

Photo by David Heinsohn

THE BRASS POUNDER



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Kansas Central Division
Mid-Continent Region of the **National Model Railroad Association**

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Timetable

The next KCD meeting will
be at Ray Brady's
On June 10, 2017

Join the KCD on Facebook!

Kansas Central Division-NMRA has a Facebook page and is for NMRA members only. It is a place to share model railroading adventures, post pictures, tell tales of woe in building your empire, post obstacles you have overcome, and ask questions. Have fun. Simply enter Kansas Central Division - NMRA in the Facebook search block and select request to join. See you there.

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Join the KCD Yahoo Group!

Kansas Central Division has a Yahoo Group. To join the KCD Yahoo Group, send an email to KCD-NMRA-subscribe@yahoogroups.com. You will be automatically subscribed to the group with the email address from which you sent the message. Or, go to groups.yahoo.com and enter KCD-NMRA in the search window to find the group and to join

<i>Call Board</i>	Director David Heinsohn Kd0r@fhrd.net	Superintendent John Snell jsnell@cox.net	Clerk Tom Katafiasz	Paymaster Larry Tiffany
	THE BRASS POUNDER Editor and Publisher Ray Brady	THE BRASS POUNDER Associate Editor Christine Heinsohn		

Minutes of Last KCD Meeting

April 1, 2017

The April meeting of the Kansas Central Division was held at the home of Alan Meinhold in Emporia, Kansas. Superintendent John Snell called the meeting to order at 1:10pm. Those in attendance were John Snell, Ray Brady, Wayne Castegnaro, David and Chris Heinsohn, Alan Meinhold and Tom Katafiasz.

Due to a scheduling conflict the June meeting will be scheduled for June 10 in Salina.

Upon the review of the division's officers by the NMRA it was found that treasurer, Larry Tiffany, had not renewed his membership. A phone call was placed to Larry and his membership will be renewed.

The MCoR/Thousand Lakes Region 2017 joint Regional convention will be held on May 18-21 in Ames, Iowa. Convention registration is now open for anyone planning to attend.

The state of Kansas 501c-3 renewal is due in June; Tom will file the necessary paper work.

David mentioned that the Chisholm Trail Division might host the 2019 division convention in Wichita. They may call upon our division for volunteer assistance.

Superintendent John Snell adjourned the meeting at 1:27pm.

Alan presented a clinic on the making of conifer trees from furnace filters. Everyone took home trees that they had made during the clinic. It was very interesting and entertaining! Thank you, Allan.

Respectfully submitted,
Tom Katafiasz
Clerk, KCD





The Tree
Branches
Being Shaped

Glue them
on with
PVA
glue



The
Preparation
for the
Ground
Foam
“Foliage”
(We did this
outdoors
because of
fumes)





Ground Foam

Foliage
(Separate paper
bag for each
color to recycle
the over-
sprinkles)



The Caboose end of the
meeting - we are all Kibitzing
about trees.

Oops! Wrong publication...

Kansas Central Division – NMRA

Ray Brady's House

Agenda for June 10, 2017 Meeting

Short Business Meeting

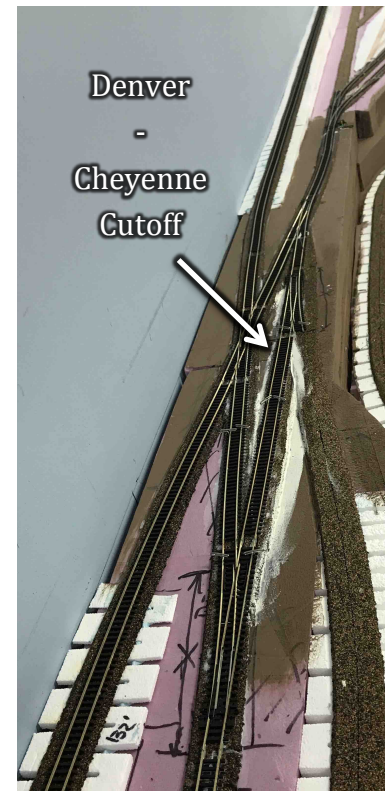
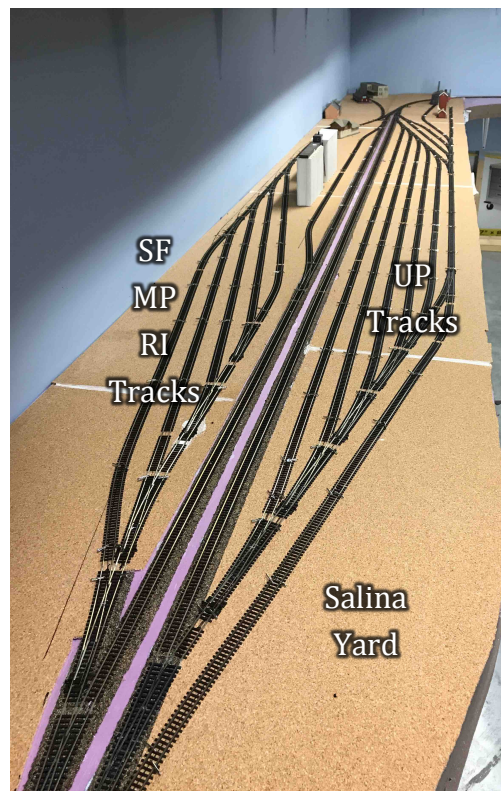
Followed by

N-Scale “Operating Session”

Since the last meeting, the Salina Yard is (or will be) operational. Yes, that will make it “legal” to run SF, MP, and RI on my UP, D&RG, and CM layout. They will have trackage rights on UP from Abilene to Salina, as well as yard facilities south of the UP tracks.

And, a temporary Denver – Cheyenne cutoff has been installed so that continuous running is possible on the lower level only.

Whether switching instructions, car cards, or dispatching will be available -- probably not.



Superintendent News

From the **KCDivision NMRA**

I want to thank Alan Meinhold for a great meeting in April at his place. Alan showed us how he made some very realistic looking conifers using skewer sticks and furnace filter. We all joined in and each made several trees to take home. Easy and fast and fun! I have always said that if you are going to learn to swim, you've got to jump in the water. For some of us, building scenery has been like this. We have been afraid to unleash our inner artist. Little projects like Alan's trees can be that first jump in the water. And who knows where that might lead you. Backdrop painting anyone?

Do you like running trains? We have a great opportunity for you this next meeting, June 10, at Ray Brady's place, to make long runs on his N scale layout. Ray has told me that he has laid more track in some yards [ED:

Salina Yard] and has opportunity for actual operations. This means making up trains in a yard and sending them out on the mainline to their destination. I don't know if Ray will have actual train orders for us, but I'm sure we will fun, nonetheless. If you haven't had the opportunity to see Ray's pike, check out this link.

<https://www.youtube.com/watch?v=jd372wlXqu8>

Here you will see Ray's entire layout from the cab of the lead engine as it traverses the pike from beginning to end. Be prepared to spend some time! And be prepared for a great time at Ray's.

Hope to see a lot of you there!

John Snell



Director News

From the **NationalMRA**

As I'm typing this it's 78 degrees outside. Time to get all those yard and gardening jobs done before it becomes too hot to be fun outside. Once that happens it'll be time to be inside in the nice air-conditioned train room again. So, while you're pulling those weeds think about what you want to do rather than sweat outside.

Again as I write this it's one week until the MidCor Regional Convention. By the time the Brass Pounder goes to press the convention will have come and gone. I hope I see lots of you in Ames. All of the model railroad conventions I've attended have been fun. I always meet someone new and interesting. I always get to talk to friends I've not seen for a while, sometimes a short while, sometimes a long while. I always get to see some interesting layouts and models. And, I always learn more about this hobby. I hope you're able to attend at least one, if not several model railroad conventions this convention season. Some I've attended in the past include:

1. The NMRA National Convention: It's in Orlando this year, but next year it's in KC. Plan now to attend!



4. The ATSF Historical and Modeling Society convention. Always at an ATSF served town, large and small. I'm sure your favorite railroad has something as well.



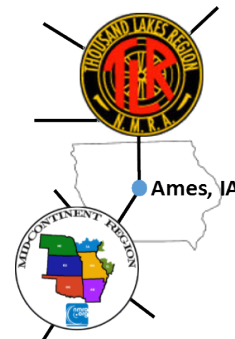
2. Tulsa Ops Weekend: It isn't really a convention, but it's still a fun weekend. It's usually in March.



5. The National N-Scale convention.



3. The MCoR Regional Convention: The 2017 convention is in Ames in mid May. There won't be one next year as the national convention is in KC, therefore within the region



6. The National Garden Railroad convention: This year it's in Tulsa in July. This is where you get to see the gardening efforts I was talking about earlier pay off.



That's a few. Pick out the ones that might interest you and give them a try. Looking forward to seeing you at Ray's in June to run some trains and talk model railroading!

An Editors View



A VIEW LOOKING OUT

"THE ONLY THING CONSTANT IS CHANGE"

How many times have you heard that expression? We see it all around us in everyday life. From our homes that need constant repair, to the changes we see in the weather, to the alternate roads we have to take because of construction, the list can go on and on.

What got me to thinking about this were the program changes we have experienced in the Kansas Central Division – NMRA this year. We began the year with a full lineup of topics for all six of the 2017 meetings. And, as the year rolled on, all three of the events we published in the December Brass Pounder have been changed.

In February, we moved the date back a week to accommodate the Wichita Train Show, then moved it back another week because of scheduling issues with the host. In April, we had to change hosts and location because of scheduling issues with the host. And, now for this meeting on June, we not only had to change the date because of the involvement of our members in the Hutchinson Train Show, but also because of a schedule conflict with the host on the following week. And, the Superintendent and Director had to look at alternate plan C because alternate plan B would not work. So, we will meet at my place on June 10 to run trains.

