

The Modeler's Journal

A Free Journal for Today's Modeler

VOLUME I

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Heavy Haulers Part II

Modeler's Showcase

GE's Evolution Series

**Introducing
Jocelyn Bullen:
Getting Into The
Modeling Hobby**

**Be Sure To Check Out Columns From
Harry M. Haythorn, Jack Hykaway,
Ron Marsh, The Track Planner,
Geno Sharp, and Blayne Mayfield**



Cover Photo Courtesy of Jack Hykaway

Editor's Note...

Summer has gone by quite fast this year! Now, with daylight getting shorter and a cold nip in the air, it is time for modelers of all types to begin their hibernation cycles (I mean model-building), and head down to their basement, workshop, or kitchen table, spending hours at a time working on their dioramas, miniatures, or models. It is also time to start reading this issue of ***The Modeler's Journal***.

In this issue, we feature the work of Jocelyn Bullen, who has recently discovered not only the trials and tribulations of building a model kit, but also the joy and pride that comes from finishing one.

We also continue with Part II of "Today's Heavy Haulers" in *Jack's Junction*, which focuses on GE's Evolution series of locomotives.

Geno Sharp discusses building boxcar doors in O scale and Ron Marsh discusses the role trees play in a modeling scene in his article entitled "The Truth about Trees."

Harry Haythorn continues with his car build series and describes how he scratch-built the UP Power Car #2066 in another installment of his *UP-Hub* column.

The Track Planner discusses various approaches to train operations and developing an operating plan. He also shares his thoughts on prototypical operating sessions and how he incorporates the use of sequential train orders lists, car cards, and waybills in his article "Operations-Oriented Track Planning."

Blayne Mayfield reminds us in his article "Modeling Silos" how we modelers can get highly focused and "silo" ourselves within our branch or discipline of modeling, and that we should go to "the other side of the fence" and explore other branches of modeling that can offer many creative ideas applicable in our modeling work.

Our next issue will be released at the beginning of January 2019. Until then, happy holidays and happy modeling!

– **Loggin' Locos**
Editor-In-Chief



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This locomotive was built new for CN in 2016.

From the looks of it, it is definitely a heavy hauler!

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Getting Into The Modeling Hobby

By Jocelyn Bullen

In this issue, we feature the work of Jocelyn Bullen who has recently started model building and is working on learning various techniques and improving her modeling skills.

At **The Modeler's Journal**, we love featuring and supporting the work of people entering the modeling hobby. We hope you enjoy a glimpse of her work.



All photographs by Jocelyn Bullen.

Hello, my name is Jocelyn Bullen. I am 32 years old and I am from the UK. My husband Przemek (my biggest fan!) and I have a 7-month old baby.

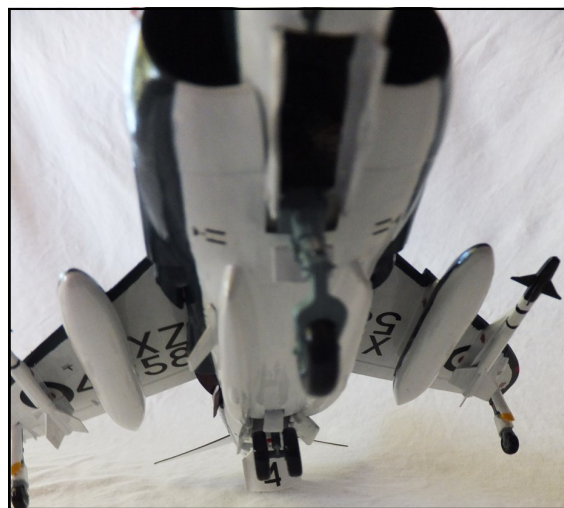
I first got into modeling as a part-time hobby because I needed something to do while I was staying home on Maternity leave. Earlier in the year, I had watched my husband make a special edition of the Scania V8 truck and I had ended up working on the decals, and this had piqued my interest. Also, he had a collection of unfinished and unopened model kits.

It was then I had decided that I wanted to build a model from start to finish, on my own. My husband showed me the different types of models, as he loves painting figurines (including Warhammer), but I have always had a soft spot for fighter jets ever since I was a child because growing up I had gone to many air shows.

The Tamiya Sea Harrier FRS 1 in 1/48 Scale

A detailed 1/48 scale model of a Tamiya Sea Harrier FRS 1, painted in dark blue and white. The model is shown from a side profile, highlighting its delta-wing configuration, canards, and landing gear. The fuselage features the number '124' and a roundel insignia. The tail fin is marked 'ROYAL NAVY'. The cockpit canopy is clear, revealing a pilot figure. The model is displayed on a light-colored surface.

A detailed model of a Royal Navy Sea King fighter jet, dark blue with white markings, including the number 124 and the text 'ROYAL NAVY' on the tail. The aircraft is shown in profile, facing right, with its landing gear deployed.



The most difficult part of making this model for me was applying the white paint as I needed about 4 to 5 coats in order to completely cover the underlying plastic! I chose to depict and apply the appropriate decals for the “800 Naval Air Squadron” on HMS Hermes, circa 1980, because it was decommissioned the year my husband was born. Plus the red color on the tail, I believe, looks a lot better than the alternative schemes. The bombs/weapons on the bottom of the wings were difficult for me to assemble and I made a mistake and one of them (one sits wonky, but only I know it is there.)







The Italeri AW-101 Merlin in 1/72 Scale



The second model I built was one my husband had hidden away — the *Italeri AW-101 Merlin TTI* helicopter in 1/72 scale. This helicopter was a joint venture between Westland Helicopters in the UK and Augusta in Italy and was first flown in 1999. The AW-101 helicopters were designed to operate in severe weather conditions and I believe they were used in Navy sea rescue and civil VIP transportation.







This model took me longer to complete (approximately two to three months) as the instructions were not that clear to me and I ended up sticking some tiny parts in the wrong place. So when it came time to put on the decals, I had to overcome several issues; in some cases, I resolved issues with the decals by cutting them in half and then applying the individual pieces together. The actual parts themselves had to be sanded or filed down as some did not properly fit. This was definitely the most frustrating one to assemble, but I did not give up on it and finally finished it.





I have just started building the *Revell Tornado F.3 ADV* in 1/48 scale. The parts are tiny and I know this will take even longer in my spare time. Fingers crossed it all goes to plan!



When my husband posted the photographs of my models on Social Media I was surprised to see that there were no females in the groups. I really hope more females do take it up as it is such a diverse hobby for anyone to get into. Plus it is really rewarding when the model is finished and is proudly displayed on the shelf.

For anyone who is just getting into the hobby, please keep in mind that it is very intricate work and attention to detail is a must. Every kit is different and is built differently. You may become frustrated, but it will all be worth it when the model is finished. So, I encourage you to not give up as it will get better as you develop your modeling skills.





Building Boxcar Doors in O Scale



By Geno Sharp

All Photographs by Geno Sharp.

Hey gang, welcome back! In this edition of the *Corner*, we are going to talk about boxcar doors. Now, there are numerous versions of boxcar doors out there on many varieties of boxcars. For this project, the boxcar we are going to tackle is a 50-foot, outside-braced, RailBox boxcar (see Figure 1). I have several of these cars that I want to get ready for service on the layout, so I want to work on such things as weathering and changing out details to more closely model the prototype cars.

After researching RailBox cars online, it appears to me that most of these common car types were delivered with the Youngstown-style door on the prototype, as seen in Figure 2, as well as on the “as-delivered” scale model shown in Figure 3.

At some point in the lives of these outside-braced cars (and not just the Rail-Box cars), many were changed out – or “upgraded” – to the Superior-style doors, as seen in Figures 4 and 5. I am unsure as to the reason for the change; possibly it came about due to a change in the car’s service, damage, or just to



Figure 1. After years in service, this RailBox still is helping carry the load.

provide a better-working door. At any rate, I wanted to model this change on a few of my cars.

I looked around online but was unable to locate an O-scale, Superior door that suited my needs, so I decided to build my own. The process I will describe is not limited to O scale: you easily could use this process to model Superior doors in other scales, as well; simply adjust the material sizes and measure-

ments to the scale which you model. Follow along as I show you how I modeled these doors.

To begin, here is the list of materials used in this project (see Figure 6) as well as tools needed.

1. One large, plastic “for sale” sign. (This is equivalent to .040 styrene sheet material but much cheaper than purchasing it as sheet goods.)



*Figure 2 (left). The Youngstown door was the most common style for the prototype...
Figure 3 (right). ... as well as for O-scale models of these cars.*



*Figure 4 (left). This Southern boxcar has been upgraded to a Superior door.
Figure 5 (right). A closer and less angled view of the Superior door.*

Figure 6. Here are the materials needed for this project.



2. One pack of Evergreen scale 6"x6" styrene strips (#8606, for O scale).
3. CA glue (a.k.a. superglue).
4. A hobby knife.
5. A metal straight edge.
6. A fingernail emery board or sanding block.



Figure 7. (Left) Using the original door to trace out the Superior door on the back of the styrene "for sale" sign.

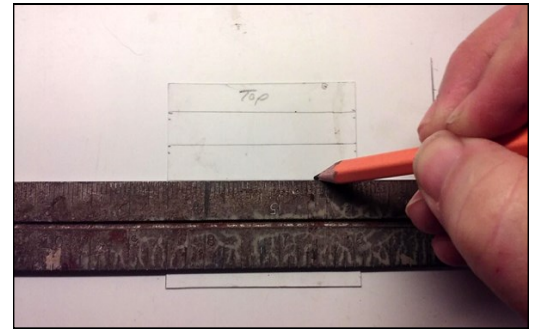


Figure 8. (Right) Eye-balling the positions of the cross braces based on the prototype photos.



Figure 9. (Left) The outer edges are trimmed with styrene strips.

