Caboose Kibitzer

2ND QUARTER 2010 VOLUME 60, ISSUE 2

- BUILDING A "REALLY" BIG BRIDGE
- YARD THROAT CONTROL
- THROTTLE TIME

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Submissions: The *Caboose Kibitzer* welcomes articles, photographs and other model railroad or railroad-related contributions. Contact the editor for more information.

Advertising: All advertising inquiries should be directed to the Advertising Manager. MCoR reserves the right to refuse or drop advertising for any reason. Advertising in the *Caboose Kibitzer* in no way constitutes an endorsement by MCoR or the NMRA.

Deadlines: All materials submitted for publication must arrive no later than the dates listed below to be considered for inclusion in that issue:
First Quarter 2010 . . . . Jan 31, 2010
Second Quarter 2010 . April 30, 2010
Third Quarter 2010 . . . . July 31, 2010
Fourth Quarter 2010 . . . Oct 31, 2010

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WAYBILL

SECOND QUARTER 2010
VOLUME 60, NUMBER 2

FEATURES

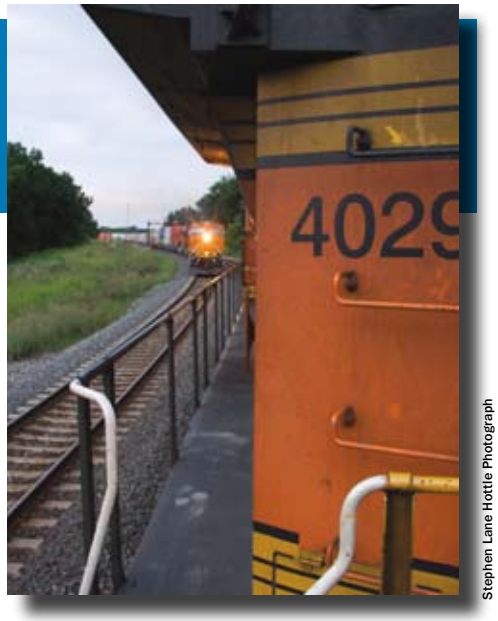
DEPARTMENTS

On the Cover:

Master Model Railroader Richard Napper shows us how he designed and constructed a large bridge for his under-construction layout. — *Richard Napper, MMR photograph*

THE HEAD END

BY PAUL RICHARDSON, MMR
MCOR PRESIDENT



Stephen Lane Hottle Photograph

By the time this edition of the *Kibitzer* is in your hands the MCoR Convention in Cedar Rapids, Iowa, will have come and gone. If you missed it, then you missed a great experience and you need to start making plans to attend the MCoR 2011 Convention in Norfolk, Nebraska.

With summer quickly approaching, set aside some time to work on your layout, modules, or models to keep your skills sharp, and I would like to encourage you to participate in the Achievement Program if you are not actively working in the program.

I often tell our members the AP will help you improve your existing skills and help you gain new skills by prompting you to try something new. I get a tremendous feeling of accomplishment when I try a new area of the hobby and have a success. A whole new world opens up to me, and I use that experience to motivate me to try the next challenge.

In addition to the new skills we learn in the AP, I have realized the most important benefit to working the program is the people you meet along the way. Working the program gives us the opportunity to meet and make friends of some of the finest people in the world. I have many good friends because I met them while working at some level in the Achievement Program. Our hobby brings together people from a diverse set of backgrounds, and we can all learn from each other. I have learned a great deal from many of my fellow modelers and continue to do so.

As the Achievement Program General Manager, I must say that I have been very impressed with the number of Achievement Certificates submissions from MCoR each month and the number of new MMRs within our region. You guys and gals are really making great strides on the road to becoming Master Model Railroaders, and I want you to know that I'm delighted by your progress. Since I became the GM at the beginning of April 2008, there have been 39 members who have become Master Model Railroaders. Of the 39 new MMRs 10 are MCoR members, that means more than 25 percent of the new MMRs in the past two years are from our region. That is fantastic! Please understand, I take no credit for this explosive growth. This is due to the efforts of MCoR AP Chairman Marty Vaughn *and* the division AP Chairmen. I would also like to say thanks to the individuals who promote the AP by mentoring other members, presenting clinics, and providing leadership to others.

The Achievement Program is very dear to my heart and I could ramble on all day but I realize it is time to stop.

Until next time, keep the wheels out of the dirt,

Paul

CONDUCTOR'S CALL

BY CINTHIA PRIEST, EDITOR

Summer is here and hopefully most of you are enjoying Divisional, Regional, and maybe even National conventions. Your investment of time (and a little money — if you can resist the temptation to shop) attending these events provides myriad returns, some of which you might not think about.

First and foremost, attending conventions opens the door for you to share your hobby with others who have the same core interest. At a convention, you can avoid awkward conversations with nonrailfan friends trying to explain the difference between an SD40 and an SD40-2 and why we care about those differences. Especially if our favorite road never owned one or the other.

