your modeling can be a great motivator for other modelers. Sharing your modeling is a significant part of mentoring. Please participate in these programs designed to help other modelers improve their skills.

William K Walthers, Inc. 2022 College Scholarships

I recently received this announcement from Walthers. Congratulations to Walthers for developing this program for young model railroaders. Good luck to everyone who enters.

Wm. K. Walthers, Inc. wants to recognize the future of our hobby; the youth and young adults active in model railroading and pursuing a degree in one of the STEAM programs; Science, Technology, Engineering, Arts or Math. Walthers will award two deserving young adults one $2,500 scholarship each!

Application Deadline: July 1, 2022

Qualified applicants MUST meet the following criteria:

- 2022 high school senior or 2022 high school graduate residing in the United States.
- Have a 3.0 GPA or higher
- Plans to attend a two-year or four-year technical college or university during the 2022-23 school season with an intent to pursue a degree in one of the STEAM programs.
- Demonstrated participation in a model railroad youth activity program such as Youth in Model Railroading®, Scouts MRR program, 4H model railroading, MRR Youth clinics, active participant in building a home layout, or belong to an organized model railroad club.
- Write an essay describing their involvement in model railroading and how they feel it has benefited their education within one or more of the STEAM areas of interest.
- Include one reference that can attest to their involvement in model railroading activities. Walthers will be contacting the reference of selected finalists.

Please contact Karen Formico - karenf@walthers.com if you have any questions.

Jim Allen is our new "New Tracks" Webmaster

I am very honored and pleased that Jim Allen has agreed to become the "New Tracks" webmaster. Jim is an extremely experienced and knowledgeable website developer and brings his dedication to our website. I am looking for some exciting things for our website under Jim's leadership. I will be profiling Jim in a future article so you can get to know more about him.

Jim is going to need your support and a lot of help, so if you can spare a little time, please contact him at Jim.Allen@newtracksmodeling.com. 2022 is going to be an exciting time for "New Tracks" so join us and become a part of developing our efforts.

"New Tracks" Scratchbuilding Workshops Saturday afternoons at 1pm Eastern Time

These Saturday Scratchbuilding Workshops resulted from comments I received from modelers and Kris Blackmarr's interest and creative ideas to develop the project. Many thanks Kris for volunteering to lead and moderate this project. This short one minute video shows what the Scratchbuilding Workshops are all about: https://youtu.be/aKmQxRv1FVg

The segments are structured like our popular BUILD ALONG segments on our Wednesday evening "New Tracks" shows, except these Saturday shows are designed to show modelers how to scratchbuild a model. I personally believe that scratchbuilding is one of the most creative parts of model railroading, and I think you will agree if you try it. Here is your opportunity to work with skilled modelers to learn how to do it.

You can learn the steps, skills and techniques involved in scratchbuilding a model in any scale you want. There are no kits to buy, only the needed scratchbuilding supplies, so cost is at a minimum. Model plans will be used that you can download on your computer at no cost.

The show's moderator, Kris Blackmarr, a very talented and artistic modeler, as well as his guests, will guide you through the complete scratchbuilding process, one small step at a time. After all, that is what mentoring is all about.

If you are a beginner, join in and experience the thrill of completing a scratchbuilt model and being able to stand back and say "I built that!".

If you are a more experienced or advanced modeler, join in and offer your advice and knowledge to less skilled modelers, and even get some fresh ideas yourself. The live shows will be recorded on YouTube so you can refer to the information later if needed. I hope you join us and help make this new project a success.

"Scratchbuild Along" with Kris Blackmarr

Kris's first Scratchbuilding project is an Ice House. Photos and plans are available on our website. As part of the project, Kris sill be using pastels for coloring and weathering the model. If you are not familiar with using pastels, this is your chance to learn about them.

Kris contacted Dakota Pastels, one of the major Soft Pastel vendors/art stores in the US. This is the company Kris has long used to acquire his pastels and art supplies. They have agreed to offer a discount to "New Tracks" modelers who are interested in using Pastels along with Kris for their modeling. The discount code is **RAILROAD10** (not case sensitive) for 10% off most art supply items, excluding Terry Ludwig and pastel surfaces. All the items Chris discusses and uses on the show (Schmincke, Rembrandt, pencils, etc) are eligible. Code is usable once per person, on domestic and international orders. It expires on April 30, 2022. Thank you Kris and Dakota Pastels for providing this opportunity for "New Tracks" Modelers.

New Weekly Wednesday Show Segments

1. "The Art Of Detail"

Starting on January 19th , Darryl Jacobs of Interaction Hobbies presented "The Art Of Detail" segment here on our "New Tracks" show. These segments are designed to assist modelers in learning new techniques, using new tools and products, for building and adding details to bring their model railroad to a whole new level. Darryl Jacobs has been a lifelong modeler and "all things miniature" enthusiast. After a career in Aerospace engineering and manufacturing, Darryl and his wife Joanna are now miniaturizing history with their Craftsman structures kits, vehicles, boats and details through their company. Interaction Hobbies, based in Chase, BC, Canada. You in can contact Darryl at Darryljacibs@newtracksmodeling.com with questions or ideas for him to cover.

2. NMRA Clubs and Discussions

A bi-weekly Segment starting April 27, 2022 is based on one of the ways I was able to get modeling help and meet some really outstanding modelers. I have been honored to have served on two NMRA Regional BOD and as Superintendent for one NMRA Division.

I believe at its core, mentoring is best done one on one at a local level with a talented model builder who can guide a person in learning the skills, techniques, and gaining confidence in their modeling efforts. These are some of the greatest memories I have.

A mentor does not have to be an MMR or a famous model railroader, he or she just needs to be able to build models you admire or have some skills you want to learn. Ultimately, a mentor wants to help you improve your modeling. Those are the people and friends I learned modeling from.

Since all of my "New Tracks" efforts are focused on mentoring, I have been trying to figure out how to communicate with you, the "New Tracks" audience, the value of seeking local mentoring.

This new segment is based on my personal experiences, and is my answer to how you can find a local mentor and meet some great people in the process. Join us in this special segment of our show.

I have asked Phil Edholm, a NMRA Division Superintendent of the NMRA PCR/Coast Division, which includes the San Francisco Bay Area down to Monterey in California, to lead this segment. We will kick off the series with Gordon Robinson, President of the NMRA, to discuss the value of NMRA Clubs and Divisions to improving the modeling abilities of their members. We are planning to invite NMRA Divisions and clubs from all over the world to talk about what activities and mentoring opportunities they offer. If you hear something that sounds good, see if your local club or division offers it as well.

In this way, I hope what you hear will cause you to consider attending a local NMRA club or a Division meeting near you to see if you may find a person who can help your modeling or find a group of people you want to get to know, and decide to join their group. Visiting does not require a NMRA membership. It gives you the opportunity to see what the organization is doing and meet the people involved. It is a first step to finding your local mentor.

These "New Tracks" segments are planned for every two weeks. If you are a member of a local NMRA club or Division and believe it should be invited to discuss their activities, please notify Phil Edholm at philedholm@newtracksmodeling.com

I am always looking for your suggestions to make this new segment most helpful to you. Please send me any ideas you may have, including any local non NMRA organizations you feel I should talk with about being on the show. My email is: jimkellow@newtracksmodeling.com.

3. Hobby Shops and Modelers Working Together

Starting October 19 Mark Poggendorf, a NMRA member working on his MMR, owner of Poggies Trains and a member of the National Retail Hobby Stores Association (NRHSA), will moderate a monthly segment concerning common issues facing Hobby Shops and Modelers. The focus of these segments will be on how both groups can work together for their mutual benefit.

Mark's involvement in our hobby is as both a modeler and hobby shop owner. He not only has a brick and mortar store in California, but also attends, as a vendor, many of the Train shows throughout the Country, and is also a member of the NRHSA, makes him well suited to lead these discussions and provide insights into the problems and issues facing both the hobby shop industry and modelers.

This segment will provide a forum where modelers and hobby shop owners can better understand each others positions on hobby issues, and hopefully help each other solve the issues for both of their benefits. Please join us in these discussions and make your voice heard. After all, if local hobby shops are successful and meet modeler's needs, everyone benefits.

4. An Inventor Segment June 15, 2022

Peeyush Garg of the LocoFi™ Team will be our Modeler/Inventor on my "New tracks" Zoom show June 15, 2022 at 7pm Eastern Time. He will discuss the new features and capabilities of his LocoFi™ control system. In addition he will sponsor a Random Contest Drawing for one viewer of the show to sin one of the latest versions of his product. This is a great opportunity to meet and talk with the inventor of LocoFi™ and

maybe win one for yourself. You can take your LocoFi™ equipped locomotives and operate on any DC or DCC powered layout without changing a thing.

I hope to expand this segment to include other modeler/inventors and their products. If you are interested in sharing your inventions with us, please contact me at jimkellow@newtracksmodeling.com

5. Learn to Remotely Operate a Switching Layout

On July 13th, Heath Hurwitz will show us his small, 48" x 10" switching puzzle he calls Human City Junction, a variation on John Allen's Timesaver. What makes this layout special is that it can be operated 100% remotely. One viewer will have the opportunity to operate the layout, including coupling and un-coupling the boxcars from the comfort of their own home, controlling the locomotive and turnouts while seeing it all in real time over the Internet. One day, maybe not too far off, we may all be able to operate layouts of all different scales remotely from all over the world. Having dedicated space for a switching layout will no longer be an obstacle to engage in operating a model railroad layout. Join us on July 13th to see how it works and the technology that makes it possible. Then, starting on August 10th, and every two weeks thereafter, we will be offering our viewers the chance to operate on the layout with different puzzles at changing difficulty levels. Operators of all skill levels are welcome.

Want to Help? We really need you!! Volunteer to participate in a Segment of our Show, or help produce our Zoom/YouTube Shows.

We are fortunate to have new volunteers regularly sign up to help us, but we need more of you to participate in our shows. As our show's audience grows, and our segments increase, we are always in need of more volunteers. Please help.

Everyone who watches our shows has a contribution to make. Offer your help in participating as a mentor, or help making and producing our Zoom and YouTube shows, or help with our website and digital marketing. Any amount of time and help you are interested in providing, is greatly appreciated and definitely needed.

Our show is a live participation show, not just a sit and watch show recording. Also keep in mind mentoring is a two way street. It requires communication between modelers who want to share their knowledge and skills, and modelers who want to learn skills and techniques to improve their modeling. All skill levels are welcomed and encouraged. Contact me at jimkellow@newtracksmodeling.com and let's discuss. Please subscribe to our New Tracks Modeling Website and YouTube channel.

"New Tracks" articles and Zoom events introduce modelers to talented experienced modelers who could become your mentor or at least give you guidance to improve your modeling and confidence.

We currently have over 1,300 subscribers, and hope you will join us. Please subscribe to our website newtracksmodeling.com and verify the confirmation email to get the latest information about what we are planning on our shows and get the Zoom log in link.

Also, please subscribe to our YouTube channel, New Tracks Modeling, click the BELL and hit ALL to get notices about our live streaming YouTube live shows and view our almost 500 past recorded show videos. Please also send the Zoom and YouTube log in links to your friends so they can also join in the mentoring and fun of our shows. Thanks in advance for your help and support. Word of mouth is the best way to advertise our shows.

Join our "BUILD ALONG". It is a great learning experience that provides you a personal mentor. You also get to p purchase the kits at a significant discount.

Hunterline

Starting March 30, 2022, Rick and Maureen Hunter will start building and weathering a Hunterline 50’ Queen Post Covered Bridge. (Railroad Bridge). Kits will be available in Standard or Narrow gauge in N, Nn3, HO, HOn3, S, Sn3, O and On30 scales. This time, they plan to video the segments and pre-send them to whoever will be doing the Build Along with them. Then they will also build the model live on each of the show segments. Join Maureen and Rick from Hunterline as they take you through step by step instructions to build this kit. Skills to learn: read templates and instructions, distressing basswood, staining and gluing techniques, assembly, NBW installing, applying Hunterline’s basswood Roof Shakes and weathering techniques.

This is an intermediate difficulty. Old pros can learn a few things too!

Wit and Wisdom Models

Original Painting

Full Size Scene (shown) and Cafe Only Kits available.

Original model by John Armstrong.

Starting April 6, David Vaughn, owner of Wit and Wisdom Models, will team up with Jim Murphy for a Build Along of one of his new John Armstrong inspired kits – the “Nighthawks Cafe”. To many of us, this is an historic model built originally by a truly great model railroader. We are fortunate to have David Vaughn provide a kit for this model.

The Nighthawks model comes in two variations (complete/full scene and cafe only) in four different scales (O, S, HO and N).

The full scene contains a row of stores from the original Hopper painting which adds greatly to the authenticity of the scene, as well as the forced perspective street and mirror to add depth. The full scene also includes an apartment to the rear and right of the cafe to add balance.

The kits are computer designed and laser cut. Parts are numbered. The kits come with complete, step by step instructions and background on the painting and model.

David is offering a 10% discount off the list price for in stock kits for the Cafe only and Full size kits for our viewers. You must use the code *New Tracks* at the time you order to get the discount. Once the current in stock inventory is gone, or June 30, 2022, whichever comes first, the discount will end. I encourage you to buy a kit as soon as possible to ensure you can get one in the scale you want. Please visit the Wit and Wisdom website for more details about the kit.

Conowingo Models

Starting May 25, 2022, Chris Course, owner of Conowingo Models, will be building one of his new kits. The kit is called "THE KELLOW STATION". Chris said since I am a trolley modeler, it will be a trolley station. What a great honor to have your name on a model kit. Thanks Chris. I can't wait to see it. More details can be found soon on our New Tracks Modeling website.

Banta Models

Starting June 1, 2022, Bill Banta, owner of Banta Modelworks, will start a "Build Along" of his Banta model On30 Caboose kit.

Laser cut wood caboose conversion. Fits Bachmann 18ft On30 Flat Car. This kit is all laser cut wood and laser board. Includes wire and bending fixtures. Based on a caboose from a logging railroad, it's really a cool looking addition to your fleet. Like all of our kits, it's a fun build backed up by our no questions parts replacement, you break it, missing or lost, the dog eats it, no cost to you.

This is the first On30 scale "Build Along" we have done. It is the result of comments I have received asking what is involved in using a HO scale chassis from one manufacturer, in this case, a Bachmann 18' flat car; and using a O Scale body kit from another manufacturer, in this case, the Banta Modelworks Caboose kit, and building an On30 scale model. This may sound complicated, but Bill will show you how easy it is. Here is your chance to find out how On30 narrow gauge models are created and why On30 has become a significant part of O scale modeling. Bill is offering a 20% discount off his Caboose kit to New Tracks modelers who build along with him on their orders specifying it is for "NEW TRACKS" May 1, 2022 – June 15, 2022.

