YouTube Model Builders eMag

A Free YouTube Model Builders e-Magazine
Produced by YouTube Model Builders.

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VOLUME I www.YouTubeModelBuilders.com SEPTEMBER 2015

ARTICLES YOUTUBE CHANNELS COMMUNITY TIPS & TRICKS

Shane Mason's Amazing Weathering!

Learn Some Of Shane's Techniques For Weathering N Scale Steam Locomotives

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Cover Photo:
Model Of An M-Class 4-8-0 #475 On The Strasburg MRR Club's Layout

Be Sure To Check Out
YouTube Model Builders Live!
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Welcome YouTube Model Builders!

We have worked very hard and are excited to present this September edition of the **YouTube Model Builders eMag** to the community. The YouTube Model Builders "Team" is committed to putting the "eMag" together with the assistance from the model railroading community at large.

We continue to deliver a useful and informative publication for model railroaders who travel this vast net of information. In this issue (and many to follow), we include many informative, tutorial-based articles, information on happenings in the community, listings of up-and-coming YouTube channels, information about the **YouTube Model Builders LIVE!** show, **Tuesday night Hangout Presentations**, along with general information that is inspirational in building of our model railroads.

Our Vision:

To establish free, online resources as a primary source for model railroad techniques and inspiration in an ad-free, selfless service environment.

Our Mission:

The mission of YouTube Model Builders is to inspire individuals for sharing model railroad building techniques through the use of YouTube and other free online resources. Our goal is not only to share knowledge in a community but also assist individuals who are learning or looking for inspiration through the online model railroading community.

— The YouTube Model Builders Team

Editor's *Note...*

Summer has quickly passed us by and autumn is now upon us. For many of us, the kids are back in school, and the chaos of homework and after-school activities has begun. However, this is also the time for us to spend indoors working on, improving upon, or simply operating our model railroad empires. With that in mind, we pick up where we left off in May and cover some more weathering and custom building of details for our scenery.

Shane Mason shows us how he weathers N scale steam locomotives—he must have some very nimble hands and great eyesight! Barry Rosier begins a new column in which he documents a buildout of a G scale LGB based layout, the Strasburg Model Railroad club, of which Barry is a founding member, has undertaken as a favor for a friend of theirs.

Carmine Allocca writes about how he took parts from a couple of SD40-2s to build a much smoother running version of what he calls his "Frankenstein" build. The Track Planner—Bill Beranek defines for us the concept of view-blocking peninsulas and discusses how one can be used to increase the perceived distance our trains travel on the layout. Harry Haythorn gives us a bit of history about the Union Pacific Harriman Horse Express Cars and show us how he custom built and painted two of these hard-to-find cars.

Geno Sharp shows us how to quickly and easily scratch build billboard signs and Ravainell Hunt describes step-by-step how he inexpensively builds chain link fences. Adding billboards and chain link fences can give your city scene a touch of realism. The Community Collage features photographs of the Strasburg Model Railroad Club's layout as displayed at the Railroad Museum of Pennsylvania. Also, be sure to check out the Pick-3 listings.

In the Food for Thought section, Andy Crawford gives his opinion on the matter of complexity of DC vs. DCC. As you read it, I ask that you keep the following two key points in mind:

1. Anytime we decide to expand upon, add layers to, or build on top of anything we use, by default, we quickly introduce complexity—even if that was not our intention. That is part of nature's physics.
2. DC based model railroad layouts were never intended to run multiple trains on the same track. When we go beyond the intended or original design envelope, we have by default introduced complexity. And this holds true for both DC and DCC.

Let us know where you stand on your thoughts regarding model railroading.

Happy model railroading!

– **Loggin' Locos**
Editor-In-Chief

Contents:

Weathering A Steam Locomotive Is Not Hard... To Mess Up

By Shane Mason

Airbrush Weathering An N Scale Steam Engine

With these tips and tricks, hopefully weathering will be a bit easier for you.

I start by cleaning the model with a damp rag or towel. This ensures that you do not seal any dirt or dust to the model and helps preserve the original detail of the locomotive. The rag does not need to be soaked, just slightly damp. This can also be done with a dry/clean brush, a dry cloth or compressed air.

Once your unit is clean, it's time to start weathering. But, before I get to the model, I try to find prototype photos of the unit I'm weathering. Normally, photos for steam locomotives are a bit harder to find. My problem is that if they are not black and white, they are usually not the best in the world. To help solve this problem I use a weathering chart found on page 32 in the February 2012 issue of Model Railroader [1]; it shows a very general picture of what the weathering would look like.

Once you have an idea of what you want the unit to look like, you are going to need a few supplies before we can start.

List of Supplies:

1. An airbrush and an air compressor set for anywhere from 20 to 25 PSI.
2. A spare piece of track and a power pack.
3. Light grey, ash grey, tan or dirt, and soot (or black) airbrush paints. You can also get rust paint, but I use rust powders, so I do not use this color.
4. Testors Dullcote
5. Weathering powders and a brush.
6. Paint thinner (I usually use the same brand thinner as my paint).
7. Airbrush cleaner (a lot).
8. A roll of paper towels.
9. Masking tape.
10. Cotton swabs.

To start, I take the unit and mask off anything I don't want dirty, like Windows, lights, and electrical contacts. Once this is done, I mix my first color in my airbrush. Normally my color mixes are one part thinner to two parts of paint (a ratio of 1:2). I also add a few drops of airbrush cleaner as well. The airbrush cleaner is optional; I use it because I think it makes things a bit easier to clean out afterwards, and it doesn't hurt the paint at all.

Pro Tip: Always test your paint mix on scrap material before using it on a model, and never use new paint on

[1] "Re-Letter and Weather a Steam Locomotive" by Cody Grivno; *Model Railroader*, Feb 2012; pp 30-33.

A layer of light grey paint is applied to the very front of the unit, down the boiler near the steam dome, the fire box, and just ahead of the cab.

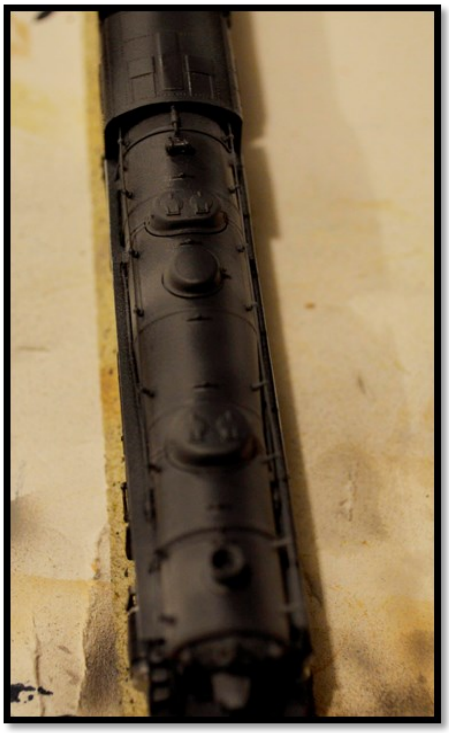
a model until you feel comfortable with the effect the paint has. This could mean that you will waste half a bottle just playing with the paint; personally, I would rather lose half a bottle and have the model look good, rather than try the paint straight off the shelf and wish later that I wouldn't have done it at all.

I more typically start with light grey paint. The light grey represents your mill scale and other metal flaking areas, and it will be the bottom layer. This is applied to the very front of the unit, down the boiler near the steam dome, and the fire box. The area just ahead of the cab will see a light coat. This coat can be as light or heavy as you like. The only thing about going a bit heavier is that it starts to seem more like a grey blob than mill scale. I would play it safe on the side of a lighter coat and gradually add more until the desired effect is achieved.

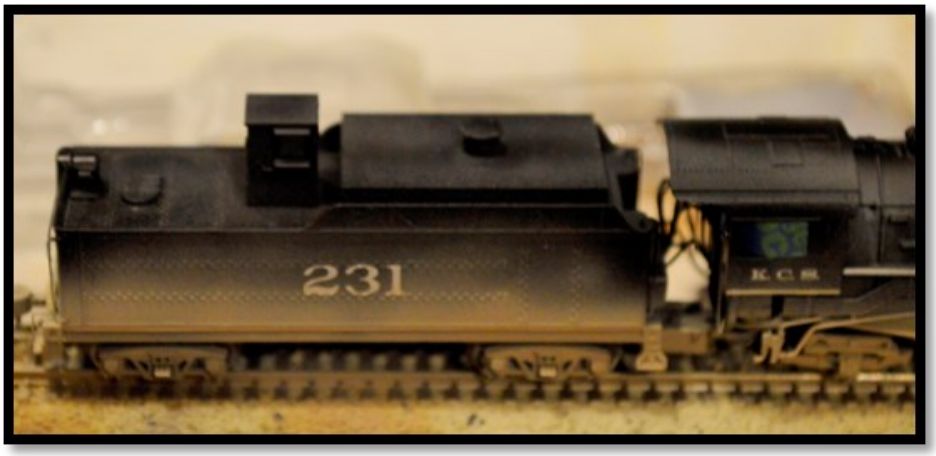
Second in line is your ash grey color. This will give your soot color a bit of a base and something to fade against. This is usually a wide band from about the top of the hand rail on the boiler to the same spot on the other side. I try to fade the thickness of the color as I get closer to the handrail itself. Again, this gives you a nice base onto which you can work soot/black, but will also fade the top of the unit to look a bit "sun soaked". One of the nice things about this coat is that if it is too heavy at the top, it will be covered by the black coat, so it's not a huge deal. It's more the lower areas around the handrail where quality should be stressed a bit more.

After two rounds of airbrush cleaning, we are prepared for the third round of color. This time we will be using the black color to create a sooty look. Some guys use a black with a bit of grey to it, but because I have already used the ash grey color, I don't have to worry about that. This band of color will be only about half as thick as the ash grey layer, coming down only about halfway to the handrails to ensure we do not cover the ash grey color. The highlight area I stress with this color would be the very front. This is where you will see most of the soot effect from the locomotive sitting idle much of the time. I also usually cover the smoke stack, high-up details such as the bell and marker lights, and the area on the boiler around the smoke stack. From there, I run another section back

Ash grey is used to provide a base of soot and is applied in a wide band from the top down to the handrails on the boiler, fading near the handrails.



Thin bands of black provide a more sooty look, especially towards the front and on the smoke stack.



Above: Earth tone paint is used on the base of the engine and the tender to weather in dirt and road grime. Below: Few spots of rust are added using weathering powders wherever water tends to gather, such as pipe fittings.

almost to the cab; this is a bit lighter, but only by a shade. The top of the cab will get a bit of a dusting to almost none. The tender will see a very quick pass.