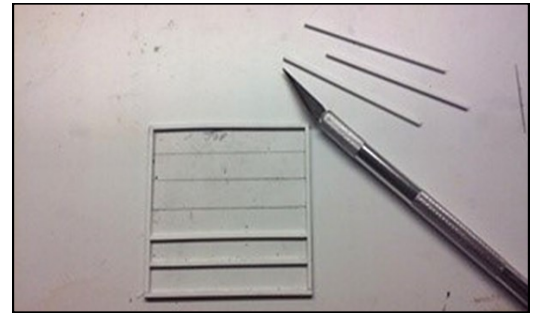


Figure 10. (Right) Here, I've cut and started to glue the cross braces to the door.

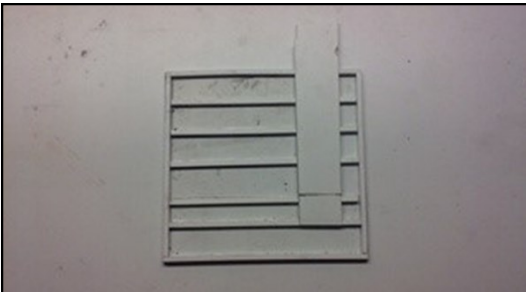


Figure 11. (Left) Cutting out a tack board for the door.



Figure 12. (Right) The door with the tack board glued in place.

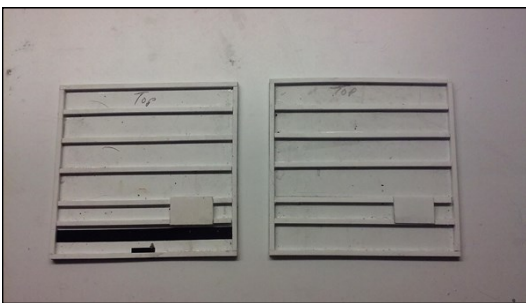


Figure 13. (Left) Two doors, ready for cleanup and painting!

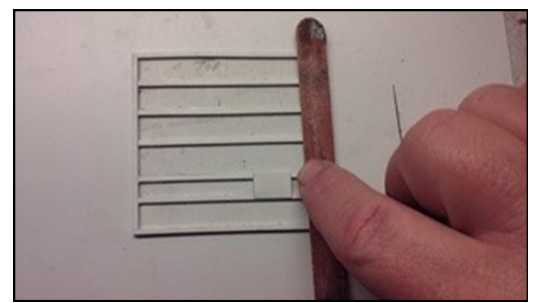


Figure 14. (Right) Sanding the surface joints to smooth them out.

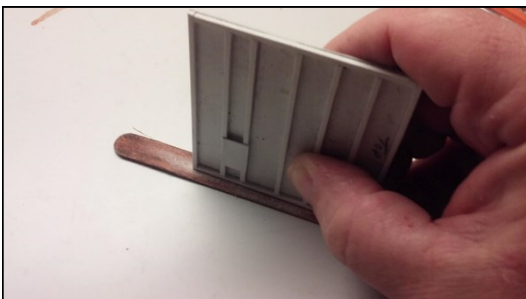


Figure 15. (Left) Sanding around the edges to square them.



Figure 16. (Right) Dry brushing the painted doors to weather them.



Figure 17.
Positioning the new doors on the boxcar.

Step 1. I removed the stock Youngstown door from the car and used it to trace an outline of the new door onto the styrene sheet (see Figure 7), and cut out this base layer of the door. I then used a straight edge to mark the lines on it for the brace strips (see Figure 8). I did not have the actual prototype measurements for positioning the brace strips, so I marked them off by sight to look as close to the prototype photo as possible.

Step 2. I cut the outside frames for the new door from scale 6"x6" styrene strips to fit the door and glued the strips to the outer edges of the door, as shown in Figure 9.

Step 3. Again using the 6"x6" styrene strips, I measured and cut each cross brace and used the guidelines I drew on the door in step 1 to glue them in place (see Figure 10).

Step 4. This step is optional, depending on whether or not the door you are modeling has a tack board for posting notes on the boxcar. The particular door I am modeling has one; you will want to refer to prototype photos of your boxcar to determine the size and location of the tack board, as I have found they are not always the same size or located in the same place. I measured a small, flat piece of styrene against the door (see Figure 11), cut out the tack board, and glued it in place (see Figure 12).

At this point, I repeated steps 1 through 4 to complete the second door (see

Figure 13) so that I would be ready for painting and installation, as described in the following steps.

Step 5. Using an emery board, I filed any rough edges smooth and squared up the door sides (See Figures 14 and 15).

Step 6. Once all the sanding was complete, I painted both doors with flat black spray paint. While I was at this step, I also mixed up a blend of acrylic cream and brown paints and used the mixture to drybrush a little light road dust weathering onto both doors, as shown in Figure 16.

Once the doors were dry, I sprayed on a mist of dull-coat to seal the weathering. Then, I finished weathering the car and put the doors in place, as shown in Figure 17.

I did not glue the doors into position. Instead, I tried to keep the measurements close so that they would fit snug-

gly in place and stay put; I wanted to be able to change the doors to the open or closed position depending on the scene I am modeling. You could take it one step further and make slide hinges so the doors actually would operate, but I chose not to do that for this project.

As you can see on the finished model (see Figure 18), the doors – though simple in design – turned out very nice with just a little amount of work. And in the end, they make a big difference in detail for this model.

Well gang, that pretty much is gonna do it for this edition of *Geno's Corner*. I hope that you enjoyed following along on this project and have found the tips useful. Give it a try on one of your models; I think that you will be happy with the results. 

About the Author

Geno Sharp, a retired deputy sheriff, has been a model railroader for over 30 years. He has built several layouts in various scales during that time and currently is building a new two-rail, O-scale switching layout, the *South Dixie Beltline*, an urban-based layout set in the mid-to-late 1970's. You can follow the layout build on his YouTube channel, <http://www.youtube.com/gknosmodeltrains>.

Figure 18. *This RailBox is ready to roll!*



Gain A New Perspective With The Track Planner!

Follow Bill Beranek's column "A Perspective
on Track Planning" in every issue of
The Modeler's Journal.

Topics include:

- ✓ Principles of Track Planning
- ✓ Designing for Operations
- ✓ Proper Benchwork Design
- ✓ Dissecting Track Plans

And much, much more!



The Modeler's Workshop

WITH
RON MARSH
RTNT



By Ron Marsh



[Watch Video](#)

All photographs by Ron Marsh.



The Truth About Trees

Whether you are building a model railroad layout, a diorama for displaying military models, or fantasy models, the scenery will be a key component to your modeling. Your favorite locomotive, World War II-era tank, or haunted castle will look its best when set amid hills, grass, rocks, trees, and underbrush. Thus, no matter what type of modeling you do, you need to master some basic scenery building techniques. In most landscapes one of the critical components of scenery is trees. Most of the areas you model will have some type of trees as part of the scene. Convincing tree building, therefore, is a critical element in any modeler's skillset.

As you plan your scene and the trees that will be part of it, you need to ask several questions that will guide you as you build those trees. First, what type of landscape are you

building? If you are building high Rocky Mountain scenery, you are going to need many large pine trees. If it is Appalachian scenery you are recreating, you will need large cano-

pies of deciduous trees. In central and southern Texas you are going to find numerous small, scrubby Mesquite trees, and in the Midwest, you

Figure 1. Note the height difference between the commercial tree on the left, less than 40 scale feet tall, and the more prototypical modeled trees on the right, 65 scale feet tall.





Figure 2. The locomotive and boxcar which are 16 scale feet in height are realistically dwarfed by the 80-foot pine trees in this scene.

will find towering oaks, maples, and elms.

Size is an important consideration as you plan and build your trees. Many commercially available trees are

much too small to represent truly scale trees in whatever scale you may work (see Figure 1). Trees which are too small or too large for your scene and your models will destroy the sense of realism that is the

goal of good modeling. In most cases, trees should tower over residential houses or railroad locomotives, dwarfing our models and thus putting them in a realistic perspective (see Figure 2).

Figure 3. (Left) The few dead and dying pines on this hill give some believable variety in this pine forest.

Figure 4. (Right) Plastic commercial armatures may not look very realistic out of the package, but some manipulation and paint may produce quite nice background trees.





Figure 5. (Left) Natural tree armatures like these made of seafoam produce very believable trees.



Figure 6. (Below) Leaf flake (left) and ground foam (right) can each make good tree foliage depending upon the particular application.

Trees are not perfect in the real world. The temptation to build trees that are uniform and symmetrical will yield a scene that looks too “perfect” and thus unbelievable. Real trees often have voids in the foliage, lean in a direction where they will get more sun and are lopsided. Modeling these imperfections will yield a scene that is much more realistic and believable. Even including some dead or dying trees can make a scene look more varied and prototypical (see Figure 3).

Variety is the spice of life. It is also the key to a good looking forest of either evergreen or deciduous trees. Try using a variety of techniques and see what kind of varied results they



yield. You may find that some techniques produce great looking background or canopy trees while others yield beautiful foreground trees. Try also using a variety of products.

Compare the results you get using commercial plastic armatures versus those made from a variety of natural products (see Figures 4 and 5). Compare your results using leaf flake



Figure 7. You can see the variety produced by using a combination of furnace filter (first tree on the left) and twine and twisted wire (the right four) techniques for making pine trees.

foliage versus ground foam (see Figure 6). See the difference you get between twine and twisted wire pines versus furnace filter pines (see Figure 7). In short, play with your tree making techniques and materials to see what works where.

As you experiment with your tree-making skills you will find that practice yields improvement. You will find that, as you discover the techniques you prefer, you will improve each time you make another tree. Before you know it, you will be amazed at the improvement in your scenes as you yield the fruit of better tree building.

Happy Modeling, Ron. 

About the Author

Ron Marsh is a pastor in Southwest Missouri. He grew up in West Central Missouri where he became a railfan of the Gulf, Mobile & Ohio and Missouri Pacific Railroads at an early age.

Ron has been a model railroader for over 20 years and has modeled 1970s Missouri Pacific and contemporary BNSF.