CAD Build Along

Starting July 13th, a two step modeling "Build Along" with Earl Hackett.

Step 1. A CAD produced Model "build Along" using a free, downloadable CAD program to produce the parts needed to build the model. Earl will present either Fusion or Onshape pending the outcome of his comparison of the two applications.

Step 2. Get the CAD parts printed and build the model.

Who is Earl Hackett and what is this all about?

Earl: "I have been a scratch builder most of my life. I've also been using CAD systems since AutoCAD v1.0 that I used to design our current home.

Years ago I made CAD models just to get dimensions for a model, but with the improvements in 3D printing, CAD has taken on a much more important role. The models I produce on my Elegoo printers are as good as any injection molded commercial models. I believe the thing holding people back from using this technology is the startup cost, particularly the cost of a CAD system that they may not be able to figure out how to use.

Whenever we have a NMRA division meet and I give a presentation or show my latest model, I'm usually asked what CAD systems are available for hobbyists. My recommendations for a free CAD program are either OnShape (out of the UK), or Fusion 360 from AutoDesk. Everyone I know who tried them came away frustrated, unable to produce anything useful.

Last week I came up with an idea for a series of presentations that would document me learning how to make Fusion 360 or Onshape work, and finishing with the construction of a small model of a short deck girder bridge.

This presentation would be very different from the usual tutorials. Those I've seen are given by one of the program developers who: 1) goes so fast you can't understand what he's doing, or 2) they skip over some little, but critical detail because 'everybody knows that'...

Since I'll be learning the system along with everyone else, it certainly won't be going too fast to understand, and critical details will certainly be pointed out. Think of it as a digital "BUILD ALONG."

I told Earl and he loved the idea. I think this will be exactly what many modelers, including me, need to see. It is how a mentor would do it, slow and detailed. I also liked the idea that the CAD program would be free.

But most of us do not have a 3D printer, so how do we get our CAD items printed? No problem, Earl will discuss this and we have some ideas we are discussing. Of course, Shapeways is the most well known custom printing house. However, here in Wilmington, there are dozens of home businesses that do custom printing, but most use filament extrusion printers that are useless for detailed models. You have to shop around to see what's available. I'm sure that is the case in most towns.

You could probably find another model railroader with one – within a 30 minute drive from me there are three modelers with one of these things.. Plus, if a viewer wanted to purchase one, the prices have come way down. There are several printers Elegoo printers on Amazon including the Mars 2P, print volume 129 x 80 x 160 mm*; the Mars 3, print volume 143 x 89 x 175 mm and the Saturn, print volume 192 x 120 x 200 mm *

Earl and I will give more information about what will be involved in this Build Along on the June 8, 2022 Zoom show. Please join us and have your questions ready. Then Earl will start the CAD BUILD ALONG program on the July 13, 2022 Zoom show and continue the segments every two weeks to make sure that everyone has sufficient time to complete each task. Each show will be 30 minutes, and we encourage questions.

I want to do something that is complex enough to show all the problems that can be encountered during a design. A 50' plate girder bridge would be a good topic. I searched my digital copies of MR and found drawings and dimensions. It looks complicated, but there are only 7 or 8 parts that you have to design that are used over and over. Rather than building it in one big print, it will be printed as a kit - a bunch of parts to be assembled. The biggest challenge is putting in all the rivets.

Once we get the parts. Earl will then build the bridge and everyone will be able to "Build Along" with him. To give everyone time to get all the parts made. we anticipate this will start on the September 21 Zoom show for 4 shows.

Card Model with Paul Egri and John Thomas Reynolds

Starting July 23, 2022 a "Build Along" of a Paul Egri created card model by John Thomas Reynolds. The FREE model can be downloaded as of June 15, 2022, in any scale from our website newtracksmodeling.com. There will be a presentation on our June 15, 2022 Zoom meeting about this "Build Along". Don't miss this as you will find out how to do the scaling and downloading of the model, plus tips to help you get started.

The model on our website is in HO scale so you will need to use the provided scale chart to download it into your preferred scale. If a modeler wants to customize his model with different signage graphics, please contact

Paul Egri at Paul.Egri@newtracksmodeling.com and he will work with you to provide your needed graphics. Again, Paul is doing this for FREE. Any questions for John Reynolds about the "Build Along" should be sent to him at John.Reynolds@newtracksmodeling.com. If you have never built a card model, this is your opportunity to learn from some very talented modelers how it is done.

Berkshire Valley Models

Starting August 31, 2022 Richard Rands, owner of Berkshire Valley Models, will join with Martin Brechbiel, MMR to build his On30, On3 Ore car kit. There is a 25% discount on the purchase if the kit is for "New Tracks" members who order between July 27 and September 7, 2022 using the order code NEW TRACKS.

Kit #351 a 16' On30/On3 Ore Car. The kits are precision laser cut wood that assembles easily. The detail parts are made of white metal. Trucks and couplers are not included. The ore car we have designed does not follow a specific prototype, but is patterned after the many types found around the turn of the century. A good place to see examples are the "Car Builders Dictionary". The shorter cars were made to carry the heavy precise metal copper & iron ores.

More Build Alongs to come

I hope you want to participate in all the "Build Alongs". The modelers and manufacturers who are making these events possible, are doing them to try to help you improve your skills and have more enjoyment and confidence in your modeling. They are true learning experiences that have helped many modelers. Join us.

This program provides modelers, your own personal mentor on our shows. So if you have been sitting on the sidelines for awhile, give model building a try. I believe you will have some fun. It is really great for me to hear the enthusiasm and excitement from first time or previous armchair builders after their participation in these events. Please show your support for these events by your active participation. Thank you.

I am looking for more modelers and manufacturers to be involved in future "Build Alongs" in late 2022. I have several scheduled so far, and if you are interested please let me know. Remember, a model builder can select the dates, manufacturer, and specific kit to build. A manufacturer can build his own kit, or I will find someone to build the kit for them. Contact me at: jimkellow@newtracksmodeling.com and let's discuss your interest.

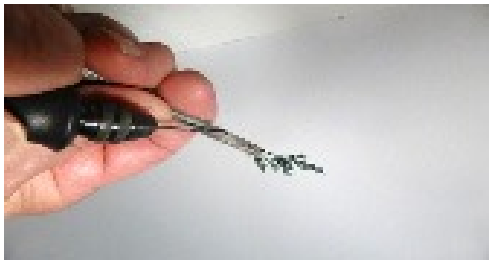
We have several other Modeling Segments on our Zoom shows.

"Watch Me Build"

These segments are meant for modelers who want to share their modeling efforts and discuss their modeling techniques so others can benefit. These segments can be for one or more shows depending on the details included for the model building presentation.

March 9, 2022 Nathan DeLay showed us some of the HO locomotives, freight and passenger cars he scratchbuilt using Coke cans, including his model of the Duchess of Hamilton which was his first scratchbuilt

locomotive. His mentor is Joel Holubec. I am looking forward to this as Coke cans may be my replacement for brass to build some of my models.



July 6, 2022 Pat Rivard and Paul Hurly will do a segment “Making Coniferous Trees”. This will be a 40 minute DIY PowerPoint presentation by Pat and Paul where they will share their easy-to-follow six steps to build realistic foreground and mass planting coniferous trees in O and HO scale. They will show how to use a variety of tree branch materials to recreate species that are seen throughout North America.

You may never have shown your modeling before in public for a variety of reasons. I assure you, I think you will enjoy and benefit from participating in these segments. Email me jimkellow@newtracksmodeling.com or if you would like to discuss your idea by telephone, you can get my contact off our website.

"Ask A Modeling Question"

These segments are where viewers can ask modeling questions and get answers from other modelers on the show. It is a forum where viewers can help each other solve specific modeling problems or offer advice on modeling techniques. We have a form on our website you can use to ask your questions. This allows us to schedule the appropriate time for this segment on each show. Or send me an email and I will get you an answer. My email is: jimkellow@newtracksmodeling.com. Please don’t hesitate to ask questions, after all, that is how we learn new things.

"Remembering Old Kits"

Modelers will be building kits from our distant past that are either no longer manufactured or hardly available. Kits whose names we may have forgotten, but when we hear their name again, it brings back great memories from our youth and remind all of us what modeling used to be like.

The first two segments had Martin Breckbiel, MMR building a Van's Car Shop and a Train Craft kit. If you have an old kit and want to participate, let me know at jimkellow@newtracksmodeling.com.

"Let's Go To The Hobby Shop"

Meet local hobby shop owners who may become your new best friend. I must admit it has been a very long time since I have been to a hobby shop.

I recently talked with the National Retail Hobby Shop Association and wrote an article for their publication called "A Modelers View" where I talked about the importance of Model Builders and Mentoring to the Hobby Shop Industry and the issues that we both, modelers and hobby shop owners, have in common. It was published in the Association's October Member only Magazine, "Hobby Merchandiser".

It was well received ,and I have already scheduled some of their members on future shows. The first member was Steven Elliott a member of the NRHSA Board of Directors and owner of Fundemonium Hobby Shop on February 9, 2022.

If viewers have a hobby shop that they would like to recommend to be on our show, or you are a hobby shop owner who is interested in being on our show, please let me know. There are not many hobby shops left around the country, and I believe they need to be recognized and supported. So please tell me about your hobby shop at jimkellow@newtracksmodeling.com and I will ask them to be on our show.

Now let's return to Kenneth Anthony and his life in card modeling, where he was starting to eliminate a boat from his image.

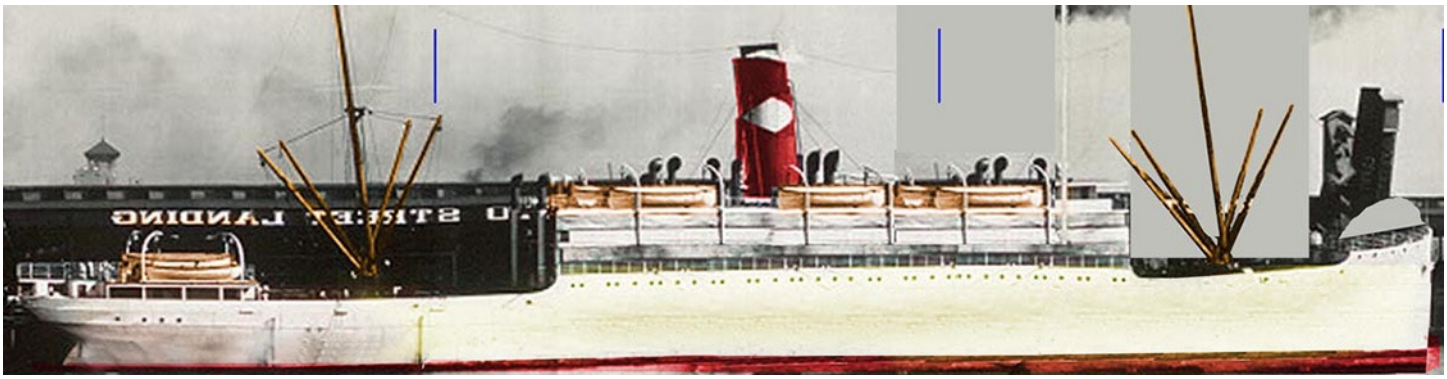
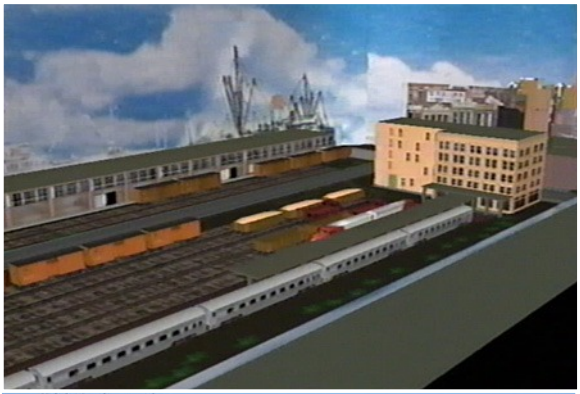


Image flipped, unobstructed portions of image copied and pasted to cover unwanted boats, different parts of vessel colorized to give them a hue but leave some of original photo texture.

The largest I can print is an 8½ x 14 inch legal sheet, so I broke image into 3 parts to print. I created this image for my old round-the-walls layout, and started out by printing in one plain paper as a test. I stuck the pieces together and put them up against the painted part of my background just with double-stick tape. I wasn't sure of the scene, and that would affect where the ship went. I planned to print it on cardstock and glue it permanently when the time came. It stayed as a taped paper for years until I dismantled the layout. However, when I started on the new layout, I still had the computer files of the ship and printed them out on cardstock. I cut around main outline of the ship, but NOT small details like masts, lines and funnels that would have been thin slivers of card. Instead, I taped the ship lightly in place, marked where the cutout would cutoff and DREW the funnels and masts directly on the background with marking pen. I drew the lines with pencil and ruler.



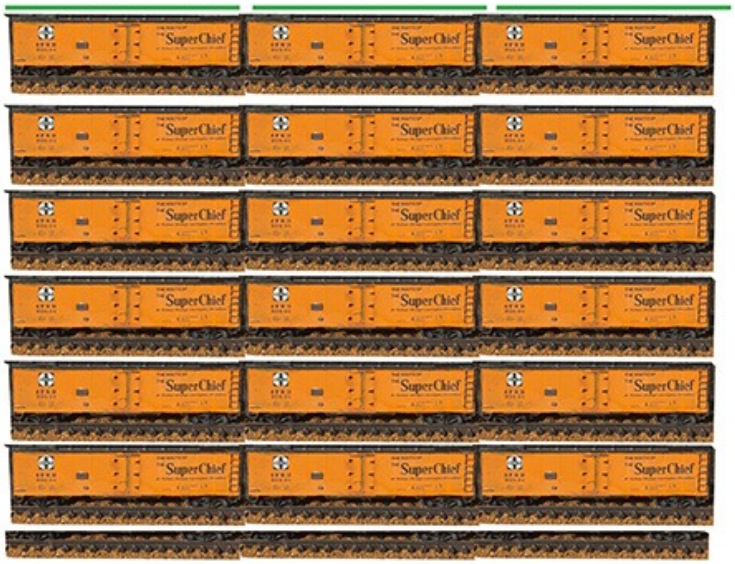
The new layout had no space to model the cargo sheds and port trackage in front of the ships (which were a flat picture because, again, no room). This is a CGI rendering from a 3D mathematical model made 20 years ago of the scene I dreamed of.