Round three of cleaning has brought us back to the beginning of our fourth and final shade: the dirt and road grime. This is where you need your track and power. I hook up power and put a large object in the way of the train. Once the unit is set on the tracks, I give it a little bit of power to get the wheels and drive rods to turn. I then take my tan or earth tone paint and spray the lower front pilot, the wheels, drive rods, underframe, trucks, rear of the tender, and the underside of detail spots like the air pumps and firebox. I apply very lightly when starting; it is a lot easier to add paint than to take it off. Once all sides have been

Little or more rust can be added in select areas in order to indicate the length of time the engine has been in service.

painted with the earth tone, I clean out the airbrush and call in the dogs.

The last thing I do before completing a unit is to add rust to a few spots. My favorite areas to add rust are the water-fill hatch hinges, just below the cab window sill, anywhere that might see water at a piping joint, and down the sides of the tender. These are optional for a "newer looking" unit. After rusting is done, I seal the locomotive with Testors Dullcote and use cotton swabs dipped in thinner to clean any wheel face surfaces that have paint on them, since this could affect electrical pick-up (something you can't afford to lose in N scale!). For the tender wheels, I pop them out and clean them by hand. The drivers will be cleaned after I apply power; I let the drivers spin while I hold a cotton swab against them, making sure to only remove the paint on the wheel face and not the sides. Just before your locomotive rolls off to duty, remove the masking tape and be sure to touch up any "blank" spots.

Now your steam locomotive looks like it has been working for the railroad for some time, whether that's a week after its first run, or a week before its last. Your units will surely look the part and stand out against the rest!

About the Author

Shane is an 18 year old modeler and is a member of the Heartland NTrak of the Greater Kansas City Train Club. He manages the NTrak Facebook page. Shane has modeled in several scales but has settled on the N scale.

Currently Shane is modeling UP, MRL, and CB&Q from the 1940's through modern times. He considers himself an intermediate modeler and has about four years of experience. Shane has quickly become an expert at installing DCC decoders in N scale engines. He enjoys sharing tips and talk with other train fans.

Shane's YouTube channel, https://YouTube.com/thebrakeman17, includes many great modeling and rail fanning videos.

These N scale steam engines are finished with a sealing coat of Testors Dullcote. Masking tape is removed and touch-ups are made to give these engines that final look. These units stand out as the workhorses of the railway!

The ***YouTube Model Builders Big Build Contest*** is a YouTube-based model railroad structure build contest that will be judged through YouTube videos by a panel of judges from the YouTube Model Railroad community.

The ***YouTube Model Builders BIG Build Contest*** is hosted by Eric Hall from IMRROcom.

To enter is easy! Just click here for the *Entry Form and sign up! You must have a YouTube Channel on which to place your build videos so they can be judged!

Your build must be completed by **September 30th**. Any and all related videos of your build must be uploaded for judging by **September 30th**. A panel of Judges will then review the ***YouTube Model Builders BIG Build Contest*** videos and select the winners based on set criteria.

So share your ***YouTube Model Builders BIG Build Contest*** videos for everyone to see!

*For complete rules and further information, please click here.

A Layout Takes Shape - Part One

By Barry Rosier (Barry's Bench)

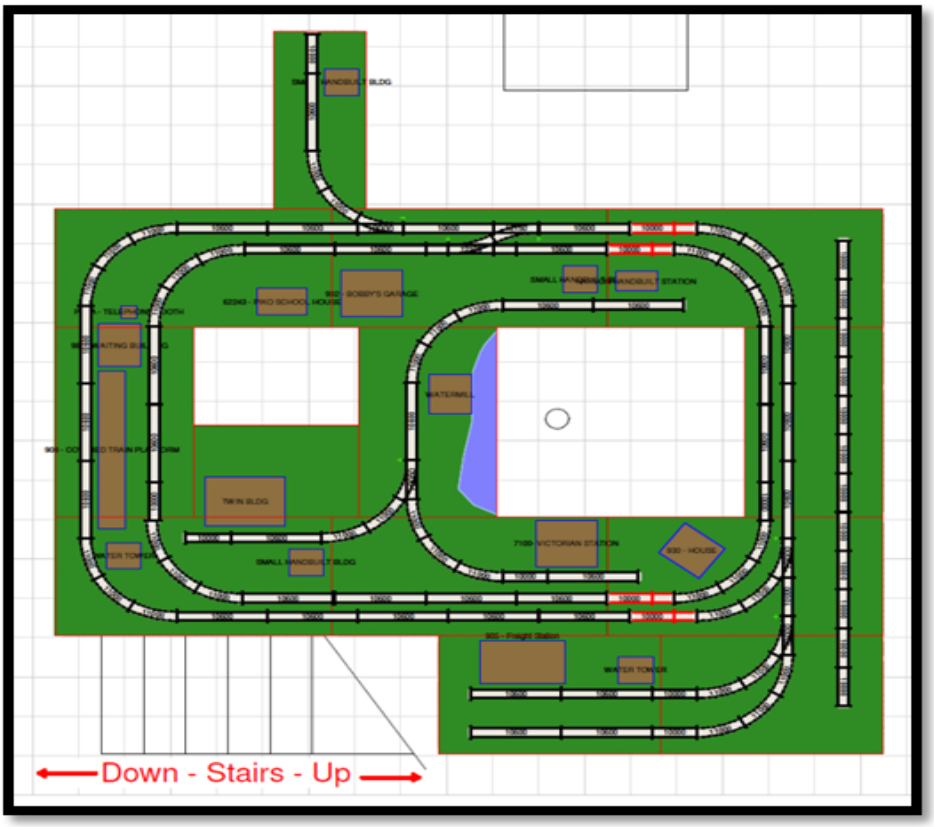
I'd like to introduce to you a friend of mine, Charlie. Charlie has been a collector of LGB trains for 35 years. Years ago he had built his first G scale layout. He has moved since and had to leave behind his layout, but has continued collecting LGB models. Charlie lives with his wife, who has Multiple Sclerosis, his daughter, and grandkids. Charlie spends most of his time taking care of his wife and therefore has not had the time to focus his attention on building a new layout.

Recently Charlie decided he wanted to build a new layout that he could share with his grandkids. It is very hard for him to find the time to build a layout, and at 68, the task of constructing one is not so easy anymore. He found our club's website, www.strasburgmodelrailroad.com and decided to contact us and ask if we would be interested in helping him build his new layout. Our club president Dave Luciano forwarded the email to the club members and we all agreed to help Charlie.

So I, Mike Dettinger, Jim Langley, and Jim's friend Rick Johnson contacted Charlie and made our first visit at the beginning of the summer. This first meeting was a planning session to check out the space, discuss Charlie's plans with him, see what he had in his collection, and get an idea on how to proceed with the layout plan. Charlie provided us with a fully typed-up inventory of his track, buildings, engines, and rolling stock, including all building dimensions. This made our planning task much easier.

We measured the space and started sketching the outline as we asked Charlie about what he had envisioned for his layout. He told us that he wanted to run the trains, rather than operate them because the main purpose of the layout was to enjoy running trains with his grandkids. With the size of G scale and what Charlie wanted, we had to make the modules three feet wide to accommodate his ideas.

Given the size of the layout, we decided to go with the old tried and true doughnut-hole design. This also facilitated access to the layout from both sides for construction and maintenance. Currently there are no lift-out sections, and because of the size of each module, there are no plans to make one. Charlie placed pieces of carpet under a section of the layout so he could easily crawl under it to get to the doughnut holes, if he needed to get access.



Initial plan for Charlie's G scale LGB-based layout.

Jim uses his chop saw to cut lumber.

The connected modules take shape and start to look like a layout.

Once we had the plan done, and Charlie approved it, we made the materials list for the benchwork and Charlie ordered the materials. Once the materials arrived we scheduled our next visit to begin construction of the benchwork. It took us two visits to get the modules built and about half of them standing upright. All of the benchwork is built from 1"x4" lumber with a center brace to support the ½" plywood top, and 2"x4" legs with adjustable feet in the leg bottoms.

Jim brought over his chop saw and stand, and we started measuring out the lumber, and cutting. We precut as much as we could and then started assembling the frames. All of the corners were aligned with corner clamps, and were glued and screwed together. Once the frames were completed, we laid them out on the floor to see what the layout would look like.

Jim connects the modules while drilling wiring holes.

After our first build session Charlie decided to rearrange the modules as he had allocated more of his basement space for the layout. So we accordingly made changes to the plan and finished the last of the frames. Jim cut the legs, I drilled the holes for the feet, and Charlie installed the feet. We began to assemble the legs to the modules and attached the cross bracing. As we finished a module we put it in place. Then Jim started attaching the modules together and leveling them. He also drilled feed holes for wiring as he went along. We finished standing the modules upright and about 40% of them were attached together in this visit.

We could not come out for several weeks so Charlie's former son-in-law offered to help out. He came over and cut all of the plywood tops, attached them, and finished connecting all of the remaining modules.

On our third visit Mike Dettinger and I worked with Charlie and laid out the track and buildings. With the new module configuration we made major track plan changes based upon Charlie's feedback as we laid out the track. We ended up adding

The completed modules with track laid in place and structures temporarily placed gave us an initial preview of the layout. Notice the three-way turnout in the upper right picture. The picture on the top left shows the new modules with the three cars of the cog railway and the picture in the middle-bottom show the trolley line in its foreground.

a three-way turnout with an extended branch line off of the main line, and a separate trolley line on the new section of the layout. At this point we had expanded the plan to the other side of the basement steps. The new plan allows Charlie to run four trains at once, one of which will be an inclined cog railway (it actually runs on a center cog track). By the end of the day we had the trains running with some temporary wiring.

We went back and painted the benchwork, permanently laid down approximately 60% of the track, and completed all of the track wiring. I am working on the updated modules and track plan to document the changes we've made to the original layout. There still remains a lot of work to be done on this layout. We still have to plan wiring for signals, turnout controls, and structures. All of the scenery and track ballasting still needs to be modeled. One of the interesting items we will be building is a mountain with a tunnel, and the cog railway up the mountain. So stay tuned for the next installment of A Layout Takes Shape, as we continue to build out Charlie's G scale LGB-based layout. Perhaps by then, Charlie will have a name for his railway!

About the Author

Barry Rosier is a member of the NMRA (Member #159585 00) and a member of the PRR Technical & Historical Society (Member # 9218).

Barry Rosier is currently building a 12' x 20' American Flyer S scale layout. This is his first personal layout but not the first layout he has built. Barry is one of the founding members of the Strasburg Model Railroad Club and has worked to help build their 117 foot modular layout of the Strasburg Railroad near Lancaster, PA. The club is 23 years old. The other layout he is planning is a PRR HO layout that will be a double deck above his American Flyer layout. Barry is currently documenting his American Flyer build on YouTube. Hopefully the construction of the HO layout will begin this fall and will be documented on his channel at https://www.youtube.com/user/bsrosier.

