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# **STEAM**<sub>IN THE</sub> **GARDEN**

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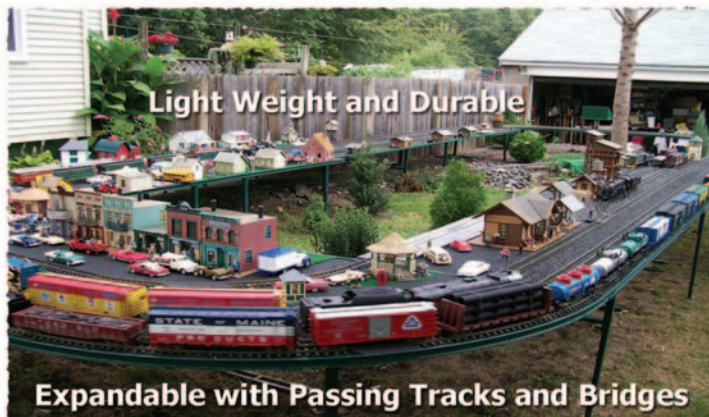




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**O-Gauge Hudson:** An eBay "Barn Find" O-Gauge Hudson chassis gets a new life with a new boiler. - Photo by Joe Rothwell

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## LATEST WAYBILL

### In Memoriam

#### Stan Cedarleaf -

Stanton (Stan) John Cedarleaf of Cedarleaf Custom Decals passed away Dec. 30, 2021 at the age of 83. Stan's enthusiasm for model trains enlivened online message boards, informed train shows and brightened numerous layout open houses and G Scale gatherings.



His ability to provide accurate historical decals, as well as individual designs for G Scale roads, helped garden railroaders everywhere achieve their vision. When he retired from his portrait photography career, he turned his camera to model trains and shared his photos readily. His smile welcomed all.

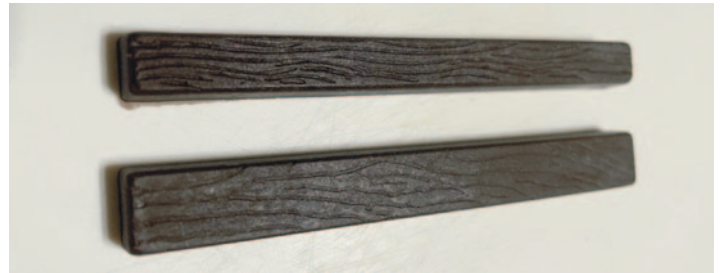
Stan grew up in northern Illinois, served in the USAF, succeeded as a photographer, then traveled around the world consulting on the business of photography, as a missionary and as Food for the Hungry coordinator in Uganda. He married his beloved wife, Kay, in 1993 and they served at Tecate Mission near San Diego before settling in Prescott, Arizona, where Stan served as an Elder at Cornerstone Church.

Many of us in the Model Railroading community got to know Stan on-line through forums such as myLargescale.com and at shows and gatherings such as Marty Cozad's Battery-Powered Steamup and the Big Train Show. He was always ready with a helping hand and useful advice. Stan was an excellent decal maker, adapting computer printing techniques to our hobby. His own Prescott Short Line demonstrated his skill at modeling and artistic vision.

He will be missed by his extended family and by all he touched in our railroading world. Contributions in Stan's memory may be made to the Cornerstone Church, 700 W. Rosser, Prescott, AZ 86301

### Sunset Valley Railroad LLC New Product Announcement -

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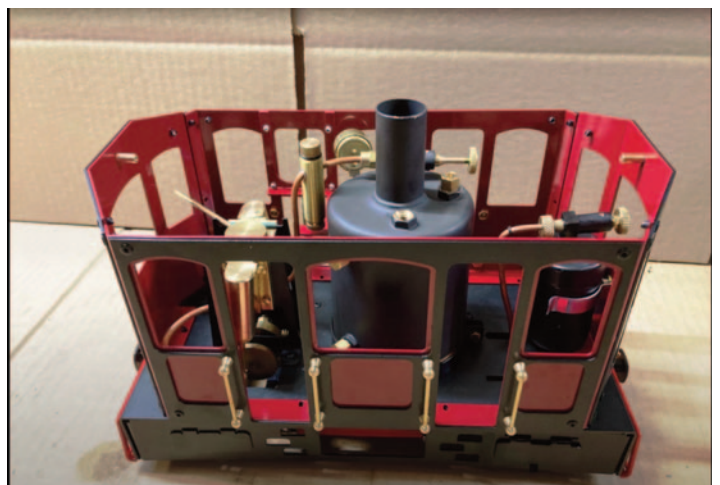


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### New Mamod Steamer in Development



Mamod recently released a YouTube video of a new live steam model currently in development by their R&D Department. The basic chassis appears to be based on the Brunel with a new Tram body.

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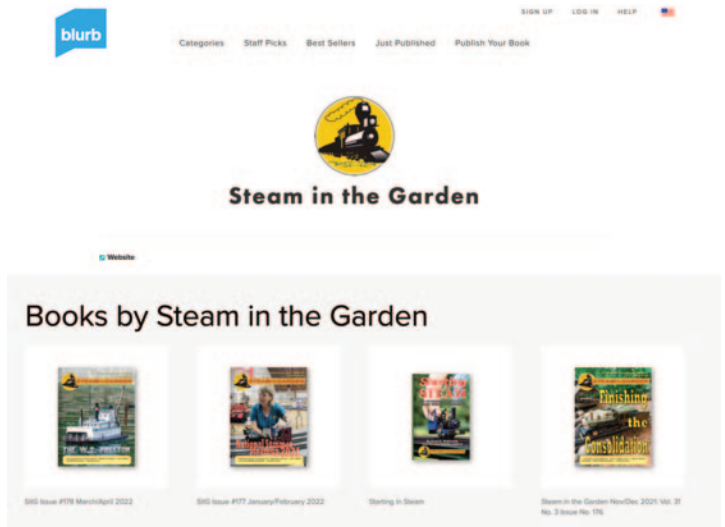


It is a handsome looking live steamer, one that we think will be quite appealing to the small scale live steam community. Other than the video, no other details are available at this time. SitG is in contact with Mamod and will report in the future details of the model as soon as we have them.



Mamod Steam Tram  
<https://youtu.be/rfcm363xCtg>

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### Another Vest Pocket Climax

Following the recent series in SITG about building a Vest Pocket Climax, this is another article on the same subject but it does not have a happy ending so be prepared to get your handkerchief out! Between September/October 1996 and May/June 1998, a series authored by Mel Ridley appeared in SITG about building a Vest Pocket Climax. The late Don Baker started building one and completed a rolling chassis and the boiler. Don was primarily a 16mm scale modeller, but like many of us he was engaged in a number of projects including a 7¼-inch gauge Hunslett. (I live in South Africa where for some reason 7¼-inch is one of the popular gauges rather than the 7½-inch which prevails in the USA.) Just before he died I bought Don's 16mm items which included the partially built Climax.

Now I have an admission to make: a project such as completing the Climax was and is way beyond my capabilities, not least because being of advancing years with deteriorating eyesight, and I had a stroke five years ago which although slight had an effect on my manual dexterity. So the completion job had to be outsourced. The individual who was asked to finish the build was a gifted modeller by the name of Martin Hampton.

The cylinders and pistons were the main items requiring attention but there also was some superstructure work, cab, bunker etcetera, required. Martin kindly mounted the result on a rolling road. He also warned me the result was not a 'runner'.

Attempts to steam the loco were a miserable failure. Upon reading some comments in the media and various forums about locos with similar problems, properly running in the engine was the main solution proposed. This was duly done by running the loco forwards and backwards for extended times using an air compressor.

A dramatic improvement was noted. The loco would start without 'encouragement' so time to try steam again. Sadly, although it would run for a brief period after the aforementioned 'encouragement', as soon as steam supply was turned on pres-

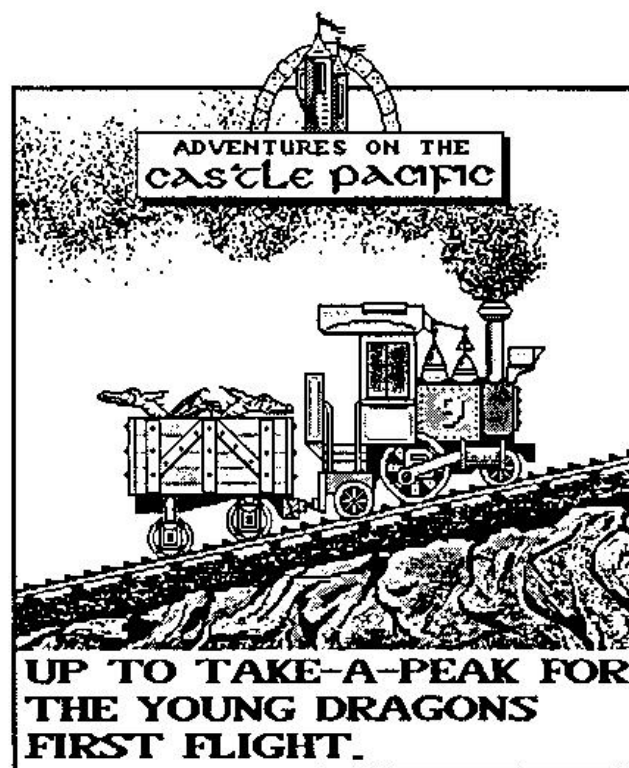
sure dropped dramatically.

So now I have a model of an unusual loco which sits on a shelf in a display cabinet. That is all very well but not what my original intentions were. Time to get out those hankies for a quick eye dab. It is obvious from the comments in the media and forums to which I referred earlier that I am far from being the only person who has had these experiences with this loco, but I am also aware that some have had success with solving the problems. Accordingly, while one purpose of this article is to relate my experiences, the second is to appeal to anyone who has overcome the problems to share his or her experiences with the live steam community.

David Cairns  
South Africa



### FROM THE ARCHIVES



Rick Drescher © 1992

*Eratta - In our previous Issue #178 we mistakenly labled in a caption Bob Trabucco as "John". Our apologies to Bob for the oversight. — ed.*





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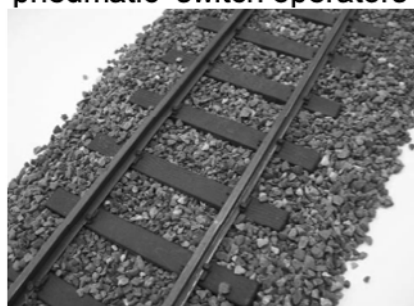
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# O-Gauge Hudson Part One

Text and Photos by Joe Rothwell

**F**inding this O scale live steam Hudson on eBay started out innocently enough; I just typed those words into the 'search' window again. Over the years, rarely would a model even come up when searched for, and the three or four offerings I've seen during those years were mostly half-finished models of either the 'Josie', a O scale Hudson design from the Grandmaster 'LBSC' or a 'Little Engines' Hudson project (who still offer rough castings for an O scale Hudson!). But the chassis I

found was different from those two designs.

