

THE

O

RESOURCE

NEWS, REVIEWS, INFORMATION TO USE

Volume 8 No.2

November/December 2020

SCALE



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Bob's Machine Shop
Strasburg O Scale Show
Converting a Weaver Troop Kitchen Car
Scratch Building Steam Locomotives PT 2
Backshop Solutions
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Published Bi Monthly

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

November/December 2020

Volume 8 No. 2

Owner / Publisher

Amy Dawdy

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Daniel Dawdy

Advertising Manager

Jeb Kriigel

Welcome to the online O 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

Amy took this shot on Tim Rasinski's layout. This is a teaser for one of the many layouts we shot on our trip out East. Next issue we'll feature the "Gettysburg Five" and their beautiful layouts.

Rear Cover Photo

Amy captured this scene on Rich Randall's layout. Again, next issue we'll feature the "Gettysburg Five" and their beautiful layouts.

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The Model Railroad Resource, LLC publishes *The O Scale Resource* and *The S Scale Resource*. Be sure to look at both of our magazines. There are many articles in our magazines that are not scale specific and will be of interest to you. Click the magazine title in this announcement to see the magazine.



From the Publisher's Desk



What a year it has been! Amy and I decided it was time to take a road trip culminating at the Eastern PA 2 Rail O Scale Train Show and Swap Meet in Strasburg, PA. On the way, I wanted to get down into Tennessee and West Virginia to do some photography as my Richmond, Danville & Southern Railroad runs through that area and I have never been there. Also, the Saluda grade in Saluda, North Carolina was on my bucket list as the “widowmaker” grade on my layout is 4.9%, not to my liking, but sometimes the basement determines these things. The route is no longer used, but all the rail and signals are still in place. After a few days in Johnson City, TN we moved on to Beaver, WV and did some railfanning there including White Sulphur Springs. Amy had booked us into a tree house with a hot tub for two days!

The other reason for the trip was to meet other modelers and photograph five beautiful layouts in the Gettysburg area. This was Art Selby's idea, and his layout along with Tim Rasinski, Rich Randall, Brian Scace and Ken Kime were photographed and videoed. We'll have these in an upcoming issue of *The O Scale Resource Magazine*. Each layout had something that I could takeaway and use on my layout. That's one great thing of being about to visit other people even if it's not the same scale as you work in. You will pick up on something that you may have not seen or never thought of and incorporate it into your layout.

The Strasburg show was a success and is featured in this issue. People were careful, masks were worn and money was spent. It felt good to get back into a show and meet people again. Amy and I had dinner with Bob and Karen Lavezzi Friday night. Things got a little fuzzy towards the end, but we had a great time.

In this issue, we continue to follow Glenn Guerra as he scratch builds his steam locomotives. This time it's the spring rigging and frame assembly being worked on. Holger Rimkus from Hamburg, Germany shows how he converted a Weaver troop kitchen car to close coupling and narrower trucks. His bolster is 3D printed and the STL file is available for downloading within the article. Brady McGuire shows us the before and after photos of his restoration of a late 40s sheet tin O Scale Rail Craft panel side hopper. George Paxon talks traction caboose in an article that was bumped from the last issue. Sorry George, but we are back on track now. Neville Rossiter show us how he made some modern dumpsters for his mill scenes. William Lubert was a New Tracks winner and shows us how he built Bob's Machine Shop from Walker Models in Australia. New Tracks looks at computers in model railroading, this also appeared in the last issue of *The S Scale Resource Magazine*, but we thought since many of you don't read that, we would reprint it here with updates. Ross Dando is back in the Backshop with his latest projects and so much more.

So what are your plans for the upcoming few months? After seeing the layouts listed above and some some prodding from well meaning friends, I am going to start some trees and static grass scenery. I'm not all that excited about it, but it's something that I just need to start and get on with it. Like may projects, once I get started all will be fine, it's just getting over that beginning hurdle.

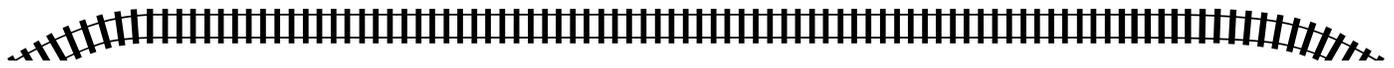
We continue to look for articles, pictures, quick tips, most anything you want to share with the great world of O scale modeling. [Send me an Email and let's talk.](#)

Till next time, stay safe and keep on modeling!

Happy Reading & Happy Modeling,

Dan Dawdy

NEWS YOU CAN USE



Woodland Scenics has a great new product coming soon! The NEW Utility System allows you to create the illusion of providing power and communication lines on a layout in minutes. Each utility pole is pre-wired, and all products are designed to work together with placement in mind so there's no guesswork. Innovative packaging lets you pull poles out of the package and plant them in place on a layout with ease.



Run Double Crossbars along railroad tracks to simulate communication lines and place Single Crossbars down city streets to represent power poles. Then use the Transformer Connect Set to imitate supplying power to buildings. It's that easy.

Keep an eye on the website and social media to learn more about the products as information becomes available.



Rick from Rusty Rail sent us some information. Going to try something new a series of narrow gauge cars for a work train set. The base car will be a flat car with different parts to place on the flat car.

The first work car you see on the right is the oil and junk car. You see our square oil tank and a junk bin with a junk pile casting to fit inside. I will include the San Juan detail parts (former Grandt line), 4 stirrups and a brake wheel setup. 2 Kadee coupler boxes are included, but you supply the Kadee couplers



you want the the trucks you want. The next car will be a tool car workbench and tools added.

We released the 1937 Ford pickup in HO last time and now we have produced it O scale. Makes a great low cost unique truck for your dioramas or layout. Comes with a load of junk to place in the back or make your own load and use the pickup load

Also made a single casting of the same pickup as a derelict truck with a lot of junk in the back and some flat tires to give it that barn find look. Back behind a old barn or house or in the weeds would add some character to the scene.



Also put together a small combined pack of a couple of junk piles for sale. [Check out their Website for more.](#)

We received some samples from [Stephen Wilder of Smokebox Graphics.](#)

Smokebox Graphics have been providing the HO Scale market with self-adhesive FRA 224 reflectors and high-quality, screen printed decals for the last

The O Scale Resource November/December 2020

five years. Recently, we have scaled up a couple of our most popular decal sets for the 1:48 scale market. These sets are as follows:

SMOKEBOX GRAPHICS • O SCALE • Road Sign Font Patch Jobs **DF5148**

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 27655712384

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- DF5148 Road Sign Font Patch Jobs. This set includes lettering in a distinctive “road sign” style as used by NOKL, NDYX, and several other operators. Also included in this set is data for a full repaint covered hopper, red brake shoe labels, and truck sideframe reporting marks. A foldout instruction sheet includes an enlarged sheet diagram and placement example.

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SHEET GUIDE

SMOKEBOX GRAPHICS • O SCALE • Patch Job Stencils - Sans Serif **DF5648**

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 JJJKKKLLLMMMNNOOPPQQRRRRS
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 22333334444455555566666777778
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 AAAABBBCCCDDDEEFFFGGGHHHII
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 22333334444455555566666777778
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 SSTTTUUUVVWWXXYYZZIIII12222222333334444455555566666777778
 88889999900000 88889999900000

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- DF5648 Patch Job Stencils — Sans Serif. This set includes scale 9" and 4" stencil-style lettering in both black and white. These sizes are perfect for the reporting marks and road numbers found on car sides and ends when "patched" by their owners. Multiple styles of each letter and number are included to allow for the closest possible match to the prototype car.

Also available is our O Scale FRA 224 reflector set in yellow. This set includes the federally-mandated 4" x 18" reflective strips and provides enough strips for 16 cars. It sells for \$7.00.

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More information on all of these items can be found on their Website.



[Berkshire Valley Models](#) has some new products available. The 864 Small Ore Bin - Mine Track and 865 Small Ore Bin - Truck Ramp.

The #864 Represents a small mine's ore bin for loading freight cars, wagons, or trucks. Laser cut wood kit that goes together easily. Includes mine track trestle with Code 40 rail that can be installed from the back or the sides. Also, there is a small retaining wall that will boost the ore bin up another .450" for more clearance.



The #865 Represents a small mine's ore bin for loading freight cars. Laser cut wood kit that goes together easily. Includes a truck ramp for unloading trucks or ore wagons. The ramp extends back another 7-1/4". Also, there is a small retaining wall that will boost the ore bin up another .450" for more clearance.

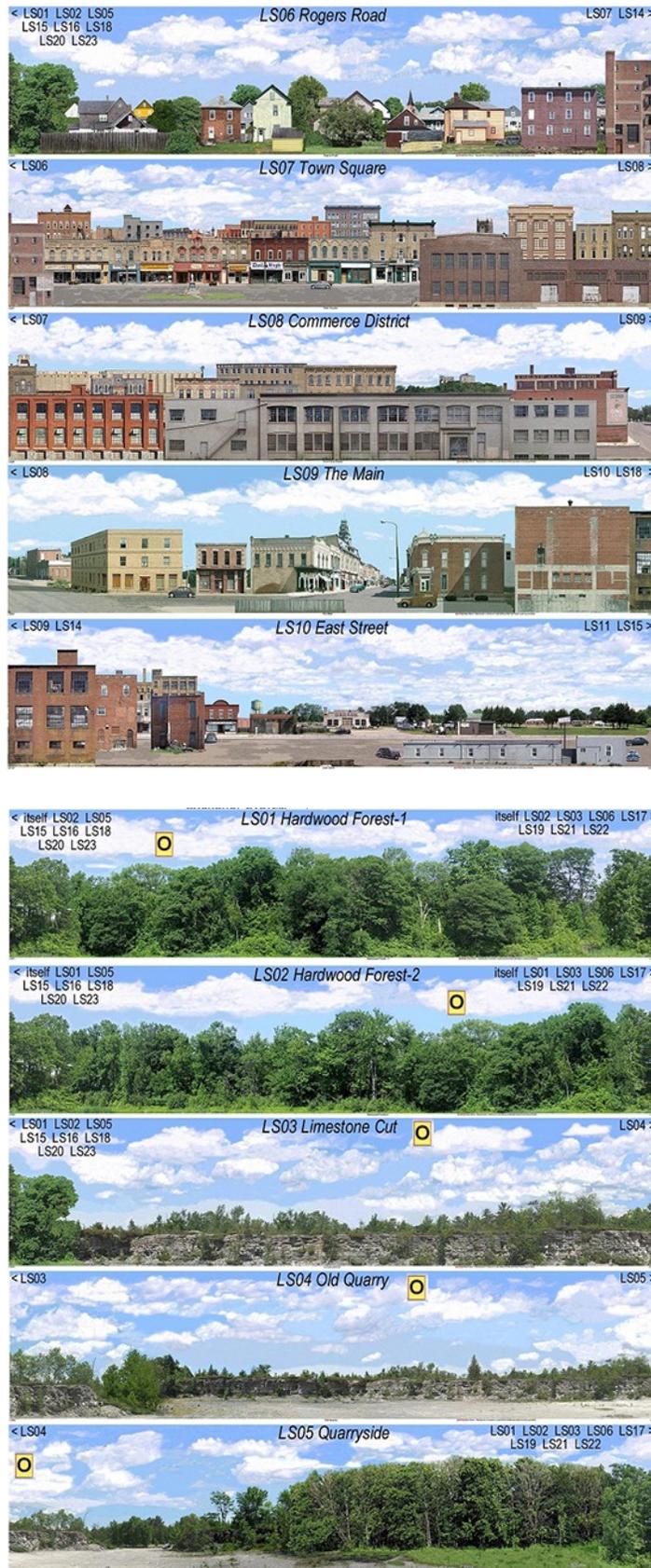


See their Website for full details.

SceniKing is back! SceniKing was shut down for a few years while Les dealt with some health problems, but he is back with some new products.

From BPH Enterprises, SceniKing brand of model railroad and model railway backdrops, providing backscenes and backgrounds for model railroaders in N scale, HO scale, S scale and O scale, with potential for infinite length.

There are many others so please check their Website for all the details and instructions.



SoundTraxx releases their new Big Steam decoder.

Last summer, SoundTraxx had the privilege of recording audio from the famous Big Boy #4014 - the only company to do this before the locomotive's excursions were halted due to COVID-19. Now, in an exclusive decoder, we are introducing the actual sound recordings of the Big Boy, featured in our new Tsunami2 for Big Steam! This decoder will be available in TSU-1100, TSU-2200 and the TSU-21PNEM8 decoder formats. Never before have the authentic sounds of the Big Boy been able to be heard on model rails! Now, they can!!



The Tsunami2 for Big Steam (TSU-BIGSTEAM) will be available in these three formats for purchase on our website as a web-only special decoder release. Right now only the TSU-2200 version is in stock, but the other board formats will follow shortly.

See their Website for more details.

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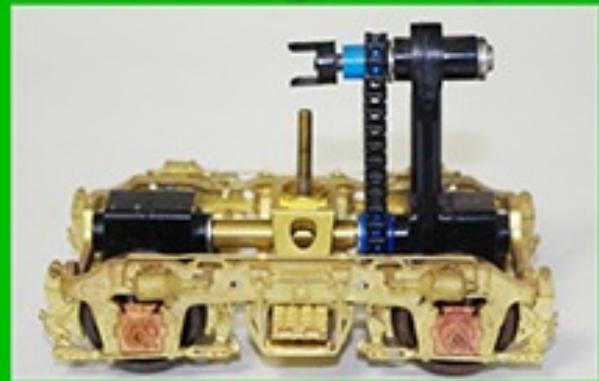
#865 Ore Bin w/ Truck Ramp - O scale (1/48) \$39.95

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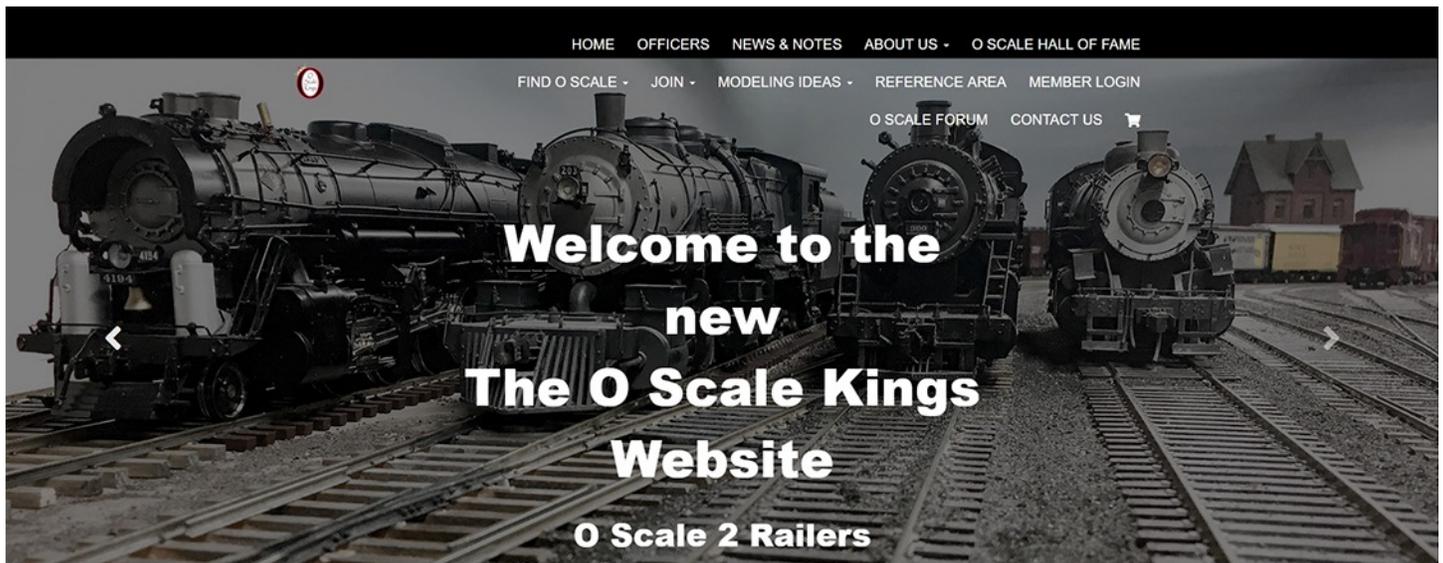
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What's happening with the O Scale Kings, October 2020?

Simple answer - A lot!

Let's start off with an invitation to join or renew your membership ASAP. This invitation is especially for those of you who want to have a say in future leadership of the Kings. Ballots are being prepared for mail distribution to the membership on October 31st, so if you want to vote, go to our website and join or renew your membership now! There are probably only hours available to make this happen. Memberships, new and renewals, can be done via PayPal on the website. We will be electing a new President, Secretary and a Board Member. Also, and of great importance, will be to changes to our Constitution. The first one allows two additional Board Members to be elected (packing the Board?), and secondly, changing the voting method from surface mail to electronic. As your current President, I highly recommend positive votes for both of these changes.

I'd like to report on the past for just a few words with a report on the Strasburg show held 17th of October. Success! Success! Success! The promoters of the show used an overabundance of caution including having vendors bring hand sanitizer for their tables, requiring everyone to wear a mask at all times, having tables spaced out throughout the fire hall, having less vendors than normal. The promoters also actively asked those who felt uncomfortable for whatever reason not to come and with no judgment that I could hear against those who followed that advice.

Yes, attendance was lighter than what I expected being the first O Scale 2 rail show since Chicago back in March, but those who were there came with money in their pockets that they were willing to spend. I heard multiple people reporting what a steal they got either in something that was very rare and reasonably priced or just reasonably priced items. Lots of track and switches were available for some at really decent prices. I saw several large boxes of track leaving the hall. The good news from this is that people are building layouts. I'd also like to report that the O Scale Kings facemask competition was a success. We had 2 winners, Matthew Martin and Michael Rahilly, who each received a nice prize for their efforts. A big thanks to all those who participated, and to Amy Dawdy for acting as judge, and to everyone who wore a facemask during the show. I also personally want to thank all those who came, both vendors and customers, and wish to give a big shout out to the show promoters for hosting this show. It was not an easy decision for them to make, nor is it an easy decision for other show promoters to cancel their shows. And just in case you haven't gotten the word, the Cleveland show in November has been canceled.

The O Scale Kings had their booth at the show. The O Scale Central program was also represented with the
The O Scale Resource November/December 2020



Wingate module. The O Scale Kings also had the new modular pieces on display including the 3-D printed sections or parts on hand. I can't thank enough those who put in their time and effort to make this happen.

I'm not going to mention names because I'm sure I'll forget at least one, and that just wouldn't be right. I can tell you that every time I looked over at the booth, our representatives were engaged with someone in discussion about some facet of O Scale 2 rail. Thanks to the efforts from these folks, we sent five new

memberships to our secretary for processing. I do not believe any of these five were renewals. So the O Scale Kings continue to grow in numbers. By the way, a reminder, dues are due for 2021 are due on January 1, 2021 but can be paid any time in advance by going to the website and printing out a membership form and mailing a check/money order or using PayPal online.

So what about the future? It's Bright, Bright, Bright for O Scale 2 Rail!!! Why do I believe that? It might simply be that during the course of this virus, the O Scale Kings have continued to grow, make plans and put into place things that will help the hobby continue to grow. Please go to our website www.oscalekings.org and read all about it. Our new O Scale Central program is really coming along. Great plans are being made for the [O Scale National](#) to be held June 17-20, 2021 in the Denver area. It would behoove you to set those dates aside and start making your plans to attend this convention. And without giving out too much information, let me also advise you to set aside a couple of days before and after. This is a good time to remind all that 2022 is still open. I am looking for a few good people to host 2022.

The O Scale Kings will be at the Amherst show in January 2021. I'm looking for a few volunteers that would like to take a break from their shopping to help man the booth for an hour or so at this show. Please contact me at Bruce@oscalekings.org if you can help out. This is a great way to get to meet other members and wave the flag for the scale to possible recruits.

Chicago 2021: While not an absolute positive that the show will be a go, the promoters tell me they are very close to meeting their room night guarantee for 2021 and once that is achieved, 2022 will be a shoe in. The O Scale Kings have determined that we will have at least a general membership meeting and bull session at the hotel if the show is canceled so that those of us who of already made room reservations will have something fun & train related to do. I urge you to make a reservation and help these promoters out.

Thanks,
Bruce B Blackwood
President O Scale Kings

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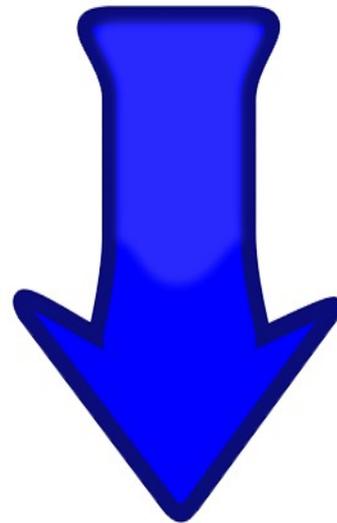
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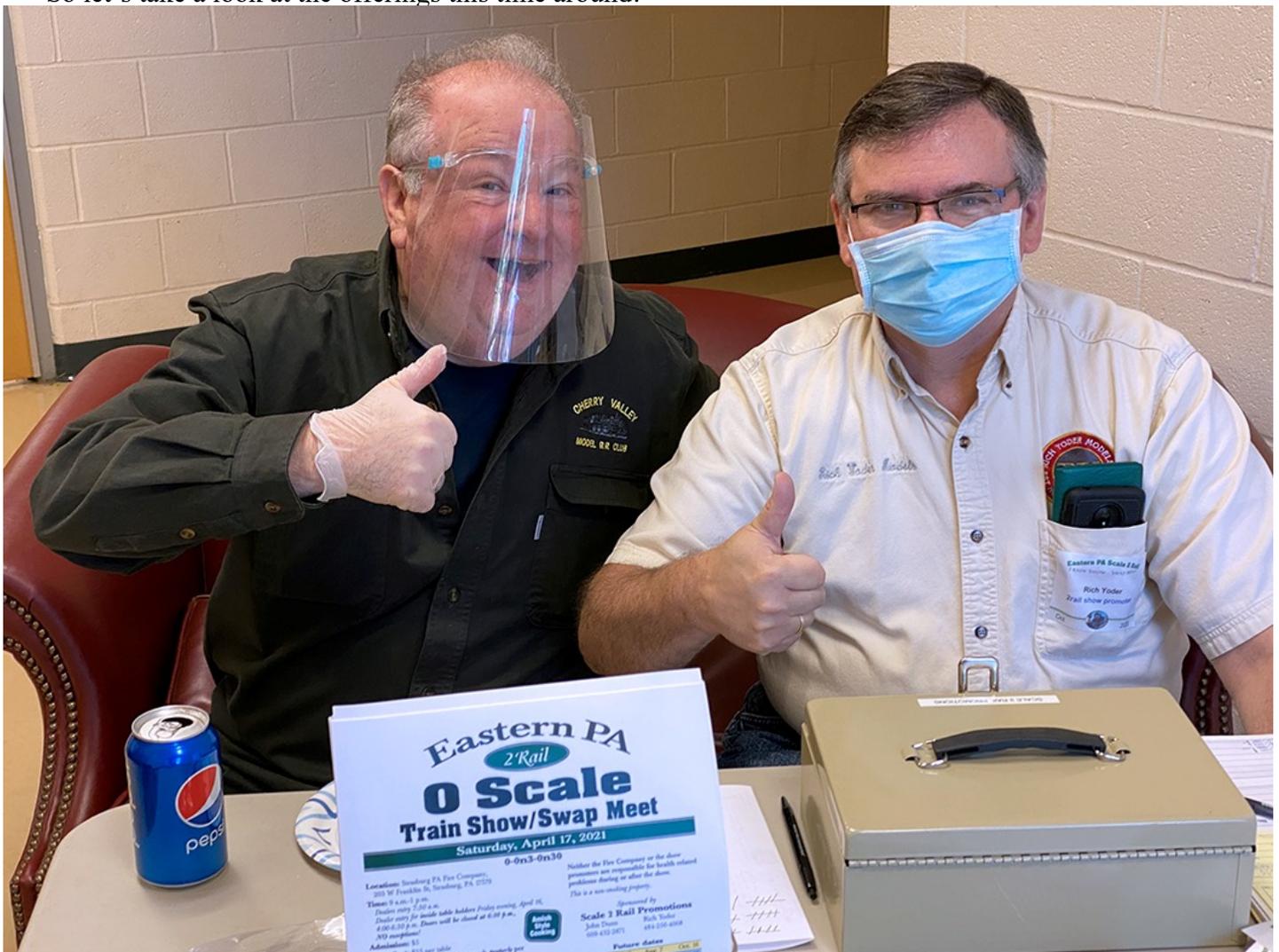
All Tracks lead to Strasburg, PA

Eastern PA 2 Rail 0 Scale Train Show and Swap Meet Strasburg, PA

Show or no show, Amy and I were headed out East for a vacation. Luckily, the show went on as planned and I thought, all things considered, it was a great success. Precautions were taken and everybody played by the rules for a safe show. The weather was great and people showed up looking and finding some great deals.

I have never seen so much track for sale in one place. Many vendors had Atlas, Roco and Micro Engineering new and some lightly used flex track at under \$2.00 a stick! Switches were also plentiful, as well as, freight cars and some brass engines I had need seen for a long time. I continue to say this, but if you get a chance to go to an O scale show, do it. Yes, it may cost a bit to get there, but the deals are there as well as the experience.

So let's take a look at the offerings this time around!



John Dunn and Rich Yoder along with the Strasburg Fire Company pulled off this show and all precautions were taken. Everyone had a great time at the first O scale show since March. These two deserve all the credit!



The O Scale Kings were showing their new module standards being worked on. Also showing some of the 3D printed parts that will be available for this. We'll have more on the standards in an upcoming issue.



The woman who really run things, Karen Lavezzi and Amy Dawdy





All kinds of track and switches, even narrow gauge track was here. If you were starting a layout or planning an expansion, this was the place to buy!

Older kits, great for learning or even modifying to today's standards, were plentiful and inexpensive. Old kits like these are a good place to start.



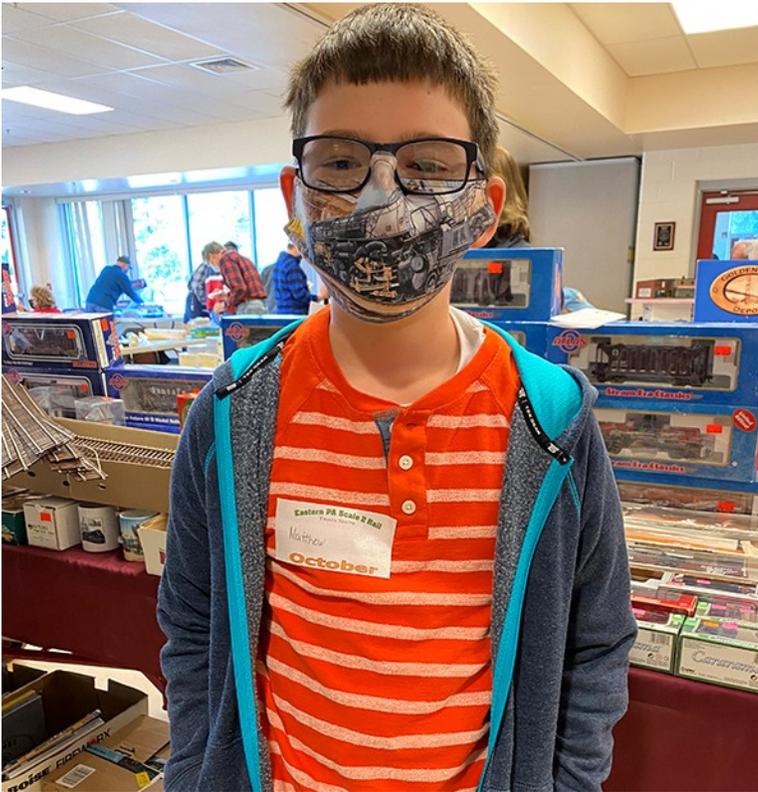






New kit coming from David Vaughn . This will be available soon.

For information contact David here.



Winners of the best railroad face mask were Matthew Martin and Michael Rahilly. The O Scale Kings presented each with a freight car.





Tony Koester designed and built a P48 module for “Model Railroader”. The Wingate modules represent Wingate, IN on the Nickel Plate in 1954. It was displayed at the 2018 Washington National and then featured in “Model Railroader”. David Vaughn has purchased this from Tony and will use it to promote O scale at upcoming all scale and RPM meets.





I looked real hard at this locomotive and tender, but did not pull the trigger. It did not last long and has a new home... just not with me.

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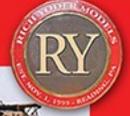
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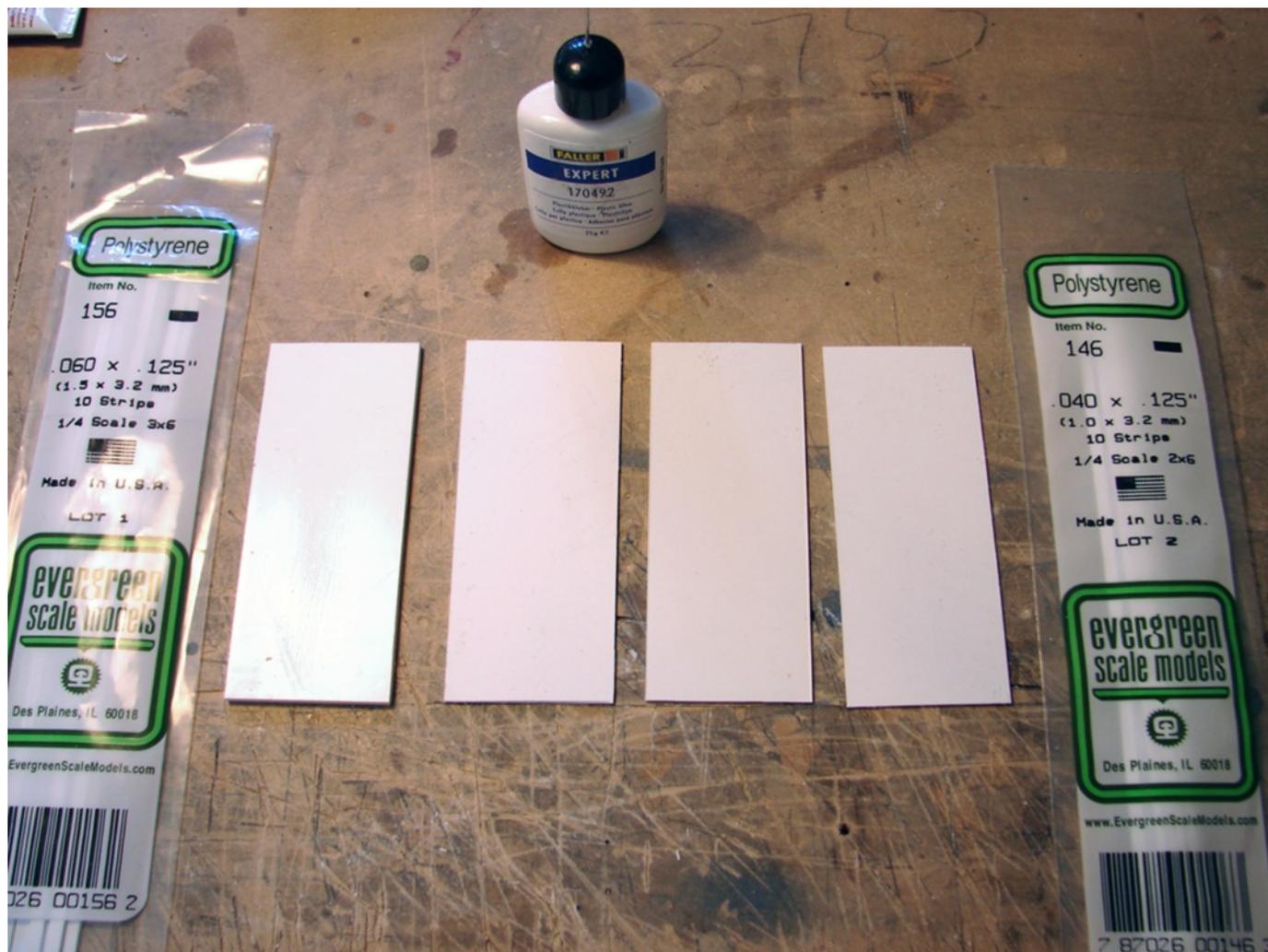
I have many scrap yards on my layout, and when the time came to detail them, I wanted some dumpsters. Now O scale being what it is, I just can't run to the local hobby shop and buy them.

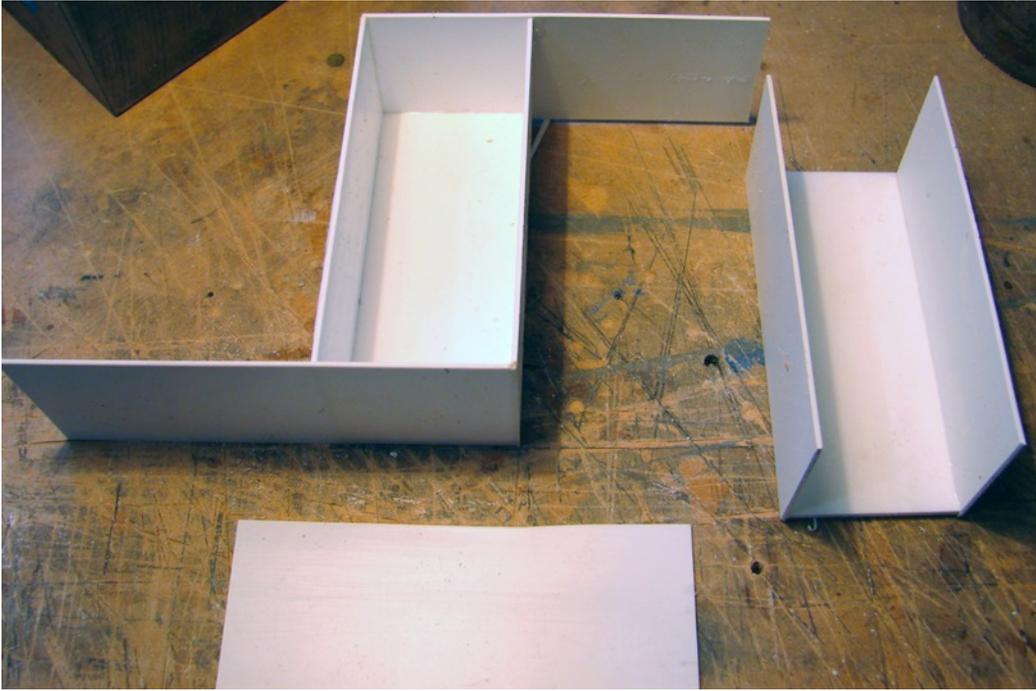
I did a lot of research and found that no one really makes them in in O scale. Shapeways has a couple, but they are expensive and I wanted ten, all different shapes and sizes, so I decided to make my own out of good old styrene. Here are the results.

The dumpster shown in the photos is the following size in O scale. 16 feet long, 7 feet wide, 7 feet high. They come in many sizes, and this is one of the smaller "roll off" scrap metal dumpsters.

I am building a couple of trucks to haul them built out of the old "Honest John" Revell kits using the Kenworth cab and chassis which are still available.

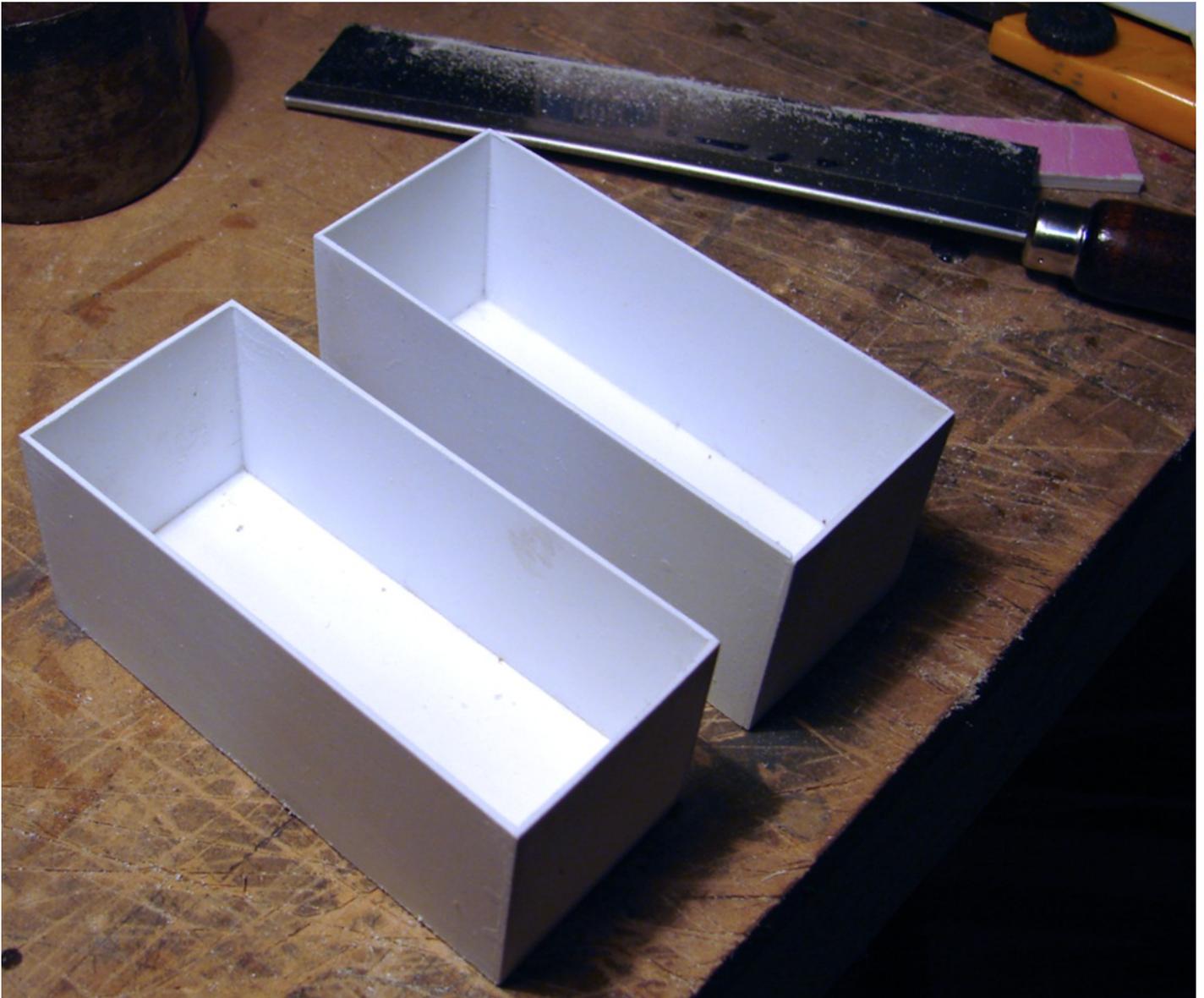
The first stage is to make a simple box. I use 3 mm styrene sheet for the base and 1mm for the sides and back. Using 3mm for the base gives the sides and ends some support till the glue dries.



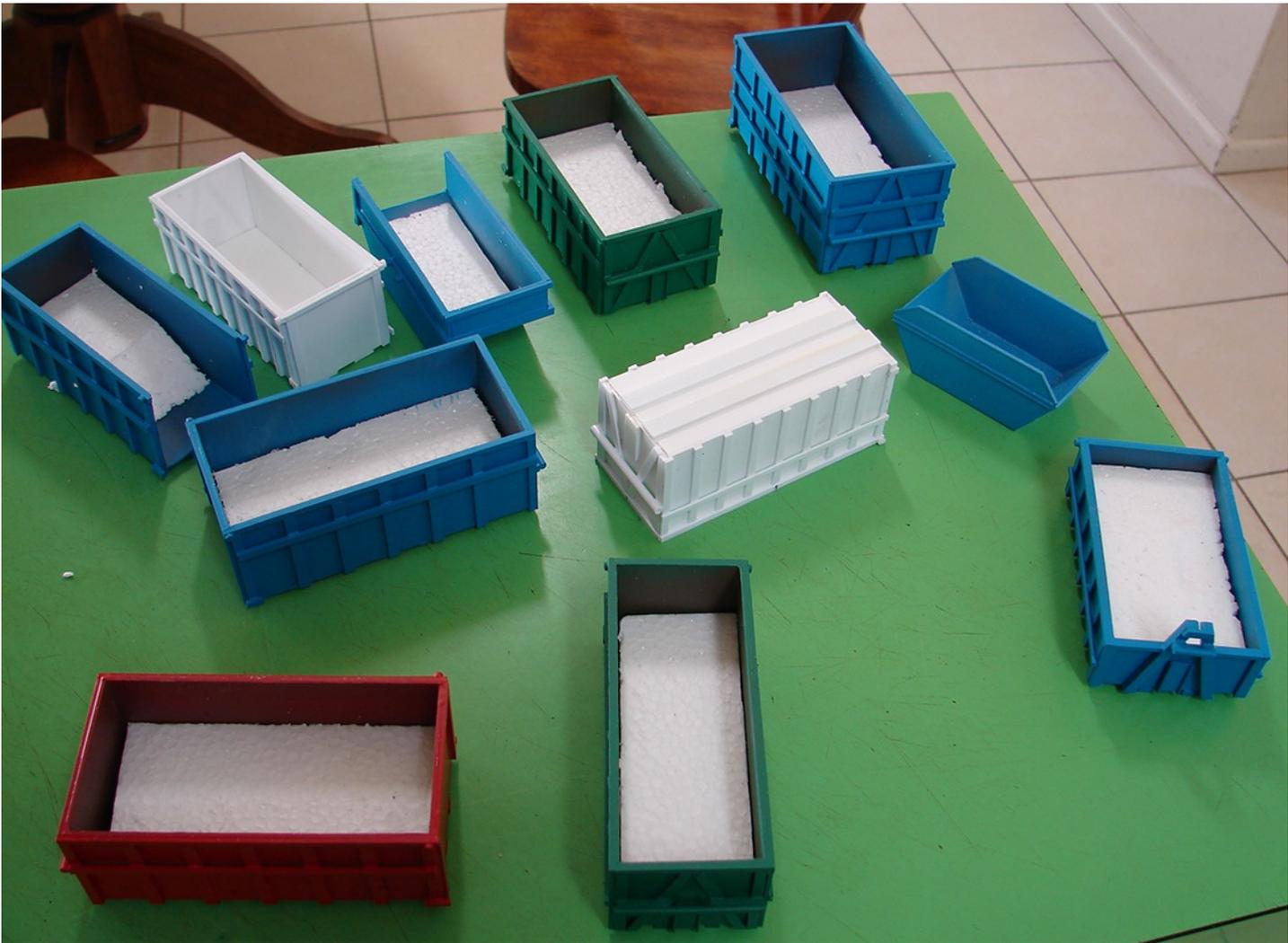


When you have the box made, sand all the ends and sides and glue the vertical slats on using Evergreen shapes. I did not detail them to the last nut and bolt, or should I say weld, just enough to blend in to the scenery on the layout. I am using some foam to partially fill the dumpsters and then will glue the scrap onto the foam.

Till next time, Nev.







Traction Caboose

By George Paxon

The humble caboose is probably as much a well-recognized symbol of railroading as is the steam locomotive. In the “good ol’ days”, you always found one on the back of a steam road freight train. When growing up it was such a thrill to watch a train roll by. We often counted the cars, inspecting carefully each one as it passed, even though where I came from, there was rarely anything except dirty old red, and sometimes black, Pennsy coal hoppers. As the train rolled along at a snail’s pace, we eagerly awaited the certain-to-eventually-appear, freight car red, Pennsy caboose, or cabin, in Pennsy lingo. This provided the only variety in the otherwise drab procession. As the caboose passed, we would look for a conductor or brakeman on the rear platform and give him a big wave usually getting a friendly wave in return. Some of you were probably more fortunate and lived along what was a bit more “up-market” rail line and had merchandise trains to watch every day. This would have provided you with a much greater variety in car type, reporting marks, and color than we had.

But, then occasionally even we would break loose, walk into town and across the Monongahela River bridge, and take up a commanding position near the Pittsburgh & Lake Erie track to wait for a train there. Now that was a considerably better show than on our side of the river. There was considerable coal traffic coming off the Monongahela Railroad and down river on the P&LE, but quite a few trains were of a merchandise nature, came through at what we thought was break-neck speed, and had cars from many railroads and every sort of car type known to a young boy. That was real train watching! And at the end of each train, there was sometimes a strange caboose. We found it a bit weird that it did not have the obligatory cupola but had bay windows instead. And it was sometimes green!

We forgave the P&LE for those sins as the train was really a fantastic show compared to the drab coal trains on our side of the river.

If I could train watch now, I don’t think it would be the same without the caboose.

But traction freight trains were quite different. There, a caboose was a rare sight indeed. Some traction lines did use them. These were usually lines that operated more like a steam road than a “down the middle of the street” trolley type operation. And they tended to be lines that had longer runs and longer freight trains.



Photo 1

Traction freight trains more often than not were very short affairs with just a few cars being not all that uncommon. Electric locomotives usually had spacious cabs so there was plenty of room for trainmen as well as enginemen. And, with the short trains, it was not a long walk when a trainman needed to go to the rear of the train to protect there or to assist with a backing or switching move. For most traction lines, a caboose was unnecessary.

Illinois Traction System was a larger than usual traction line and a big user of the caboose. It turned into the Illinois Terminal Railroad as a Class 1 operator of diesel locomotive pulled freight trains when its traction days were over. Eventually, it ended up a part of the ever-expanding N&W. They had a nice variety of caboose cars with most home built.

I had to build a model of a novel style of ITS caboose for my Mountain Electric, and it should provide good service on our layout. See Photo 1 for the finished model and photo 2 showing the car under construction. The prototype for this Illinois Traction caboose started life as a somewhat standard short wood caboose with a cupola. When growing freight car height made visibility from the cupola difficult, the ITS shopped some of these cars, installed home-made steel bay windows and added years to their usefulness. They were car numbers 900, 901, 903, 906, 923,925, and 936. The M.D. McCarter photo collection, an excellent source of prototype info, includes several photos of these cars both before and after conversion to cars with bay windows. Car Works did import a nice model of the car as well. A local friend of mine down here has one of the Car Works models which I offered to purchase a while back. When he told me he did not want to sell It, I started work on building my model of the car from scratch. He has since changed his mind, but I told him I did not need his model any longer. If I play my cards right, I might end up with a second one for a good price now that I am not all that hungry for one!



Photo 2

ITS had similar cars in basically two series, numbered from 949 to 958, made of steel, slightly longer, that ran on old de-motored passenger trucks. I am not positive of all the details of their history, but they were all built in the Company shop as well. These steel cars did not shout “build me“ as loud as did the wood ones. Car Works imported models of the 951 to 958 cars as well. Drawings for them can be found in *Mainline Modeler*, January 1993.

Anyone interested in building an accurate model of the wood ITS caboose can obtain excellent plans for it, drawn by David Waddington, from Underground Railway Press. I bought my copy of the plan there for \$4, which is a good price for a high-quality drawing. They have a nice assortment of traction, steam road and narrow gauge plans for reasonable prices by many modelers and draftsmen. They do the hobby a valuable service by maintaining this data for future modelers, and supporting them is a very good idea. If you are in search of plans, this is a source I would recommend. You need to write for their 12 page catalogue (\$2.00 last I heard) as they do not have an Internet listing unfortunately. They do run ads in some model publications, but for some perverted reason, not in a recent *O Scale Resource*. They can be found by a Google search and their address is PO Box 814, Brevard NC 28712-0814. Give them a go!

The Waddington plans for the wood caboose were also published in *Mainline Modeler*, December 1992 edition, so if you can get your hands on that magazine, you can get the plans there, too.

Photo 3



Another of my favorite lines that found the caboose essential was the Sacramento Northern. It had about the longest run of any interurban, so the caboose was very useful there. The Sacramento Northern did have quite a substantial freight business that justified a mobile office for the conductor. They, too, had an exceptional assortment of caboose types. Late in life, they had a few very interesting ones with steel outside framing and wood siding that were hand-me-downs from the Western Pacific, the steam road that owned the Sacramento Northern. See Photo 3.

The Sacramento Northern caboose cars I really like though are the early ones. One in particular had no end platforms and side doors. The number of this car was 1613. Another Sacramento Northern caboose was so short that its two four wheel trucks almost met in the

Photo 4



center of the car. It was car number 1614. Good photos of both these cars can be found in the Sacramento Northern book by Harre Demoro.

Both these cars had been screaming “build me, build me” for so long it just had to be done. See Photos 4 and 5 for my under construction and finished model of the first, number 1613, Sacramento Northern car. Sorry that I could not provide photos of the prototype with the article. Harre has died, and I am not sure who would be owner of the rights to the book and photo material at this stage. There is a good ¾ view photo of the car available from the M.D. McCarter collection, negative number N47844, also. It is not difficult to build such a car from a few good photos. One mistake I think I made on my model was making the side windows too large.



Since I have not been able to find a previously published drawing of 1613, and could not include photos of the prototype, I have done a sketch for you and it is provided as Figure 1. Dimensions are taken as estimates from a few photos so they may not be exactly correct in all cases. There are a few differences between this drawing and my model. My windows are too large and I have made those in the drawings smaller. And, I did not include the cupola braces that are on the prototype on my model. I also had on hand some Kemtron/PSC Wabash tender steps and I used them for under the side doors.

To the best of my knowledge, the two sides of the car were the same except the roof ladder was on one side only. And, both ends were the same with the exception that the roof ladder was only on the “B” end of the car.

I could not read much of the lettering on the left side of the side door. I believe the “27” is correct, but can’t make out the rest. There is probably a weight date under the light weight, but it cannot be deciphered. I made a stab at this on the sketch. Below the light weight is the repacking data. This I could not read at all so I just made up what I thought would be reasonable there based on photos on other SN cars.

I have yet to build the second caboose, but it is definitely on the “to do” list. It might be a while until I get to it as I will be in good shape caboose-wise with the completion of these two.

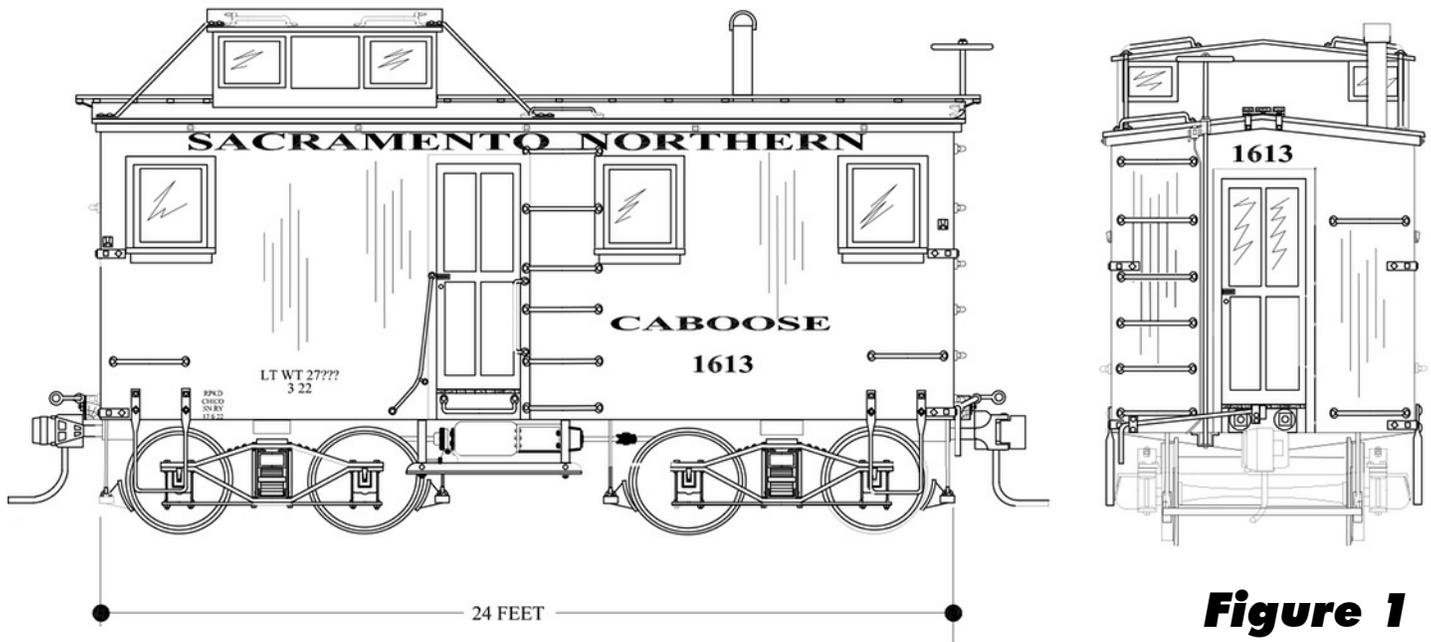


Figure 1

Note that my photos of both cars during the “under construction” period have them on shop trucks awaiting the proper ones. After searching for a short wheelbase arch bar truck with leaf springs that would be suitable for the ITS car, I ordered a pair of five foot wheelbase trucks from Bill Davis, American Scale Models. I have managed to cobble up trucks for the SN car using Wiseman Model Service short wheelbase truck frames, Northwest Shortline wheel sets and some leaf springs from Precision Scale Company. I also managed to buy the outside hung brake beams and attach them to the trucks of the ex-Sacramento Northern car. The ex-ITS car has the pair of American Models trucks under it now, but the photo was taken before they were installed.

Other big users of the traction caboose were the Pacific Electric and the North Shore. These roads also had some interesting cars. But we can’t have more caboose than freight cars can we ?

Much traction equipment had the charm of narrow gauge equipment. This is probably due to the fact that most traction lines were as poor and about as down-and-out as were most narrow gauge lines. Equipment that was needed was often cobbled together out of whatever could be found on the junk track. Maybe some other traction roads did not have a caboose mainly because there was nothing on the junk track that could be made to look the part.

The roads mentioned above were some of the more fortunate and, at one-time, profitable of the traction roads. They probably had better equipment than average, although they all eventually fell upon hard times as well. The roads above had substantial shops with the capacity to design and build their own locomotives and cars, and most did so. This certainly gave them the necessary capabilities to own better than average cars. The caboose cars of these lines reflected those exceptional capabilities to some extent.

There were some very peculiar caboose cars on other traction lines that are worthy of note. Some came equipped with trolley poles to collect power which allowed them to have electric lights while our steam road friends were still using kerosene lanterns.

One very innovative road, International Railway, came up with the idea of powering their caboose. This railway ran in the Buffalo, Niagara Falls and Lockport, New York area and into Canada. This was a four wheel caboose, N-7, which had a traction motor on one axle. Usually the power collected via the trolley pole just operated the electric lights in the caboose. But when it was necessary to switch a freight car into a facing point siding, the caboose became a temporary switching locomotive. The road motor would drop the freight car in need of spotting and the caboose below the switch and run the train ahead to clear the switch. The caboose would then use its very minimal, but sufficient power, to shove the freight car into the siding and then return to

the main track. The road motor would then back down and recouple the train to the caboose, and off the train would go. The car became just a lighted caboose again. Very innovative indeed. This car is covered in Not Only Passengers, which is Bulletin 129 published by the Central Electric Railfans Association. The book has a comprehensive and interesting coverage of electric railway freight, express and baggage operations.

On the Denver and Intermountain, they used an ex-Colorado and Southern narrow gauge combine, mounted on standard gauge trucks, as a caboose.

My Mountain Electric is certainly much shorter than any of the traction lines I know of that used a caboose, and we probably don't really run freight trains long enough to need them either. But, we just had to have them never-the-less. We could not really justify a caboose to the Railway's accountant, but then we have sleepers and could not justify them either.

We also have a few other caboose cars that should prove useful.

One is an ex-Texas and Pacific side door car as shown in Photo 6. The shop managed to get it repainted for service on the ME Ry promptly when it arrived; but, it is looking like it is about ready for another painting. I need to fit "proper" trucks to this car yet. It came with leaf spring Bettendorf style trucks which are too modern for my liking. This was a Hallmark brass model, I think. I can't locate the box at the moment. I will replace the coil spring trucks now on the ex-T&P car with the leaf spring ones previously under the ex-ITS caboose.



We have a few second-hand ex-Pennsy caboose cars as well. We have a four wheel Nc and an eight wheel N6b. Photos 7 and 8 show these cars. The Nc is a Car Works brass model while the N6b was built from an old Quality Craft kit. Both these cars were from my previous layout and only needed some minor repainting and re-letting for service on the ME Ry.

Another "in work" project is a four wheel brass car a friend gave to me when it came in a box of miscellaneous junk he bought at a garage sale somewhere. It had no wheels or pedestals when I got it. Photo 9 shows it as I acquired the little orphan. It was a low-end import by a company called Empire Midland if I remember correctly. I think it was a model of a Lackawanna or maybe Delaware and Hudson four-wheel car. My plan is to mount the brass body on a re-worked plastic four wheel unpowered traction truck I salvaged from a static 1:45 model of a Japanese prototype trolley car. The Japanese trolley I want to build up and use, and it will get a metal powered truck. This made the plastic truck available for scrounge.

Photo 7

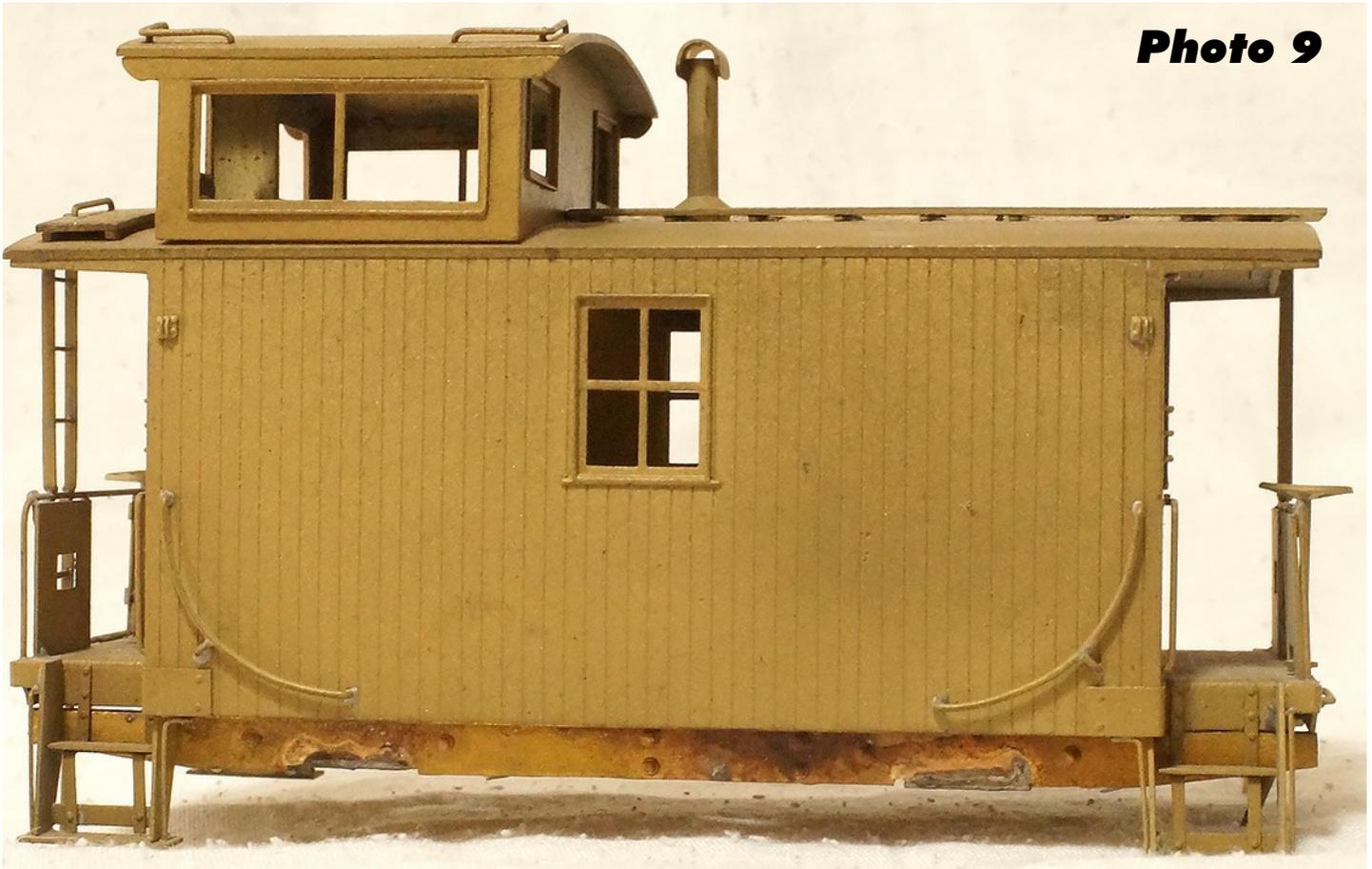


Photo 8



This project makes me feel very much in-tune with the average down-and-out traction operation as it was an awful lot like the prototype going to the junk track for parts! I will remove the plastic wheel sets and replace them with metal ones to get a better rolling truck for the caboose and all should be all good. The brass car should have sufficient weight to operate well with the plastic truck frames. But, finishing this caboose will be another project for another day.