I see this in my model railroading too. I start one project, and then have to change in another direction because of either unforeseen circumstances or something that becomes a higher priority.

A case in point: The June 2016 meeting was the last time you all were here to run trains on my layout. I had just completed the entire mainline track, and everyone could run the full layout with enough passing sidings that we could all travel unimpeded.

Then, I turned to Genealogy and the model railroad sat dormant for a couple of months while I discovered much, much history about my Swedish Grandfather and his Emigration to America.

Then, after the Thanksgiving trip to Bailey Yard with the Heinsohn's, I redirected to speed matching (which you will read about in this issue of the BP) because, as I said: "I need to get more Armor Yellow on the layout."

And, once I got about 15 locomotives speed matched, I told myself that I needed to get some more Yards done for someplace to put the locomotives. And, I need more mature track work before anyone can do anything close to real operations on my layout.

And, waiting in the wings are sleepers at each track joint, ballasting, cutting in industries along the main, occupancy detection, signaling, buildings, backdrop, lighting, fascia, decoders, operations. And the list goes on and on and on.

But, I wouldn't have it any other way. As Chris says in her interview in this issue, there is so much to learn and do in the hobby. It is great!

So, I encourage you to broaden your experience. Whether it is being a rail fan, attending a convention, or getting a new model, go out and enjoy the hobby. Happy Railroading!

Ray Brady

KCD *Associates* in the NMRAssociation

Activities and Interests of the Division's Members

As a way of introducing each of us to each other, the **BRASS POUNDER** is talking to members of the Kansas Central Division about the exciting things that each is doing in the Model Railroad world that would be of interest to all the membership as a whole. We hope you enjoy reading about what other model railroaders are doing.

Sometimes the model railroad community is afforded the opportunity to get the perspective of both spouses involved in model railroading. We in the Kansas Central Division - NMRA are blessed in that we have a model railroad team participating in the hobby, David and Chris Heinsohn. In the October 2016 issue, we heard from David Heinsohn of his interests in the hobby. This month we hear from Chris Heinsohn of her interests and travels through the model railroad world.

The Brass Pounder: So Chris, what got you into model railroading?

Chris: My husband retired in July of 2011 and wanted to celebrate his retirement – his last retirement because there had been one other – in a way he could remember it. So we booked a train trip later that month with a couple of friends of ours from Kansas City to St. Louis, spent the night, and took the train back. That was great fun. It was an interesting, short train trip on the Missouri River Runner. We all had a good time, stayed in a hotel in St. Louis that had been the Railroad YMCA – it's a Drury Inn now. It has an Italian restaurant in the basement – had fried spinach for dinner – it was just real fun.

The next week, he came home after he did something with his dad in Wichita with bags in his hand. And he said, "I just spent \$200 unauthorized." I said "Oh really!" He then said he went to the model shop. Well, my thought went to model ships because he used to do that when we were younger. So, I said "Yeaah?" He said "I bought a train set." "OK???" [laugh] So, a couple of hours later, when I was calling him to dinner, I looked down the stairwell and there was an oval of track with an engine going around and there was this 6' 2" six-year old sitting in the middle of it with a great big smile. The picture was just so nice ... to see him with that kind of joy. So, I said that if this is going any further it will be fine. If it causes that much joy, let's go for it. I called him to dinner and he left the trains. We had dinner and then he took me down and showed me that trains. My first start in model railroading was being beside him and feeling his joy and concurring that it was GREAT.

But, that experience took me back to my youth. We lived in Salina. I was about 8 and my friend's brother got a new Lionel steam engine for Christmas with smoke. We played with it, and it was such a wonderful experience. I went home and told my parents I wanted one. And my dad told me I could not have it because it was a boy-toy. I think that was my start of feminism because I did not want to be told I "can't because I am a girl." So, there has been an interest all along in trains.

I would go with my grandparents to get ice from the ice-house that sold ice to the railroads. I think it was on Ash St. or something, a little north of downtown. They lived on North Penn. There is a set of tracks that parallel 4th St and I remember waiting for trains there and driving beside the trains. That was always cool, because my dad would say we were racing the train. The trains worked around downtown Salina – you had the engines that were moving a lot in that area because there used to be a lot more train-supported industries than there are now. And so, they were just part of life. They were big, and they were impressive for a 6 or 7 year-old kid.

BP: Now you look at the buildings along Santa Fe in Salina and there used to be spurs going into them. Any other experiences in Salina?

Chris: Before we moved to Great Bend and I was 10, my mother wanted to make sure we had a

train ride as a passenger because she felt the trains would be going away soon. She wasn't too far wrong. So, she took us on a train ride from Salina to Abilene where my grandparents lived and back. But, that was the longest trip my family took on a train.

BP: When you moved to Great Bend, did you get involved with the trains down there?

Chris: No. After we left Salina, trains became less and less a part of my experience. But, in about 2009, my mom took us on a family vacation to Colorado. All of my sisters, brother, and their families went. David didn't go with us that time. We stayed in a big house in Breckenridge, and my grandmother Walker, who was in her 80's at the time, went with us. And of the things we arranged to do for some of us, one was to ride the train in Georgetown. I sat with my mother and grandmother and I was fascinated with my grandmother because she knew all the train signals because my grandfather was a conductor.

BP: He was in Abilene?

Chris: No, this is my dad's second wife. This is my step-mom and her mom. Dad met her in Goodland. Granddad Walker was a conductor back then on the CRIP. He would make the runs from Goodland to Denver and back. I would see him get ready for work when I stayed with them. He would take off and he would be gone for a day or so. "When is grandpa coming back?" would be one of the conversations. But, he retired a couple of years after my dad and stepmom got married. It did not get to be a large part of my life – it was just there.

BP: But it was still an exposure?

Chris: Yes – an exposure. So, on the trip on the train in Georgetown, I had a narrator all the way up and back. Grandma would tell us what was going to happen next – not that she was telling everybody; she was relating what was going to happen. It was like she was remembering happier times. It was just amazing to me that she remembered such detail and that there was such detail to deal with. She would talk about the braking, all kinds of stuff that I don't remember any more – but it was just fun. So I had that experience and it kind of went away. And then I saw David sitting in the middle of the n-Scale oval smiling up a storm....

BP: So what was it that you were interested in once that started?

Chris: Well, the first thing I was interested in was to make sure we still could retire! Because the spending on his part needed to be moderated. So, I became the Chief Financial Officer. And, as he would do things, he would tell me what he was doing. Just because he was doing it, I was interested – I was interested in finding out what was going on.

I find model railroading to be one of the most intellectually stimulating hobbies that I have ever seen – and maybe I haven't looked at hobbies correctly. There seems to always be something to learn. It has taken us into new territories in terms of learning and the craft and the art. Not just watching him play in operations, but watching him work with models. Yeah, he used to build ships. But for example, building houses – how do you get that to look right? - how do you get it straight? - how do you paint it? Going through all those steps has been a learning experience.

BP: How have you been involved with the hobby – what have you done with it?

Chris: Well, other than being CFO, I shop for cars. When we go to train shows, that has been one of the things I have had fun with. I buy cars for the layout that are period-appropriate. And, my primary modeling, physically, has been cars (automobiles and trucks).

BP: For the layout?

Chris: Yes. All of the vehicles of our traveling layout are things I have built. I decided I wanted to start out small - with something easy. So, I decided to build an N-scale pickup truck. I soon realized

that was probably the wrong approach. Things are T-I-N-Y in N-scale.

BP: Did that necessitate an opti-visor?

Chris: Ouhhh Yeahhh! [laugh]

BP: So you are participating in the spending as well?

Chris: Yes. I used a magnifying glass. And David has a glasses-type magnifier that sufficed for the truck. I have done about 5 vehicles so far, and am working on a grain truck for the module of the FREMO trans-loading facility in Canton [KS].

BP: Do you get into painting and weathering?

Chris: Yes – painting. I assemble them, and I paint them. And most of them look weathered as a result of my painting [chuckle]. Yes, the pickup truck is definitely been driven hard and put up wet. It looks like a pickup truck from out here in the country, i.e. dirty, dusty etc. It is a typical farm pickup. There is a Model-A, a Buick, and others. It has been fun going online and doing the research. Paint colors – what were the colors of paint that were applied in 1935. I want them to be prototypical.

BP: What brand of paint are you using now since there have been companies quitting manufacture of model paint?

Chris: When Engine House went out of business, David bought a lot of paint so we have a lot of colors. What I've done is mix colors until it looks like the manufacturer's car colors. With black, that is not too hard tho.... But, I have had to play around with the buff a little bit because the Buick is buff.

BP: So how big of a quantity do you mix? That is what has been perplexing me.

Chris: A quarter teaspoon is too much. And, I have had to break up paint sessions. Once I encountered this. It went something like this: "Oh CRUD. I can't mix this color again. Like [Richard Harris' song] MacArthur Park, I'll never have that recipe again." What I ended up doing, and it worked pretty well, was to scrape the paint off the plastic pallet into a piece of plastic bag and then tied it off so it made like a miniature pastry bag. I saved it for the next day and snipped off the end and eased out the paint I needed. It worked fine. I went back 3 or 4 days later, and it still painted well and matched. I did not have to worry about mixing another batch and trying to get it to match.

After the first vehicle, I learned I really needed to wash things. I created a car wash out in the Freight House [ED: A separate building devoted to their model railroading]

BP: A real "model" car wash?