A large commercial brass engine shell with no resemblance to our beloved Hudson encompassed the boiler and chassis. The eBay ad stated that the boiler was not plumbed to the chassis and that the chassis still needs timing. I contacted the seller and made an offer, which was accepted. It arrived damaged from rough handling by the shipping apes, mostly confined to the brass engine shell. Happily there was no damage to the chassis.

The damaged body and boiler were removed from the chassis and inspection began (**Photo 1-1**).

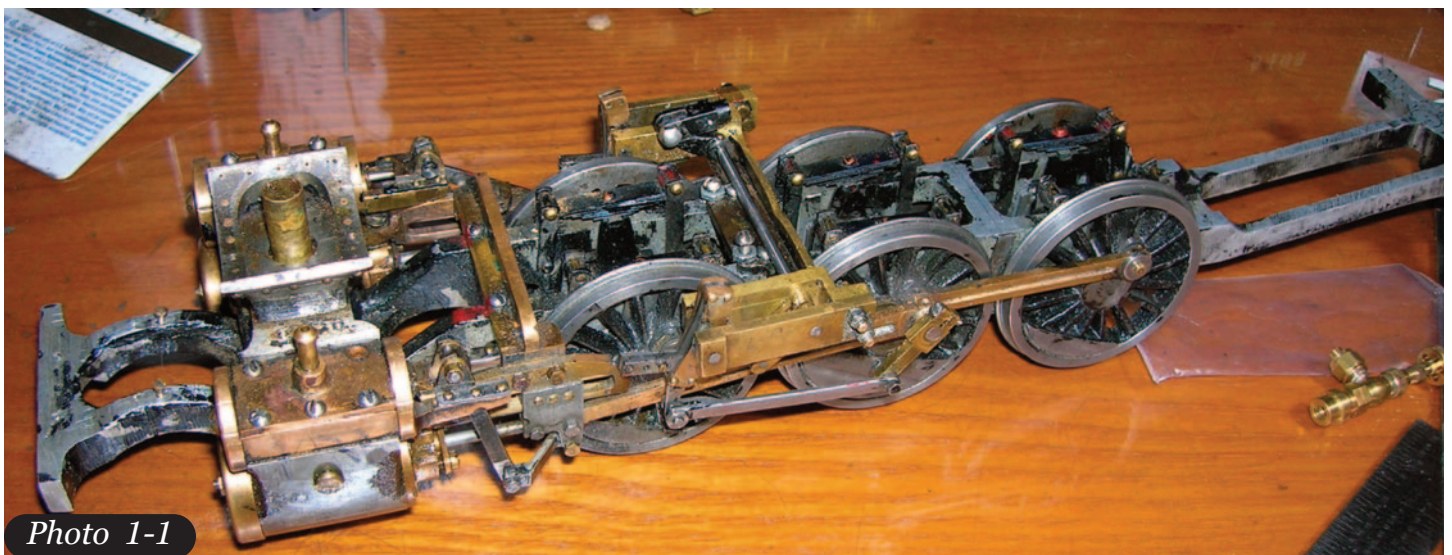


Photo 1-1



## Original Builder Found!

The damaged chassis from ebay was fortuitous; it made me contact the seller who then put me in touch with the builder. The chassis was built by Tony Boccaccio, MIT graduate and retired NASA conceptual design engineer who worked on the Space Shuttle program. Tony's grandfather, Sal Celauro, worked for the New York Central RR. When Tony was young, his family would go visit his grandparents in Long Island, NY. After arriving, he remembers making quick cordial greetings to relatives and then rushing down to the basement, where Grandpa Sal had a shop and was always working on some interesting project. Tony would help and learn. Sal must have been a proud grandpa, these were great days back then. Tony still has his grandpa's 'South Bend' lathe and this was used in building the Hudson chassis.



Steam was a common method of heating your home during the bleak winters of New York State. It is here we find Sal, newly arrived Italian immigrant, assigned at a young age to operate, maintain and repair the family home heating system. This would have included the boiler and its fuel, steam pipes and radiators. This was no problem for Sal as he was very mechanically inclined. However, this skill nearly cost him his life.

Fast forward a few years and Sal ends up in France, a young American soldier fighting in WWI. When his superiors find out Sal is handy with live steam, he's assigned as an engineer on a steam engine, hauling soldiers, supplies and the dreaded ammunition load to and from the Front. The engines were small, not much more than a boiler on a platform with wheels, and they ran on rough narrow-gauge rails barely tied together with scrap lumber. No gravel road beds were laid near the Front as that changed almost daily, so the rails were set down on whatever surface that was present. Speed was slow on the undulating tracks, making these engines and consists a prime target, vulnerable to German artillery and aircraft. It was high risk running a train and the mortality rate was frightening. A derailed engine spelled certain disaster for crew and cargo.

Sal survived the carnage and insanity, returning home to find work with the New York Central RR. Not seeking any special favors, Sal started out at the bottom and worked his way up to fireman and finally engineer. Management took notice of his skills and Sal was assigned to New York Central's thoroughbreds; Hudson's and Niagara's, pulling the Great Steel Fleet, perhaps the finest passenger car service of all time.



*A Baldwin "Trench Engine" getting ready to make a run to the front. What are the odds that maybe the engineer might be Sal himself?*

The machine work was masterful and are those equalizing beams? Yes, it had working scale Hudson suspension...in O scale...unbelievable! The main frame looks to be 'Little Engines', but it's made from cast aluminum which is not offered by them. The cylinder castings and the rest of the construction are also unique.

What a wondrous piece of machinery and I'll admit I felt a little guilty at the thought of putting a wrench or screwdriver to the chassis at first. The original builder, Tony Boccaccio (*see side-bar*) scratch-built everything to his own design, from casting the chassis main frame in aluminum (he used the Little Engines frame for a mold) and the cylinder chest to the side rods and suspension. He used aluminum for the chassis to limit heat expansion — it moves less than brass.

The chassis did not run on compressed air and no amount of adjusting the eccentric crank helped. The slide-valve chest covers were removed and the problem was identified. The slide-valves did not cover the forward ports completely when the valve was at its most forward position (**Photo 1-2**). After disconnecting one of the eccentric rods, the valve was slid into its proper position and the difference was measured...  $3/16$ ths of an inch needed to be added to the eccentric rod length. I made a rough pair of rods out of sheet brass, installed them and turned on the air. The chassis came alive and ran well. But this extra length added to the rods created some minor issues with the expansion link, pushing it forward and limiting its swing back. It also lifted the reverse rod which lessened the amount of arc the expansion link would swing. And  $3/16$ ths of an inch didn't sit well with me either, so another solution had to be found.

The other rod that can be lengthened is the radius rod. On the back end of the radius rod on the right side of the engine were two tiny wire rivet fasteners which were backed up with a bit of solder, and the radius rod on the left side had one rivet and one very tiny watch screw, no solder. These ends were at the expansion link side and looked formidable... how to remove them without wrecking the whole works was the issue. That's why I modified the eccentric rods first, it was the easy button.

The brass eccentric rods that I had made were removed and the original eccentric rods (these are beautifully machined out of steel bar stock) were put back on. Then the rivet heads on the radius

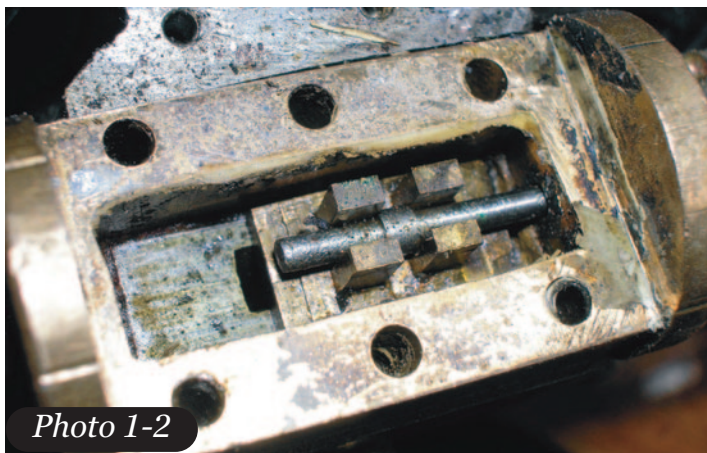


Photo 1-2

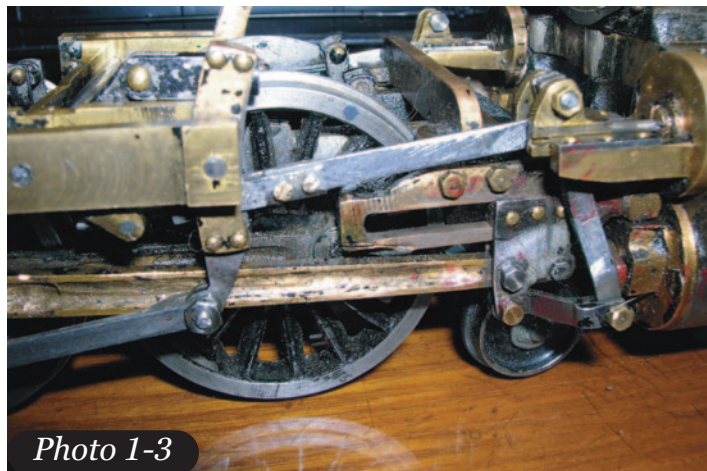


Photo 1-3

rods were ground down with a rotary cut-off wheel. A small bench was specially carved from a two-by-four block of wood and slipped under the radius rod on one side while the chassis was laying on its side to support the rod end. A punch, ground down to almost needle-like, was used to tap out the rivet shafts. The radius rod needed only  $3/64$ ths of an inch (much better than  $3/16$ ths) to be added to its length, so two were made from some scrap sheet steel of the proper gauge (**Photo 1-3**). One side at a time was repaired, and a watch-maker's tap was used to thread the two rivet holes for tiny watch screws. This can now be serviced in the future, if needed. The chassis was aired up again and ran even better.

A boat boiler was temporarily set up and fired, with the steam piped over to the chassis. The throttle on the boat-boiler does not offer the fine adjustments that this engine requires, so there was a bit of a runaway with the rpm's, but the chassis doesn't seem to mind and is smooth at any speed. Steam pressure was around 30 lbs. Power was incredible and it took some pressure to slow the drivers down when a finger was pressed onto the wheels. A Hudson, through and through.