Photo 9

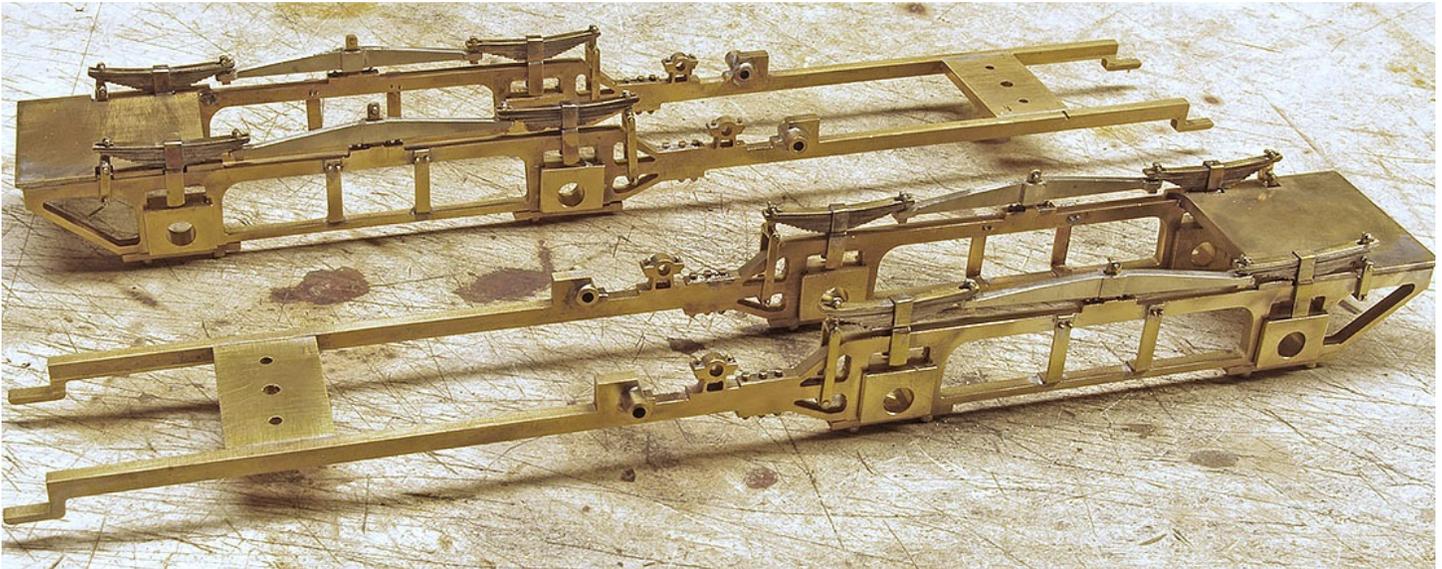


Our ME Ry freight trains should operate quite happily with these caboose cars, and our trainmen are looking forward to a nice warm comfortable office free of practical jokes and harassment from the enginemen in the motor at the front of their train.

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Scratch Building My Steam Locomotives

Pt 2 The spring rigging and frame assembly



By Glenn Guerra

Here we are at part 2 of scratch building my steam locomotive models. It's difficult at times, and I feel like I constantly need to invent ways of doing things, but I am really enjoying the process. The more of this kind of work you do, the easier it is to look ahead and plan the process better. Many of you have told me you like how I explain what I did and why I did it that way. It does not always work as planned, and I will tell you that part also.

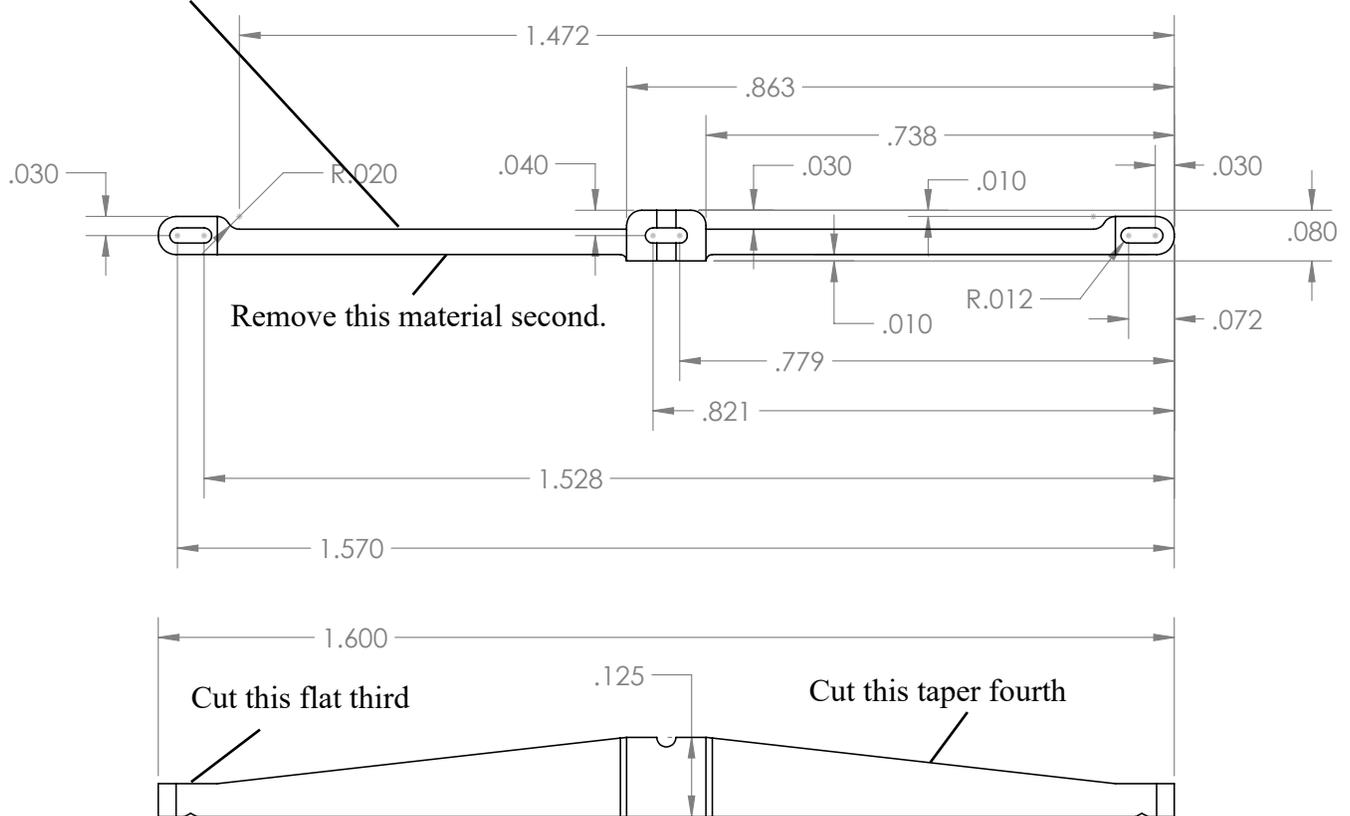
For these models, I wanted to make the spring rigging function, so in this article I will show some of the steps and set ups. I had some prototype information to work from and that was a big help. However, I always recommend making some drawing or sketches with the dimensions you will be working with on the model. When you scale the prototype dimensions, you will see that the parts get very thin or very small. It becomes difficult to hold these parts, and if you are doing any machining, the force of the cutter removing material can rip the part out of the vise or bend it. On the prototype parts they are large enough and you can hold them, but even the full size parts take some thought as to how you will make them. As you remove material, you may not have parallel surfaces anymore, and holding the part will be difficult. You may also lose a reference surface that you were using to determine locations of holes or other features. One of the things that my machinist friends would always tell me is to "leave a handle on the part". What that means is to leave part of the stock material and cut all the other features, then cut the part loose. Thinking through the whole process is an important step. Sometimes you still get trapped, but for the most part, it works fine.

Another reason for thinking the process through is to improve accuracy. Each time you remove the part from the machine you introduce error into your part. If there are multiple features or holes in your part, think about how you can cut most of them with the same set up.

The last item I would like to bring up is determining what dimension will make the model function better, and what dimensions are just for looks. This will help when thinking through the process. If it is only for looks, the dimensions are not that critical and you can remove the part from the machine and not worry.

With all that in mind, let's move on. I will try to explain my thought process on the parts I am making here. My methods may not work for you, but they may give you some things to think about.

Remove this material from a large piece first.



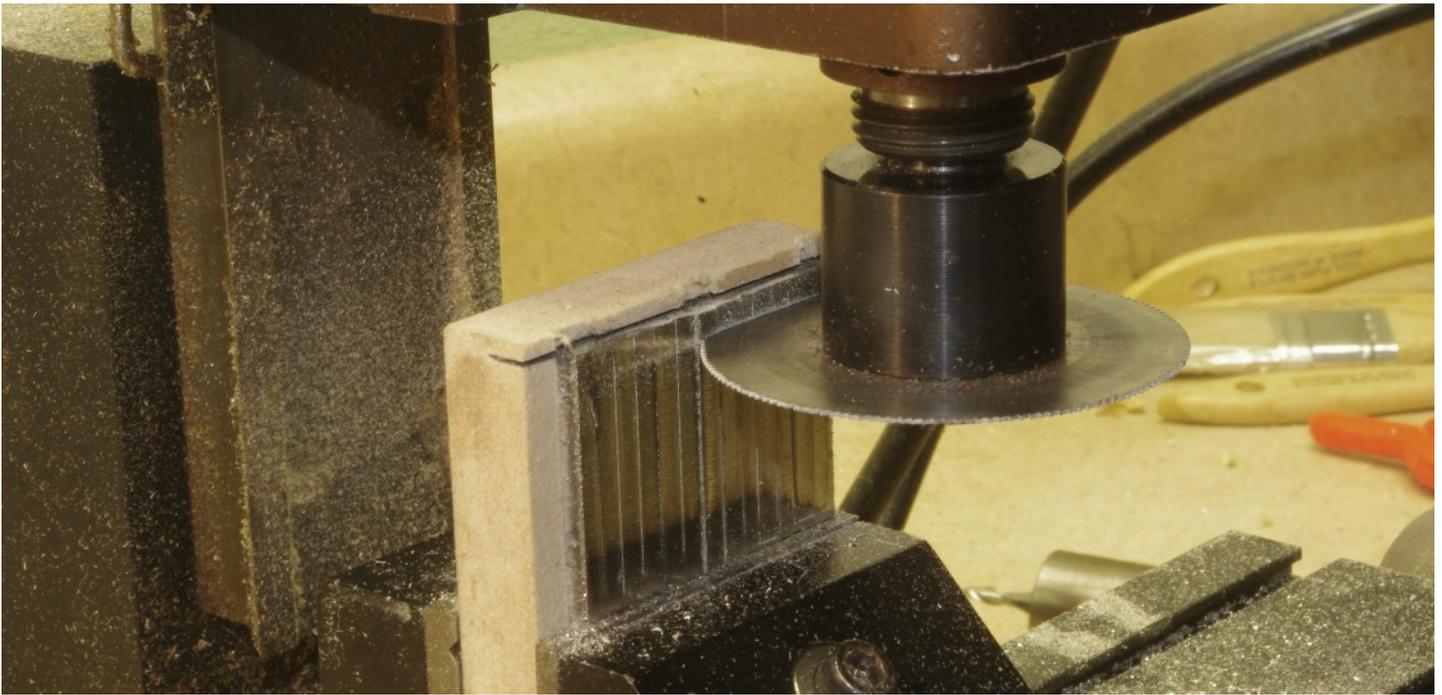
This is a drawing I made of the equalizer for the spring rigging. I started with some prototype drawings that I got from the Lake States Railway Historical Association. The next thing I did was to redraw the part in the scale I wanted to make. This is very important, and I recommend it to everyone. Now look close at the drawing. This is a small part and there are no good surfaces to use to hold the part in a vise. When looking at the prototype dimensions, this does not seem like a delicate part, but it does in model size. The other thing you will get when you draw things up in model size is to see what you will be using for tools to make the part. Take a look at the slots on the ends. They are .012" radius and that is .024" diameter. Will I be able to work with a .024" diameter cutter? I ended up using a .030" diameter cutter and made the slot larger. This actually worked better as it gave me more clearance with a .020" spring hanger that went through this slot. Lastly, I needed 4 of these parts. I decided to make a "loaf of baloney" and cut the parts off. That is a term that my buddy, Hank Balinski, always used. Look at the top view of the part. What if we cut all that material off of a large piece. We would be able to hold the part while machining, as well as, remove material for all four parts with the same set up. This is how I approached the problem. The next 6 photos will show the steps.



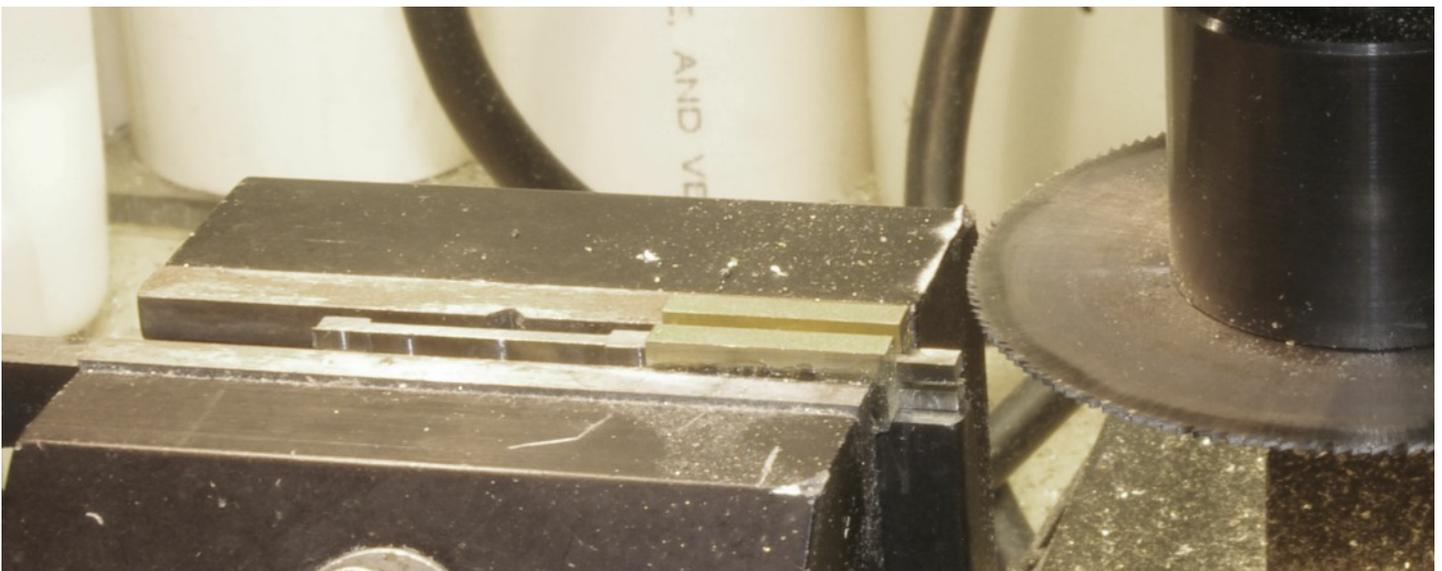
I decided to make the equalizer out of nickel silver. On some of these old engines, the equalizer was not painted and just left in the machined finish like the side rods. The first step was to put a piece of wood particle board in the vise and face it with a fly cutter. This now gives you a true flat surface. Then I glue a piece of nickel silver plate to the wood with ACC glue. I have been doing a lot of this and it works as long as you take light cuts. Square up the piece first. What I am going to do here is cut the profiles and then slice off the individual parts. Holding small parts in the vise is always a problem and this method allows me to take off a lot of metal and make multiple parts at the same time. When you are done with the machining, pop the nickel silver off the wood. Some of the wood will be stuck on the metal yet, so soak the part in Acetone to dissolve the ACC and get clean metal for the next step.



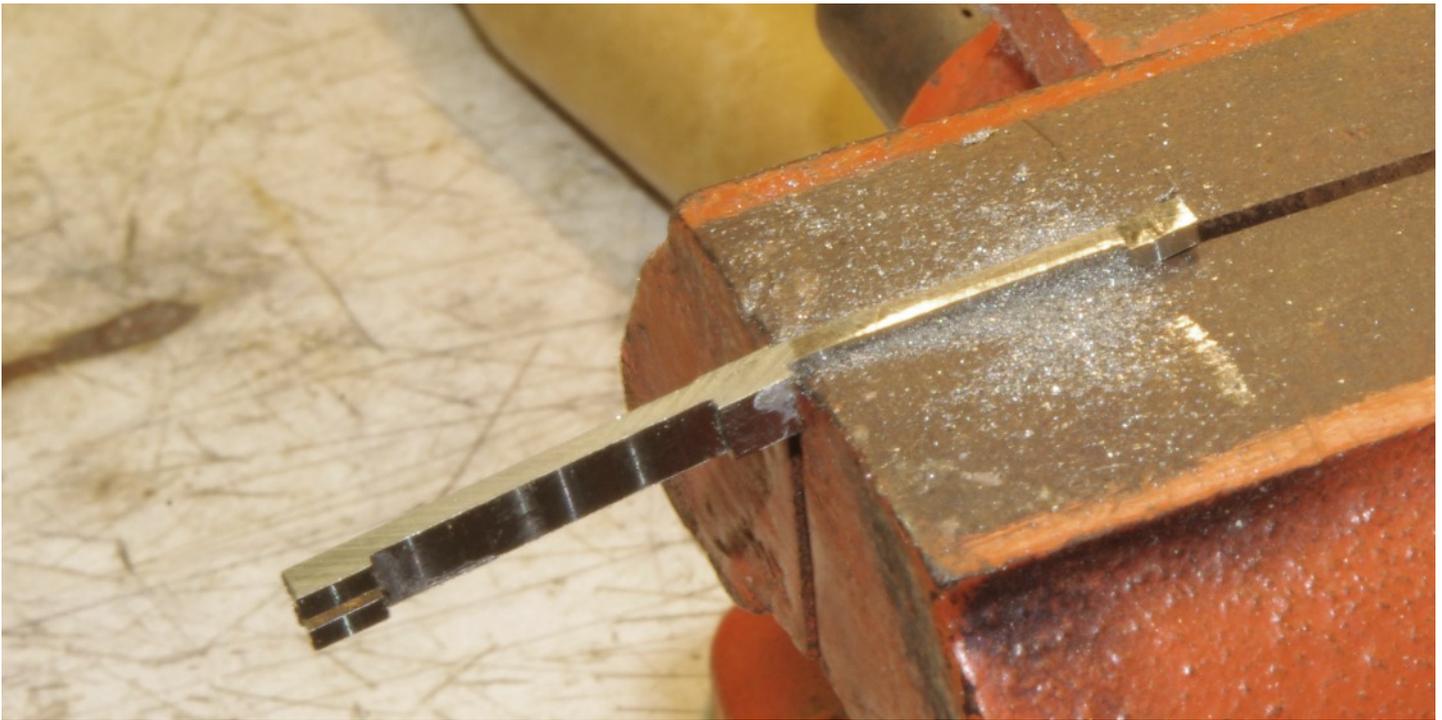
In this operation, I am doing the other side of my part. Notice how I cut the wood to fit the profile of the first piece. After cutting the wood, do not remove it from the vise since the cuts in the wood are now registration lines for gluing the nickel silver back to the wood. These features I am cutting are largely for looks and this registration works just fine.



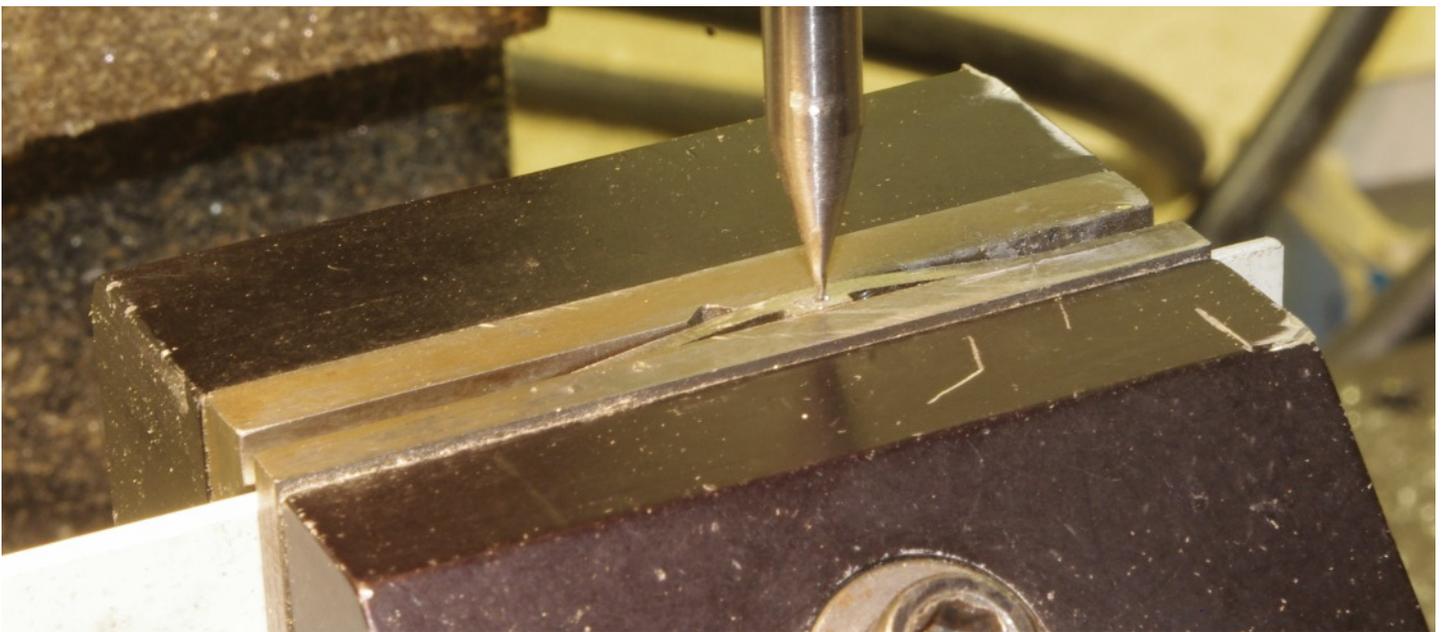
Now that I have the back side of the equalizers cut, I need to cut the individual parts off. Do this before you remove the nickel silver from the wood. Stand the wood up in the vise as shown and use a slotting saw. Make one cut and that will be your starting point or zero point. I used a .010" thick slotting saw. I have found that this thin saw works better than the thicker ones because there is less cutting force and less chance of tearing your part off the wood. Go slow and a little oil does help keep the saw from binding. It seems like the nickel silver is a little gummy and it sticks to the saw teeth. A little oil seems to help this.



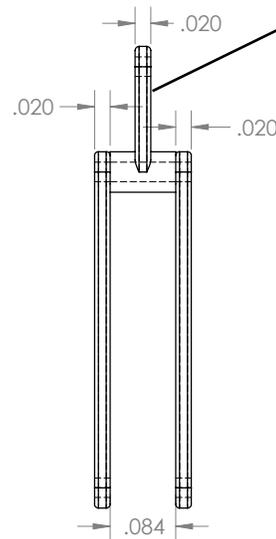
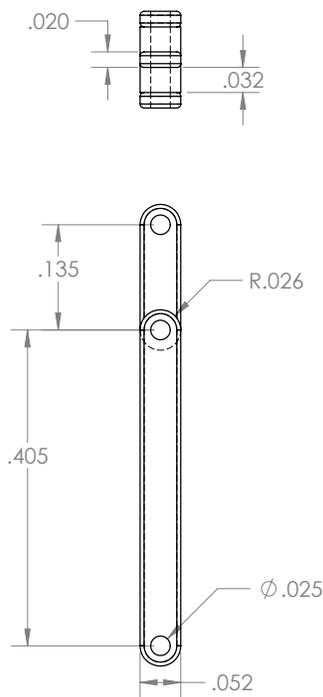
The equalizers taper towards the ends and I needed to take some material off the ends. The parts are getting small and would be difficult to machine with a conventional end mill. The end mill would bend the piece so I decided to use the slotting saw to cut a notch as shown since the saw does not grab like an end mill would. I glued the two brass blocks to the vise and they act as a stop as well as holding the part. With this set up, I can do repetitive cuts with the same saw location. When you are done, the brass pieces can be removed from the vise and the vise cleaned with Acetone.



After I had the ends of the equalizers slotted, I just filed the taper in place. This worked fine. This is a feature that is for looks and not function.

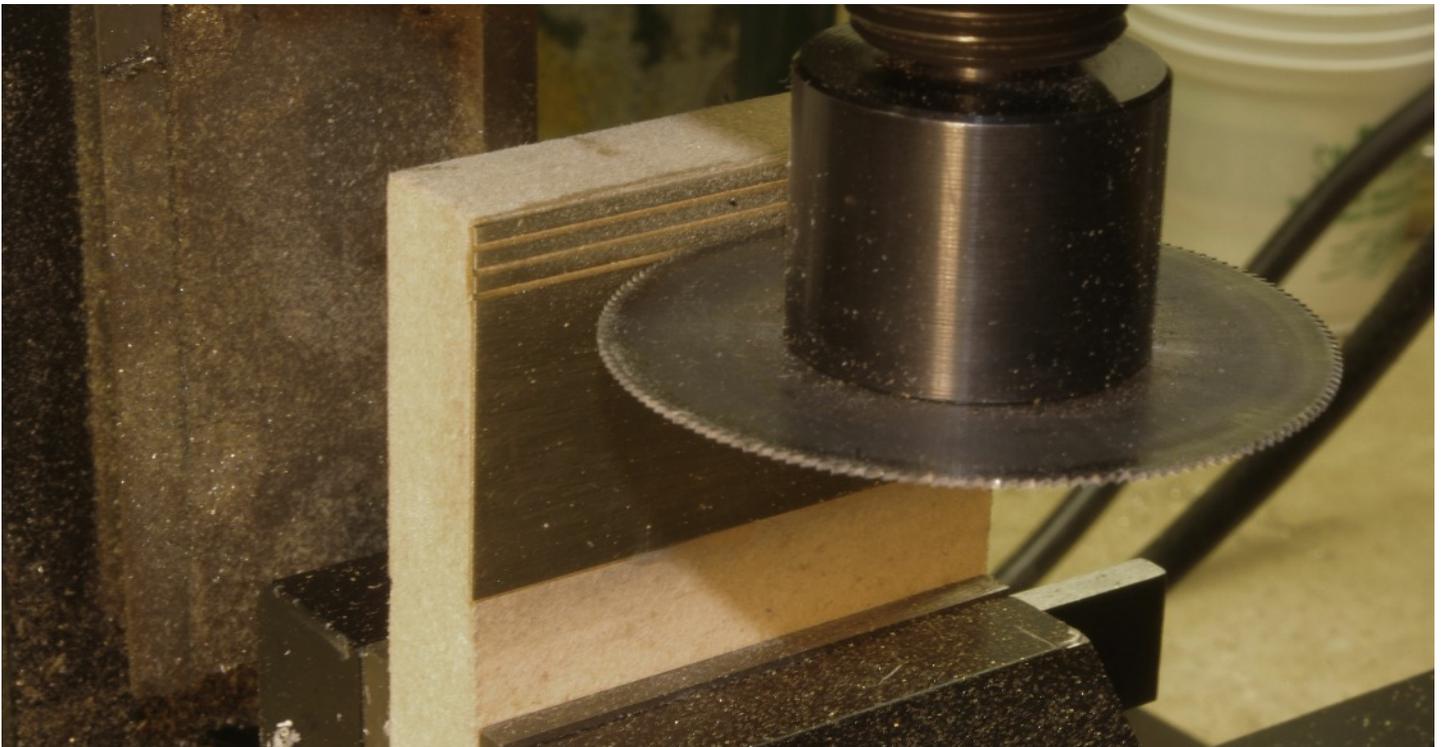


In this set up, I am cutting the slots in the equalizer with a .030" diameter ball end mill. The ball end mill will cut a little like a drill and it worked good for this operation. I went only .005" deep on each cut and went back and forth. Then I dropped another .005" and went back and forth. These are small cutters and they flex a lot. I am still having trouble with deep cuts and need to keep telling myself to go slow. The white styrene is acting like a parallel, and I am using the side of the vise as a stop. After I did these parts, I made a good stop for this machine. See my article in the [August/September issue on working with the Sherline Mill](#). The last step on these parts was to file the radius on the ends with a file.

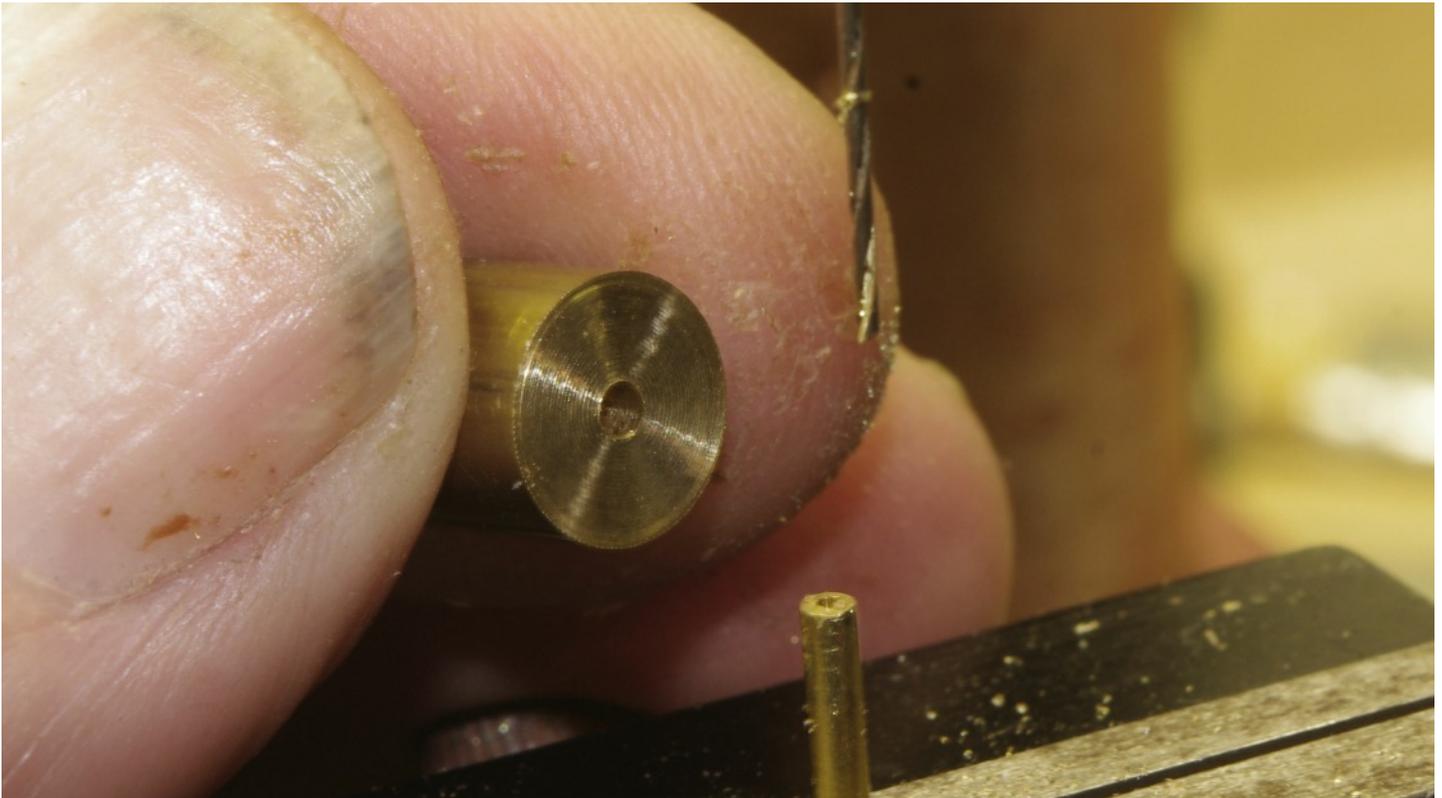


This top link would be difficult to make as one piece like it is drawn. I decided to make a flat link and solder a bushing on each side. The long links, bushing and top links would be pinned and then soldered together as a unit. That worked.