Chris: Yes. An 8-ounce canning jar and lid with clear water, and another 8-ounce jar with soapy water. I put the parts from the kit in the soapy water, mix them up, fish them out, and put them in the clear water. The other thing I would recommend is that you get kits that have extra tires. They fly all over the room, and an N-scale tire is T I N Y. Ask me how I know.

BP: That is something I have yet to get into.

Chris: I looked at the layout we take to the train show, and it was naked. It needed something besides the building; it needed cars to make the scene come alive. We had people figures, but it needed cars. That was my inspiration for doing cars.

BP: I asked about weathering. Besides the cars, have you weathered the railroad cars you have purchased?

Chris: I played with one. David was doing his Golden Spike and I played with the technique he was using with powders and pastels and it worked. But I wanted something better. So I took a course that Pam McPhail from Chisholm Trail NMRA Division in Wichita offered. She did a course at the

Wichita train show about 3-4 years ago.

BP: Part of what I was leading up to was the Brass Pounder article of your visit to North Platte Bailey Union Pacific Freight Yard. You seemed fascinated with the graffiti on the cars we saw there?

Chris: Part of the interest in graffiti is that my daughter collects N-scale graffiti cars. So, one of the things I have thought about but haven't done yet is doing a car for her. I don't know if you knew it, but I've picked up drawing and coloring because of model railroading - how to use colors effectively, how to put something on the side of a car. But where can I practice - which led me to the coloring books and colored pencils. So far, I haven't drawn a picture of graffiti yet.

BP: Of course you can buy decals. From what I've seen of what you have colored, it is intricate fine detail that you are coloring.

Chris: That is the thing about model railroading. You have research. - what did the manufacturers use on cars? Are there pictures out there of an original? Where do the accessories go? For example, in these kits, when they give you headlights, they don't really mark very well where the headlights go. So, if I wanted it to look reasonably close and accurate, I had to look it up online. And, there are people that do restorations so there are pictures of restorations. They give me a basis for what to look for so I can make the car look more prototypical.

BP: Have you gotten to the point of customizing the cars, like chopping or lowering?

Chris: No, my customization has primarily been with just making the vehicle sit level [smile]. It is back to the fundamentals. Some kits are made better than others. Especially the resin kits that sometimes get distorted. So now I look for the distortion more than I did in the beginning.

BP: Didn't I remember that, at the N-scale Enthusiast Convention last July in KC, there was a whole section on vehicles?

Chris: Yes. The first N-scale convention we went to was in Roanoke and I got to see the table for the N-scale vehicle association. It is not very big. They have a Facebook page and they hold a contest for people to vote on the best model released by a manufacturer. From the Facebook link, I found out there is a guy in Germany that builds in N-scale and does some really elaborate stuff - hook and ladder trucks. In Germany, they sell Kinder-eggs. But, the N-scale vehicles inside of them are small. They are considered choking hazards so they cannot be sold here in the USA. But, he takes the vehicles inside the Kinder-egg and turns them into something fantastic by making accessories for them. They are the right scale for N-scale. But, I have enough stuff out in the freight house that I don't have to worry about getting more.

And, because the CFO has spent a lot of money, David likes to take her to train shows because she spends more than he does. It started out that we still need to think about retirement - we needed to moderate in how much money we spend on this hobby. But, it grew into something bigger. I am not that much of a moderator of what we spend on the hobby any more.

BP: It seems you are in it as deeply as he is, except it is in another capacity?

Chris: Yes, he also uses me as a consultant for colors. He'll do a layout drawing and say this is what he is attempting and every now and then I have something to contribute. I act as an extra set of eyes for him.

I also built the skirt for around the FREMO layout we took to Kansas City last July. He has done all the landscaping and I have watched. But, I might point out to him that you need more trees there, or something like that. Haven't built any buildings yet - just concentrating on vehicles.

BP: That's all right. There is a whole gamut of stuff to get involved with.

Chris: Yes, and so far the people I have met in model railroading have some interesting aspect of the hobby that I want to learn about. The conversations are always interesting. And, I don't think I will ever learn everything I need. There were so many railroads historically.

And I didn't realize there were so many different engines. They all looked alike to me at one point and they all sort of look alike to me now, but I know they are different.

BP: Have you gotten any engines yourself?

Chris: No. I just purchase vehicles or rolling stock. If I find something we might like, I say something, but I normally just stick to rolling stock. And, I go with ones that are track ready. I don't do rapido couplers. I spend the extra bucks and go with the micro-trains couplers. I did buy a couple of steam engines on e-Bay. One works and one doesn't. In retrospect, I suspect it will be one that is destined to go in a park with a fence around it. There are plenty of them around [smile]

It is also interesting to see the quality of what was manufactured over the years. The early N-scale equipment was a little clunky and it has gotten better and better and better.

We have the switching layout that we take to train shows; and David is working on a 4X8 that he is using to achieve his MMR. And we have lots of dreams about putting a layout in the freight house but that hasn't come to fruition yet. That has kind of put a halt on engine buying. But, if we ever started building the freight house layout, then the situation would change and the number of engines would go way up.

Another aspect of the hobby: Our daughter and husband and son came to join us at the Roanoke convention. About a year before, David had gone to visit them and one of the things David wanted to do was go to a train show. So, they all went to the train show. Paul, our son-in law, had liked HO trains when he was a kid. By the end of the train show, Paul had sold his HO stuff and had bought N-scale track and had a layout in the living room. So, David is responsible for them getting into the N-scale too.

They are definitely collectors. And, their son now had an O-Scale layout, but he likes N-Scale – particularly farming stuff. And, their daughter is attracted to trains and she collects Hershey's cars and vehicles in HO. So, the whole family got affected by model railroading.

In the spring of 2012, 844 went through Wichita. A couple of weeks before this experience, David had gone to Topeka looking for something but he was frustrated because he was stuck behind a train going through with all these people lined up and he was running late. So, he turned around and went a different direction. Then his mind clicked in: "Oh, those were yellow passenger cars." He calls me up on the phone and says "Quick, find out if there is a special train going through Topeka 'cause I think I saw it and maybe I can catch it 'cause he was headed towards Lawrence." I did manage to search on the Internet and 844 was on the way to Kansas City.

I then found out how to follow 844 on the Internet and found out it was going down to Texas and then back through Wichita. So we knew when it was going to be in Wichita and what time. We were in Wichita with David's dad and sister when it was supposed to be there and I looked down on Twitter and it said it was in Derby. So David looks at his dad and said "do you want to go chase a steam engine?" Twitter was probably about 10 minutes behind where the train really was. We tried to catch up with it but it was always ahead of us through Wichita. You could hear the steam whistle though. And the smile on David's dad's face was great – this great big smile. We finally caught up with it in north Wichita when it was near the elevators. And it headed north-east and it parked at about 39th street and Oliver and was going to spend the night there. It was getting water from a fire truck and all kinds of people out and about and around. Cool!

BP: I assume everything is Santa Fe that you are modeling?

Chris: Since I am doing vehicles, I do not have to worry about that. But, yes, when I buy stuff, I try to make it appropriate for our layout. We intend the layout to be Santa Fe through the Flint Hills in the late 30's-early 40's.

BP: So that would be almost exclusively steam then?

Chris: If I remember right, the early diesels started about '37 on the Chief. They tried the diesels out for road use. They had diesels in yards in other places but they didn't have diesel road engines for freight

BP: What all do you plan on for the layout?

Chris: I think I have convinced David that we will have a nice, big Newton. And, we will have Sand Creek represented. Newton was a busy center in that time frame with trains coming in from the east and west. And passenger trains continued south as well as west. I think there was some stuff that went north too.

The other end of the layout will be Emporia. It probably will be two levels with a helix in there somewhere. And there will be some small towns so we can have industries.

BP: How big of a layout will it be – how many feet?

Chris: Probably 90-100 ft. of track. And, our thought is to have a peninsula since we cannot block the large entrance door along the long wall of the building. And, because of the differences in height between David and I, as well as my bad ankle and potential wheelchair in the future, we could probably get more layout in there. But we need to consider the ADA aspects of the floor plan – at least a sitting position. Which then has led to discussions between David and myself as to what height to make the layout. David is a foot taller than me, and that leads to line-of-sight issues for each of us.

BP: Well, you could have a "his" and "hers" - half the layout for him, and half the layout for you?

Chris: Yes, we could. But, that wouldn't be any fun... And, he does play more with the operations.

BP: Height and separation are the concerns when you are looking at optimum viewing.

Chris: What I can see on two levels is often blocked from David being able to see. So, we will need some sort of compromise. Also, we have toured a number of layouts, and there are some with very narrow aisle. We want to avoid that too.

BP: That becomes part of your design criteria?

Chris: There is one in Kansas City that is in the mechanical room and there are 4-5 levels. All of it has scenery, but the lower level is like 20 inches above the floor. He was running out of space, and he said he just "needed to have another level." He can operate it; he can work it. But it would be hard to have an operating session. Since David really, really likes operations, our layout has to have operations...

BP: You each compliment what the other is doing, each of you have different interests. How have you been involved in the NMRA? Have you gotten into the Achievement program?

Chris: I won't until my retirement date. But, I really enjoy going to national conventions. And, I enjoy going to the clinics. I learn about more stuff in the clinics than what I learn in reading books and magazines. They are only 1-1 ½ hours long. It is not a lot of exposure but it is enough that lets me know that I want to learn more. I would love to get into 3d printing.

BP: Then you could have the exact car you want?

Chris: On the grain layout, we don't have any of the augers that get the grain out of the trucks and into the piles. 3D printing would be great for that. There is some stuff on Shapeways but they are a little pricey. On the grain layout, we have the silos modeled, but there are lots and lots of external

stuff on them that need to be modeled that would be perfect for 3D.