Building the "Frankenstein"

By Carmine Allocca

A MULTI-BRAND SD40-2 LOCOMOTIVE

This project of completely rebuilding a pair of old GSB Rail SD40-2s began by a stroke of luck when I was given two old GSB SD40-2s. The pair of locomotives was given to me as a late Christmas gift. You may be thinking: "Why go through the trouble of rebuilding locomotives?" I have a few reasons why I wanted to embark on this build. For one, I like the challenge of resurrecting a 30+ year old locomotive, with an intriguing story. Secondly, I wanted to make something that old run as smooth and as efficient as today's locomotives. My third reason, knowing that I have a budget of nearly nothing, was creating something nice, almost exclusively with the parts I had on hand!

A Little History

Before diving into the build, I thought I'd take the time to share a very intriguing bit of Model Railroading History regarding the GSB SD40-2.

About 30 years ago, (a few years prior to the release of their SD40-2s), GSB had been a very successful importer of some of the finest brass electric interurban models ever made in N, HO, and O scales. The brass interurban models remain a hot commodity with operators, collectors, and on the auction sites to this day.

Their SD40-2, while ultimately a commercial failure, did help to press the issue for better details, scale-width hoods, and the use of can motors in cheaper, plastic model locomotives. GSB's detail parts, such as cab interiors and plastic windshield wipers were also cutting-edge at the time.

The owner of GSB, Skip "Skippy" Guirty, wanted to get into the plastic market so his company could cater to a larger demographic of modelers and collectors. Skippy would get his company into the new market by designing and producing a plastic model of EMD's popular SD40-2 locomotive. Companies like GSB Rail and Front Range showed a lot of promise, but, unfortunately, lacked in execution.

In 1980, the company was taking up tons of ad space in model railroading magazines to promote their new SD40-2 locomotive. GSB wanted everyone to know about their plans for a cheaper - yet more detailed - locomotive.

After a year of promoting their new diesel, GSB didn't even have the blueprints made yet! The company had no molds, no infrastructure, and no production plans. However, the lack of a design or a prototype didn't stop Skippy. He continued to advertise the new plastic model in many magazines.

Somehow, by late 1981, GSB managed to get a prototype locomotive built. The prototype, aside from the fans, was built in brass by Gordon Cannon. The fans of the SD40 were hand-made in brass by Cliff Grandt. The brass parts of the prototype SD40-2 would later be used to form the molds for the production model's plastic parts.

Did I say Gordon Cannon and Cliff Grandt? Do those two names ring a bell? They should!

Have you ever used Grandt Line details and structure parts? How about Cannon & Co. HO scale diesel fans and super-detail parts?

Yes, that's right! Gordon Cannon and Cliff Grandt built the prototype of GSB's SD40-2!

By mid-1982, production on the new locomotive had finally started. The sub-$40 models would have superior details, including extra add-ons, like metal grab irons and lift hooks, as well as chassis details, like air filters, windshield wipers, fuel filler tubes, and air lines. The SD40-2 would be powered by a Mashima can motor

and a tight dog-bone drivetrain.

Remember, it's 1982. There's nothing like this in plastic, and it had a better drive than some of the high-end brass models of the time!

Unfortunately, even with the high-quality drive and fine details, the first models were absolute crap! The handrails were grotesquely oversized, and the finish on the bodies was rough and grainy, because GSB used sintered bronze molds to shape the styrene parts of the SD40. Although alright for making Athearn's early wheels, the bronze molds were terrible for molding styrene!

Worst of all, the trucks and gears were a disaster! The trucks literally disintegrated … that is, when they didn't wobble worse than AHM trucks!

However, the SD40-2 did have, and kept, one great part: the Mashima Can motors.

GSB purchased a couple thousand of those Mashima motors, and that helped, as the company had to sell some off to help pay for and create the right molds.

By early 1983, Skippy and GSB had a viable product, albeit flawed. Skippy started displaying his brand-new SD40-2 at many major train shows. There was incredible buzz about this, because nobody made an affordable, plastic SD40-2 up until now. When they were released, they were hot! The GSB SD40-2 was flying off the shelves. It could be found all over the 1/87 and 1/1 rails back then!

I was told the following story by a distributor that dealt with Irv Athearn back when he was still alive.

Not long after GSB came out with their plastic SD40-2, both Mr. Athearn and the owner of GSB were at a trade show somewhere in California. Irv Athearn went over to the GSB booth to congratulate the owner for bringing exciting new models to the market. But the owner of GSB decided to tear into Mr. Athearn, describing all that he thought was wrong with Athearn models and how much of a disservice Athearn was to the hobby.

This upset Irv greatly. Like many model railroad manufacturers, Athearn's main focus was to produce affordable and reliable equipment. Irv set about making his own version of the SD40-2, with scale width hoods (Athearn's first). Athearn's new SD40-2 came to market within a few short months and was substantially less expensive than the GSB model. Athearn went on to make their own versions most of the models listed in the GSB catalog.

Skippy Guirty never fixed the horrible truck problem. No longer able to sell economical quantities of its more expensive SD40-2, GSB couldn't afford to repay the tooling cost for them and future models, and the company eventually folded.

The Rebuild

Now, I've got work to do!

I found out after a week of tweaking and fighting that Skippy's truck design just flat-out didn't work. The gears would bind by design! The trucks had helical cut gears - like the ones on today's high-end models - that give smooth and quiet operation. The problem with the GSB trucks was that the gears were not designed to mesh with each other. They would grind and make horrible sounds while the unit was running.

Another problem with the unit was the "innovative" fiberglass chassis. Although scale in shape and dimensions, it was far too lightweight to ever track properly.

There was only one way to save these two locomotives: I decided to make drastic changes to the old GSB models.

My friend Terry Tsutsumi, had done a very similar project, installing a GSB SD40-2 body on a modified Athearn SD40-2 chassis. He had pictures of how he cut the Athearn frame. This was fortunate, as it made the biggest step easy for me! I bought an Athearn SD40-2 chassis with trucks on eBay. It arrived in

To prepare the Athearn frame, eight scale feet of ends were trimmed, and a circular well was ground out to make room for the motor and flywheels.

the mail promptly, and I was ready to start chopping.

The frame modifications didn't look pretty, but they were functional. I cut eight scale feet off of each end, and ground out a circular well to make room for the motor and flywheels.

I discovered a nice freebie while building the chassis. While digging through "spare parts", I found an Atlas/Kato C30-7 that took a fatal trip to the floor previously.

The Kato motor from the wrecked C30-7 fit on the Athearn chassis with minor modifications. I used a big glob of RTV Silicone to hold it in place.

To my pleasant surprise, the old dog-bone drive shafts were the same length as the Kato's drive shafts. After a series of small modifications, I was able to fit the Kato drive shaft to the Athearn worm gears. The whole thing fit like a glove!

The body is made up of the stock GSB SD40-2 shell, as it has great detail and represents the "Phase 1" version of EMD's SD40-2. The couplers were already body-mounted, so nothing had to be done there.

To finish the exterior, I used Tru-Color paints (because they cover well) and my trusty old Badger D/A airbrush to apply the color. The Badger D/A airbrush has served me well for almost twenty years.

The GSB body fit on the Athearn chassis with very little trimming - another pleasant surprise!

Now that the major work is done, I can get to work on finer details. I'm not going to rush this process.

My purpose here was to show the newer, maybe less-experienced modelers, that any build can be possible. It only takes your imagination, lots of cheap (or free) spare parts, a few expletives (optional) and perseverance to build something extraordinary!

I'm not the most talented modeler you'll ever see. I was just the kid who could get a square peg in a round hole!

About the Author

Carmine has been a Model Railroader since 1975, and has modeled every scale except for S. In recent years, HO Scale has been his mainstay. Carmine has worked with the Boy Scouts, helping them get their Model Railroading Badges. He also did annual work with the Make-A-Wish Foundation. Carmine is member #152456 of the NMRA, and is currently working on his 5' X 21' Pacific Belt Railroad HO Scale Layout. Follow Carmine's progress on his layout on his YouTube Channel here: https://www.youtube.com/channel/UCMTZPfY2Yoohecv3p6lmfyw.

Want to get your YouTube channel featured or mentioned in the YouTube Model Builders eMag? Contact us at YTMBeMag@gmail.com and tell us about your YouTube Channel.

A Perspective On Track Planning - Part Four

By William (Bill) J. Beranek —The Track Planner

Design Elements #5: View-Blocking Peninsulas

In my prior installment I discussed design elements #3 and #4: long mainline runs and trains traveling through scenes once. This installment builds upon those elements with a discussion on view-blocking peninsulas. I was going to include design element number six, staging yards, but I will save that element for the November issue.

To have a meaningful discussion on peninsulas, we need to go back a couple of installments, when I wrote about design element #2: narrow shelves (see the May 2015 issue of *YouTube Model Builders eMag*). In most cases, when I design track plans, narrow shelves and peninsulas go hand in hand with each other. However, I have watched many YouTube videos where individuals are designing and constructing layouts without, it appears to me, even

View Blocking Peninsulas

Most model railroaders understand what a peninsula is. When you add the term "view-blocking", you can get some strange looks from people. Simply stated, a view-blocking peninsula prevents an operator or visitor, standing on one side of the peninsula, from seeing the other side (of the peninsula) without physically walking around the end of the peninsula.

View blocks do not need to go all the way to the ceiling; they only need to be a few inches taller than your tallest operator. A view block only needs to be a few inches thick in order to create the illusion of space and distance.

Pinch Points

Unfortunately, "pinch points" are an unavoidable part of model railroad layouts (see Figure 2). Most modelers do not have unlimited amounts of space to build their "dream" layout. At some point, either during the design phase or during the construction phase, reality hits and "pinch points" start rearing their ugly head.

What defines a "pinch point"? I consider any distance between 2 pieces of benchwork (fascia) less than 24 inches wide, to be a pinch point. Depending on the physical makeup of an operator and/or visitor, 24 inches can seem very tight. When I design track plans, I never try to go narrower than 20 inches and then only for a very short distance, maybe a foot or two at the most.

Pinch points can become a major issue during operating sessions. At some point, operators, following their trains, will physically pass each other. When that happens, and it will many times during an operating session, 24 inches can seem extremely tight. You cannot eliminate pinch points; you can only manage them. The location and width of pinch points need careful consideration when designing a layout.