He is currently working on his third layout—the Texas, Colorado & Western—depicting BNSF operations in North Texas and Colorado in 2008. He is a member of the [N](#)

[Scale Enthusiasts](#) – a national organization for N scalers.

Ron posts model railroading videos weekly to his YouTube channel, [Ron's Trains N Things](#).



A Perspective On Track Planning



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

Operations-Oriented Track Planning



Watch Video

In September 2018, Joe Desmond and I presented the [first in a series of videos](#) for [YouTube Model Builders](#) on model railroad operations. (You can learn more about Joe's Central Jersey Conrail in N Scale on [Facebook](#) and [YouTube](#).) Our initial episode dealt with how to set up the paperwork needed for a successful operating session. We included examples of car cards, waybills, switch lists, engine cards, train cards, and so forth – all the things you'll need to hold an operating session. In the upcoming shows, Joe and I will get into greater detail on operations and operating sessions including preparing the layout for an operating session and applying the paperwork.

Preparing for the first show reminded me how much my understanding of real railroad operations affects

my track planning business. In this issue of *The Modelers Journal*, I would like to go into greater detail on why having a good working knowledge of railroad operations can help every modeler. Having even a basic knowledge of how real railroads operate can be the difference between building a layout where trains run in circles (e.g. the engine chases the caboose) and a layout that closely represents a “mini-transportation system.”

The premise of the first show was accumulating and preparing the necessary paperwork, described from two different perspectives: Joe's and mine. It recounts how two prototype modelers developed different (and sometimes, distinctly different) procedures to arrive at the same goal: operating a model railroad in a

prototypical manner. Preparing the paperwork, for some modelers can be intimidating and be their least favorite part of operations. In many cases, intimidation is a byproduct of a lack of understanding.

Joe models a section of the Conrail system in central New Jersey, while I modeled, (the layout has since been dismantled because of a move) a small regional railroad in northcentral Idaho, called the Camas Prairie Railroad (CPRR). Joe models a small section of a large, class-one railroad, while I modeled a small section of a relatively small regional railroad. Each of us took different approaches in preparing our paperwork but we both arrived at the same results; we are/were able to operate our layouts in a prototypical manner. Every train has a purpose for running. Joe's approach to paperwork was

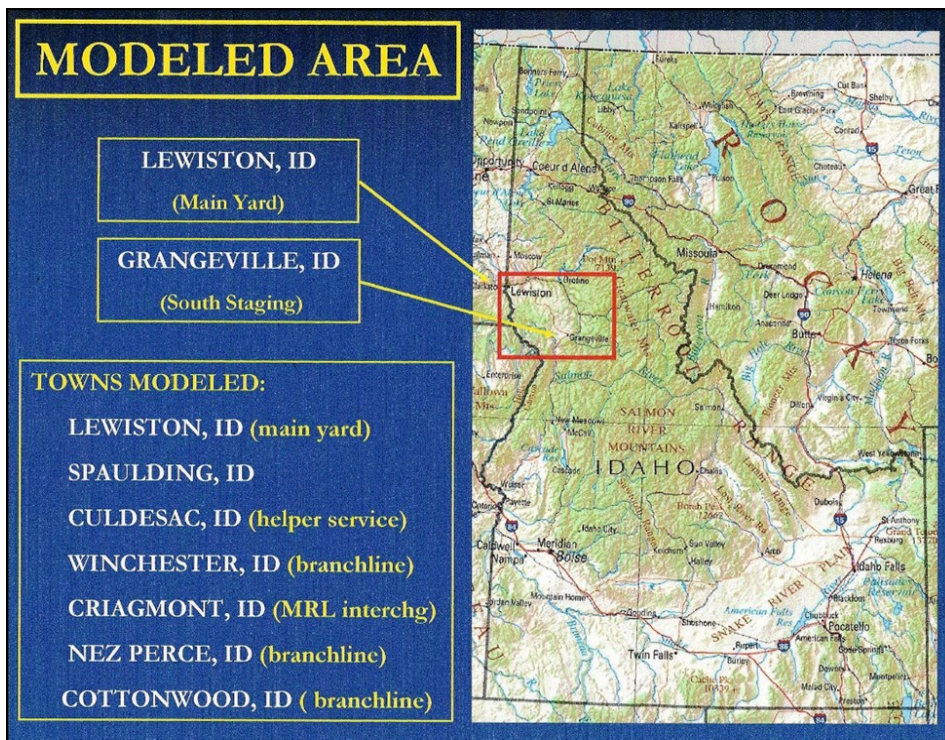


Figure 1. The area modeled on the CPRR.

influenced by the prototype, while my paperwork was more “operator driven.” That is, for the most part, Joe’s paperwork reflected what the prototype railroad did, while my paperwork was designed to create as little stress on the operator as possible. Neither approach is totally right or totally wrong; rather, both systems work to meet our own specific needs. I held approximately 18 operating sessions before dismantling the CPRR. Joe is into his third or fourth operating session and is still “tweaking” his system.

My Camas Prairie Railroad (CPRR)

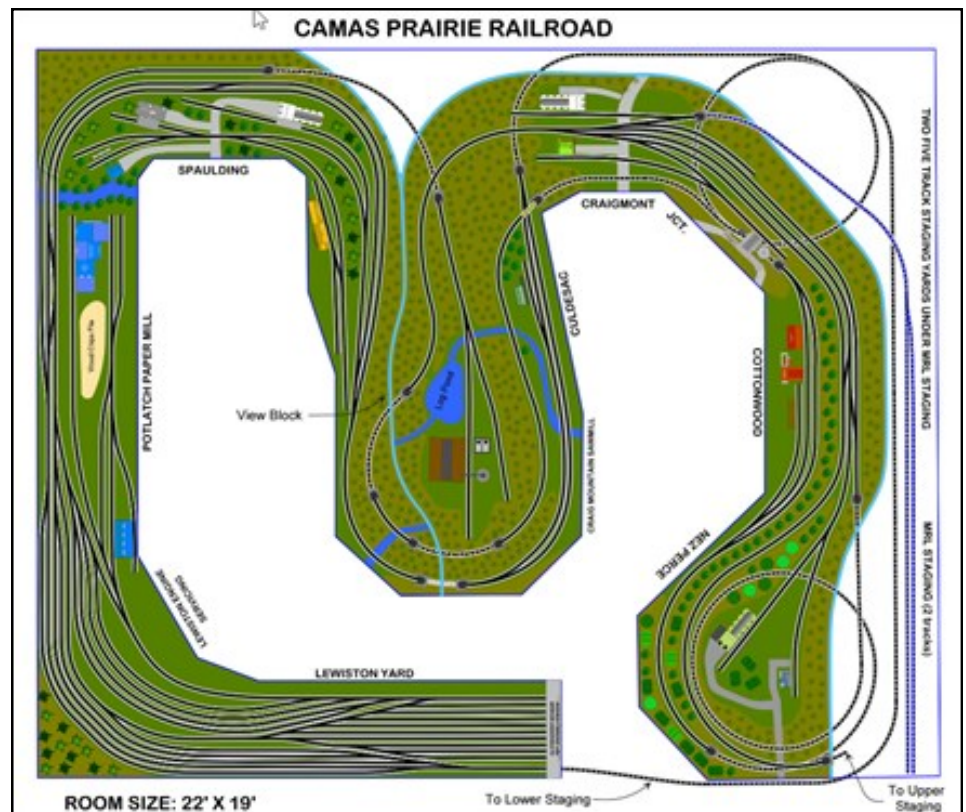
I’m confident that a majority of model railroaders have never heard of the Camas Prairie RR. The CPRR was a small, regional railroad operating in northcentral Idaho, as seen in Figure 1. The CPRR was unusual in that, for several years, the railroad was jointly owned by both the Union

Pacific and Burlington Northern. The two railroads not only shared profits, but they also shared operating expenses.

While doing research, it became clear that the CPRR was the perfect regional railroad to model, based on my available space. Instead of trying to model most of the CPRR, I settled on a sixty-six-mile portion, from Lewiston, ID to Grangeville, ID. Then, using “selective compression,” I was able to represent the sixty-six miles inside a 22' x 19' space. (See Figure 2.) What was it that made the CPRR a great railroad to model? Within the sixty-six miles, the line had a 3,000-foot elevation change. This was perfect when designing a track plan that, because of space limitations, needed to crisscross over itself to gain elevation.

The railroad’s primary sources of revenue were agriculture and wood products – two commodities that are easily replicated on a model railroad. Being a smaller, regional railroad made it easier to pick out a

Figure 2. The CPRR track plan.



specific area to model. Having done the research and using my knowledge of prototypical operations, I developed a track plan that had what I call the “believability factor.” Visitors and – more importantly – operators got a sense of its “believability.” I wanted my version of the CPRR to look like and operate similarly to the real CPRR. Once decisions were made on the towns and industries, the track plan came together quickly and was finalized within a couple of months. Over the next three years, I erected my version of the CPRR.

Next came developing an operating plan. When you model a prototype, don’t try to “reinvent the wheel.” With today’s internet, most of the information you’ll need is out there. As mentioned earlier, this railroad’s main revenue stream consisted of agricultural products, in the form of grain harvested on the high plains of central Idaho, and wood products from the forested regions in north-central Idaho.

By knowing what commodities needed to be shipped, developing the operating plan was rather straightforward. To get commodities to customers, the CPRR needed a connection to the “outside world,” or as Allen McClelland (of V&O fame) described it, “thinking beyond the basement.” The CPRR needed a link to the “outside world,” and hidden staging provided that link. Because of the CPRR’s geographical location, products were shipped primarily in two directions: west to the coast and east to the large, metropolitan areas. To simulate products “going somewhere,” I included three staging yards: one for eastbound traffic, one

for westbound traffic, and a branch line connected to Montana Rail Link (MLR). The MLR connection was a figment of my imagination. The MLR is also one of my favorite railroads and, being geographically close to the CPRR, I was able to make the connection between the two railroads “believable.”