BP: That means software that you have to become familiar with.

Chris: Yes, but that does not scare me. But, I need the time to study the use of the software, which I don't have time for right now.

BP: What could we do at the Division level to encourage our members to turn out?

Chris: I think we have somewhat changed our meetings around to be more hands on. The last year has been productive. And, I have enjoyed the interviews [in the Brass Pounder] and knowing about people. We are so spread out and that is a disadvantage for us.

BP: So that brings up the question of how do we get the participation and still accommodate the 2-2 ½ hours travel time from end to end?

Chris: It might be that we could do clinics or presentations via video connection - video conferencing. That might be one way to enhance the communication. We live out in the middle of nowhere so we expect to travel no matter what. But, I realize that not all of the members share that feeling.

I've seen a lot of young people interested in the hobby as we go to train shows. By that I mean less than age 40, and there are grade school through high school kids that are interested in trains. Getting kids out is a challenge and young families don't often have a lot of time to do that kind of stuff.

I think those of us that are the older ones that will have the bigger layouts and spend the most money. That is just the nature of the hobby. But, if we can reach out and let other people know that our layouts are open and they can join us. I do see that some people are very protective and make it an individual hobby. But, there should be a way to invite others in so they can enjoy and learn.

BP: I've asked the question of others about maybe a central location for our meetings, like Herrington. What do you think?

Chris: You still have travel. It is still 1½ hours from either Topeka or Emporia.

Going back to the earlier question, I sometimes really feel lonely because I am the only spouse or I am the only woman, not necessarily in this division but other locations too. So, I wonder why there are not more partners involved in model railroading – are we actually excluding the spouse?

I have also seen, in a national magazine, wording such that women are unintentionally excluded from things. I think that is one of the things the hobby needs to look at. I don't think they want to be exclusionary. There is nothing in the hobby that is inherently "male."

I was talking to David about this the other day, and weathering is just like applying makeup to your face. The skill of applying makeup could be applied to a car. It is the same kind of thing. A lot of women are into miniatures anyway. which could have an application too.

BP: I've noticed that at the model railroad conventions, they have things for the modelers and, oh by the way they have a quilting bee at the same time, as though the women aren't part of model railroading. If that is not sexist, I don't know what is?

Chris: I appreciate that not everyone that is a partner is interested in trains. But, there shouldn't be the "men's track" and the "women's track." But, I think the non-railroad events should not be focused just on the feminine.

BP: The question is how many of the modeling community feel that way?

Chris: I know there are some. The couple that run Spring Creek are clearly in it together. But, I see language in a lot of publications that is exclusionary. You don't have to use male pronouns all the time.

BP: Do you see it in our group?

Chris: No. I haven't felt it or seen it. It has been fun. I am treated like an equal. And, when I go to conventions I am treated like an equal. But, I think it is one of those things people forget about. When doing a publication or a video, there is a language that is "male". You know, one of the Chisholm Trail NMRA members has a layout and I understand the colors are wonderful on it. And, he has a wife that is a color consultant and does not consider herself a model railroader. But, she is probably very important to his layout. There is probably more of that going on than we give credit to throughout the hobby. The gender awareness still could be better promoted.

BP: What other outside activities are you involved with besides model railroading?

Chris: Work, right now! But, model railroading has led me to look at things differently.

You really have to see what you are looking at. When I looked at Bailey yard, I looked at it differently than someone not interested model railroading. When I look at the track in Salina, I look at it differently than when I was a child. I see it in detail and I see how it works. And, that has led to being able to sketch out what I see. That has led to drawing, which is becoming a strong interest for me. I have already told David that when I retire I want to take some art courses at Emporia State.

Another activity is one that you experienced this afternoon - cooking [ED: An excellent experience, I might say. Yum!] I love to cook. I hope some day to write another cookbook.

BP: Traditionally, cooking in a domestic activity that is for the woman. Is that why you like cooking?

Chris: No! I just love it. When I was doing industrial cooking in the 70's, you had to be man to be the chef. I would have loved to pursue that, but decided not to and went into management and computer related stuff. It was really about 15 years later that women really came on strong in the industry.

BP: How about travel? That seems to be one of the things you and David enjoy.

Chris: Travel is definitely what we like to do. With retirement, we will have more time to travel. We have done a lot of train travel since 2011. We did a great circle from Kansas City to Los Angeles to Portland to Essex Montana to KC. We have done Kansas City - Los Angeles - New Orleans - Kansas City. We have done Toronto to Vancouver in the winter. I want to go back and do that in the summer.

BP: Has all this travel caused you to reconsider what you model?

Chris: Actually, no. We struck on the idea of the Flint Hills in the 30's because that is when David's dad grew up and that is where the idea came from. If anything, it is the availability of funky diesel engines of that time period.

But, David built an n-Scale module because we were both fascinated with the transloading facility over by Canton. So that necessitates modern era cars and railroad equipment.

It is just a wonderful hobby. There are so many different aspects of it. You are exposed to so many different things. And, I did not really realize where this was going when I saw the "6-year old" in my basement and that I would become this interested in model railroading. So, I would say don't close off possibilities. There are many ways to express one's self. And, it just points out that real railroads are an integral part of our life. The amount of freight moved across the country is tremendous.

BP: Chris, thank you for your time. It has been fascinating talking with you.

Chris: Thanks for the opportunity.

KCD Modeling in the NModelRA

Our Member's Modeling Activities

-Locomotive Speed Calibration-

and

-Engine Speed Matching-

by Ray Brady

When I was putting the finishing touches on the design of my N-scale layout and getting ready for the construction, I had already been thinking about what I would be needed to make my layout fully functional. One issue was: How I was going to set up the motive power to get the engines to run together (Speed Matching and Consisting)?

Before I had even started my layout, I already had some steam, diesel, and turbine power from multiple manufacturers and knew that various manufacturers' locomotives ran differently. Plus, the decoders that would find their way into the locomotives (if they didn't already have one) would also have their own speed characteristics. And, because of the elevation changes on my layout with the corresponding 4% grades in places, multiple unit consists would be necessary, with even DPU's or helper service necessary in some areas.

That led me to the start thinking about how to set up my engines to get consistent speeds from my locomotives – both in terms of the **engine speed vs throttle setting** of each locomotive and **matching speeds** so all the locomotives could be run together as consists or helpers.

The discussion that follows outlines different methods of measuring speed followed by the details of the method I am using to speed match my locomotives.

Locomotive Speed:

Let me start with how to characterize the speed of locomotives. I knew I could determine speed (or scale speed) simply by measuring the time it took for a locomotive to traverse a known distance. After all, speed is simply distance divided by time. So, for an N-scale locomotive, scale speed (in mph) is:

$$\text{N-scale Speed} = 160 * 3600 * \text{Layout Distance}_{\text{feet}} / (5280 * \text{Time}_{\text{seconds}})$$

or

$$\text{N-scale Speed} = 109.09 * \text{Layout Distance}_{\text{feet}} / \text{Time}_{\text{seconds}}$$

Note: if you are in a different scale, substitute your scale into the equation where the "160" appears, (i.e. 87 for HO scale.)

Thus, for a known distance, measuring the time it takes to traverse that distance and substituting into the formula will yield the speed.

But technically, this speed can be average speed (speed measured over a "large" interval of time) or an instantaneous speed (speed measured over a "short" interval of time and showing variability with time.). For example, 1 mile in 1 minute is 60mph. But, if you continuously change the accelerator input in your car such that your speed varies between 30mph and 90mph during that 1 minute, your average speed could still be 60mph but your state trooper would not like it when you were going 90mph....

In the discussion that follows, I'll leave it to the reader to weigh the differences between instantaneous vs average speed, the impact it has on your speed measurements, and your choice of the method to make those measurements.

Options:

While I have not done an exhaustive survey, I have identified, via an online search, some options for the different methods for determining speed on a model railroad. *Note: the inclusion or exclusion of any product in this list is not an endorsement of the product.* It is intended to give the reader a sense of what is out there when you want to do speed matching.

I lump the choices into three general methods:

1. **RADAR – Measure speed directly using a conventional radar device.**
2. **Measure wheel angular velocity, and relate that to the linear velocity of the train.**
3. **Measure the time to traverse a distance and calculate the train speed per the above formula given above.**

1. RADAR:

By far the easiest way to determine the speed of your locomotive or train is to measure it directly the way the local law enforcement officers do it - just point a “radar gun” at what you want to monitor and get your results. There are many radar guns on the market for the consumer, ranging from a couple of hundred dollars on up.

However, the practicality of this is an issue. Considering that when we are running at scale speeds, 70 mph in HO scale is 0.80 mph in the real world. And, it gets even more ridiculous in N-scale - 70 mph is 0.44 mph in the real world. I suspect that a radar gun accurate at these speeds would be horribly expensive. And, the rustling of the foliage on the scale trees would probably set off a false positive.....

Another thing to consider too: as layout owner, you could use the gun to catch speeding trains (engineers) on your layout. And you could impose fines or sanctions too. But once it became known that you had a speed trap, you would probably see an upsurge in engineers investing in radar detectors. We see them on car dashes –right? So, they would probably start showing up with engineers running trains on your layout. ;)

2. Wheel Angular Velocity:

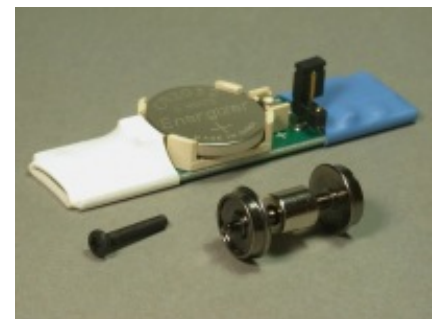
These are devices that measure the rotational speed of the wheels of your train. Knowing the diameter of the wheel, they calculate the linear speed the train is moving down the rail. While uncommon, this method has application to our modeling.