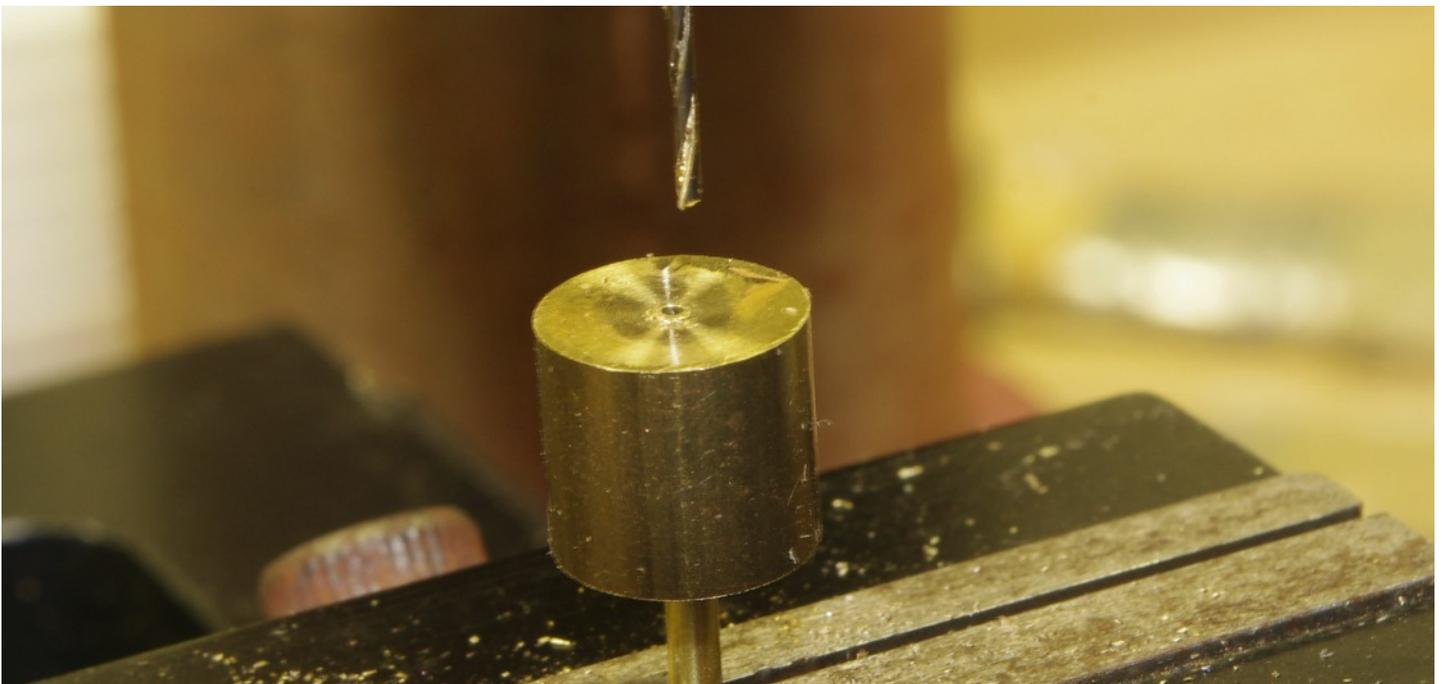
This is a drawing I made for the front spring hanger assembly. On the prototype, the top and side long hangers were pinned together. I decided to pin and solder all this together. The bushings would be a problem and making .052" X .020" brass strips would be a problem. The next 4 photos show some of what I did.



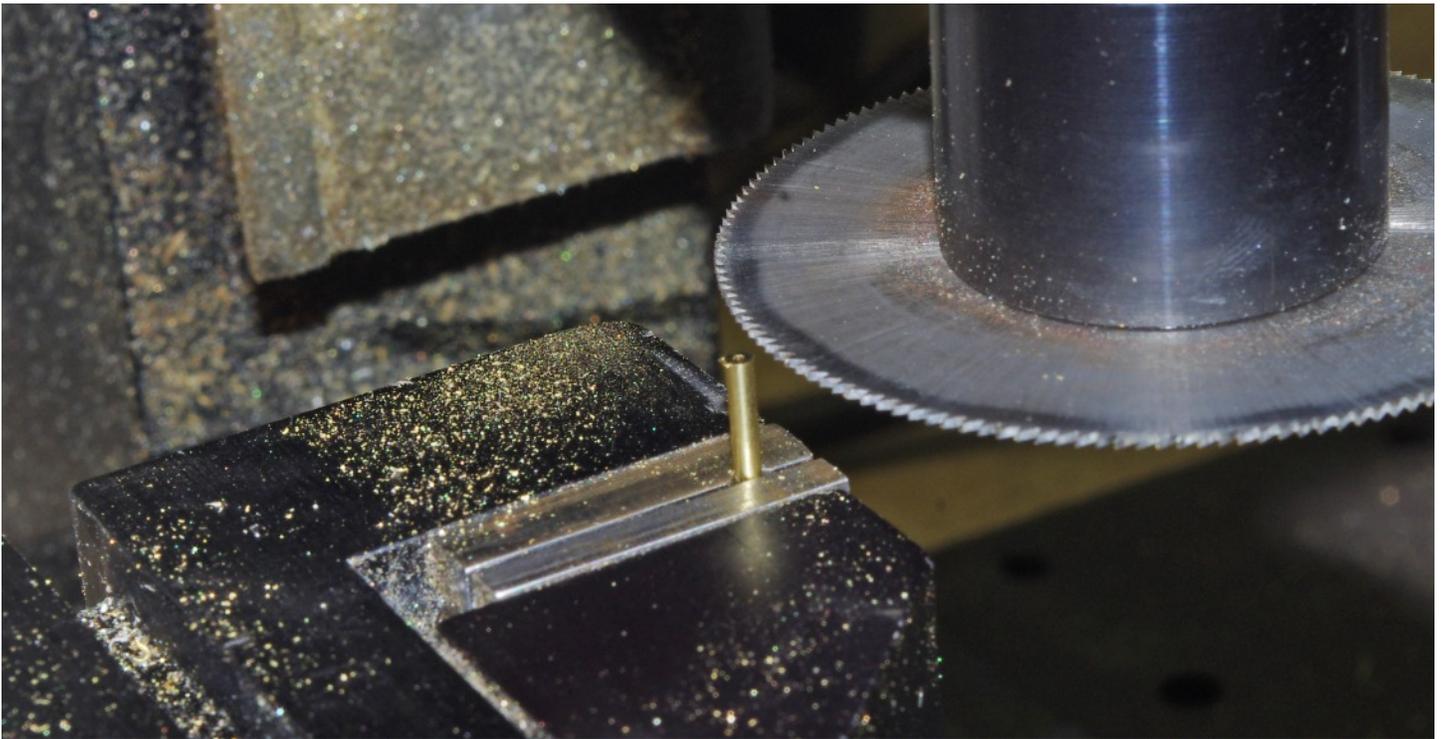
I needed some .052" X .020" brass strip and had to make my own. This is the set up I use for cutting strips. Cut one line first and that will be your starting point. I am using the .010" slotting saw here. Don't forget to take into account the thickness of the saw. I wanted .052" wide strips so I needed to move the saw down .052" plus .010", for the saw thickness, or .062" total. Pop them off the wood and soak them in Acetone to clean them.



This will give you a better idea of how I drilled a hole in the end of some .062" diameter wire. I drilled a .062" diameter hole about .125" deep in the brass while it was in the lathe. Then, before removing it from the lathe, I drilled a .025" hole deeper. Now I have two holes that are concentric. Place the larger brass piece over the end of the wire and drill the .025" diameter hole using the brass as a guide.



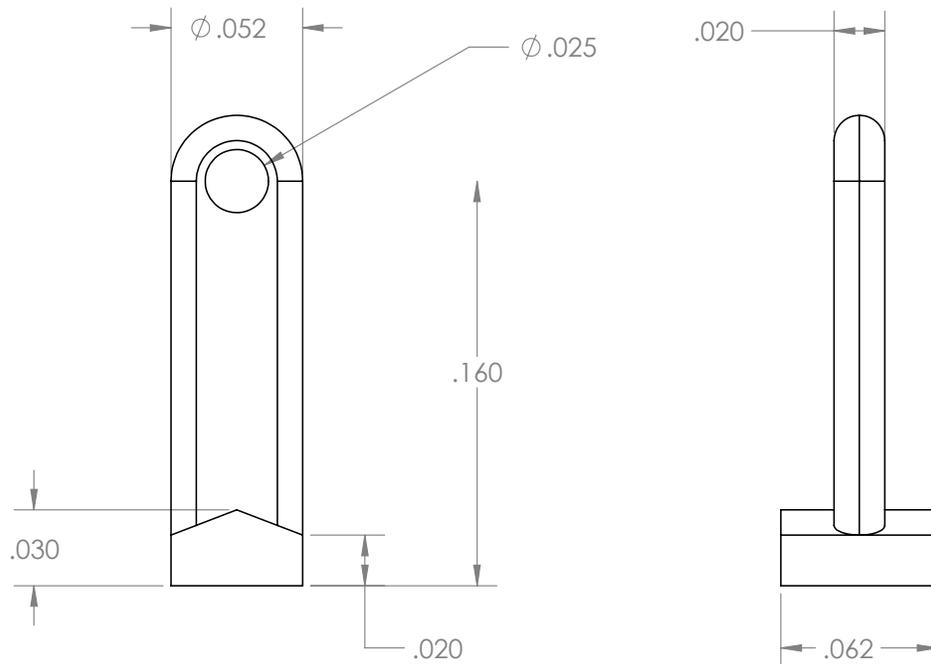
This is a simple set up I use for drilling a hole in the end of a piece of wire. I needed some .062" diameter bushings with a .025" hole in them. I started with some .062" diameter brass wire. My lathe will not hold wire this small. After doing this, I found I could turn a .052" diameter on the end of some .125" diameter brass. That would work better, but this set up is worth putting in the back of your mind. It may come in handy some day.



This is how I cut off the bushings. These bushings are .062" diameter and .030" long. The .010" thick slotting saw made quick, accurate work out of this.



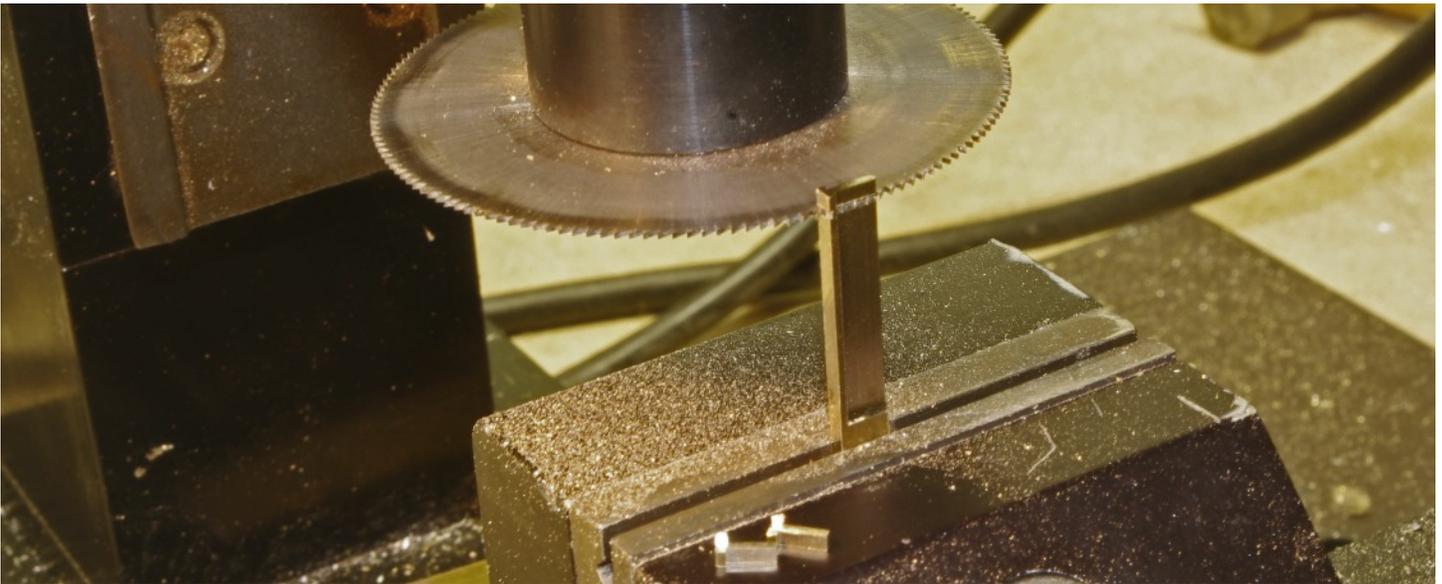
This is how I held the parts together while I soldered them. I pinched the ends of the pins so the parts would not fall apart while I was handling them. I got tired of getting on my hands and knees on the floor looking for small parts. The ends of the links were filed round after the whole assembly was soldered together. Looking back, I could have done a little better. The pin holes are not centered very well on the links. I have since installed some digital read out and dial indicators on the mill and my work is getting more accurate. My machining is getting better, and I also found I could turn a .052" diameter on the end of a .125" diameter rod and drill it with a .025" diameter hole. The way I did it using the .062" diameter wire and jig for drilling made the hole in the center, but created a lot of tricky filing to get the .062" diameter bushings to match the .052" wide hangers. The way I did it by drilling the hole in the wire is a good trick to know which is part of why I put it in this article.



This hanger goes through the equalizer and through the spring. Look close at the dimensions. I needed 8 of these. By using the “loaf of baloney” method I was able to remove most of the material in one set up. Then I cut the loaf of baloney off the brass plate and cut the individual parts off the loaf of baloney. See the next 2 photos for how it worked.



Part of the spring rigging had a small “T” shaped piece. I put a piece of brass plate in the vise as shown and cut on each side of it as shown. After this, I cut off a piece of this for the next operation which is in the next photo. You will get the idea when you look at that photo.



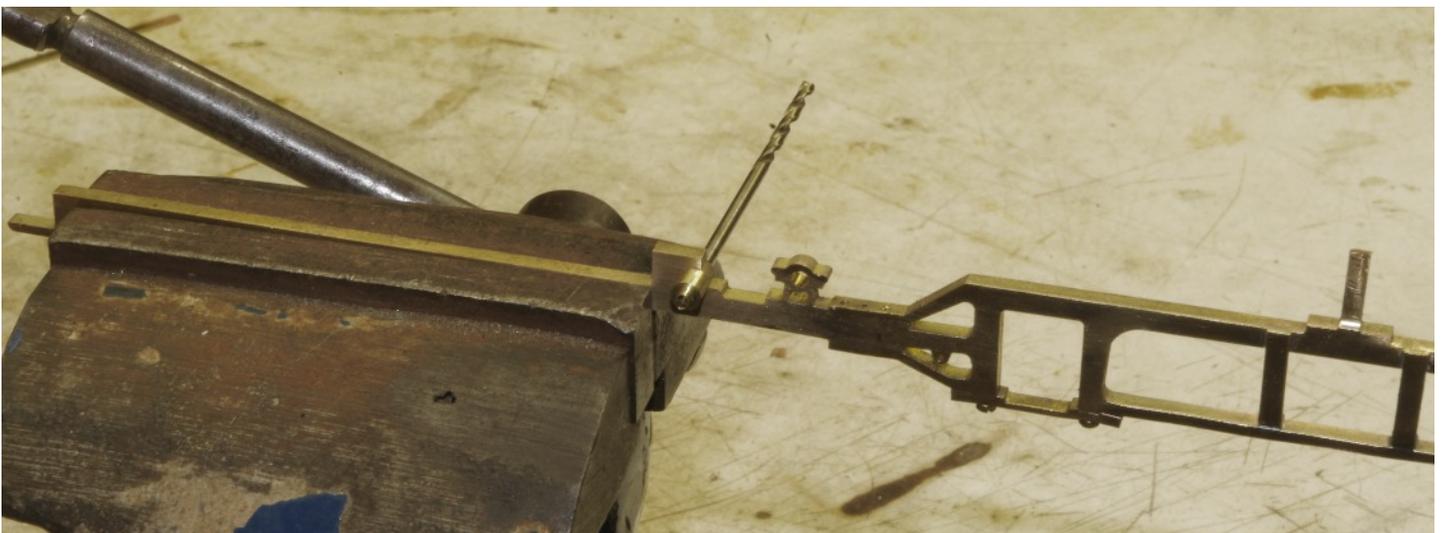
Here I am cutting off the parts. One of my machinist friends called this making a “loaf of baloney” and cutting the parts off. I have been doing a lot of this on these models. Look at how small the parts are. Can you imagine holding them to machine them? They also call this “leaving a handle on the part” I was able to hold the part tight in the vise with the “handle” and cut off the parts from the baloney.



The leaf springs have a curve to them and I wanted to make them up out of individual leaves. I cut the leaf stock out of .008” brass sheet with the slotting saw. Next I cut the pieces to length. I did this with a caliper to mark the length and some scissors to cut them. I was in a hurry and the measuring and cutting was not too good, but I moved on. I made this set up to hold the curve while I soldered the leaves together. It is a piece of PVC pipe with some metal tape on it. The metal tape can be found in the hardware store and is used on dryer vent pipes. The advantage of the metal tape was that I only need to ground the tape and my resistance soldering unit would work on the spring stock. You can see the ground lead for my soldering at the lower right. This worked well, but you need to go slow so you don’t overheat the pipe.



This will give you some idea of how the parts look. I cut the slots on the springs with a .030" diameter ball end mill. The hangers were soldered together and the ends filed round. I blocked the bearings in the frame at the correct ride height and cut the supports on the springs to fit. I filed the supports until the springs were level. It was easy to work on the frame rails while they are separate and I would recommend considering it on your models if you do the frames this way. When I had everything fit the way I wanted, I soldered the pins to the hangers. Following that, I cut and filed the pins so they just stuck out. The whole set up moves freely, and I can't wait to get some drivers on them to see how they work.



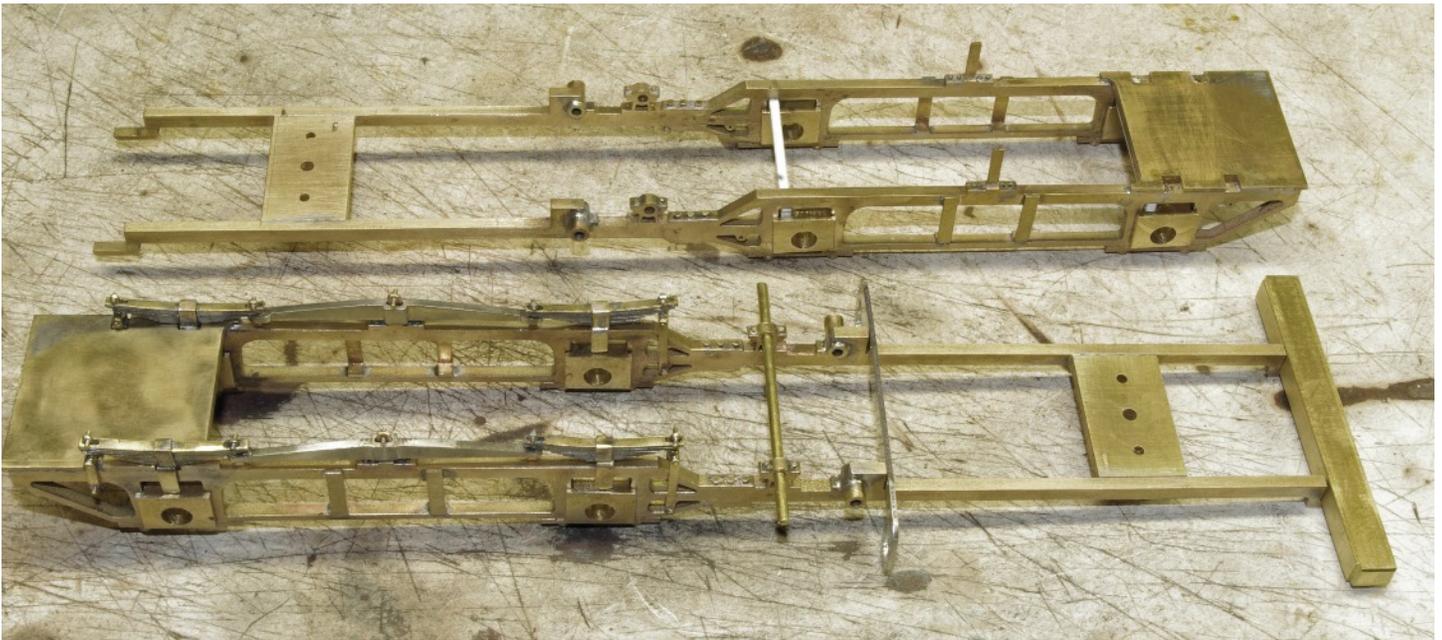
When I made these frames, I made the rocker support and valve hanger support part of the frame rather than separate parts like on the prototype. I needed to extend the rocker bearings, so I turned up some bushings. I cut these off with the slotting saw also. I put a .062" diameter drill through the hole and a bushing on each side. Then I soldered the bushings in place with 96% Tin 4% Silver solder. You can get this in any hardware store in the plumbing section. This solder melts at around 450 deg and will not stick to the drill. It is also stronger than Tin Lead solder. When it cools, give the drill a twist with some pliers and it will come out. After this step, I added some nut bolt detail to the frame which is not shown here.



I added the nut bolt detail to the frame rails and some of the brake cylinder mount. Now it's time to put the frame together. This is a tip that Louis Bartag told me. On large parts, pin them together first so they will not move when you solder them. Clamp the parts tight where you want them. Louis would actually glue them together with ACC. Next, drill some .022" diameter holes and put some .020" wire in them. Take everything apart and clean it all before soldering. Re-assemble everything and solder it together. All the parts will be lined up. I have done that here and all that remains is to file off the pins.



This is how I soldered the front of the frame under the cylinders together. Notice the pins again. I will file them off next.



Here is another photo of the frames. The top frame has the blocks that I used to space the driver bearings when setting up the spring rigging. The bottom frame has the cross head hanger and pilot beam in place, but not soldered yet. So far so good.

That is how I made the spring rigging for my models. I am pleased I was able to make stuff like this and have it work. I think I could have done better with the bushings in the spring hangers. The leaf springs look OK, but I could have done a better job of cutting them to length and soldering them together. More experience for future models.

For the next article, I will show you how I made the cylinders, cross head hangers and guide bars. See you then.

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How to convert a Weaver troop kitchen car to close coupling and narrower trucks

By Holger Rimkus

A short introduction of myself. My name is Holger Rimkus and I live in Hamburg, Germany. I'm 60 years old and married for 30 years to my wife, Sabine. We've 3 daughters. I started about 35 years ago with German O scale kits. I had always a love for American trains, and during my first travels as a service engineer to the USA in mid-1988, I started to buy O scale stuff from various manufacturers.

Early this year, I was able to buy a Weaver troop kitchen car on Ebay Germany for a nice price. The first thing I noticed on its maiden run was the huge distance between the kitchen car and the next car. As the car was running fine, I'd no intention to change anything so far because of extensive travel for work and other ongoing projects.

A few weeks later, everything has changed and I'd more time than I ever expected, at least not before retirement. During one of my Internet researches, I came across Rod Miller's website where he described the rebuilt to a closer coupling and the realistic positioning of the air, power and steam connectors. He also mentioned that the model in the delivery state has the wrong wheels (36" instead of 33") and the trucks are too wide. So, all credits go to Rod Miller.

Further Internet research to find more information about the Allied full cushion trucks ended up with almost nothing. Just one patent drawing that shows half of the truck showing one dimension from center to center. The outcome was about 43mm. I found in my collection 4 complete axles with 33" wheels, but 2mm blunt ends. The original plan was to reuse the pointed axles, shorten them and mount the 33" wheels on the new axles. A working colleague wanted to show me how to turn pointed ends, but pushed the date from week to week. One Saturday afternoon, I decided to use the ready axles with the blunt ends. First, I wanted to drill the existing bushings up to 3mm to insert a 3mm bushing with a 2mm hole. So, I started with a piece of 3mm brass rod drilling a 2mm hole in it. The original bushings are so hard that during drilling the first one up to 3mm it eventually got stuck in the drill and came out when I released the handle. I had to look for a different solution. The holes have a strange diameter - at least for a metric guy - of 3.76mm. The easiest solution would be a 4mm hole in the truck frame. As I found no matching brass stock in my collection, I went to my brass scrap metal box only to return with some pins from electrical connectors we're using at work.

The first 4mm hole and the original hole in the casting.



The pins that I used. The two cuts are for C-clips to secure it in an insulating nylon bushing. The short piece above is the remaining piece after cutting the pin at the recess off.

And again, I started to drill a 2mm center hole into the brass piece, straightened one end and cut it to almost the correct length and straightened the other end.

I repeated that 8 times and installed the bushings in the truck frames. The 4mm hole was slightly over sized and so I used the engineer's best friend to secure them in the truck frames: Loctite high strength.



Both sides straight and ready to install



Test fit on the axle end

The bushings installed in the truck frame





The next goal was the new bolster. Since it should be insulated, I decided to create a new one with Tinkercad and do a 3D print of the bolsters.

After cleaning the print, I noticed that the screw hole for the electrical pickup on one side was too close to the frame that secures the truck side in the bolster. I drilled a new hole and installed both parts. The original bolster has angled ends, so the pickups are clear off that frame. With a little bending, it was possible to install the pickups. The biggest challenge wasn't to lose the little self-tapping screws for the pickups, because directly behind the truck is a huge square hole for the cables to go in the car body. For sure it happened 4 times that



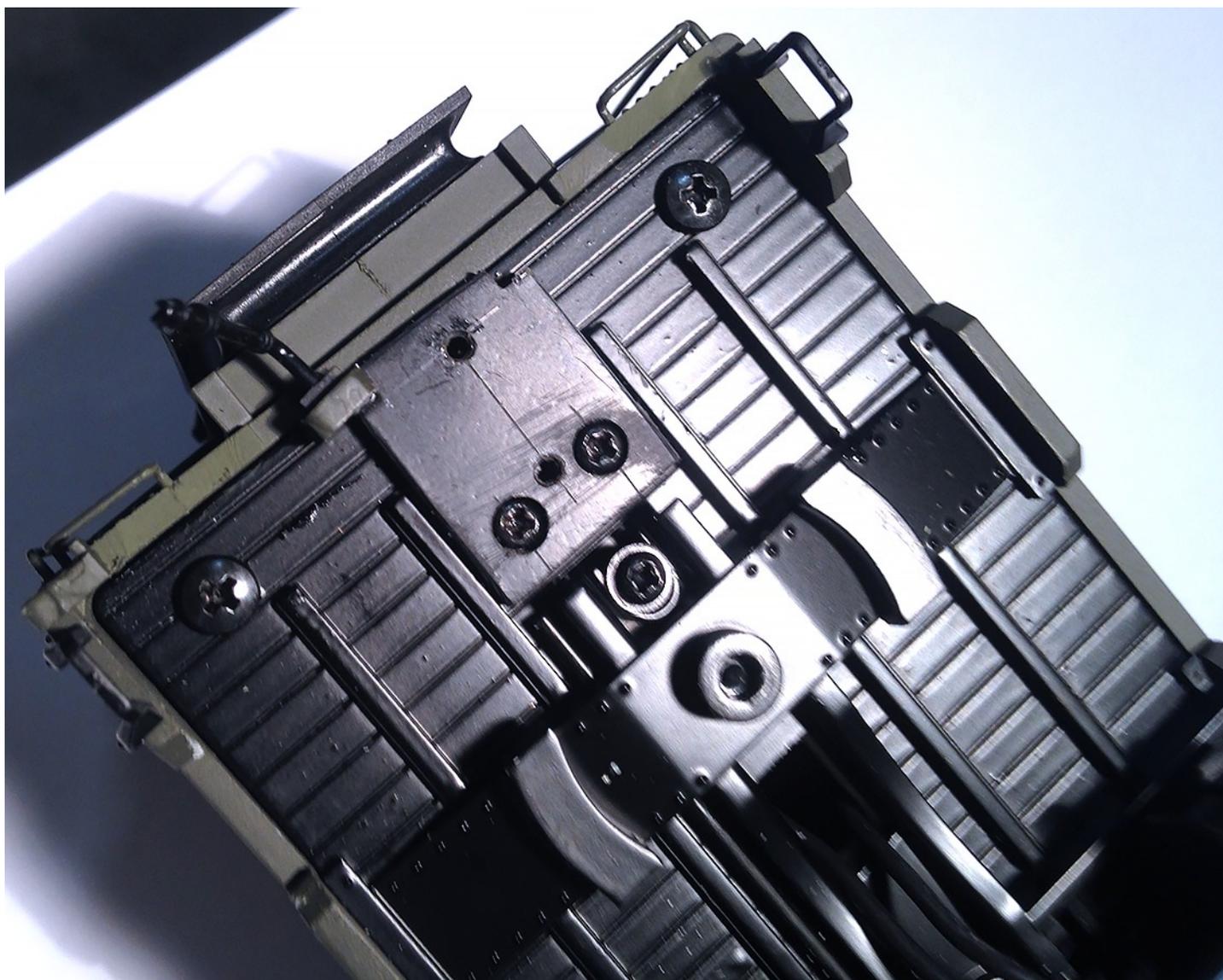
screws fell into these holes.

And both sides cleaned. The gap is for a square distance piece that was under the original bolster.