But there was no room on the downsized layout. My passenger terminal tracks ran right up against the ship picture. The scene needed at least some visual separation.

If I could create the ships with a flat image, how about the cargo sheds? I had taken a few photos of the cargo sheds years ago, but they weren't right to print as background. I didn't know when I would ever get a change to go back to Galveston to photograph more. So I went to Galveston on my computer via Google Earth and chose Street View. That allows one to go up and down a street where Google Earth car drove, and pick angles from 360 degree views every 100 feet or so. This is the monumental.

I picked out other shots, up and down the row of sheds, all at right angles to the front of the facade. Now that the terminal serves cruise ships, the recent shots show nicey-nice awnings on the second floor which don't fit the work-a-day appearance of

historic 1950s photos that fit my layout era. I was able to remove the awnings by cutting and pasting in Photoshop, coming up with a 3-foot-long cargo shed background image.



One problem: the bottom of the shed images had a number of modern automobiles and trucks etc. that were close to the camera and oversize. To cover that up, I spotted railcars in front of the sheds to be loaded and unloaded. Not actual modeled railcars, but flat images again. I shot a bunch of N scale railcars flat-on and "stripped" them together to print out at about 95% N scale. They are supposed to be farther away than the passenger cars that will be right up against them!

I created the background before even building my layout table. When I laid the plywood and got my first shipment of Kato Unitrack to try out on a bare tabletop, I had something that already looked a little bit like a scene, thanks to the background.

Cardstock Printed Background Elements

I paint my sky backdrops with "sky blue" and a lightened sky blue oil paint in a gradient so sky is light near horizon, applied to 8 foot x 16 inch pieces cut from a 4 x 8 foot sheet of styrene. I spray-paint clouds with white rattle cans, and paint horizon lines, distant water etc. by hand brush with acrylics. But I create the building portion of the backdrops images with images printed out from computer on filing-card weight cardstock. Background structures help me represent

industries and structures when I don't have room for them. Printing my own on cardstock makes them inexpensive. (Except when my printer cartridges run out of ink!)

Case in point: Back in 1980, I did a television news feature about a ship and rail movement through the Port of Corpus Christi. Iron ore destined for a smelter in northern Mexico came into Corpus Christi by ship. It was offloaded from ship by a huge bulk unloader into hoppers that had been accumulated and held on port tracks in advance of the ship's arrival.

From there, the ore was carried by rail across the tip of Texas into Mexico. I went onto an overpass to film the hoppers going by. It looks like they didn't bother to fill the hoppers. I explained in my story that iron ore is a lot heavier than coal, so the cars are carrying a full load by weight, even though they are less than half full by volume.

I thought of two applications to modeling. A model operation with open coal or ore loads is sometimes a problem, if we want to send empty cars to the loading point and loaded cars out. We can juggle removable/replaceable loads. Or we can have some cars with loads and some empties, and juggle sets of cars back and forth by some scheme, such as staging, loads in/empties out, pairs of industries etc. The case of the cars with little volume of load makes it less obvious to notice if cars are empty or loaded. We could run cars with a little ore to cover weights in a car and call it either loaded or empty, as we do boxcars. Second, a shipload of ore makes a different, irregular and interesting operation to run. Many layouts have industries with sidings where a car or two or three is spotted for loading or unloading every other session. Common. Or there are modeled coal mines that ship a good-sized string of loaded cars every session and receive a string of empties. Or coal-fired power plants that receive strings of cars. Or layouts which model the "in-between" with loaded trains moving in one direction around a loop, and trains of empties running the opposite direction. Different from all of these, a shipload ore operation would involve routing empty cars to a port city, perhaps in dedicated solid trains, or perhaps a few cars at a time to fill in tonnage on regular scheduled manifest freights. Cars would be accumulated on whatever sidings were available at the port in advance of a scheduled ship arrival. On the ship's arrival, a switcher would move empties to ship side for transloading, and as cars were filled, transfer them to a trunkline railroad's yard. When enough loaded cars were accumulated, a solid train of loads would be made up to run outbound. In the real operation, it took three trainloads to carry the ship's cargo. It sounded like a fun operation to run on a layout two or three times a year. Someday, on the right layout.

The someday approached in the new millennium, as I started a port-theme layout in 2000. I would try to work in at least a minimal spur for ship side bulk-material loading and some kind of model of a loader. (Details to be worked out as the layout went along…) In the meantime, I was doing the layout background first, and I could put a picture of a loader on the background to set the scene, even if I was going to build a similar model later.

Walthers was making an HO model of a Hulett loader about this time, and I got a Walther's Flyer advertisement in the mail with a full-page picture of it. I thought of cutting out the ad image to glue on my background, but it was on thin slick paper. The glue and/or the image on back side of the paper might show through, or edge of the thin paper might peel up. Something printed on cardstock would work better. CARDBOARD/PAPER MODELING HINT: An advertising picture of a model, even in the wrong scale, may provide an image of a type of structure, etc. not available elsewhere to use on a background, or to suggest an interior visible through a window.

I discovered that Walther's photo of its model was almost identical to a ca-1940 photo of the real Hulett from the Office of War Information collection available online from Library of Congress.

I downloaded and printed out the historic Hulett photo onto light cardstock, cut off about two inches from the bottom and added it to an EXISTING background, to make it appear the Hulett was visible in the distance over the top of warehouses. Incidentally, the warehouse images were drawn directly in Photoshop. The two boxcars at right are models. The boxcars visible end-on between the two warehouses are PHOTOS of models, digitally stripped onto one of the warehouse images.

Meanwhile, I built a fleet of hoppers to use in the shipload ore operation, concentrating on Santa Fe (my prototype road). Santa Fe had some 2-bay hoppers like the MTL composite side and offset side models (but not the rib-side ones) I thought of them as "honorary ore cars" because of their short length. The only ore cars Santa Fe had in my mid-1950s era were a design unlike anything ever mass-produced as a model in N. I also had one rib-side MTL 2-bay car and painted it like a Burlington/Colorado & Southern prototype.

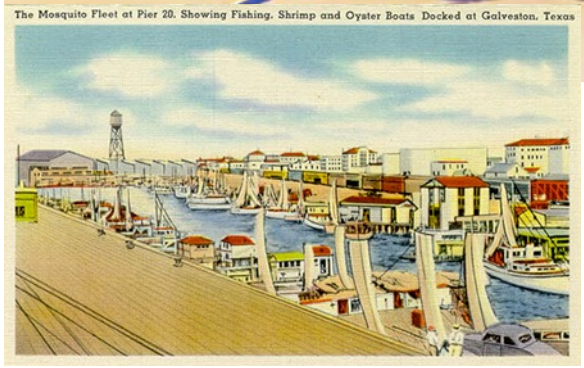
I keep my cars in flat cardboard boxes that 1" wide professional broadcast videotape came in years ago. I made cardboard inserts so cars can lay flat on their sides and I can identify and grab them to set up an operation. I store cars in boxes by type: box, flat, gondola, hopper, covered hopper, etc.

I discovered a Missouri Pacific quad-bay hopper that matched a number of random-roadname old Model Power, Trix and Bachmann models I had, so I started painting a few of those to be available for an ore ship arrival.

I illustrated that project with a photo staged on a diorama, using an Internet image of a ship printed on a plain 8 ½ x 11" piece of copy paper as a background. CARDBOARD/PAPER MODELING HINT: A photo printed just on an ordinary sheet of paper can make a background for an individual car or building project to create drama, setting, and sense of place.

Well, the Island Seaport layout I started in 2000 never quite got off the ground (or actually, it was too far off the ground at 5 foot elevation above the floor). I dismantled it two years ago to build a sitting level layout. The background on two walls of the room came first, before I even built my table or snapped together my first test loop of track. Since I kept the jpg picture file of the Hulett on my computer, I could just print it out with no effort, to add to the new layout.

With just a bare test loop and a background, I already had an instant scene for my ore operation.

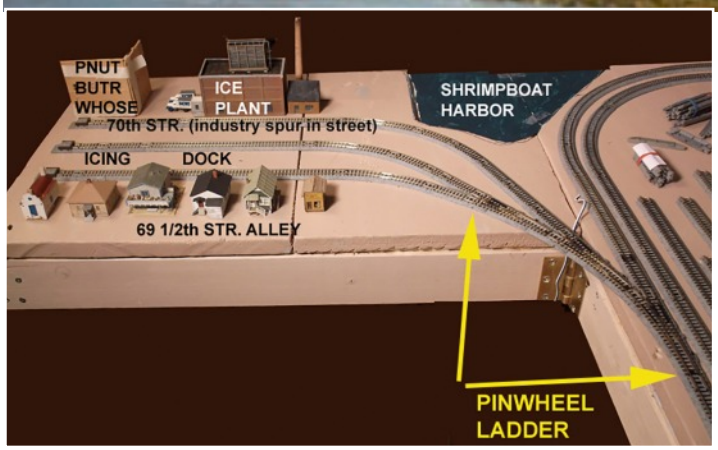


Another paper-printed background from my failed dismantled round-the-walls layout is finding new life on the new Elderpike layout. A shrimp boat harbor has been part of my prototype city for over a century, and it provides a commodity for the railroad to ship- seafood in refrigerator cars. The part of the harbor set aside for the small fishing boats is called the Mosquito Fleet.

The layout had room for only a handful of small boat models, but a photo of additional boats on the background could multiply the number; IF I could find a photo with the correct perspective. I drove to shrimp boat harbors in South Texas at Aransas Pass, Rockport and Fulton.

Finally found a grouping at Fulton that looked like I could match the perspective with foreground models.

I cut out the outline of the shrimp boats to mount on an 8 foot long x 16 inch tall piece of sheet styrene mounted on one wall of my layout room. The sky is painted with oil paints, the clouds sprayed with white spray cans, the distant shore across the channel with acrylic craft paint. The three tank across the channel are from a stock-image computer disk, printed three times at slightly different sizes. The blue building with the white roof, at right, is also from the stock disk, but the pier under it is a printout of a photo of model pier pilings. The building at left with the GHOTI sign is a printout of an image created by cutting and pasting pieces from an Internet advertisement for a seafood restaurant. The GHOTI name is a joke. It is GH as pronounced in the word “tough”, O as in the word “women”, and TI as in the word “motion”. The metal shed at far left started as a cardboard mockup of a railroad station. When the finished station model was built, the mockup became surplus, and was covered with scale corrugated aluminum to make the shed. Unbuilt boat models sit in the “water” to mockup the scene.



When the round-the-walls layout was dismantled, the styrene backgrounds came down off the wall. The new layout is up against the wall on only two insides, and I did not have a place for the shrimp boat harbor on that side. However, I can use a 2-foot section of the background on a side of the new layout mostly open for access.

So much for backgrounds. Next time, we get back to building cardboard buildings.

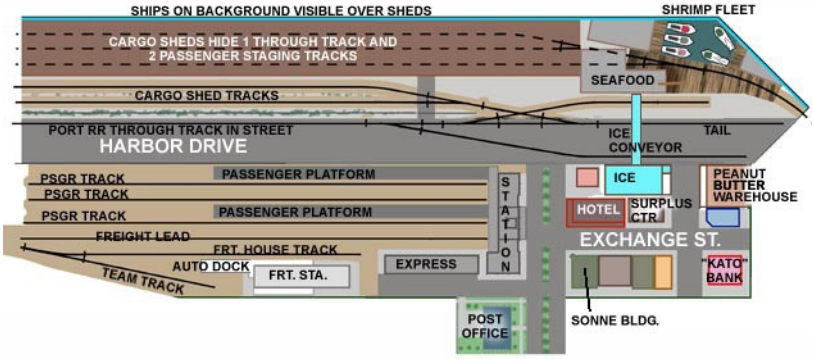
For over 20 years, I have wanted to model a station like the Santa Fe station and GCSF headquarters at Galveston (shown here while it was being converted to railroad museum).

While planning a layout, I built a 3D computer model to visualize the scene.

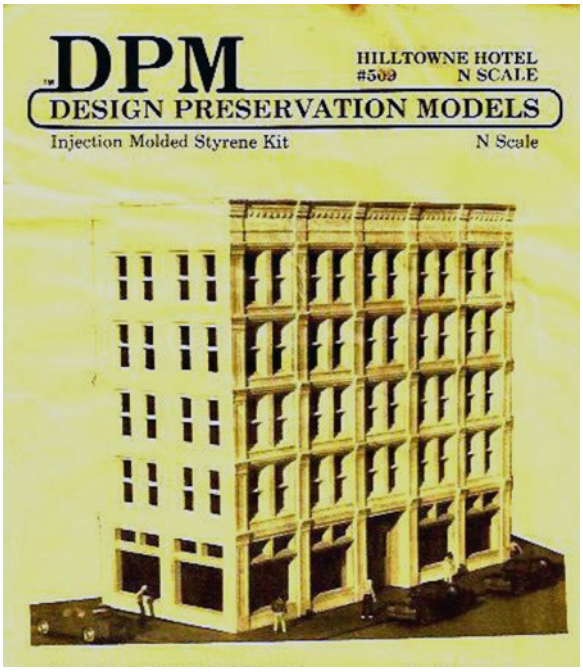
I planned a round-the-walls layout that would have had 3 layers of depth… station tracks, baggage and freight station in front, a street to divide the station from port cargo buildings, with track in the street, and then hidden staging inside the port buildings. It would have been three feet or more deep in N, and hard to reach back into.

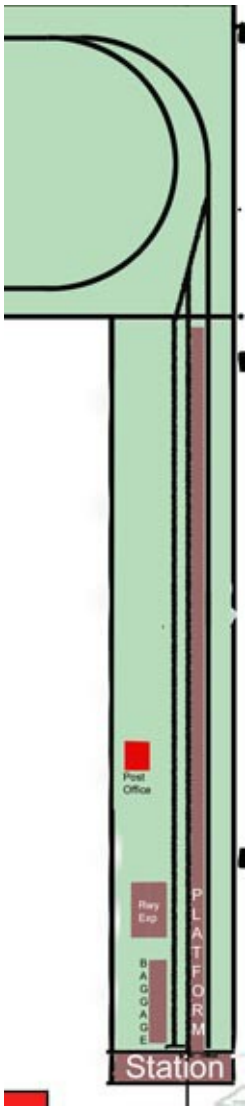
I was planning to build a station building from three DPM Hilltown Hotel kits. I bought one unbuilt, and bought a kitbash someone had done with 2 kits.

It was not the same windows or stonework as the prototype station, but Hilltown would give the impression of a mid-rise office building of 1930-1950 era. (April 2018 photo)

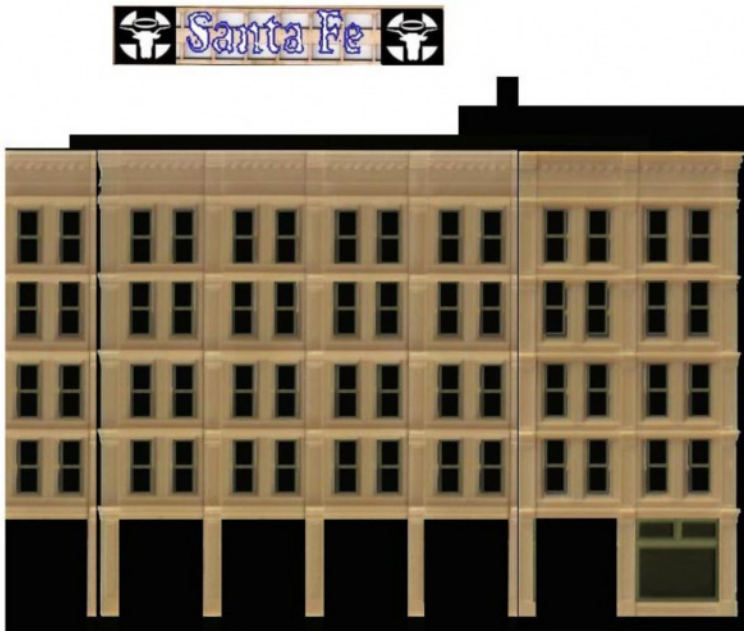


I never got the planned round-the walls-layout going, but I included much of the original planned station area in a new downsized hopefully-more-practical layout. However, it would be on an arm off the main table, only 14 inches deep. The station building would be a shallow almost flat facade at the end of passenger train tracks. Here's where the cardboard model came in. I wanted to check the fit of a building, its appearance and how it could be bashed from Hilltown parts. To that end, I scanned parts from a Hilltown kit.





In Photoshop, I colorized, cut and pasted images from the kit into printable sides of the building. This sheet held the track side, and a side way, all to appear in a portico.



This sheet would fold to make a 1-bay deep right ends extension to track-end facade, with open portico and 2-bay wide end. I also made a scan of a Bar Mills rooftop Santa Fe sign.

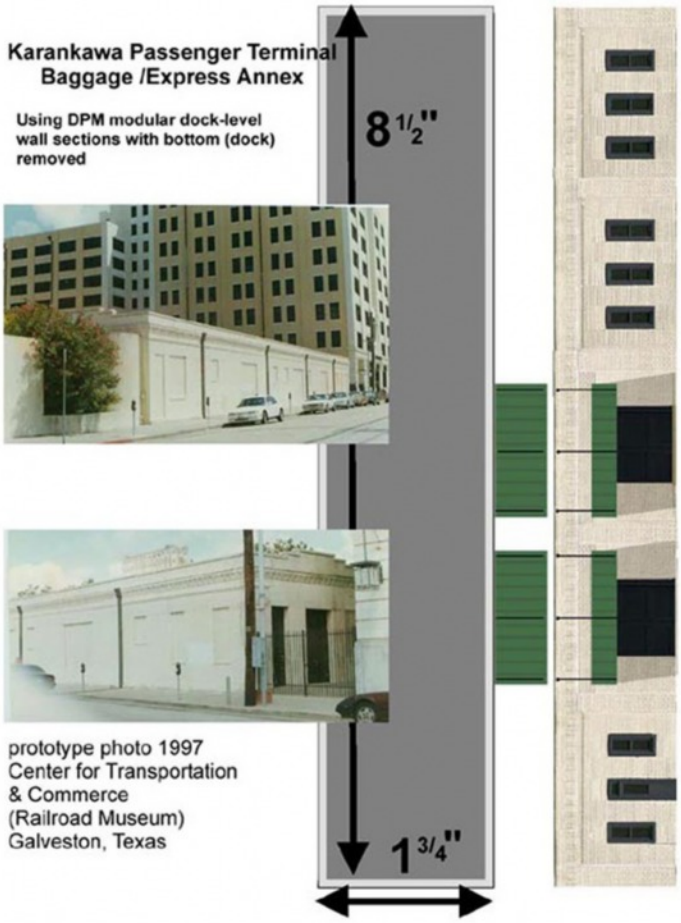
I built a simple cardboard on which to glue the Photoshop printouts. The station building is 11 inches wide, 2 inches deep on end, 6 inches high to the top of the sign. I used 4 pieces cut from used insulin syringe plungers to support the rooftop sign. The cardboard mockup proved that the concept fit the track plan. I snapped track into place and wired it. I haven't glued it down yet, and I plan a finished model to replace the mockup someday. But for the time being, I can operate passenger trains and have a nice looking, though temporary, scene.

The station mockup provides a focal point down the track.

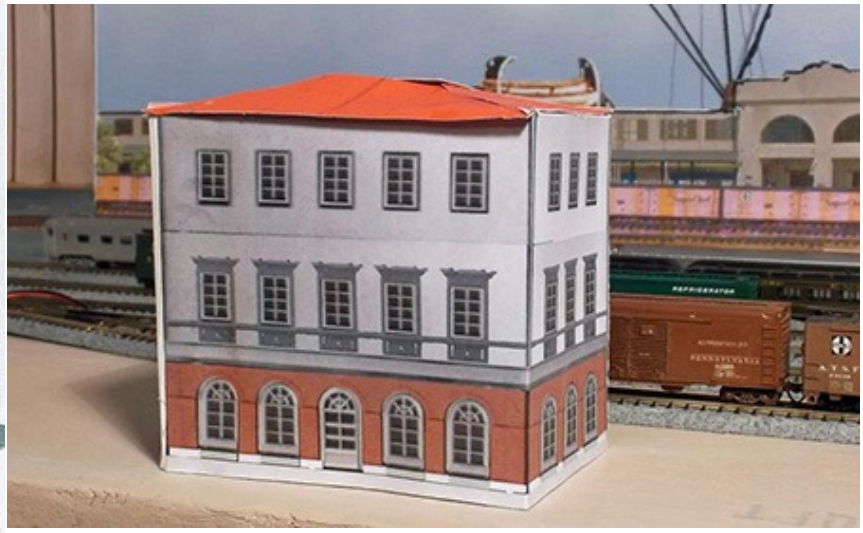
Some years ago, I made up a jpg file with photos of the station's baggage/express building, and a plan for how it could be kitbashed from DPM modular walls. Now with the layout underway, I built a cardboard shell for the baggage building, printed out my wall images and created an instant mockup.

I wanted a "downtown main post office" for my Island Seaport layout to place near the passenger station to connect with Railway Post Office cars in passenger trains. It didn't need to be directly on a rail spur. The main post office in my prototype city was 2 blocks away, and my layout didn't have room for a dedicated mail car track, but I had a spot close enough for mail cart access. I chose a prototype, not in my prototype city but in Corpus Christi, where I have lived over 50 years. The building was a post office in the 1930s where a notorious double murder took place. The Postmaster and Assistant Postmaster killed each other. It became a federal courthouse where I was grilled on the witness stand in the 1970s, so it had meaning for me. In addition, there is a commercial model in N and HO that resembles it.

The Model Power "St. Mary's Hospital" kit has three stories like the prototype. It's 5-bay width resembles the central 5 bays of the prototype. Circular arch doors and window openings on the ground floor and rectangular windows on the top two floors. The kit has decorative moldings for the top 2 floors which are applied as separate pieces, so they can easily be applied only on the second floor as per the real building. It has a molded Spanish tile hip roof. The kit makes this one easy.



I built a cardboard mockup to test the place and act as a placeholder while I concentrate on other parts of the layout. To make the mockup, I scanned the kit parts on their separate sprues, colorized different parts in Photoshop and cut out and pasted down windows images, doors and molding as I intend to kitbash. The cardboard mockup works so well, I'm in no hurry to redo it.



Peanut Butter And Cardboard Sandwich

Early this millennium, I discovered an interesting doubly-historical building in Galveston and wanted to model it someday. It was an antique store in a building called the Old Peanut Butter Warehouse. The first time I visited, I just enjoyed shopping. I took pictures on another visit.

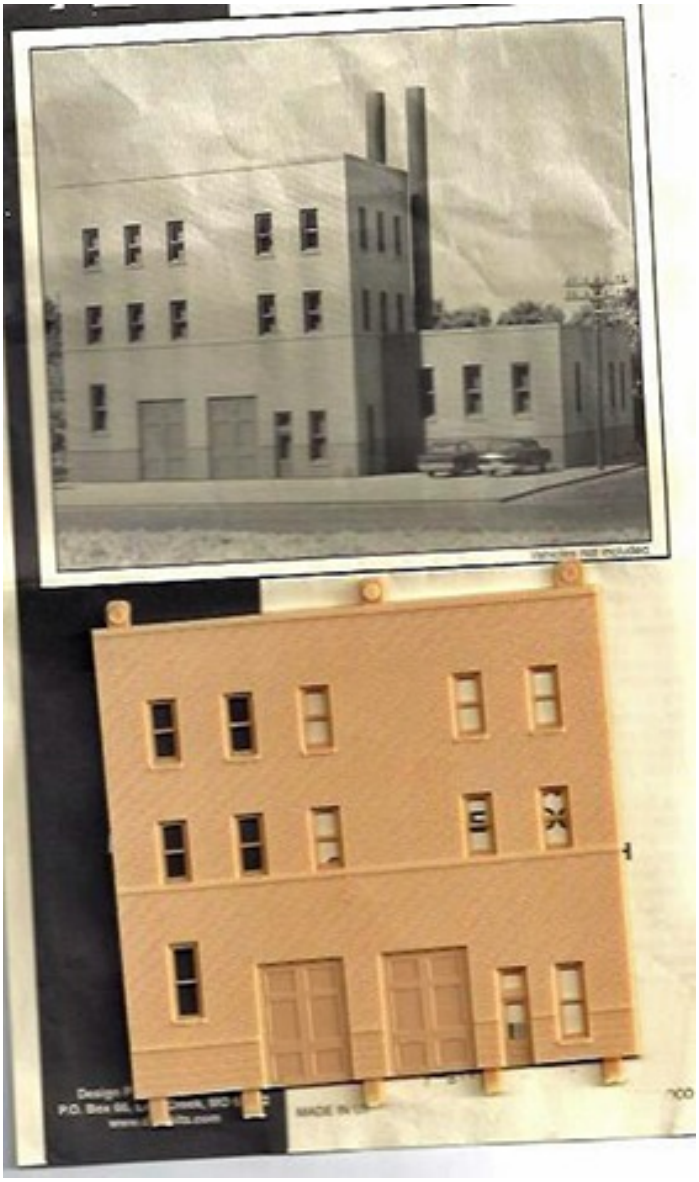
Moreover, the Peanut Butter Warehouse has rail loading doors where there used to be a spur reached by street running. Great modeling and operation opportunity. Note that this 2007 photo shows a fourth story, added in recent years to provide residential condominium units with views of historic district and waterfront.

I was especially interested in the peanut butter connection. I modeled a peanut butter plant on my old East Texas layout. It shipped peanut butter to various distribution points around Texas, including Karankawa, my version of Galveston. If I modeled the Old Peanut Butter Warehouse, it would give me a nostalgic traffic connection to the old layout.

Modeling allows me to take the building back to a time in the past when it was a working warehouse with rail service. I found an historic photo with a boxcar spotted at a door, no fourth floor condos, and a truck that suggests 1920s.

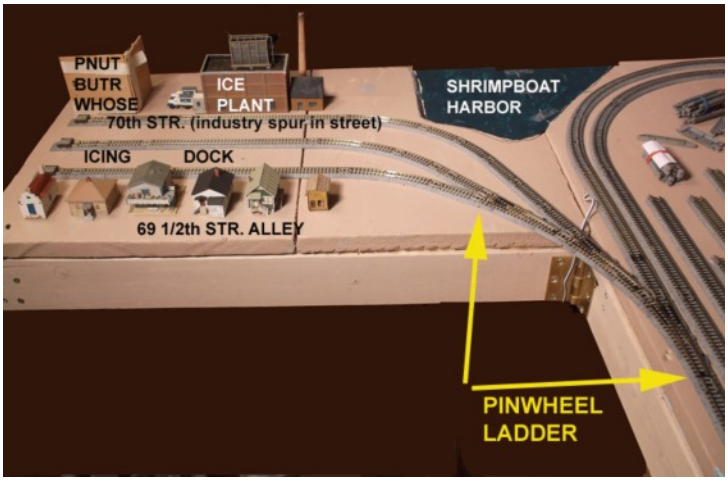
If I want to build it from a kit, I could use DPM's Goodnight Mattress Company to provide a three-story trackside wall with two rail loading doors. The doors aren't spaced the same, but they could give the impression of the prototype, if not a match.

PAPER MODELING HINT: I made a "huge" sign for the roof of the peanut butter plant with the face of the Dixie Darlin' girl (based on a photo of a friend's child). Since I saved the computer file of that graphic, I can easily print in out for an advertising billboard on my new layout or for sides of delivery trucks which could be parked at the warehouse.



I also want two large loading doors that face a raised platform on the front street side of the building. For that, I bought a second DPM Goodnight kit.

I scanned the loading-door side of the kit into computer. Photoshop allowed a "virtual kitbash" by repeating an extra copy of the loading-door side, cutting out a strip just above the loading doors and moving them to the height of the street-side platform, colorizing and adding signs, including one for Dixie Darlin' Peanut Butter.



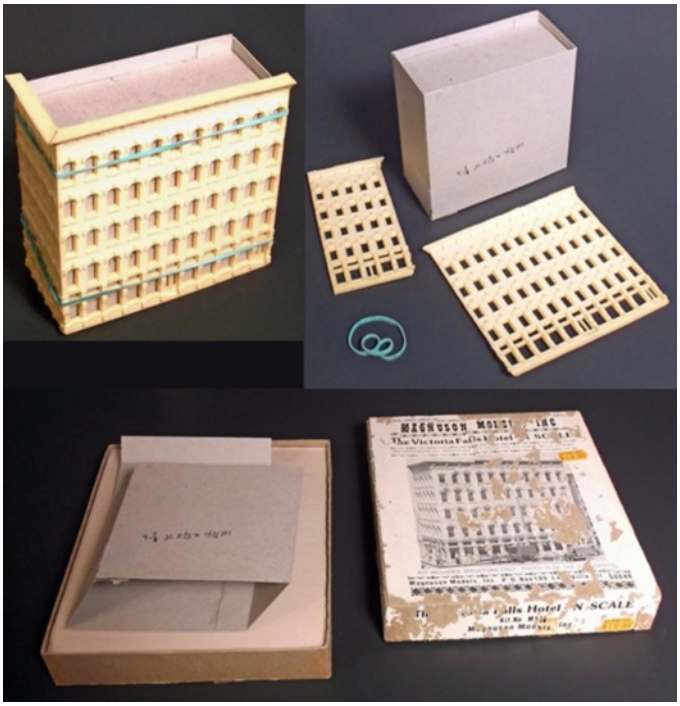
When I started putting together my new layout, I printed out the "virtual kitbash" and taped the two sides to a surplus box to mock up the scene.

I liked it enough to build a custom cardboard box with a depressed roof for a slightly more finished mockup, with canopy and loading dock added on the front street side.

George Washington Slept In A Cardboard Hotel

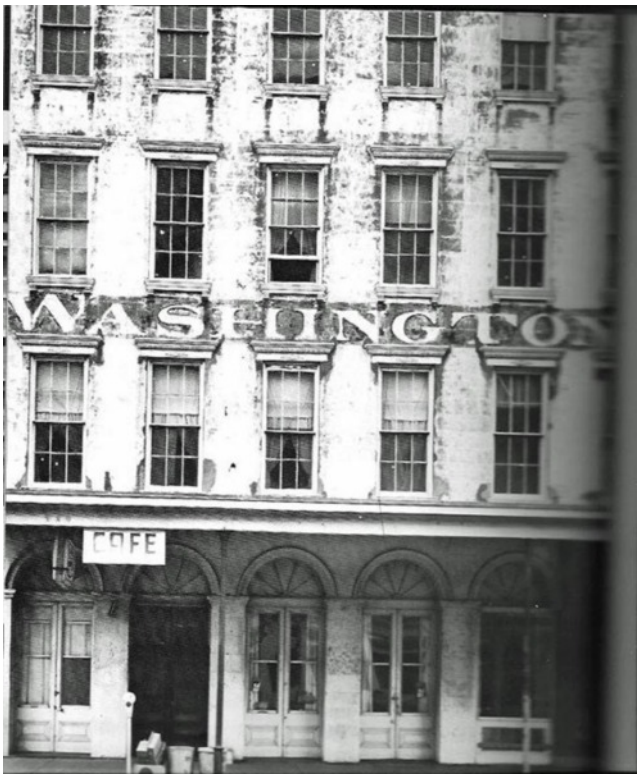
This is out of the chronological order of structures I have planned, mocked up and built, but it relates to the Old Peanut Butter Warehouse, so I'll tell this story here.

I bought two of the DPM Goodnight Mattress Factory kits to have two loading-door walls for Peanut Butter Warehouse. That leaves a lot of spare parts, which go to another project. But first a digression.



I wanted a hotel for my old declining downtown district near the railroad station, and I have had an old Magnuson N scale Victoria Falls Hotel kit unbuilt since the 1970s. I made a cardboard box where I could tape the unassembled sides of the kit as a mockup.

Later I scanned the kit parts, and colorized the brickwork, stonework, doors and windows as seemed appropriate, printed out and glued the cardstock sides to my cardboard core box. Many of the buildings in my prototype street scene had awnings over the sidewalk, so I added cardboard awnings and sidewalks to the mockup. It didn't look like any specific real hotel building on the scene, but it represented a nice generic addition to what had become "Cardboard City". It stood for quite some time on my layout, filling out the space nicely.

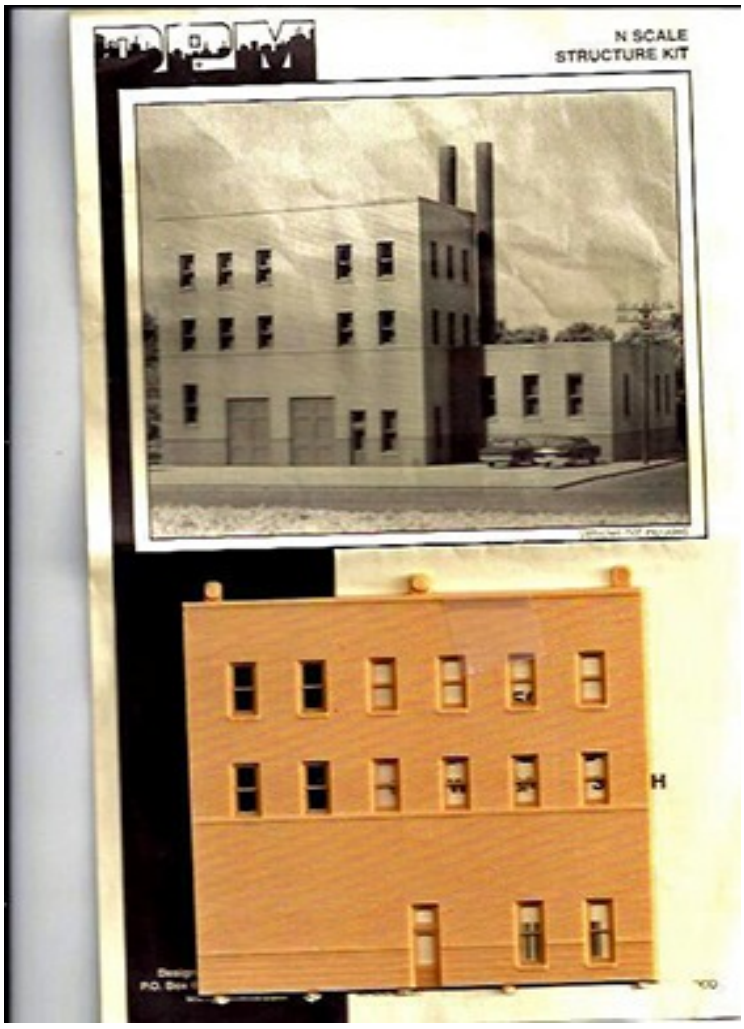


Then I made the "mistake" of delving more closely into the prototype scene in books, web research and an on-the-ground trip to my prototype area in Galveston. A 1965 photo by Ezra Stroller for the book *The Galveston that Was* (p.44) fascinated me as it captured the fading Washington Hotel. An interior view suggested it had become more of a cheap rooming house than an accommodation for travelers.

The Galveston Architectural Guidebook gives 1871 as the construction date. A photo taken about 1970 for the Historic American Building Record in Library of Congress Online provides an overall view, probably much as it appears in the 1950s period of my layout.

I could not find the hotel on an April 2018 research trip, but I found it had been rebuilt around the shell of the original building in 1987 as condominium apartments and renamed “The Washington.” My camera caught in on a May follow-up trip.

The model is only three stories tall to the prototype’s four stories. And the model’s front walls are only 6 building bays wide instead of the prototype’s 8 bays. However, the model has regularly-spaced rectangular windows, that make the top two floors a reasonable condensed version of the real building, ca. 1950s-70s. The kit parts even have casting sprues on the top that (accidentally?) resemble vertical protrusions, possibly chimneys, that rise above the roof line in period photos. I haven’t found kit parts for the ground floor arch doors and windows, that should be uniformly spaced and line up with the windows above. For a mockup, I scanned the kit walls and “decorated” them with signage for the upper 2 floors and drew a ground floor in Photoshop to print out.

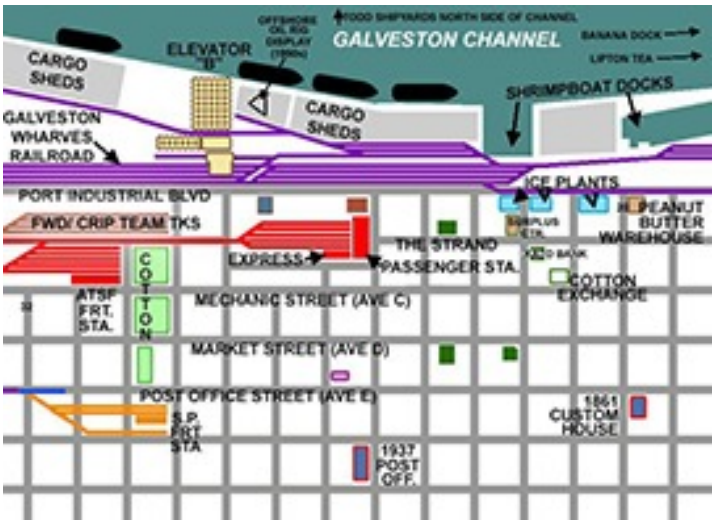


What this has to do with the Old Peanut Warehouse and the DPM Goodnight Mattress Factory: I have leftover parts from 2 kits with the non-loading-door walls of Goodnight Mattress.

Maybe when the finished model is made, it might be a hybrid of kit parts and cardboard parts, either printed flat or built up in layers. Here’s part of the ground floor in 2018.

Cardboard City

I used cardboard mockup buildings as an important tool in designing a city scene for my layout. I want to model a scene like The Strand, an unusual district in Galveston, Texas. I say "like" the Strand. I call the street "Exchange Street" and the city "Karankawa" after the native group that once inhabited the area. That gives me some excuse for structures that are not necessarily scale models of specific buildings, nor located exactly like the prototype. I do try to "base" everything on something real.

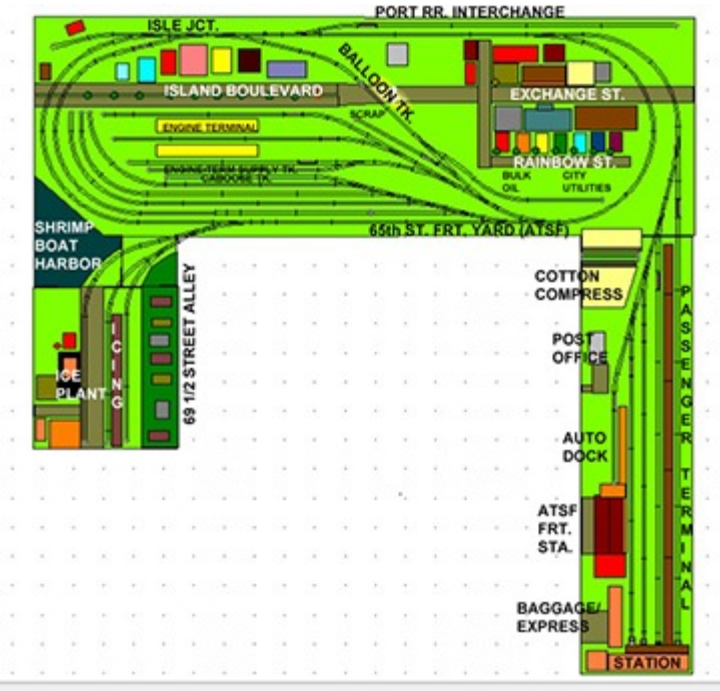


The Strand begins where the rail passenger terminal ends, and both the street and the tracks into the station are backed up by views of the harbor.

Trying to squeeze a long list of "wants" on a downsized 2 ½ foot x 7 table in N scale, I had to put my elements where they would fit, with track location as a top priority. The passenger terminal is on a lead that comes off the oval loop at the top right of the plan, near the back of the layout. If I had spliced the switch for the passenger lead in the middle of my right-end turnback curve, it would have made the curve too wide to fit the 2 ½ foot deep table without using sharper curves which would have restricted long cars. Visual access to that switch plays a role in arranging the Exchange Street structures.

The Exchange Street scenes sits at the right end of the layout to make it visually close to the passenger terminal, and sits toward the back half of the layout to leave the front right end available for some minor industry switching.

I consider The Strand district especially interesting for modeling. It was the financial center of Texas in the



1870s, 80s and 90s, with major banks, exchanges, and high-rent retailers. But the nation's deadliest natural disaster, the 1900 hurricane, devastated the city and its economy. Galvestonians rebuilt much, but it never came back as it had been, and Houston overtook it. Most buildings were not replaced with newer structures in the 1920s, 30s, 40s, and the result was an entire Victorian big-city business district frozen in time. The street is now spiffed up since the historical preservation and heritage tourist promotion of the latter 20th century.

However, in the 1950s railroad transition period of my layout, the area was in a state of decline. Once-grand edifices stand, but occupied by warehouse storage, industrial services, port-related suppliers – or not occupied at all but vacant. (And this is the scene I want to model.)

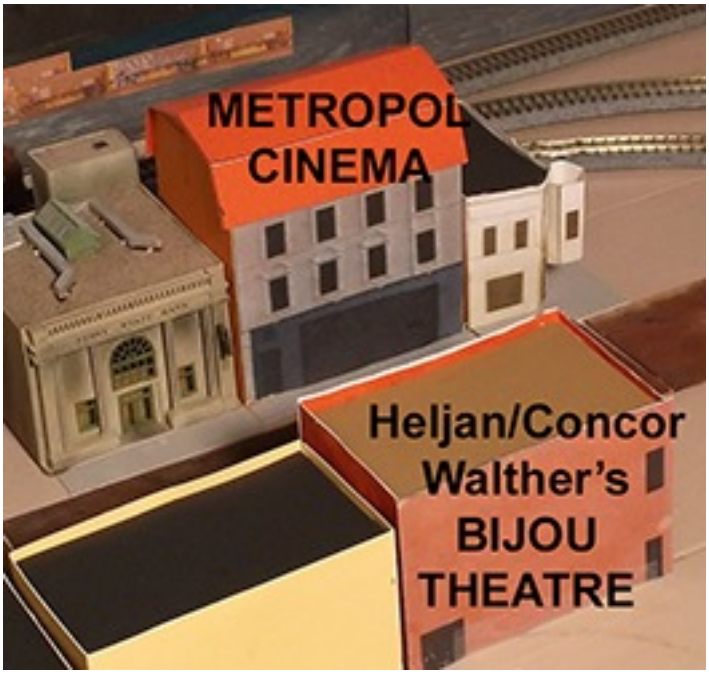
Ca 1960s, Historic American Building Record, Library of Congress)

I mocked up the street with a combination of cardboard mockups, some with window, door and wall textures glued on one or two sides, some plain boxes, and an old structure or two from a dismantled layout thrown in. I included some 4 and 5 story structures to give the feel of the one time big Victorian business district. However, I needed to work in a building or two no higher than two stories to allow me to see the clearance point for the passenger lead entry turnout (white arrow below). I need to be able to see that trains backing into the terminal have cleared the turnout switch before throwing it.

The mockup shows me that rolling stock will barely be visible at the clearance point WHEN I stand up from the operating position. Standing up is not always easy for me. I may want to try a one-story structure for better visibility before making a final structure arrangement.