Bachrus: This is a device that sits on your track and has roller bearings that your locomotive wheels roll on. It can be configured to hold anything from a 4-axle locomotive to a 31-axle Big Boy and tender. It is available for N-scale through G-scale and interfaces with JMRI.

<http://www.bachrus.com>

Boulder Creek Engineering: This is the second entry by Boulder Creek into speed measuring of trains (see Speed Trap Photo-sensors below). It utilizes a magnet on an axle, monitored by electronics in the car, which then transmits the speed via Bluetooth to an Android smart phone. Apple iPhone/iPad capability is soon to come according to their web site. This is a relatively new device, and comes with a warning that the magnet is “extremely strong” and that persons with pacemakers should be careful with this. Also, they warn that magnetic media could be damaged by the magnet.

<http://www.bouldercreekengineering.com/rollby.php>



Computer Products for Education: This is a device that is mounted in a car and monitors the frequency of the spokes of a wheel as the car moves down the track. A light beam sensor is mounted beneath a car. As the car moves, spokes of a wheel break the light beam. The on-board computer counts how many times the light beam is broken per second and then calculates the speed of the train.

<http://www.cp4e.com/trsped.htm>



Home made Hall effect sensor: Custom made for a particular installation and measures wheel rotation over time to yield train speed. Requires assembly, as only the description of the device is given here:

<http://forums.parallax.com/discussion/162906/model-train-speedometer-and-odometer>



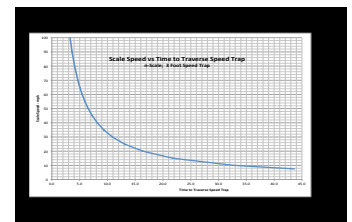
3. Time to traverse a distance:

The following speed measuring systems are based on the time it takes to traverse the distance between sensors in a speed trap. While they use the relationships described in the formula mentioned above, they use different hardware to achieve the end result.

Ruler and Stop Watch: The simplest method to calculate speed is with a known distance and a stopwatch. Record the time it takes for the front of a locomotive to go from one end of the known distance to the other end and substitute that time into the formula given above to get your answer. To do that, you need a calculator and paper to record the results.



Speed Graph: Another way is by reading the speed off a graph of the above formula. That is shown in the attached chart. Just go onto the chart to the time it takes to traverse the distance of your "speed trap" and read off the "scale speed." But this can be tedious, and requires time to use the chart. Note: the chart is for a 3-foot speed trap in N-scale.



On-line Calculators: There are a number of online calculators.

These all still require a time measurement over a known distance.

<http://www.stonysmith.com/railroad/speedcalc.asp>

<http://www.mcr5.org/articals/speed.php>

<http://www.amodelrailway.co.uk/speed.htm>

<http://www.modelbuildings.org/free-scale-speed-calculator.html>

Model Railroad Speed Calculator

1. Select your Scale
2. Select distance your consist has (or will) travel
3. Use the timer, or enter number of seconds to travel this distance
4. Click the Calculate button

Scale Z (1:220)	Timer 0:00 Start/Stop Reset	Time to travel this distance in seconds: 0.0 Calculate
Distance to travel 110 mm	Results <input type="radio"/> scale miles <input type="radio"/> inches/second <input type="radio"/> scale mph	

Smart Phone App: Another way is to use a smart phone app. The iPhone has an app called ModelSpeed that will do the calculation for you and give you the scale speed directly. I am sure there are apps for the other phone operating systems. The app has application for all the major scales, including a 1:1 real railroad. I have used it to measure the speed of trains when I have been out watching real trains. (Pick a car of known length....)

<https://itunes.apple.com/us/app/modelspeed/id317775289?mt=8>

ModelSpeed
The Modeler's Speedometer

18
S scale MPH

Start Speed Calculation

River Bridge At Club
S scale, 17.25 inches, MPH

Profile
River Bridge at Club
Model Scale: HO 1:87.1
1:1 1:2 1:4 1:8 1:16 1:32 1:64 1:128 1:256 1:512 1:1024 1:2048 1:4096 1:8192 1:16384 1:32768 1:65536 1:131072 1:262144 1:524288 1:1048576 1:2097152 1:4194304 1:8388608 1:16777216 1:33554432 1:67108864 1:134217728 1:268435456 1:536870912 1:1073741824 1:2147483648 1:4294967296 1:8589934592 1:17179869184 1:34359738368 1:68719476736 1:137438953472 1:274877906944 1:549755813888 1:1099511627776 1:2199023255552 1:4398046511104 1:8796093022208 1:17592186044416 1:35184372088832 1:70368744177664 1:140737488355328 1:281474976710656 1:562949953421312 1:1125899906842624 1:2251799813685248 1:4503599627370496 1:9007199254740992 1:18014398509481984 1:36028797018963968 1:72057594037927936 1:144115188075855872 1:288230376151711744 1:576460752303423488 1:1152921504606846976 1:2305843009213693952 1:4611686018427387904 1:9223372036854775808 1:18446744073709551616 1:36893488147419103232 1:73786976294838206464 1:147573952589676412928 1:295147905179352825856 1:590295810358705651712 1:1180591620717411303424 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1:680564733841876926926749214863536422912 1:1361129467683753853853498429727072845824 1:2722258935367507707706996859454145691648 1:5444517870735015415413993718908291383296 1:10889035741470030830827987437816582766592 1:21778071482940061661655974875633165533184 1:43556142965880123323311949751266331066368 1:87112285931760246646623899502532662132736 1:174224571863520493293247799005065244264512 1:348449143727040986586495598010130488529024 1:696898287454081973172991196020260977058048 1:1393796574908163946345982392040521954116096 1:2787593149816327892691964784081043908232192 1:5575186299632655785383929568162087816464384 1:11150372599265311570767859136324175632928768 1:22300745198530623141535718272648351265857536 1:44601490397061246283071436545296702531715072 1:89202980794122492566142873090593405063430144 1:178405961588244985132285746181186810126860288 1:356811923176489970264571492362373620253720576 1:713623846352979940529142984724747240507441152 1:1427247692705959881058285969449494481014882304 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Accutrack II: Another method is to use a ready made speed trap called Accutrack II that is a portable, stand-alone device. It has its own batteries, straddles the track, and gives you scale speed directly. It appears to utilize photo sensors to measure the time it takes to traverse the approximately 1 ft distance the sensors are spaced apart. Being portable, it can be moved from layout to layout.

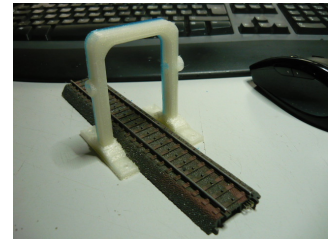
<http://www.dcctrain.com/shop/item.aspx?itemid=6124>



Arduno Microcomputer Speed Trap: This is a speed trap built on an Arduino microcomputer that calculates train speed based on distance between sensors and time to traverse the distance.

<http://dcc-arduino.weebly.com/scale-speedometer.html>

<http://baijs.com/model-train-speedometer/>



Speed Trap Photo-sensors and a microprocessor: Each of the sensors below offer speed measurement of a train utilizing two photo sensors and a microprocessor that is programmed to sense the time interval the sensors are triggered and calculates the train speed based on the sensor separation. They are arranged in ascending order of cost.

<http://www.bouldercreekengineering.com/hotshot.php>

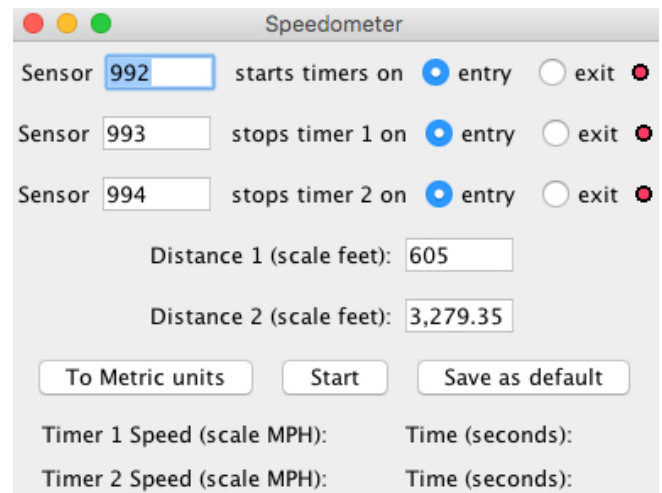


https://www.tcsdcc.com/Customer_Content/Products/Train_Speedometers/index.php

<http://www.trainelectronics.com/products.htm>

JMRI Speedometer: Java Model Railroad Interface is a suite of tools that allow the model railroader to maintain a roster of locomotives and their decoder information, program the decoders, set switch routes, detect track occupancy for dispatching and layout signaling, control multiple trains/engineers on the layout via a human dispatcher, route cars to industries, and more. Included in the suite is a speedometer that makes use of block occupancy detectors to determine the time to traverse that block.

<http://jmri.sourceforge.net>



My Speed Matching Philosophy and Process:

JMRI is the tool I chose to do my speed matching. I already had chosen to use JMRI because of the ease of programming decoders – no need to know the CV numbers or what they do. For me, the simultaneous use of JMRI to measure speed was a natural extension since the speedometer and the decoder programmer tool can be displayed on the computer screen simultaneously.