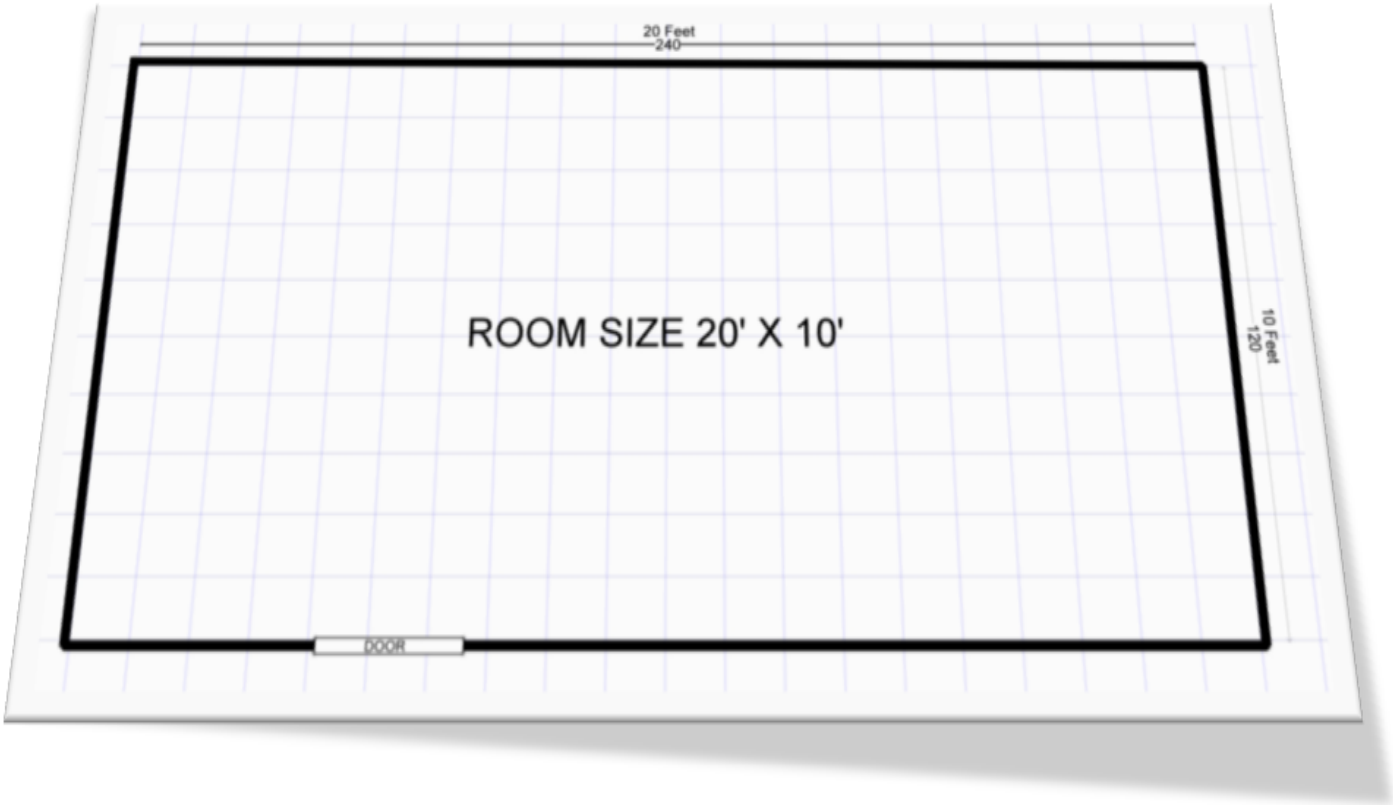


Figure 1— A typical 20' x 10' area where a shelf layout would traditionally be built. The door is on the south wall.

considering a peninsula. I assume this happens because they feel they do not have the space, or constructing a peninsula is beyond their carpentry skills.

There are two big advantages to a view-blocking peninsula:

1. It increases the mainline run, sometimes by as much as 30% to 40%, and
2. The layout will look, feel, and operate much larger.

Narrow shelves and peninsulas work very well together. Many of the YouTube videos I have watched, the presenters think narrow shelves are anything just under 24". Many of my track plans have shelf widths far less than 24". That is why, when I say narrow shelves, I am talking about shelves sometimes as narrow as 6 to 8 inches!

Take a room measuring 10 feet wide by 20 feet long (see Figure 1). Most would agree the space is long enough for a good-sized layout. At the same time, many would think having 10 feet of width is too narrow to consider adding a peninsula. Those individuals would be correct, if they wanted the around-the-wall benchwork to continuously be 18" to 24" wide.

If you built a 24" wide benchwork around the outside walls (perimeter), you would have a very difficult time fitting a peninsula into a 10 feet wide space, unless you were willing to put up with an 18" radius on your peninsula turn-back, which most serious modelers would not consider. However, let us assume, you were willing to have benchwork only 8 inches wide for short distances, say, for two to three feet lengths (see Figure 2). These will become your "pinch-points," and now everything fits!

I will now explain:

1. How to add approximately 30% to 40% more mainline,

Google+ Hangouts! If you like real time video chat with other model railroaders, watch for these LIVE Hangouts to join. Ask questions, help others with their modeling videos, or just join in live chat and simply "Hangout!"

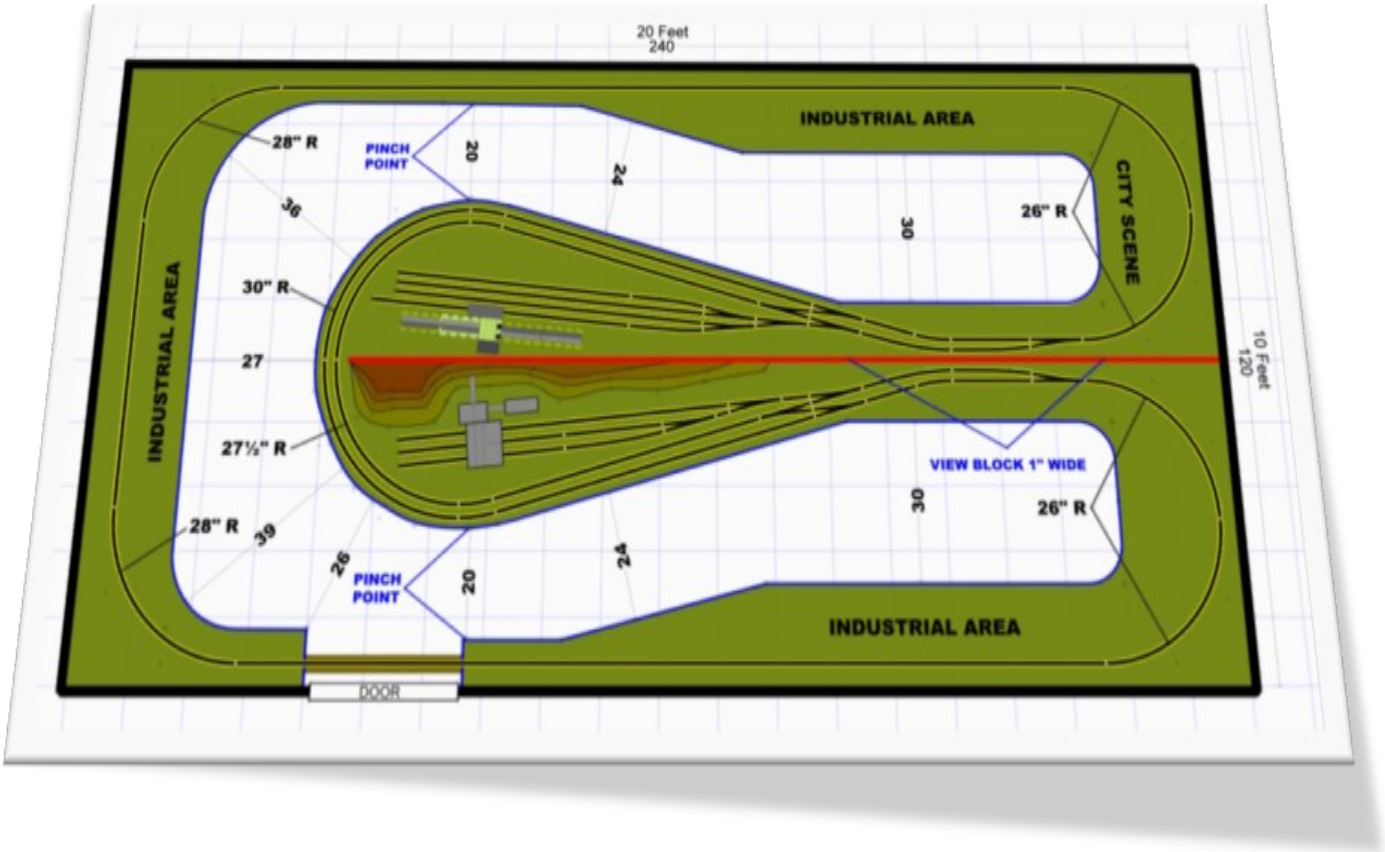


Figure 2— A track plan that incorporates a view-blocking peninsula in a 10' wide space with a 30" radius for the outer track. Notice how the outer shelves reduce in width at the "pinch points," allowing for more operator space.

2. Have a reasonable size radius for your peninsula turn-back,
3. Maintain decent aisle widths,
4. Maintain 18" wide benchwork around 85% the room's outside walls,
5. Have only two pinch-points, and
6. Do it all in 10 feet.

Please bear with me while I go over some numbers (see Figure 2). Let us assume you want a reasonable turn-back radius on your peninsula, say 30", allowing 2 inches of benchwork on either side of the turn-back track. We would need a total of 64" (30"+30"+4"=64") for the peninsula width. Let us further assume we can live with two 20" pinch-points as we walk around the peninsula turn-back.

> Forcing operators to walk around the peninsula automatically creates the feeling of distance and size.

Adding 40" for the 2 pinch-points, plus the 64" for the peninsula turn-back, leaves us with 16" total, or 8 inches on either side of the room for shelving, from the total 120" (10 feet) of room width. That is more than an enough room for a peninsula, assuming the peninsula narrows after the turn-back (notice the "light bulb" shape of the peninsula).

We have established that we can include a peninsula in a space that is10 feet wide. Now, what can we do to enhance the track plan even more? Simple! Add a view-block down the center of the peninsula.

A single one-inch wide view block has numerous advantages:

1. If you cannot see over the view block, it instantly makes the layout feel larger,
2. It prevents visitors from seeing the whole layout,
3. It divides the peninsula into two separate scenes, and
4. It forces the operator(s) to walk along with their train.

Advantages 1 and 2 are a natural result of view blocks. You, or another operator, standing in one loca-

tion, would not be able to see the whole layout, thus making the layout will feel much larger. When operators cannot see everything from where they are standing, their natural inclination is to want to see what is on the other side. Forcing them to walk around the end of a peninsula automatically creates the feeling of distance and size.

Advantage 3 is even more important. Assume you have two large industries on your layout (as in Figure 2). One is a coal mining operation (closer to the door), and the other a large grain storage operation (closer to the north wall). Both eat up a lot of real estate and a peninsula is a great location, for them. Without the benefit of a view block, it would be impossible to design both scenes separately and make both scenes believable, when they are only inches apart. Coal mines need hills, and grain elevators need flat terrain. By adding a one-inch wide view block, both scenes are depicted in their natural environment (see Figure 2).