The CPRR Paperwork

Once the region’s towns, industries, and commodities were established and the trackwork was 75% complete, it was time to tackle the paperwork. My priority was to hold operating sessions that were semi-prototypical, but easy on the operators. Having operated on numerous layouts using many different types of operating schemes, my number one priority was to make the sessions as enjoyable as possible with little stress.

To accomplish this, I created what some would consider being a non-prototypical scheme; I did not use timetables (TT), train orders (TO), or fast clocks. Having operated on layouts with TT/TO and fast clocks, I felt that when you combine all three, you put undue stress on operators, especially operators unfamiliar with the layout; operators can begin worrying about the timetable and whether they are running late, and they don’t

concentrate on the job at hand. In my opinion, operators tend to make more mistakes when they are under the constraints and pressure of TT/TO operations.

Sequential Train Orders List

Early on, I decided to use a sequential train order system. (See Figure 3.) I predetermined the order trains would run. This is not quite as easy as it sounds, as you must think about how trains interact with each other; which trains need to run early during an operating session and which ones can run later. On the CPRR, I had four “through” freights: two eastbound (one AM and one PM), and two westbound. Their jobs were to run from staging to staging with a stopover in the Lewiston classification yard where they would set out or pick up cars depending on what the car cards dictated. These four trains took commodities “beyond the basement” or brought commodi-

Figure 2. The CPRR track plan.

CPRR - OP SESSION #13				
Run Order	Train Number	Train Name	Origin	Term
MORNING SHIFT				
1	251	BN WEST - THROUGH FREIGHT	US	LS
2	281	GRANGEVILLE LOCAL - WB	LY	GS
3	111	REEFER EXPRESS - WB	GS	GS
4	262	MRL LOCAL - EB	LY	MS
5	261	MRL LOCAL - WB	MS	LY
6	272	GRAVEL TRAIN	US	LS
7	SP	SPAULDING TURN	LY	LY
8	202	UP EAST - THROUGH FREIGHT	LS	US
9	221	UP GRAIN TRAIN	US	LS
AFTERNOON SHIFT				
10	PT	POTLATCH TURN	LY	LY
11	241	MRL COAL DRAG (LOADED)	MS	LY
12	242	MRL COAL DRAG (EMPTY)	LY	MS
13	CJ	CRAIGMONT TURN	LY	LY
14	252	BN EAST - THROUGH FREIGHT	LS	US
15	WI	WINCHESTER TURN	LY	LY
16	201	UP WEST - THROUGH FREIGHT	US	LS
17	232	BN GRAIN TRAIN	LS	US
18				



*Figure 4 (left). The Potlatch Paper Mill on the CPRR.
Figure 5 (right). The loading dock at the Potlatch Paper Mill.*

ties and supplies to the CPRR. I also ran numerous “turns” and “locals.” Turns would leave Lewiston yard, servicing various towns and industries; locals would deliver and pick up cars from the larger industries on the CPRR (e.g. the sawmill or the paper mill plant) or from locals coming off the MRL branch. The turns and locals needed to be coordinated with the “run-throughs” so that commodities left the CPRR and arrived at the customers’ locations on time.

The train order list included the train number, a job description, where the train originated, and where the train terminated. At the beginning of an operating session, I would assign operators the first trains (i.e. the first “jobs”) on the list. The jobs varied from run-throughs to locals, to turns. Some jobs were very specific, such as switching out the Potlatch Paper Mill (PPM), shown in Figures 4 and 5.

The PPM job could take an experienced operator up to 45 minutes, in real time, to switch out. When operators completed their assigned job,

they would come to me (in my role as the dispatcher) and I would assign them the next job on the train order list. Having used such a sequential list of jobs for numerous operating sessions, I know the system worked. Operators were under no pressure to speed up and complete a job as quickly as possible. There was no timetable or fast clock to worry about. Incorrectly spotting cars at the wrong locations was minimized.

Car Cards

Car cards help operators identify individual cars. The information on car cards is an area where, in my opinion, less is more. On the CPRR, I designed and printed my own car cards. (See Figure 6.) The cards had minimal information printed on them: the call letters, car number, the type of the car, a picture of the car, and the “return to” information for when the car was empty. This was all that was needed for an operator to successfully identify a car.

Most modelers assume the car number is the most important infor-

mation on a car card. In my opinion, the most important feature is the photo. Operators react better to visual information. Having a photo helps operators visualize the car they are looking for; although having car cards without pictures may be more prototypical. But early on, I decided to use visualization to help operators. I’m convinced photos help eliminate mistakes.

Waybills

The waybill is another area where too much information can be distracting during operating sessions. Waybills fit inside the pocket at the bottom of the car cards; across the top of the waybill, you will find the routing information for that car. To print my waybills, I purchased a software program named “Waybills” from *Shenandoah Software*. I like the program because I can include as much or as little information as I feel is necessary. (See Figure 7.)

For my purposes, I included the car type, the town name, the “routing” information, the “to” information, the “from” information, and the car

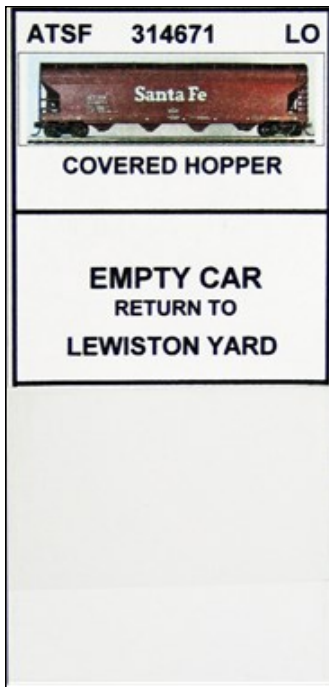


Figure 6 (left). A typical car card.



Figure 7 (right). An example of a waybill. It is folded at the dashed line across its middle to create a two-sided waybill that represents two different car destinations.

yellow. This made it easy for the yardmaster and it was almost impossible to insert a car into the wrong train.

The benefit of using color coding was very evident for new yardmasters who had never operated on the CPRR before.

They were able to understand the system and most got up to speed quickly. As anyone who has ever been

run. But, I always follow up that statement with the question, “What happens next, after watching trains run around in circles gets old?”

I’m a firm believer in designing and building model railroads based on prototypical operations. Operations will give the owner more enjoyment and satisfaction over a longer period. Engines chasing cabooses is only interesting for a short time; eventually, the modeler wants more. If the modeler starts with the premise of building a “mini-transportation system” and not a model railroad layout, they’re light years ahead, and their enjoyment of the hobby will last many years into the future.



About the Author

Bill Beranek - The Track Planner has over forty years in the model railroading hobby. Bill enjoys golfing, traveling, 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-50s.

You can find out more about Bill—The Track Planner at www.thetrackplanner.com.

“contents.” The “contents” information was not necessary if the car simply was being moved from point A to point B. For the yardmaster, the most important information was on the color-coded top line. All the yardmaster needed to know was where the car was going; by taking a look at the color coding and destination (town, industry, or staging), a yardmaster could quickly determine into which train the said car was to be “classified”.

A yardmaster doesn’t and shouldn’t care about the exact destination a car is going to, just the train in which the car should travel. On the CPRR, I had a different color code for every train. On the example shown in Figure 7, the *Spaulding Turn* was color-coded in red; when the waybill was flipped over, the *UP Eastbound Through Freight* was color coded in

involved in an operating session knows, the yardmaster controls the pace of the session. Anything you can do to make the yardmaster’s job easier benefits everyone. Colors and photos, in my opinion, create a less stressful environment for operators, thus making the operating session more enjoyable and smoother running.

In Closing

In this article, I have covered only a few of the basics of operations – those things I feel are the most important to a successful operating session. Much of what I’ve written about influences my layout design business. I’d like to have a dollar for every time I have heard the phrase, “But, I just want to watch trains run.” Please understand, there is nothing wrong with watching trains

All Photographs Courtesy of Harry M. Haythorn.

Harry M. Haythorn, UPHS #4043

Modeling The UP Power Car #2066



Watch Video

"Power, Unlimited Power!"

... Oh, sorry guys; the kids and I have been watching *Star Wars* lately. In this installment of the *UP Hub*, I will cover a build for one of the most unique cars in the Union Pacific Passenger (UPP) fleet: car number 2066 - the huge Head-End Power (HEP) car with the large hump on its roof. This car has been in the fleet since it was built in 2004. A model of this car has never been commercially produced in any medium, including brass. A 3D-printed shell, however, makes that possible. I had the shell 3D-printed by [Shapeways](#) and have used their 3D printer file. Unfortunately, the link to this content currently is not available; however, you can click [here](#) to go to their website and check out their services.

Car History

UPP #2066 began its life in 1960 as Postal Storage car #5816. It was built by St. Louis Car and has never left the UP roster. In 1972, after it



Figure 1. 2066, on its way to Cheyenne Frontier Days, is seen just west of Grand Island, Nebraska. (Photo courtesy of Mr. David Burnham.)

was no longer used in revenue service, it was renumbered to UP 903677 and used as a Roadway Tool Service car until it was selected to become the new Head-End Power car in 2003.

The rebuild took the better part of the year and changed the appearance of the car drastically with the addition of the hump, which stands 16' 1" above the rail. There are some great pictures on the Internet of it

during the construction phase. That huge hump on the roof houses the large radiators and cooling fans for the Cummins generator that is contained in the car. The hump houses twice the power of the other power cars in the fleet, or enough electrical output to run 18 passenger cars. The car is normally used at the front of the train, near the locomotives, to keep noise pollution down for the guests in the passenger cars.



Figure 2. A Walther 44-seat coach is used for the core.

Building the car

If you model the UP-Steam program, or even UP business trains after 2004, then this car is almost a must-have. It has made many-a-trip lately with business and officer trains behind an assortment of locomotives, including numbers 1943 and 844 on the annual Cheyenne Frontier Days trips.

The construction of a model of this car is a long and lengthy process; I have built eight of them so far, and each takes about 150 hours to complete everything that I do to them. I have gotten the construction down to a science and enjoy building them.