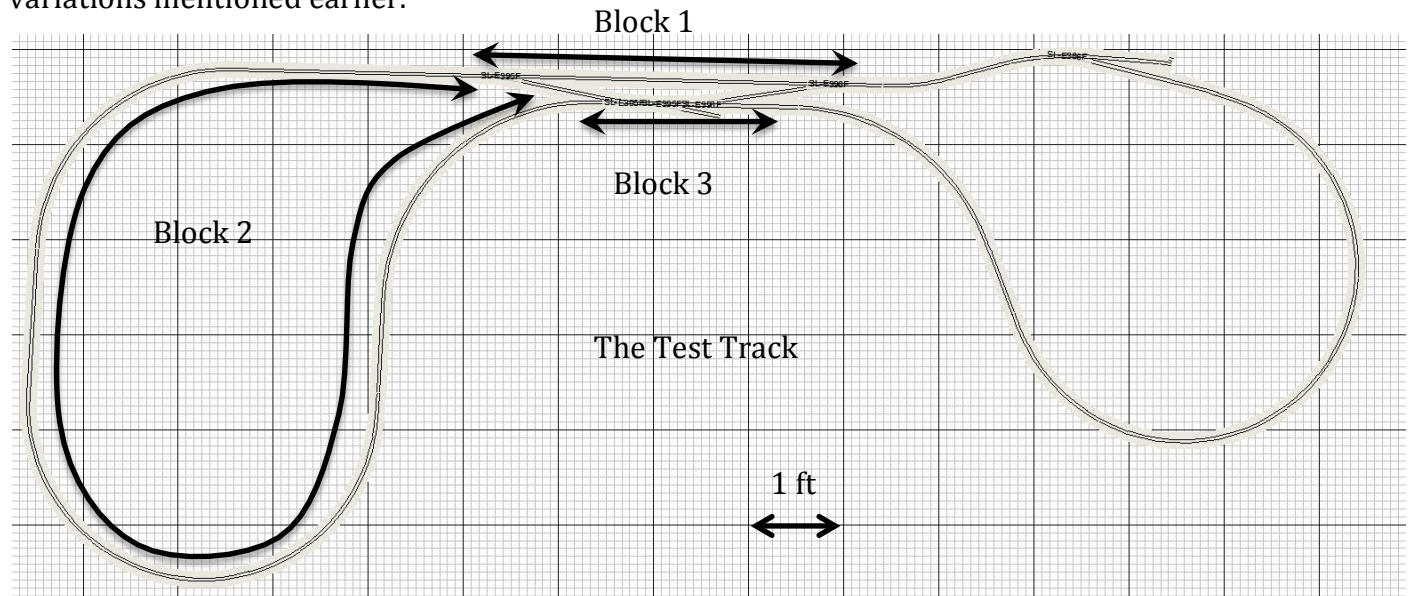
Here is the write-up for the speedometer module in JMRI

<http://jmri.org/help/en/html/tools/speedometer/index.shtml>

System: I am using an NCE Powerhouse Pro DCC system. The hardware needed to set up the JMRI speedometer was three block occupancy detectors (I used three BD20's) and one AIU01

(Auxiliary Input Unit) that connects to the NCE cab bus. Since the AIU01 has input for 14 external devices, the remaining slots will be used for other block detection as I expand into block detection and signaling on the main layout. Any block occupancy detector compatible with your DCC system would work.

Block detection: Shown on the diagram below are the blocks used by the JMRI speedometer. I always run counterclockwise for speed matching. Block-1 is approximately 4 feet long; block-2 is approximately 20 feet long. Block-3, while approximately 3 feet long, is needed to trip the timer in JMRI to end the long-block time trial. The Block-1 four-foot section is on a tangent track and was chosen to be able to measure slow speeds in a reasonable amount of time (4 feet at a n-scale 10mph takes 44 seconds.) The 20-foot Block-2 was chosen to have both right hand curves and left hand curves that allow any speed variations to average out – thus helping to negate the instantaneous speed variations mentioned earlier.



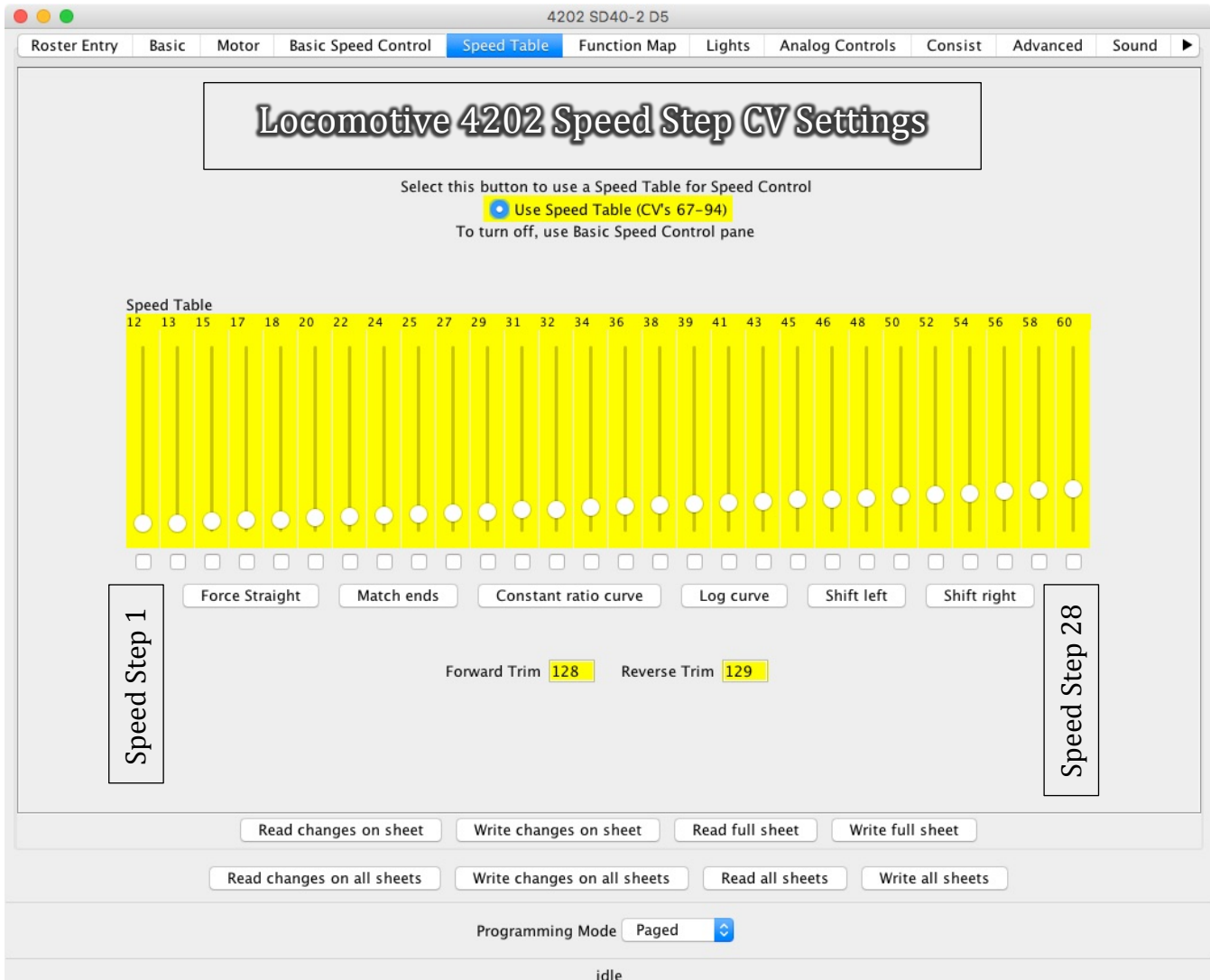
Test Track: The section of the layout I chose to measure speed was a test oval I purposely built that has capability for either DC or DCC. I wanted DC capability so that I could test and break in newly acquired locomotives without the need for them to be on the main layout DCC system. This test oval was integrated in the planning of the overall layout and allows crossovers to the main layout so that there is no need for a 0-5-0 manual switcher (X 2 if needed) to handle the equipment once it is deemed ready to go on-line. The crossovers also happened to be where branch lines diverged off the Union Pacific's Menoken-to-Gibbon mainline – at Hastings and Marysville on my layout. The test oval is shown in the diagram above.

The Track: Each piece of Peco Code 80 track has 22-gauge feeder (a maximum of 12 inches long) to a 14-gauge buss, then through the track occupancy detectors to the power booster. This minimizes any voltage drops that could affect the speed of the locomotive.) I used insulfrog turnouts on the test track, and probably will retrofit to electrofrog turnouts because of some sparking at the frogs.

Speed – Speed Step Relationship: I chose to establish ONE *speed-speed step* relationship for ALL locomotives. I chose speed step 1 to be “creep” – as close to 1 mph as I could get it. I chose 70mph scale speed for the maximum speed of all my locomotives. And, I chose speed step 28 to correspond to that speed. Further, I chose to establish a linear speed curve. Hence, speed step 24 would be 60mph; speed step 20 would be 50mph, speed step 16 would be 40mph; etc. Thus, for any of my hammerhead ProCabs, I could look at the displayed speed step and instantly know the scale speed. And, I would know that I could choose ANY locomotive to consist with ANY OTHER locomotive. Note: I have had as many as 14 locomotives in an advance consist without any bucking or snorting.....

Documentation: To automate the process and to document the results for each locomotive, I

set up a spreadsheet to record the speed for each throttle setting. From there, MExcel turns the data into a graphical form to see how much deviation I have from the desired linear relationship. This form is shown in the attached figure on page 23 for my Kato SD40 Road Number 3017. Note that I take three speed measurements through the speed trap and then average the speed for a particular throttle setting. This lets me check the repeatability of the data, or whether there is something going wrong (see below for lessons learned.)