Meeting like-minded hobby enthusiasts inspires each individual in different ways. Perhaps we decide to change scales because of the possibilities demonstrated in that scale by a clinician. Maybe we're prompted to scratchbuild a model for the contest room under the guise of some "friendly" competition with a good friend. (I use the term "friendly" here loosely because when I enter against Stephen, I'm in it to win it!) Another possibility is that we're looking for a solution to a problem we've encountered during a modeling project. With so many opportunities to expand our knowledge, skill-level, and networking, why would anyone choose not to go to a convention?

Unfortunately, all the plates I juggle on a daily basis kept me away from the MCoR convention this year. My hope is that nothing can keep you from attending a convention near you. Trust me, you will not be disappointed!

Cinthia

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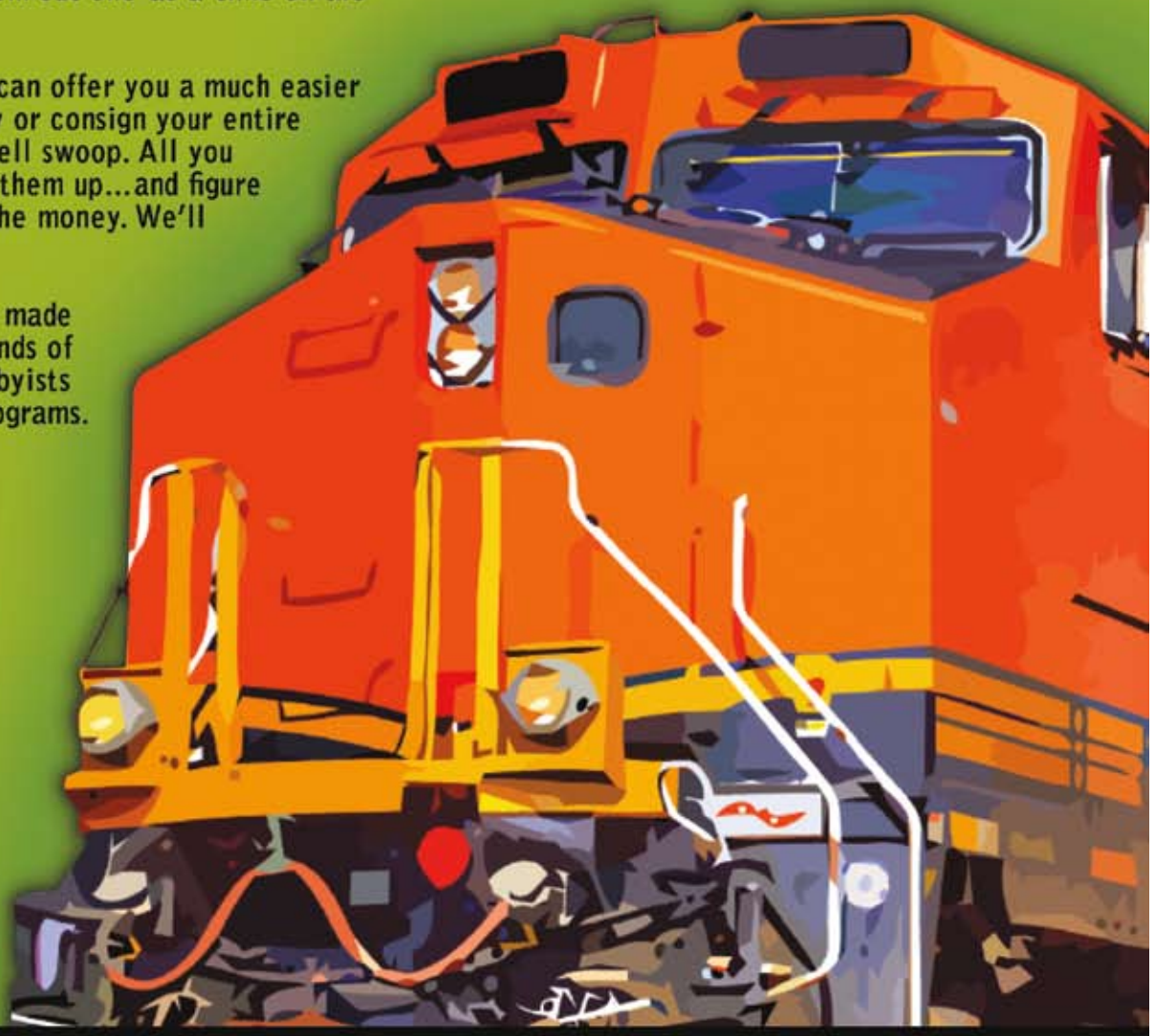

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MCOR BOD MEETING

JANUARY 30, 2010

MCOR BOARD OF DIRECTORS MEETING

Johnson County Library Antioch Branch, Merriam, Kansas January 30, 2010.

The regular meeting of the Board of Directors of MCoR was called to order at 09:22, January 30, 2010, in the meeting room at the Antioch Branch of the Johnson County Library located in Merriam, KS. The presiding officer was President Paul Richardson MMR. A quorum was present, including the following officers and members:

Paul Richardson MMR
MCoR President

Whitney D. