

Partnering Mentoring Building

RRA

Building The Budd 10-6 Sleeper Lessons in Soldering & Building New Tracks - International Model Builders Switching Eras is Almost Like Switching Scales Shows, Meets and so much more...



## BILL OF LADING

## Published Bi Monthly

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#### August/September 2018 Volume 4 No. 6

Owner / Publisher Amy Dawdy

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

#### **Front Cover Photo**

Bob Hogan's beautiful Budd 10-6 sleeper.

#### **Rear Cover Photo**

Last look at John Albee's S scale layout.





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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.

The S Scale Resource August/September 2018



# S SCALE MIDWEST SHOW

## Come to Indy and kick off your modeling Season!

# THE BEST OF O SCALE AND S SCALE IN ONE SHOW SEPTEMBER 20-22, 2018

WYNDHAM INDIANAPOLIS WEST 2544 EXECUTIVE DR. INDIANAPOLIS, IN 46241

WYNDHAM

ROOM RATE \$108.00 Refer to Indianapolis "O/S" scale show

317-248-2481 877-361-4511 DEALER SETUP THURSDAY 4PM - 9PM FRIDAY 7:30AM - 9AM

\*\*\* SHOW TIMES \*\*\* FRIDAY 9AM - 5PM COMPLIMENTARY HORS D'OEUVRES AND CASH BAR 5PM - 6:30PM SATURDAY 9AM - 2PM BUY/SELL/TRADE MODELING CLINICS MODULAR LAYOUTS LAYOUT TOURS

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### INDYOSCALESHOW.COM OR SSCALEMIDWEST.COM Contact info@indyoscaleshow.com or call 815-584-1577 with any questions

The parties, whose names appear on this registration form, have agreed to hold harmless all of the organizers, sponsors, Model Railroad Resource, LLC, The Wyndham Indianapolis West, and others, single and collectively, for any injury, harm, log Hange Steaden Resource, LLC, The Wyndham Indianapolis West, and others, single and collectively, for any injury, harm, log Hange Steaden Resource, LLC, The Wyndham Indianapolis West, and others, single and collectively, for any injury, harm, log Hange Steaden Resource, LLC, The Wyndham Indianapolis West, and others, single and collectively, for any injury, harm, log Hange Steaden Resource, LLC, The Wyndham Indianapolis West, and others, single and collectively, for any injury, harm, log Hange Steaden Resource, LLC, The Wyndham Indianapolis West, and others, single and collectively, for any injury, harm, log Hange Steaden Resource, LLC, The Wyndham Indianapolis West, and others, single and collectively, for any injury, harm, log Hange Steaden Resource, and the second steaden and the second steade and the second steaden and t

# From the Publisher's Desk

In order to improve ourselves, we must constantly learn. Merriam-Webster defines learn as "to gain knowledge or understanding of or skill in by study, instruction, or experience". I don't know about you, but I am constantly trying to improve myself by learning new and different things. That's what this issue is all about - learning. In order to learn, we must be open to new and different ideas. With respect to modeling, that includes not only the scale you model in, but looking to other scales as well.

The basics of modeling are not scale specific, and this issue's "New Tracks" highlights some great international modelers. None of these modelers model in S Scale, but their techniques and skills can be applied to any scale. Be sure to check them out, and contact them with any questions you feel they can help you answer.

Learning a new skill can be fraught with questions, and Glenn's article in this issue highlights soldering and how he does it. Hopefully you can glean some valuable information, not only with respect to the RS-1 that he is working on, but soldering techniques in general that will definitely carry on to other projects.

Shows help us to learn as well, and give us the opportunity to meet with other like minded individuals with whom we can discuss our hobby. Glenn and Jeb will be at Also, don't forget about the 2018 NASG Convention in Massachusetts nest week, so stop by to say hi!

Learning is the theme of this years's Indianapolis O Scale and S Scale Midwest Show September 20-22, 2018. We will be having "learning areas" in the trading hall this year where you can see firsthand different modeling techniques. The modelers showcasing techniques will be happy to answer questions while showing you how they do things such as figure painting, kit building, soldering and more. Also, check out the website to see a list of vendors that have signed up to date. Vendors, if you have not yet signed up, be sure to do so by July 31, 2018 to save \$10 per table. This will be our second year hosting the show and we look forward to another successful event!

Happy Reading & Happy Modeling,

Amy Dawdy

# NEWS YOU CAN USE

Soundtraxx Announces New 50 X 90mm Oval Speaker. SoundTraxx is now shipping a new oval speaker that measures 50 x 90 x 37.5 mm(D).

This speaker is suitable for use with our Tsusnami2, TSU-4400 4-amp Digital Sound Decoder in models with higher stall currents such as some S, O, and Scale large locomotives. This large speaker will provide robust low frequency bass sounds.



Dimensions: 50 x 90 x 37.5 mm(D) Frequency Response: 230Hx – 20kHz Peak Power: 5 Watts Impedance: 8 Ohms



Stephen Gardiner of Gardiner Model Railroad Designs is offering an S Scale Fairmont S2 Speeder Car through shapeways.com

\$20.00 US in "Smooth Fine Detail (Formerly Frosted Ultra Detail), or \$25.00 US in "Smoothest Fine Detail (formerly Extreme Frosted Detail). SFD is nominally smoother, with thinner layers and finer details, I honestly can't see the difference myself!

The model is based on measurements of an ex Canadian National Railways Fairmont S2 Speeder which was formerly a resident of the Toronto Railway Museum. This is a static element, the wheels do not roll, but it is printed in two pieces for ease of painting and detailing. The print has openings to insert the lift bars using small pieces of strip wood so they can be positioned as desired.



For handling, Stephen recommend washing in lukewarm tap water with maybe some very mild dish soap. I find this is enough to clear any support material left from Shapeways while not softening the print and risking deforming it. When dry, the print material can be brittle, care must be taken if you drill it to add more details. I recommend priming with Tamiya Fine Surface primer from a rattle can. It covers well and bonds well to the print material. After the primer, I try to stick to acrylic paints as I know they don't react with the 3D print material in my experiences.

#### Click here to for all the details and ordering.



One last shipment for Shinohara Track announced. Scenery Unlimited announced that Shinohara will make one more batch of track and turnouts for Scenery Unlimited, both standard and narrow-gauge. They are looking at a Fall delivery. This may very well be your last chance to get Shinohara track and switches. Contact Scenery Unlimited for more information.



Precision Laser cut wood construction and includes our paper corrugated roofing.



See their Website for more details.





New Zealand Finescale has a large selection of 1:64 scale products. Horses and wagons would be right at home in any layout through the 1960's.

They also have a nice selection of figures and many other items for all S scalers. Check their Website here.



Wild West Scale Model Builders has a new kit available in S scale. Atlantic Cable Hoist/Boiler House features interior etched floor boards and exterior walls, ladders, two different front walls (for different building periods) optional battens, multiple building configuration possibilities, and more!

Windows and doors can be custom positioned and include laser cut glazing. Their trademark EASY to follow FULLY illustrated step-by-step instructions make building easy! Doug Junda and Bob Stears sent us a press release which should make many happy. We are happy to announce the acquisition and merger of Grandt Line Products, The San Juan Car Co., San Juan Decals, American Limited Models and The Leadville Shops. This new conglomeration of companies is called The San Juan Model Co.

At the request of the Grandt family the "Grandt Line" name has been retired. The extensive Grandt Line catalog of detail parts and kits has been merged with the extensive product line offered by The San Juan Car Co.

This new combined catalog of well over 1000 detail parts, as well as the combined HOn3 and On3/On30/O Scale kits of both companies, will be available directly from The San Juan Model Co. web site as well as from our current distributors.



Daniel Navarre of River Raisin Models has some update and exciting new products to show.

#### "RAILWAY EXPRESS AGENCY"

#### Steel Welded Express Refrigerator Reefers

The first four models in the production run have arrived here. The photo below shows off these beautiful cars. River Raisin is offering these cars in five versions. The complete production run will arrive here in early August. Pre-Production pricing of \$389 per car will expire when the cars arrive at River Raisin Models. The pre-reserved models will be shipped to their new homes after inspection. We have added a variation of the REA-003.1 with White Lettering in place of the Dulux Gold Lettering. The added variation with White Lettering operated in the later 1950's.



See our website for updates to this project including photos and reservation details. .

"Southern Pacific P-10 and Chesapeake & Ohio F-17, F-19 4-6-2 Pacific Project" In S Scale Brass!



River Raisin Models announces "The Southern Pacific P-10's and the Chesapeake and Ohio F-17 and F-19 4-6-2 Project. These classic locomotives will be built in very limited quantities.

The SP P-10's will be built in five versions; regular boiler, skyline boiler, Daylight Paint scheme with full streamlining, and with early and late lettering.

The C&O F-17 will be built in three versions and all five of the F-19's will be offered. These classic

locomotives powered the famous "The George Washington", "Sportsman", and the "Fast Flying Virginian" passenger trains. The production run is planned for completion around the end of 2019.



No pictures, as I haven't ordered them for myself yet, but I've made the adjustments I think are needed, and put them up for sale on my Shapeways Store.

Check Stephen's blog here.





These models are available with Loksound DCC Sound, with factory installed ESU's Full Throttle files.

This option must be pre-ordered with your reservation. Contact River Raisin Models to request a reservation form. C&O photos compliments of the Tom Dixon Collection, and the SP photo compliments of the Robert Hundman Collection.



This just came in from Stephen Gardiner. I'm rolling the dice to see if there is interest in a second type of 3D printed S Scale speeder car. The Fairmont M14, another speeder in the collection of the Toronto Railway Museum that I have produced an HO Scale version of, has been converted to S Scale and Sn42 Narrow Gauge for my one customer



Pierre Oliver of Yarmouth Model Works is thinking for a new S scale kit. DL&W 40' double door steel automobile boxcar. Pierre needs commitments for 50 kits in order to produce them.



Proto car above with HO version below.



Pierre wants to gauge interest in doing this in S scale. Let him know through his Contact Page that are interested in this possible project.



New from Model Tech Studios LLC.

This Classic soda fountain is meticulously detailed in S Scale. Unpainted, it is a beautiful piece and comes assembled ready to paint in your scheme This is a challenging piece for us to produce but we've made it really simple for you to finish up as there is NO assembly it is decked out with detail.

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Footprint in scale approximately 3 1/2" L x 1 1/2" W and comes Assembled and UNPAINTED......just add your own Paint scheme to fit your scene, (Figures not included)



Did you miss an issue of The S Scale Resource? Forgot to look? Well, sign up here and never miss another exciting issue. We'll send you an Email when the latest issue is loaded to our site. Don't worry, we won't sell or post your Email address to anyone!

## Click Here to sign up today!



BIGFOOT the Legend Lives, Finished Beast - A fun character to add to your layout. He is very "Beastly" and comes all painted and ready to add to your scenes. Approx 1.40 Inches tall so he is taller than a human in S scale

See their Website for more.

Paul Vaughn from PVC wrote in to say that Precision Vintage Classics is pleased to announce that our webmaster has performed magic! Our website <u>pvc-sn3.com</u> is restored to full functionality including the shopping cart.



Have a a new product and you want to get the word out to over 1700 scale modelers? Let us know here.

Ready to start advertising to those same 1700 scale modelers? Let Jeb Kriigel know here.









Mentor Definition: A Trusted Counselor or Guide By Contrubiting Editor Jim Kellow MMR

# International Model Builders You May Want To Be Your Mentor

Awhile back, I joined some non US based Model Railroad and/or Railway groups to see what modelers outside the US were building, and if any of them might be mentors profiled in my "**New Tracks**" articles. I knew that these builders might not model in O Scale or S Scale because of lack of space. In many countries, homes are much smaller than in the US. But I believe we all might benefit by seeing what these modelers are building, and the skills, materials, and techniques they use.

While I live in the US, I have been fortunate to have traveled throughout Europe, Australia, the Far East, the Middle East, South America, and most of the Caribbean Islands. During my travels, I have been fortunate to meet some very skilled modelers, visit home layouts, and meet local manufacturers. In June 1993, I published an article about a Czechoslovakian manufacturer I had visited, ETS and its owner Gustav Taus.

My "New Tracks" articles are about skilled, dedicated, model railroad/railway builders and their modeling skills and techniques. Therefore, they can apply to modelers in any scale or gauge or particular country they may model. I once had a friend tell me "It does not matter what scale or gauge you model, but only the quality of your modeling." Any skilled model builder can be a mentor, and any modeler can be in need of a mentor.

My articles are about builders, the great ones, the ones who will be great because they are trying, the ones in need of help, the young, old, disabled and healthy. The only requirement for me to want to talk to you and possibly include you in one of my articles is for you to be a skilled builder of models, or a person who wants to be a model builder, or a supplier, manufacturer or organization that can help modelers find mentors to work with. So with that said, my email address is: JimKellow@oscaleresource.com. I look forward to hearing from you and talking about model building and mentoring.