For this car, I used a 3D-printed shell and a Walther HO 85' car as the core on which to put the shell. I prefer the ACF 44-seat coach as it is regularly available and the underbody configuration is very close to the 1:1 car. (Please see Figure 2.)

The construction process starts with the removal of the roof and car sides from the coach, but it goes deeper than that. Next, I pull the car ends off and apply CA (superglue) between the skeleton and car ends (see Figure 3); this ensures that they will be structurally sound for the next step of the build. I also change out the trucks at this time for the GSC A62-UDO-11 6-wheel trucks

(Walther Part # 920-2119); this requires the centerline holding tank on the car to be shortened about a 1/2 inch, and I do so with a razor saw.

The next step is the removal

of the top and bottom mounting rails of the skeleton. This requires a good, sharp blade or razor saw; I prefer the razor saw, as it is also needed to cut the locking tabs on the car ends, flush with the ends. This step also ensures a good, flat area for the ends of the 3D-printed shell to be glued. Once the top and bottom side rails have been removed and the ends have been smoothed out, remove the end walls of the bathroom as seen in Figure 4, and then cut the ends of the car right at the end of the interior floor but not through the car floor. This ensures that the shell can be separated from the floor by removing the screws that hold the coupler boxes to the end of the car; thus I will be able to finish the car with glass and interior details.

Now that the car is stripped, it is time to start on the 3D-printed shell. (Please see Figure 5.) Cleaning of the printed shell is critical to proper paint adhesion, as the plastic used in 3D printing requires a proper cleaning before paint is applied. I use a multipart cleaning process. First, I use Bestine, which is a solvent used

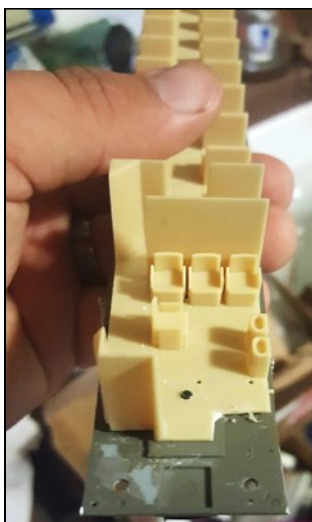


Figure 3(left). The end of the interior is cut away so the shell can be glued on.

Figure 4 (below). The mounting rails are cut away with a sharp blade or razor saw.

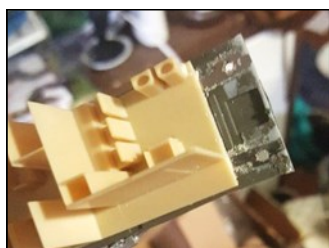




Figure 5. The 3D-printed shell fresh from the printer.

to thin rubber cement; I leave the shell in it for 30 minutes or so, then I use a regular old grease-cutting dish soap (such as Dawn) and warm water. I always try to be careful to use warm water rather than hot, as hot water can deform the shell. But I don't panic if the shell is twisted or tweaked a bit; that can be fixed.

After the shell has been cleaned, I begin the modification to the ends so that they will fit on the floor of the

car. This requires the use of the razor saw again and a good, sharp blade. The ends of the shell have a small shelf inside; this is where you cut to make it fit down over the floor and between the skeleton ends on the Walthers car. With the razor saw, I cut 4 or 5 vertical slots, then scribe horizontally along the bottom of the shelf, and finally – very carefully – flex these tabs and remove them as seen in Figures 6 and

7. A little file work smooths up the shelf and the sides of the car body so that it snugly fits down over the car floor. This is where the previous prep work on the ends will pay off, as I glue the shell to the insides of the Walthers car ends, but not to the floor; this is because the shell will need to be removed for the paint and detail work later. Another detail to note is that when I build these cars, I face the coach seats backward so that the underfloor details match the prototype car (and it makes the car fit together easier).

The next step is to fill in the space left between the car ends and the shell. For the roof, I utilize the ends of the Walthers roof: I cut them off, and then I file and fit them into the space on the shell, thus giving a uniform appearance to the roof. Next, I deal with the space between the ends. For this I use .010" sheet styrene, cut to fit into this space: one piece is laid into the space between, and a second piece is placed on top to fill in. After this has dried and set overnight, the shell can be removed from the floor for painting. At this time, I add the Wi-Fi box to the low end of the car which I make from a small plastic box removed from the underside of the car.

Figure 6 (left). First, cut slots in the end shelf of the shell ...

Figure 7 (right). ... and then scribe horizontally across the tabs and flex them until they come loose.

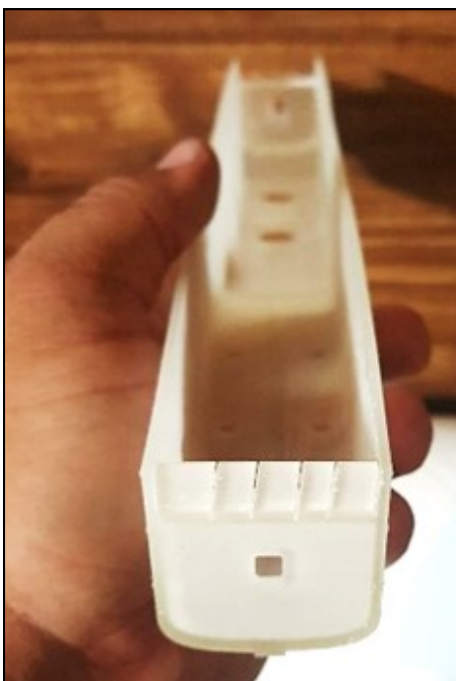




Figure 8. Brass fans are installed. Also, note the mounting tabs with screw holes in them.

Paint and Details

Painting of this car is relatively straightforward. I paint the whole car yellow and let it sit overnight. Then I give it four light coats of Scalecoat II UP Armour Yellow, waiting 24 hours between coats; this gives the car a smooth, glasslike finish. Once the yellow has dried and is glossy and no longer has any smell (indicating that the paint is fully cured), the car can be masked in preparation for painting with Scalecoat II UP Harbor Mist Gray on the roof and along the floor line. I use Tamiya masking tape for a good quality separation of the paint colors

with no runs or bleed-through. The gray gets two to three light coats, or until the yellow is fully covered. The last things to paint are the four large square vents on the sides of the hump which I paint a black grime color.

Once the car has been painted and has fully dried and cured, it is time to add glass, grilles, and fan shrouds. The four small stainless steel grilles are cut from pieces of photo-etched grill found in the GE Dash 8 detail kit from Detail Associates (part # GR 2718). These are cut and glued behind the openings in the car body. The next detail that I add is the 48"

fan shrouds for the roof; I use Precision Scale brass pieces (part # 3963), as they press-fit into the holes in the roof, and just a drop of CA will keep them from coming out. After these details are applied and have dried, I add the four large grills to the hump; these are also from the Detail Associates kit and are painted grimy black as well. (Please see Figures 8 and 9.)

The last thing that I do before reassembling the car is to add the glass. I use clear acetate sheet for the windows, and – based on the customer's preference – I either leave them clear or I add black or green window tint. I always use canopy cement to

Figure 9. The paint is on the shell, and the floor is in the background.



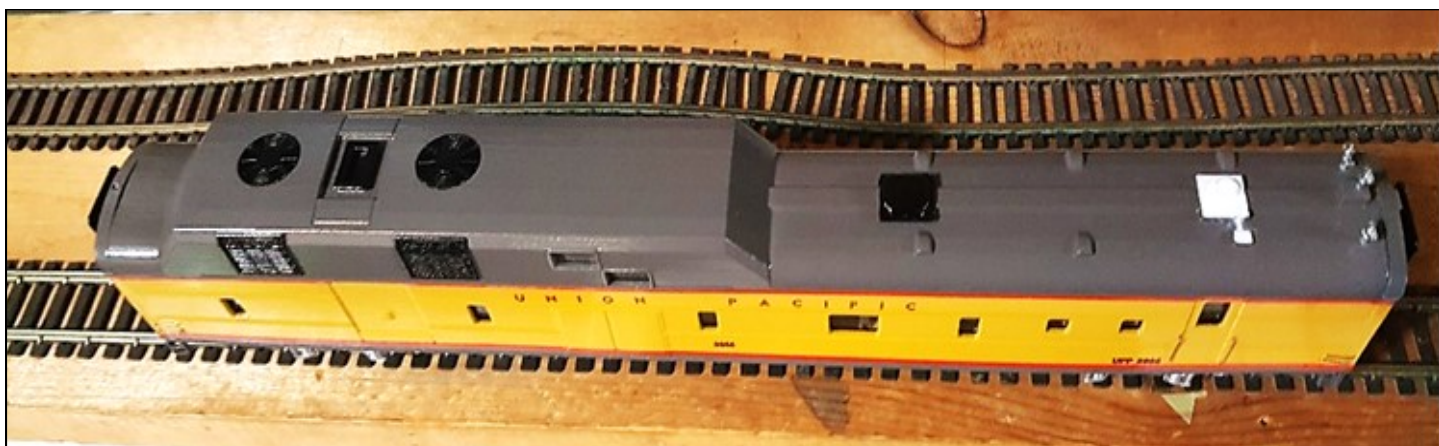


Figure 10. Rooftop details are installed and ready for service!

attach the windows to the car; this glue will not fog acetate windows, remains flexible, and is paint and plastic safe.

Final Assembly

Now that the glass and grilles are all in, it is time to reassemble the car. The reassembly of the car is straightforward. The first thing I do is put the shell in a foam cradle to protect it and then put the floor back under the car. Because of the way the ends of the car were assembled, the assembly is flexible enough to make sure the car floor is square with the shell. Now that the shell and floor are back together, the couplers and boxes can be reinstalled, and the screws that hold them on also hold the shell onto the floor.

The car is now ready for the decals, the grab irons, and the stirrup steps at the end of the car. These are all harvested from the sides of the Walther's car. The grab iron holes must be drilled and I use a #79 drill bit as later on it will make putting the grabs on a little easier.