## Building a Boiler

With the chassis testing done, the boiler could now be tackled. The brass body shell and boiler that originally came with the chassis was not specifically designed for a Hudson engine or even fit the chassis, so these were set aside and a new plan was needed. I found a 'Williams' brass O-scale Hudson on eBay that was missing its tender for about \$150. This electric engine will donate its brass shell to the live steam project. And what a beautiful shell it is; the attention to scale and detail makes this a worthy topper for Tony's chassis. So now we have the chassis and the brass engine shell to measure for the dimensions of the new boiler. This will be a challenge for me because I've only soldered a few small pot-boilers together and designed one small gas-fired boiler. Some of the design criteria will include a fire box and fire tubes per the prototype. The safety and filler port are placed under existing domes on top of the shell.

Most everything I'll do with this project has been covered by authors in past issues of *Steam in the Garden*, a great value and source for experienced information. A thick-walled piece of copper pipe, 1 1/2-inch ID, was cut to length and marked for the fire box (**Photo 1-4**). Only two cuts are made for the fire box, T-shaped if you will, using a rotary hand-tool spinning a carbide cut-off wheel. The newly cut area is heated with a torch to the point where it becomes annealed and then shaped after it cools. A wooden buck is carved from a piece of two-by-four to the inside dimensions of the fire box, and slipped inside to help hammer the sides flat while preserving the arch. This old method of making a fire box works best if the fire box doesn't need to be deep. For this project, it works out fine (**Photo 1-5**).

To finish the fire box, a rear plate (back head) and forward plate (throat plate) are cut out of paper cardstock first and fitted to the fire box. When all looks good, the shapes are traced onto 0.060-inch sheet copper and cut. The throat plate gets drilled for the fire tubes (**Photo 1-6**). Now, much study by engineers has been devoted to the size and placement of fire tubes inside boilers, but at the scale we're working with here, most of that goes out the window. The area of the throat plate where the fire tubes go through is less than 3/4-inch square...so you put as many tubes as you can

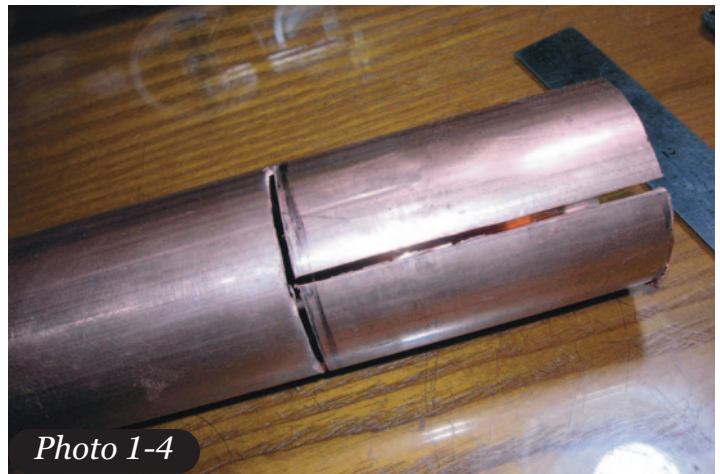


Photo 1-4



Photo 1-5



Photo 1-6

in this area. I could fit three quarter-inch tubes and two 3/16-inch tubes in that space. If a cross section of the boiler at mid-point is drawn, you would see the bottom 2/5ths of the boiler tube is occupied with fire tubes surrounded by water and the middle 2/5ths above this is the useable 'steam' water. The top 1/5th is an air gap, left open where steam builds up pressure and gets siphoned off for various duties.





Photo 1-7



Photo 1-8

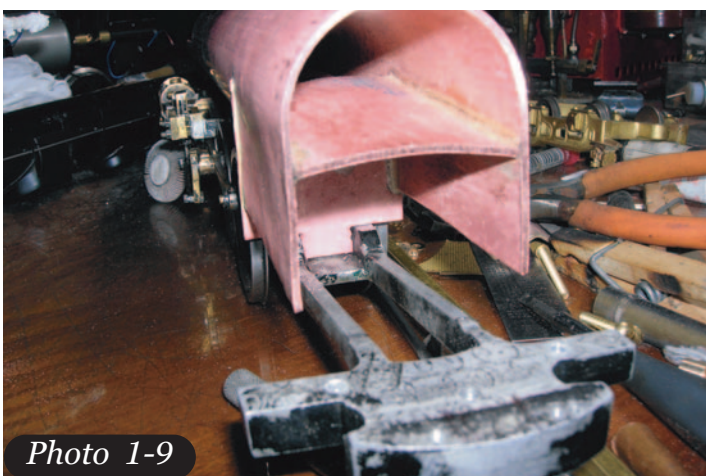


Photo 1-9

The boiler front plate also gets the paper card-stock treatment, being extra careful with the placement of the fire tube exit holes. Again, this is transferred to sheet copper and cut out. A quick word about cutting and drilling copper, the stuff doesn't like to be worked. However, the material is soft and will yield to most methods of removal, if done with a little patience (**Photo 1-7**).

The last piece to be fabricated is the crown sheet for the fire box. I put an arch in the crown sheet to eliminate the use of stays. The size of the sheet is  $2\frac{1}{2} \times 1\frac{1}{2}$  inches, just too small for a stay to make a difference. I'll get more support from the arch is my opinion. Okay, maybe one stay through the side of the fire box at mid-point, perpendicular to center-line (just below the crown sheet) might be useful, but I will forego this one too. Operating pressure is around 40 PSI at best, paltry by steam engine standards. All the parts fit snugly, but not too tight as we want solder to flow around the joints.

Before starting the soldering, I called Bob Sorenson and got the lowdown on silver brazing. His advice proved to be most helpful and gave me the confidence that this could be done. (See Bob's article on Soldering in the *September/October 2021*, No. 175 of *SitG*.) After drilling holes in the top of the boiler for the safety bushing and filler plug bushing, the boiler is partially assembled for soldering. The fire tube ends at the fire box end were flared first with one of my old brass surveyor's plumb bobs. Anneal both tube ends before starting assembly so that flaring is painless. The flare keeps them from falling out and cuts down on annoyance. Once the fire tubes are soldered to the throat plate, the other end of the tubes at the front plate can be flared after the front plate is set in place. My front plate is a rather tight fit to the boiler, so flaring the ends of the tubes gently did not knock the plate out of alignment. These were flared for an overall stronger solder joint. All front plate fire tubes were soldered at the same time, including the circular outer seam of the plate (**Photo 1-8**).

I broke from tradition by soldering the arched crown sheet into the fire box next (**Photo 1-9**). This piece usually gets put in last, after the back head sheet is soldered on, but the idea of trying to fit that tiny curved sheet into the fire box, in and out repeatedly until it fit, seemed a bit much. Also, I could control the amount of solder on the 'inside' side of the crown sheet and get a better fillet of solder with the back head out of the way. The back head was pre-tinned with solder first, cooled, pickled, re-fluxed and then soldered on with a little bit more solder. The throttle is the internal type with the exit at the front plate and into the smokebox and the throttle screw is on the back head end, at the top. The throttle gets soldered on last.

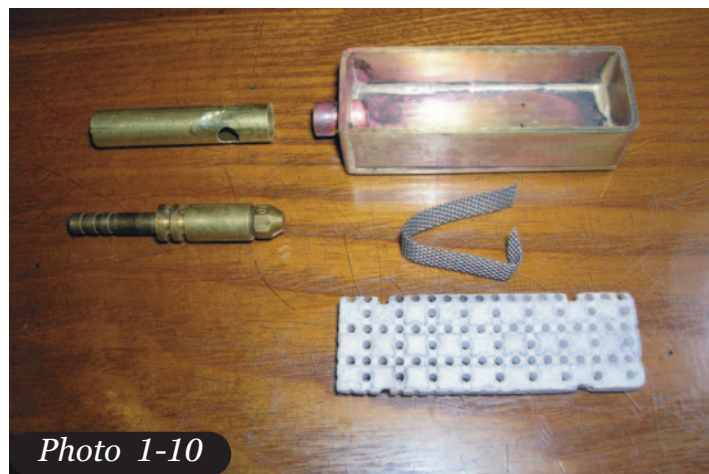


All the parts of the boiler were pickled before any soldering took place. Bob recommended citric acid for my pickle solution and it seems relatively safe. It's made from tap water poured into a plastic tub (large enough to fully submerge the boiler) and powdered citric acid mixed in. How much? When the water just starts to have trouble dissolving the powder, you've reached saturation. About two pounds per gallon is a good starting point. Citric acid is cheap on the internet, but expensive at the health stores.

First, soak all the boiler pieces in the pickle solution overnight (for a deep clean) before any soldering begins. When a soldering session ends and the piece cools off, 15 minutes in the pickle is plenty of time to remove solder residue, then rinse well with tap water and dry. I lost track of how many soldering sessions it took to assemble the boiler, over a dozen for sure. A pro probably could have done it in two or three sessions, but I was in no hurry and the boiler acted like we never stopped as each session was started and completed.

The solder used was 'JM Easy-flo #1', 50 percent silver and with 18 percent cadmium. All my soldering was done outdoors, so I get the benefit of the cadmium without the dangers of the fumes. JM Easy-flo flux powder was mixed with distilled water into a paste and used liberally on all solder joints. Heat comes from a torch handle and hose hooked up to a five gallon propane cylinder. The torch handle is the type that mixes the air high up in the handle and not at the tip. This is critical and lets the torch stay lit when the tip is inserted into something like the fire box – it doesn't go out like a tip-mixed one does. The burner tip is about an inch in diameter and is the main heat source for silver soldering, aka silver brazing. I also used a standard home propane torch with the stock tip, you know the type with the small cylinder (about a foot long) that screws onto a smallish tip-fed torch.

I would flux the area that needed soldering, cut little pillows of solder and lay them on the seam and into the flux, then slowly heat the body of the boiler nearest the soldering site with the big torch. The actual seam was then heated with the smaller torch while the big torch was continually applied nearby until the flux melted, and then rather quickly, the solder melts and flows. The added heat of the smaller torch made the job almost painless and provided more pinpoint control than did the



*Photo 1-10*



*Photo 1-11*

big torch. The big torch prevented the heat from the smaller torch from being wicked/sink'd off. Yep, it took two hands for most of the job, but sometimes I had a helper on the big torch for the more complex sessions. The three rules for any successful solder joint, hard or soft, is a clean/bright joint area, lots of flux and lastly, lots of heat. If it's weak in any one of those three areas, the job won't go well at best. All of this info has been written by others many times, but it's nice to read it every now and then.

The burner for this boiler is a ceramic plate and gas type, which is getting more popular. Heavy brass sheet for the burner box was cut and silver soldered together (**Photo 1-10**). A very low profile was needed, so the ceramic plate was sanded down to the thinnest possible thickness. A vee-shaped brass baffle sits under the ceramic plate along with a vee-shaped stainless wire mesh-screen support for the plate (**Photo 1-11**). Brass tube holds the jet and is soldered into the box on one end. A test fire shows lots of heat.

Next will be the plumbing and mounting of the boiler and shell.





# Cabin Fever

## Model Engineering Expo 2022

by Rob Kuhlman

Photos by Rob Kuhlman, Cliff Ward and  
Thomas Biggerstaff

*Above - Ryan Medine talks about his Accucraft  
B&O "Docksider" saddle tank locomotive with a  
crowd of attentive visitors.*

*RK Photo*

**T**he 25th Anniversary edition of the Cabin Fever Model Engineering Exposition was held in Lebanon, PA over four days of the Martin Luther King weekend in January. As might be expected with the post-holidays Covid Omicron surge in the eastern states, to say nothing about the fickleness of our winter weather, participation was down compared with previous years – perhaps 50 percent of us Aikenback Live Steamers and maybe 50 percent of the general public. Mike Moore once again brought both of his portable railways for us to use. Most of our Small Scale Live Steam Engineers were from within a short drive of Lebanon – New York, Pennsylvania, New Jersey, Maryland, and Northern Virginia – but some folks came from as far as Tennessee and North Carolina to the south and Ohio to the west. The turnout of exhibitors and vendors was close to the usual number, so there

were plenty of neat models of engineering craftsmanship to be inspired by – steamboats, stationaries, radio controlled construction and road equipment – and ample opportunities to stock up on tools and materials for the upcoming year of model building.

One aspect of Cabin Fever which is important to me is the opportunity to interact with folks on the days when Cabin Fever opens its doors to the general public. It's through this personal interaction that we can greet and inform those who have an interest and are perhaps considering getting involved. On occasion someone will appear from the crowd with a brand new loco and ask if it'd be possible to run it. We've got to do all we can to support our newbies, and the faithful presence of Marie Brown at the *Steam in the Garden* table makes that support a lot easier to provide.





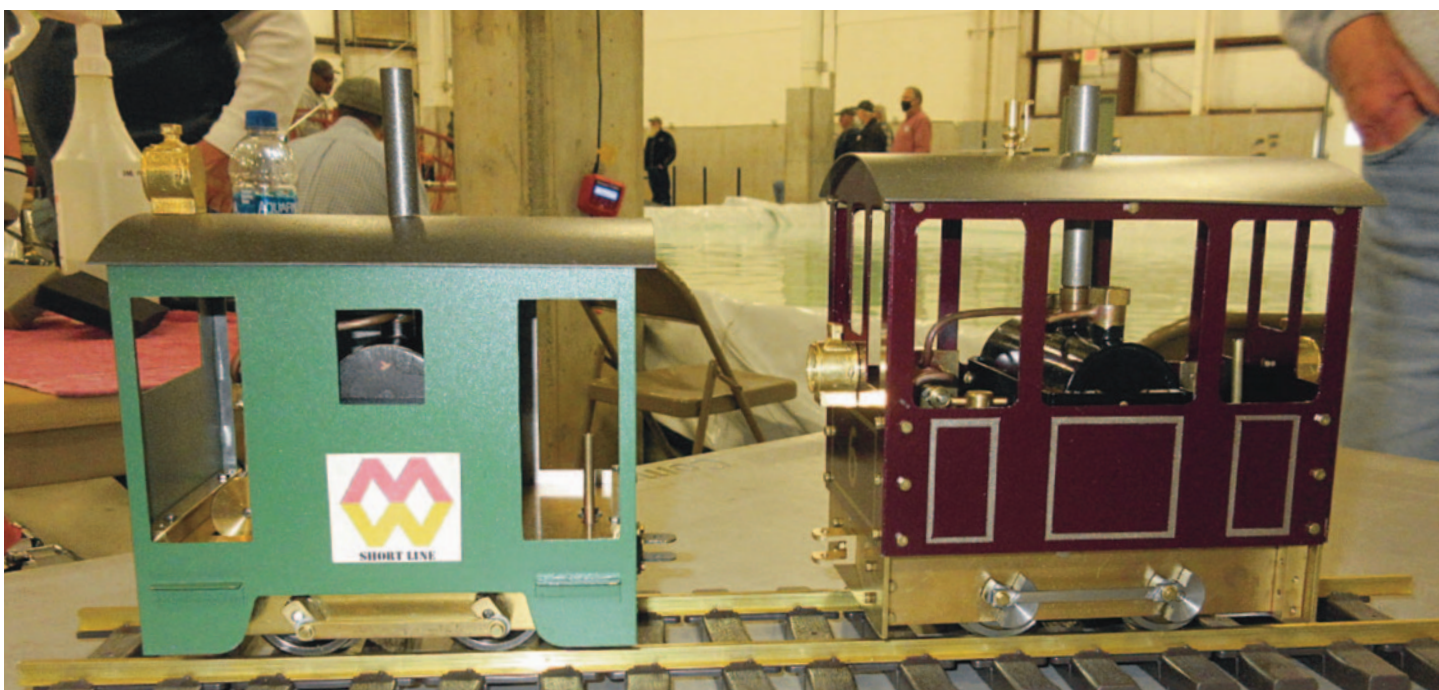
*Dave Biggerstaff tends to his Accucraft Great Northern Heavy Mikado in preparation for taking the mainline of the large track.*

*RK Photo*

This year's version of Cabin Fever featured four new Aikenback steamers on the big track, all in their 20s. It's a delight to see the future of our hobby being so actively engaged.

Also making an appearance this year were several models based upon construction articles in re-

cent SitG issues. Rich Blackham and Scott Baldridge, from western PA, both displayed and ran their versions of the Marc Horovitz-designed Minitram (*SitG Vol 170-174*) and the Les Knoll-designed Freelance Heisler (*SitG Vol 160-165*). In fact, Paul Vossler, of PM Models and designer of



*Minitrams by Rich Blackham (l) and Scott Baldridge (r) ready to take to the circuit.*

*RK Photo*



*Right - Scott Baldrige (l) and Rich Blackham (r) showing their Freelance Heislrs to Paul Vossler (c) of PM Research, developer of the V-twin oscillating cylinders used in the project build.*

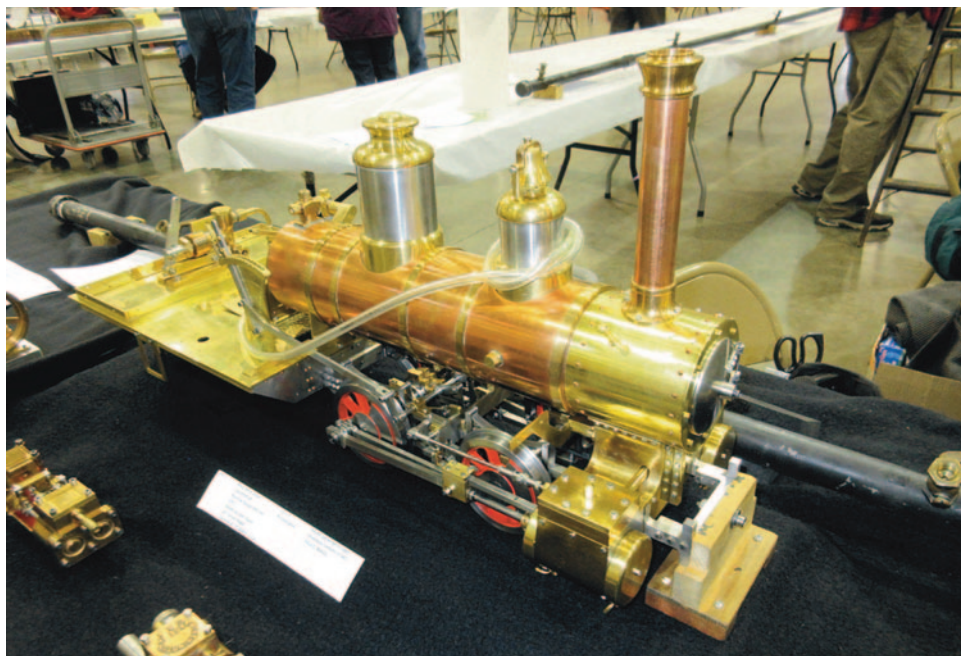
*RK Photo*



the V-twin oscillator engine used on the Heislrs, came by to watch his progeny operate flawlessly.

The ongoing Covid pandemic has certainly presented major challenges to large gatherings like Cabin Fever, but in the face of these challenges there were also opportunities – more track time,

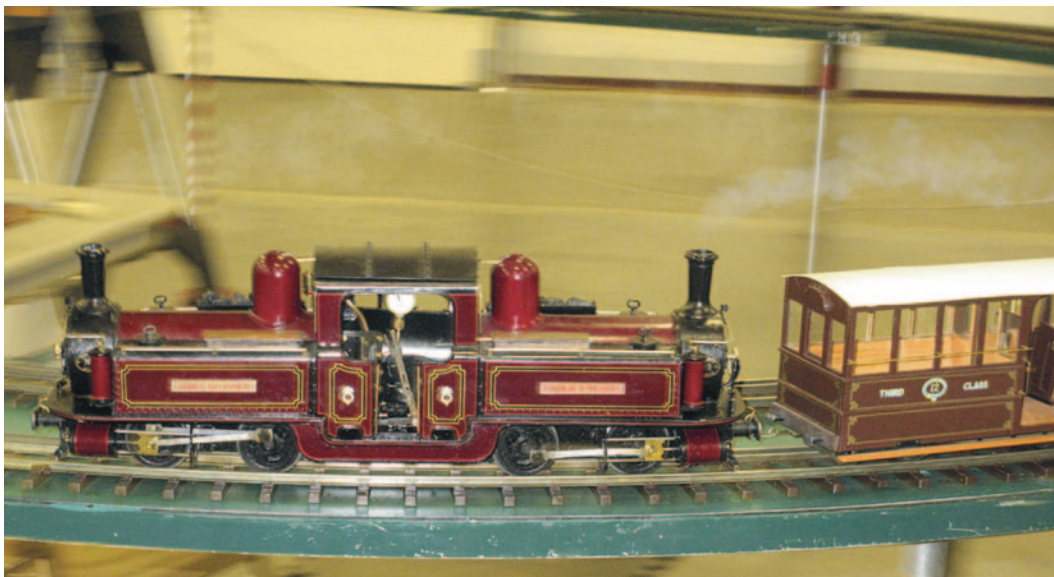
more extended conversations with one another and the visiting public. I think I speak for all Aikenback participants in saying that we were thrilled to be there and were grateful to have opportunities to run our trains on both of Mike's railways.