I found several International modelers I believe have the model building determination, confidence, and skills to be mentors to my readers. These are some of, but certainly not all, of the modelers I found. I think you will enjoy meeting them and hearing about their model building efforts. All of these modelers have traveled down "New Tracks" and I hope you will want to travel with them, at least part of the way.

#### Individuals

#### **Diger Rossel lives in the Netherlands**

I included Diger because he is building a unique model railroad based on a sugar cane plantation and factory. His modeling reminded me of the sugar cane plantations and factories I have visited in South America,

the Middle East and the Caribbean. Here are photos of his layout Pabrik Gula Jairuba. The photos were taken by the photographer of Rail Magazine, Len de Vries. Please meet Diger Rossel.

I live in the Netherlands. As a child, I had a simple layout. Later, I built a layout in the attic of our home. In 2000, I built a modular Layout called "Ferien in Blumenfeld" (Holiday in Blumenfeld). In 2010, I built my second layout called "Jairuba Blue Bay Beach Railway" a tropical layout on the beach of my fantasy Island Jairuba. This layout won second place at OntraXS in Utrecht in 2012.



(OntraXS in Utrecht is a **Modeltrein Expo** at the Dutch Railway Museum. This year, it was held on March 9, 10 & 11, 2018)

"Surrounded by their behemoth counterparts, the tiny engines of Europe's best model railways are on display during Modeltrein Expo. Model railway builders from all over Europe have been invited to display their creations at this event.

At the Modeltrein Expo exhibition over twentymodel builders will be showcasing their high-quality model railways. The quality of the models on display and its unique setting has made Modeltrein Expo one of the world's top model railway events: Railway models constructed with great care and dedication and attention to detail."

That same year, I built my third layout that is presented here. This layout also won second place at OntraXS in Utrecht and first place with the kids award. Recently I won first place with my latest layout "The Barch Bergbahn" A layout with a rack-railway, based on the Schafbergbahn (A meter gauge cog Railway in Upper Austria and Salzburg) in Austria.

My first layout was built in HO. All the others were built in scale HOe. The reason that I am building in this scale is that it fits best with the theme. I have built everything myself. I learned to build from the model builder Jozef Brandl from Germany. He is a master in building layouts. The following deals entirely with the construction of my model Railway Pabrik Gula Jairuba.

#### Pabrik Gula Jairuba

During OntraXS 2015, I presented my new model layout "Pabrik Gula Jairuba". The layout outlines the image of a sugar cane plantation on Java Indonesia and the transport of sugar cane from the field to the sugar factory in a beautiful tropical landscape. The name of the layout is taken from Indonesia, "Pabrik" means factory and "Gula" means sugar. Jairuba is the fictional name of the tropical island and based on Jamaica and Aruba. The layout has a length of 200 cm and a visible depth of 50 cm. On the back is a shadow station along its entire length with a depth of 30 cm.



#### The harvest of sugar cane on Java

Each factory on Java has (or had) its own rail lines from the factory to the surrounding fields. Most of the factories have a track width of 700 mm and some 600 mm. In the months of May or June, the factories start with the harvest of the sugar cane that continues day and night until everything is harvested somewhere in August. In the morning starts from the factory a steam locomotive with empty bogies to the sugar cane field. On the part of the field that already has been harvested, is a field track that connects to the rails. By using oxen (kabouwen) the bogies are pulled to the work area on the sugar cane field. The workers cut down the sugar cane stalks on a certain length hand rid them of the leaves. These are then loaded on the bogies. Once the bogies are full, they are pulled back to the track by the oxen. Finally, the steam locomotive, there are workers on the front who throw sand on the tracks to prevent the steam locomotive from slipping. In the factory they unload the bogies, and the sugar cane is processed into cane sugar and the by-product molasses. The squeezed cane stalks are dried and then processed into bales. These bales are also called "bagas" or "ampas". With the bales, the entire steam requirement of the factory is covered and also of the steam locomotives. Disadvantage of the

bales is that they only bring 1/3 of the fuel value compared to coal and need a lot of space. The tenders of the steam locomotives were modified with attachments and a steel sheet roof to take as many bales as possible.



#### **Converting reality to model**

To get a correct transformation of reality to model, the first problem were the steam locomotives. I have chosen for the 1:87 HOe scale, or narrow-gauge railway. The steam locomotives are submitted by Roco and are completely rebuilt and made older with rust. The tender is rebuilt and filled with bales to be as original as possible. The diesel train is from Liliput and the bogies are of the brand minitrains. The bogies are rusted and filled with "sugar cane" made from dried grass.

#### The model layout

The layout is made up of two parts. The left part has an opening on the right, and the right part an opening on the left. If both parts are merged, it is resulting in a layout with a length of 200 cm. The back wall of the layout is curved and plastered with a landscape poster of Faller. This landscape poster is submitted with palmtree photos from the internet. On the inside of the model layout there are two speakers for the sounds on the layout. On the left is the sound of the steam engines in the sugar factory, and on the right the sound of the workers in the field and the sound of the water through the rice fields. Finally, you hear in stereo the original nature sounds from Java Indonesia. The lighting consists of two fluorescent tubes of 90 cm at the front and four power leds in the ceiling of the layout. In this way, the lighting looks very sunny and gives the right light temperature for a tropical landscape.

#### The track plan

The layout is so arranged that the factory is on the left with the sidings and locomotive shed and the sugar cane field and the rice fields on the right side. On the right side and on the left side are holes in the back wall. Seen from the right, the track comes out between the trees and leads along the front to the left across a railway crossing and continues on the terrain of the sugar factory. On the terrain, the track splits itself to various sides and finally dissapears with two tracks between the trees to the shadow station on the back. The outer track goes to the right side again, and the innner track goes to a third hole in the back wall to the sugar cane field. On the tracks of the sugar factory can be shunted with the bogies and the steam locomotives.

#### The buildings

To get a good picture of the colonial sugar factories in Java, I have used the baukasten system from Auhagen. First the walls where painted in white. With the proper composition of the buildings and the walls I made a beautiful factory. The roof plates are made of aluminium packaging material. They are all stuck on the roof piece by piece. With paint powders from Anita decor the roof sheets are rusted. Next to the factory is a converted oil storage tank of Kibri which serves as a molasses storage tank. Also full with rust. The loco shed also comes from Auhagen and looks the same as the factory. There is also a converted barn from Busch and a small cottage at the level crossing by Langmesser. The cabin at the ricefields is made with wooden skewers and a roof of real palm leaf remains.

#### The palm trees

On a sheet of A4 paper, I draw multiple leaves and copied this several times. After that, I started to cut all the leaves out of the copied sheets. Each leaf is folded and trimmed. Many cuts for a palm leaf and less cuts



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for a banana leaf. The leaves are then pasted on a thread of 20 cm length. The leaves were then bundled with 15 pieces to a palmtree. To mimic the trunk, I use Dash clay and masking tape. The leaves are then curved in the shape of a palm tree and sprayed in a green color. The trunk is painted brown. I ended up with 50 palm trees and banana trees made in different heights. Through the internet, I have purchased some very nice palm trees from the Model tree shop in England. The most beautiful trees are placed in the foreground.



#### The sugar cane field

For the sugar cane field, I used a plastic plant, the asparagus. The ends of this plant were well suited for mimicking the sugar cane. The ends were cut on a length of 6 cm. After that they were painted in a green color. These cane stems I have planted on the model layout. When I was done, there were 1200 cane stams on the layout. The sugar cane field now gives a picture of densely growing sugar cane stems. The sugar cane field is constructed in such way that there is still a great deal to the left that needs to be harvested. On the harvested part of the field are still some remainings of the sugar cane. Also you can see the fieldtrack and some bogies with oxen.

#### The soil and the plants

The entire layout has been given a top layer of real sand. This sand comes from the garden and is dried. The dried sand was sifted with a tea strainer. The fine sand is mixed with wood glue to a paste. This paste is applied in a thin layer on the model layout and sprinkled with sieved sand. Also the road is created in this way and smooth coated. The road is then equipped with scratches to look like a bad surface and got a surface with paint. After that, the ground was partly painted with powder paint to imitate oil traces and rust signs. The grass comes from Heki in various colors. Some trees are by Anita decor. The bushes are of Silhouette and Mininatur. I also used dried weeds from the garden. Here and there are also ferns and some plastic plants. Altogether, it gives a good picture of nature in Java Indonesia. The ricefields (sawa's) are made with hundreds of small The S Scale Resource August/September 2018



clumps of grass. These too are all planted piece by piece. For the water I used a kind of jelly of MBZ. The water is used in the rice fields and in the channel. It remains smooth and looks very realistic.

#### The figures and verhicles

Finally, there still had to come life on the model layout. Most figures come from the brand Preiser. Since I needed much tinted persons, I was looking for the right figures. From many packages, I only could use one or two figures out of six. Fortunately, I found enough people to bring the model layout to life. In the trees and on the roofs are monkeys and birds. There are swimming geese, there are chickens, cats and dogs for an even more



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natural finish of the layout. Since there are no tuk tuks (three wheelers) existing in model, I used Piaggio tricycles of the brand Busch. There are mopeds and motorcycles by Preiser and Noch and a converted bike from Artitec to a rickshaw.

#### Finally

After a construction time of 18 moths, there was the premiere of Pabrik Gula Jairuba during OntraXS 2015 in the railway museum in Utrecht. After three days, the model layout reached the first place in the category OntraXS kids award and second place in the catagory OntraXS award. If you feel I can help you with your modeling please contact me by e-mail at Diger.Rossel@sscaleresource.com



Claudio, Foster, Denilson, Paulo, Celso, Ademir (me) Tonetti, Diane e Lucivaldo

#### Ademir Conicelli lives in Brazil

The AMFEC (Railway Model Association of Campinas) was founded on 07/05/2007 and currently has 30 associates. The idea of founding an association came after a meeting of modelers held at the Gare de, a former railway station in the city of Campinas located 100 Kms from the city of Sao Paulo (Brazil). This meeting of modelers happens from year to year in the same place and that is where our model is installed, in other words in an old cabin where the deviations of the courtyard of the old station were controlled. All the partners like trains very much, because each of us had a relative who worked in railroad or even some ex rail. I, for example, my father was engineer of the railroad Sorocabana. Currently this station is disabled for use and only moves for her, some

freight trains weekly, because our rulers deactivated the use of passenger trains in almost all Brazil.

So, our HO scale model (1:87) has 350 metres of track being all digital and it was fully built by us partners.

The project does not have an idea of a place that exists in reality, and yes, we seek to put in the demo everything that can exist in a rail environment. I also have my model home (1.80 x 3.30 metres) analog, all made by me. Here's some pictures from the scale model Amfec. Thank you very much for your interest in our Association. If you have any questions please contact me at Ademir.Conicelli@sscaleresource.com



*A barbecue on the hill of the lookout.* The S Scale Resource August/September 2018



Here shows a small auto road.



Here shows the view of a small lake and the Mini refinery.



Panoramic view of the model.

Here is the grain silo.



Panoramic view of a part of the model, note the levers that moved the deviations when everything worked, I say when the railway was fully active.



View of the roundabout and the locomotive depot.



Here a tunnel heading north.



*View of the main*  $P\tilde{A}_i$ *teo and the station.* 



Another view of the village Hope.



Here the  $P\tilde{A}_i$  teo and the main avenue.



Village Trade Street



View of the Enchanted Valley.



General view of the Enchanted Valley showing the Three bridges



An RS3 the defunct Paulista Railway Company



#### Rod Clark lives in the United Kingdom

My name is Rob Clark and I am a UK based model railroader. My current layout is a freelance HO scale 1930s short line called the Cornhill and Atherton railroad which has been underway since 2013 and is around 80% complete.

I was hooked on US railroading at an early age (in 1967) when I discovered an article in *Model Railroader* on John Allen's Gorre and Daphetid – probably an introduction that many others have had. However, as a UK kid, I was probably (in fact certainly) unusual in my US modelling interest; and even more unusual was a parallel interest in drag racing which started when I was 11 years old.

I did try to explore HO model railroading, but youth and a lack of funds were an issue and like many I suspect. I left modelling behind in my teens as girls, music and cars became interesting. It was only when I reached later life (I am now retired) that the time and money became

available to make a re-entry into the hobby a practical option so I took up at the age of 55, where I left off at 15.

Being a bit of a lone wolf, the Internet was a great source of information to help me develop my skills. I am a great believer in trial and error, and much more can be achieved by giving something a go and experiencing a failure, than agonising about the right way to do something and never getting started. That said, the Internet also introduced me to skilled modellers. both indirectly and directly.