Advantage 4 is important for prototypical operations. Operators, who have to walk with their trains, get the feeling of actually going somewhere; not standing in one location and watching their train run around the room.

I hope this installment has shed some light on why view-blocking peninsulas can be a great addition to your layout. In the next installment, I will discuss design element number six: staging yards. I will discuss the various types of staging yards and how they can be incorporated into even small-sized layouts.

About the Author

Bill Beranek - The Track Planner has over forty years in the model railroading hobby. Bill enjoys golfing, travelling, and of course designing "prototypical operations" focused track plans. He has been a member of a local 135+ member model railroad club since 2003 and has served twice as the club's president, twice as a board member, and is currently serving as the club's treasurer.

Bill is currently working on his latest triple-deck HO scale layout depicting the SP&S (Spokane, Portland & Seattle Railway) in southern Washington and the OTL (Oregon Trunk Line) on the upper level in northern Oregon in the mid 50's.

You can find more about Bill—The Track Planner at:

www.thetrackplanner.com.

Up-Coming Articles By The Track Planner*

November 2015 Issue

- Design Element Six - Staging yards
- Design Element Seven - Prototypical operations

January 2016 Issue

- How the era you like sometimes conflicts with space

March 2016 Issue

- Computer Aided Design (CAD) software

May 2016 Issue

- Model railroaders who were ahead of their times

*** Proposed topics—subject to update or change.**

We want your YouTube inspired articles!

Contact us at YTMBeMag@gmail.com

YouTube Model Builders LIVE!
Join Us LIVE Every Month
Air Dates

YouTube Model Builders LIVE! show is aired monthly with a great line up of events and panel members. The main focus of YouTube Model Builders LIVE! is to provide a Q&A style forum for YouTube modelers to interact with their favorite YouTube model builders. Come watch and remember to register for great door prizes during the show! For the latest schedule updates go to www.YouTubeModelBuilders.com.

September 19th, 2015

Cooler weather is ahead, and summer is behind us. The modeling season is about to commence!

Panel Members: Barry Rosier, Miles Hale, and William "Big Bill" Graham

October 17th, 2015

Fall means brisk weather, hot cider, and working on the layout. Come on in from raking the leaves and talk about modeling!

Drum roll please! The winners of the *YTMB Big Build Contest* will be announced, *Live!*

Panel Members: Barry Rosier, Norfolk & Western Clinch Valley District, Signalfan, and William "Big Bill" Graham

November 21st, 2015

The weather outside is frightful, and the fire is so delightful … So here is the question: Why are you sitting by the fire and not running trains?

Panel Members: Barry Rosier and William "Big Bill" Graham

Building a Pair of Union Pacific Harriman Horse Express Cars

By Harry M. Haythorn - UPHS #4043

In this issue, I chronicle another one of my builds. This time I am building two Union Pacific Harriman Heavyweight Horse Baggage Automobile Express cars, better known as Horse Express Cars.

A little Horse Car History

In 1923, Union Pacific began purchasing the first of 25 Harriman Horse Express Cars. These unique arch-roofed head-end cars were constructed of steel, and were built by the American Car & Foundry Company in conjunction with the Bethlehem Steel Company. Once complete, the Harriman Horse Express Cars were numbered in the 1759 to 1798 series. These cars were built according to the D-CB-20764 general design, which called for three 5-foot doors (with windows), as well as 8 windows per side on the car body. The unique arched (Harriman) roof, dotted with several utility vents was also included in the general design of the car. These express cars served for many years on Union Pacific rails. The cars were in service for so long that they served in all 3 of Union Pacific's passenger paint schemes. First, the cars were decorated in Pullman Green, then Two Tone Grey, and finally, the Armour Yellow scheme. These 74-foot cars had the capacity to transport 24 horses, their handlers, and equipment such as saddles and/or other tack and supplies.

When not transporting race horses or other fancy stock, the stalls, feed and water troughs and interior bracing could be folded and stored away, so the cars could be used to transport regular baggage. However, carrying horses and baggage wasn't the only thing the Harriman Horse Express Cars could do. Thanks to a large door on the "A" end of the car, the 74-foot car could be filled with up to three vehicles. The cars were also commonly used to transport large express items, such as theater scenery and pieces.

UP was not the only road that owned Horse Express Cars; ATSF, Pennsylvania, and many other roads also owned a few, but they did not serve for as long as UP's fleet. As race horse traffic moved away from the railroads, Union Pacific converted most of the cars to accommodate regular baggage or mail. During the conversion to handle inanimate freight, the cars lost their side windows and their rooftop vents. The ultimate fate of most of these very unique cars was the scrapper's torch, but six of them were turned into Maintenance of Way flat cars that serve as either crane tenders or equipment flats. Two of them ended up on the ground without the trucks in Marysville KS, and three of them are in Kansas City, MO.

Finished pair of UP's Harriman Horse Express Cars in Two-Tone Grey (left), and in the Armour Yellow scheme (right).

Let's Build a Horse Car or Two

My decision to build some Horse Express Cars stemmed from multiple reasons; one is the fact that my Great-Grandfather and Grandfather Haythorn both transported stud horses in UP Horse Express Cars in the 1930's-1950's. The second reason is that these cars are very hard to obtain; they were produced in brass by the Coach Yard in the mid 1990's, but they are almost impossible to find.

The process of building these cars was very straight forward and are one of my favorite builds. I started with two Walthers heavyweight baggage cars (P/N 932-10529). I stripped one factory end, the roof, and sides off of the car, and installed my custom-cut sides and Harriman roof in place of the factory pieces. The floors, underbody details, trucks and couplers are stock Walthers.

I cut the sides from .040" flat styrene sheet, and added the New England Rail Service 5-foot Baggage doors (P/N 529-211) in the correct location. I used a ¼" mortise punch to cut the

Above: Custom-cut sides (from 0.40" styrene) and the Harriman roof are put in place. Below: The assembled car is ready for paint.

Another view of the assembled car ready to be painted in Two-Tone Grey (left), and a freshly painted car in Armour Yellow (right). Notice the 5-foot baggage doors in the correct locations and the properly cut windows.

Painting process for the UP Two-Tone Grey horse cars.

car body windows perfectly square and in line. The roofs were cut, sectioned and lengthened from Model Power Harriman coaches. The Model Power coaches are 67 scale feet long whereas the Horse Express Cars are 74 scale feet long, thus requiring a chop, cut, and section of the roof to extend the length. The large end door is a Bethlehem Car Works/Kit Bits Horse Baggage end door (P/N 718-201) and the roof vents are Kit Bits Harriman Utility Roof Vent (P/N 718 -16).

The wire grab irons came from Tichy Train Group, A-line, Cal-Scale, and Detail Associates.

I painted one car in the Armour Yellow scheme and one car in the Two-Tone Grey using Scalecoat II. Both cars were decaled with Microscale decals. The interiors include a few details, such as a few horses and a couple of handlers.

YouTube Videos

The Horse Cars can be seen in action in a few of my videos including these:

1. Westbound UP Mail and Express No. 5: https://youtu.be/_jKGTh3vg08
2. 840 on Mail and Express train: https://youtu.be/vIHyIUw0m-0

About the Author

Harry is a rancher who works with his father and grandfather to help run their 22,000 acre, 1500 head of mother cow, ranch. He lives in Nebraska with his wife and 6 children ages 11 years old to 6 months old and therefore stays busy all the time.

Harry has been model railroading for over 20 years and considers himself a serious prototypical modeler, but believes in "good enough" modeling and not rivet counting.

Harry models the Union Pacific Steam era from the 1930's to the 1960's, in central and western Nebraska (the area and time period that he loves the most).

Harry is a Sustaining Member of the Union Pacific Historical Society and a member of the UPHS Streamliner 100 club. He is a National Model Railroad Association member currently working on his Master Model Railroader Certificate and is also a Member of the National Hot Rod Association (Drag Racing), as well as a Lifetime Member of the American Quarter Horse Association.

Harry regularly posts videos on his YouTube page. You can follow Harry as he works on his 7th layout on YouTube at https://www.youtube.com/channel/UC6-MPHmYU3Cc2uEVfjZDIcQ, and on Google+ at https://plus.google.com/u/0/+HarryMHaythornUPHS4043/posts.

YouTube Model Builders LIVE! Want to see live shows discussing modeling techniques, YouTube resources, and Web resources? Check out the LIVE show that airs monthly .

— Free to you!

Community Collage

Strasburg Model Railroad Club's Layout

In this issue we present pictures from the Strasburg Model Railroad Club and their replica of the Strasburg Rail Road, the Railroad Museum of Pennsylvania, and the surrounding area as displayed at the Railroad Museum of Pennsylvania from August 21st—23rd 2015.

In each issue we choose one YouTube model railroader and feature a collection of photographs of their layout, building structures, or any other YouTube model railroad related project. If you would like to share pictures of your layout in the Community Collage, please contact us at YTMBeMag@gmail.com.

PICK 3

In each issue we share with you three YouTube Model Builders' channels that stand out and provide the model railroading community new and interesting ideas, tips, tricks, and resources. Please check them out!

ChessieFan2

https://www.youtube.com/user/ChessieFan2

This channel contains many videos demonstrating the techniques that ChessieFan2 uses as he models his HO scale Wisconsin Central layout. His channel also includes a number of railfannig videos for your enjoyment.

James Risner

https://www.youtube.com/user/TheJrisen99

A fan of both scale models and real trains, James includes a good number of videos involving long trains. In one video, he demonstrates his bi-directional spiral with an endless HO scale train, made up of many hoppers intermingled with a number of diesel locomotives. Other videos include his longest train of covered hoppers, which takes a full three minutes to pass by the camera, and a long train in which each car totes an empty 12-ounce drink can. Just great fun to watch!

NSModeler24

https://www.youtube.com/user/NSmodeler24

This young man and his father are building a modern Norfolk Southern HO scale layout, and many of his videos relate to construction and operation on this layout. Recently, NSModeler24 has begun to chronicle in detail a custom rebuild of an Athearn UP SD60 into an NS SD60-E.

Into Facebook?
Check out the YouTube Model Railroaders Facebook page!

We now have three different types of Hangout Presentations each month!

For the latest schedule updates please go to www.YouTubeModelBuilders.com.

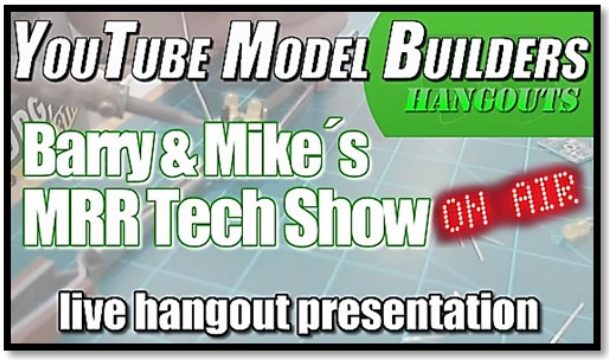
The first Tuesday of each month is Geno's Show!