*Just one of many model engineering projects on display at Cabin Fever. This scratchbuilt 3 1/2-inch gauge model of a Baldwin is set up to operate on air provided at the venue.*

*RK Photo*





*Ron Vertrees's Double Fairlie the "James Spooner" plies the track with its beautiful custom consist.*

*RK Photo*

*Rob's venerable Aster Schools swings past the SitG table in the background.*

*RK Photo*



*Always a delight at any steamup is the "Big Iron" that pops up. An Aster Union Pacific 4-8-4 #844 always puts on a great show with a consist that wraps halfway around the track.*

*TB Photo*



*Scott Baldriges's Stella Mae steamboat passes gracefully by in the 30 x 50 foot indoor pond created each year for the event.*

*RK Photo*



*Rich Blackham's Lake Erie commercial fishing boat and his Minitram.*

*RK Photo*

*Cooper Ward gets his Accucraft K-37 ready to run out on the mainline.*

*CW Photo*





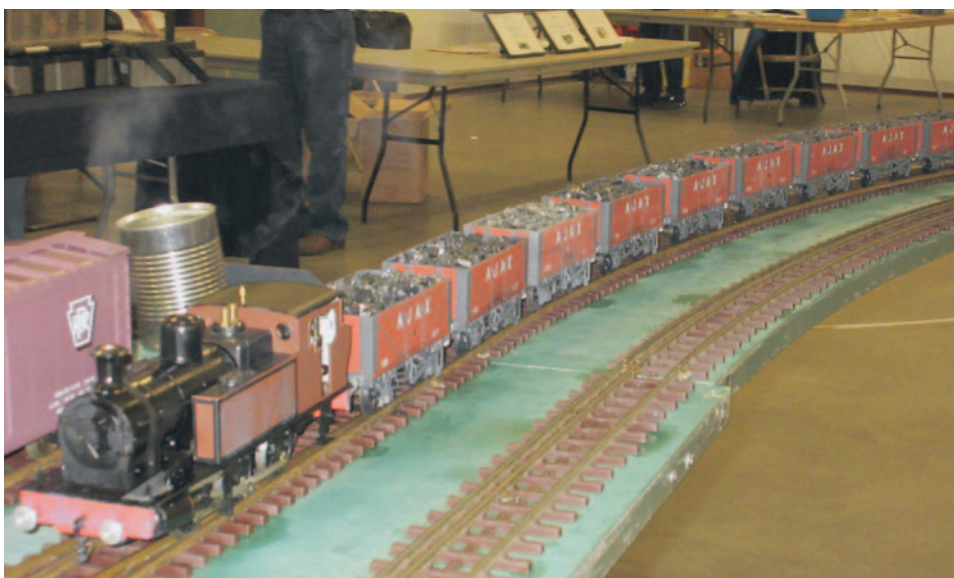


*The Accucraft K-37 runs to the delight of the crowd gathered trackside..*

*CW Photo*

*An ancient Bassett-Lowke 0 gauge "Enterprise" entertains the visitors.*

*RK Photo*



*Rob Kuhlman's Accucraft Kerr Stuart "Victory" painted up for the AJAX colliery railway hauls a train of 3D printed coal wagons.*

*RK Photo*



# LIVE STEAM STATION



**Southern Pacific P8**  
1:32, Alcohol or Butane  
Kit \$3995, RTR \$4495



**LNER B1**  
1:32, Alcohol Fired  
Kit \$3100, RTR \$3600



**BR 4-6-0 5MT**  
1:32, Alcohol Fired (Black Only)  
Kit \$3100, RTR \$3600



**USRA Mikado Heavy**  
1:32, Alcohol Fired w/ 6 Free Cars  
Kit \$4400, RTR \$5500



**N&W 4-8-4 J-Class**  
1:32, Alcohol Fired or Electric  
Alcohol \$5950, Electric \$5250



**DB Class 45**  
1:32, Butane Fired  
RTR \$4995



**Adams Radial Tank**  
1:32, Butane Fired  
Kit \$1995, RTR \$2160



**Tiger 0-6-0 with Tender**  
1:32, Alcohol Fired  
Kit \$3250, RTR \$3800



**Smooth Sided Pax Cars**  
1:32, Alum Body  
\$340/Car, \$2040/Set of 6 Cars



**BR Mk1 Passenger Cars**  
1:32, Plastic body, Metal Trucks  
\$295/Car



**L&SWR Coaches**  
1:32, Brass  
\$800/Car, \$3040/Set of 4 Cars



**3 Bay Hopper Car**  
1:32, Plastic Body, Metal Trucks  
\$119/Car



**D&RGW C-25**  
1:20.3, Coal or Butane  
RTR \$5250



**D&RGW C-18**  
1:20.3, Butane Ceramic  
\$3095-\$3395



**Baldwin "Mabel" 0-6-0T**  
1:20.3, Butane Fired  
Kit \$1249, RTR \$1499



**Ruby #1 0-4-0T**  
1:20.3, Butane Fired  
Kit \$649, RTR \$699  
Black, Red  
Blue, Green  
New version 2022



**Jackson & Sharp Coach**  
1:20.3, Ball Bearing Trucks, Lighting  
\$295/Car



**Drop Bottom Gondola**  
1:20.3, Plastic Body, Metal Trucks  
\$220/Car



**3-Bay Hopper**  
1:20.3, Plastic Body, Metal Trucks  
\$150/Car



**Box Car**  
1:20.3, Plastic Body, Metal Trucks  
\$170/Car



**Wheel & Tie Car**  
1:20.3, Plastic Body, Metal Trucks  
\$150/Car



**Gondola**  
1:20.3, Plastic Body, Metal Trucks  
\$160/Car



**Open Ended Gondola**  
1:20.3, Plastic Body, Metal Trucks  
\$160/Car



**Long Logging Car**  
1:20.3, Plastic Body, Metal Trucks  
\$110/Car



**"Tallyllyn" Railway 0-4-2ST**  
1:19, Butane Fired  
RTR \$1700



**Quarry Hunslet 0-4-0T**  
1:19, Butane Fired  
RTR \$1600



**'Cranmore' Peckett**  
1:19, Butane Fired  
KIT \$1695  
RTR \$1795



**War Dept Hunslet 4-6-0**  
1:19, Butane Fired  
RTR \$1900



**RGS #6 Goose**  
2.5" Scale, 7.5" Gauge  
\$4950



**Forney SR&RL & WW&F**  
1:13.7, Butane or Coal  
Butane \$3200, Coal \$4200



**2-4-0 7.5" Gauge Ride-on**  
2.5" Scale, Coal Fired  
Kit \$15000 RTR \$18000



**Austerly 0-6-0T**  
5" & 4 3/4" Gauge  
Kit \$5800 RTR \$6050







# THE WORLD'S LARGEST STORE FOR MODEL STEAM TRAIN SUPPLIES

ACCUCRAFT · ASTER HOBBY · MAXITRAK · J&M MODELS · ARGYLE LOCO WORKS · AMS

**USRA Mikado Light**  
1:32, Alcohol Fired w/ 6 Free Cars  
Kit \$3900, RTR \$5000



**GWR 43xx 2-6-0**  
1:32, Butane, Green and Black  
Kit \$2695, RTR \$2895



**Chinese QJ-Class 2-10-2**  
1:32, Butane Fired  
RTR \$4500, Electric \$4150



**Deutsche Reichsbahn BR38**  
1:32, Alcohol Fired  
DB/DR RTR \$5400



**Kerr Stuart 'Victory'**  
1:32, Butane Fired  
RTR \$1100



**Mk1 RMB Restaurant**  
1:32, Plastic body, Metal Trucks  
\$295/Car



**"Train Bleu" CIWL Sleeper** J&M Models  
1:32, Brass  
\$950/Car, \$3800/Set of 4



**Japan National Railway**  
1:32, Coach and Observation  
Coach Kit \$680, Obs RTR \$1545



**40' Reefer Car**  
1:32, Plastic Body, Metal Trucks  
\$119/Car



**AAR Box Car**  
1:32, Plastic Body, Metal Trucks  
\$119/Car



**C&O Steel Caboose**  
1:32, Brass  
\$450/Car



**Pennsylvania Caboose**  
1:32, Brass  
\$499/Car



**Dora 0-4-0T**  
1:20.3, Butane Fired  
Black, Maroon, Blue  
& Green  
RTR \$499



**Saxonian IIIK**  
1:20.3, Butane Fired  
RTR \$2975



**Jackson & Sharp Combine**  
1:20.3, Ball Bearing Trucks, Lighting  
\$295/Car



**Jackson & Sharp Coach**  
1:20.3, Plastic Body, Metal Trucks  
\$220/Car



**40' Reefer Car**  
1:20.3, Plastic Body, Metal Trucks  
\$119/Car



**Tank Car**  
1:20.3, Plastic Body, Metal Trucks  
\$160/Car



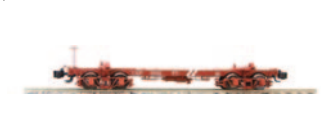
**Flat Car**  
1:20.3, Plastic Body, Metal Trucks  
\$140/Car



**Logging Disconnects**  
1:20.3, Plastic Body, Metal Trucks  
\$120/Car



**Short Logging Car**  
1:20.3, Plastic Body, Metal Trucks  
\$120/Car



**Short Flat Car**  
1:20.3, Plastic Body, Metal Trucks  
\$70/Car



**Iron Mountain Car**  
1:20.3, Plastic Body, Metal Trucks  
\$60/Car



**Short Caboose**  
1:20.3, Plastic Body, Metal Trucks  
\$170/Car



**Lawley 4-4-0**  
1:19, Butane Fired  
TBA



**Sentinel DG6 Lorry**  
1" Scale, Butane Fired  
RTR \$1580



**Allchin**  
1.5" Scale, Butane Fired  
RTR \$3800



**Fowler Ploughing Engine** MAXITRAK  
1" Scale, Butane Fired  
RTR \$5295



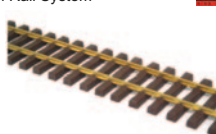
**Kerr Stuart 'Wren' 0-4-0ST**  
1:13.7, Butane Fired  
RTR \$1775



**Code 250 Rail**  
Brass Rail System



**Code 332 Rail**  
Brass and Alum Rail System



**West Coast 1" Rail**  
Steel, Rail System





# End of the Line

## Saugus Highline... Finale?

Text by Jeff Campbell

Photos by Rick Parker, Carla Brand Breitner

**O**n the last Saturday of January, there was a steamup on a layout behind a house in the San Fernando Valley. Steamers from Palos Verdes to Bakersfield came, because it was a very special steamup -- it would be the last run on the Saugus Highline, a Mecca for Southern California steamers for the last dozen years.

*Above: Marie Strauss shares some memorable moments of running trains and her late husband Eric Strauss with the assembled steamers.*

*C.B. Photo*

About eight years ago, I had purchased a Roundhouse Sandy River No.24 from Jim Pitts, a dear and recently lost friend. I was new to the hobby, so I asked him "Where should I run this thing?" He recommended that I call Eric Strauss in Sherman Oaks. I did so and was welcomed by Eric to attend his next steamup in two weeks.

However, this felt like no regular welcome. It was like I was some kind of celebrity -- maybe Neal Armstrong asking to attend an amateur astronomy club. After the call I thought to myself, "That was kinda weird." I came to find out that this is how Eric treated everyone. Furthermore I discovered that this is how everyone at the steamup treated everyone.