A couple other notes on city planning. Many modelers feature downtown scenes with only one side of the street, the far side, to allow a better view of storefronts facing the observer. That can be justified scenically by having the front street on top of a bluff or embankment, or by having the front business street face a railroad line. I wanted a downtown with buildings on BOTH sides of the street, just because it feels right.

The buildings on near side of the street, with backs toward the viewer, seem somewhat shallow. I deliberately made them shallow to attempt to squeeze in a one-sided residential street scene on the near side of the business street, and then some light industry on a spur in front of that. The mockup suggests this is too shallow and crowded. It might be worthwhile to re-do the this-side-of-the-street businesses to give them more depth. And with cardboard mockups, it would not be much work.



My Cardboard City wound up with cardboard mockup modifications of two kits marketed as movie theaters, both to be adapted into something else, and changed in size. I bought a Pola European "Metropol" Old-town cinema kit (#N-341) because its shallow-sloping dormer-windowed ROOF and the kit's elaborately-framed windows somewhat resemble a real

1870 building on The Strand. I didn't bother adding cardboard dormer windows to the mockup, just made a quick representation of the size and shape and omitting the movie-house marquee. The real building is four stories, the Pola kit would be five as to-be-built, and it was easy to change the cardboard version to four stories. (I have since built the plastic kit with the modifications.)

I had an old leftover salvaged Bijou Theatre plastic kit which has been marketed at various times from Heljan, Concor and Walthers. I built it once before for my East Texas Piney Woods layout, and was wondering what to do with it. I didn't think a small town or neighborhood style movie house would fit with my scene. The only movie house operating in the real Strand district in the 1950s was the 1894 Grand Opera House. That would overpower everything else. Since I had the Heljan/Concor/Walthers kit, what could I do with it? I could make it into some kind of a storefront building by leaving off the marquee and converting the theater entrance into a storefront. And I built a cardboard mockup, cutting the depth of the building in half to fit with other "half-depth" buildings on that side of the street. Since I haven't done anything with the actual plastic, it will be easy to try other cardboard variations of the build,

Also in the same picture, on the right end of the far side of the street is a cardboard mockup of the Heljan/Concor Two Brothers corner restaurant.

A street corner in the Cardboard City. Four and five story buildings at the corner give a bit of big city feel. I wanted to locate the cross-street far enough from the right end of the block to look like a decent block's length of businesses. I'm hoping I can build a convincing grade crossing over the tracks. This gives a good view of the track, but it is not where I needed visual access for the yard lead switch clearance. I would not want a cross street there, where I would need to suggest some street crossing over a turnout. Not impossible, but a hassle.

The mockup buildings prove the concept, even though I plan to use different designs in their places. The mockup at right is based on an 1970s Magnuson Victoria Falls Hotel kit, built as a generic hotel with a sunbelt-style awning over the sidewalk. Since making this mockup, I have found a specific real building I can approximate with this kit. Similarly, I have found a real HOTEL I can model for the left corner, in the same footprint.

Meanwhile, I found a one-story building to use where I need the view of the back-track clearance point. One story businesses are almost non-existent on The Strand. What is now the Roof Garden event venue was a three story store and office building before the Great 1900 Hurricane took off the top two floors. For 50 years, through my 1950 layout period, it was a neon sign shop, which made the oldest existing neon Coca-Cola sign in Texas.

I could be designing and redesigning my layout over and over again "on paper", but doing it in cardboard helps me see it better, and gives me a scene to look at while I build.

The Cliff of Doom and Independence Haul

I knew I shouldn't have done it. I knew I shouldn't have. But I did it anyway. I put one of my passenger station tracks right up against the back of the layout, one inch from the edge. This is my longest station track, stub-ended, and my longest passenger train has to BACK into this track. My entire layout is on rollers for access and the table is not attached to the background, which is mounted on the room walls.

I push the table close to the background and wall but often a small gap remains, hardly visible, but

susceptible to allowing a car or loco to fall off the back of the layout. Sure enough, in early test operations, a car derailed and fell off the CLIFF OF DOOM and broke a coupler.

This photo shows how the table can roll away from the background and wall.

I didn't want to move the track. My space was critical. I decided to build a "TRAIN CATCHING FENCE". Disguised to look like a long linear building, a flat just a couple inches tall, fastened to the back of the table.

Part of my solution was a commercial cardboard cutout model I have had sitting around some 40 years, a commemorative kit sold during the 1976 Bicentennial to make a replica of Philadelphia's Independence Hall. I bought it, NOT to build Independence Hall, but as possible kitbashing stock to modify into less identifiable structures.

The box described the scale as 1":12 feet which would be 1/144 proportion, slightly large for N scale, but small for HO. However, the doors and windows of

central, most-recognizable portion of the building made it look large for N scale, while the annex buildings on the end looked small. (However, this is correct according to scale drawings I looked up from the National Park Service. Monumental buildings are often built with very large doors and windows.) I used parts of the walls for the large-proportioned central hall some 30 years ago as part of the background for an O scale San Francisco cable car steep-street diorama for a streetcar-fan friend. I kept the rest of the kit, and the side annex walls measured 2 inches tall, about right for a 2-story brick commercial building at 26 N-scale feet.

Those annex buildings looked more like an old office or commercial building than what one would usually find in a mid-20th century port or industrial area. However, I found a justification. Back in 2012, I took a ride at a train show on a caboose pushed and pulled by a switcher from the Galveston station/museum through the port area. On that ride, I snapped a photo of an interesting structure hardly a boxcar's length from the track, an old brick building that looked more like a small office building than a warehouse. It didn't exactly resemble the structure I could build from the Bicentennial kit, but it had the same feeling of a not-so-industrial building. AND it

was actually located between the passenger lead and the port transfer sheds, the same place I needed to place my train-catching fence.

NOTE: I looked on Google Earth street view and discovered this interesting old building is now a vacant lot. So glad I got to at least a grab shot while it was still there!

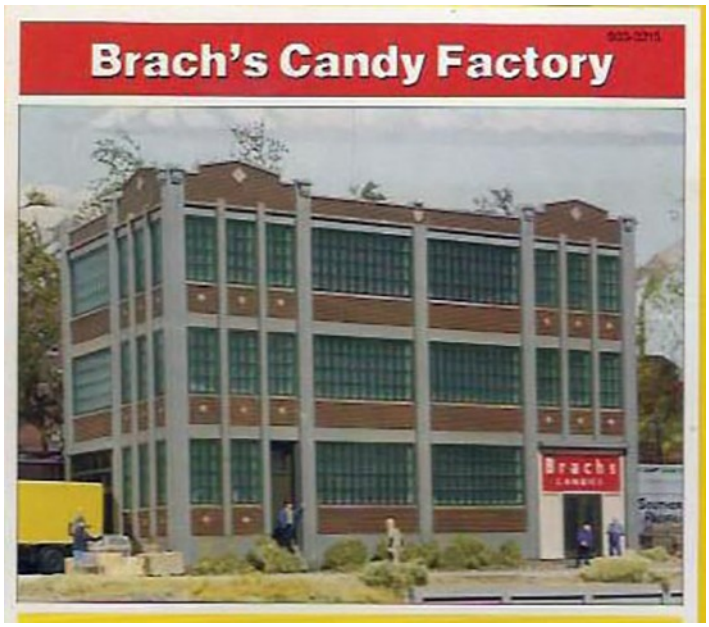
I cut out the side and end walls of the annex action to assemble together side-by-side. This is the basic old kitbash technique of "unfolding" the walls that a manufacturer intended to make a four-sided structure, in order to make one long "flat". In this case, there was no need to unfold because the walls had never been folded up in the first place. They made a 24 inch long flat which I affixed with Walthers GOO™ to a five-inch tall strip of styrene left over from making backgrounds. Since the building image was 2 inches tall, this left 3 inches "underground" to attach to the back side of the table.

With the layout table rolled back into place, the train-catching-fence didn't attract much visual attention to itself, but it was ready to catch misguided trains.

Candy and Cardboard

I used Walther's Brach's Candy Factory plastic kit to help build my train-catching wall, and I used cardboard to help with the plastic kit. I bought the kit some 35 years ago, to accumulate structures for a giant dream (nightmare?) layout I might build in a train palace house if I ever win the lottery

I bought the candy factory to suggest the older part of the Maxwell House coffee plant that overlooks the ex-Houston Belt Milby Street enginehouse. The older section of the plant had been an automobile assembly plant. I envisioned shipping raw coffee beans by rail from a port city to the coffee plant, and shipping processed coffee to grocery wholesalers in several directions.

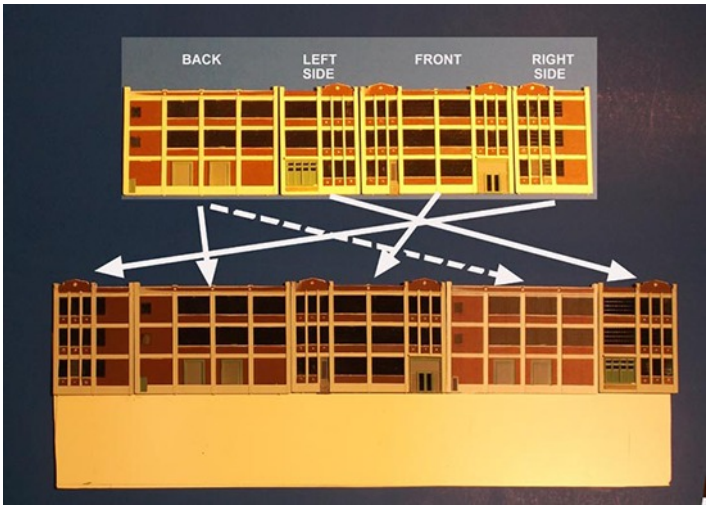


As the lottery win and the giant model train palace ideas became less likely, I considered "sacrificing" the candy factory kit to a lesser project – a row of harbor side transshipping sheds that would hide staging tracks. Before going into my saved kit with razor saw and glue tube, I measured the kit walls and laid out their dimensions on poster board to build a temporary mockup. I converted an unused replaceable mop head my wife didn't want, to become a roof over three backstage tracks. It looked like the idea would work in general, but my study of the kit walls while laying them out in cardboard showed me some problems. The kit had some loading doors, but on a transshipment shed that needs to handle a large number of railcars, the loading doors should probably be located pretty uniformly, one car length apart. I couldn't see any way to do that with the kit.

That layout never quite took off, so the candy factory kit was available when I needed to build a train-catching wall along the back edge of the new layout. Using the plastic kit was mostly a matter of

painting and assembling walls separately without attaching them at each corner at right angles, and omitting the base and roof, then putting them together side by side, a four-sided building "unfolded." Mostly. One window panel disappeared during assembly and I had no spare. I scanned a copy of a window, printed it on medium weight cereal-box cardstock and glued it in place. I shot a picture when I did that six months ago, but I have lost the picture and now I can't tell which window is the flat printed replacement!

At the top of the composite, I show the walls as they would look if simply "unfolded." However they didn't seem quite balanced. The repeat of the peaked cornices between the front section and two sides, which looks fine for corners, looks a bit odd when side-by-side in-line. To separate the peaked cornices, I put the right side wall on the left end of the assembly, and the left side onto the right end. This improved the symmetry to some extend, but the even number of wall sections left the front not quite centered. To center it, I scanned and printed out a cardstock copy of the back wall, as shown by the dotted line. When I mounted the wall sections to a piece of styrene for mounting onto the back of the layout, I put a piece of heavy-duty cardstock behind the repeated back wall to make it the same thickness as the plastic walls. Signage was deliberately omitted to avoid drawing too much attention to the train-saving wall.



Photographing real structures for a train-saving wall

I protected rolling stock from falling off the side edge of my passenger terminal with a mixture of cardboard building flats and commercial plastic kits built as flats.

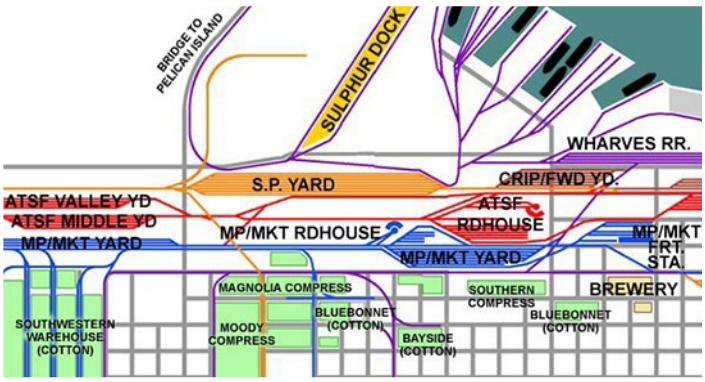
That left an unprotected "Cliff of Doom" at the back of the layout. I had laid out my oval loop so it filled nearly all the depth of my 7 x 2 ½ foot table. I foolhardily added a spur at the very back because I lacked a spot to deliver cars consigned to port industries when they came into my trunkline railroad yard on merchandise and unit grain and cotton trains.

Here a GP is pulling boxcars from that spur. It does not have spots for specific port locations, but serves as a general-purpose transfer point for port traffic – like an extremely minimal port terminal yard. (The orangish cars behind the cut being pulled are not real models but flat printouts of models glued on the background.)

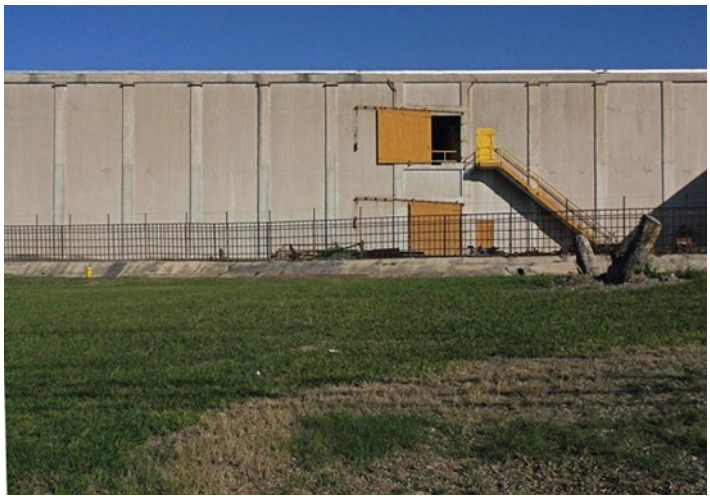
A complex of cotton compresses was part of my prototype scene, but I had not had space to model it. A compress seemed a likely candidate to be a train-catching flat.

I lacked good flat-on color photos of the compresses in my prototype town, and they were several inconvenient hundred miles away to photograph when I needed them. However, my home in Corpus Christi was less than five miles from a similar compress.