I have never had a mentor, and despite always managing to struggle through, I have always regretted the lack of a guide. So many unnecessary mistakes could have been avoided, or at least less time wasted on dead end projects. To that end, I think it appropriate to offer my experience to those who can make good use of it.

Often said, but I am "jack of all trades and master of none", however I have experience in every aspect of building a model railroad from design of the train room, through to scratch building structures and everything in between. Contact me if you think I can help with any questions. Rod.Clark@sscaleresource.com.

All photos were taken by me.



Modified Campbell Columbia Gazette Office kit. Features a sound enabled welding simulation using an Arduino microcontroller.



SSL kit of 1920s steam cement mixer, suitably painted and weathered



Above: Redpale Creek on the C & A, featuring many scenery techniques - in particular the use of a mirror to extend the backdrop. Below: Scratch built trestle.



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Above: Bachmann 2-10-0 "Decapod" repainted and weathered. Left: Scratch built (apart from vertical boiler) donkey engine for the sawmill derrick.

Below: Scratch built sawmill.



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Above: Proto 2000 0-8-0 painted and weathered and shoving a North Eastern Scale Models kit of a 1918 all wood hopper.

*Right: Views of both in-progress and completed bench work.* 

Below: Ambroid outside braced caboose kit – detailed, painted and weathered.







#### Dan Beresford lives in England

My name is Dan Beresford, and I have been a model railroader for the past 6 years. I started out in N scale, and have built layouts in N, HO, and am currently working on an new HO scale home layout, as well as an O scale 2 rail exhibition layout. Initially, N scale seemed a great fit for the amount of space I had, however after working in HO, N scale just seems too small for me.

I was inspired to try my hand at O scale by a British modeller named Jim Read, who uses photographs, card stock and scrap parts to scratch build everything on his British themed O gauge layouts, from the trackwork right up to the locomotives and rolling stock. His card stock locomotives are true works of art.

From Jim's example, I learned how to build model railroads simply by having a go. Card stock is a very cheap and forgiving building material; and if something goes wrong, you aren't wasting huge amounts of money

to scrap a model and start again. I also make extensive use of instructional videos online, as there is always something to learn from every model railroader and the styles and methods they employ.



Above: Weaver O scale Boxcar. Below: West Allen Street .





I am by no means a master at this, but I just keep trying until I achieve a result I am happy with. I work from reference photographs of the general area that I am trying to capture in a model, to get the correct colours for local scenery, preferred architectural styles and materials, and flora. The Internet is a great source of these images, and I am constantly on the lookout for everyday items that would be useful fodder for scratchbuilding and kitbashing.

The most recent aspect of the hobby that I have attempted is building my own trackwork, which is surprisingly easy once you learn the process.

My last completed model railroad, named West Allen Street, was a HO urban industrial switching

district set in Kentucky, and featured scenery and structures made almost exclusively from card stock and printed paper, with only a single plastic kit from Walthers used on the entire layout.

I am happy to help mentor any model railroaders of any experience and skill levels in scenery work, structure building in card stock, paper and strip wood, and weathering of locomotives and rolling stock. I would also happily offer advice on track building, but in this area I am still learning myself, and am certainly no expert! Please feel free to contact me at Dan.Beresford@sscaleresource.com



#### Daniel Bella lives in Australia

I was born in Brisbane in 1986 and I've lived in South-East Queensland, Australia, all my life. By profession, I'm an IT support officer, having graduated with a degree in Information Technology. As far as I can remember, I've been interested in trains. My interest in model railroading started when I was six years old, with a HO scale train set.

It took me a while to figure out what I wanted to get out of model railroading. From the HO scale set I started with, I moved into N scale. During this time, I developed some basic model railroading skills. My father taught me how to build benchwork, and how to solder and wire the tracks. One of our neighbors was

also into model railroading, and I learnt a bit from him. I also picked up several skills and tips from magazines such as *Model Railroader*. These early layouts mostly used ready-to-run models, and structures built from plastic kits. Even in N scale, I would enhance these kits by adding scratch built interiors. That was my start in kit bashing, and I've enjoyed this aspect of the hobby ever since.

In 2009, I got 'bit' by the narrow-gauge bug and started modelling in HOn3. While doing this, I had my first encounter with rolling stock kits and discovered that I enjoyed building them. After discovering On30, I realised this scale would be ideal for a kit bashing addict like me, owing to the size and the ability to use HO scale parts and mechanisms. So in 2012, I made the switch to On30. I settled on western logging as my theme, as I liked the look of the equipment. Shortly after making the switch to On30, I joined the Gold Coast Model Railway Club. Several of the members there also model in On30, and I was able to learn a fair bit about the scale from them.

Most of what I've learnt in terms of kit bashing and scratch building has come from just going ahead and trying things. I started small, by adding after-market cab kits to ready-to-run steam engines. From this, I learnt

how these models went together and what approaches, glues and materials worked best together. After this, I branched out to more involved kits, including one to convert the Bachmann On30 Forney into a tender engine. As my confidence and experience grew, I tried more ambitious projects, including scratchbuilding locomotives. They didn't always work out, and I've ended up with a 'graveyard' of failed projects. Some of these I've been able to return to and resurrect, others have donated parts to projects that have worked out.

In 2016, I decided to kit bash a Bachmann On30 2-6-0 into a 2-6-2 saddle tank engine. As well as the saddle tank, I would also need to construct a completely new cab and rear end for the locomotive. In order to get the best results, I decided to try 3D printing these components via a company called Shapeways. I'd already done some 3D models using Blender, for a computer game called Trainz Railroad Simulator. I was able to adapt my knowledge from this to designing components for 3D printing. Again, I started out with something small. In this case, it was a switcher-style pilot for the 2-6-0, which was designed to drop into the mounting slots for the original cowcatcher pilot. After a few tries, I managed to get a print that worked, and I used the knowledge gained to help design the 3D printed components for the rest of the model. Since this project, I've used 3D printing for a few other kitbashes.



I took the same approach of starting small and experimenting when I went to build my rolling stock. When I started in On30, I'd decided to scratch-build most of my freight cars. On top of getting to build them, this was also to save money. I'd done a couple of HO scale Tichy Train Group 40' boxcar kits, and found that they sold the underframe castings for these separately on their website. After a bit of experimenting, I found that widening these castings with brass bar along each side gave me a robust chassis which was wide enough for On30. I then used this 'standard chassis' for most of my scratch built rolling stock, starting with flatcars, then gondolas and moving up to more complicated examples.

While this was going on, I was also building my layout and working out how to operate it. In order to simulate the time taken to load and unload log wagons, I wanted to have a timer that would light up a series of LEDs, counting up as the log wagons were 'loaded'. After looking into how to do this, I decided to use Arduino microcontrollers. These are designed for experimenters and have a wide range of function libraries available, including some designed specifically for model railroading. Just like with my approach to building models, I



started out small and experimented. There are quite a few forums for Arduino users, and I was able to get help here whenever I got stuck.

While playing around with Arduino microcontrollers, I started to see more ways in which these could be used to automate various aspects of layout operations. My layout is designed for a single operator, and I was able to use them to help with scheduling and dispatching, as well as driving various animations such as water tower spouts. I was also able to automate the two-track staging yard behind the backdrop, with a dedicated controller that will switch trains to an empty track, turn off power when they've been parked, and turn on the power & align the turnout when a parked train is called up on the DCC system.

As a result of my experimenting and trying new technologies, I've been able to build whatever I've needed for my layout. More importantly, I've had fun while doing so. For those who are looking to start kit bashing or scratch building, I'd provide the following advice:

- Start small, and build up your experience.
- Experiment to find what works best for you and your projects.
- Don't throw away failed projects. They may be able to be reused or resurrected.
- Both traditional and new approaches and technologies (e.g. 3D Printing) can be combined effectively.
- See what skills and experience in other areas can be used in model railroading.

I'm willing to mentor other modellers in the areas of scratch building/kit bashing, 3D design and printing, and electronics/microcontrollers. I can be reached via email at <u>Daniel.Bella@sscaleresource.com</u>.

#### Greame King lives in New Zealand

Modeling from about the age of 7. Started on Airfix kits, mainly boats and cars. Started on Hornby OO at about the age of 10. I migrated over to N gauge at age 16, mainly because of space restrictions at home.

The hobby got shelved for many years due to moving away from home and studying.



top 50 in NZ Masterchef in 2015.

Migrated to NZ in 2004. Started collecting N gauge and O gauge items. It is easier to indulge the hobby because of the much larger house I have. Plus, having the available funding helps too.

The skills I have are all self taught. I often look at other modeling efforts and think how did they do that. Having a curious mind helps I think.

My cooking interest overlaps nicely. It gives me an accuracy and a pride in detailing the models. I am reasonably talented in the kitchen as well, making the





If you think I can help you in your modeling, please contact me at Greame.King@sscaleres ource.com

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#### Ger Deguelle lives in the Netherlands

I fount Mr. Ger Deguelle, who is from the Netherlands, on one of the Facebook model railroad pages I follow, and we stared talking. I believe he is one of the most dedicated model railroaders I have ever met. He has tried to do everything he could do to finally build the model railroad he wants. I admire his determination and believe we can all learn from his efforts to succeed.

My name is Ger Deguelle, 50 years old. I live in the Netherlands and am married to my wife, Claudia.

How did I start with a model train? It was very early, I was about 7 years old when I got my first HO train. Some years later, my parents also bought me an N scale train.

#### But

then I went to school and the trains did not speak to me anymore. I liked to watch trains but had other interests including school and later the Army. After the Army, I married and slowly started to work on my model trains again. While my wife did not like my model trains, I kept buying more N scale now and then. A few years later I got a divorce and concentrated on my work. The S Scale Resource August/September 2018



In 2011, I met the woman I am now married to, Claudia. She also likes model railroading especially in N scale European.

I got more and more into my model trains when I found a forum named: <u>www.amerikaanse-treinen.nl</u> There I met Jan van Gerwen. I saw his Layout in the American style and I was sold. I talked about it with my wife and she also liked it. I broke down my old layout, sold everything, and bought American model trains for a new layout.

Shortly after I started to model American railroads in N scale, I thought about making everything big. Then I faced a major problem because my wife slowly started to become blind. I then decided to stop with N scale and move on to HO scale. To save space, I made a layout in the living room along the ceiling. As my wife started to see less, I made the layout in the living room as fast as possible so that she could see as much of it as possible being built. When that layout was done, I did not do anything for more than a year and a half because I also became sick.

Then I tried to make a HO layout in the living room, but the room was too small for the HO layout I wanted. So even before the job was finished, I broke it off again.

I found it very unfortunate that I had sold all of my N scale models that I had built myself and that I was proud of.





At the end of 2017, I started building my current layout "Colorado" along the Living room wall in N scale with large mountains and canyons. Finally I have a model railroad I enjoy. It has been a long trip for me, but I am glad I took it.

I will be glad to share my Model Railroad knowledge and mistakes with anyone who wants to contact me. My email is

ger.deguelle@sscaleresource.com

That is all for this "New Tracks" issue. I hope you enjoyed something a little different from the normal US modeling, and have found some interesting ideas and help for your modeling experience. If you want more

international modelers spotlighted please let me know. Any comments or suggestions for the next article will be appreciated. Please contact me at: JimKellow@oscaleresource.com. Don't forget to Friend the "New Tracks" facebook page at https://www.facebook.com/ModelRailroadResource/

# BUILDING THE BUDD 10-6 SLEEPER

**By Bob Hogan** 



Cements used: Testors Liquid Cement, Zap-A-Gap Green, Tenax 7R & Walthers GOO.

I often overhear S scalers lamenting that they can't get models of their favorite railroad's passenger cars, especially if they are of the 80 foot lightweight car variety. That really isn't true any longer, as today the average modeler can create lightweight passenger cars for nearly any railroad prototype using the products of several existing suppliers. The purpose of this article is to provide the S scale modeler with a simple, easy to follow process for crafting these cars. The example chosen is one of the more numerous prototypes to model, the BUDD 10-6 Sleeper.

The 10 Roomette, 6 Double-Bedroom sleeper came into popularity following WWII as railroads sought to replace open-sleepers with allbedroom cars. Most all of the major railroads purchased the 10-6 and they were manufactured by all three major car builders; BUDD, Pullman Standard and American Car & Foundry. Each builder exhibited their own unique style in the 10-6 Sleepers, but they all followed a similar floor plan. The 10-6 Sleeper was among the most numerous of the post war sleepers with new cars being built into the early 1950's. Many survived well into the AMTRAK era and some remain active in private ownership even today.



Dremel Moto-Tool with sanding cylinder and saw blade.


Mill file and other small tools used in construction of BUDD 10-6 Sleeper.