The next few details to add are a mix of commercial parts and pieces from the scrap box. The commer-

cial part is the rooftop octagon-shaped GPS dome (Hi-Tech Details part #6007). This is added between the front pair of roof vents on the low section of the roof and I paint it black and attach it to the roof with CA.

The other rooftop details are the three Wi-Fi antennae for which I use pieces from the original trucks that were removed; that part is the brake arm from the cylinders on the truck. These are then put into holes drilled into the roof with a #56 drill bit. The shell also has a dome 3D-printed in place on the roof and I paint it white.

The last few steps are to apply the decals and then finally install the grab irons. I use a

couple of different decal sets for these cars. The stripes (part #87-616 - UP Head End cars) and Union Pacific lettering (part # 86-632 - UP E-Unit stripes), come from Microscale. Circus City Decals makes

Figure 11. Number 2066 bringing up the rear. (Photo courtesy of Richard Rineer.)





Figure 12. With a UP excursion train, a long-range photo always is better! This train includes not only the #2066 Power Car I built but also the Howard Fogg and Lynn Nystrom cars I built, as described in previous installments of The UP Hub. (Photo courtesy of Richard Rineer.)

a set of UP Business Car names which has the 2066 numbers on them (part # UP 205 - UP Heritage Fleet Car Names), and I use them if I have a set on hand; but if I do not have the set, I simply place the individual numbers on the car one by one. Once the decals have dried overnight, I add the grab irons; I put a small drop of CA glue on each grab iron before pressing it into the holes drilled earlier.

The final step is to clear-coat the whole car for that nice, shiny, and clean look that the UP-Business Fleet always has - and it also protects the decals. (Please see Figure 10.)

Now, the cherry on top is seeing this car on a business trip or steam excursion, like this video of #1943, #1995, and #2066 on an Officers Special: <https://youtu.be/gMNBVvZvDqs>. And the nuts sprinkled on top of the cherry was when one of my UPP #2066 cars was high-

lighted by James Wright II on episode 38 of Ken Patterson's What's Neat This Week video podcast, starting at about the 14-minute mark.

I hope that you have enjoyed this build and all the others that I have done lately. I have enjoyed helping others build their UP-Business car fleets. I hope to continue with these and other builds over time, but my family is the most important thing in my life; my wife's health has not been great the last few months, so car builds will have to slow down. I have a few ideas for articles in upcoming issues, so don't worry my friends, The UP Hub will go on!

On that note, I will leave you with a couple of pictures from the Colorado Model Railroad Museum in Greeley, Colorado. Both photos were taken by my friend Richard Rineer.



About the Author

Harry is a rancher in Nebraska who works with his father and grandfather to help run their 22,000-acre, 1,500-head of mother-cow, ranch. Harry has been model railroading for over 20 years and models the Union Pacific Steam era from the 1930s to the 1960s, in central and western Nebraska. 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. Harry regularly posts videos on his YouTube page. You can follow Harry as he works on his 7th layout at <https://www.youtube.com/channel/UC6-MPHmYU3Cc2uEVfjZDIcQ>.



All photographs by Jack Hykaway.

Today's Heavy Haulers

Part II



By Jack Hykaway

GE's Evolution Series

It's a quiet evening on the prairie near Poplar Point, Manitoba. The day's faint breeze has died off and only the whir of a distant highway can be heard over the chirping birds. The birds seem to enjoy the warm springtime sunshine, as do the photographers waiting patiently track-side.

Although sightlines on the flat prairies are good, on calm evenings one can hear approaching trains before any headlights break through the heatwaves on the horizon. At first, as if replying to the birds' chirping, the low – and throaty – sound of a locomotive's air horn is faintly audible from miles away. The familiar long-long-short-long pattern repeats itself as the train clicks off mile after mile as it approaches.

Finally, after the fourth horn sequence, the locomotive's headlights streak through a curve on the hori-

zon and the one blob of light slowly separates into three as the train nears. The crew has their three locomotives working hard – the engineer's throttle is wide open and the train is doing on the rich side of a mile-a-minute.

The distinct scream of General Electric traction motors at track speed is the next frequency to hit my eardrums before the roaring of the air horn once more takes over. The lead locomotive bears down on me, bouncing through a switch and kicking up loose gravel surrounding the track.

Taking a few steps back to witness the spectacle safely, Canadian Pacific (CP) Railway's GE ES44AC No. 8700 – the first unit of its class – blasts by me in a festival of noise, heat, and wind. Containers, stacked two-high, follow the locomotives at a blistering pace and the sound of freight car

wheels whizzing by quickly overtakes the sounds of the locomotives.

Then, just as quickly, the last car of the ten-thousand-foot train passes by and the birds' calls return.

CP 8700 is an early-generation General Electric (GE) ES44AC (**E**volution **S**eries, **4400** horsepower, **AC** traction) locomotive, ordered new from GE. The ES44AC – and GE's three other variants (ES40DC, ES44DC, and ES44C4) – have become the staple symbol for heavy-haul freight locomotives in North America.

In the early 2000s, the United States Environmental Protection Agency (EPA) introduced their Tier 2 emissions standards. After the date it was passed, all locomotives built and sold for use in the United States were required to meet or exceed the document's criteria.





CREX (CitiCorp Railmark Inc. aka CitiRail) has purchased a number of ES44ACs. Their fleet was purchased to be leased out and most of their units are currently on lease to CN and BNSF in the US and Canada. This one was photographed near Winnipeg, MB on a CN train.

Because GE's older and very successful models such as the C40-8W, C44-9W, AC44CW and their variants (all developed in the late 1980s and 1990s) did not conform to these specifications, the company was forced to develop a new series of heavy-haul diesel-electric locomotives for the American market.

There was lots of pressure on the design and reliability of GE's new locomotives; they would have a huge reputation to maintain. GE's predecessor models, especially the ones listed above, were incredibly successful in the North American market. They quickly became popular among all North American (and some International) carriers, and even became preferred over EMD's equivalent models, boosting GE's sales above those of the competition

enough to secure them as the leading locomotive manufacturer in the US.

With much fanfare and anticipation, GE unveiled their newest series of locomotives and immediately began the demonstration period. The shiny, new, and efficient machines were given a chance to stretch their legs over their demonstration period. Railroads were clearly very impressed with what they saw and orders began flooding in immediately.

The ES44AC is, to date, GE's best-selling Evolution Series locomotive. This locomotive is the direct replacement for the very successful AC44CW and this variant has performed efficiently, even in the tough conditions of heavy-haul mainline railroading. It has become the staple

symbol of the mainline with 2300+ units being sold to nearly every Class I railroad in North America.

Why is it so popular? Let's look at a couple of the statistics. The ES44AC is very similar to its Evolution Series relatives; it even uses the same 12-cylinder GEVO prime mover as the others do. However, due to its AC-driven traction motors, it puts down a lot of traction: 183,000 pounds starting and 166,000 pounds continuous. This makes them great for handling heavy unit trains traveling over treacherous terrain.

GE still manufactures Tier 3 compliant ES44AC locomotives, most of which are destined for service in Canada where the EPA's current Tier 4 regulations do not apply. Canadian National has recently placed



*ES44ACs are commonplace on heavy unit coal trains across the BNSF network.
This one was photographed near Sully Springs, ND.*

an order with GE for 200 brand-new ES44ACs to expand its locomotive fleet. The first dozens have already hit the rails and are numbered in the 3800-series.

The ES44AC's closest relative is the less-successful ES44DC locomotive.

This DC-traction counterpart delivers the same 4,400 horsepower as its AC sibling, but it was designed to replace GE's C44-9W locomotive model. The Dash-9 was especially popular with BNSF, NS, and CN. It is then logical that the majority of the nationwide fleet of ES44DCs is

dressed in the BNSF's bright orange paint, while CN and CSX also own several copies. Between the three companies, the fleet is rounded out to a healthy family of 1,100 units.

The ES44DC has not been produced in a number of years due to its unfavourable

*A shiny CN 3800-series ES44AC leads a train through the Thompson River Canyon at Morris, BC.
This locomotive was built in 2018.*





*This CN 2285 is an ES44DC.
It was photographed on the rear of a potash train near Lytton, BC in the Thompson River Canyon.*

avorable DC-traction system. AC-traction technology has gained popularity in recent years and new locomotives are nearly exclusively built with integrated AC traction systems.

GE also introduced a 4000-horsepower equivalent to the ES44DC, which was very popular