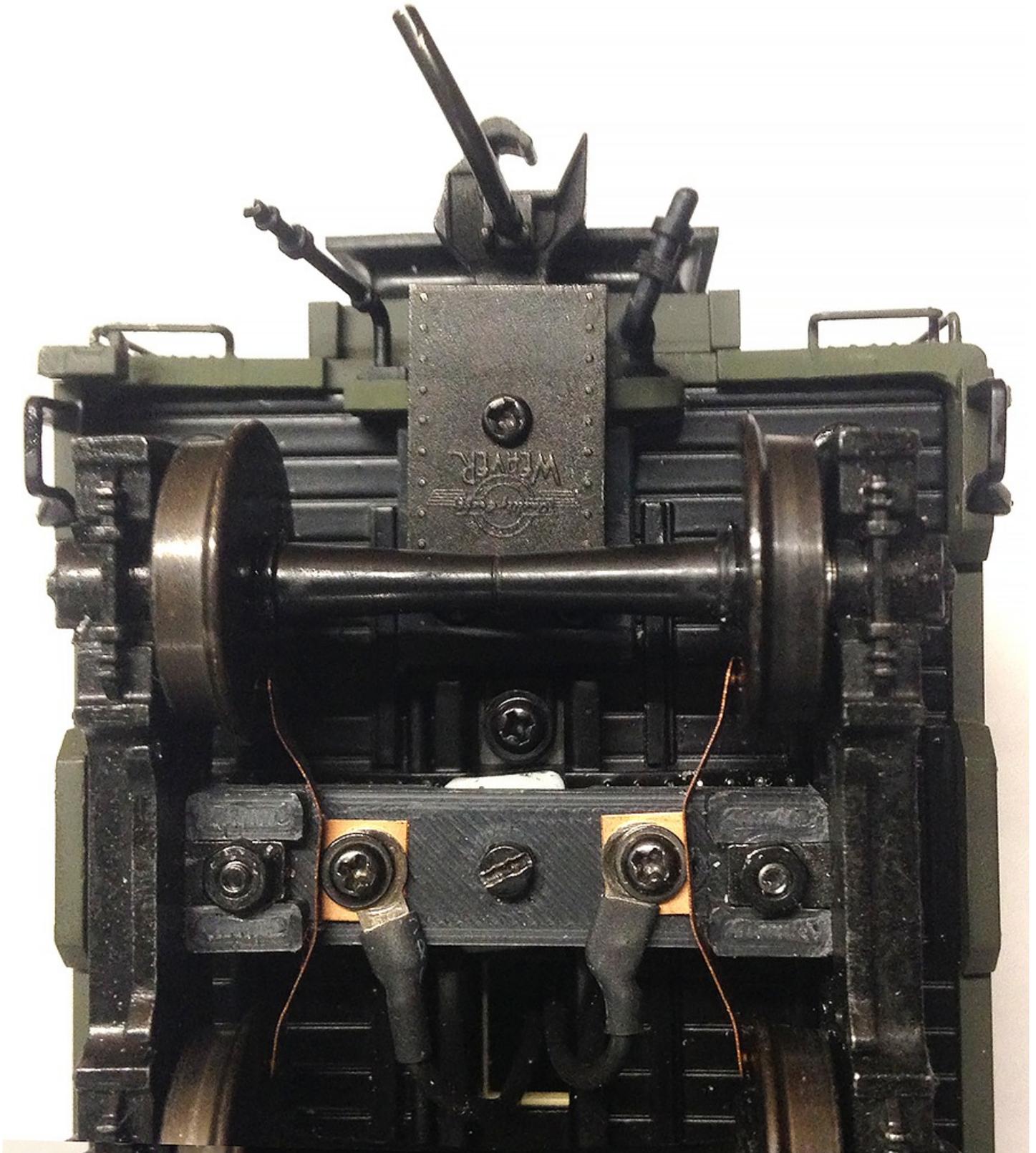
Test fit of the bolster

The final part was the coupler shim to lower the coupler. The part that Rod has manufactured is a cast brass piece. Since I've no flat brass stock I used black styrene in 1 and 1.5mm thickness. Since the other parts that Rod recommend -steam and power lines- where also not on hand, I decided to reuse the original parts. The overall appearance isn't that bad for a mass product. Before I glued the styrene plates together, I first drilled the holes for the mounting screws into them. The 1mm plate got 2 x 2.1mm and the 1.5mm plate got 2 x 2.5mm holes drilled so that the original screws are recessed into the new coupler shim.

The new coupler shims are slightly wider than the coupler so I cut the top corner on each side out in order to glue the original plates with the steam and air connector in position. After gluing them together, I determined the position of the coupler, drilled 2 center holes and tapped them with a 2mm thread. During the drying time of the 2 plate assemblies, I carefully removed the tiny grab irons from their tight fit mounting holes. Then I cut away (with a sharp electronic cable cutter) the steam and air lines together with their mounting plates. The original body color is white, so I used some olive drab to paint these areas over.



The new coupler shim. The cut outs for the air and steam lines are visible in the top corners. The 2 holes have 2mm threads to screw the coupler in place.



The next step is to screw the coupler shims in place on top of that the coupler pocket, and then I glued in either top corner the plate with the steam and air connector. After this is dry, the car is ready for a test run. What I didn't do was to replace the coupler centering spring with a piece of plastic tube.

What I didn't like on the original bolster was that the pickups were too low and widened. So, I changed the construction and added a rectangular platform to mount the

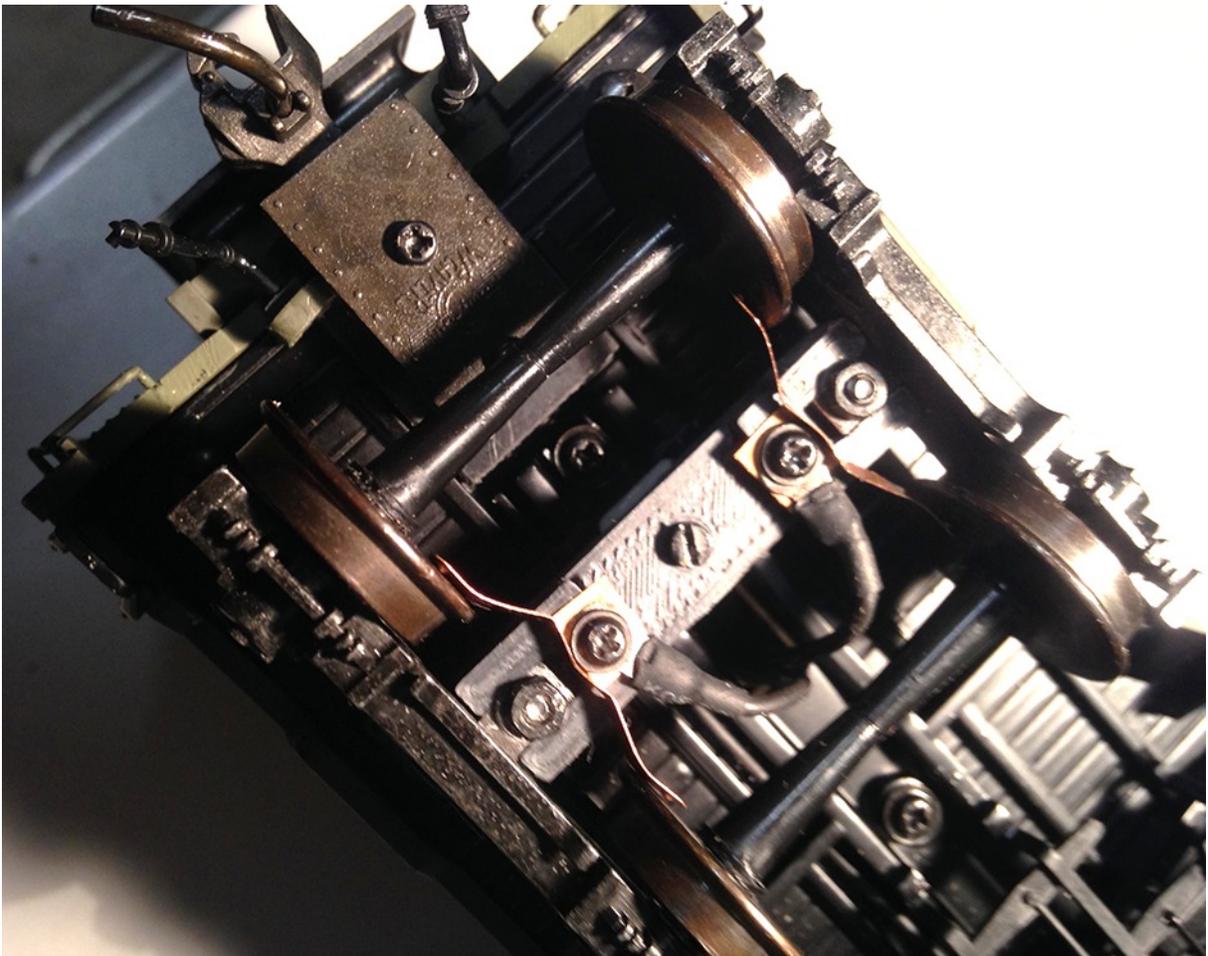


The new bolster. The square for the distance piece has been narrowed to 8mm.

Mr. Rimkus has sent us the STL file for his bolster. [You may download it here.](#)



For personal use only.



Everything installed and ready to go.

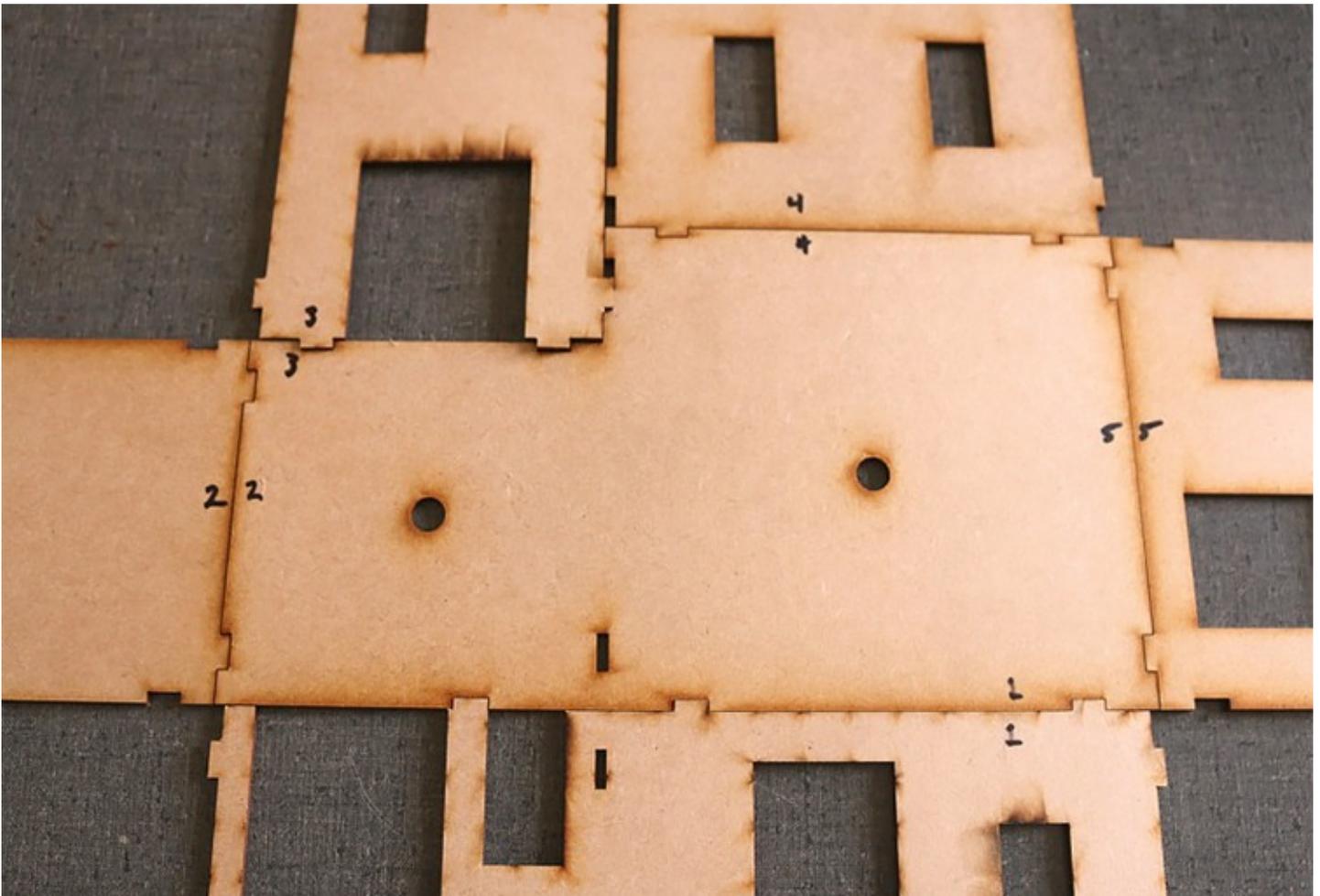


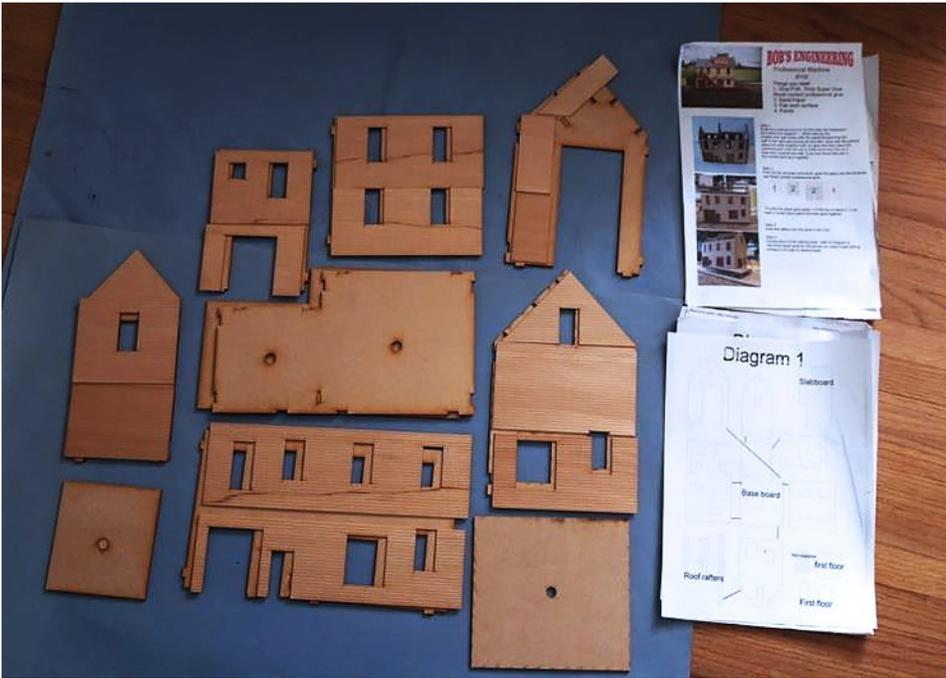
Bob's Machine Shop

By William Lubert



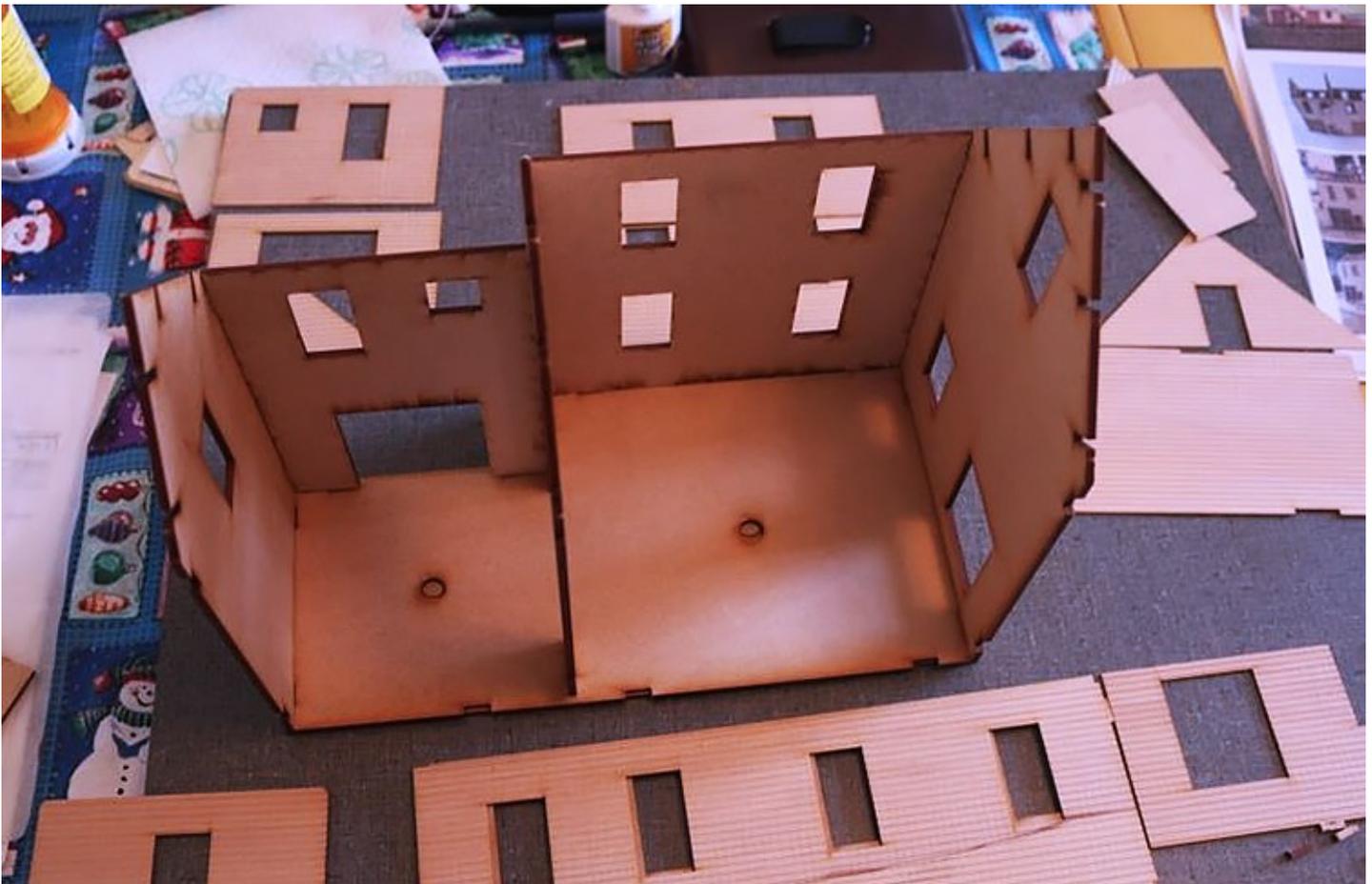
It all began while reading the Nov/Dec 2019 issue of *The O Scale Resource Magazine* when I came across the contests within the New Tracks feature of Jim Kellow. Entering a few, I hoped to get something. As time passed, I had received word that I won a kit from Walker Models in Australia. It took a while for the kit to arrive. When it did, the kit was in a crumpled up box. Inside there was no packing material. In the box was a plastic bag with the kit inside. Within the bag was all the wood pieces to make the Bob's Machine Shop. I noticed that pieces were cut with a





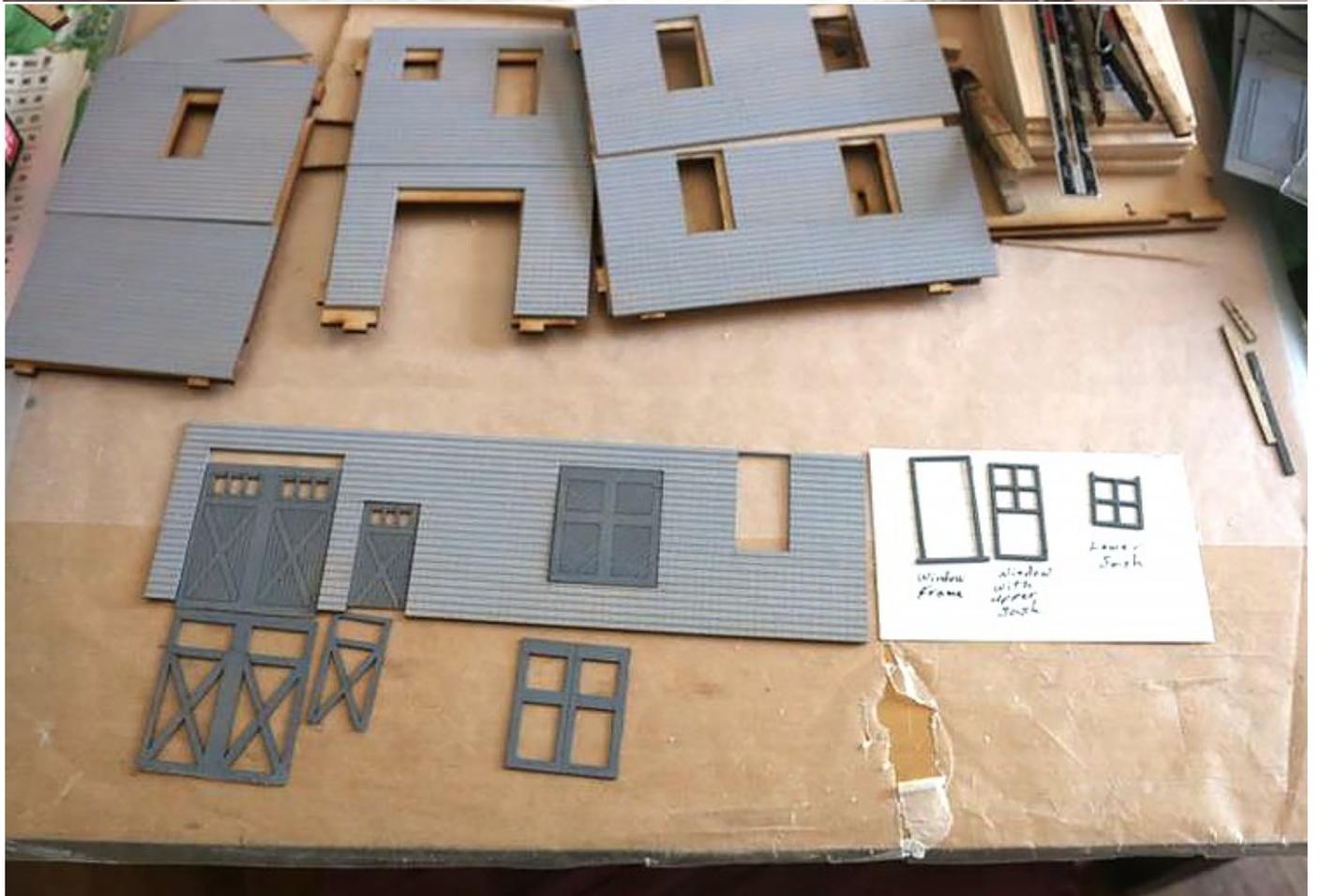
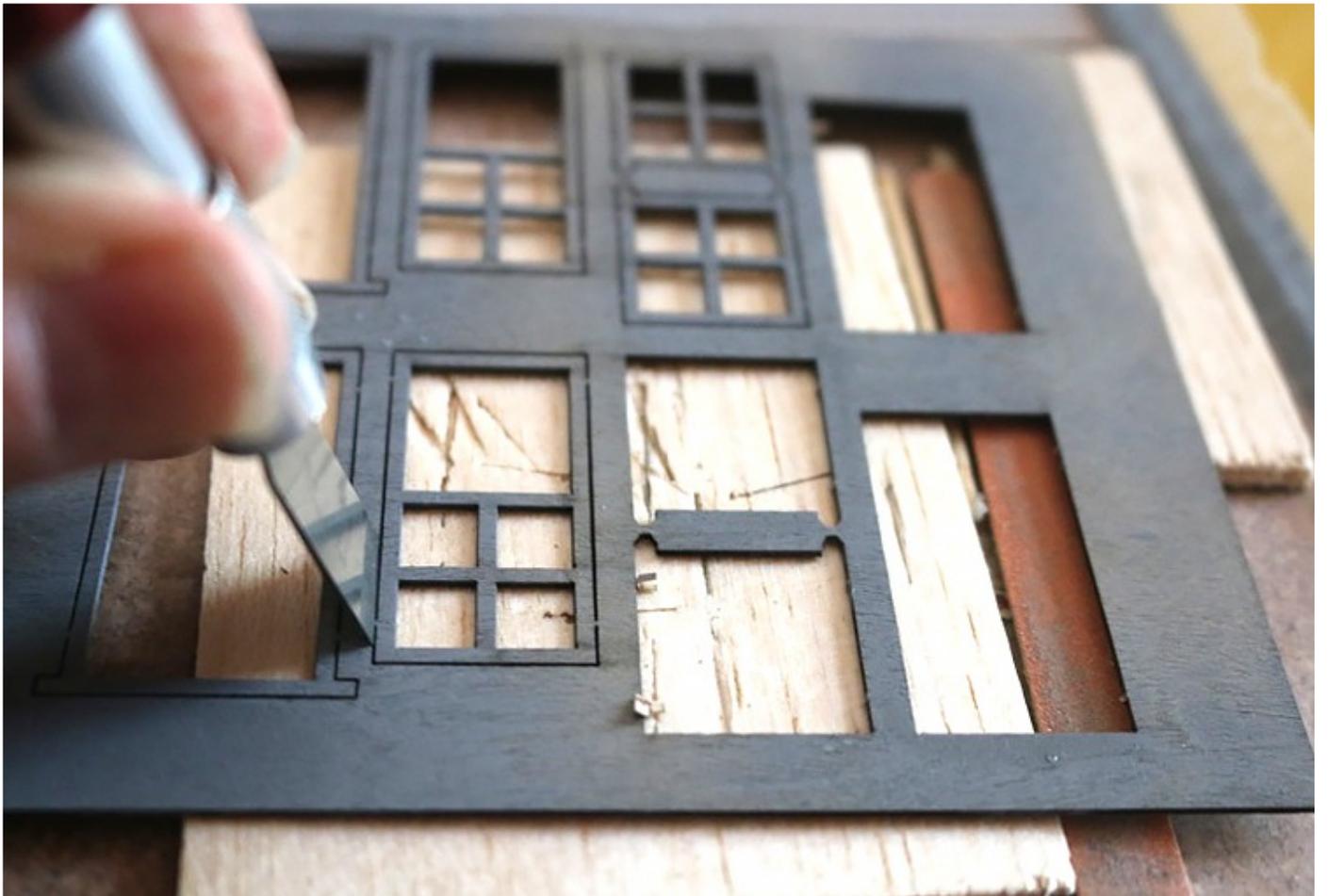
laser. And there were some pieces laying loose. Emptying the contents on my work board, I started on it. First item located was the instructions.

There wasn't much to the instructions. There were some drawings, but not helpful. No parts list either. After reading the instructions, I decided that I was on my own. Looking at the pieces of wood in front of me, I proceeded. There were also a few photographs showing the model in various stages of construction, but only two sides of the structure were shown. The walls consisted of two parts, an



interior wall and an exterior wall. Flooring was also two parts, a floor and a sub floor. Since the floor and the interior walls were the largest pieces I started with them.

After opening the bag, I started looking for the larger pieces. This will consist of the floor and the interior walls. All walls are positioned by tab and slot method. After inserting the walls, I numbered the walls and the floor so no mistake will be made later. Some caution needs to be made since some walls can be inserted backward. It seems that a few tabs and slots can be made off setting so no mistakes are made.

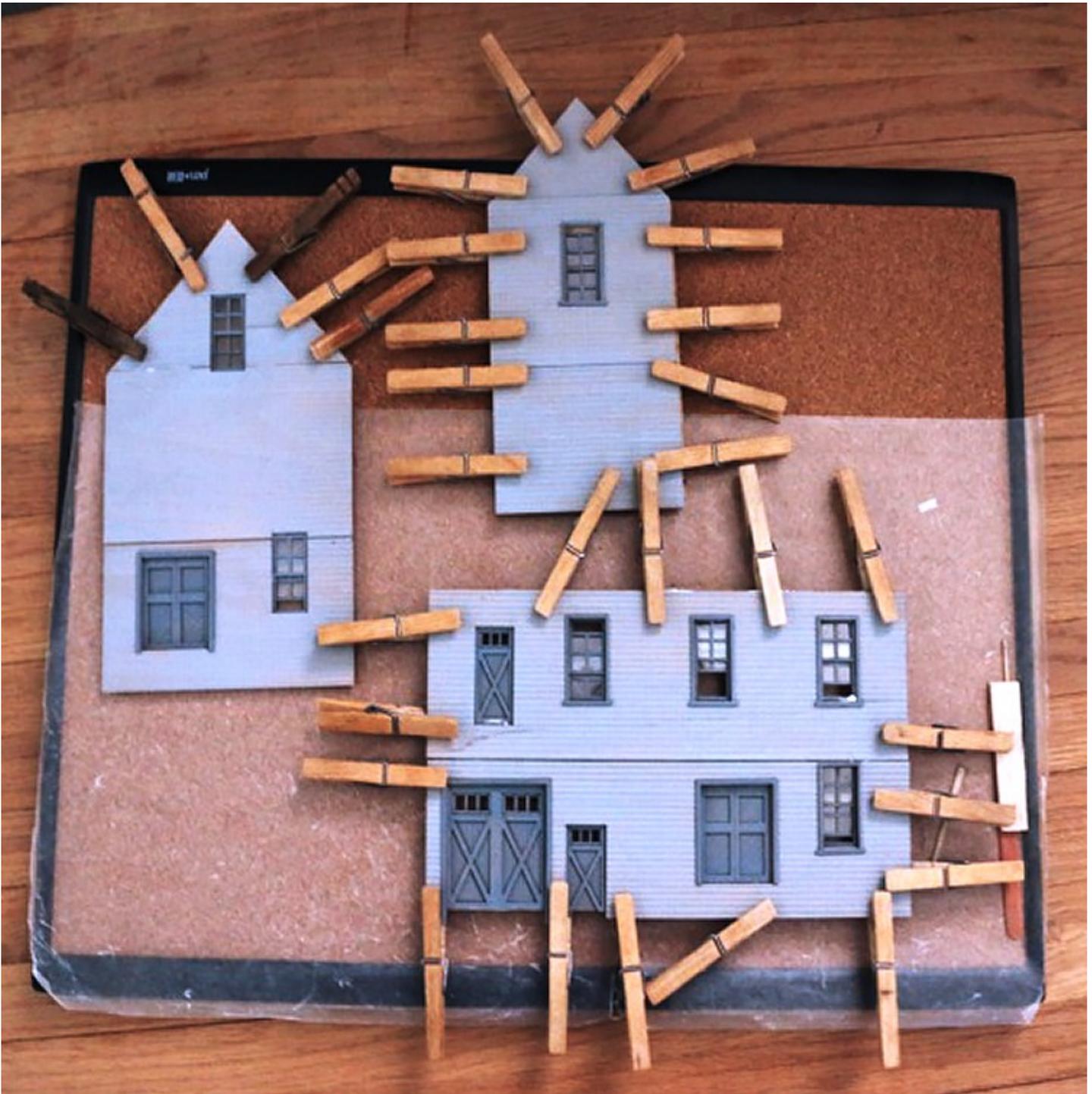




According to the instructions, I am to glue the interior walls and then the exterior walls to the floor. I felt that made things difficult. Instead I moved on. After the location of each interior wall, I tested each exterior wall.