Basic components for building the BUDD 10-6 Sleeper

Union Pacific Purchased 50 *Pacific*-series 10-6 sleepers from BUDD in February 1948. They were intended for general system-wide assignment to UP passenger trains. Pullman designated these cars as Plan 9522/214 and they accommodated 22 passengers; ten in the roomettes and 12 in the double-bedrooms. They were delivered in 1949 and 1950 with half of the cars in UP Armour Yellow and Harbor Mist Gray and half in UP two-tone gray. The two-tone gray cars were assigned to secondary trains like the San Francisco Overland, while the yellow and gray cars were assigned to the City trains like the City of San Francisco and the City of Los Angeles. By 1952, all were re-painted in UP's Armour Yellow and Harbor Mist Gray. All but five cars were sold to AMTRAK in 1971, with the final five going to CMStP&P and then on to the NdeM.

I have separately listed the parts required to model the BUDD 10-6 Sleeper, as well as the tools and adhesives that I have found most useful. As with modeling any specific prototype car, it is important to refer to photos of the prototype whenever possible. There are several good photos of the UP BUDD 10-6 available on line for this purpose. I usually begin by printing the best photos of each side of the car to help in the placement of roof and underbody parts. The UP BUDD 10-6 sleeper was built new without bottom center skirts making it important to understand where the various underbody parts are located, as they will be visible and make up an important part of this model. The following are a step-by-step instructions to help you build this 10-6 car or other LW passenger cars using the Union Station Products milled styrene sides.

#### **CAR SIDE ASSEMBLY:**

The Union Station Products sides consist of three pieces per side; the milled .010 styrene sides, the large lower flute panel and the large single flute above the window line. Let's begin.

- 1. Tape the two car sides to a flat surface (cutting board).
- 2. With a pencil, mark the location of the large single flute above the window line.
- 3. Mark the location of the top for the large flute panel below the windows. The distance between the top single flute and the bottom flute panel should be 33 inches.
- 4. Cut to length and cement the single flute above the windows using Testors liquid cement. Use a straight edge to make certain that this flute is both straight and level above the window line.
- 5. Cut the large flute panel to length making certain that the cuts are square. Cement this large flute panel below the window line making certain that it is level with the window line and the top single flute.
- 6. Some BUDD cars had curved drip rails over the doors. These can be replicated by using Evergreen .010 X .020 styrene strips, gluing them "on-edge" to the car sides above the doors. Because of the red upper stripe on the UP cars, I did not add this drip rail.



Completed sides with top and bottom flutes in position.

#### **CAR BODY PREPARATION:**

Proper preparation of the American Models body core is critical to the final appearance of your car. The Dremel tool, sanding cylinder and metal saw (60 tooth) are the primary tools for cutting the car body, while a mill file is used for smoothing out these cuts.

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- 1. Begin by using the Dremel tool with a sanding cylinder to carefully remove all of the detail from the car body sides and roof. I first insert the car body floor (upside down) for rigidity and then proceed to remove all of the door details, the roof details and the raised longitudinal strip along the bottom of the car. Do not remove the rivet rail at the top of each side as it will serve to position the styrene sides on the body shell.
- 2. Because this prototype car does not have bottom center sills, I next use the Dremel with a circular saw blade to remove the bottom center sill section only from the AM car body shell.
- 3. Next, take the flat mill file (or similar) and smooth out all of the areas where you have removed details to obtain a flat surface upon which we will apply the new styrene sides and roof. I use 150 grit sand paper to do a final smoothing of the roof areas.
- 4. Gently remove the rivet detail from the rivet rail using the mill file. This rivet rail will serve as a guide for locating both the styrene sides and roof panels. It will later be covered with a .010 X .030 styrene strip.
- 5. Perhaps the most difficult procedure in the body preparation is cutting out the new window openings. The overall intent here is to identify those body areas to be removed while retaining four or more places where the body shell remains intact (top to bottom) to ensure overall rigidity. Begin by placing the AM body shell on its side and lay the new styrene car side on the shell flush with the top rivet rail. Use a pencil to outline/mark the position of each new window on the shell. I then remove the car side and use a small square to mark the vertical lines for the new window openings. I next draw lateral lines running the length of the car body above and below the window openings that are between <sup>3</sup>/<sub>4</sub>" and 1" apart. Determine which sections of the body shell need to be removed for the new window openings and mark these areas with an X. Again, you should try to retain four plus areas that will remain uncut (see photo) to maintain body rigidity. Use the Dremel with a saw blade to make the vertical cuts followed by the lateral (top and bottom) cuts. When you have completed these cuts and removed the AM body pieces, lay the car side back on the body shell to make certain that the body shell has been cut clear of each window opening in the sides. When you are satisfied that all of the window openings are correct, use the mill file to smooth out all of the rough areas inside and outside on the body shell. Perform the same functions for the opposite side of the car.



AM body shell with all window cut-outs completed

#### **ROOF APPLICATION:**

The application of the fluted roof is the most critical step in the assembly of your BUDD car because any errors or excess amounts of cement will be obvious when viewing the finished car.

- 1. Place a piece of masking tape across the AM body roof edgewise. Mark on the tape the exact measurement between the two rivet lines to serve as a measurement for your new BUDD fluted roof width.
- 2. Place the Budd fluted roof piece on a flat cutting surface. Use the previously marked masking tape as the measurement guide for the roof panel width. Using a sharp #11 blade, cut the fluted roof one flute wider than the marks on the masking tape. This allows for expansion in the roof contour when

bending of the new roof piece over the AM shell. Carefully cut the new roof panel to this width and then cut to the correct length.

- 3. Apply Zap-A-Gap cement to half of the AM body shell roof. (left to right) and along the entire length. I use a small plastic parts bag (or similar) smooth the CA+ cement over the entire coated surface. Make certain the cement is applied up to the edge of the rivet strip on the car body, but do not over-apply the Zap-A-Gap or you will have cement transfer onto the new fluting. Apply regular masking tape along the entire length of the car to hold the new roof panel in place. I use several pieces both lengthwise and top to bottom to ensure that the roof is held in position. I let the roof dry overnight before applying cement to the second half.
- 4. After drying, remove the masking tape. Next, again apply the Zap-A-Gap cement to the balance of the AM body top smoothing it out with a plastic parts bag as before. Once again, make certain the cement goes to the edge of the rivet line, but do not apply excessive cement as it will ruin the fluted roof if it gets onto the new fluted roof piece. Carefully roll the fluted roof across the AM body top using your hands to ensure a smooth and tight bond between the new roof and the AM body shell edge-to-edge and end-to-end. Again, use masking tape liberally to hold this half of the roof tightly against the body until dry.
- 5. Allow the roof to dry and then remove all masking tape. If there are any areas where the new roof has not dried flush with the AM body shell, we can fix this with the Tenax 7R Weld cement. I apply the Tenax with a small brush between the new roof and the AM shell working only about a 1" section at a time. With the Tenax applied, I use my hands to hold the 1" section tightly against the body shell until dry. This takes about 30 seconds. I then move on to the next section, etc. until all of the roof is tight against the body shell.



Body shell with BUDD roof applied

6. Measure the car roof to the center (widthwise) and using a pencil draw two lines each two scale feet on either side of the centerline down the length of the car. These lines are to locate the two large longitudinal strips that run the length of the car roof. Use Evergreen .030 X .030 styrene strips and apply them to these lines using the liquid Testors cement.

#### **CAR SIDE APPLICATION:**

The car sides affix to the AM body shell using the Zap-A-Gap with weights to hold them in place until dry. This is the easiest step in constructing the car.

- 1. The Union Station Product styrene cars sides are applied to the AM body shell using the Zap-A-Gap CA+ cement. I have tested over a dozen cements, and the Zap-A-Gap product is the best for affixing styrene sides to the American Models ABS type plastic shell. It holds well, dries in a reasonable time and does not damage the styrene sides. It is important, however, because this is a CA+ type product, that you keep it off both your fingers and the front side of the car sides. Should any excess CA+ be transferred to the car sides you can sand with a 600 or 800 grit sand paper to remove it without damage to the styrene sides.
- 2. Apply the Zap-A-Gap over one side of the body shell working left to right and smooth this cement out using a parts bag as you did with the roof. Place the new styrene side onto the body shell flush

with the top rivet rail on the AM shell. I use several lead weights to hold the side in place while the cement dries. Do not worry about the styrene bottom sills at the car ends at this point.

- 3. Follow the same process for the other side of the car. Once all is dry, use the Tenax 7R Weld cement to hold the bottom end sills flush with the AM body shell, holding the sills firmly with your fingers until dry.
- 4. After the sides have totally dried, apply a length of Evergreen .010 X .030 styrene strip between the fluted roof and the car side top. This piece serves to effectively hide the rivet rail on the AM shell that we needed to position both the styrene roof and side pieces. I use Testors Liquid for this task.



Body with roof, sides and roof details applied

#### **UNDERBODY DETAIL:**

The underbody details are fairly simple on the BUDD 10-6 Sleepers, and we will only be adding those larger items that are most obvious to the viewer (see photo).

- 1. Begin by taking the .080 X .188 Evergreen strips and cutting them into six pieces to fit between the floor supports on either side of the AM body floor piece. Use Walthers Goo to cement these pieces along then outer edges of the floor. These strips will serve to position the underbody details at the correct height. Allow to dry before adding the detail pieces.
- 2. I first add the ASPW tank and filler pieces to the AM floor, followed by the balance of the resin castings. The B.T.S. brake and generator castings are added last using extra .080 X.188 styrene strips as necessary to support the three-piece brake set. Both the resin and brass pieces are cemented in place with the Walthers Goo.
- 3. Lastly, I add Evergreen .188 X .188 X <sup>1</sup>/<sub>4</sub>" styrene pieces to either side of the coupler pad to hold the B.T.S. signal and steam lines. After drying, I drill holes in these pieces and add the B.T.S. brass signal and steam lines to each end using Walthers Goo.
- 4. Des Plaines Hobbies makes the outside swing hanger trucks that are correct for the Union Pacific sleeper. Other railroad sleepers used the more common 41-N-11 passenger truck. The American Models sprung "Commonwealth BUDD truck" is a good representation of this truck. If you choose to use the American Models truck, you have the option of using the AM truck-mounted dummy couplers (which will allow the car to operate on tighter radius curves) or body-mounted KD #802 couplers.
- 5. Use a 1/16" drill to mount the KD #802 couplers on the car body floor. The forward hole needs to be drilled slightly outward (toward car end) from the existing hole in the floor casting to ensure proper car clearance once the diaphragms are applied.



Underbody with all detail pieces in position

#### **ADDING DETAILS:**

The final steps in construction involve adding the roof vents and the roof and side grab irons.

- 1. Train Station Products makes an HO passenger vent that nicely approximates then small vents found on most BUDD passenger cars. Apply six of these vents to the BUDD roof using Testors liquid. Two vents are located over each vestibule door and one vent is located at the opposite end of the car (see photo).
- 2. This BUDD 10-6 sleeper has two roof grab irons on either car side at the vestibule end of the car. I cut small squares from the .010 X .030 styrene strips and cement them into position on the roof with 18" centers using Testors liquid. After they dry, I drill #76 holes and add standard 18" grab irons and cement into place using Zap-A-Gap applied from the inside of the body shell.
- 3. Lastly, we need to add the B.T.S. brass passenger hand grabs to each side of the car. These are applied at the vestibule doors and at the non-door end. Drill #74 holes for these hand grabs and use Zap-A-Gap to cement them into place from the inside of the car body. Additional detail and grab irons can be added to the car ends if desired.
- 4. The American Models BUDD diaphragms work well on these cars. Begin by trimming off the "tab" portion on the back side of the AM diaphragm castings so they can be mounted flush on the AM car body end doors. I do this using a flush rail cutter and then sand the edges smooth and flat. Bend the diaphragm's upper springs inward slightly so they make contact with the car end when placed on the car body and then attach these diaphragms to the car end using Walthers Goo cement.

#### PAINTING, FINISHING & WINDOWS:

The completed car needs to be air brush painted using your favorite styrene safe paints. Following painting and lettering, the clear window material is added from the inside of the completed body shell.