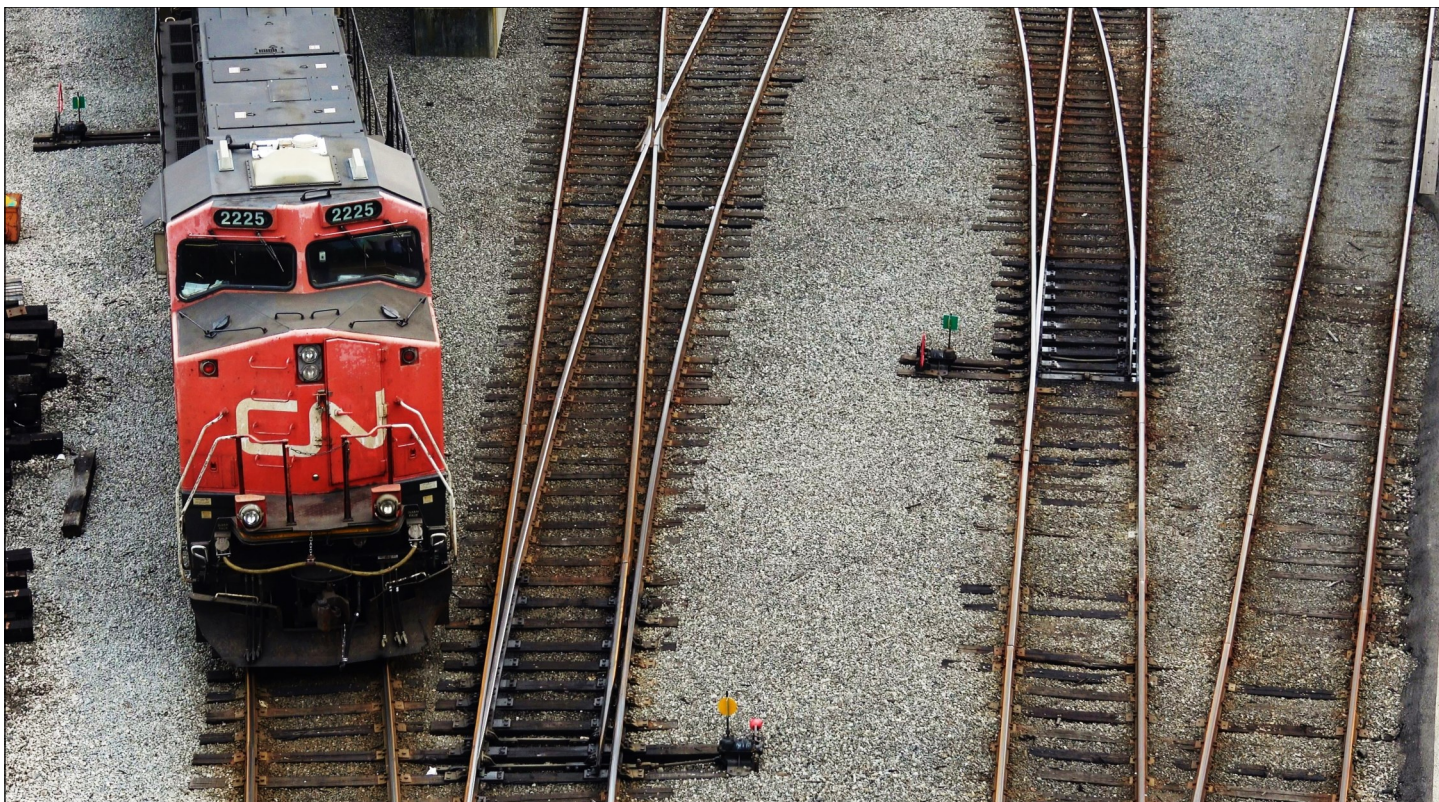
with CSX and NS. They were two of only a few purchasers of this lower-powered model. The idea with the ES40DC was improved fuel economy over its 4400-horsepower counterpart.

The ES44C4 joined the family later on and was an immediate hit with

the BNSF in particular. The ES44C4 is mechanically identical to the ES44AC, save one major difference. Whereas the ES44AC has six powered axles, the ES44C4 has only four powered axles – the middle axle in each one of the trucks is unpowered (and is not fitted with a traction mo-

*A CN ET44AC leads train X101 through the woods near Wade, Ontario.
Note the locomotive's large flared radiators behind the cab.*





CN ES44DC No. 2225 sits in Vancouver's Waterfront Yard.

tor). This design is ideal for light-weight freight trains that travel long distances at high speeds. Essentially all of BNSF's cross-country container trains use these locomotives today.

The newest addition to this high-performing family of locomotives is the ET44AC/ET44C4. This locomotive was designed to conform to EPA's strict Tier-4 emissions regulations and was highly anticipated by railway companies. I won't go into great detail about these locomotives here (you can read a previous *Jack's Junction* about them [here](#) – scroll down and select the January 2017 issue), but they feature state-of-the-art emission suppression systems and have been popular among nearly all Class I railroads in Canada and the United States.

GE has set a new standard with their Evolution Series of locomotives; one that has yet to be beaten by a competing manufacturer since its debut in the 2000s. Next time you're trackside, watch for one of these heavy-hauling locomotives – you surely won't have to wait long!

For more information about GE's Evolution Series, please visit these links:

- <https://www.american-rails.com/evolution-series.html>
- <https://www.gettransportation.com/locomotive-and-services/evolution-series-locomotive>
- https://en.wikipedia.org/wiki/GE_Evolution_Series

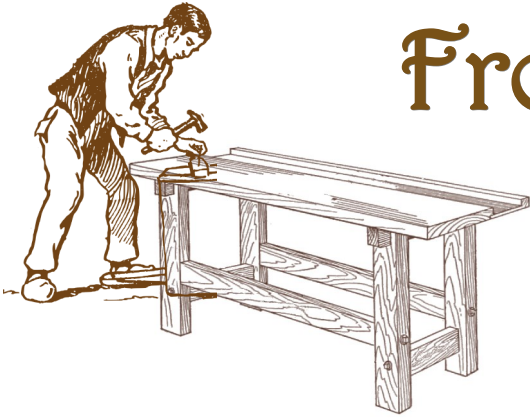
About the Author

Jack Hykaway is a student, currently attending a post-secondary institution in his hometown of Winnipeg, Canada. He is an amateur videographer and writer and enjoys exploring and documenting nearby railroads and railroad operations in both written and visual formats of his work.

Jack's main focus of late has been producing his column *Jack's Junction* for *The Modeler's Journal*.

Follow along with Jack's videography on his YouTube channel at <https://www.youtube.com/user/WinnipegRailfanner1>.

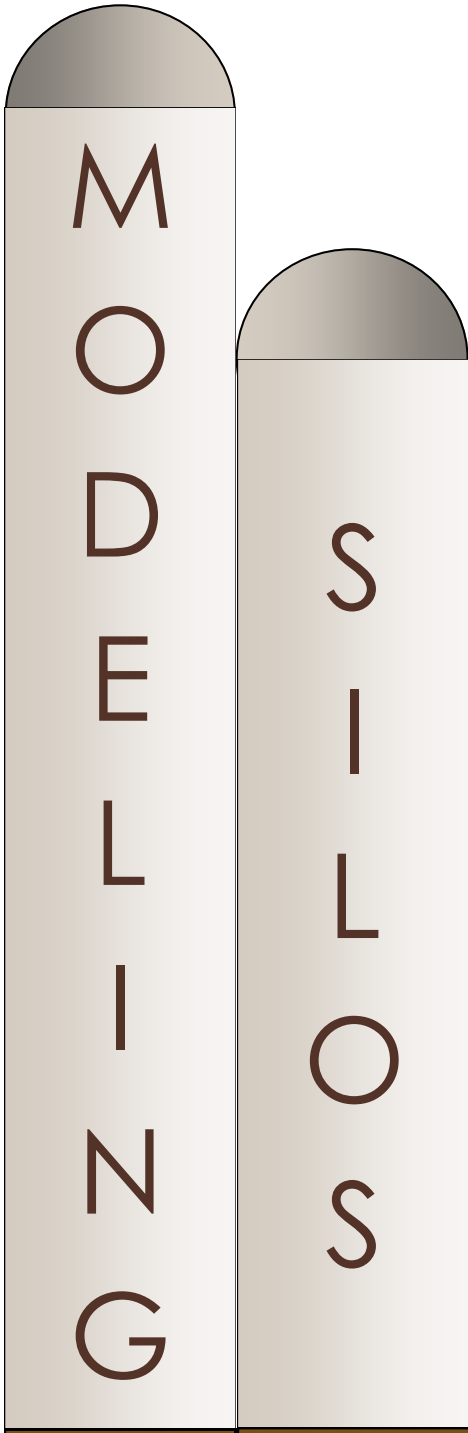




From My Side of the Workbench...



By Blayne Mayfield



Okay, let me start by clarifying that I'm not writing about how to model silos such as the [Walthers HO Concrete-style Silo \(#933-3332\)](#).

Instead, I'd like to examine how and why we who are in the modeling hobby tend to "silo" ourselves; that is, we tend to look for and share tips, tricks, and techniques within our own branch (trains, planes, automobiles, etc.), rather than looking at other branches of model making.

I feel that "the silo effect" is not as bad as it once was; the proliferation of freely- or easily-available information on the Internet has encouraged cross-pollination. However, I still believe that we tend to silo too often. When someone looks at a different branch of modeling – say a model railroader looking at war modeling – it is viewed as novel or radical. Brothers and sisters, this should not be!

Certainly, there are particular techniques and processes that apply better to a particular scale (e.g., 1:32) than to other scales (e.g., 1:87). One could even argue that certain

practices are more effective or convincing in one branch of modeling (e.g., sci-fi spacecraft) than in others (ship dioramas). But I believe that each of our scales and branches would benefit if we would "look over the fence" more often rather than focusing on looking to "our own;" in many cases, this can also mean not having to reinvent the wheel.

Alas, I must admit that I am part of the problem. As a (purported) model railroader, I tend to look to other model railroaders to find solutions for my own modeling needs. One of the advantages of working as an editor for *The Modeler's Journal* is that it has helped me to remove the blinders and see my modeling with a broader perspective.

So, let's say that, like me, you've decided you'll bite the bullet and look around at other modeling branches for some new techniques and ideas to apply to your own models. You begin to peck a few keywords into your favorite search engine, and suddenly, you are overwhelmed with the number of results. In the good

ol' days (pre-Internet), we suffered from too little information; unless you lived in a town or region with an active modeling community, magazines probably were your main source of information. But today, we suffer from a glut of information. How do we filter out the chaff from the wheat in our search engine results list? It will do us well to remember that the Internet is a two-way street. We can get into online communities and get advice from our fellow modelers ... even those from other branches of the hobby! [Facebook](#) is a great place to start, and it doesn't matter whether you live in an urban setting or out in the boonies. For example, some of the Facebook groups to which I belong include:

- [The Art of Modeling](#) – Focuses on the artistic qualities of the hobby;
- [The Terrain Tutor's Terrainiacs](#) – How to create convincing terrain for your diorama, train layout, etc.
- [Dioramasphere](#) – Scale figures, kits, and product & paint reviews.
- [Model Railroad Structures and Dioramas](#) – Members can show off their model structures and share techniques in all scales.
- [The Modeler's Journal](#) – Well ... you know ...

Be aware that many of these groups are “closed groups”, which means that you have to ask request to join – and almost always will be accepted – while others are “open groups”, where you simply join. Some of you

who also belong to these or similar groups will understand and agree when I state that, on occasion, I will see a modeling effort that literally stops me in my tracks with my jaw hanging agape. (Sometimes, they are so convincing that – after seeing them on my phone – I run to the computer so I can see them full-screen!)