Procedure: To accomplish the speed matching, I adjust the CV's for each speed step to yield the desired speed and then check repeatability by getting three samples. Once that speed are calibrated in the forward direction, I then adjust the "Reverse Trim" CV in JMRI to yield speeds at all speed steps that match the forward speed curve. This has worked out pretty well in all my locomotives.

The actual steps in the process include:

Run the locomotive in the forward direction and:

1. Set the decoder forward trim to 128.
2. Turn off momentum.
3. Iterate on speed step-1 slider so the locomotive moves at 1 mph (creep speed.) For this I use a 2-inch section of the loop and measure the speed using the ModelSpeed App on my iPhone. This step is not as accurate as the remaining procedure but starts the locomotives moving once the throttle is cracked – so all locomotives will creep at the same time.

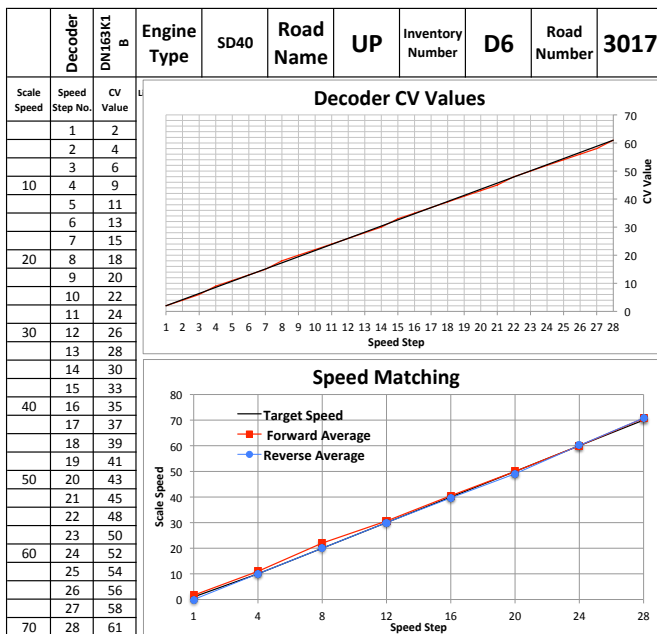
4. Iterate on the speed step-28 slider value so the locomotive moves at 70 mph scale speed. This will be the locomotive max speed.
5. Set speed step sliders for the intermediate speeds (normally little deviation from linear, but read on.....) I use speed steps 24, 20, 16, 12, 8, and 4 for the iteration process. I let JMRI interpolate the intermediate speed steps. From this, I can see how linear the decoder-locomotive combination really is without having to look at all 28 speed steps.

Then, I reverse the direction of the locomotive on the test track (so I can still run counterclockwise) and check for proper speed in reverse.

6. Set reverse trim value to 128.
7. Start with speed step 28 and measure the scale speed.
8. Adjust reverse trim to yield 70 mph at speed step 28 in reverse.
9. Check all other speed steps to assure they are consistent with the forward speeds. Normally, I have seen the locomotives/decoders come in within a scale 1 mph or less of the forward speed.

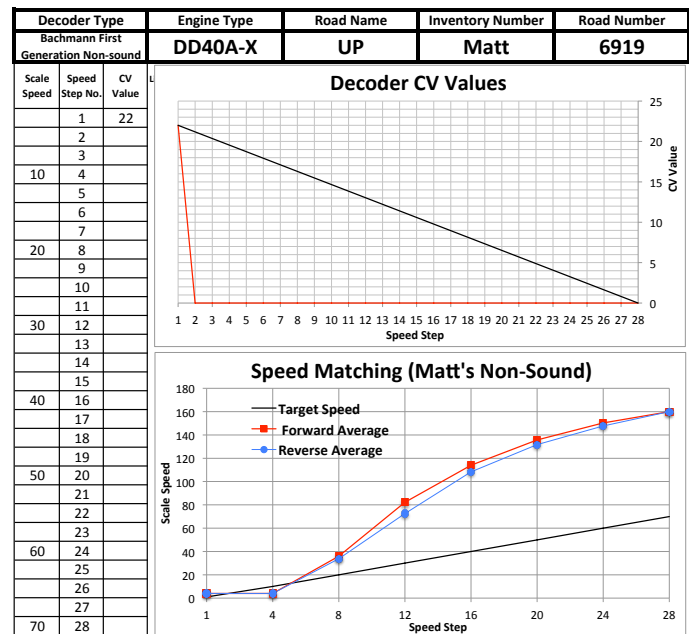
Once I complete this process, I can be assured that all my locomotives will behave similarly and they can be consisted or DPU'd. And, they can run forward OR reverse without concern that they will be mismatched.

Linear Decoder Behavior



Forward Trim = 128 (CV 66)					Reverse Trim = 132 (CV 95)				
Target Speed	Speed Step	Trial 1	Trial 2	Trial 3	Forward Average	Trial 1	Trial 2	Trial 3	Reverse Average
1	1	1.7	1.7	1.6	1.7	0.0	0.0	0.0	0.0
10	4	11.0	11.0	11.0	11.0	10.0	10.0	10.0	10.0
20	8	22.0	22.0	22.0	22.0	20.0	20.0	20.0	20.0
30	12	30.8	30.5	30.6	30.6	30.8	29.6	29.6	30.0
40	16	40.6	40.3	40.6	40.5	39.6	39.5	39.9	39.7
50	20	49.9	50.0	50.0	50.0	49.0	49.3	48.9	49.1
60	24	59.6	60.2	60.3	60.0	60.3	60.3	59.9	60.2
70	28	71.0	70.6	70.6	70.7	70.2	71.2	71.1	70.8

Non-linear Decoder Behavior



Forward Trim = N/A (CV 66)					Reverse Trim = N/A (CV 95)				
Target Speed	Speed Step	Trial 1	Trial 2	Trial 3	Forward Average	Trial 1	Trial 2	Trial 3	Reverse Average
1	1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
10	4	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
20	8	38.2	35.3	34.4	36.0	29.8	35.4	36.1	33.8
30	12	82.6	83.1	81.1	82.3	72.7	72.9	72.1	72.6
40	16	114.0	114.0	114.0	114.0	108.0	108.0	109.0	108.3
50	20	137.0	135.0	135.0	135.7	132.0	132.0	131.0	131.7
60	24	151.0	151.0	149.0	150.3	147.0	147.0	149.0	147.7
70	28	158.0	161.0	161.0	160.0	161.0	158.0	161.0	160.0

Caveats: Sometimes despite all good intentions you “can’t get theya from heah” as they say in Maine. Sometimes decoders are very limiting. The second chart (above) shows the results of speed mapping a Bachmann non-sound DD40A-X with factory decoder. There is only one CV that can be programmed – the CV for start speed. “You get what you get” for the remainder of the speed curve. Obviously, if you want to run that locomotive in a consist or DPU'd, the other locomotives would

require speed matching everything to this particular locomotive, which is what I had to do with a sound equipped DD40A-X and a Kato SD40-2 for a member of the Topeka n-Trak club. My choice would be to change out the decoder, which is what I will have to do with my early Athearn Challengers and Big Boy's that use the MRC decoders.

Lessons Learned: Maybe it is because I am in n-Scale, but some things I learned from this process:

1. The locomotive must be clean and properly lubricated internally. Since I usually pick up a lot of my locomotives off e-Bay, some have been "well used." I have been doing a complete teardown, cleaning, and lubrication before I start any calibration.
2. The track and wheels must be VERY clean. Because of my being in n-Scale, I usually clean the test track after every locomotive, and clean the wheels before starting the calibration. I use alcohol to remove any contaminants – I have been unsuccessful with any track coating that "enhance" electrical conductivity.
3. The internal electrical contacts of the locomotive must not be intermittent. If in doubt, solder or attach permanently. Any intermittent connections will throw off your calibration effort.
4. The use of insulfrog turnouts sometimes leads to intermittent electrical continuity, depending on the speed of the locomotive. As I mentioned above, I will be changing out to electrofrog turnouts on the test track (I already use Peco electrofrog large turnouts throughout the rest of the layout.)
5. Trackwork must be relatively level with minimal gaps at track joints that would induce truck bouncing.
6. Make sure there is sufficient rocking and pitch capability in the trucks to allow for uneven track. If not, you may get intermittent electrical contact.
7. Minimize the non-block detected section of the speed calibration loop. My loop is approximately 50-ft in length (for other reasons), with only 4-ft devoted to the slow speed calibration, and 20-ft devoted to the high-speed calibration. With the 3-ft exit detection section, that leaves over 20 feet where you are just waiting on the engine to get back to the first detection block. Time to think (translated: boring.)

Thus, I've describes the process I use for speed matching locomotives. It takes considerable time (about 2 hours per locomotive) but I have been very happy with the results of this process. Some may consider it "overkill" but I feel the end results justify my time investment.

APRIL 21, 1917
J.C. Johnston and W.E. Grove, of Newton, were in Marquette on Tuesday in the interests of extension of the Missouri Pacific from McPherson to Marquette. It is proposed to build a line straight south from Newton to Wichita, another one straight east from Newton to Madison, thus making an outlet from Pueblo to St. Louis and from Marquette to Wichita more direct and more convenient for passengers and freight.

125 years ago
APRIL 22, 1892
Only \$5.55 to Kansas City and Return. The Union Pacific will sell tickets from Salina to Kansas City and return at one fare for the round trip. Tickets on sale May 3 to 5 inclusive, limited to May 8.