As I arrived with my laundry basket full of cheap Bachmann cars (my gear has improved significantly since then), I was greeted enthusiastically by each person there, and went on to see how they all greeted each other with equal enthusiasm. What a great group of people these were. After 20 years of flying model aircraft and seeing no such kinship,



*The late Eric Strauss poses with the Saugus Highline shortly after its completion in 2009.*

*R.P Photo*





Above: Gary Woolard readies his "Tourist Train" pulled by an Accucraft 2-6-0 "Nevada County" (l) while the visiting steamers prep their locomotives for their turn on one of the two mainlines available on "The Saugus Highline."

R.P. Photo

this was a real breath of steam oil-infused fresh air. I found that besides being cheerful, live steamers were mechanically minded, bright, and had good senses of humor. I could ask anyone a question about my new engine and they would all be willing to help. Cool.

And then there was the layout. Perfectly engineered twin tracks sweeping through the yard as level as the Bonneville Salt Flats. Eric, a retired aerospace engineer and machinist, documented the build in *Steam in the Garden* issues 110-112, March/April to July/August 2010. Height was completely adjustable and the gap between rails

was intentionally set so there would be no binding in the hot San Fernando Valley summers. "These people and this track," I thought, "this is going to be fun." It was.

Eric and his wife Marie built a perfect conduit for steamups in their own backyard. A great place to experience a great hobby with great people. After going to many wonderful steamups, Eric and Marie's, in my opinion, were the best.

Unfortunately, Eric passed three years ago, after fighting an illness for some time. With the help of a small group of "Saugus Highline Volunteers" Marie has managed to host steamups several times



Greg Dahlem adjusts his Stirling Single on the fly as it snakes around a wide sweeping curve.

C.B. Photo



The author fires up his coal-burning 7/8ths Forney, with Nico Amato looking on.

C.B. Photo





*A look back to 2013 - A younger Nico Amato preps a friend's Accucraft Fort Wilderness for a maiden run when the layout was still new.*

*C.B. Photo*



*Greg Dahlem lights off this chain-drive creation of the late Bill Turkel. The loco ran surprisingly well.*

*C.B. Photo*



*Pete Comley with his Great Western train.*

*C.B. Photo*



*Jeff Campbell preps Eric Strauss's favorite Darjeeling B train for its traditional "first run of the steamup."*

*C.B. Photo*



*Left: Judy Luscher's "Iuki" and Jeff Campbell's K-27 race through the switchyard.*

*C.B. Photo*

a year, which we deeply appreciate. But it had to end. Marie will be moving to a more manageable condo and as much as she says she likes us around, "The track isn't going with me."

So this would be the last steamup at Eric and Marie's. It was great fun, a little sad, and I know we will all miss running there. Thanks Marie.

### **A silver lining to this bittersweet tale**

Several generations of steamers have learned the finer points of boiling water under Eric Strauss's tutelage in the dozen years that the layout has ex-

isted, including a young man named Nico Amato, who first visited the layout in 2012. When Marie invited the now adult Nico to what would be a last steamup, they began talking about possible alternative visions for the layout's future. The result is that, rather than simply being broken up and hauled away to the dump, the components of the Saugus Highline, from post anchors to platforms to track, will be carefully dismantled and transported to a new home in Kern County. Someday soon we hope to see the Saugus Highline reborn.





*Left: Sonny Wizelman adjusts his Accucraft B&O "Docksider" switcher.*

*C.B. Photo*

*Right: (from l-r) Buzz Barry, John Polen, Pete Comley and Greg Dahlem share some fun moments trackside as Greg pumps up his Aster Sterling Single.*

*C.B. Photo*



*Left: Sonny, Nico, Gary, Buzz and Jeff look over the latest issue of SitG, and debate — "a steamboat on the cover!?"*

*C.B. Photo*



# Steamup Reports

## Kicking off a New Year!

**Bay Area Garden Railway Society Live Steamers** — Several BAGRS live steamers gathered together on a perfect February day (unfortunately, for the lack of rain) at Rob Lenicheck's. The steamup included some new and exciting engine sightings. Channing Cheng brought the newest Accucraft live steam offering: a 1:20.3 narrow gauge D&RGW C-18. This is a prototype of the model run, which will have many design improvements which Accucraft has incorporated into their recent designs, such as a ceramic burner, full Stephenson's valve gear, and a roof which folds off to the front rather than overhanging the side of the cab. *(Submitted by Rob Lenicheck)*



*Group shot of all who attended.*

*From left: Bill Allen, Channing Cheng, Mike Williams, Bob Trabucco, Mike Laine, Bill Mansell, Ron Sickler (seated), Dennis Mead, Tom Winter (at back), Sanjaya Kumar, Tim Boles, Jim Goss, Gary Whaley, Rob Lenicheck*



*Right: Bill Allen (l) consults with Channing Cheng of Accucraft on the prototype of the newest Accucraft live steam offering: a 1:20.3 narrow gauge D&RGW C-18.*



*Right: Ron Sickler brought his coal-fired Accucraft Emma and a new Basic Project Engine, which he is discussing with Bill Allen.*

*Right: Sanjaya Kumar, a rather new and welcome addition to the Bay Area live steam ranks, shows off his fine articulated model of the "Skookum," built by Bill Allen.*







*Left: Tim Boles is very serious about getting his coal off to a hot start.*

*Right: Some of the group discussing Ron's project.  
From left: Bill Mansell, Ron Sickler, Bill Allen, Gary Whaley*



*Left: Ron shows off the correct vessel by which to add whiskey, er, water, to the boiler of his Accucraft coal-fired Emma.*



**International Small Scale Steamup, Diamondhead, MS** - This year turned out better than last year for attendance. We had 65 registered and 12 walk-ins. Unfortunately, some of the registrants had to cancel due to health and/or weather reasons, but those who did attend had a good time and there was next to no waiting for track time. We had three tracks up and running and they were busy most of the time.

Track set-up commenced on Saturday and most of the work was finished later that day. We had the usual track crew, but the hotel maintenance men helped a lot on Saturday. This year there were three maintenance men who helped a lot with setup, takedown, lunch and general cleanup. On Sunday we put the finishing touches on the track and running began. Theo Reshew was the first steamer to run with his Aster Climax. Eric Bowles wasn't far behind with his beautiful Aster British engines pulling Accucraft British coaches. Richard Jacobs set up his turntable which was quickly filled with the larger mainline engines from Aster and Accucraft. *(Submitted by Pat Darby)*



*Left: The storage tracks of the turntable provided by Ritchie Jacobs quickly filled up with mainline engines waiting for their turn on the largest track available at the steamup.*

*Right: And speaking of mainline, Ritchie Jacobs' Accucraft Big Boy puts on a show around the large track as it passes another Big Boy on the inside line.*







*Left: Dan Fuller taking advantage of the very late night, (or is it early morning?) track availability to run his train.*

*Right: Tom Bowdler checks the operation of his heavily bashed Regner locomotive making its way around the medium size track in the atrium of the Diamondhead Resort.*



*Left: There's work to be done in between running! Caleb Roberts works on his Accucraft D&RGW K-28. Not sure if its being prepped or post run, but Caleb seems pleased with the locomotive.*



*Right: The steamup couldn't run smoothly without the help of faithful volunteers pitching in and helping out. From (l-r) Becky Montelaro, Charmaine Reshew, and Karen Crabb put in a lot of hours making sure everyone had snacks and drinks.*



*Right: Andrew Finnegan (standing) working with Brittney Grimm on her coal fired locomotive.*

*Right: Attendees gather for the annual group photo. Hopefully the pandemic will be a part of history soon so we can all return to next year in greater numbers to share our enjoyment of small scale live steam. Hope to see you there!*







# Bob's Bit's

Weekend Projects for Steamers  
by Bob Sorenson  
Photos by Bob Sorenson

## Building a Portable Layout Part 1, Building the Legs



*Above: Our end goal. In this Four Part series we will take you through the steps to complete a easily transportable and assembled layout for steamups.*

**M**y wife and I recently moved to South Dakota. The new house is all finished, the builders did a great job, the "honey-dos" are done and it's time to fill that big basement with something fun. So, for the next few editions, we are going to build a portable Gauge One steaming layout.

This layout is dual track, no switches, the central radius being 72 inches. The inner track has a radius of 68 inches and the outer is 76 inches. Not real big, but it's about all the room we have. The layout proper is circular, but I plan to incorporate a bridge section on one side and a straight section opposite. The circular portion is made up of ten table top sections. Each section has its own leg for good support. The table sec-

tions are made similar to a hollow core door. They are rigid, yet light weight. The overall concept is to make maximum use of four-by-eight sheet goods and eight-foot lengths of ordinary framing lumber. Since there are considerable repetitive operations, use jigs and assembly fixtures as much as possible.

Let's start off with the legs. **Photo 1-1** shows a finished leg. The legs consist of a vertical pillar, four horizontal stringers, two on top, two on the bottom, a table section joiner plate and some footies. The legs are from nice quality three-quarter inch birch plywood. The pillar is six inches wide and 32 inches tall. The stringers are four inches wide and 16 inches long. The joiner plate is six inches wide and 16 inches long.



To maximize the plywood material, take into account the thickness of the table saw blade. In the end, all dimensions ended up about a quarter-inch under the nominal. Two full sheets of plywood is enough for the legs, with some leftovers for two straight sections if desired.

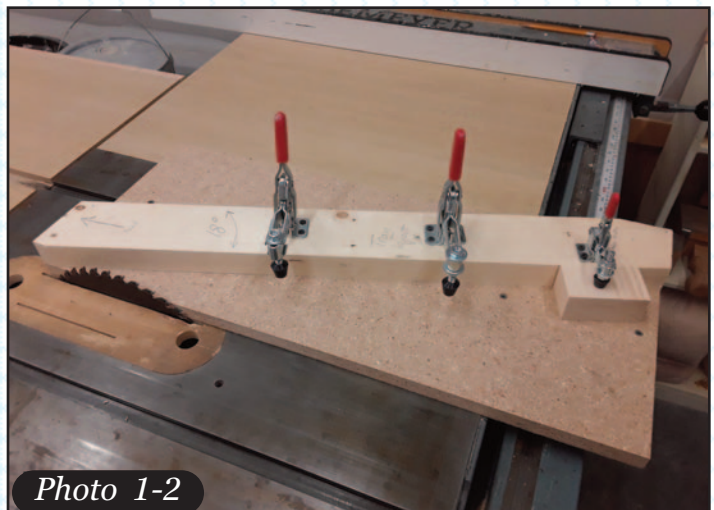
After cutting all the stock for the legs, make a sliding table jig for the table saw as shown in **Photo 1-2**. This jig gets used a lot. Since there are ten table top sections, each section is 36 degrees in sector. The jig cuts stock to the half angle of 18 degrees. Layout the 18-degree setting on the jig fence very carefully. The jig slides in the slot on the table saw top. **Photo 1-3** shows the bottom of the jig with the slot guide. **Photos 1-4** and 1-5 show the use of the sliding jig to cut a decorative taper on the leg stringers. The sliding jig makes very quick work cutting the 40 stringers needed. The stringers are attached to the pillars with glue and screws. For a consistent appearance, make a marking jig as shown in **Photo 1-6** for the screw holes. Drill and counter-sink all the stringers.