- 1. Thoroughly wash the entire car body and floor prior to painting. I use original Scalecoat for painting my models and, contrary to some opinions, it is fully safe for styrene when airbrushed onto the car. Scalecoat dries to a medium gloss which is perfect for decal application. Scalecoat makes both Union Pacific's Armour Yellow and Harbor Mist Gray. They also make the light and dark gray should you wish to finish the car in those colors.
- 2. The Union Pacific prototype has a 3" red top stripe and a 4 <sup>3</sup>/<sub>4</sub>" large bottom stripe to separate the yellow from the gray colors. Microscale makes red strip decals in a variety of HO and O scale sizes that will work for these stripes. The actual car lettering is a combination of Microscale HO scale UP decals.
- 3. Once painted and lettered, we can begin to install the car windows using Evergreen .005 clear styrene. Begin by cutting the .005 clear styrene into strips <sup>3</sup>/<sub>4</sub>" deep. Next, cut these strips into the various lengths needed to fill in the window cut-outs in the body shell. I cut these pieces to size for one side of the car and place them into position on the car from inside. Using Testors liquid cement and a small paint brush, lightly apply the Testors liquid cement to the outside edge of the clear styrene strips keeping the cement clear of the window areas visible from the outside. Make certain that the clear panels are flush with the sides and that the liquid cement has been applied to the edges. Once completed, turn the car over and make certain that no cement has gotten onto the visible part of the windows. If this has occurred, quickly remove the damaged clear styrene piece and replace it. Check to make certain that all of the windows are securely glued into place. Repeat this process for the other side of the car.
- 4. Paint the car side hand rails silver to match the prototype car.

Your completed BUDD 10-6 sleeper should now look like the photos. I've also included photos of other 10-6 sleeper models to show how other builders and railroads made their 10-6's.



Above: Completed model both sides

#### Below: Overall completed photo of Union pacific 10-6 Sleeper





Above: 10-6 Sleeper as used on the California Zephyr

Below: Southern Railway 10-6 French Broad River



The following links will display some prototype cars: http://www.northeast.railfan.net/images/up\_pacific\_guard0.jpg http://rr-fallenflags.org/up/up-pul14jpa.jpg http://rr-fallenflags.org/up/up-pacslo-jpa.jpg

The following links will display some prototype cars:

http://www.northeast.railfan.net/images/up\_pacific\_guard0.jpg

http://rr-fallenflags.org/up/up-pul14jpa.jpg

http://rr-fallenflags.org/up/up-pacslo-jpa.jpg

#### Parts List

#### **TRAIN STATION PRODUCTS (HO)**

#435 BUDD Screen Vents

- **PRE-SIZE MODELS**
- #543 Welded Air Tank 69"
- **#542 Water Equalizer Tank**
- **#548 Small Battery Box**
- **#536 Equipment Control Box**
- **#533 Air Conditioner Unit**
- #531 A/C Compressor
- #540 Large ASPW Tank

**EVERGREEN STYRENE** 

.030 X .030 Strips (Roof)

- .010 X .030 Strips (sides/roof grabs)
- .005 Clear Styrene (Windows)
- .080 X .188 Strips (Underbody)

#### OTHER

Zap-A-Gap CA+ Cement (Green label) Testors Liquid Plastic Cement Walthers GOO Cement Tenax 7R





## SWITCHING ERAS IS ALMOST LIKE SWITCHING SCALES... ALMOST

#### **By Peter Vanvliet**

When I returned back to the hobby in 1999, I had no clue as to what I was going to model; I just picked what I liked. The very first purchase, after buying an N-scale starter train set, was a Gulf, Mobile & Ohio RS-1, just because I liked its color and its shape. I then discovered that the PRR's freight cars had a similar body color (which turned out to be freight-car-red, of course), so I soon started buying anything with "PENNSYLVANIA" slapped on it.

I then, of course, became enamored with the PRR and started studying it some more. In N-scale, I had grandiose dreams of building the four-track mainline between Pittsburgh and Harrisburg. Then I came across documentation that indicated that the PRR changed is paint scheme from the ball keystone version to the shadow keystone version in 1954. Since my collection already included both, I decided that my modeling era was going to be the year 1954, that way I could justify having both.

#### What Time of the Year to Model?

As for what time of the year I wanted to model, that has always been easy: summer. I love warm weather, and don't like the winter time, so I am not going to model winter. Although there are some fantastic examples of



modelers who are modeling fall time, a great example is Roger Nulton in Sscale, I would find that difficult to model. Besides, I actually like full, lush, green trees and bushes. So, that was pretty much set in stone.

#### **Modeling Reality Sets In**

As I got older, I made the difficult decision to switch scales in 2008. Upon researching S, O, and G scale, I settled on S. It took me about a year and half to sell off my entire N-scale collection via eBay. I was pretty tired of the trips to the post office by then.

In Houston, Texas, where we don't have basements, the idea of modeling the PRR mainline in a 10'x10' spare bedroom in S-scale went out the window right away. After spending a substantial amount of time doing research into PRR branchlines, I stumbled across the "Chartiers Branch" in southwestern Pennsylvania. It connects Carnegie, PA (southwest of Pittsburgh) to Washington, PA in a 23-mile stretch of track. (Figure 1) During its heyday, the line was even double-tracked for a good

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portion of it. My first S scale locomotive purchase was the S-Helper Service NW2, which the PRR bought in 1941. It was the first NW2 the company bought, and it was only the second diesel locomotive it had added to its roster (the first was an EMD SW engine). The road number of the NW2 was 3909, which was renumbered to 5912 in 1942, which is the road number that S-Helper Service had on its model. So, this meant that my modeling era was going to be sometime in 1942 or later. I have always had an affinity toward prototype accuracy. (**Figure 2**)

However, my favorite diesel locomotive has always been the Alco RS-1. So, I bought the S-scale Railmaster Exports kit of that engine. When I finished building the model, it had a big impact. The PRR bought its first



RS-1 in 1948, and it was bought to replace a steam engine for a commuter route in Baltimore, Maryland. So, it wouldn't have seen service on the branch line I had decided to model. The PRR added the remaining RS-1 locomotives in its roster in 1950. So, that shifted my modeling era to 1950 or later. (**Figure 3**)

#### FIGURE 4

As I continued to learn more about the branch line I had chosen to model, I learned that passenger trains, which had been numerous on the branch line (at least six per day), were stopped in 1952. Since I would like to model the short passenger trains, I knew that 1952 would have to be my upper limit.

In the meantime, I had started to build a small switching layout as my first Sscale layout. It was a U-shaped one fitted to the room. The Chartiers Branch has a fairly good-sized town near its center called Canonsburg. So, I decided that one side of the U layout was the town of Canonsburg, and the other side was Washington, PA. I could then do switching work in each town, moving cars between the two of them. This kept me entertained for 7 years (a personal record!). (**Figure 4**)

However, I have always been drawn to museum-style, accurately-scaled

models. So, I became increasingly frustrated with my layout, because it was really still just a freelanced model. And so began my quest to build the next layout. I wanted no compromises.

By that time, I had focused most of my research efforts on the town of Canonsburg, more specifically on the coal mine tipple called Hazel Mine, which was on the southeast side of town. I decided that I was going to build a layout/diorama around this mine. The Summer of 1950 was still my chosen era.

#### **Prototype Research Brings Another Dose of Reality**

There is a fantastic group of guys on the Yahoo! Groups discussion list called "prr\_panhandle\_pa" that covers an area that includes the Chartiers Branch. One of the guys on that list read my personal web site (http://pmrr.org/) and sent me some research material. This was new information to me on top of what I had already been accumulating so far.

The more I read and re-read that new documentation, the more I came to the conclusion that the mine and its surroundings were literally falling apart by the early 1950s. Passenger service was almost nonexistent, coal mines were closing left and right (there were 25 mines in 1916 serviced by the PRR on the branch), and many industries were being adversely affected by strikes. It seemed like a real depressing time, at least from the railroad's perspective in that area. As odd as it might seem, the 1920s were actually a lot more upbeat. Most of the factories were productive even during the Great Depression, simply because the factories in Canonsburg produced items that the country needed. This kept the railroad busy as well.

Although my personal model railroading "hero" is George Selios, he chose to model a time where things were really down in the dumps. It might be fun to model broken-down buildings, etc., but I am more of a positive person. What I would really like to model is a snapshot in time when things were going well for the area that I model; a-day-in-the-life kind of image, with people going about doing their normal thing in that time period.

#### **Switching Eras**

So, it became abundantly clear to me that the time period that I should really model should be somewhere between 1910 and 1940. But how does one go about making such a decision? Some things don't really change. In the case of the PRR's Chartier Branch's track, the track is still there today. It is back to its original single-line (the secondary track was removed in 1952), its own branches that led to various nearby mines are gone, and its connection to the PRR four-track mainline was severed in 1959 (its connection with the rest of the PRR's system was now made as a branch line off of the Scully Branch). A lot of the big factory buildings still remain, although they have changed ownership many times. So, to some extent, one could model those things that didn't really change, and thereby justify any chosen time period.

For those of you who are interested in narrow-gauge modeling, you may have heard of the Waynesburg & Washington RR, which was a three-foot line between Washington, PA and Waynesburg, PA. The PRR owned the line and they converted it to standard-gauge in 1944. Before then, passengers disembarked from the Chartiers Branch trains' passenger cars at the Washington station, and walked over to the W&W passenger train to continue their journey. If I wanted to include the W&W, and I had been modeling 1950, the track would be standard-gauge. If I then jumped back across the 1944 time-line, I would have had to re-lay all the track to narrow-gauge, and buy appropriate equipment.

As I stated above, my current modeling focus is the Hazel Mine in Canonsburg, PA. There was a definite beginning and ending time for that structure. It was built in 1900, producing coal for the first time in October of that year. I don't have a firm demolition date yet, but the 1960s is probably close enough. The Chartiers creek, which is where the branch line got its name, was re-routed in the 1970s, and Interstate 79 now runs through the location where the mine once stood.

In 1900, the mine was supposedly a perfect example of the most modern and the safest way to build a mine in the U.S., or so the period newspapers stated. This led to engineering magazines and books of the time reporting on the mine. This is a gold mine (pardon the pun) of information, because even the original engineering drawings are available for this mine! What more would you need as a modeler? I found those early in my research. Photos taken at the time also showed a large brick power house, four water tanks, various



supplemental buildings, and a long walkway over the five-track yard to the mine (for the employees to get to work). All infrastructure needed to support the goings-on of the mine, and all of these were very appealing modeling projects to my eye. (Figure 5)

Most of these photos and drawing were from the 1900s and 1910s. As I dug deeper, I found some 1940s and 1950s aerial photos taken by the federal government of the area. Their resolution isn't very high, but you can tell from the shadows where the buildings are. It became clear that a lot of the buildings that whetted my modeling appetite were no more. Since I had already started working on my current layout, I realized that if I stuck to 1950, I'd have a somewhat barren, almost boring model when it was all said and done. So, after several **months of debating with myself, I made the decision to roll back my chosen era by several decades.** 

E FRSProductMgr for PRR Era Study				
FRSProductMgr Store Column Data Edit Sort Web Site View Settings How-to				
Compare 1 → Compare 2				
Show:  All  Filtered By				
	Year 🔺	Equipment	Railroad	^
11	1909	H21a hopper	4-4-0 shown in photo	
12	1910			
13	1911			
14	1912			
15	1913	H9 2-8-0; H10 2-8-0		
16	1914	N6b cabin car		
17	1915	H21a hopper		
18	1916	F25 heavy-duty well car		
19	1917	H22 coke hopper		
20	1918	I1s 2-10-0		
21	1919	H25 hopper; GLd hopper; X26 box car; G24 gondola		
22	1920			
23	1921			
24	1922	H22a coal hopper		
25	1923	GLc hopper; G5 4-6-0	Passenger station iron fence erected between tracks at Canonsburg	
26	1924	X29 box car		-
Canonsburg: Washington: Hazel Mine strike lasts 6 months. A fire destroyed the U.M. Beck ice houses, killing the natural ice harvesting industry.				
Ready U3/29/2018 3:08 pm 38 entries SCRL OVR CAP NUM				

#### **But Which Era To Choose?**

That became the next question. As I mentioned above, some things remained relatively the same, but things such as buildings, figures, automobiles, that really pinpoint, to the viewer, a specific time frame, do affect what you can model.

I created a spreadsheet of sorts (I am actually using my company's FRSProductMgr for this task, but any kind of spreadsheet or word-processing document could be used for this). In the left-most column, I entered all the years of possible interest. In the end, I wound up having a row for each year from 1896 through 1939 (I knew I didn't want to go past 1940). (**Figure 6**)

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The biggest investments we are likely to make in our hobby are our locomotives. Even if they are not brass, you still have to account for the details you purchased to improve the model, the couplers you might have added, the DCC decoders and sound that you may have installed, etc. Since I limited myself to 1939, I was only looking at steam locomotives. Yes, that means that the diesel engines I have are now surplus to my needs (eventually), which is why I titled this article *Switching Eras is Almost Like Switching Scales*; some things you have bought can no longer be used (if you are a real stickler, as I am).