APRIL 20, 1867
There must have been great excitement in Salina on Saturday, April 20, 1867, exactly 100 years ago. The Union Pacific railroad's Eastern Division track was completed in Salina on that long ago day. Trucks from Junction City to Salina had been laid at the astonishing speed of one and a half miles a day in spite of severe weather, floods and threats of Indian trouble. And so the railroad came through Salina and eventually linked the nation 100 years ago.

KCD *Modeling* in the NModelRA

Modelers from the Past

From the pages of the Caboose Kibitzer
Fall 2000

Duties of a Railroad Conductor **By Conductor R. G. Mason** **Union Pacific Railroad**

I hired out on the Cotton Belt RR in 1962 as a brakeman. In 1967, I was promoted to conductor. The Cotton Belt RR is owned by the Southern Pacific RR. As of February 1998, and because of the Southern Pacific and Union Pacific merger, I now work for the Union Pacific RR. My heart is still with the Cotton Belt! I model the Cotton Belt in HO Scale.

Let's talk about the conductor and his job on the Railroad. The train dispatcher will notify the crew dispatcher as to the time to call a crew for a train. The crew dispatcher will then call the crew, which usually consists of a conductor and an engineer for all through-freights. A local or yard crew usually has 1 conductor, 1 or 2 brakemen or switchmen, and an engineer. The crew dispatcher will give the crew about a 2-hour call. For instance, at 6:00 am the crew dispatcher will call the crew and tell them that they are called for 8:00 am.

Upon going to duty at 8:00 am, the conductor will go to the computer and pull up his paperwork and send it to the printer. The paperwork consists of a Train Orders, Train Consist, Train Graph, and a Work Order. Everyone knows what Train Orders are but what is that other stuff? A Train Consist is a list of the cars in your train showing loads, empties, dangerous, wide loads, etc. The train graph is a bar graph showing how the tonnage is spread throughout the train. A work order shows you what work you have to do en-route, pickups, setouts, etc.

After you get the necessary paperwork,

you have a job briefing with your crew. A job briefing is a discussion of the work to be performed on that trip so everyone understands what is to be done. You then go to your engine and call the yardmaster to see what track your train is made up on. The engineer does not move his engine except when the conductor gives him a signal to move. The conductor is in charge of the train and the engineer is in charge of the engine, but the conductor tells the engineer when and where to move the engine. After putting the engine on the train, you call the air department for an air test. The air test is performed between the car department and the engineer. If there is no car department then the conductor performs the duties of the car department and makes a walking inspection of his train to see that all brakes set and release on all cars. All trains are required to have a working EOT. As the train leaves the terminal, the conductor rides on the lead engine with the engineer. The conductor helps the engineer watch for all block signals, which affect the movement of his train. The conductor watches all road crossings for approaching vehicles. The engineer and conductor both look their train over on all curves to see if everything is OK. You look for smoke, unusual dust, and shifted loads. About every 20 miles there are detectors placed near the track to detect defects on your train. The detectors talk to you and tell you if or where a defect is located in your train by counting axles from the head end of your train.

The detectors look for overheated bearings, hot wheels, equipment dragging, and wide loads or shifted loads. When the detector tells you of a defect, the engineer stops the train and the conductor then walks the train and counts the axles from the lead engine to the defect indicated by the detector. Sounds easy? Remember there are no sidewalks, only rocks, weeds, mosquitoes, snakes, 100 degrees in July, -0 degrees in January and maybe snow or ice. Or

how about some rain, wind, dust? Guess where the engineer is while the conductor is out in the weather? The conductor's job can be tiring. Sometimes you are cruising along about 50 mph and the train goes into emergency without warning. The conductor gets to walk the train again to determine the cause of the emergency. I guess I should explain "emergency." Emergency is when the train loses its air and the brakes will automatically set up and stop the train. The conductor or engineer can cause the train to go into emergency, or a busted air hose, train separation, or the EOT fell off, anything to cause the air pressure to go to 0. Most trains carry 90 pounds of train line air as indicated by the air gauge on the EOT. Train separation sometimes happen when the engineer takes off too fast before all slack is out of the train and a knuckle will break, resulting in a train separation and loss of air pressure. Yes, you guessed it. The conductor walks the train, puts in a new knuckle by himself, and then couples up the train and recouples the air hose.

The conductor is also the switchman if there are any cars to be picked up or set out en-route. Sometimes your setout is on the rear end of your train and sometimes you are told to

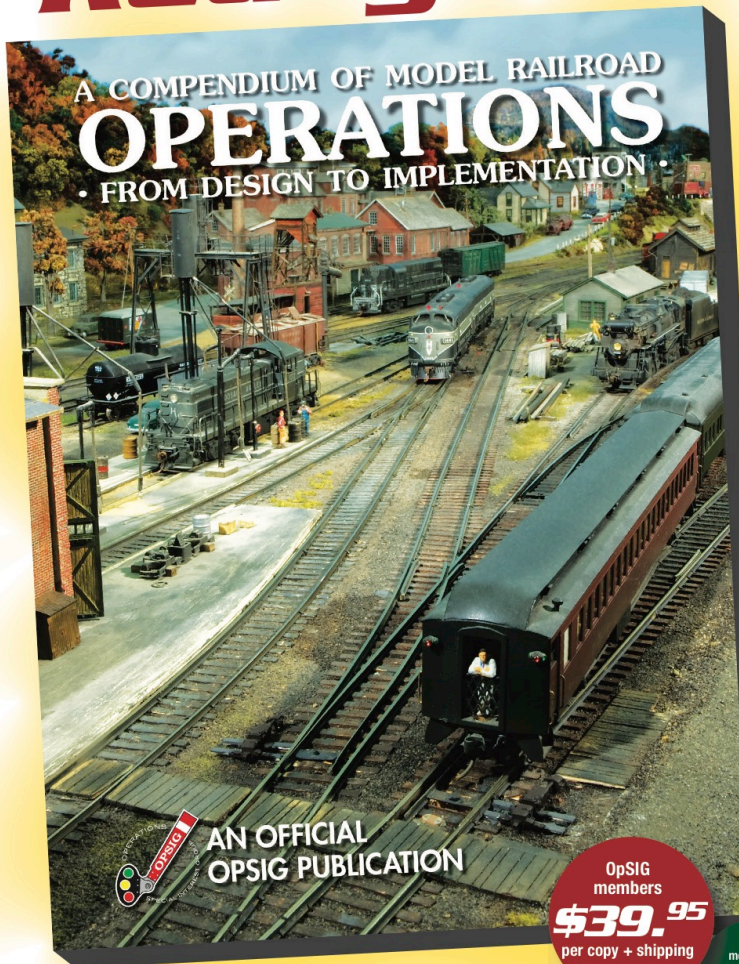
pick up cars on the rear of your train or behind a set amount of cars. After the work is done you walk back to the engine. Remember, weather is no problem. You learn to dress for all occasions, Rain, Snow, Sleet, or Hot Hot Hot! You are not allowed to stop the train to eat, you have to take your lunch with you and eat whenever duties allow. Average on-duty time is 10-12 hours. When you arrive at your final destination, the conductor will yard his train in 1, 2, or 3 tracks (depending on how many cars you have.) then cut off the engine and take the engine to the roundhouse, pit, engine track, etc. The conductor will then fax his Work Order to the RR headquarters, which in my case is Omaha, Nebraska. Upon going off duty, the RR will take you to a nearby hotel for 8-36 hours. That's right, you do not know how long you will be at the hotel. The crew dispatcher will call you and give you a 2-hour call when they are ready for you to come back to work and take a train back to your home terminal. When you get back home, you do not know how long you will be home, probably 8-48 hours. It is impossible to make appointments, dates, or plan to do something with your family. You have to carry a pager with you and be available for work at all times, 7 days a week, 24 hours a day with no holidays and no weekends. There is **ONE** benefit to this job: **It pays well.**



A Special Interest Group (SIG) is an independent, not-for-profit, membership group organized to provide a forum for the exchange and collection of railroad prototype and/or model railroad information about specific topics. The Operations SIG (OpSIG) has chosen to join the NMRA Special Interest Group Program and is devoted to furthering the simulation of prototypical operating practices on scale model railroads. They have recently released a second OPSIG book shown below. If interested, see the information below.

Dispatcher to OpSIG Publication No. 2, you're ...

Ready to Roll!



All model railroaders, whether expert or beginner, will find a wealth of useful information in the OpSIG's second publication, **A Compendium of Model Railroad Operations - From Design To Implementation**. A complete guide to all things operations, our latest offering covers every aspect of prototype operations and how to apply them to your model railroad—from design and staffing to yards and paperwork, from communications and signals to dispatching and car forwarding—in 310 full-color pages. Written by ten of your fellow modelers and professionals, **The Compendium** contains more than 350 photos, 120 illustrations, and countless tips, pointers, suggestions, and prototype information to help guide you on your journey. A must for any modeler interested in prototype operations, add it to your library today!

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Timetable

A Look Down the Line beyond the June 2017 Meeting

Mark Your Calendars
August 5, 2017
1:00 PM



The August Meeting of the Kansas Central Division – NMRA

Hosted by
 John Snell

Abilene and Smoky Valley Railroad
Abilene KS

The KCD meetings for remainder of 2017

<i>August 5</i>	<i>Abilene and Smokey Valley Railroad</i>	<i>Abilene KS</i>
<i>October 7</i>	<i>David & Chris Heinsohn</i>	<i>Elmdale KS</i>
<i>December 2</i>	<i>John Snell</i>	<i>McPherson KS</i>

Plus, we may have some ODD MEETINGS throughout the year