But [Facebook](#) is not the only Internet-based source of knowledge that can help us find out what is in those other silos around us. If you are a visual learner (like me), then [YouTube](#) is a great place to pick up new techniques from modelers in other branches; and don't just base your viewing choices on keyword searches within [YouTube](#), but also subscribe to the channels of the video artists you like best. (One channel I heartily recommend is Luke Towan's [Detailed Modeling Tutorials](#).) And, of course, forums and blogs are a great place to share, learn, and ask questions; one of my favorites is the one hosted by [Model Railroad Hobbyist](#) magazine. In general, you will find the modeling community to be accepting and inclusive of all skill levels and modeling interests.

An interesting study in differences concerns how roadways are created in different branches of modeling. (Or even within the same branch!) For example, in this [YouTube video](#), Panzermeister36 (I hope that's not his real name) uses Sculptamold to create a wonderful, cobblestone street for a WWII diorama. And if you look at this thread from the [Model Railroad Hobbyist forums](#), Tim Warris and others discuss creating cobblestone (in a smaller scale)

using custom or premade, laser-cut basswood sheets and premade plastic brick sheets. I've even seen discussions of printing brick patterns from the web onto paper and then gluing them down to create a cobblestone street. Depending on your scale and your needs, you may find a viable technique that you hadn't seen before.

So, be part of a new, modeling revolution. (Modeler's of the world unite! You have nothing to lose but your silos!) I challenge you to step out of your comfort zone and spend some time looking at other branches of modeling than yours. And do you want an even kookier dare? Don't just read forums or watch videos, but actually get into a conversation with those in distant silos of modeling. I think you'll find that you have more in common than you might initially think. You can learn from them, and they can learn from you!

Then maybe more railroad modelers will be using pin washing the way the war modelers do. 

About the Author

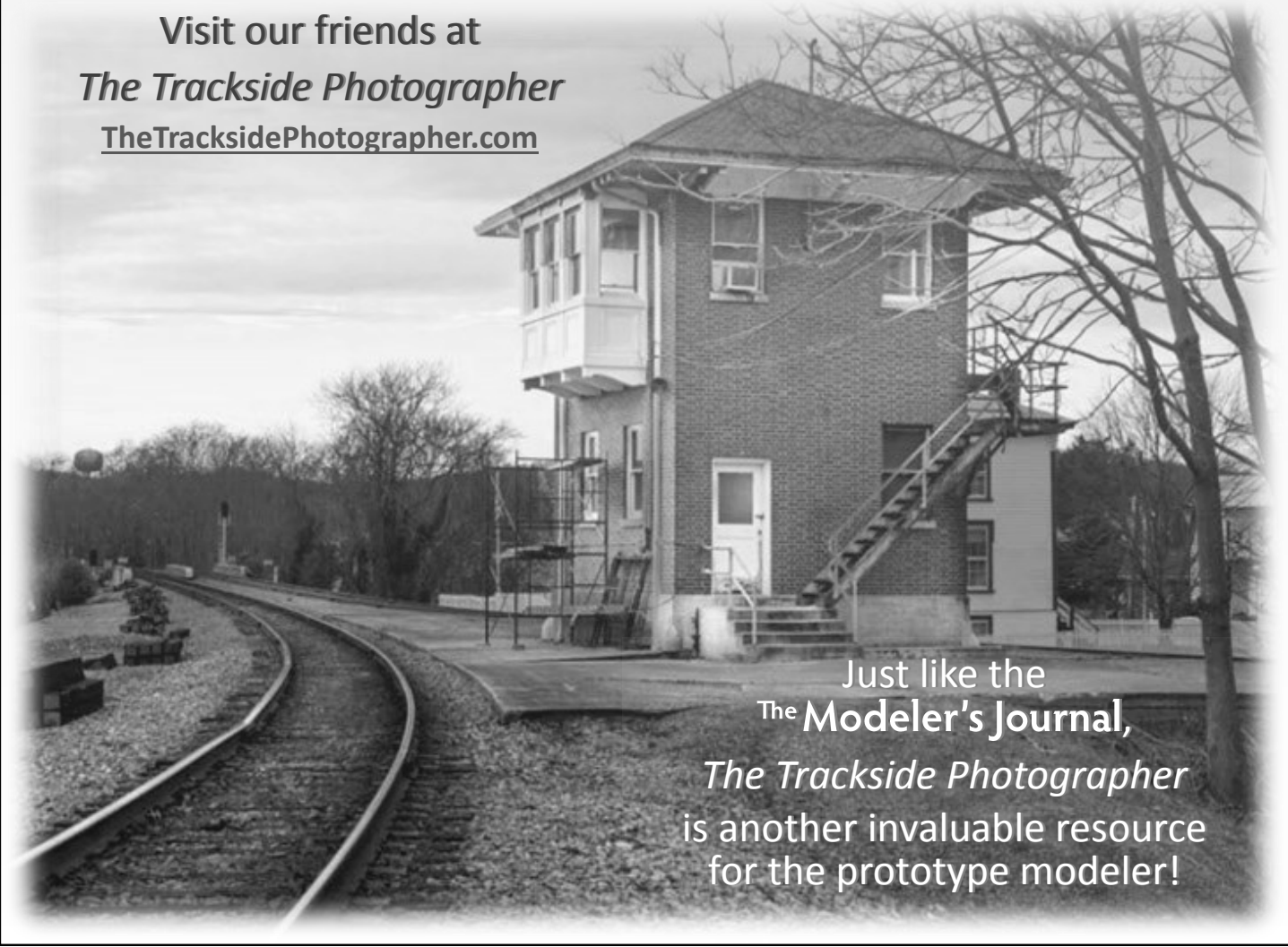
Blayne Mayfield is a university professor by day and an HO engineer by night. After a 20+ year absence from the hobby, he currently is working on a proto-freelance layout based on the [Frisco Railroad](#) in southern Missouri. Blayne lives in Stillwater, OK, and volunteers as a content editor for *The Modeler's Journal*. You can follow him on his YouTube channel by clicking [here](#).

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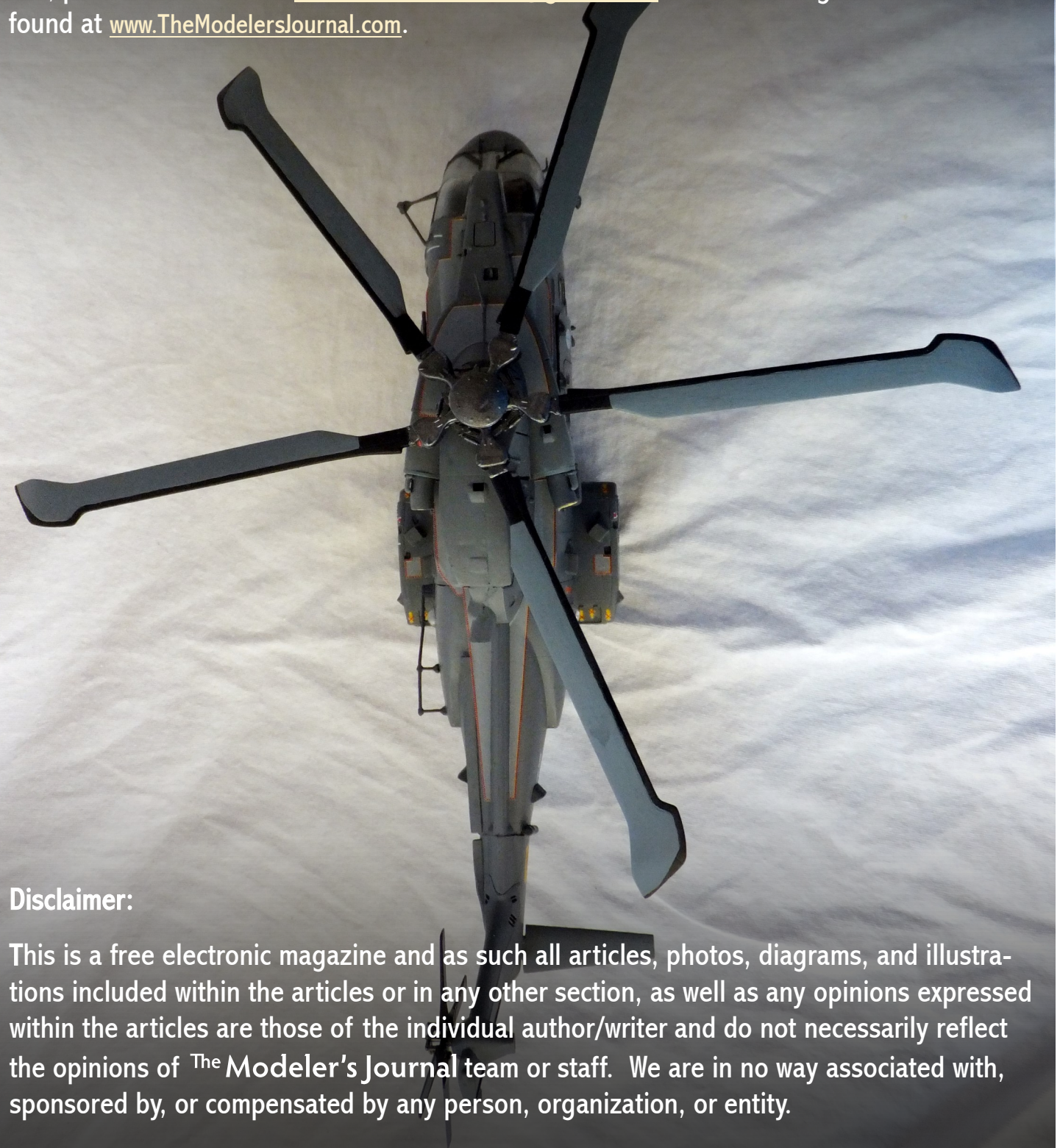
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