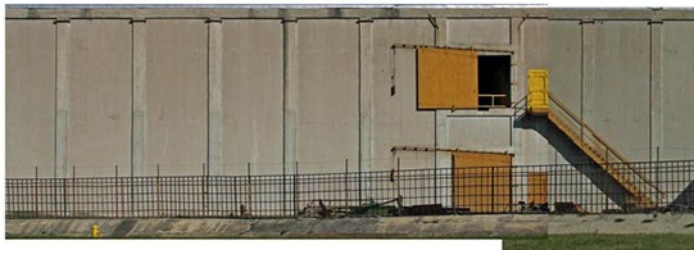
I photographed it it with my el cheapo digital camera set on high-resolution. My afternoon sun came from the southwest, and I could get flat-on brightly lit photos at right angles to the south Quonset-construction and west cast-concrete walls. The direct sun on the photographed walls would be consistent with the direct light on the modeled buildings toward the back of the layout, and near the wall of flats. Rather than "panorama-ing" to get a series of photos from a fixed position, I took photos from a fixed distance from the walls, walking from one camera position tom another, keeping my axis perpendicular to the wall.



I cut, matched and pasted pieces of pictures in Photoshop. Resolution of 300 dpi is recommended for sharp printing, but I let resolution drop to 200 since I don't want the background overly sharp. Since the maximum height of my train-catching buildings would be two inches, I could lay out two strips of buildings on one file to print on one 8 ½ x 11 inch sheet of filing-card weight printer cardstock. It took three such printouts to have pieces to splice together for a 3½ foot background flat.



The finished background row was GOOed to a styrene strip 3 inches taller than the buildings, and screwed onto the back of the layout table.



Here is a staged demonstration of the train-catching building row in use, as viewed from an angle not usually seen by an operator or visitor.

Kenneth, what can I say but thanks. It has been a great experience reading about your card modeling. It has been exceptional and yes, as you said, FUN. Thanks for sharing your memories with us.

Kenneth can be reached at: Kenneth.Anthony@newtracksmodeling.com

Please subscribe to my website NewTracksModeling.com to get log in links to my Zoom events and see what "New Tracks" you can travel. Please give me your comments, suggestions, and modeling ideas. I so enjoy hearing from you. My email is: jimkellow@newtracksmodeling.com

It's now time for me to return to my workbench and continue working on the scratchbuilt brass Business Car (pictured below) for my new Grandson, William Clifton Kellow.

Thanks you for reading this far. I really appreciate it. As always, best of modeling to you. It really is fun.

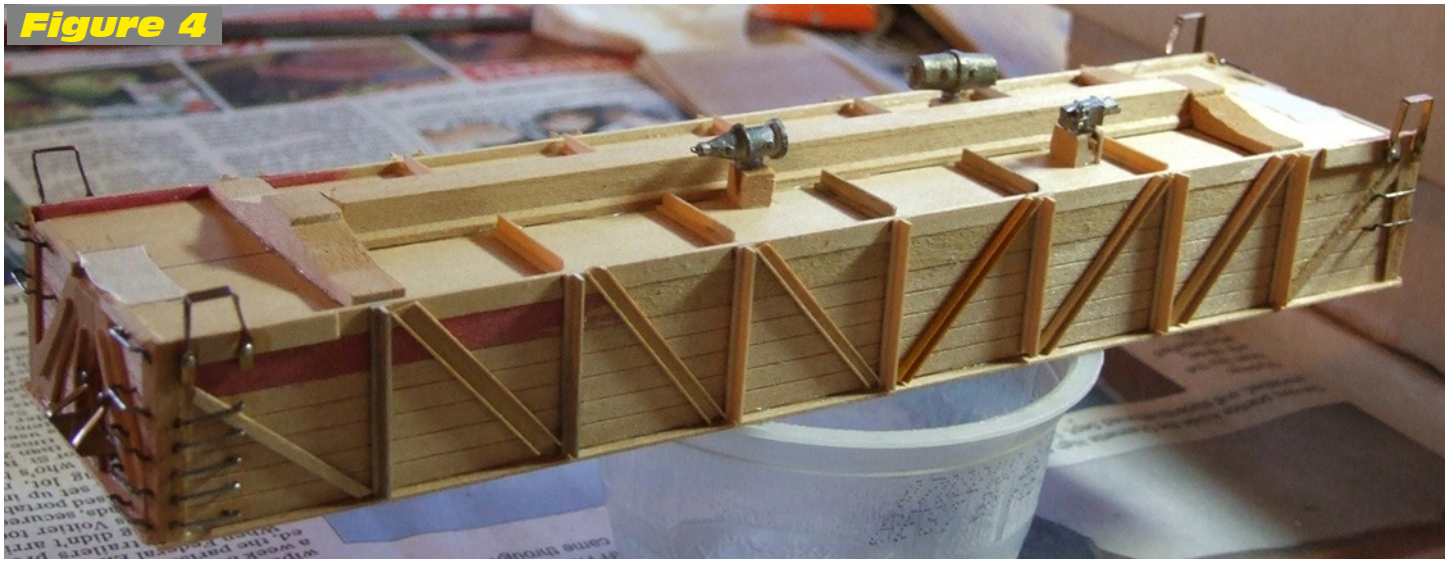
WHAT'S ON YOUR WORKBENCH?

By Jay Mellon

This project was intended to be my entry into Jaime Bothwell's "Make Bill Eat Crow" contest. The aim of the contest was to induce modelers with old S kits sitting in a closet to get them out and build them. I have acquired a number of such kits over the years with the idea that I would build them as an exercise in S modeling history. I selected a 41.5 ft. Milwaukee Road composite gondola produced by the Regal kit company. The kit consists of mostly wood materials, but also includes some cast metal parts (e.g. brake wheel; end pilots), wire grabs and decals. It did not include trucks or couplers. My main goal was to use only the materials that came with the kit. There was a review of this kit in the March, 1965 issue of the *S Gauge Herald* (out of print) magazine, so my selection definitely qualified for the contest, being about 55 years old. The contents of the kit are shown in Figure 1.

Kit construction was fairly straight forward. It required lots of precise cutting of small wood parts (e.g. side reinforcing struts), so the Northwest Short Line Chopper tool was very useful. I used Aleene's white 'Tacky' glue to bond wood parts together. I used ACC glue (Zap-A-Gap medium viscosity) to bond parts of dissimilar composition. The end pilots included with the kit prevented the use of Kadee couplers, so I used American Models non-operational couplers. I needed to add a small piece of styrene sheet material to orient the couplers to the proper height (checked with NASG coupler gauge). I fitted the model with American Models trucks.

Figures 2-4 show the model during the construction phase. I painted the model with Tamiya Fine Surface oxide red primer paint (rattle can). I weathered the interior of the model with Bragdon's Enterprise Weathering System powders (brown dirt, medium rust).



The decals included with the kit turned out to be disappointing. I knew they would be very fragile since they were so old. I tried to skirt this potential problem by over-coating them with the MicroScale Industries Liquid Decal Film product that is designed to save old decals. However, after doing so, these treated decals would not settle down and bind to the model's wood surface using the MicroScale Micro-Set; Micro-Sol solutions. I finally found a partial solution to this problem by applying a thin layer of Aleene's white glue (dries clear) to the back of the decal and carefully smoothing the decal onto the model surface. Unfortunately, when applying this technique to some of the larger decals, they began to tear. Thus, I decided to quit while I was ahead. So, I intend to replace the decals included with the kit with some better quality decals, if I can find some (HO scale?).

Figures 5-6 show the completed model in its current form. I will need to come up with an appropriate load that will add weight to the model, since it is now fairly light.

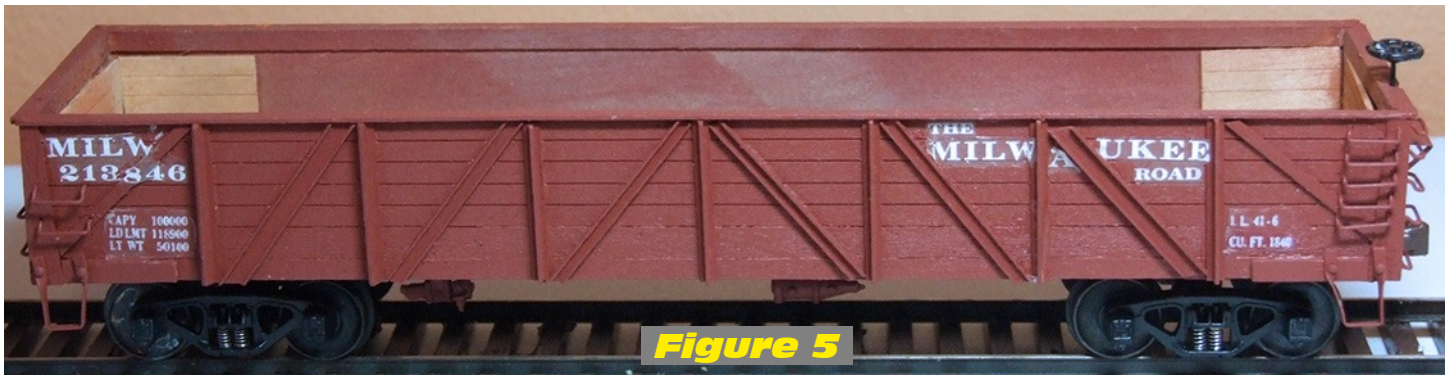


Figure 5


Figure 6

MORE WHAT'S ON YOUR WORKBENCH?

A Pedestrian Walkway

By Gaylord Gill

This in-progress pedestrian walkway will span Babcock Street yard on Gaylord Gill's railroad. The structure is being kit-bashed using components from at least six manufacturers.

Like many S scalers, over the years I have purchased kits and components from other scales to potentially fill in where my favorite scale lacked products. This has been especially true with items which might be used for bridges and trestles.

My layout is centered on the PRR's Babcock Street yard in Buffalo. It's a double-ended facility measuring 50 actual feet end-to-end, with a dog-leg bend at the mid-point, and the yard is large enough that operationally I have divided it into an east and west section. I wanted a visual separator for my operators to understand their yard limits, and the logical device was a pedestrian walkway. This would span the six tracks adjacent to the roundhouse and provide access for my Pennsy employees working there.

Photo 1

Photo by Jim Kindraka / Streator, Illinois

Photo 1 shows an example of the type of bridge I was thinking of, although I didn't plan to model any particular prototype.

From my stash of kits and materials, I pulled several components that looked like they might be usable for this project (photo 2). Almost all of these are products designed for HO – the lone S product is at the left: a sheet of laser-cut stairway stringers by Rail Scale Models. Those stringers could form an obvious starting point for the stairways I wanted, but my overpass would be all metal – the wooden treads in the sheet wouldn't be suitable.