Geno's show is all about structures, weathering, scenery, and more.

The second Tuesday of the month is an open presentation hosted by Troy Pendzimas.

The third Tuesday of the month is an open presentation hosted by Dude Lindler.

Open presentations are topic driven and fellow YouTube modelers are brought in to present and answer questions from the panel and the viewers.



Every fourth Tuesday of the month is the MRR Tech Show hosted by Barry Rosier and Mike Dettinger.

The MRR Tech show is all about the technology of model railroading. Covered topics include DCC, JMRI, animations, 3D printing, and much more.

Calling all geeks!

Google+ Hangouts And Etiquette

Dude Lindler

YouTube Model Builders works very hard to bring YouTube model railroaders together in what is called Google+ Hangouts. Google+ has many free resources for us to use and we look forward to taking full advantage of these resources.

What is Google+ Hangouts? It's an application that runs through a web browser that allows up to 10 people to connect with webcams. Using this forum for model railroading discussions is great! It builds friendships, inspiration for model railroad building, and most of all, a great place to air your designs, models, and share in your building adventures with others in real-time. Many of the YouTube video producers you know "Hangout" in these Google+ Hangouts.

Many builders simply place their webcam on their project they are working on and show others what they are doing; it may be they are building a model, laying track, or working on anything model railroad related. Many look for feedback from the group, get questions answered, and elaboration on the many projects on which they are working. It's simply a great place to interact in real-time with other YouTube model railroaders.

These Google+ Hangouts are posted most every day on the Google+ YouTube Model Railroaders Community page. You are not required to use a webcam or even a microphone; you may only use the provided chat box if desired.

With the utilization of Google+ Hangouts by many model railroaders, YouTube Model Builders is now scheduling specific types of events for the community members. Here are two Google+ Hangouts that we have arranged to help bring more model railroaders together.

Topic Driven, Tuesday Night Hangout Presentations:

YouTube Model Builders invites specific guests to explain techniques in model building, and many times these individuals are invited to our topic driven hangouts based on videos they have produced. Showing the progress real time, the topic driven hangouts are moderated by YouTube Model Builders staff which keeps these hangouts on subject and informative. The Topic Driven Hangouts are much like clinics as they are more so for instruction and techniques shared by a presenting individual or individuals.

We now have three different types of Tuesday night hangout presentations. The

first type occurs on the first Tuesday of each month It is Geno's Show, which is hosted by Geno Sharp of Gknos Model Trains. The second type of hangouts are moderated presentations that are hosted by Troy Pendizmas of Pacific North Central and Dude Lindler on the second and third Tuesdays of each month respectively. The third type of moderated hangout presentation is the Barry and Mike MRR Tech Show which is moderated by Barry Rosier and Mike Dettinger. This show is presented on the fourth Tuesday of each month and focuses on the more technical aspects of model railroading such as DCC controls and JMRI. There are plenty of opportunities to learn from many experts in model railroading through these hangout presentations and shows. So come and join in the Hangouts!

General Moderated Hangouts: Thursday Nights

Where many hangouts posted through the Google+ YouTube Model Railroaders encompass many subjects and often have many people showing their layouts, and discussion varies from model railroading to just general conversation, YouTube Model Builders has a weekly scheduled, Thursday night, general moderated hangout, to specifically keep on the subject of model railroading. The Thursday night hangout is moderated by Johnny of Southeast Rails and the topic selection is really driven by community feedback.

YouTube Model Builders as a team helps drive these Hangouts, to spread the word, and get the YouTube Model Railroaders involved. Many people participate and as these numbers have grown, a simple etiquette is followed for the hangouts posted on YouTube Model Railroad resources.

Below is a simple guideline for participating in any YouTube Model Builders hangout event:

- Always keep the conversation G Rated.
- Refrain from political/religion based conversations.
- When not speaking, mute your microphone.
- Keep the hangout fun and on model railroading subjects.
- Remember, you're in a room with others, try not to monopolize speaking time. Allow others to get in their input.
- If you have your camera on, please be presentable – remember others can see you!

Following these simple etiquettes will make hangouts fun, and most of all, suitable for anyone who might want to join! We hope to meet you in a hangout in the near future if you don't already participate! If you have any questions on this subject, feel free to ask any one of the involved YouTube Model Railroaders to help get you into the fun sharing in the Google+ Hangouts.

YouTube Model Builders Live Chat / Presentations HANGOUTS

YouTube Model Builders Tuesday night Topic-Driven presentation Hangouts start at 9 PM CST / 10 PM EST and are scheduled for up to 2 hours so you have plenty of time to ask questions and learn. These presentations are also recorded for later viewing. For the latest schedule updates go to www.YouTubeModelBuilders.com.

September 2015

22nd: JMRI basics, part 1: software finder, download, and set-up; with guest Chris Heili

Hosted by Dude Lindler

29th: JMRI basics, part 2: software finder, download, and set-up; with guests Chris Heili, Dave Vallejos (a.k.a. D&S Railroad), and Troy Pendzimas (a.k.a. pacificnorth central)

Hosted by Dude Lindler

Space is limited so make sure you don't miss these popular Hangouts!

October 2015

6th: The Geno Show: Scratch-built overpasses; with guest Taki Haywood

Hosted by Geno Sharp (a.k.a. gknosmodeltrains)

13th: JMRI for NCE, Digitrax, and Lenz systems, part 1; with guests Chris Heili, Tommie Belderson (a.k.a. tommie022481), and Andy Crawford

Hosted by Troy Pendzimas (a.k.a. pacificnorth central)

20th: JMRI for NCE, Digitrax, and Lenz systems, part 1; with guests Chris Heili, Tommie Belderson (a.k.a. tommie022481), Andy Crawford, and Dave Vallejos (a.k.a. D&S Railroad)

Hosted by Troy Pendzimas (a.k.a. pacificnorth central)

27th: The Barry and Mike MRR Tech Show: Uses for the circuit cutter in model railroading; with guest Miles Hale

Hosted by Barry Rosier and Mike Dettinger (a.k.a. DCC Reanimator)

Sign Here... A Quick & Easy Scratch-Build Project

By Geno Sharp

Billboards are a great way to get to add realism to your layout.

List of Materials

1. One plastic "for sale" sign
2. 9.75" wooden skewers
3. Evergreen brand 0.060" x 0.090" styrene strips (part #8608)
4. Superglue
5. White glue
6. Paint in your choice of colors (I use spray paint)

Hop in your car and take a quick ride down the street; I bet you won't get far till you see a roadside billboard. As long as there have been automobiles (and even before that), roadways and interstates have been literally covered with many colorful and entertaining messages that advertisers hope will grab your attention and make your brain focus on their product or service. As modelers, we should take a page from the advertising world and use billboards as an attention grabber for the detailed scenes on our layouts.

In this article, we will go through some quick and very easy steps to help you scratch build a simple and realistic-looking billboard. The finished product will give added detail and realism to any scene and really make it pop!

After a little research on the Internet, I was able to learn that the average "standard" billboard size is 14' x 48' measured to the inside of the frame, and 15' x 49' measured to the outside of the frame, as shown in Figure 1. Now that we have our measurements, we can start our step-by-step construction of a standard-sized billboard.

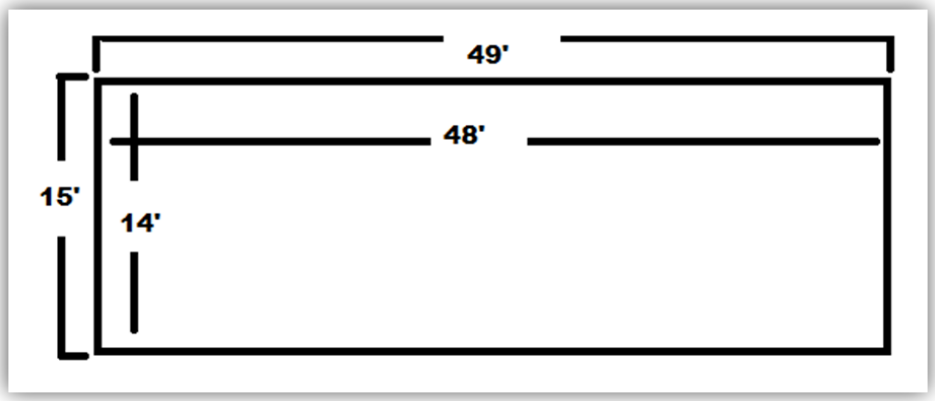


Figure 1. The inner and outer dimensions of a "standard" billboard.

Step 1: With a scale ruler, measure and cut a piece from the "for sale" sign so that it is 15' x 49' in your modeling scale. This will give us the base surface for our signage. (See Figure 2.)

Figure 2. Base surface of sign.

Step 2: Superglue four skewers vertically to the back side of the base, spacing them evenly across the surface. These will act as the support poles for the billboard. (See Figure 3.)

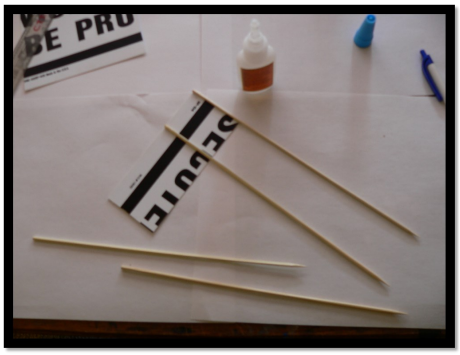


Figure 3. "Poles" made from wooden skewers.

Step 3: Measure and cut four pieces of Evergreen strips to a scale length of 49'. (See Figure 4.) These strips will serve as horizontal braces for the long poles; two strips will be attached across the front side of the poles and two will be attached across the back. Measure a scale distance of 5' below the bottom of the base surface, and superglue one of the strips across the front of the poles. Then, measure a scale distance of 10' below the first strip and superglue a second strip across the poles. (See Figure 5.)

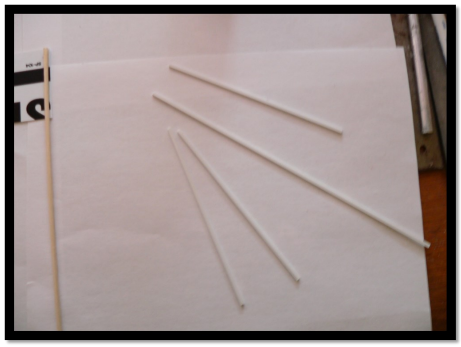


Figure 4. Styrene strip "braces".