The table section ends rest on top of the leg joiner plate and are attached using bolts through the top. Placement of the bolt holes in the joiner plate must be consistent. Clamp two stops to the table on the drill press as shown in **Photo 1-7**. Drill a three-eighths inch hole through on each corner of the joiner plate 1-1/4 inch from both edges. To finish the joiner plates, cut a quarter-inch chamfer on the corners to soften the sharps.

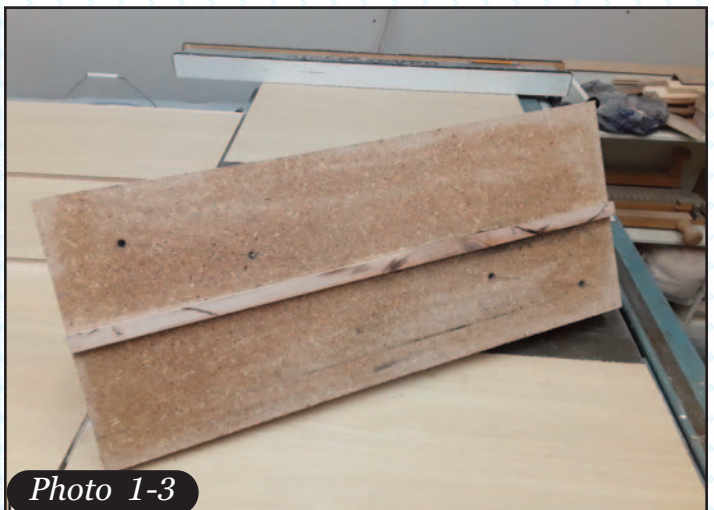
With all of the leg materials now cut, drilled and ready for assembly, chamfer all those sharp plywood edges with a couple scrapes from a block plane. It is also a good idea to roller paint the parts now. Over the next few photos, note the glue surface areas masked off from paint.



*Photo 1-1*



*Photo 1-2*



*Photo 1-3*



Assemble the legs with the use of a jig shown in **Photo 1-8**. First butt up a stringer against the stops as in **Photo 1-9**. Glue and lightly tack a pillar in place as in **Photo 1-10**. Attach a second stringer with glue and 1-5/8 inch drywall screws as in **Photo 1-11**. Flip the partial assembly over and repeat to attach the other two stringers as in **Photo 1-12**.

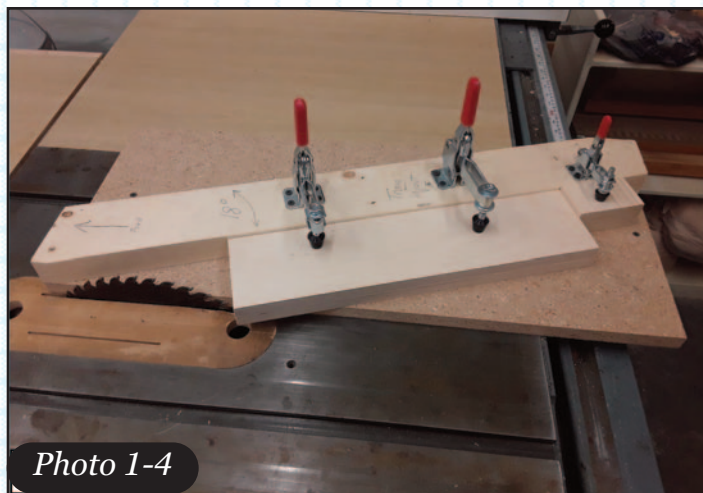


Photo 1-4

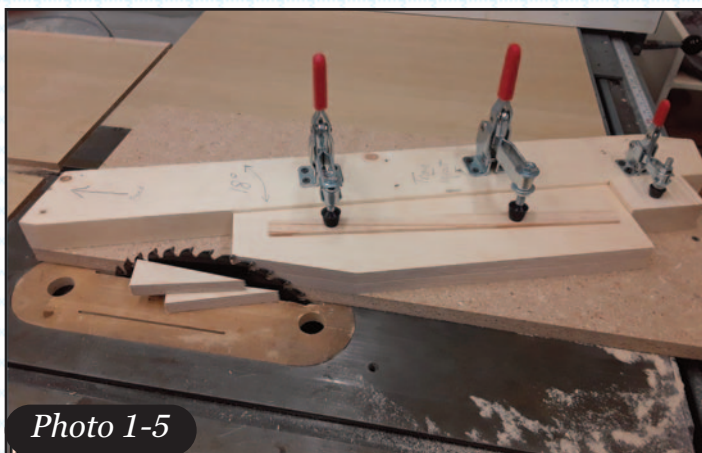


Photo 1-5

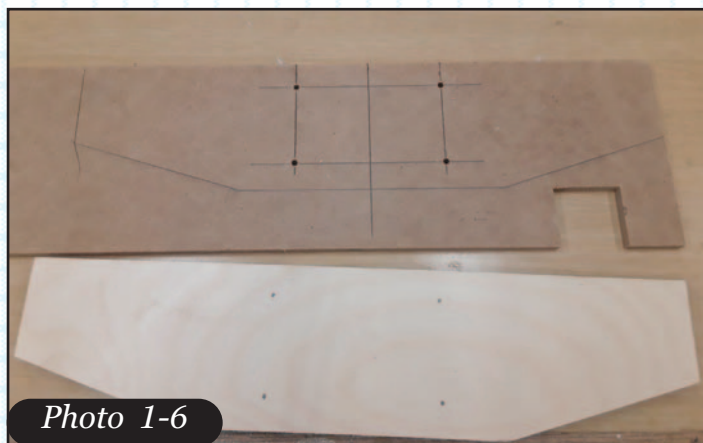


Photo 1-6



Photo 1-7

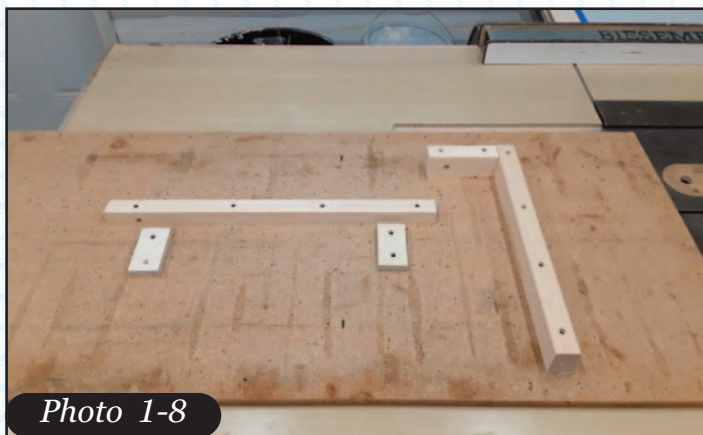


Photo 1-8

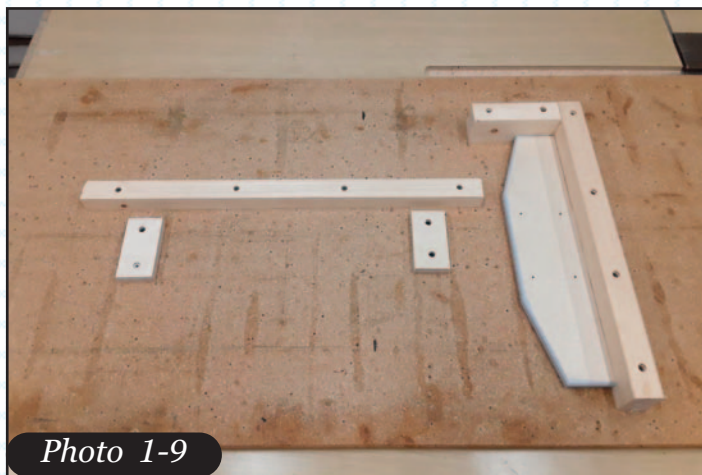


Photo 1-9

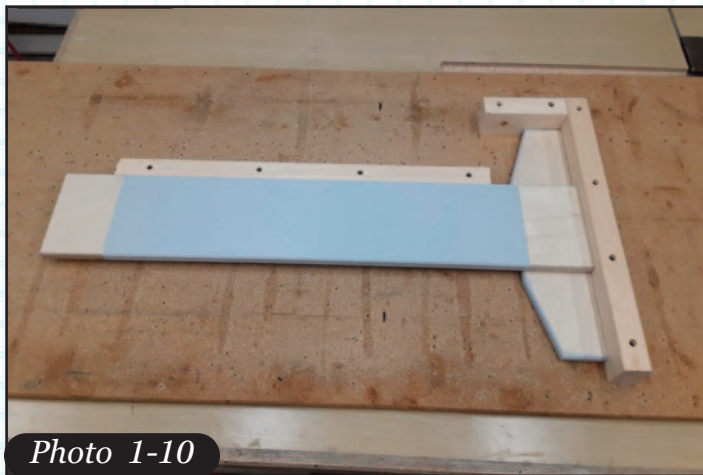
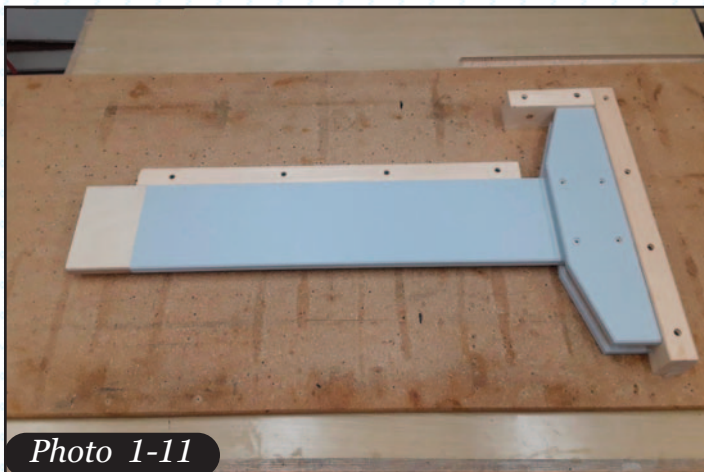
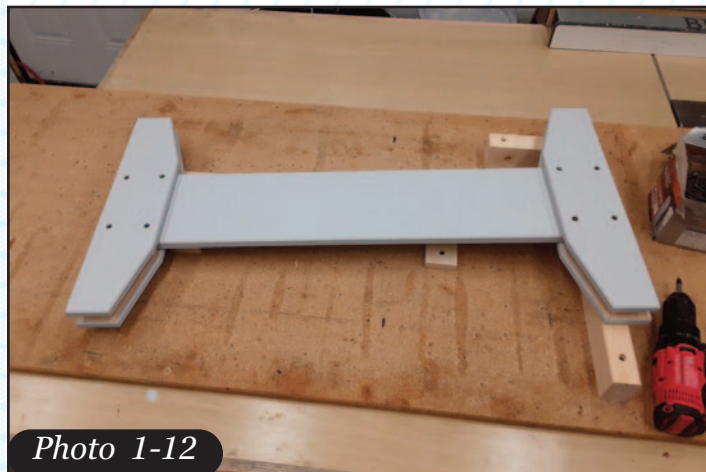