From prototype research, I learned that the Chartiers Branch saw 2-8-0, 2-10-0, and 4-6-0 locomotives. An occasional 4-6-2 and 2-8-2 were brought in for special occasions to pull extra long passenger trains. So, I went through each of my Pennsylvania Railroad reference books that I have bought over the years, looking for when the PRR actually bought these particular locomotives. In the second column of the spreadsheet I noted the steam locomotive configuration. For example, the PRR's H8 class 2-8-0 locomotives were added to the roster in 1907. The similar H9 and H10 were added in 1913. The 2-10-0 was added in 1918, and finally the 4-6-0 was added in 1923. The 4-6-0 was primarily used for pulling the daily passenger trains, while the other configurations were used for pulling general freight and coal trains. (Figure 7)

I then went through the same process of doing research into the various freight cars. The branch line was heavily coal-related, so tons of hoppers were seen. Also, some general service box cars and many flat cars were used for transporting goods to and from the factories. Eye-witnesses reported rarely or never seeing tank cars or stock cars. The southern half of the branch line had lots of dairy farms, but milk cans were picked up by the passenger trains. So, my focus is mostly on hoppers, flat cars, box cars, and gondolas. While I was at it, I also looked into cabin cars (cabooses).

Much to my relief, the cars that I had previously scratchbuilt, such as the GLa hopper I described in a previous issue of the S Scale Resource were safe. The GLa appeared starting in 1905. The H21a hopper was introduced in 1909, and the FM flat car was built starting in 1902. These are all the scratchbuilt cars I have done so far.

I am planning on scratchbuilding an N6b cabin car, which was introduced in 1914. However, the Kaslo N5c model that I have was built and added to the PRR's roster in 1942. (Figure 8)

Again, I included the various freight car models into the "Equipment" column of my spreadsheet. Next, I spent a lot of time reading through the various books, magazines, and online data I have collected so far about the Canonsburg area, and about the Chartiers Branch line in general. I added a column to the spreadsheet in which I noted some general information, such as when a branch line was added to the Chartiers branch. My



main focus, for now, is Canonsburg, but I am also interested in the town of Washington, PA, so I added two extra columns to the spreadsheet where each of those towns' notes are covered. Additional towns will be added over time as I focus my future interests on them. Things I noted in the towns' columns are things such as when a particular factory was opened or closed. Of course, since my focus is on the Hazel coal mine, anything of significance that happened to it, especially that might affect my modeling, was noted here as well.

#### **Drawing a Conclusion**

From all of these diverse resources, I was able to build a single document that captured all of the key data. I used books, magazines, and online data. I am a member of the Pennsylvania Railroad Technical & Historical Society (PRRT&HS), which includes its The Keystone magazine. They have done a couple of articles covering the Chartiers Branch, which has been really useful. The Society also sells books that contain a lot of prototype information, such as entire books dedicated to the PRR's hoppers, flat cars, gondolas, etc. There was a local magazine in Canonsburg in the 2000s that contained a lot of historical local information, some of which included older photos that locals provided. Some of those issues are available online and were of great help. Other resources included the Sanborn insurance maps, aerial photography by the state and federal government, topographical maps, and, in my particular case, engineering magazines and books. It was then a matter of spending a few days thinking about what would be the best period to model that would include some of the things I would really enjoy modeling. In the end, I chose 1924. Somewhere in the 1930s the brick powerhouse next to the Hazel mine tipple was demolished, but I would really like to model that. The branch was double-tracked in 1902, so my selection of year would allow for me to model that.

About 60% of my freight cars can be used in the new layout's era. When I made the decision to roll back the time, I knew I'd have to "give up" my diesel locomotives. Steam locomotives in S-scale are hard to find. I had already decided a while back that I was going to scratchbuild at least one steam locomotive in S-scale. Of the three types of locomotives found on the branch line in regular use, only the 2-10-0 has been produced in S-scale. Omnicon Scale Models imported these brass models in 1991. Even today, they still fetch a pretty good penny, if they even come on the market. So, in the end, my conclusion was that if I want to build at least one steam locomotive in my lifetime, I might as well build more than one.

#### What about the diesels?

Well, it is still just my layout, and I can do as I please. So, in the meantime I'll run whatever equipment I have, and enjoy them running next to buildings that were long gone by the time the diesel appeared. In the future, these models might migrate to a display shelf, or perhaps be offered for sale to other modelers. I haven't decided yet. Almost all models I own, I have spent some time improving them, adding details, installing electronics, applying weathering, etc., so once you have invested some of your personal energy into them, they are harder to part with.

#### Why Choose an Era At All?

I have found that having a firm era in mind helps me control the hobby funds a little better. Now when some shiny new thing appears in a magazine or online, it can be a quick and simple decision whether I would even entertain purchasing the item by evaluating its time period. It does require a bit of discipline and commitment.

Choosing an era also helps us focus our research efforts. Now that I have chosen 1924, articles in magazines about diesels are less of an interest to me. As before, when my focus was 1954, and then later 1950, I pretty much ignored everything about second-generation diesels onward. I know very little about them. I couldn't tell you anything about an SD-something or U-whatever boat. I know quite a bit about first-generation diesels. Now, my efforts are going to be more focused on steam locomotives. I would really like to learn more about what all those external parts are on those engines. I find prototype research almost as much fun as the actual modeling in the hobby, so I am looking forward to the new things. So, switching eras will actually help me to expand my horizons and add new challenges to my execution of the hobby.

#### What Else Must Change?



Due to the over-abundance of 1:64 vehicles in the market, I have accumulated quite a collection of models that fit my 1950 "deadline" from before. That was actually still a challenge, because if you look at the overall market of 1:64 automobiles, most seem to be from the late-1950s onward. If you model 1950, for example, the only 1950-year models that you can buy are those brand-new for that year, and they must be placed in the showroom of your S-scale car dealership! To populate the streets of my previous layout, I needed cars that were built in 1949 or older. Due to World War II,

there weren't really that many cars manufactured between 1940 and 1950. So, getting automobiles to fit my time period of the summer of 1950 had already been a challenge. The "oldest" vehicle in my collection is the 1931 Cadillac Cabriolet, a model by Johnny Lightning. (**Figure 9**)

Now that I have made the decision to go all the way back to 1924, I am now looking at cars such as the Ford Model T, which was produced from 1908 through 1927 (when the Ford Model A came into being). Since I model a "blue-collar" town, that's really the only car that will be seen in abundance (the first automobile to appear in the town of Canonsburg, PA was in 1905). Duesenbergs would have been rare, I would imagine! I am looking at brands like Willys-Overland, Buick, Cadillac, Packard, Chevrolet, Dodge, Durant, Hudson, Lincoln, Nash, Oldsmobile, etc. Most of these cars are intricate models, and so finding 1:64 versions of them is going to be long-term challenge as well. I am even looking at adding some horse-drawn carriages to my scenes (which slowly started to disappear between 1920 and 1939)!

Another area of concern is figures. People were, on average, several inches shorter in the early 1900s than we are today. Of course, clothing will be different. I'll have to pay more attention to the figures I already have, and perhaps have to modify some of them. If your scenes includes ships and/or airplanes, these will have an impact on the viewer's perception of the era modeled. Although not applicable to my situation, but going back in time would allow you to purchase kits based on ship models from the late 1800s. Putting something like that in the foreground when modeling a harbor scene has got to be an eye-catcher!

World War I made a huge difference on the look and advancements of airplanes. Airport terminals didn't appear until 1927. Charles Lindbergh's famous non-stop flight from New York to Paris happened in May of 1927. Zeppelin airships were still common. Early 1920s airplanes were still of the bi-wing variety. Some of these are available in 1:64 scale as kits or die-cast display models.



#### Choosing an Era into the Future

Some modelers might choose to move their modeled time period into the future. Although I have personally never done so, I would imagine that that is a bit easier to do. For example, a lot of modern-era modelers can justify purchasing a steam locomotive to run excursion trains. Older freight cars become maintenance-of-way equipment, or, by removing the trucks or moving it off-track, they can be used as office space for railroad crews or industries. We have all seen passenger cars and cabooses converted into local restaurants or gift shops. Older automobiles are easy to justify, as either the owners being too poor to purchase a new car, representing a car collectors meet in a restaurant parking lot, or as rotting-away junk cars in a scrap yard or in a field somewhere. (Figure 10)

So, I see moving your modeling era forward as being less of a budget-cruncher then is moving back in time.

#### **Do What You Enjoy Doing**

As I stated above, I am a stickler for accuracy in my modeling efforts, but as soon as I walk out of my model railroading room, I enjoy everything related to model railroading, regardless of a modeler's chosen style, scale, or prototype. I enjoy going to see others' layouts during layout tours locally. This is a fantastic hobby, and everyone should do as they find most enjoyable. For me doing the prototype research, and then being able to figure out how to bring that information into a 3D scale model that I can then see or even operate is something I really enjoy.



# Assembling The S Scale ALCO RS 1

### By Glenn Guerra









Des Plaines Hobbies produced this S Scale kit of an Alco RS-1 and it sold out rather quickly. I wrote these instructions for assembling the kit. Those of you who have built the kit will recognize what follows. There is a lot of step by step instructions with photos to show a set up. Many people who saw the instructions asked me to do an article on them for just general soldering and fixtures along with soldering ideas. Here it is.

### **General Information**

The kit consists of brass etchings and brass castings. The hood and sills are pre-formed, but will take some fitting when assembling them. I would recommend soldering the parts together, although they can be glued with ACC or epoxy glue. I soldered my kit together and these instructions will show how I did it. In each step, you could substitute glue for the solder. The instructions are in the order that I put the kit together and there are photos showing each set up. I would recommend looking through all the instructions first to get a feel for how the model goes together. You may have some of your own techniques that you are more comfortable using.

To build this kit, I used a 100 watt resistance soldering unit, a small butane torch, a 35 watt soldering iron, an assortment of files, scotchbrite pads, sand paper, a bench vise, a purpose built work table, and a variety of clamps. There are some other tools that you can use, and in each section, I will offer some alternatives. Some of you are more comfortable with large soldering irons or torches to get the heat. If you are comfortable with these, keep using them.



When soldering, holding the parts in place can be a problem. If you are using a resistance soldering set up, you will need a ground wire clamped to your work. This tends to limit where and how your work sits. It also tends to move the work around every time you bump the wire. Another consideration with soldering is the probe of your resistance unit or the tip of your iron. In order to get the heat to transfer, you need to touch your part. If they are not held somehow, you will not be able to get good contact and heat transfer. To solve many of these problems, I built the work table shown on this page. It has a 3/16" thick top made of masonite hard board and that is covered with a scrap of countertop laminate. The raw masonite will work, but it smokes and can contaminate your solder joints. The countertop laminate will not. Any local cabinet shop will have some scraps around and they will probably give them to you. You will see how this table works in the photos. I made my table 2" wide and 9" long, You may want to make the dimensions to suit what you are doing. I use these tables a lot of any kind of assembly. Even if you are not soldering, try making one and see how you like it.

# **Brass Etchings That Came With Kit**



# **Brass Castings That Came With Kit**





Start with the frame upside down. On one side of the frame, you will see the diamond pattern walkways, and on the other side, you will see 8 groves etched into the frame. These grooves are to locate the center and side sills. You can see how I use the work table. The top of the table is thin enough that I can put clamps on my work. The bench vise is heavy enough that it is solid and the work will stay put when I am working on it. Lastly, the ground lead is firmly attached to the work and will not drag the work around the bench while I am trying to solder it together. My first version of a table like this was a 3/4" piece of wood in the vise. That was flat and worked, but I could not put small clamps on my work because the wood was so thick. I next made the "T" version like the one shown and that worked well. The last improvement was the countertop laminate. When you solder on a piece of wood, some of the moisture in the wood will boil and the wood will smoke. This was contaminating my solder joints.

When soldering, the brass must be clean. I use scotchbrite, sandpaper, or a small wire wheel in my motor tool to clean the metal. I used 60% Tin 40% Lead solder for this model. It melts at around 350 degrees F. I bought some .020" diameter solder from Radio Shack. You can also get small diameter solder from people who cater to the Jewelry trade. One source I use is Stan Rubinstien and Associates. You can find them online at sra-solder.com. I also use a 96% Tin 4% Silver solder a lot. It is stronger, but melts at 450 degrees. The extra 100 degrees can help when soldering other small details on with the 350 degree Tin Lead solder. For large pieces like this, the 450 degree Tin Silver solder would have been good, but my 100 watt resistance unit could not supply enough heat. I now have a 250 watt unit that works fine for this type of work. I like to stress knowing the materials you are working with and their properties. In this case, I could have bought a 250 watt unit right away, but by going to a lower temperature solder, I was able to keep going.

I like to use Zinc Chloride flux because of the aggressive cleaning action. You can get it at most hobby stores under the Tix brand. I get mine from Stan Rubinstien. Read the label and make sure it contains Zinc Chloride. They make it by dissolving Zinc in Hydrochloric Acid. It is a dilute acid when used for soldering and many of you have used it when soldering wires to your track.