Laying out all the pieces of floor and the interior walls, I placed the exterior walls on top of the interior walls. Feeling the exterior wall with my fingers, I felt something wrong. These walls are supposed to be Board and Batten (B&B). The kit has the B&B going horizontal when B&B are vertical. Also the spacing is suitable for HO, but not for O scale. (Note: I thought that this was unusual until I watched a video on



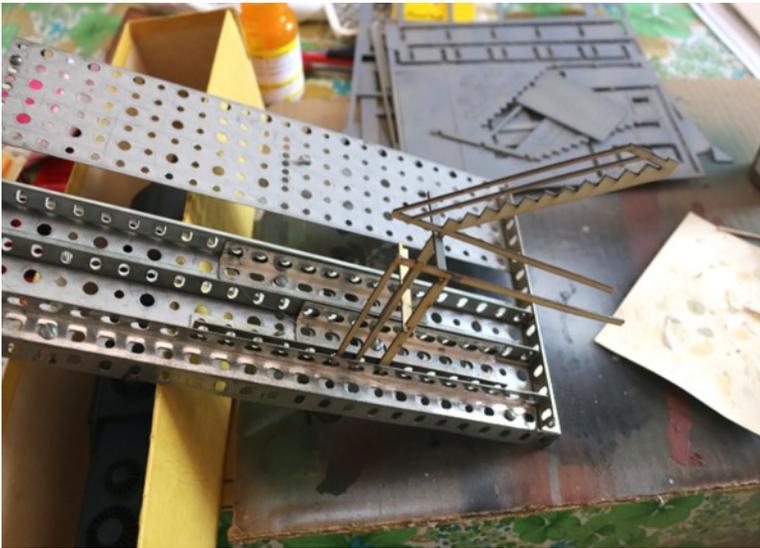


YouTube. A man was making a simple milk station with a computer. He made the same two mistakes. He used B&B siding going horizontal when it should have been vertical. And he used HO scale B&B. Doesn't anyone do research any more.)

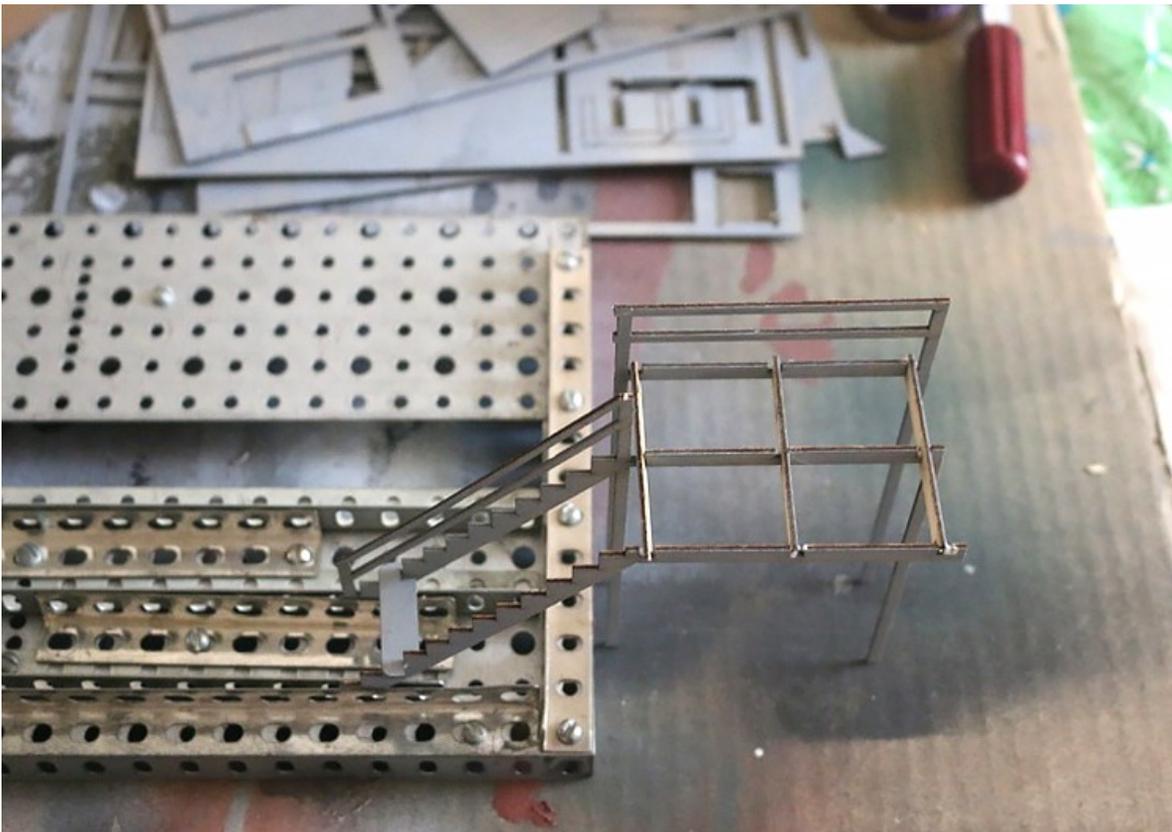
Since there was nothing that I could do about it, I continued. Once again, I laid out the pieces of the walls, laying the the exterior walls on top of the interior walls. Then I decided it would be best to paint the outside of the exterior walls. I used Tamiya light gray primer paint, but any paint will do. Other parts were painted with Testor gray primer. Instructions mention Revell Quick Drying Cement, which I couldn't find in any store. Besides I don't like quick drying since it does not give enough time to adjust the pieces to their proper position. Instead I used Aleene's Tacky Glue.



To begin, I put the interior wall together with the floor without glue. This gave me a chance to learn how the pieces should be joined and when. I laid out the exterior walls in their corresponding position. This led me to wonder when and where to install the doors and windows. Not to mention how. And what about the dock and stairs? I felt I needed to answer these questions before I started gluing. Small pieces of the structure were painted before they were removed from their sheets. To remove the pieces, such as the doors, I used a number 18 blade inserted in a number 5 handle. With the bevel side away from the door piece, I pressed down on the handle to break the joint.



I did the same for the windows. There is little instruction for the doors and none for the windows. Doors are made of two pieces. An inner piece and the outer piece which is the frame work. After gluing the two pieces together, I placed the door in the interior wall. Windows are made up of three pieces. One is the frame which glued to the outside of the exterior wall. The window is made up of two pieces. The big piece is usually the upper sash, while the small square piece is the lower sash. Before gluing these two pieces together, small sheets of clear plastic needs to be glued to the sashes. A toothpick was used to apply the glue. Various positions were use to make the windows



open. One window I tried to make open differently. I turned the window upside down and placed the small sash on the outside. This has the window closed on the bottom, but open on top.

This will give the window a different look. It is the window on the second floor next to the door. Some windows I kept closed. This gave the structure variety. Once all

the doors windows inserted and glued, I assembled the structure. I began by gluing the exterior walls to the interior walls. Clothes pins with springs were use to hold the pieces together. (Note: One day I was wondering what a modeler can use to put a kit together. One day while at a Walmart store I was in the clearance isle and I came across this bulletin board. It was a nice size to work on and it had cork on one side and a hard board on the other. When gluing I put a piece of wax paper on the work surface.) While these were drying, I moved onto the dock.

Assembling the dock and the stairs is not as easy as they appear. For example, the dock is made up of a number of pieces. Years ago I tried a method I thought of. The method was to use pieces from an Erector set. For those who are not familiar with the Erector here a is brief statement: A.D. Gilbert and Company is more famous for the American Flyer S gauge trains, also made the Erector. Beginning in the 1930's, they sold sets of pieces of metal of various shapes and sizes with holes in the pieces. Lionel also sold similar sets. With the pieces, a person could build anything from a bridge to a crane. I took some metal pieces from one of my sets and built a work table for the dock and stairs.

For the dock, the pieces need to be held vertically, and kept at a constant distance while the glue dries. There are two different joists. Shorts joist are placed under the dock which is next to the track. Three long joists



are for the short dock. After these are assembled, the sheet which is the dock, was glued on. Stairs had to be held at an angle so the pieces won't fall apart. The stairs had to be repositioned to get the steps glued on. Having a jig to hold the pieces makes assembling a lot easier. If you don't have an Erector set, you can make a jig using wood. As I was to the end of assembling the kit, I noticed something was terribly wrong. The two end pieces of the structure had warped. This prevented me from finishing the kit because the joist for roof did not fit properly. Therefore, the kit sits unfinished. I did replace the some of the roof joists with bass wood of 1/8"x 3/8" cut to length. But the roof itself is another story. As seen in this photograph, a standard gauge 40ft box car dwarfs the structure. As a result, the structure might look better on a narrow gauge layout.

There are other items that can be added. Namely an interior with people and machines. A parking lot can be on the other side with cars and trucks. The finished kit can be quite an addition to a layout.

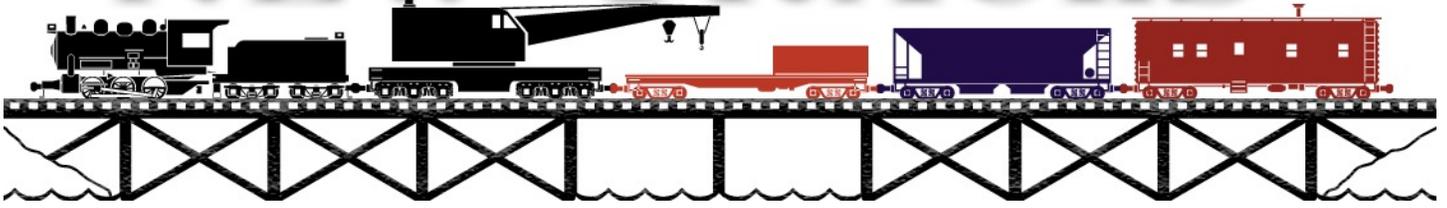


THE
S
SCALE

ONLINE

Don't forget we also publish The S Scale Resource Magazine. Click here to see what's going on in the scale S world as well as other articles of interest to all model railroaders.

NEW TRACKS



Mentor Definition: A Trusted Counselor or Guide

By Contributing Editor Jim Kellow MMR

Editors note: Computerize Your Model Railroad! Appeared in the S Scale Resource Magazine but we thought we would rerun it here also as many of you may have an interest and don't read the S Scale Resource

Computerize Your Model Railroad! But First, “New Tracks Meetup” Announcement

“New Tracks” is presenting its second Virtual “Zoom Train Show” with many Outstanding Vendors on Saturday November 21, 2020 at 1pm EST. It will be live on Zoom and live streamed to our “New Tracks” YouTube channel.

If you missed our first Train Show, you owe it to yourself to take this unique opportunity to visit with some truly talented and creative modeling manufacturers, and meet the editors of some of the great model railroad publications that our hobby relies on to bring us products and news while providing a showcase for our own modeling. You might even learn how you can become an author!

If you are new to the Zoom video conferencing technology, all you have to do is download the Zoom App to your computer, iPhone, android or iPad, then click on the log in and link to the “New Tracks Meetup Train Show”. Or you can log into our “New Tracks” YouTube Channel and participate through the live streaming of the show. A log in link to this channel will also be posted.

The log in links will be available on my Facebook page, [Jim Kellow MMR](#) and on my website, [New Tracks Modeling](#). It can't be any easier to attend a Train Show than through video conferencing from wherever you are, using either your computer, tablet, or cell phone. Best of all it's free!

Our goal for this event is for vendors to reach potential customers world wide, and to have modelers find vendors that can help them in their model building efforts, and buy from these vendors. A win-win for both vendors and modelers. Best of all, more modelers will become model builders.

How will this virtual Train Show work? The vendors will talk about their products and prices. Participants can ask questions through the Zoom chat function or by email directly to the vendors. And, of course, you may buy on the spot. You can also watch the recorded video of the event which will be posted later and buy then.

The video of the show will be posted on Jim Kellow MMR Facebook page, on my website, New Tracks Modeling, and on the YouTube “New Tracks” channel for one month after the event. All buyer's purchases will be made directly with each vendor. There will also be an open discussion period at the end for questions/answers, comments, and ideas for future shows by all participants and vendors.

Please let me know at JimKellow@oscaleresource.com if you have any questions or comments.

I look forward to your input, suggestions and most importantly learning that you enjoyed this event and it was helpful to your modeling. Thanks in advance for your support and participation. Click on the login link to either Zoom, or live streaming on YouTube, a little before 1pm EST on November 21, 2020 to participate. I look forward to seeing you.

In addition to the Train Show information, you can also find out what else is going on, in the MY BUILD segments, and who are the Featured Modelers scheduled to appear on the regularly scheduled twice weekly Zoom “New Tracks Meetup” on Facebook Page: [Jim Kellow MMR](#), and on my website, [New Tracks Modeling](#). I look forward to meeting you, seeing your models, discussing modeling with the featured modelers, and learning how we all can become better modelers.

I really wish I could have found O Scale modelers for this article. The truth is, I tried and did not have success. I was told over and over again that not many modelers in the USA, in any scale, have implemented computerization of their model railroads. Therefore, since modelers in all scales can do what the modelers I profiled here have accomplished, I hope you learn a little about what you can do, and benefit from their experiences and offers of help. If you are an O Scale modeler using any type of computer assisted system in your operation, I would like to hear from you so I can share your experience in a future article on this subject. My email is JimKellow@oscaleresource.com.

Computerize your Model Railroad

Imagine walking into your model railroad room, turning on the lights and pressing a start button on your computer. Your railroad comes to life. You can be a part of its operation as much, or as little, as you want.

The first scheduled train starts, second train starts, and so on, switches are thrown for each train’s selected route, when needed, signals change when needed, lights and sounds and animated scenes come on and off as scheduled.

A train starts up a mountain. It’s weight is measured, and if it needs a helper engine to climb the mountain it stops. A second engine at the roundhouse starts up, travels to the rear of the train, couples up, exchanges whistle signals with the lead engine, and the train starts up again. As it climbs the mountain, it changes speed based on the grade. All this time, all the other trains and accessories are still operating on schedule, and all you have done was press a button, watch and enjoy.

Or, imagine you walk into a museum and there is only one person there with the model railroad. You ask if you can see it operate. He presses a button on a computer and six different trains start on schedule, slow down as needed for the terrain, and stop at designated stations, blow their whistles as required, and move around the layout just as the real railroad would have operated in 1909. Meanwhile, you get the benefit of hearing the volunteer tell you about the real towns, stations, and beautiful scenes you are watching the trains pass through.

Welcome to, not what could be in the future, but what is two actual examples of model railroading operations that exist in the USA today using off the shelf software you can purchase.

Is computerization of our model railroads to this level of technology for everyone? Probably not, but for some modelers and organizations, the computer is replacing the crew historically needed to operate a railroad with only one person who can operate one of the trains on the layout as much as he wants while the computer operates the rest of the layout. Wow. I had no idea the software was available that could make this level of operation possible.

I recently had a modeler tell me that he would not be interested in model railroading if he could not computerize his model railroad. He also told me no one should be a NMRA MMR unless they were skilled in the use of computerization for controlling a model railroad.

Since I don't have a PC, and only use an iPad and a iPhone and can, most of the time, do email, word and Zoom, with help, I might as well give up my MMR! I don't agree, but to each his own.

But wait a minute, what if he is having more fun with his way of operating his railroad than I am? Maybe I should see what this computer stuff is all about. Maybe I should see if current technology can help me better enjoy this hobby.

No sooner had I written a post on Facebook asking for modeler's help in identifying what computer programs are available and who was using them, than I immediately got comments saying forget about computerization as it is bad for the hobby.

OK, I understand that some modelers may think computerization of their model railroad is not for them. But I really encourage you to read about what I discovered, as you may learn something new that you can use and will enhance your enjoyment of operating your model railroad.

NOTE: While I cannot say that the software I included in this article is all that is available, it is all that modelers told me they were using. If you are using another software or know someone who is, please let me know so I can contact them and add to my knowledge about model railroad computerization and update this article.

After getting pro and con responses, and having modelers talk about writing their own code using [JMRI](#), a free open source program on the Internet, or ADAFRUIT Industries free program, or the [NMRA LCC](#), various brands of DCC, [Bruce Chubb's C/MRI](#), [Arduinos](#) to run signal systems and to control random lighting effects in buildings, TrainTraxx.com, [Raspberry Pi](#), Train Brain, 'RailMaster' software, and being told "for unleashing the full power of PC control the Hornby 'eLink' is placed in between the PC and the layout", from obviously very knowledgeable and talented modelers, I frankly got totally confused.

I got so lost in the forest, I could not see the trees and knew I just had a lot to learn. I was about ready to give up trying to write this article.

But then I decided to talk to the modeler who originally contacted me, tell him my feelings and ask for his help. He immediately suggested I contact Freiwald Software Company, and one of his friends in Australia who used their software.

I did, and after talking to the company and his friend, decided to concentrate on the Freiwald Software for this article. This is not an endorsement, but I think I can at least explain to you what I believe is the current state of the art in computerization for model railroaders and off the shelf software that I "might" be able to tackle. I will leave for later, or to others to discuss other ways to write your own programs or use other technologies.



Freiwald Software Company

I talked to the company owner, Mr. Juergen Freiwald, who I found easy to talk with, and he even said things in a way I could understand.

His website <https://www.freiwald.com/pages/index.html> provides a lot of information and is very informative. I encourage you to check it out. After looking it over, I asked Juergen some questions.

Q: Tell me about your company's software products for model railroaders.

A: Freiwald Software provides professional software for computers running Microsoft Windows for model railroad computer control.

Q: Why should model railroaders implement your software? What additional operational capabilities does your software provide to model railroaders?

A: Our software allows a modeler to operate model railroads in a way that cannot be achieved by one single human operator by hand.

Q: Many modelers are not very computer literate so how difficult is it to install?

A: Installation has been made as easy as it can be made on modern Windows computers. However, model railroad computer control, requires certain knowledge in the handling of computer programs in general, as well as technical affinity and basic knowledge in the digital control of model trains in particular.

Q: What size model railroad do I need to benefit from your software?

A: The size does not matter. If you want to control more than one running train at the same time without the risk of collisions you will benefit from our software.

Q: Can any scale benefit from your software?

A: Our software is not scale specific.

Q: If I need help, do you provide help in the installation and operation?

A: Our software comes with complete and comprehensive documentation; an online support forum with more than 20,000 members and answers for questions via our email support.

Q: I live in the USA, is there someplace I can go and see your software in operation?

A: There are several museums and exhibition layouts, which use our software. The probably best known is Gulliver's Gate located at Times Square, New York. (Note: I tried to contact them but was told by a friend the Organization filed for bankruptcy and was not currently in business.). I did find another museum and have profiled that museum later in this article.

Q: Can you recommend a model railroader who uses your software who I can talk with and profile as part of this article ?

A: That's difficult, because as a matter of principle we never uncover contact addresses of our users. But if you place an inquiry in our forum www.freiwald.com/forum, you should be able to get in contact with model railroaders in the USA, and perhaps some exhibition layouts we are not even aware of. Not all users tell us what they do with our software. In our forum, there are several thousand users from the USA. There should be several, whom you can get in contact with. NOTE: Through some friends, I was able to find two modelers: one in the USA and the other in Australia that I have profiled in this article.

Q: Are photos available of model railroads using the software?

A: We have distributed a number of photos of exhibition layouts on our website www.freiwald.com. However, these may not be able to be used without the owners's approval. But these pictures at least give an impression. Otherwise, we only have pictures that we have received with the promise that they will only be used confidentially. But in our forum www.freiwald.com/forum, there will be probably many people who will happily share some of their photos with you. Our forum is the best reference and source for anything.

Q Next I asked about the software:

A The software has been completely developed by Freiwald Software. It is available since Version 1, was published in November 1995.

The modelers I talked with who use the software had nothing but great things to say about it and, based on what I heard, the software is really outstanding and is what one modeler told me is a “force multiplier” and “enhances” your model railroad operation.

But probably not for me to use as I am not very computer literate, as you can tell, and only have a relatively small layout which uses regular DC and home built controllers with diodes, and WWII rheostats to run up to two trolleys at a time, with a controller in each hand. Please, stop laughing and read on.

But for others, this software is something to investigate further. I have tried to tell you about two modelers and one museum in such a way that you can get a good feel about how this kind of software can enhance your operation. Now let’s talk with these Freiwald Software users.



[Darren Johns](#) (aka: Dazzy Jay) - Australia Modeler

I found Darren through the modeler who originally got me interested in this subject. Darren, aka Dazzy Jay has installed and used the Freiwald Software for some time and has a YouTube Channel called, [Model Railroad Techniques](#), you can visit to learn about his experiences. Also, he told me that he will help anyone who is considering computerizing his model railroad.

While I was writing this article, I showed Darren an early draft to make sure I was saying what he and other modelers were actually accomplishing with computerization of their model railroads. Darren not only gave me his comments on the draft, he also wrote a piece on Imagine that I believe captures his model railroad.



Imagine this, you want to run an operations session on your miniature transportation system, but due to the current restrictions you don't want to risk operators coming to your home. This is no problem as you have set up your DCC railroad to be flexible. With a click of a few buttons you can send pre staged trains to any location on your transportation system ready for shunting.

If you are like me, seeing only one train travelling over your railroad maybe a bit boring, but you have set up trains to run automatically to create bridge traffic. This includes all prototypical bell, horn and lights activations on the locomotive and pre staged stopping locations such as stations. These trains will never collide with the collision avoidance measures built into the railroad. Once you conduct your manual shunting moves at the various industries and sort your paperwork, you send this train back to the yard...but this time you want to control this train manually. This is no issue, you easily set that train to semi-automatic control. This allows you the use the hand controllers to control the train: speed and functions, etc. With semi-automatic control, if the engineer does not stop at a red signal, the computer takes over the train to stop it thus avoiding collisions. Once back at the yard, your train goes through an uncoupling move utilizing Kadee Electro magnets uncoupling the locomotives from the rest of the train. The locomotive then automatically parks itself in a round house or other facility. You are now free to shunt this train.



Does this sound exciting, but daunting to set up computer control? This software is available now its called TrainController. Please see a link below to my YouTube channel where I have showcased the software's capabilities. Furthermore, you can download the software and use its full functionality connected 'live' to your miniature transportation system before deciding to buy it.

If computer control is not your thing, but you want some help with DCC. I can work with you to design the DCC hardware architecture and teach you the basics to create your miniature transportation system.

Please meet Dazzy Jay (a really great mate from Australia). I am so glad I found him.



Darren Johns grew up in South Australia, where he became a rail fan with his Grandfather from a young age with the then SAR & AN-South Australian & Australian National Railways. Darren has been a model railroader for 30+ years. He is currently working on his third layout: The Fallen Log Railway, which is a freelance railroad predominately modelling Eras 1-3 European locomotives and rolling stock. Darren posts weekly how-to and product review videos on his [YouTube channel, Model Railroad Techniques](#) and can often be found on Facebook at [modelrailroadtechniques](#).

He said he models in HO Scale as it is the most widely available for European railways. Plus, his father and grandfather modeled in HO.

I asked if he had any mentors. He told me: “During my modelling journey, I have been blessed enough to have several mentors who have helped me immeasurably, by passing on their knowledge and expertise to give me the skills in this great hobby of ours. Two gentlemen in particular are always too willing to assist me with any question I may have. One other gentleman I have never personally met, but met him on the TrainController Software Forum. TrainController is a German based (I believe to be ultimate model railroad software). In the past several years, I have conversed, via email, with him several times a week (sometimes daily). He has helped me immeasurably and asked nothing in return.

The other gentleman who helped me only lives a 30 minute drive from me; we often talk model railroading. My ultimate mentor in model railroading is Josef Brandtl, I have never met this gentleman, but his modelling is second to none.

Of late I have been getting into American craftsman kits, eg: Carolina Craftsman Kits and Railroad Kits. I have interviewed on my channel several gentlemen in this space such as Stephen Milley from Rail Scale, Jeff Grove of CCK and Ron Klais from Mine Mount Models. I have been asked, “Why American craftsman kits on a European layout?”. Well.....the architecture is very similar to Europe, plus if I like the look of something, I will model it. I watch A LOT of YouTube of late on making and weathering these models. I have even made some videos on these aspects.

Why did I computerize?

I have a large layout and live in a small rural town South of Adelaide, South Australia, Australia. I do not have any crew members that can come and help me run my railway. So the logical solution was to have a computer controlled railroad. Why TrainController (TC)? Whilst thumbing through a book by Josef Brandl, I saw one of the layouts he built was run by a computer, TC, so I downloaded the free version and gave it a go. WOW that is all that I can say. Software designer Juergan Freiwald coined the phrase “perfectly control model railways”. This is particularly true with this software. There is so much you can do with this; well beyond the scope of this short passage of text. The main reason I went for this is that I can control my whole railroad from a central location. TC is a program that you build the basics eg: track plan, which are called switchboards with all your track elements on it, eg: switches/turnouts (depending what part of the world you are in). Next you add all the blocks which are detected via current sensing modules that talk with the PC. This is the basis of how TC knows where a train is at any given location and then, in turn, adopts collision avoidance measures.

You can then keep adding other computer code to the program to do a myriad of other functions like setting your schedules where you present up journeys for the train to travel. These schedules can link in with other schedules to send trains where ever you want them. I set up the schedules to link in with my operations system. I have set these schedules to run automatically from point A to point B where the train is then shunted. Or I can manually run trains from point A to point B and they shunt the wagons out as per the waybills. I build in this flexibility depending on the amount of operators I have. The possibilities are endless with what you can do with TC. Another huge consideration is the amount of wiring is limited because you do not have to wire physical traditional control panels. Additional pros are talked about above.

Cons would be you need to have some computer skills to set this up. Having said that, Freiwald has developed an awesome forum where everyone is willing to help. The program is very expensive.(well worth it though) and you need PCs. You need to buy a lot of electronics to detect blocks and control the turnouts/points.

After I read his comments I asked him several questions.

1. What if I have a small railroad? Would this software help me? How?

My Fallen Log Railway fits in a 30 feet by 30 feet structure. It is a G shaped layout. I have never measured the mainline track. I probably should do this. The current layout has taken 12 years to get to where it is. Labour of love. I have changed the control system 3 times since this, which meant it has been rewired twice. I will never to that again as it's too time consuming.

Definitely, you can use the software to control turnout/switches via the PC monitor. As discussed before, this limits the amount of wiring required to a physical control panel. If automation is your thing, TrainController (TC) can be used for a myriad of tasks such as setting up grade crossing gates, PC controlled layout lighting and realistic signaling that can all be controlled from TC. You could set the layout fully automatic scheduling if you want to show friends the layout with minimal input by you if you are entertaining.

2. *Ball park cost for software and all the electronics to computerize your model railroad?*

This is dependent on size of layout and software architecture. Eg: S88N or LocoNet. I use S88N as it is a cheaper option and TC will do all the heavy lifting regarding collision avoidance and train detection. I use either Digikeijs or Liffinski Datem Technica (LDT) which are both European companies. S88N protocol is an older standard, but used widely still in Europe. If you wanted to stay with USA products, Digitrax is supported by TC. I personally love Roco which is an Austrian Brand. I believe it is a better system, in particular updating firmware in the command station and hand controllers.

Cost:

Digikeijs turnout/switch control. DR4018 controls 8 turnouts = 37 Euros= \$42 USD (approx.) LDT are a similar price. Therefore \$5.25 per turnout. My layout has approximately 148 turnouts. I use predominately Tortoise and DCC concepts turnout motors. In my staging yards, which are hidden, I use Roco above board solenoids to change the turnouts.

Occupancy Detection:

I would conservatively have 195 isolated occupancy blocks controlled by the above companies detection units. They cost around 54 Euros (\$61 USD) and control 16 separate blocks. Therefore, \$3.80 USD per block. This is a tricky one to talk about with out a track plan in mind. I have a lot of blocks because I run so much automatic operations. If you want very accurate stopping distances you need a lot of blocks to track the train. But my layout is very large by Australian Standards.\

Software:

Train controller costs \$799 USD for the gold version which is the highest level of control. Bronze at the entry level is \$164 USD and Silver in the middle \$529USD. So the software is expensive. You can add other software plug ins to this, such as Smart Hand, which is basically a network interface that uses a mobile phone or tablet to control the trains or the turnouts. I use Smart Hand on a wireless wifi network in my layout room to control the layout via 5 PCs which includes 1 PC that is the 'main PC' and is effectively the dispatcher's panel. I have a PC in each of the main shunting type areas. Eg: Belair Yard (main yard), Harbor area, Nancy (alpine area) and Barham (suburban area) and then the dispatcher's PC that can control the whole layout.

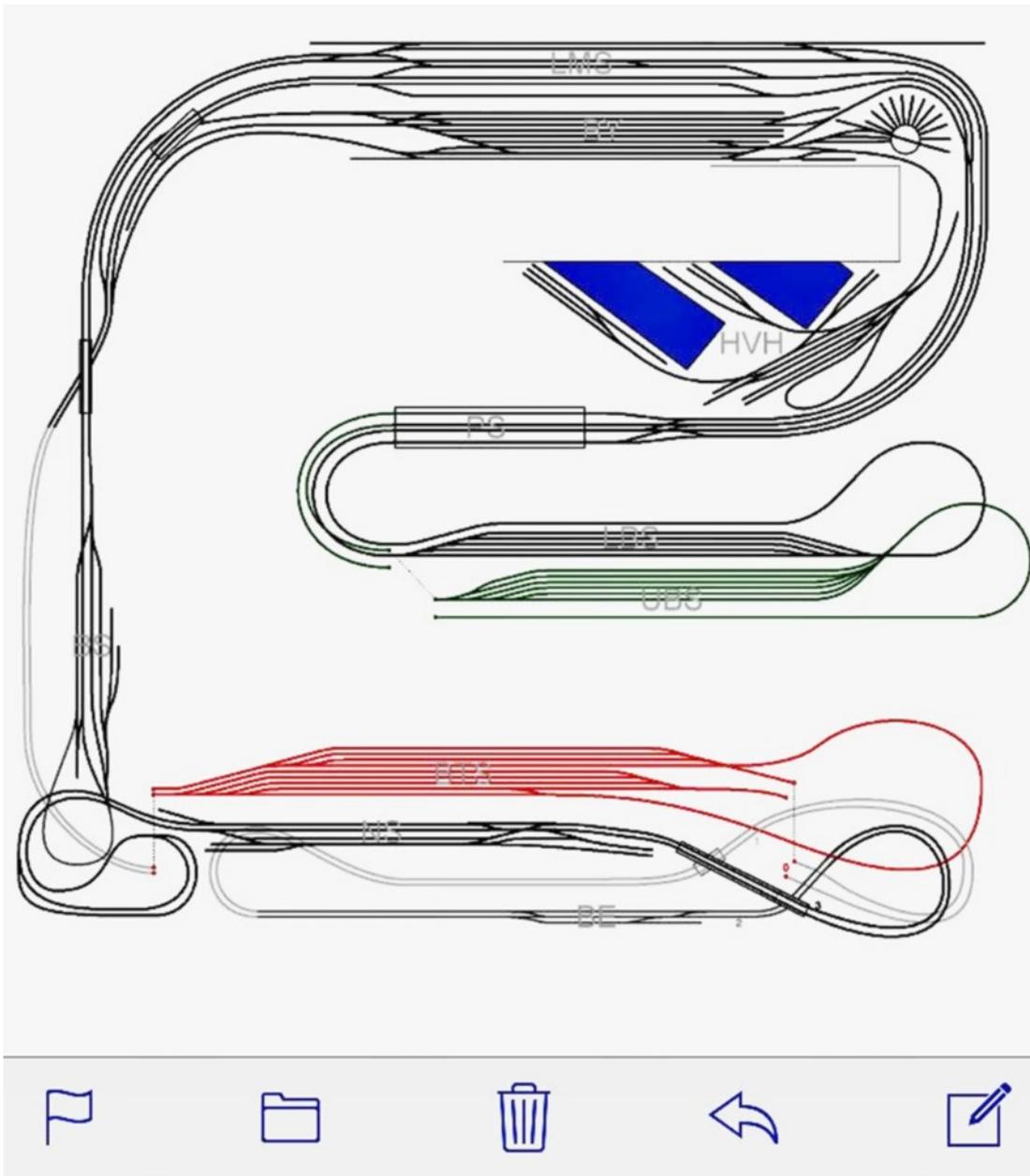
I use my 'soft switchboards' to move turnouts and start schedules and activate other functions. To run trains, I still use my proprietary controllers of my DCC system which is a Roco Z21.