Photo 1-10





*Photo 1-11*

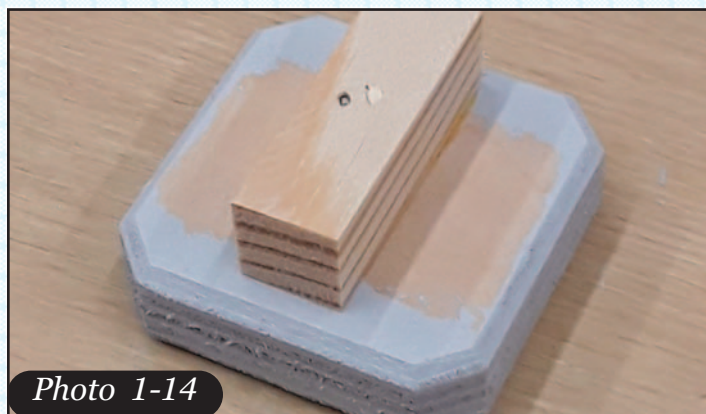


*Photo 1-12*

Ok, let's get these legs finished up so we're ready to start on the table top sections. The table sections join together at a joining plate. Bolts through the top of the table sections into the joiner plate lock everything together. **Photo 1-13** shows the bottom of the joiner plate prior to assembly to the top of the leg. Use 5/16th-inch T nuts for joiner plates. It is possible to use 5/16th-inch hex nuts with washers for this, but the T nuts will free up a hand during setup of the layout. **Photo 1-13** also shows 1/8th-inch pilot holes for the T nut barbs. Driving in those T nuts without pilot holes requires considerable force. To be on the safe side, drill some pilot holes. Attach a 3/4-inch square glue block, centered on the bottom of the joiner plate. The block provides some additional glue surface and helps with alignment. Glue the joiner plate to the leg assembly, centered and tapped home.



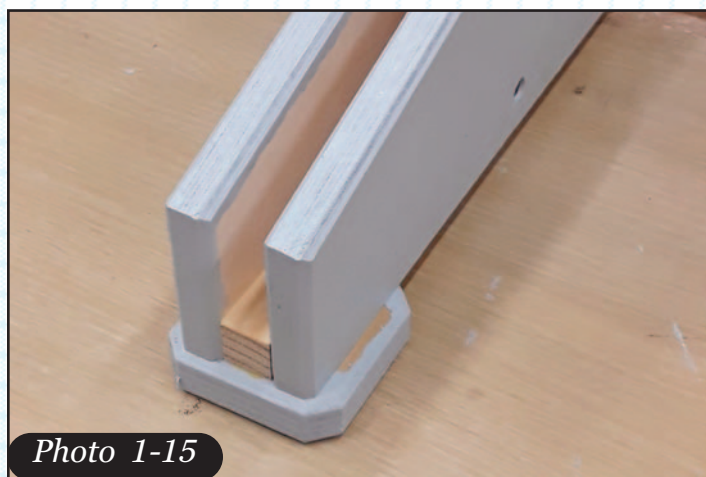
*Photo 1-13*



*Photo 1-14*

**Photo 1-14** shows some little footies for the bottom of the legs. They are three by three-inch pieces of 3/4-inch ply with a 3/4-inch square glue block attached. Glue the footies to the legs as per **Photo 1-15**. Touch-up paint any exposed surfaces. Leave the top of the joiner plate unpainted so the legs don't weld themselves to the table sections over time.

I think we'll call it quits for today. Next time we will start on the table sections.



*Photo 1-15*





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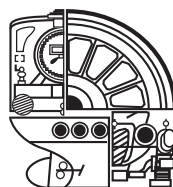
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**Puget Sound Garden Railway Society.** Two steamups per month, one at the Johnsons' on the second Saturday and a steamup at a member's track on the fourth Saturday.

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## THE CUPOLA VIEW

### More Steam for the Garden



When our Founding Editor the late Ron Brown selected the name for the magazine, it allowed for us to explore and discover all aspects of live steam that we can operate in a scale larger than what we would indoors on an electric layout. While we do seem to focus on trains more than the other models, we have strived to include the diverse areas of the “live steam hobby” in our pages and on our cover. We’ve had trains, showman steam tractors, steam driven carousels, and boats grace our pages, and the craftsmanship that has gone into these models is breathtaking and marvelous.

Growing up in Southern California, once I had my driver’s license, I would visit the Los Angeles Live Steamers on occasion to get my “I want my live steam” fix. I remember one occasion when there was a quarter-scale steam shovel in operation. It was fascinating to watch and it could move some dirt!

So, what haven’t we covered? Before I answer that, let me give you some insight into other garden scale hobbies. One of my favorite Expos is the Cabin Fever Model Engineering Expo covered in

an article in this issue. We’ve covered it before and we try to show the variety of steam driven models that are on display in addition to the close to our heart model trains. The Expo management team goes to great lengths to provide a “playground” for all types of steam that can operate in a garden. They build a huge pond, they allow the Akinback Live Steamers to set up a couple of tracks, one of which is over 24 x 50-feet in size, and they bring in nine tons of dirt for radio-controlled construction equipment. Yes, you read that correctly – nine tons of prime “let’s play in the dirt” dirt that gets dug, pushed, carted and moved around all weekend. So, the answer to the question I posed is “nothing” We’ve covered it all.

While construction equipment that is not train related hasn’t show up in our pages yet, we have had steam powered cranes and shovels for railway maintenance appear. So yes, we’ve covered it all and hope to continue to cover more in the future.

So, if you know of someone who is building and driving a steam powered dozer, crane, shovel, or drag-line in their backyard with their own private nine tons of dirt, send them our way – we’re always looking for small scale live steam to showcase in “*Steam in the Garden*”.

Happy Steaming!

**Scott**

*Cupola view’ is written by Editor Scott E. McDonald: you can contact him at [sitgeditor@gmail.com](mailto:sitgeditor@gmail.com) or P.O. Box 1539, Lorton, VA 22199.*



*Nine Tons of Dirt! Some hobbies need tracks, some need water, playing with construction equipment takes dirt.*



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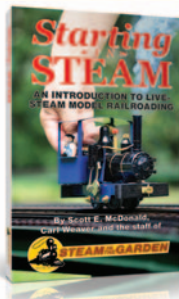
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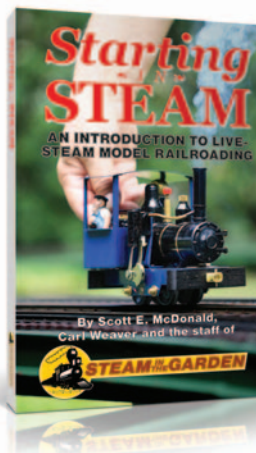


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## CONTRIBUTOR BIOS

The magazine couldn't exist if it were not for the dedicated individuals who take time from the hobby to chronicle their endeavors, interests, and joy of live steam. If you get a chance to meet any of our contributors at a steamup, please thank them for their contribution.



**Jeff Campbell** - Jeff Campbell was infected with the train bug at an extremely early age. Thanks to his father, Jeff's first bedroom held a crib, dresser, and a 4'X8" HO layout. Years later, at the local fair with his family, Jeff noticed a G scale layout in the garden exhibits and a fuse was lit. Under the guise of getting his young son a "Toy Train" for Christmas, Jeff's empire was launched. Jeff's interest in live steam began while riding on the tender of a 2-4-0 at Disneyland. All the valves, pipes, and gauges were so intriguing and within weeks a kit-form Accucraft Ruby was running in the back yard which turned him into an avid live steamer.



**Rob Kuhlman** - Rob is a retired geologist who lives in southeastern Pennsylvania. He began modeling trains with HO during the adolescent years, moved up to 1/4-inch scale during the '80s and '90s, and then discovered live steam with the earliest issues of SitG. The years spent in O scale pointed him to SM32 and the use of many O scale raw materials in those early days when commercial products were scarce. Though SM32 remains his primary interest, he also steams early O gauge tinsplate and has recently been flirting with British mainline live steam in Gauge One. For the last 20-plus years he has produced the electronic bimonthly 32mm/O Gauge Newsletter.



**Rob Lenicheck** - Being a Colorado native, Rob Lenicheck was born with narrow gauge steam in his blood. He started modeling in HO in junior high, thanks to a suggestion from a "friend", moving on to HOn3 in high school, and finally to On3 in his early twenties. Unknown to Rob at the time, the Gauge One live steam hook was set deeply about 20 years ago when that same "friend" revealed his collection. Rob now spends much of his time scratch building engines. He has degrees in Music Education and Mechanical Engineering.



**Joe Rothwell** - Joe started building models as far back as he can remember, mostly due to having an older brother. He would simply follow his brother's lead. Plastic kits gave way to balsa/tissue planes. U-control planes gave way to R/C planes. The family always had a train set, O scale at first (both wind-up and electric), then HO and ending with N scale. Joe now has a 4-foot x 6-foot table top N scale layout, running mostly NYC equipment. Steam interest was rather late, he purchased his first engine in 2006. Joe finds the hobby very satisfying still looks forward to working on the various projects he has lined up. In real life Joe is a land surveyor in order to foot the bills.

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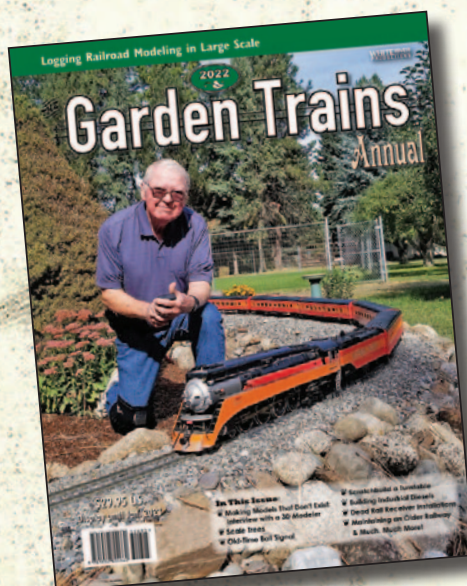
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