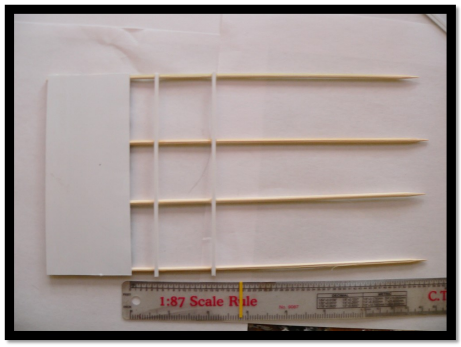


Figure 5. Braces are glued across front side of poles.

Now, turn the sign over and repeat, gluing the other two strips across the backsides of the poles. (See Figure 6.)

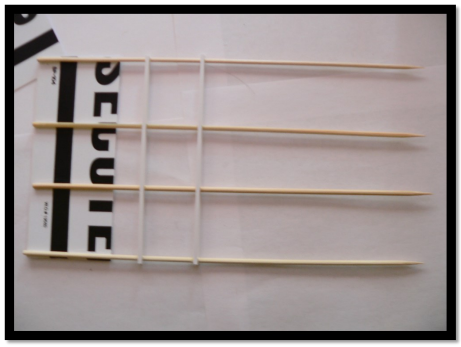


Figure 6. Braces are glued across back side of poles.

Once this step is completed, the basic construction of the sign is finished.

Step 4: When the superglue has dried and all parts of the sign are secure, select a color and spray paint the frame. (See Figure 7.) I generally use either silver or primer red, but you can use any of your favorite colors. I suggest you refer to prototype photos to help choose a color you like best.

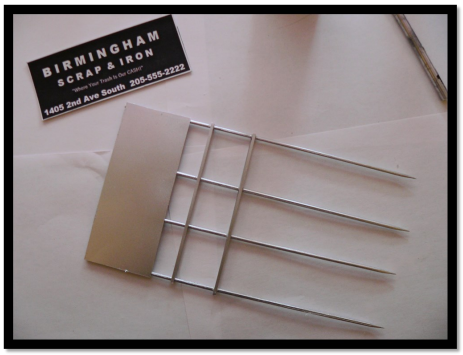


Figure 7. Paint the structure for the sign.

Step 5: Once the paint has dried, you are ready to put the signage on the front of the base. I use the computer program Microsoft Paint to create most of my custom signs; it's simple to use and makes it very easy to create any sign you like, as shown in Figure 7.

If you don't want to make your own custom sign, you can find a wealth of billboard pictures on the Web. Whether you use Microsoft Paint, a similar computer program, or download your picture from the Web, you will have to play with the size just a bit to get a perfect fit for your sign base.

Step 6: Once you have the right size, you can print and glue your signage to the base; apply a very thin layer of white glue to the base surface and position the printed sign. (See Figure 8.)

Figure 8. Ready to place by the roadside!

That's it! Six easy steps and your scratch built project is done. Your billboard is ready to be placed on your layout.

If you choose to do so, you may add some weathering and fading to the sign, and maybe a little rust on the posts to give the project a little character. The finished signs are a great and inexpensive way to add a custom-built structure to your layout and detail to your scene. I hope you find this process to be informative and easy to follow. If you are looking for a scratch building project, this is a great one for the first-timer. Give it a shot!

About the Author

Geno Sharp is a retired law enforcement officer with 21 years of service. Geno has been involved in model railroading for over 30 years and is now a YouTube channel owner. He produces a monthly layout blog video for his YouTube channel, Gknos modeltrains, as well as various "how-to" and structure build videos.

Geno is currently working on a 2nd version of his Central City Belt Line Layout. The layout is a recreation of the old belt line railroad that once encircled the city of Birmingham, Alabama serving numerous business and industries all over the city where in many areas, trains and vehicles shared the streets. Geno's layout features many highly detailed and weathered scenes and hand-laid track. You can learn more about Geno's weathering techniques and about his Central City Belt Line on his YouTube channel Gknos modeltrains.

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The finished billboard placed within a scene gives it character and a great sense of reality.

DIY— Building A Chain Link Fence

By Ravainell Hunt

Growing up as a young boy in rural Rutherford County, North Carolina, the sight of old railroad tracks spurred my imagination. I often pictured myself as a conductor and envisioned the different places I would take my passengers.

Fast-forward to December 2013, after the birth of my second son; I began to think about ways to build memories with my sons and leave a legacy, and I thought building a model railroad would be great for bonding.

At that time, my oldest son was obsessed with Thomas and Friends. I began taking him to train exhibits, transportation museums and model train shows. To him, these events were heaven on Earth. Even as a toddler, he knew the difference between steam and diesel engines and the purpose of a caboose.

> On a railway, fences can serve as a means of safety, keeping trespassers and animals off of the tracks.

I began researching model railroads, and shortly thereafter I began building a layout. When I'm building and adding to the layout, my sons (ages one and three), are almost always near me watching and talking about what we're designing. I use my layout to help them count and review colors, so we get to bond and learn at the same time.

I am very new to this hobby, and one thing I have learned so far is that our layouts have the power to tell a story and represent a specific place and time. Sometimes, the components and details that I would like to add to the story of my layout can be costly. Considering the costs of daycare, diapers and the other expenses related to having young children, it doesn't leave a lot of money for the trains. I often look for ways to cut costs for my layout details by recycling materials or finding substitute items.

Adding scenery to layouts, such as grass, trees, shrubs, buildings, backdrops, and roads adds character and a sense of realism, especially when depicting actual scenes and places. One component of scenery, a chain link fence, can help illustrate the perimeter around a school, building, or trail. On railways in particular, fences can serve as a means of safety, keeping trespassers and animals off of the tracks.

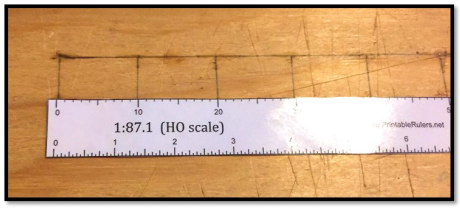
I decided that I wanted to give my layout the added detail of a chain link fence. However, I quickly learned that manufactured fences were expensive. After looking at the materials used in the manufactured fences, I decided to take the plunge and build my own, using materials I had at home and a few from the local craft store.

After I gathered all the necessary materials, I got straight to work. Keep in mind these steps and materials are not definitive, in the sense that you can tailor them to what works best for your scale and layout.

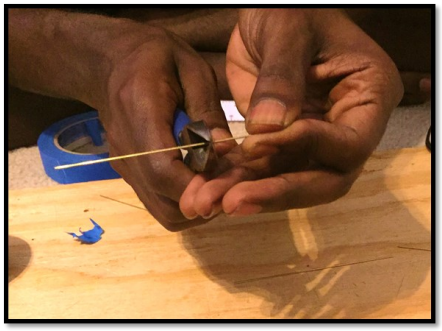
List of Materials

1. Used piece of flat wood
2. X-Acto knife
3. K & S Engineering brass rod (0.81mm)
4. Superglue
5. Spray paint
6. Masking tape
7. Soldering iron
8. Flux
9. A pair of small scissors
10. A scale ruler
11. A file
12. A pair of wire cutters
13. Solder
14. Tulle (fine mesh found at most craft stores)

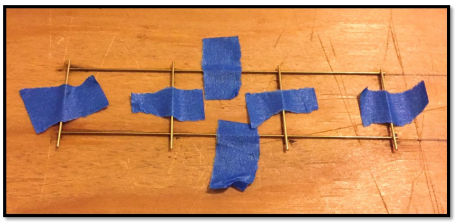
Step 1: Starting with the used piece of wood, I draw the frame of my fence with a pencil. Many chain link fences are built 6 feet tall, with posts placed at 10-foot increments along the length of the fence. I decided to build my fence to these measurements, in 40-foot sections, to create a section of fence that measures 6x40 scale feet).



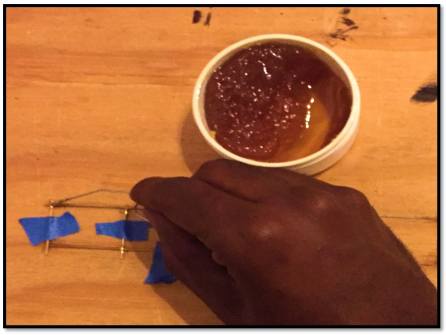
Step 2: To make the frame of the fence, I use 0.81mm brass rod from K & S Engineering. I cut the brass rod with wire cutters to their predetermined lengths. For a 6'x40' fence, I require two 40 scale-foot sections and four 10 scale-foot sections of wire. After everything is cut to length, I file the ends down so they are smooth.

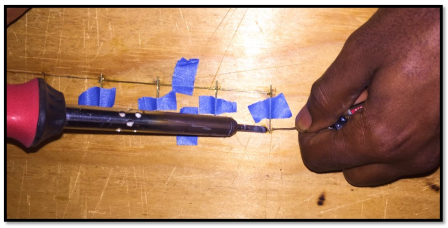


Step 3: I put the cut posts in place, directly on top of the lines I drew on the wood earlier. The horizontal (40') sections are placed first, then the vertical (6') sections are placed on top. Once the sections of wire are in the exact shape of the fence, I tape them down using masking tape. It's important to tape the brass rod in the middle of the section, as the ends will be soldered.

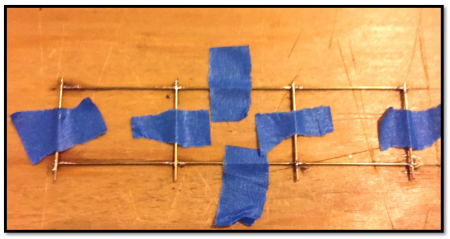


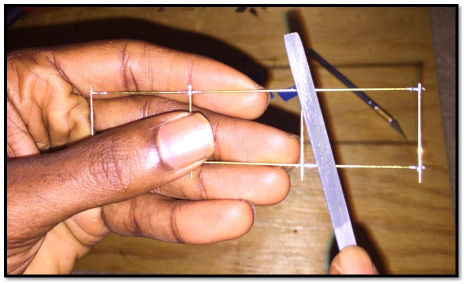
Step 4: Next, I add flux to all the solder joints and solder the vertical posts to the top and bottom sections.