There are other plug ins such as Animator (free) that you can use your own photographs of locos and rolling stock to use as icons with in TC. There is another plug in called Collections (not sure on price) where you can select from a myriad of photos to select to use as icons. I have this for my European stock. There are many USA pictures for you to use.

Software differences:

This text below is copy and pasted from TC website:

The following variants of TrainController™ are available



TrainController™ Bronze offers a cost-effective entry into model railroad computer control. It is well suited for users who are looking for an easy to use program that covers reliably the standard tasks of model railroad control, such as switchboard operation, routes, block securing, hidden yard control or shuttle trains.

TrainController™ Bronze also provides an excellent entry for model railroaders, who still have little experience with model railroad computer control. The features are focused on the essential functions. This makes it easier, in particular at the beginning, to distinguish the basic functions from the advanced.

TrainController™ Silver is the successor to the legendary program –

TrainController™ 5. It addresses users with high demands, and also users who are not reluctant to puzzle to accomplish individual goals. TrainController™ 5 was already the leader among the programs for model train control. This position is strengthened further by TrainController™ Silver.

TrainController™ Gold is the ultimate control program for model railroads. It combines maximum functionality with simple operation, maximum convenience with most efficient way of working. TrainController™ Gold is the choice of professionals and users with highest demands that want to control like the professionals. Even the largest model railroad layouts can be efficiently and conveniently managed. Their block and route system can be configured in a few days! But also less experienced users can accomplish ambitious tasks easily and with little effort with TrainController™ Gold. In TrainController™ Gold, virtually all essential requirements are considered, that have been collected from users of earlier versions of TrainController™ in the recent years. TrainController™ Gold is not only ahead of similar programs by several years, we even claim that currently there is no comparable program on the market!

3. How about some photos of your Dad's and Grand Dad's layouts?

Sorry I don't have these. They are on the old slides and never been bought across digitally..

4. *What about switching at point A and B? Is that computerized, or do you have to have control panels at each Point and do switching manually?*

Switch at A and B would still be done by the operator via TrainController (TC). I use my 'soft control panels' eg: using the mouse on each of the 5 PCs that run my railroad. If you don't have a PC in your layout room, you could use a tablet that shows the switchboard that can be operated by a touch screen or stylus. So let me try to explain this a little better. Train starts at point A, depending on how many operators I have on any given OPS session or their experience on my layout. If I have only me or 1 other operator, the layout will be switched to Automatic. Which means a waiting train is started via a button on the TC switchboard. All turnouts are switched automatically and train control is all done by the TC, including collision avoidance and all starting and stopping of trains at red signals. The train then goes through to point B and the schedule terminates. Then train is then shunted manually via the operator as per the waybill and switch-list system.

Alternatively, semi manual (as I call it) is where a waiting train is set on its journey via a button on the TCs switchboard, as on the above system. The difference here is that the operator starts and stops the train at a red signal. I have built in via TC that if an operator does not stop a train at a red signal the system TC will take over the train and stop it so the train doesn't collide with another superior train.

5. *Software controls trains from point A to B and from B to A. Also controls switches along those routes and signals and makes sure trains do not collide. What else can it do?*

This is where TC can get complicated...What would you like it to do?

5A. *Will it control switching pickups and drop offs along a route between points A and B? Will it also control animation scenes on RR? Will it also control sound module in buildings or scenes on RR? I guess what I am asking is will it also control non trains or routing items on a RR?*

Yes, you would set up schedules A-B to C and beyond if required. You would just link the schedules together. You can link any number of schedule sequences together.

Yes, regarding the animated scenes. I use Kadee electromagnets with relays so I can't see why you couldn't use other animations using a decoder to turn them on and off using TC. I know of modelers controlling cranes and all sorts. As long as it can be connected to a decoder of some sort, you can control just about anything I would think.

6. *What does "Need some computer skills" mean? How much skill is required?*

If you have basic to moderate PC skills with windows. That is an important point as TrainController is only for PCs at this point. A good understanding of this program is required to justify or load in all the data needed to run get the railroad running, eg: each turnout has a DCC address that needs to be added to TC so the system can activate the turnout. The same as loading in the addresses into the blocks so they activate when a current drawing stock on it, eg: loco or rolling stock with resistor wheels sets. The instructions within TC are ordinary at best. S88N is easy to follow as they are daisy chained together so module #1 (occupancy detection) has addresses 1-16, module #2 is addresses 17-32 and so on. Turnout decoders are a little different as you set a base address, eg: 100, so an 8 input decoder would have address range from 100-107 etc. Very similar to setting a DCC address for a locomotive .

But you break each component and justify the switchboard as you go. Eg Step 1 draw your track plan, step 2 put in turnout addresses, step 3 put in occupancy addresses. Then the sky is the limit where you go from here regarding automation etc, eg: setting up schedules. But these 3 steps will get you up and running trains. Which is very important.

7. *What is next for your RR?*

That is a great question I am in the process of building my harbor, Harold Victor Harbor, which is named after my grandfather. When this track work is finalized, I will be having a 'Golden Spike' ceremony as the all the track work will be practically completed. After that, the layout room needs a really good clean and I want to run some trains. This has not been done over the whole layout for some 12-18 months due to scenery work etc. For an upcoming video series, I will be doing a harbor side diorama that will fit into my harbor. I will be using Nickerson Landing and Eagles Landing by Carolina Craftsman Kits. (Side note I have interviewed Jeff Grove before..great bloke.) and the lighthouse will be Epsillion by Bruce Nickerson, Seaport Model Works. This will take me some time yet.

8. *What is size of your RR?*

Fallen Log Railway is 30x30 feet. Not sure how long the main line is..I should measure it one day. I will send photos once I get home in the next few days.

Last question. I am starting with zero knowledge of computerization of a model railroad. Is there anything else you would like to tell model railroaders about the subject and your experience with your modeling that I have failed to ask?

Darren said: "Keep it all simple, do the basics, master those, and then build the PC architecture as your experience/confidence grows. Just give it a go, this aspect of the hobby is mind blowing."

Thanks Darren for your help. You can contact him with questions or comments at Darren.Johns@sscaleresource.com.

By the way, when Darren and I talked by Skype the first time, he told me he can help modelers get started with their automatic computerized control system if they are having problems. Specifically he said: ". Imagine this: You want to run an operations session on your miniature transportation system, but due to the current restrictions, you don't want to risk operators coming to your home. This is no problem as you have set up your DCC railroad to be flexible. With a click of a few buttons you can send pre staged trains to any location on your transportation system ready for shunting.

He continued: If you are like me, seeing only one train traveling over your railroad is a bit boring, but you have set up trains to run automatically to create bridge traffic. This includes all prototypical bell, horn and lights activations on the locomotive and pre staged stopping locations such as stations. These trains will never collide with the collision avoidance measures built into the railroad. Once you conduct your manual shunting moves at the various industries and sort your paperwork you send this train back to the yard...but this time you want to control this train manually. This is no issue, you easily set that train to semi-automatic control. This allows you the use the hand controllers to control the train: speed and functions etc. With semi-automatic control if the engineer does not stop at a red signal the computer takes over the train to stop it thus avoiding collisions. Once back at the yard, your train goes through an uncoupling move utilizing Kadee Electro magnets uncoupling the locomotives from the rest of the train. The locomotive then automatically parks itself in a round house or other facility. You are now free to shunt this train.

Does this sound exciting, but daunting to set up computer control? This software is available now. It is called TrainController. Please see a link below to YouTube channel where I have shown the software's capabilities. Furthermore, you can download the software and use its full functionality connected 'live' to your miniature transportation system before deciding to buy it.

If computer control is not your thing, but you want some help with DCC. I can work with you to design the DCC hardware architecture and teach you the basics to create your miniature transportation system.

YouTube: <http://www.youtube.com/c/ModelRailroadTechniques>

Website: www.modelrailroadtechniques.com

Patreon: www.patreon.com/modelrailroadtechniques.

Facebook – <https://www.facebook.com/modelrailroadtechniques/>

Instagram: <https://www.instagram.com/modelrailroadtechniques/>

Now let's meet some other Model Railroaders who use the Freiwald Software:

To find USA modelers, I announced on my July 1, 2020 Zoom Meetup (Note: A video of this Meetup is available on Jim Kellow MMR Facebook page) that I was looking for USA modelers and organizations to talk with about using the software. Jack Dziadul gave me several referrals. Please meet Jack's friends:

Bill Gaver. Heritage Park Railroad Museum, Model Railroad.

NOTE: Jack Dziadul sent me a video of the Heritage Park Railroad Museum Model Railroad. I hope you will view it as it is not only a model railroad, but a piece of history caught in the year 1909. The area is Wakefield New Hampshire and the Railroad is the Boston and Maine (B&M).

To my mind, what this club is recreating is how life was in the early years of the 20th Century in New England. I put it in a par with the [Pendon Museum in England that I wrote about in a previous "New Tracks" article](#). As I said in that article: "WOW WOW". Here is another "WOW WOW". Please look at the video as photos do not do the model railroad justice, although they do show the modeling skill and dedication of the Club members.

The Heritage Park Railroad Museum has a website that provides more information I hope all of you will look at it and, if possible, plan a trip to visit the Museum. [The Freight House Layout](#) is part of the [Heritage Park Railroad Museum](#). The museum is owned by the Town of Wakefield, NH. It is built and operated by volunteers.

[Please see the hand out that the Museum provides describing its computerization of the model railroad](#). This is how Bill Graver described the Computer operation to me:

"We use the software to control a 1909 era HO scale model railroad depicting the five villages of Wakefield; namely, Union, Sanbornville, Wakefield, East Wakefield, and North Wakefield.

Two of our Heritage Park Freight House Model Railroad Crew members are the best source for the information you seek. It was Chris Oliver, whose magnificent Donner Pass HO scale model railroad operated with the Freiwald Software, who recommended and volunteered to automate the Heritage Park layout powered with NCE by adding the operating software to the freight house B&M layout. (Note: you will see Chris' layout later in this article.). Chris was very ably assisted by Rich Breton, a multi-talented member of our crew, who is also a superb photographer. Together, they would be an excellent pair to offer you background and commentary re: Freiwald software, as well as answer."

I found the President, Rich Breton, is very knowledgeable about the historic aspect, the electronics, and the Freiwald software used on the layout. He was also very helpful in providing photos of the layout and answering my many questions. He then referred me to Chris Oliver for more detailed information about the computerization.

Chris told me: "I will explain why I think the layout was computerized. After visiting my layout in April 2017, Rich Breton introduced himself and described the Freight House layout. He asked if I would provide a demonstration to the others involved with the museum layout. The fact that I alone (using Train Controller Gold (TC) software) was able to operate my layout (about 15 - 20 to 40 car trains,) including dispatching, track authority, protection, train signals, sounds and lights (i.e. blow each road crossing and tunnels) generated great excitement."

He continued: "Prior to TC, the museum would have a single train running from return loop to return loop. The only automation was automatic turnout switching when the train was in the return loops. Visitors like to watch trains moving. One train repeating the same sequence without any other sounds or trains didn't maintain

visitor's interest (or donations). After Rich described the layout and his goal to dramatically increase visitor enthusiasm and retention. I knew I could help.”

We chose Freiwald Software because I know it. Back in 2007, it was because I wanted a product that provided a complete solution. The only other offering I could find at the time was “roll-your-own” using JMRI Panel Pro. At the time, it was easy decision. TC offered a plug-and-play capability. JMRI didn't.

We both use the current release of TC Gold and +SmartHand software modules. Freiwald provides minor updates free of charge. Major new releases sometimes require an upgrade fee. For us the cost was not a major factor; about \$850US for both modules. They offer a Bronze (reduced features) version for \$164US.

Also you need to factor in the cost of a Windows type PC. Anything less than 10 years old should be acceptable.

Installation: If you're capable of maintaining your own PC (Installing and configuring software), you will probably be successful. TC has two modes. First you must enter the Edit mode. In this mode, you use a Drop and or Drag method to “draw” a logical map of your layout's track. Next you need to connect and describe the sensors (Block Occupancy), locomotives and turnouts. (DCC and or LocoNet using USB adapters are most common in the US.)

The museum already had NCE DCC control with all turnouts powered and DCC controlled. Reliable switched and controlled (DCC, LocoNet,) turnouts is key to automation and operational happiness. TC can see using trains using occupancy sensors (current, photocell, magnetic). Each defined block needs 1 or more sensors. In the case of the museum, I installed the software and created a basic track map with two blocks as Rich connected the computer to the NCE command station and installed 4 RR-CirKits track sensors. I then demonstrated basic control of two trains including opposing meets using a passing siding.

TC allows us to automate the complete layout environment. I call it realism. As an example, My layout lighting is controlled by TC, (built-in Fast Clock and Time-Table.) Each locomotive's horsepower, speed limits, vehicle weight, acceleration and braking abilities are all configured and used to enhance the realism of operations. This capability does not rely on DCC decoder momentum settings. TC can simulate the effects of grades. “The operator (or TC) drive the train. TC drives the realism.”

Training: Learning to operate with TC is not very difficult. If you a comfortable using a smart phone or iPad, you can do it. If that scares you, then TC is not for you. Some volunteers needed only a few hours of hands on training. Other took a few days.

Getting the most out of TC takes time. After 10+ years, I'm still learning. For me, that's part of fun. Freiwald maintains an online forum (20,000 members) that is a great resource for new and experienced users. There are now many YouTube video tutorials as well.

To me, it's just like becoming proficient at any other aspect of model railroading. My first attempts didn't always look great. They provide the opportunity to learn and improve. I come back into the hobby with high-tech background. Others bring other skills. We all have our interests. My workbench now has a computer, a laser cutter and a 3D printer. 20 years ago, it didn't. It's a great hobby.

There is no question in my mind that the use of the software program to operate the railroad allows the club to offer visitors a great look at the Historical Realistic Operation of the railroad that would be very difficult, if not impossible, to do if volunteers had to operate each train. This enables the club to operate the railroad for public viewing without the need for having to schedule a lot of club members to run the Railroad for each public viewing. Normally, we have only one or sometimes two members when open. The second member runs the 1950's Lionel layout and welcomes guests.



View of Sanbornville Freight House on HO scale Boston & Maine model railroad located in Union NH.



View of Sanbornville Railroad Station on HO scale 1909 Boston & Maine model railroad with background photo of Moose Mountain.



Southbound Boston & Maine mixed freight crossing Union Meadows causeway in Union, NH



Northbound Boston & Maine Railroad passenger train making a scheduled stop at the busy East Wakefield station.



Northbound Boston & Maine Railroad passenger train making a flag stop at Mathews station in North Wakefield, NH. This is one of the five villages modeled on the HO scale 1909 Boston & Maine Railroad at Heritage Park Railroad Museum located in Union, NH.

Heritage Park Railroad Museum / Layout Description

The layout overall size is 14 x 33 feet including the staging area. It is DCC (NCE) and uses Freiwald Train Controller software to automatically run up to six trains following realistic schedules. The layout height is 54". The structures are scratch-built based on historic photographs and B&M documentation. The scenery is 100% complete. Handicap accessible.

1909 Boston & Maine Layout Description: This HO scale model railroad accurately represents the five villages of Wakefield, NH as they were in 1909. This museum layout features historically accurate scratch-built structures and highly detailed scenes depicting what life was like at the turn of the century. The track plan, motive power, and rolling stock were designed and built based on research from the B&M archives located at UMass-Lowell. The layout features photo backdrops, elaborate realistic scenery, with generous scenery to track-work ratio for a life-like viewing experience. Up to six trains run per schedule with a computerized automated control system. The layout is housed in a restored 1875 B&M freight house with other railroad, model railroad, and industry displays, including a late 1950's vintage operating Lionel O-gauge layout. Heritage Park Railroad Museum also has full size equipment on display, including a 1902 Russell Snowplow, 1950's era B&M caboose, B&M wooden water tower, and a restored 1911 B&M passenger station.

For more information please contact [Bill Graver](#), [Rich Burton](#) or [Chris Oliver](#). Thanks Bill, Rich, and Chris. I appreciate your help and love the railroad your Club is building

NOTE: If your community has a museum or club activity that is capturing the community's history through model railroading, please let me know. I think there may be more railroads like this one and I would certainly like to know about them for a future article. What a special way to preserve a moment of our history.

I am so honored to be able to introduce Chris Oliver to you. I would love to see his fantastic model railroad in operation. I am sure you will too. Please meet Chris :

Chris Oliver (USA Modeler)

I've been using Train Controller (TC) software for about ten years. My current layout is an HO scale continuous climb multi-level filling a 34 x 48 foot area. It's an early 1950s representation of the SP mainline from Colfax east up and thru Donner Pass down to Truckee, CA with visible staging loops (7 Tracks ea.) at each end. The Main is about a 1000 ft run all double track and signaled like the prototype. I typically run 20ish trains. All operations are preformed using TC. I've been working on this project for 8 years.

Chris Oliver's. Model Railroad BIO:

I've had a passion for railroad history and modeling railroads since childhood. I grow up in New England during the 1960s/70s so the Boston and Main and MBTA commuter trains fueled my early interest. As a teenager, my desire to add working signals to my 4x8 ft plywood "layout" lead me towards a carrier in Digital Electronics just as microprocessors and Personal Computers were emerging. Not long after completing a 6-month Trade School "Computer Technician" course. I entered the industry. Good fortune stuck in 1981; I joined a start-up, developing computer networking technology. Today, we all just call it the Internet.

Work and young life consumed all my time, so it wasn't until 1996 and the advent of DCC that sparked a renewed desire to attempt another layout. I began construction of a HO scale freelanced modular design. Basically it was a double track oval with 2 crossovers, a small yard and lots and lots of blue foam-board. My real interest was learning about DCC. I purchased a System One (NCE forbearer) and quickly realized operating a model RR had entered a new era.

A move to a new home in 2000 led to an around-the-walls multi-level HO scale layout based on the Maine Central Mountain Sub from North Conway, NH up thru Crawford Notch (New England for pass) towards Vermont. Once the layout was up and running, it didn't long before my first "cornfield meet.". The reality is one person can safely operate only one train. I began a search for a solution.

Fast forward to 2007 – another move and a new layout (N scale due to space limits). From day one I planned to allow full automation of operations. I used this layout as a leaning environment. I learned a lot mostly using the Internet and trial and error. Today there is much more available online to help in implementing automation.

2012: We move again (the last time). [Please see the presentation I gave in 2017 on my current Donner Pass layout.](#)

Until I joined the NMRA Seacoast Division in late 2016, I'd always been a loner as far as model trains went. Since then, I've met many skilled modelers and have hosted a great many visits to my current Donner Pass layout here in New Hampshire. I've also "evangelized" the use of automation to bring what I call scaled realism to our layouts. I was asked by a local railroad museum to help automate their HO scale layout. I've been volunteering with several other highly skilled model builders since 2017. My modeling skills are improving. My strengths are in using technology; using computer-based tools. I "scratch build" using Fusion360 software, a laser cutter, 3D printer and an airbrush.

[Click for Layout description. Please see PowerPoint presentation I gave in 2018 on model RR automation.](#)

An Introduction to
Model Railroad Automation
Using a PC, DCC, & Occupancy Sensors
V1.1 4APR2018
Chris Oliver
DonnerPassMRR@gmail.com

What is Automation?

- Insert SW-PC between you and your Layout

Automation vs. Myths

- Run multiple trains stress-free
- Dispatcher's "CTC-like" Panel
- Prototype Signal Aspects
- Sounds, Lighting, Other Effects
- Realistic operations achievable
- Too complicated
- Too expensive
- Need resistors on all cars
- Can't run trains manually
- Won't work with my layout (Point-to-Point, Modular, ???)
- What else?

Automation Software

- JMRI "PanelPro & DispatcherPro"
 - Internet <http://JMRI.ORG>
 - Open source (Free) Java based (PC or MAC) "Building Blocks"
 - Requires more effort - technical skills - provides tools not solutions
- RR & Co. "Train Controller"
 - Egmating, Germany** <http://www.freiwald.com/>
 - Proprietary (\$140 - 700) PC/Win only - Highly integrated application
 - Easy for beginners - very capable for experienced users – 15K users
 - Free download – 30 day trail - includes a simulator
 - Forum and YouTube tutorials <http://rudysmodelrailway.wordpress.com>

Simple Rules: Blocks, Routes and Trains

- **BLOCKS** are physical places and logical containers
 - Can be any length: 1+ **contiguous** sections of track: **NO TURNOUTS**
 - Each BLOCK **needs a sensor** to show **occupancy** = *“Something fouling”*
 - 3 Logical States: Not Reserved, Reserved, Current Block
- **ROUTES** are logical links that connect BLOCKS
 - Turnouts provide 1+n ROUTES (“paths”) between BLOCKS
 - ROUTES may include occupancy sensors. **Not required** – Enhance capability
- **TRAINS** = **ENGINES** (≥ 0) + **CARS** (≥ 0)
 - **ENGINES can** move
 - **CARS need** ENGINES to move
 - **TRAINS reserve and occupy and release** BLOCKS
 - **TRAINS reserve and traverse** ROUTES

Occupancy Sensors “Block Detectors”

- Sensors tell **When** and **Where**: “Only things that matter!”
 - **When** a **TRAIN** enters a **BLOCK** or **ROUTE** = **Trigger** actions and or timers
 - **Where** something is: **BLOCK(s)** or **ROUTE(s)** = **Condition** = True or False
- DCC **occupancy** easily detected by sensing current flow.
 - These are **area** sensors. 1 per isolated section of track.
 - Require **something** across the rails that consumes power. ($>5\text{ma}$ Load)
- Most DCC providers (NCE, Digitrax, ESU ...) offer occupancy sensors.
- RR-CirKits provides a comprehensive set of easy to use products.
 - RR-Cirkits, Inc <http://www.rr-cirkits.com/> **Waxhaw, NC**

Tips for Success

- Pick your SW and HW first.
- Create a “track diagram.” Use Simulator. Connect PC to your DCC system.
- Add Block Occupancy Sensing using “*LocoNet*” or similar.
 - 1 per each isolated track section contained in each BLOCK.
 - 1 per turnout group (Interlocking) if using CTC signaling – Optional but useful
 - Create a “*calibration block*” and use it - **Profile Loco’s speed map first.**
- **Test and fix everything - Improve reliability!**
 - Track, Turnouts, Trains, Wiring, etc.
 - Install DCC circuit breakers to isolate “short-circuits.”
 - Use **isolated** DCC **power** control to turnout motors.
 - Consider “*Frog Juicers*” to power Turnout Frogs.
 - Automate more if you like (Sounds, lights, ????)
- Sit back, run your railroad - Remind visitors, “***Don’t touch the track. Please.***”

Thanks Chris for a very informative and thoughtful presentation of your model railroad and computerization. You can reach Chris at Chris.Oliver@sscaleresource.com.

Well that’s it for this time. I truly hope this article has gotten you thinking about what computerization could do for your enjoyment of operating your model railroad. If it has, then I accomplished my goal. Please don’t forget to check out my Facebook page Jim Kellow MMR so we can stay in touch between articles and you can find the log in Links to Zoom “New Tracks Meetup” every Wednesday and Saturday evening at 7:00 p.m. EST and our “New Tracks Meetup Train Show” November 21, 2020 at 1:00 p.m. EST. See you then.

Thanks for reading this far. Time for me to get back to my workbench and build something. Good luck with your model building and going down some “New Tracks”.



**JOIN OUR FREE SECOND VIRTUAL ZOOM
"NEW TRACKS" TRAIN SHOW
NOVEMBER 21, 2020 AT 1PM EST.**

The show is full of some of the most creative Model Manufacturers in the hobby, most of the leading Model Publications, plus the Hobby's National Model Railroad Association.

Modelers from around the world are planing to attend.

Put the date on your calendar or better yet go to our Web Site; NewTracksModeling.com and register to be notified by email so you will not miss the show.

You can view the Show live on Zoom or join the Live streaming on our "[New Tracks](#)" YouTube channel.

Come see what's new coming from these outstanding manufacturers, maybe learn how to become an author and get news from leading model Railroad publications, and learn why you should join the hobby's official Association, NMRA. Sign in a little early so you don't miss anything and bring something to drink and eat because this is going to have new information you won't want to miss, every several minutes, throughout the afternoon.

Join us, it's FREE. See you there.

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That's right, after many requests we will now be offering non business reader classified ads for buying and selling.

[Fill out our secure on-line form here.](#)

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The \$10.00 Basic Ad contains 725 characters less contact information.

Two extra blocks of 725 characters are available for \$7.50 each. For larger ads, please contact us. Your Email address will be linked so anyone reading can contact you at immediately while reading the ad.

[CLICK HERE](#)

The before and after photos of my restoration of a late 40s sheet tin O Scale Rail Craft panel side hopper.

By Brady McGuire, P.E. Ret.
Photos by the author



When I acquired the hopper, the original paint on the car was in fairly good shape. Only a few places needed touched up by hand with a small brush. But the old decals were really deteriorated. The first thing I did was give the model a good coat of Dull-Cote to seal what was left of the decals.

I pondered for a while on whether to strip the car and repaint it and then try to find new decals. Then I remembered that I had seen a burnt hopper back in the 1970s and tried to replicate that look from memory.

I did a few minor repairs, added new Athearn Delrin scale trucks with metal InterMountain wheelsets and Kadee couplers. The better WABASH decaled side I left as is and just weathered it.



Side 1



Side 2

To preserve the car as original as possible, I decided to work with the original coupler mounting socket. I modified the shank on a plastic Kadee #804 coupler to fit inside the socket. I removed the slotted portion and the bottom extension creating a simple smooth rounded short shank. I drilled a new clearance hole near the rear of this new shank for the original small screw tapped into the socket. I added styrene shims inside the socket to prevent the coupler from drooping.



The worn off, deteriorated, decaled side I weathered as if it had had a fire in the coal load that burnt off all the paint. The yard clerk took his chalk stick and did his handy work. He hopes he never sees this WABASH car again and plans to route the car from the Pennsy back to the Wabash at Logansport, Indiana as quick as possible.



BACKSHOP SOLUTIONS

By Ross Dando

Have a modeling question for our experts? Please send your description of your modeling problem to backshopsolutions@oscaleresource.com.

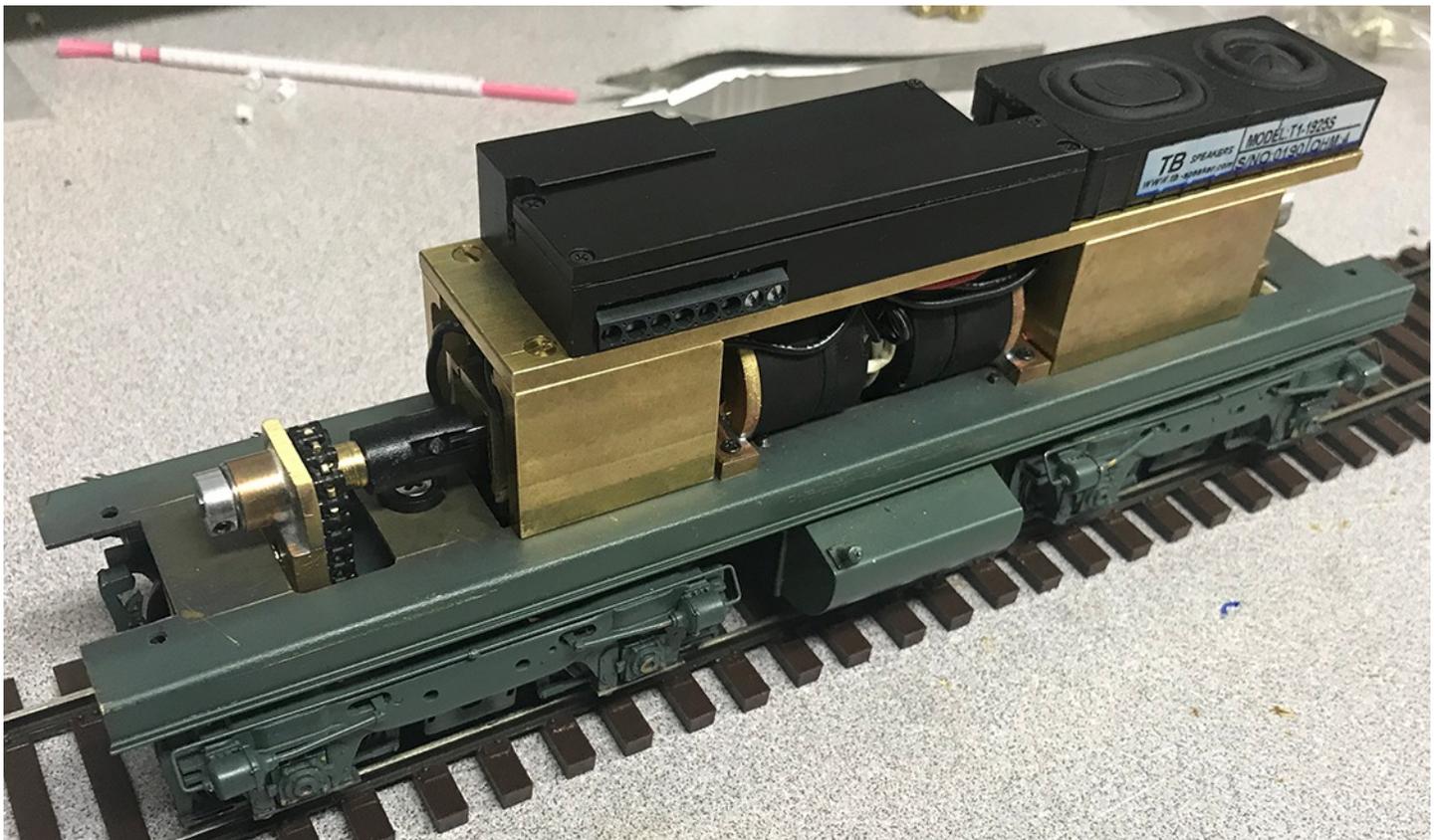
WHAT'S ON THE BENCH?