In this view you can see how I held the center sills in their location while I soldered them. They get hot when you solder them, and they would have melted my plastic clamps. That is why I put the piece of wood between the clamps and the brass. If you use a metal clamp here, the metal clamp will draw heat away from your work and make it difficult to get it hot enough to solder. Lastly, the spring clamps will always provide force as the metal heats up and expands. A ridged clamp could become loose.

Make sure the grooves are clean and the edges of the sills are clean. I ran a #2 cut file on the edges of my sills to clean them and make sure they were flat. You will need to do a bit of fiddling and tweaking to get the sills to lay flat in the grooves. When you are doing things like this, take your time and make sure that the parts fit and are held firmly in place.

THE RESOURCE NEWS, REVIEWS, INFORMATION TO USE HERE IS HOW TO CONTACT US: SCALE Phone: 815-584-1577 FAX: 800-783-0127 Email: amy@oscaleresource.com daniel@oscaleresource.com Mail: The Model Railroad Resource LLC 407 East Chippewa St. Dwight, IL 60420 www.oscaleresource.com www.sscaleresource.com www.indyoscaleshow.com www.sscalemidwest.com

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Solder the sills in place by tacking them in a few places first. As you heat the brass it, will expand. This can warp your work if it is not fastened down good. By tacking large pieces together, you can minimize the effects of the heat expansion. Notice here I have soldered only a small part of each end of the sill. Now the sill and the frame are locked together.



After I had the parts tacked together, I filled in the whole joint with solder. I worked a little on one end and then went to the other end so I would minimize the effects of heat expansion. This is a good idea when soldering any large brass sheets together. At this point, the sills are firmly soldered in place. The carbon rod on the resistance soldering unit tends to leave carbon crumbs on your work, and right now, the work looks a little messy. We will clean it up next.



These small cup brushes for your motor tool work good for cleaning up your models. If you are using a rosin flux, it will leave a residue and the brush will get greasy after a while.



This is what your model will look like after a few passes with the cup brush in your motor tool. If there is still too much solder showing to suit your taste, use a file or some wet dry sand paper to remove it. As you do more, your solder joints will get cleaner, but everyone has to clean up a little after soldering.



I soldered the side sills on next. This photo shows them both soldered in place. When you fit the side sills, make sure the gap in the hand rail post locating holes goes where the cab will go. Also, place the side sills so they are about .030" from each end. The step unit will butt up to the side sills. Look ahead a bit in the instructions and see how the finished step unit mounts and you will see where you need the set back. The next photo will show how I held the parts when soldering them.



The side sills will take a bit of fitting just like the center sills did. A piece of 1/16" thick brass run through them may help you with the fit. Take your time, and make sure they fit. This is a good idea with any kit. Make sure the parts fit, and you have them in the right place. Leave about .030" on each end for clearance when you solder the step unit in place. I ran a #2 cut file along the edges for the side sills to make sure they were flat and they fit good. Notice that I have a small piece of countertop laminate between my plastic clamps and the brass. This provided just enough insulation so that the plastic clamps did not melt. Tack the sills in place first just like you did on the center sills. You can see my tacked joints in the photo. Do the same on the outside of the sills. This is where the small diameter solder helps a lot. It helps you control how much solder gets on the part and will make your work much neater.



These are the parts that will make up the steps and pilot of the locomotive. Almost all etching kits are designed so you bend into the etch line. Assume this unless the kit specifies something else.



This is how I held the parts in place when I soldered them. The steps have small tabs on them, and the main unit has the matching slots. I cleaned the slots out with a very small screw driver first to make sure they were large enough. Then I cleaned up the tabs with a #4 cut smooth file and fitted them. You will notice that there is a difference in width on the front edge of the step unit. See how part of the main unit laps over the step unit. This is why there is the difference in width on the steps. Check this fit along with the tabs. When you are satisfied with the fit, solder the steps in place at the tabs first. Notice the countertop laminate scrap between the work and my plastic clamp again. I applied the heat to the outside of the steps and the solder to the inside. Do a little at a time, and tack the parts in place first.

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In this photo, I have soldered the steps in place and am getting ready to put the pilot on. For this operation, I tinned the steps first. I did this by fluxing the edge and then picking up some solder on the tip of my soldering iron. Wipe the solder on the edge you want to solder. Make sure you glob a little bit on so there is enough to flow out and make the joint. Tinning is putting solder on your part first. I works well in a lot of applications. It also frees up one of your hands for something else.



In this photo, I have soldered the pilot in place. You can see the heat marks from my resistance soldering tip. When you fit these parts, make sure the lower corners of the pilot and the steps line up. You may need to tweak the steps a little. Apply the heat only at the lower corners first. Then check to make sure you have the alignment right. If not, you can re-adjust. When it looks like a good fit, apply the heat to one side and then the other. I push the pilot down with the metal probe or the tip of an old tweezers. Use an old tool because the acid fumes will be hard on them and you don't want to rust new tools. When you are heating the part, you will feel it settle into place when the solder underneath melts. As always, flux the parts before soldering them.



Here the step unit is fitted to the frame. You can see how it butts up to the side sills and why you left the gap at the end of the side sills. If you don't like the fit, you can file a little off of the ends of the side sills at this time. When I had the fit where I wanted, I tacked the side sills to the steps first. Then I soldered the front edge to the frame. By doing the sides first, the steps were locked in place and solid so I could work on the ends. By now the pieces are getting larger and it is harder to heat them up. After I had the front edge tacked, I put the probe on the inside of the step unit. Solder will flow to the heat source, and by doing this, I was able to draw the solder under the step unit and get a larger solder joint between the step unit and the frame.



In this photo, I am getting ready to solder the coupler pocket in place. The coupler packet is a casting that will take a lot to heat up so apply the heat to the coupler pocket and not the step unit. Let the heat from the coupler pocket heat the step unit. This will minimize chances of the steps becoming unsoldered. Also, it is a good idea to tin the casting first. By doing this, the solder will melt first when making the joint and will help transfer the heat to the step unit. I held the coupler pocket in place with a probe. Hold the coupler pocket in place for a while to let it cool down. It will take a while for the heat to dissipate. If you let loose of the part too quick, the solder will still be liquid and the part will move.



This photo shows the truck mount before and after it is folded up. Fold into the bend lines.



This photo shows the truck mount assembled and in place. For this operation, I turned the frame sideways on my work table and held it in place as shown. Bend up the two tabs on the frame and fit the truck mount over them. Solder the truck mount to the tabs first, and make sure it is square to the frame. Then, solder the legs of the truck mount to the frame. This is an important joint and will give the truck mount a lot of strength. When this was done, I soldered the cap on. I stuck a wood pencil into the holes to keep them aligned and soldered the cap in place. This is another area where it helps to tin the cap first. Again, make sure the joint of the cap and truck mount flange is soldered well. This whole unit becomes quite rigid when assembled.



To solder the polling pockets in place, I turned my work table in the vise as shown in the photo on the right. This is another example of how handy these work tables are. I tinned the back of the pockets before trimming them. By having the frame on end, I could lay the tinned pockets in place and solder them. See the photo below for the location.







These two photos show what your frame should look like so far. At this point, you can clean it up. Sand or file any excess solder off. I cleaned mine in household vinegar and used some scotchbrite on it. The wire cup brush works well also.



The next step was to install the fuel tank supports. I held them as shown in the photo. The fuel tank goes next to the cab on the locomotive. When I started fitting the battery box, I had trouble with it being too high. It slopes down from the fuel tank support to the side sill. In retrospect, I think it would be better to install the battery box on the fuel tank support first, then install the fuel tank support to the frame. Let the battery box touch the side sill and solder it to the side sill. That will set the height of the fuel tank support and you can then solder it to the center sills. When I installed the fuel tank, I tinned it first. Then I held it to the fuel tank support with some needle nose pliers. Since I was soldering a casting to a casting, I needed a lot of heat so I used my small butane torch. Heat the tank until the solder melts, take the torch away and hold the tank in place for a while. It will take a while for it all to cool down. Lastly, I tinned the edge of the battery box and soldered the cover on. The cover is larger than the box, so solder it in place even with the top of the battery box and leave equal overhang on each side.




The hoods are annealed for forming and have a little warp to them as well as some tarnish, There are some 3/32" brass angles in the kit, and they will be soldered to the bottom edge of the hood to help straighten it and add some strength. Trim the brass angle so you leave about 3/32" clearance on each end of the hood. Before I started, I cleaned the inside of the hood with vinegar and scotchbrite to get the tarnish off. Don't clean the outside yet. We don't want to remove any of the rivet detail. Clean the brass angle with some sandpaper. Clamp the angle to the bottom edge of the hood as shown.



With the angle clamped to the hood, flux the joint. I heated the joint from the bottom edge as shown. This heated the hood, as well as the angle at the same time. I applied the solder to the inside edge and let the heat draw the solder into the joint towards the bottom edge. Tack the joint in many places first just like you did on the sills. Once it is tacked good, go back and fill in the gaps. When you are done, do the other side. You will notice how much this has stiffened up the side of the hood.



I soldered the cast ends to the hood. Check the fit of the end and the hood. In addition, make sure all metal at the joint is clean. Solder will not flow on dirty metal. You will need to file the end casting for a good fit. Time spent here will save you some grief later on. I tinned the hood first as shown. Do not tin the sides of the hood, just the top as shown.



This is my set up for holding the parts in place while I solder the end castings to the hood. The work table keeps the hood square. The wire over the end puts tension on the joint with the end. By using the wire, I get good tension across the whole top of the hood and not just in one spot. The hood will set a little high right now because of the solder you put on the inside of the hood in the last step.



This is a close up of my set up for soldering the end in place. I used some stainless steel safety wire I had on hand. You can use any steel wire. Go to the craft store and get some florist wire or the hardware store and see if you can find some thin wire. I would stay away from copper wire because I don't think it would have enough strength. When you wrap the wire around, it will be difficult to get tension on it. I solved that problem by twisting a small piece of wood at the bottom. That tightened things up real nice. The casting is a big mass, and will take a lot of heat before the solder melts. This is where I used my small butane torch and heated the casting. When the solder melts, you will see the hood settle into place. While it is hot, add some additional flux to the joint and you will get good solder flow into the joint.



This is why I did not put solder on the sides of the hood. By using this set up, I could get a nice flat tight joint on the side. Note that the wood is only contacting the hood. The casting will be a little past the hood, and we will file that flush later. When cleaning up the castings, the closer you make this fit, the less you will need to do later.



I was going to use the torch again for this operation. To minimize the chance of the brass angle coming loose, I put a clamp on it. Look close and you will see that I laid a piece of solder in the joint. I fluxed the joint and heated the casting from the outside. When it got hot enough, the solder wicked right into the joint. To help, I tilted the work table so the solder would run to the right in this photo.



Here is the result. When it was hot and the solder was still liquid, I dipped my flux probe in the flux and ran it along the joint. This added bit of flux cleaned the metal and the solder filled the joint. When I was heating the casting, I kept the flame aimed at the bottom edge of the casting. This area heated and the solder melted before the top was warm enough for the solder to melt. One of the things when soldering is to have a lot of heat so you heat the area you want to solder before the heat dissipates to other areas. With a smaller heat source, you could have made this joint; but the whole casting and hood would have been hot and you would have had joints coming apart.

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This is what your hood will look like when you get the ends soldered in place. Notice the black around the end casting. This is from the resins in the wood boiling off from the heat and the flame of the torch. Notice also that I haven't cleaned the outside of the hood yet. After both ends are done on the hood, wash it in vinegar with scotchbrite and clean it all up. Then file the ends of the hood casting flush with the brass etching. To keep from filing off the rivet detail on the hood, I put a few layers of masking tape over the hood to cover the rivets. Then gently file the casting until you get a good fit.



The inside of the cab needs a piece of brass angle soldered to the sides of the cab. This supports the cab floor later on. Measure the distance from the bottom to the top of the side of the hood where the cab floor would be. Then, with the same setting, scratch a line on the inside of the cab like I am doing here. This will be the location of the cab floor and where the top edge of the brass angle will be.



Here is the cab etching with the brass angles soldered in. Make sure the brass angles are short enough that the cab can fold up.



Once I had the cab folded up, I held it like this. The joint I am soldering is the lower left. I put the block of steel on the top to hold the joint tight. Look close, and you will see that I have a scrap of countertop laminate clamped with the yellow clamp. This piece is flush with the end wall of the cab. The side wall of the cab sits on top of the end wall for this joint. The scrap of countertop laminate helps you line up the side wall with the end wall. Tack the bottom edge like I have done here, and turn the vise around to tack the top edge. Then, fill in the rest. I cut a small piece of solder and laid it in the joint with some flux. Then I put the probe of the resistance unit on it to heat it. The solder will flow out into the joint. Tack the top and bottom first, then do the rest of the joint.