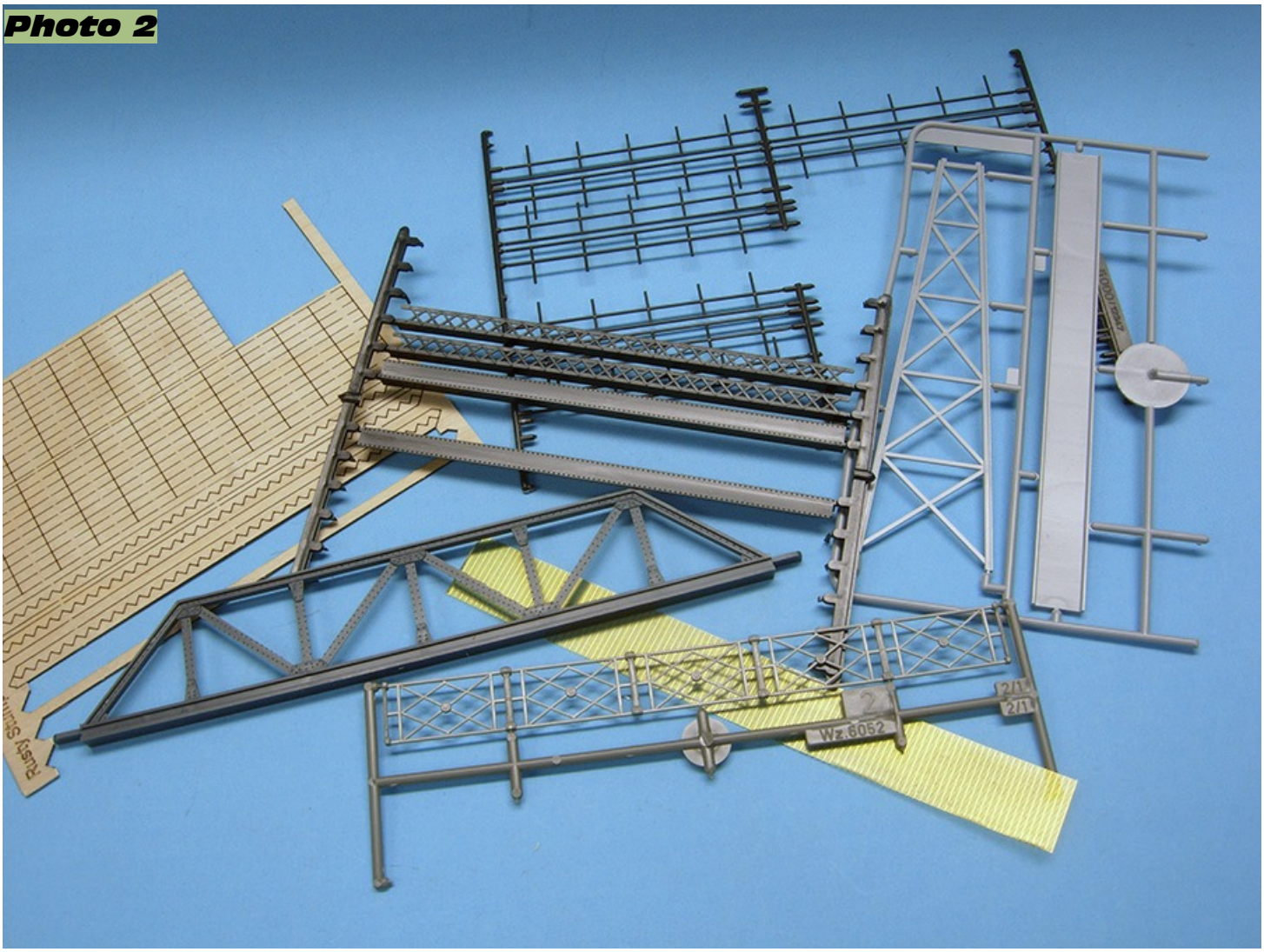


Photo 2

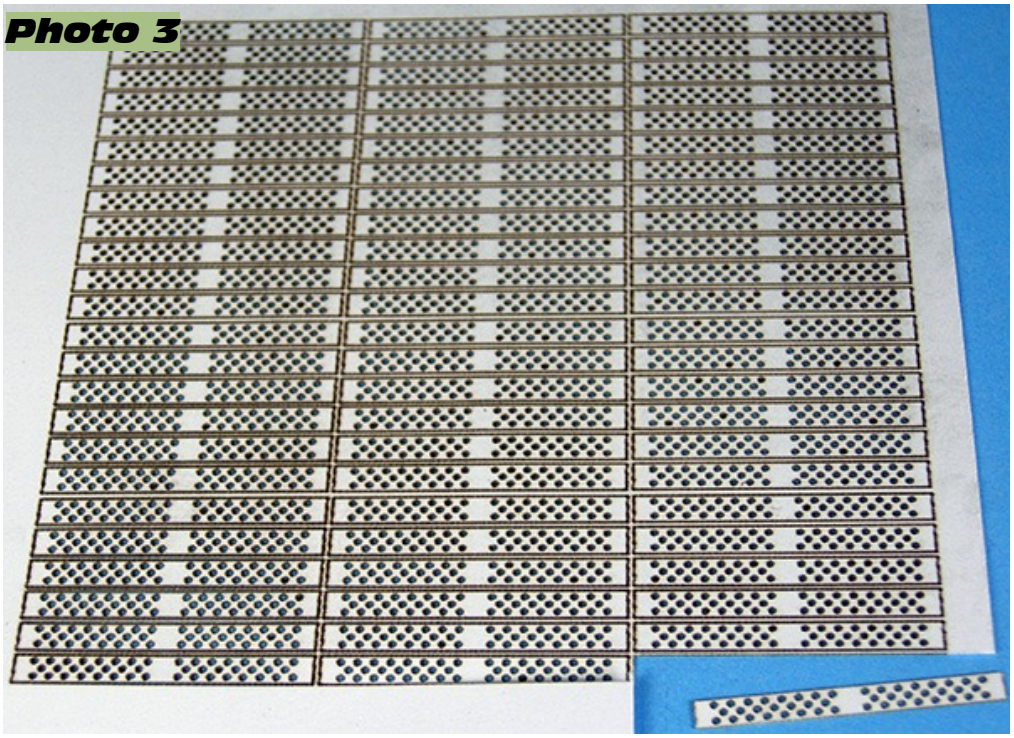


Photo 3

At the time, with the help of friend and fellow S scaler, Mark Charles, I was experimenting with laser cutting two-dimensional parts. So my first bit of fabrication was the design of metal stair treads with punched holes for drainage. Photo 3 shows the 72 stair treads that I cut on the laser, while photo 4 displays the stair assembly I put together, using the Rail Scale stringers, my treads, and HO railings from Central Valley. Needing two flights of stairs at each end of the walkway, I created four of these assemblies.

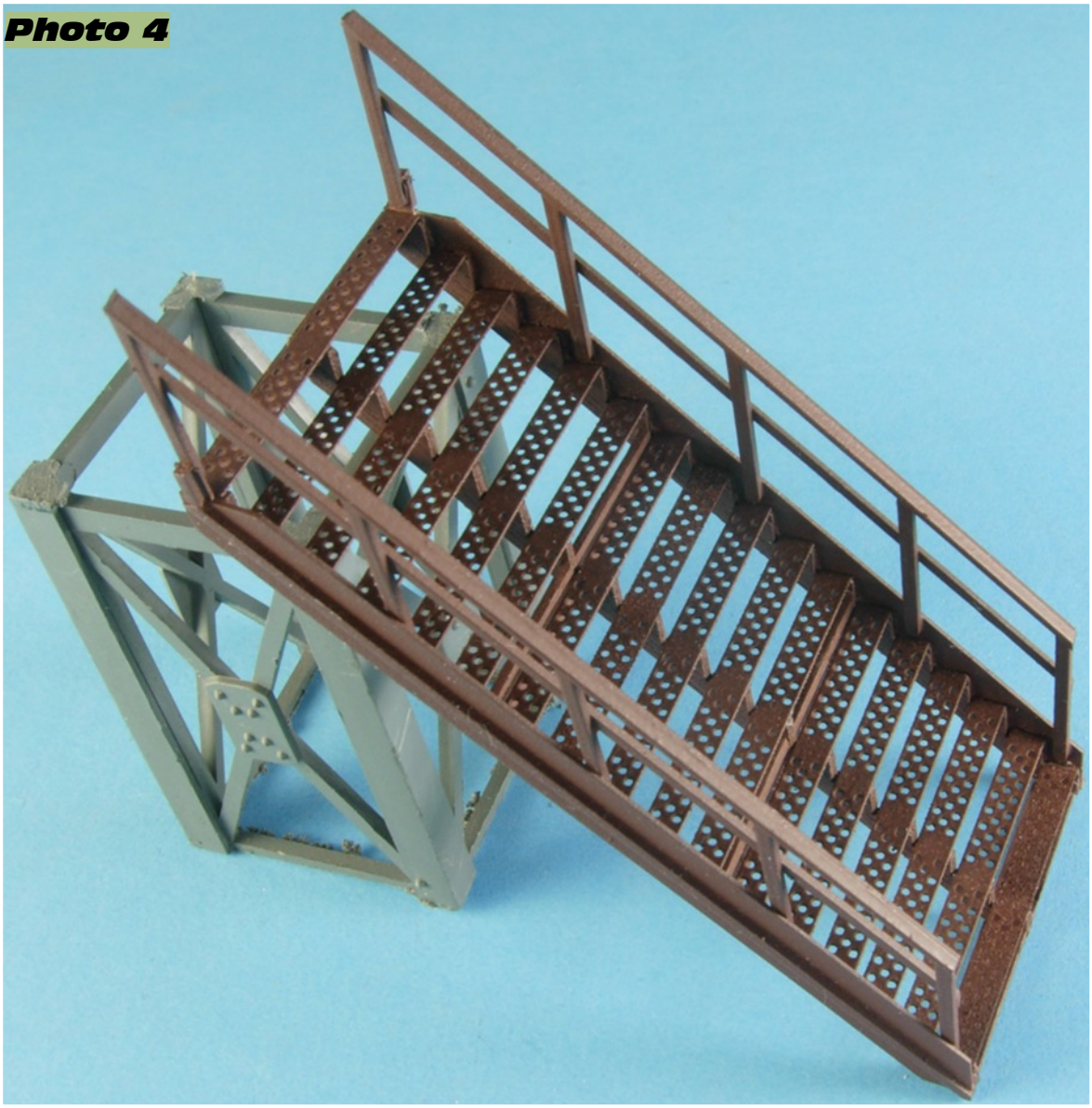


Photo 4

For the main span, I spliced together several copies of HO components I had on hand. None of these had any manufacturer markings, so I can't tell you their exact source. To the rear in photo 5 is a Warren truss type of design, perhaps by Kibri or Tyco, which forms the primary support structure. I designed the foreground assembly to nestle inside the truss assembly, and it provides cross-bracing and railings for the span. The manufacturer of these railings is also unknown.

Using laced girders by Central Valley, I fabricated the two end towers (photo 6). This HO product has been useful in several of my projects, and their package #1900-5 contains large girders (22" wide in S) and small girders (about 12" wide in S). For my walkway towers, I used both sizes. To angle the two larger legs, I used angled supports from a Walthers conveyor kit. For the intermediate stairway towers, I used more of the smaller Central Valley girders, plus various pieces of Evergreen strip styrene.

For the walkway deck, as well as the stairway platforms, I selected an Apex slotted pattern. This brass sheet item is made by Plano Model Products (their part #202), and it gives an excellent see through representation of a metal grate (photo 7 next page).

Still to be done are two intermediate supports for the span, as consultation with Dick Karnes confirmed the distance was probably too great to be held up by the end towers alone. There are also more railings to be finished at the platforms, plus final painting and weathering. This project has been a lot of fun, as I really enjoy the creativity aspect of finding ways to combine various components into a unique structure. A side benefit is that I'm finally making use of stuff I bought decades ago!

Editors Note: This series shows our readers what other modelers are working on. All that's needed is a simple snapshot of what your workbench looks like and the project on it. Send us a picture or two along with a short description of what you are working on so we can share it here. If it's a project under construction, send it in. Repair job, send it in. Completed project, send it in. Send your pictures and descriptions to *daniel@modelrailroadresource.com*

Scene Around the Layout

By Joe Hohmann

We have great trains, and even nice S automobiles and figures, but aside from some Plasticville, S structures are hard to come by. For my tiny 4' x 6' S layout, I've found some HO houses, stores, and buildings that "work" with my S figures, as well as my M2 Auto-Thentics cars from the 1950s.

The next time you are at a train show, or your dealer, take a good look at HO structures. You will see that some look larger than others, depending on what company made them. I have used Woodland Scenics Ready-Built structures, that for me, are close enough. When going to a train show, I carry an Artista S figure with me to see if they will "work".

For the RR station, I do use a building that is close to S… in my case, a metal Hallmark station. I also have a Walthers Cornerstone kit to build. The diner I got on eBay, and its scale is midway between HO and S. Five other diners in this series are available. I also have 1/4 of my track covered by a tunnel because the train disappearing makes this small layout seem not so small.

Reader Classifieds

Buy ~ Sell ~ Trade

To submit a wanted to buy or sell non business classified ad please click the link below.
https://ribbonrail.com/railroadresource/Classified/ 725 Characters $10.00 less contact information.

FOR SALE: RS 3, American Models, undecorated $50
40' New Haven Boxcar, American Models $15
B & O Hopper, American Models $15
40' Boxcar, Roscoe, Snyder and Pacific, S-Helper $25
MRC Controlmaster 20 Powerpack $90
All are in excellent condition.
Gary Herlinger
Email: garyherlinger@att.net **Phone: 770-401-2740**

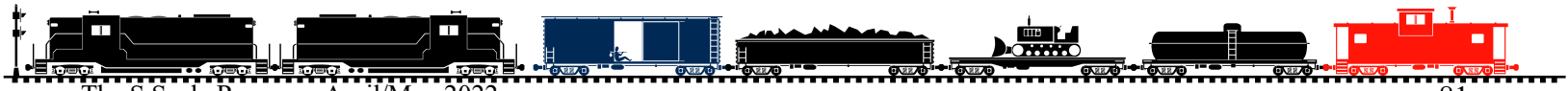
S Scale Shows & Meets

2022 Spring S Spree
May 12-14, 2022
The 2021 Spring S Spree is an all S Gauge Model Train event. This hobby specializes in 3/16" model trains. The 2022 Spring S Spree will be held at the Washington County Fairgrounds 2151 North Main Street Washington, PA 15301.
Annual S scale train show including all aspects of "S" hosted by the Pittsburgh S Gaugers.
Email info@PSGtrains.org
Website: https://sspree.info/

O Scale, S Scale, Narrow Gauge West
May 26-28, 2022
Hyatt Regency, Santa Clara
5101 Great America Parkway
Santa Clara, California
O Scale – S Scale – Narrow Gauge West is the largest 2-rail O scale convention west of the Mississippi, the largest S scale convention west of the Mississippi.
Email: rdunniii@mac.com
Website: https://www.oscalewest.com/

Sn3 Symposium
Tentive Information
June 2 through 5, 2022
Sheraton Denver West

2022 NASG Convention
August 2nd through 6th, 2022
2022 NASG Convention is announced for Buffalo, NY.
The 2022 NASG CanAm Convention will be held in Buffalo NY, August 2-6 at the Buffalo Marriott Niagara in nearby Amherst. The city of Buffalo has undergone a stunning revival in recent years with its downtown Art Deco architecture, its lakeside setting, and its extensive rail facilities. Mark it on your calendar as a “must-attend”.
Check their Website here!

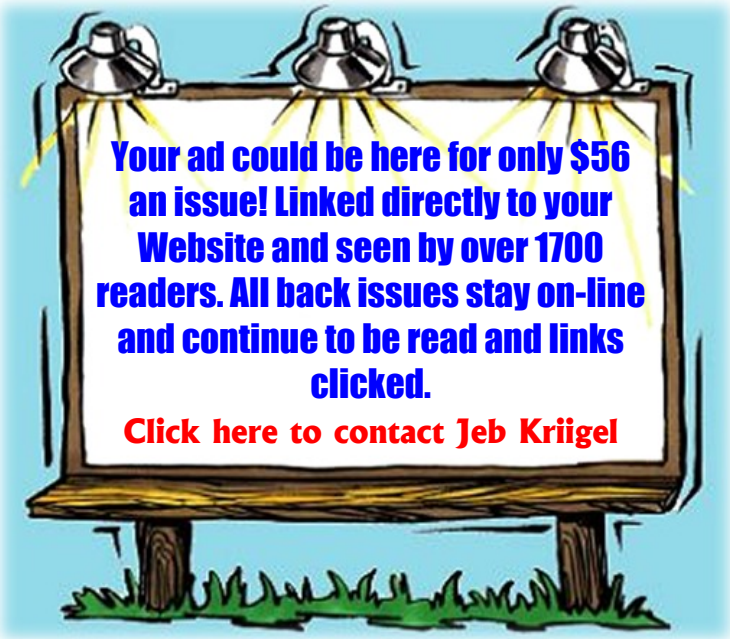


The S Resource — Classified Listings

News, Reviews, Information to Use

Manufacturers Dealers Pre Owned

To advertise in The S Scale Resource classified listings contact us for our rates. Your classified ad will appear in the section you want for 6 issues. If you do not see a section that you think would fit your products or services, let us know. We can add a category that better suits you. Your ad is hot linked to your website which puts your customers one click away from you.



Yes, we now have a Facebook page to help keep you up to date on new products and ideas. And, even in an on-line magazine, we sometimes have more pictures than we can use, so we'll post them on Facebook.

Advertiser Index

B.T.S.	Pg.	5
Clover House	Pg.	4
Des Plaines Hobbies	Pg.	4
Excelle Lubricants	Pg.	4
Fox Valley Models	Pg.	4
JT's Mega-Steam	Pg.	80
National Association of S Gaugers	Pg.	4
New Tracks	Pg.	12
RailFonts.com	Pg.	5
Right On Track Models	Pg.	11
River Raisin Models	Pg.	5
S Scale Track Works	Pg.	5
Streamlined Backshop	Pg.	12
The O Scale Resource	Pg.	32
Tru-Color Paint	Pg.	5
Trainz	Pg.	11
Tomalco Track	Pg.	4
Z Stuff for Trains	Pg.	4