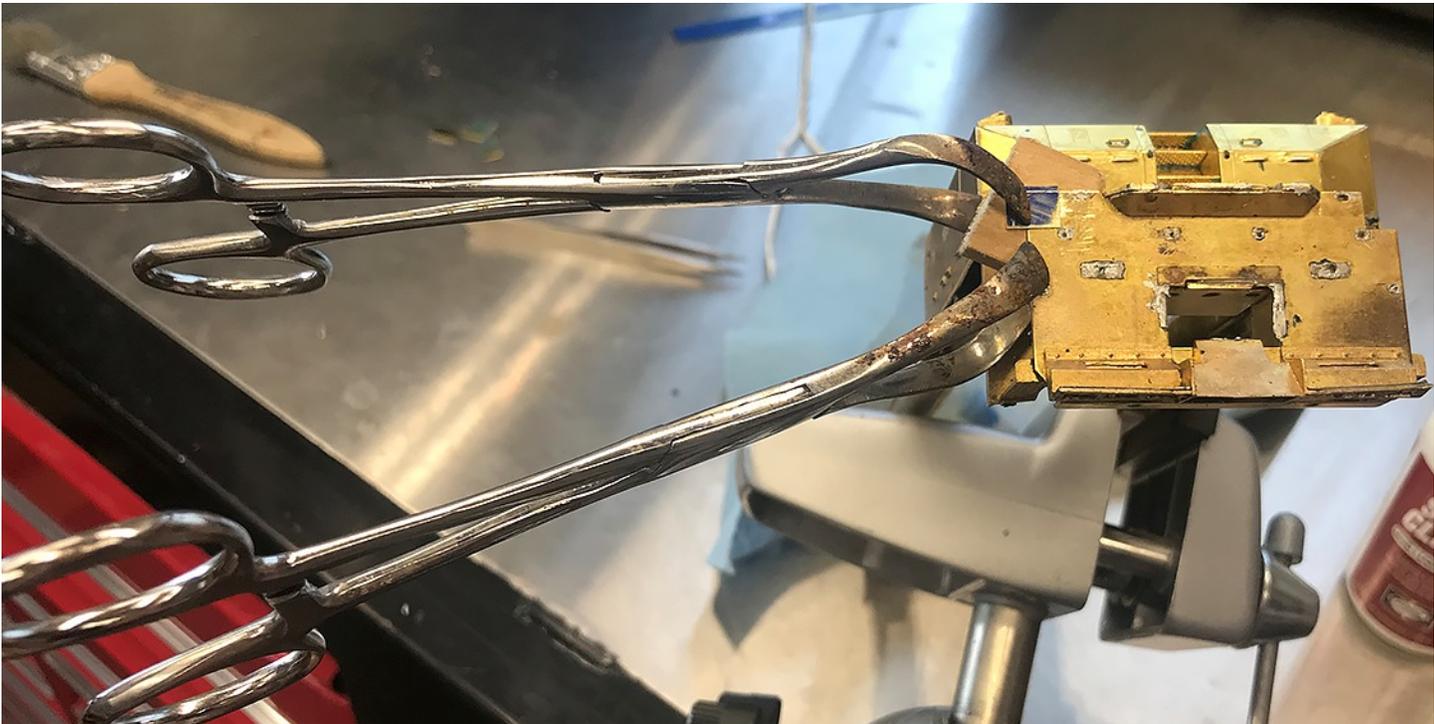
WHAT HAVE I BEEN WORKING ON?

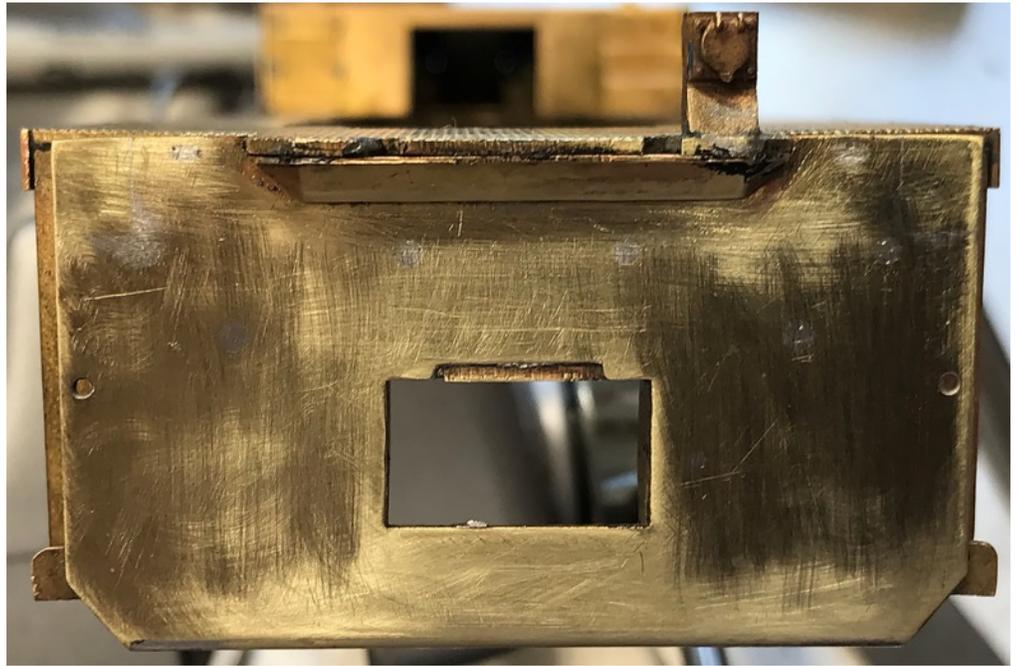
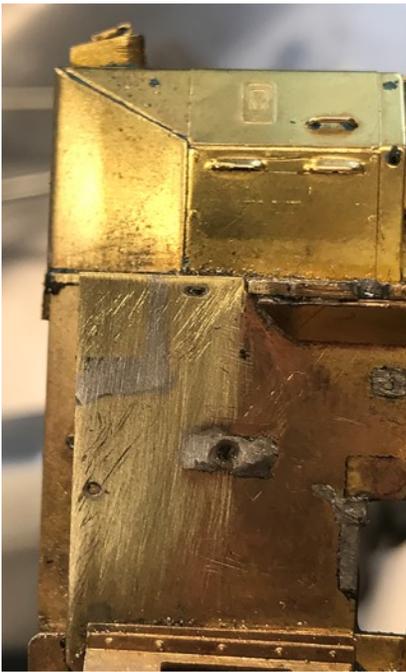
HAVE I FINISHED ANYTHING?

All questions that come up when talking to our modeling friends. Those that know me know that there are too many projects on the bench and most likely not ones I had started the last time we talked. And that could have been yesterday! Me finish something? Those that know me know that doesn't happen very often.

So what's going on this time. The brass SW1500 I showed some of last time has a heart, and Jay Criswell's Swiss watch of a drive runs and sounds great after I spent some time building a decoder and speaker support. The parts were machined to hold the ESU decoder and terminal strip for hooking everything up. A TangBang speaker rounds out the package. As I started working on the details on the model, I was not happy with a few things and have stepped back a bit. I am getting the parts made so I can regroup and build the model I want. Here are a few pictures of the innards that will not be seen, but will be heard.







The next thing that has been worked on is a module or two. I doubt many Proto48 modelers will travel to do a set up, but my concept is to enable interchangeability of scenes and configurations to set up in the spaces available at my home during different parts of the year and the changing activities. Standards. You can not have an interchangeable group of modules without standards. Having come from HO after so many years, I have seen and set up several types of modular layouts. In my youth, I remember modules so heavy that it took two people to lift and hours to set up and get running and now, fast forward to the FreeMO standards which are popular today. All of them did not click and I was searching. Along comes a group back east that I found on iOS groups called Sipping and Switching. They have things dialed in as far as I am concerned. The module construction is a bit complex but very light weight.





The end plate design has alignment pins and a fixture is used to align the rails to pins on the endplate. I have cut parts for my first two modules and assembled one. My friend, Greg Green, loves wood working and models with an extra rail, but we have fun chasing trains and building things. We have spent time figuring out how to remove more weight and ensure that we have the jigs and fixtures to make the modules interchangeable, and I will machine an end plate that will be used to locate the rails to a fixed standard.

Here are some pictures of the pieces, parts, the assembly process and a finished module with my vision beginning to take shape. It will take time, and like most people know, never be fully finished.

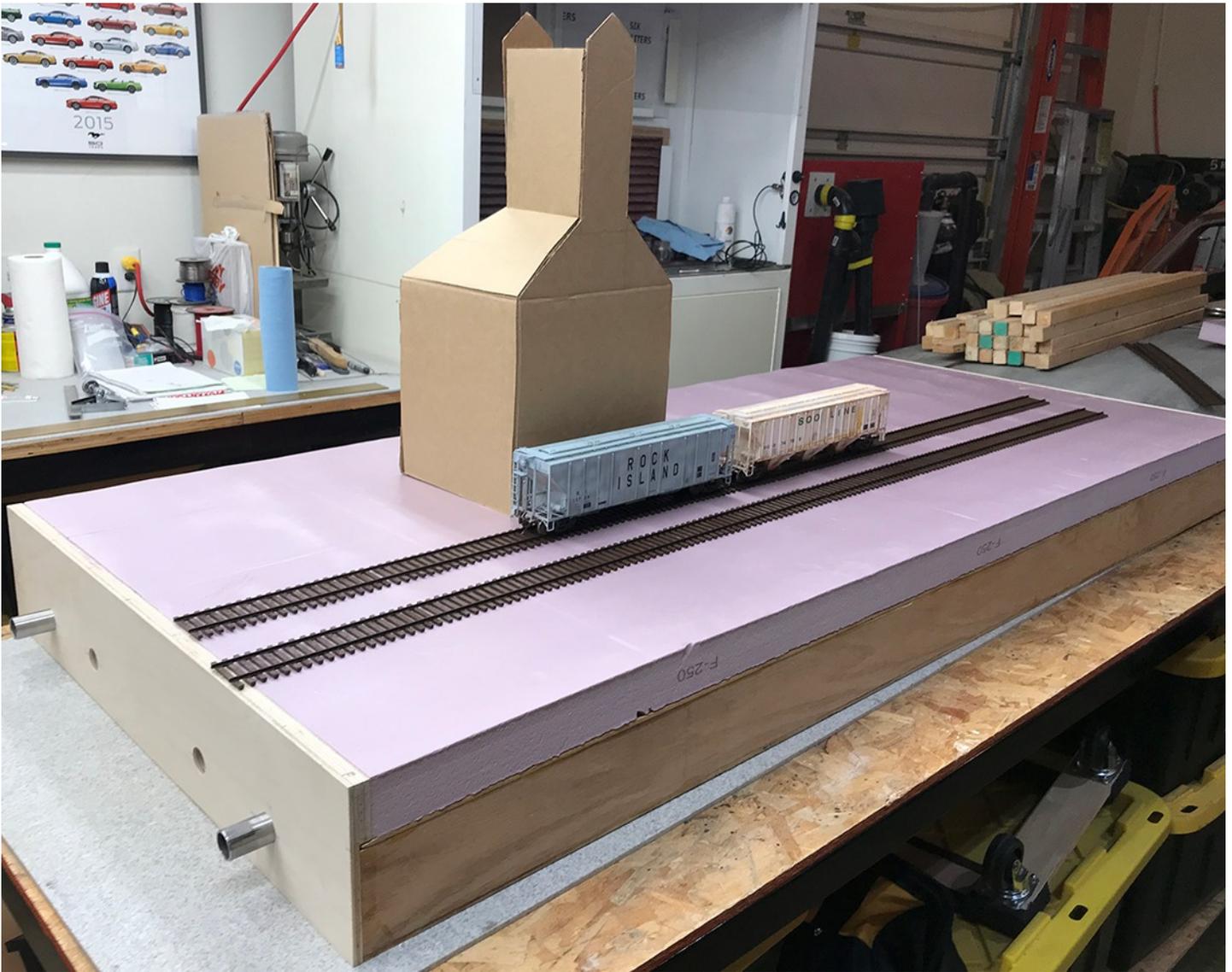








My wife Debbie with her excited look, a bit staged. She is a trooper and is slowly getting used to the trains. I keep telling her, if you like this wait until we start making trees!



Another distraction since my last update is a couple semi trailers. My friend, Harz, seems to find things that I must have. Switchline Decals came out with Rock Island Motor Transit decals. I had to get them, and when they arrived, I got really distracted and had to see what they looked like on a trailer. I have the Lionel 40' trailers. They are a bit pricey, but the detail is amazing for a 1/48 model. There were a couple of details that needed attention, and once I started, I ended up doing more. The end results are not in. But I have painted and decaled trailers, learned how to weather the tires (one tire anyway, with many more to go). Here are some pictures to show what I was inspired to do.







Finally, I painted the car I worked on last issue!!! There may be a chance of decals by the next issue, you never know. I also painted my second pilot model of the flat car along with repainting the original pilot model. Now I have a stack (literally) of cars that need to be decaled.



If you have any questions about processes I use or showed in pictures please reach out to me at backshopsolutions@oscaleresource.com. I enjoy sharing my projects, but this column really is about helping others work through problems they encounter and to show how I might do it.

In closing, I have really enjoyed getting back into modeling. It has helped clear my mind and get some sense of normalcy back in my life.

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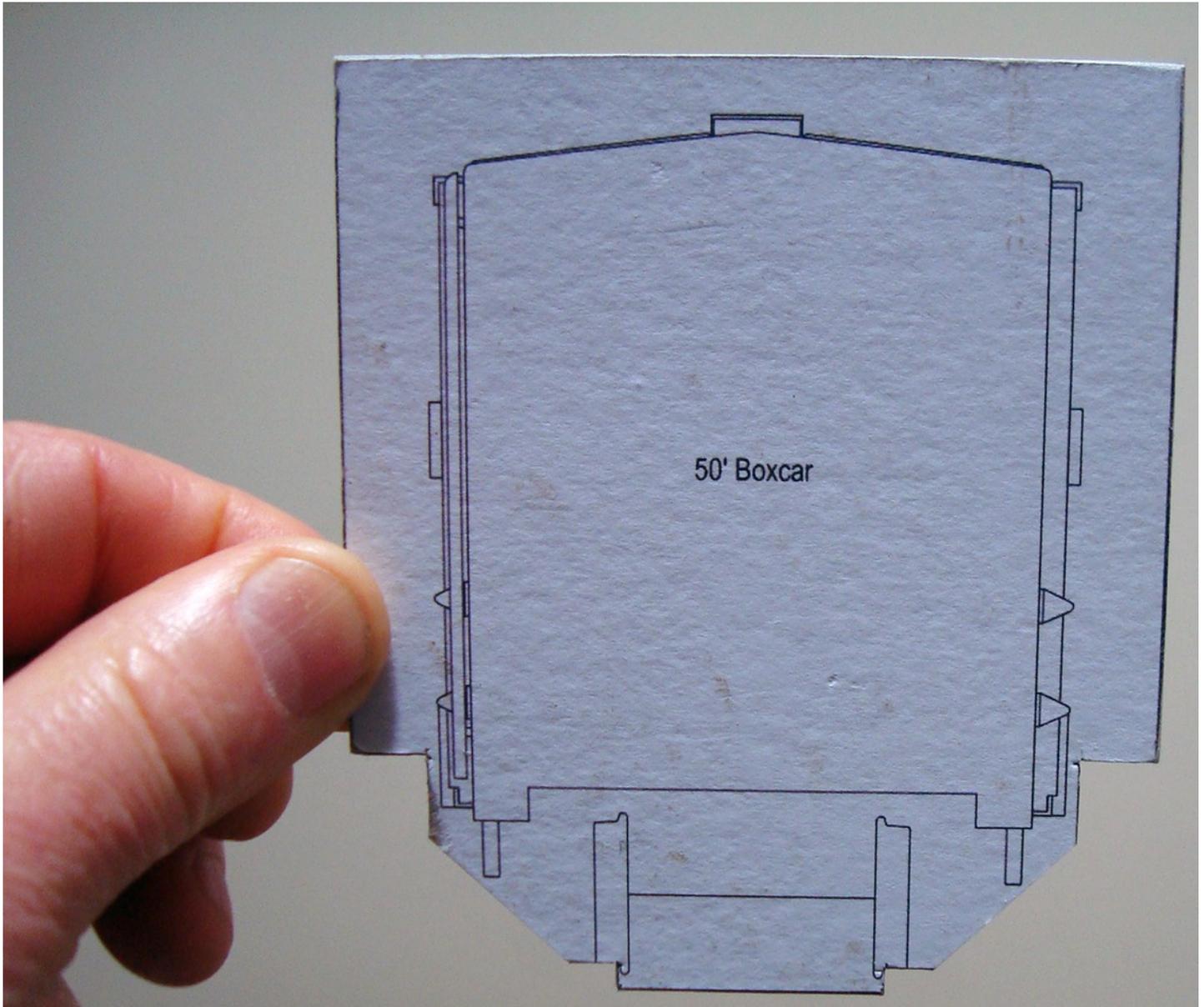
Have an idea for a different way of doing things? Something you built to make things easier around the workbench or layout? Let us know and we'll share with the world.

[Send your tips and pictures to us here.](#)

By **Neville Rossiter**

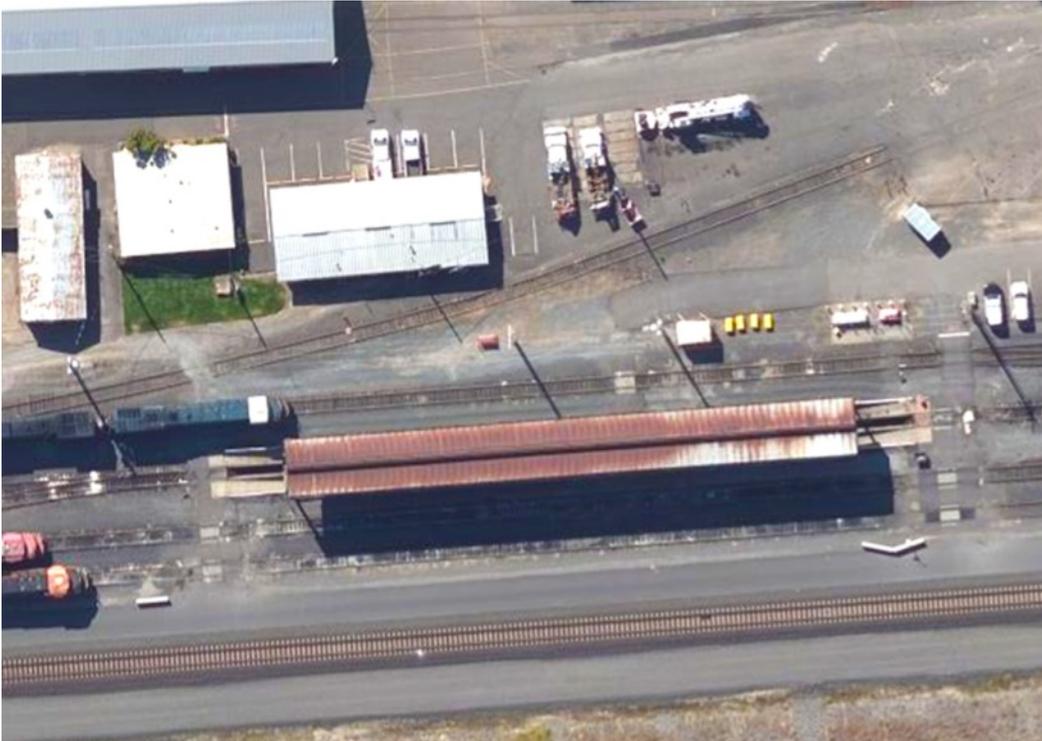
While building a layout you need to know clearances especially around track and buildings. My good friend Bruce drew up a gauge for me. I printed it out, glued it to cardboard, and cut it out. I might fabricate one using aluminum and the milling machine if I have nothing better to do.

[Click here to download a full size drawing of this gauge.](#)



WHAT'S ON YOUR WORKBENCH?

Way back in [Sep/Oct 2017 'What's on your workbench'](#) we published photos of progress on **Paul Hemsworth's** model of BN's Diesel Servicing Facility in Vancouver, WA. Here is the next installment. Since starting this project, Paul has switched prototype so that now it shows a Y class locomotive of Victorian Railways in the early 80s. In case anyone asks, yes, VR was inspired by the Erie livery merely substituting blue for black.



Preamble

The model is based on an article in February 1983 *Mainline Modeler*. Its open design immediately caught my eye as a way to display a loco while on the layout. Mind you, I did wonder about the open design in Vancouver, Washington where the average January low is 35° F and the record is -7° F. For 30 years, I tried to figure out how to make brass trusses to support the roof. In 2013, I decided since I was no closer now than 30 years ago, I should have a go at styrene trusses. They turned out better than expected so

the project was a go. Of course, soon after committing fully to styrene construction I found an etcher, but there was no going back to start again now.

The original has 9' x 25' bays with an entrance ramp at each end. The DSF is the long roof with rust stains from hot exhausts. Mine has 2 bays (I wish I'd made 3 bays to fit locos bigger than the Y class!) and one entrance ramp. The prototype DSF is built on a concrete base sunk into the ground so the rail height matches other track in the yard.

Materials

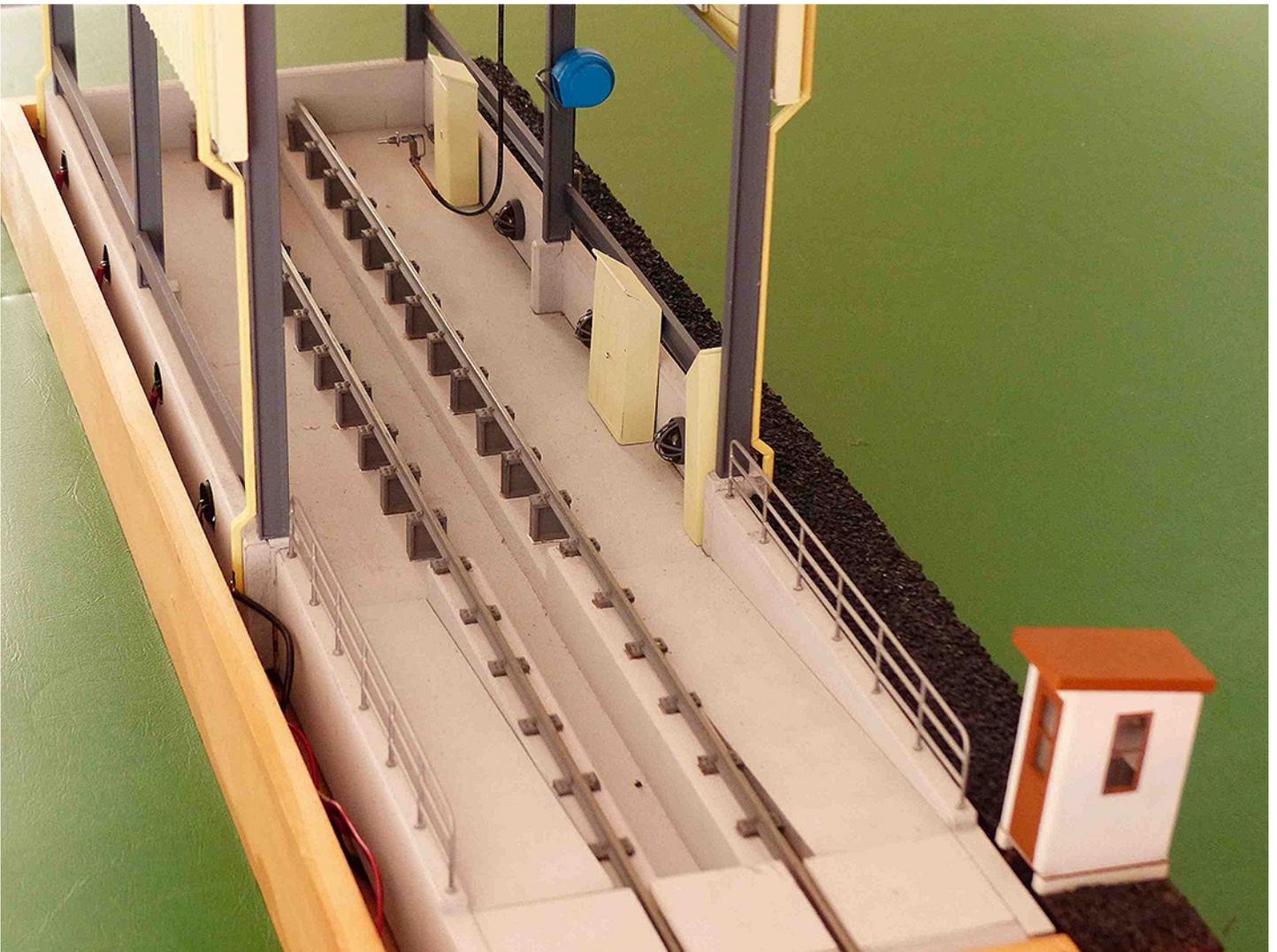
The concrete base is 1/4" Medium Density Fibreboard painted grey. I had to buy a sheet of MDF. The smallest sheet was big enough for two bases, so I cut two while I had the table saw set up. Everyone says it takes hardly any longer to make two than one, HAH! In this case, making two took 3 or 4 times longer because of unforeseen "challenges".

The canopy supports are fabricated from Evergreen shapes and clad with Evergreen 4522 metal roofing. The ridge top vent is shaped from Evergreen strips. Guttering is Evergreen H beam with half of one flange removed and the web scraped smooth. Down spouts are K&S brass, rectangular tube.



Lighting is by LED. Making the brass covers was a foreseen challenge, but it still took a lot longer than anticipated. The plug and socket opposite the office will be replaced when finally installed.

The railings alongside the pit took forever. There are 18 pieces in each railing. If one piece is out of alignment by a couple of thousandths of an inch the whole thing looks like rubbish and I had to make 4 of them.



My model has cinders on one side to represent the yard because my original intention was to view from that side. Later, I realized that only the back of the office would be visible and the cabinets would obstruct the view of the loco. So all that work to research and fabricate the Snyder diesel fuel nozzle and retractable oil hose reel won't be seen now.

I have to admit that I didn't rise to all challenges. The floor should slope toward the pit, but I was already racking my brain for a method of attaching a rail to each of the 4 lots of 12 supports while maintaining correct gauge. Adding in the cutting of 48 supports at an angle and lining them up on a sloping floor didn't bear thinking about.

All that is needed now is space on the layout.



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

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O SCALE SHOWS & MEETS

Have an upcoming O Scale event? We would like to help publicize it. Send us the information up to one year in advance, and we'll place it here along with a direct link to your Website and/or Email.

[Click here to send us your information.](#)

The Cleveland 2 Rail O Scale Meet

Saturday, November 7, 2020

Cleveland O Scale Meet our 38th annual show

9:00 AM to 2:00PM at the UAW Hall

5615 Chevrolet Blvd, Parma, OH 44130

Admission \$7, table \$137. Free parking, large facility

Dealer load in Friday 1-4PM Saturday 7-9AM

440-248-3055 email j3a5436@gmail.com

Website: <http://www.cleveshows.com>

O Scale South 2021

February 27th, 2021

Atlanta, GA USA

Cross of Life Lutheran Church, 1000 Hembree Rd, Roswell, GA

30076 Type of Event: O Scale 2 Rail Meet, 9 AM to 2 PM, Sat

Feb 27, 2021. Swap meet and modular layout display. Layout

tours info available at meet. \$5 admission (Spouses, children

free), \$25 per 8-ft table (Includes admission). Sellers contact Dan

Mason at 770-337-5139 to reserve tables and get information.

Email: daniel@southernoscalers.com

Web: www.oscalesouth2021.com

O Scale March Meet

March 26-28, 2021

Westin Lombard Yorktown Center

Lombard, IL

Under new management and new dates!

The March O Scale Meet is a 3 day gathering of vendors,

customers, clinics, and fun held annually in March in the

Chicagoland area. This is the Chicago O Scale train show you've

heard of.

Website: <http://marchmeet.net/>

Email: ChicagoMeet@yahoo.com

Eastern PA 2 Rail O Scale Train Show and Swap Meet

Strasburg PA

April 17th

Strasburg Train Show: Two-rail swap meet at the Strasburg Fire

Co, 203 W. Franklin St, Strasburg, Pennsylvania. 9 am-1 pm.

Admission \$5, wives/children/military w. ID free, tables \$25 for

first table, additional \$20 per. Great food, modular layout, clinics.

Contact John Dunn (609-432-2871) [Click here for info](#)

O Scale West - S West and Narrow Gauge West

May 28-30, 2021

Hyatt Regency Santa Clara (San Francisco area)

Website: www.oscalewest.com

Harrisburg Narrow O Summer Meet

Dated to be announced for 2021

Sponsored by: [Narrow Gauge Modeling Company](#)

St. Thomas United Church of Christ

6490 Linglestown Road

Harrisburg, PA 17112

O Scale National Convention

June 17-20, 2021

Denver, CO

The O scale community will head to Denver June 17-20, 2021

for the annual convention of all trains scaled 48 to the foot. This

will be the main event for O scale modelers looking for great

layout tours, modeling clinics, and hundreds of vendor tables

loaded with the news products as well as treasures going back for

more than 70 years. Denver is home to a major airport that

quickly connects the east and west coasts to the heartland.

Amtrak's California Zephyr connects Chicago and San Francisco

to the Mile High City.

More details coming soon

Website: <https://oscalenational.com/>

The 2021 St. Louis RPM Meet

Friday, July 30th and Saturday, July 31st, 2021

The St. Louis RPM Meet will happen at the Gateway

Convention Center, One Gateway Drive, Collinsville, IL 62234.

Collinsville is 12 miles east of metro St. Louis on I-55/70. The

meet starts at 9 AM both days.

Website: <http://www.icgdecals.com/stlrpm/>

Eastern PA 2 Rail O Scale Train Show and Swap Meet

Strasburg PA

August 7th

Strasburg Train Show: Two-rail swap meet at the Strasburg Fire

Co, 203 W. Franklin St, Strasburg, Pennsylvania. 9 am-1 pm.

Admission \$5, wives/children/military w. ID free, tables \$25 for

first table, additional \$20 per. Great food, modular layout,

clinics. Contact John Dunn (609-432-2871) [Click here for info](#)

40th National Narrow Gauge Convention

September 2-5, 2020

St. Charles Convention Center, St. Charles, MO (Greater St.

Louis)

Manufacturers exhibits, contest, home layouts, operating

modules and clinics.

Email: 41nngc.chairman@gmail.com

Website: <http://www.40nngc.com>

O & S Scale Midwest Show

Saturday and Sunday, September 17-19, 2021

This is a dedicated 2 rail O Scale and S Scale show; however, we

encourage and welcome the many modelers and collectors from

the 3 rail and high rail side of the hobby to attend. There are

many aspects of the hobby, including building, scenery and more

that applies to any scale. Moreover, this show is a great place to

get inspired while meeting old friends and making new ones!

Website: oscalemidwest.com/

Email: info@oscalemidwest.com

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and a few other things
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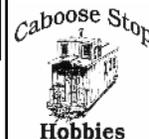
SHOWS & MEETS

O & S Scale Midwest Show

SEPTEMBER 17-19, 2021

<https://oscalemidwest.com/>
Ph. 815.584.1577

DEALERS



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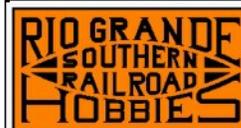
301 Main St.

Cedar Falls, IA 50613

Phone: 319-277-1754

trainguy34@mchsi.com

Web: www.caboosetophobbies.com



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