This is what your cab will look like when soldered together. The solder joint is facing us.



This is what we have so far. I have cleaned the hood and cab with scotchbrite and vinegar. Don't rub too hard because you don't want to remove the details At this point, we will place the cab on the hood and that will give this assemble a lot of strength. Note that the top cab windows on the ends have a different spacing. The wide spacing goes to the rear, or short hood, of the locomotive.

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This is the set up I used when soldering the cab to the body. The body is hanging over the edge of my work table, and is held with a few clamps. The cab fits in tab slots in the hood. Check the fit on these. You may need to clean up the tabs a bit with a file. Make sure the cab sides are lined up with the bottom of the hood. We are going to solder the tabs only, and only from the back with this set up. Like before, it is best to tack things in a few places and then complete the joint. Notice that I am using scraps of countertop laminate between my plastic clamps and the brass.



The next joints we will solder are the sides of the cab and the hood. The hood will stick into the cab a little bit. Make sure the overhang is the same all around. Apply flux and heat from the outside while applying solder to the inside. See the burn marks and carbon crumbs on the left from my resistance soldering probe. Do not solder the top edge yet. We want to do both sides first. When the sides are done, do the top edge. This will take a little tweaking to get a good tight fit.



In this view, I have soldered in the cab floors. Tin them first and set them in place. Then, heat them until they set down. I clamped the whole assembly to the table again and started fitting the hatches. The front of these engines is the long hood. The hinges on the engine hatch covers go on the left side of the hood. Clean all the castings with a file and make sure they fit. You may need to file the openings a bit. Check the castings to make sure they are square and not bent. They probably will need a bit of bending to get them straight. This is easy with your hands or you can gently hold them in a vise and push with your fingers. I applied the solder from the outside rather than tin the parts first. You could tin them, and it may make a neater job. As before, apply the heat to the casting.



This is what the hood will look like with the details soldered on. To solder the exhaust stack on, I tinned it first. Then I held it in place with some needle nose pliers while I heated it with the resistance unit probe. Put the ground lead on the body of the model and let the current flow through the body into the solder to the stack and finally to your probe. When the stack gets hot and the solder melts, it will settle down. Keep the heat on for a moment more until the hatch cover is hot and then take your foot off the peddle to stop the heat. Hold the stack with the pliers until it cools. This will take a while. I kept taking the pliers off before it was cool, and ended up with the stack being crooked. Just heat it up again and re-set it.



Now it's time to put the radiator louvers in. Look close at them. They face the short end of the hood, which is the rear on this locomotive. These will take some filing, fitting and straightening. The time spent fiddling like this on any model will make things turn out better. Bend them with your fingers or hold them in a vise and push with your fingers. When you have the fit, solder them in place. I soldered the number boards in after the radiator louvers.



After the radiator louvers were in place, I soldered the hood door louvers on. There are etched recesses in the hood doors where the louvers go. Look very close at them. The top edge has rounded corners and so does the recess in the hood door. There are a few ways to do this. The holes in the hood are to solder the parts on from the back. This is common on brass etch kits. This has the potential for neater soldering. I felt I would have trouble lining the louvers up with the recess so I decided to solder them from the front. I tinned them all first before I cut them off the etch. You can see the tinned louvers on the left.



Here is the model with the door louvers soldered in place. You can see the burn marks from my resistance probe on the louvers. Also notice again how I held the model on my work table.



Before you put the cab roof on, insert the window sash. The sash with three panes goes with the larger cab window opening. Solder the sash to the inside of the cab wall. When I built this model, we did not have the fuel fillers for the sides of the cab. Your kit will have them, and I would recommend putting them in before you put the cab roof on.

Now it's time to put the cab roof on. I bent the cab roof over a piece of plastic pipe until I had the curve right. Then, I bent over the edges using the score lines. There are a couple of ways to approach this problem. You can solder the center of the roof first and work to the edge. The problem I saw in this was whether or not I would end up in the right place when I got to the edge. I decided to solder the sides first and worry about the center later. I used my wire set up again to hold the cab roof in place and tight to the cab. Then I soldered the overhang to the cab sides. I did this on both sides.



Getting the cab roof tight to the cab front and side was a bit of a "fiddle", as my English friend, Tim, says. I could not find a good way to hold this and get the cab roof tight against the cab front and rear. What I resorted to was folding up a pad of paper towels for insulation and holding the cab roof tight with my hand. Your hand is a better clamp for irregular shaped object than anything you can buy. I laid a small strip of solder in the joint and heated it from the outside with the resistance probe. Once I had it tacked, I was able to finish it. I felt a lot of consternation while doing this model; but I think the next one will go much easier, and the results on this one were good.



We are going back to the frame now and installing the hand rail posts. There are left and right hand posts. See the photo for how they go. Before you start, measure the pin on the casting and drill out the holes in the side sills so they fit. The holes may take a little clean up. When the posts fit, and you have cleaned them all up with a file, tin the pin with some solder. Ground the locomotive with your resistance unit and hold the post in place with a needle nose pliers. Then, heat the post with your resistance probe until it settles down. You may need to straighten it a bit. Just add some more heat and twist it until it is straight. When all the side posts are on, put the jack pads on next. They go where the bolster would be on the locomotive. Figure out where that is, and scratch a mark on the side sill. Tin the jack pad and solder it in place with the resistance unit. Lastly, solder the end rail posts in place as shown in this photo.



This photo shows the fan screen and walkway in place over the fan opening. Solder the screen to the opening as shown. Not all prototypes had the walkway. If yours did, install the walkway. I tinned the feet first, and then soldered the walkway to the top of the hood. The long hood had two sand boxes. To locate the fillers, mark a spot 3/8" from the center line of the hood and on the joint of the hood etching and end casting. Drill a hole to match the sprue on the filler casting. Insert the casting and solder it in place.



The short hood had a single sand box and filler as shown. Drill a hole the size of the sprue on the filler at the center line of the hood and the joint between the hood etching and end casting. Insert the sand box filler and solder it in place.

So there you have it. I had a lot of fun building this kit and I keep learning with each project I do. Ron Sebastian of Des Plaines Hobbies has this model on display. He usually brings it to the shows so you can see it. I will be at the NASG National in Massachusetts in July representing *The S Scale Resource* magazine. Stop by the table for a visit. If you have any questions, let's talk about it and see if we can make it work for you. I will also be at the combined O Scale and S Scale show in Indianapolis in September. They have me set up with a table in the "how to" area. When doing a clinic, it's hard to measure the skill level of the audience. Some people may be bored, and some will not get it. By having a table in a "how to" area, you can sit down and we can go through your specific questions. I am not the end all with this and have a lot to learn, but we can talk about your problems and see if we can come up with a solution.

See you at the shows.

### WHAT'S ON YOUR WORKBENCH TODAY?

This series shows our readers what other modelers are working on, and we need your help to make it successful. 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

## The Motor-Gearbox Unit By Jas Millham



Above: The unit dismantled with an original unit in the background Below Left: The original gear train.



In the April/May 2018 issue of The S Scale

Resource Jas showed some wheels he acquired. This time, he looks at the motor-gearbox unit to drive the wheels.

The first job to be tackled was rebuilding the gearhead. The motor was removed and set aside, the gearhead placed in the lathe and the peening holding the sleeve to the mechanism turned back enough to allow the sleeve to be removed, but leaving the shoulder intact to facilitate reassembly. The units were originally the lens iris motors from thermal imaging cameras and have 262:1 gearheads. Removing one stage of gearing produces a 76:1 unit. The photos show the modification. The sleeve was then replaced and soldered back in place. The units consist of a cascade of identical 9-tooth pinions attached to 31-tooth

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Above: As modified with a stage of gearing removed. Below: The reassembled unit with the sleeve soldered back on. The motor goes further into the sleeve.



wheels. When a stage is removed, the motor just goes further into the sleeve and meshes with the next gear down. At this stage, the motor is rotated in the sleeve while running with a milli-ammeter in series.

The current tends to go through a peak and a minimum value due to concentricity tolerances in the motor und gear box affecting the efficiency of the gear meshing, the minimum current indicating the most efficient mesh.



The jackshaft showing insulating gap, gears and insulating sleeve. The pin ensures the gears always turn together. The gear being narrow there isn't much for the epoxy to grip on.



The gears assemble on the jackshaft.



Marking out the gear shaft centres.



The gearbox side frames were cut as a pair from 1/8th" brass and the pilot hole for the jackshaft drilled. The final stage gear was mounted on a 3/16th" rod with a point on the end, a strip of paper inserted between the gears and the larger gear moved round the smaller to draw an arc on which the centre of the final drive axle would lie. Once drilled, the gears were checked for mesh. The holes were then opened up to  $\frac{1}{4}$ " for the ball races and the side frames profiled to their final shape.

Left: Checking the mesh. No point in going further if it's wrong at this stage!

Below: Trial assembly.





*Above: The split axle, showing the insulating slot. Below: The insulating sleeve for the final drive gear fitted to the axle.* 





The complete assemblies of axle and jackshaft with ball races added.



The axle was machined from 1/8th" rod with 3/32nd" ends, the wheels previously made having 3/32nd" axle holes, the shoulders setting the back to back spacing. The wheels will be fixed with epoxy, the threaded ends are for nuts and washers to hold the wheels in position while it cures and will be cut off later. A 1mm hole was drilled through the axle and a longitudinal saw cut made with a piercing saw. (See photo) The slot was filled with full strength epoxy (not the rapid cure stuff) and left to cure for 24 hrs. Then the transverse cuts were made from opposite sides to produce a Z or N slot insulating band. After checking the insulation, the slots were filled with more epoxy and the insulated sleeve for the final gear added at the same time. Ball races were added to the axles and the whole lot assembled and tested.

The overall gear ratio is about 101:1, giving a top speed of about 180 RPM, about 30 MPH for a loco with 59" drivers, adequate for a loco designed for coal drag work with hook and chain coupled wagons in 1901 which finished its days on country branch and pickup work in the early 1960's.

Left and next page: Views of the completed unit.

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# SCENE AROUND THE LAYOUT

John Albee's Caribou and Sierra Falls Railroad was featured in our first issue of the S Scale Resource way back in 2014. Things change and time moves on, and John is moving to a smaller home on a lake so this version of the Caribou and Sierra Falls Railroad is gone. It will be rebuilt, but in a smaller version. We wish John good fortune ahead! See rear cover for more pictures of the late Caribou and Sierra Falls Railroad.



We are proud to feature readers work. Depending on your response we would like to make this regular feature. So get those cameras and cell phones out and start shooting! High quality JPG or TIF files are only. Email to <u>daniel@modelrailroadresource.com</u> with a description of your pictures.

## SCALE SHOWS & MEETS

The S Scale Resource Magazine will now be providing a free listing of upcoming events. This small, text only listing will include the Event, Date, Location, Type of Event, and Contact Information. Click here to go to the sign up form. This form will take your information, and we will publish it in our next issue. If it is an annual event, you will need to submit your information every year.

### **2018 NASG Convention**

July 24 through 29, 2018 The Boxboro Regency, 242 Adams Place, Boxborough, Massachusetts.

Hosted by the Bristol S Gauge Railroaders, in celebration of their 70th anniversary! Click here to visit the website, which includes the registration and car-order forms, and the tours.

Website: www.bsgr.us

### Indianapolis O Scale Show / S Scale Midwest Show

September 20-22, 2018 Wyndham Indianapolis West The Indianapolis O Scale Show has been in place for over 49 years. We, at The Model Railroad Resource LLC, publishers of The O Scale Resource and The S Scale Resource, are proud to have been selected to carry on the tradition for the 50th year, and include S Scale. Website: indyoscaleshow.com

### Grand River Valley Railroad Club Fall Train Show

October 13th, 2018 HSB, Inc 5625 Burlingame Ave. SW Wyoming, MI 49509 1-4PM Train Show with operating layouts Thomas play area, Lionel O scale, American Flier S scale, G scale, HO and N scales Website: grvrrc.org Email: kwskopp@outlook.com

### FALL S FEST 2018

November 2-4, 2018 The Chicagoland Association of S Gaugers, Inc. Invites You to Celebrate S Model Railroading! Your invitation to be part of the greatest S, 1/64 Model Railroading event! Georgio's Banquets and Quality Inn and Suites 8800 West 159th Street, Orland Park, Illinois 60462

Website: trainweb.org/casg/sfest.html

## Reader CLASSIFIEDS

#### $BUY \sim$ SELL $\sim$ TRADE

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### \$600 plus shipping. USPS M O is best.

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



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