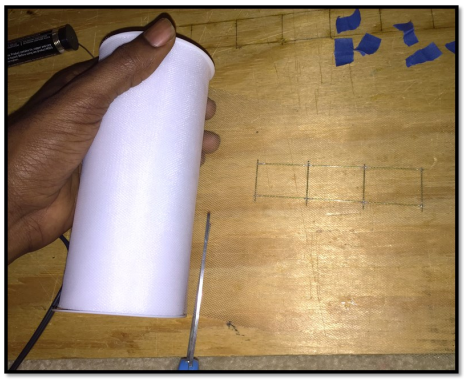
Just a word of caution: too much solder can make the fence look unrealistic. It is important not to over-apply the solder to the joints. Contrarily, the joints may become loose or become disconnected if not enough solder is used, and you may need to re-solder the broken joints. After all the posts are soldered and have cooled, you may need to use a file to smooth down any lumps of





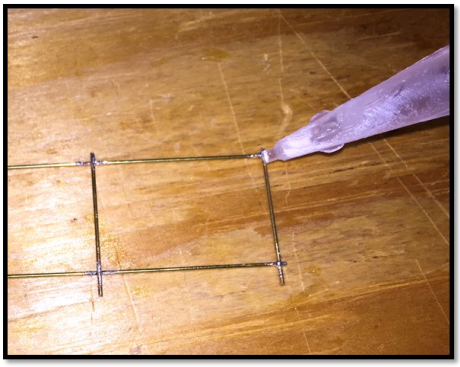
solder so that the tulle lies flat on the fence.

Step 5: Now that the frame is complete, we can start to apply the mesh to the fence. To represent the wire mesh used on real chain link fences, I use tulle. Tulle is best described as a fine mesh fabric. It is used primarily for wedding dresses and veils, and is sold in large rolls at most craft stores. Using a pair of scissors, I cut the tulle to size. The piece I cut is



much larger than the size of the fence's face. I will remove the excess fabric later on.

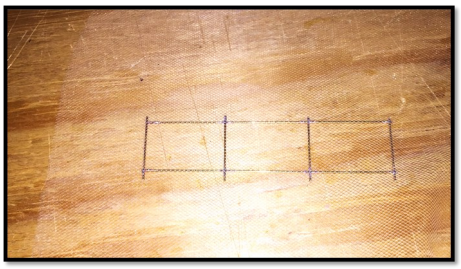
To affix the tulle to the frame, I add super glue to the backside of the fence posts.

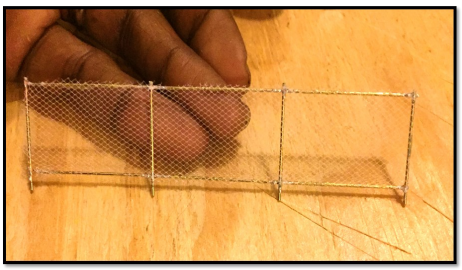


I then place the tulle on the frame, and let it dry for a couple of minutes. You will want to place something heavy on top to ensure the tulle lies flat on the fence frame. Be sure the superglue has completely dried before handling the fence. The fence may stick to the wood, so you can carefully use your X-Acto knife to remove it once the glue is completely dry. You may need to add more superglue to the frame to ensure the tulle has totally attached to the frame. After all, there's nothing worse than a fence that falls apart!

The finished chain link fence is a detail that adds to the story of the layout!

Step 6: After the superglue has dried, the excess tulle can be trimmed off. I use scissors and my X-Acto knife to carefully and gently cut the extra fabric away.





Step 7: Now that the fence is constructed, it can be painted. I use an aluminum-colored spray-paint to paint my fence. During the painting process be sure to apply the paint in thin coats, to prevent the paint from blocking the small holes of the tulle. Once the fence has dried, you can affix it to your layout.

> These chain link fences are fairly simple to build and can be weathered to show the years of wear and tear, easily blending into the scene.

To my surprise, these chain link fences are fairly simple to build. In the future I will consider weathering the fence to make it more realistic. Adding rust and toning down the bright color will add years of wear and tear to the fence, and will let the fence blend in to the scene.

About the Author

Ravainell ("Rav") Hunt has been a part of the model railroading hobby for two years. He is currently working on an HO Scale layout with his two sons. Rav enjoys learning from other modelers, and sharing his tips, tricks and techniques with the community, via YouTube, Google+ and Facebook.

He currently resides in North Carolina, and is a licensed professional counselor. Aside from the time spent working on the layout, Rav also enjoys spending time with his family and traveling. You can follow Rav and his sons' progress on their layout on Rav's YouTube Channel: https://www.youtube.com/channel/UC3tuyCvwGFirltaqNGqJ6bw.

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3. Rail yard switchers
4. Non-standard locomotives, track mobiles, and other converted machinery for transferring/moving rail cars, or MOW trains.

You can find contest rules, dates, and more details at the ASLMS 2.0 Google+ site by clicking here.

*The All Scales Locomotive Modelers Symposium 2.0 (ASLMS) is a Google+ community that can take you back to a simpler time, when modelers got out the ol' Athearn "blue box" engines and – with some paint, decals, detail parts, and a little patience – produced award-winning locomotive models!

Food For Thought...

In our feature called "Food for Thought," members of the model railroading community are invited to write an opinion editorial on some matter relating to the model railroading hobby. Topics may range from simply thought-provoking to downright controversial.

Please read it over, and then share your thoughts with us. Do you agree with the statements in his article? Do you disagree? Do you wish to add another point of view that you feel should have been made? You can send your response to us at YTMBeMag@gmail.com. We'll pick some of the more interesting responses we receive and publish them in our next issue. Please include the text "Food for Thought" and the issue date in the subject line of your email, and let us know the name you'd like us to use if we publish your opinion. If you would like to submit an opinion piece of your own, please contact us at the same email address above. Submission guidelines can be found at www.YouTubeModelBuilders.com.

Our author this month is Andy Crawford, and his opinion piece appears below. We look forward to hearing from you!

DC vs. DCC: In Challenge To The Definition Of The Word Complex

By Andy Crawford

The hot topic of model train control has been the source of confusion and debate with those on both sides of the issue. There are strong proponents of each solution and, as always, equally loud pundits, I would like to help you wade the troubled waters in the DC vs. DCC debate.

The origins of electric train control systems date back nearly 100 years. It was first based on Alternating Current (AC), still used on basic Lionel train sets today. The advent and popularization of 2-rail electric trains saw a conversion to Direct Current (DC). As modelers progressed, the desire to run, control, or have on layout, multiple locomotives and trains increased. To accomplish this on DC systems, ingenious people created such things as block wiring and control systems, such as Bruce Chubb's infamous CMRI solution. A tremendous amount of electrical cabling was needed, and complex controller or cab switching systems were required; but it ultimately gave rise to Operational Model Railroads that allowed us to begin to operate our electric trains in ways that emulate how the prototype railroads run. These systems were state-of-the-art a few decades ago, and despite their complexity, they were accepted as standard fare for large and/or operational model railroad empires.

With the advent of Command Control, those philosophies fundamentally changed. The first Command Control systems were analog systems utilizing what essentially was radio technology to send signals over the rails to specific locomotives; these systems allowed control of multiple locomotives independently with just power and the signal provided through the rails. These systems were fraught with problems: the decoders were large, often housed in permanently-attached units behind the locomotive. They often suffered from heat issues, causing frequency shifts, and you could lose control of your train and begin controlling another, random train. It was a tough time! Fortunately, that technology has come a long way, and today we have highly reliable, capable, standardized systems from numerous manufacturers.

Now, principles and history are enjoyable for their own sake, but then there's reality. When it comes to making decisions about controlling your own layout, spending your hard-earned money, and (often more valuable) spending your hard earned bits of free time, theory goes out the window and we have to deal with

the real world. In the real world, there are benefits and values to both DC and DCC, but what suits the ambitions you have for your layout are going to depend on, well, your layout. Simply put, the specifics of your layout is going to determine how it must be controlled. While you can use either DC or DCC, if the fit's not right, then it's not going to feel right.

So, let's cover DC first. It's really quite simple: if you are happy with a circle of track, then don't let anyone sell you DCC; it's not for you. DC does a fantastic job with just a power pack, 2 wires, a little track, and a loco to get the excitement of running trains. If you're building your first 4x8 sheet or small switching layout, it may very well be the best place to start; it gets the job done, and is low fuss. But if your modeling needs are more complex – say, with a reversing loop or multiple trains on the layout – things get more complex in a hurry. Building panels, wiring rotary switches for per-block cab/power pack selection and power control has been the bane of non-electrical engineer modelers for a long time. It's my opinion that, in the discussion of DC vs. DCC, some of that pain has been lost to history. One of my biggest problems with DC wiring is that the joy of letting others learn to be railroad engineers on your layout is dampened by the daunting task of training them about what switches need to be in what position to make things run properly.

If you find that you and your layout are ready for a change from what I just described, then read on.

DCC! DCC is where so much excitement has been in the hobby, by diehards and newcomers alike. But it's gotten a bad rap for being overly-complicated. How it got this reputation is easy to understand for those who know or learn the story of "Her Lady, DCC." Sure she gets around, is talked about by all the guys, loved by many, misunderstood by some… in fact, it would be strange for her to not have a bad reputation, it happens.

If you Google "DCC", you'll discover that the term has become a catchall for much of the technology around your layout, from running trains, to sound systems for your passenger cars, to whole-room lighting control. But it doesn't have to be that complicated. Let's dispel a myth right now, and this may shock you: you may have heard that

DC + 2 WIRES + TRACK + TRAIN = FUN

But the impression that

DCC + A WHOLE LOT OF OTHER STUFF = FUN

is just plain wrong. The fact that we, as railroaders, haven't dispelled that myth is not at all good for the hobby. Simply put, it also can be true that

DCC + 2 WIRES + TRACK + TRAIN = FUN!

(I told you it might shock you.) My favorite fact of DCC is this: with even a simple DCC system, you and your guests can just focus on running trains rather than focusing on controlling electronics.

I can hear some of the DCC fans now: buses and power districts and boosters, oh my! But to spread the idea that converting a loop of track from DC to DCC requires a lot of complexity, does the hobby a disservice. I'm sorr… no, I'm not sorry to say that we should be enlightening people to the enjoyment of the hobby as a whole and to the joys of DCC if it suits a particular modeler's ambitions, not fear-mongering and scaring people away from great opportunities.

All I ask is that we be fair and weigh in the balance a lot of wiring and switches for DC vs the learning of buttons on your DCC system. To all of us DCC converts, the decision seems simple, even if we don't always present it that way to others. Shame on us. Happy Modeling!

About the Author

Andy Crawford, 37 years old, is a technology provider to mid-sized businesses and financial institutions, and a lifetime model railroader. Starting young in the hobby with a train set, like many others, and after spending a decade as an armchair modeler, he returned to the hobby a few years ago, in full force. He models a very exacting replica of a 15 mile section of the Clinch Valley District of the famous Pocahontas Division of the Norfolk & Western Railway in 1952.

His interest in exacting replication of the prototype, fine scale craftsmanship, weathering, and prototypical operation can all be seen in his work. For him, recreating the experience of being a railroad professional, 1/87th the size, in the 50's is all the focus that is needed. You can check out Andy's YouTube channel here: https://www.youtube.com/channel/UC8I2bTYfzVY37328sGPD9Bw.

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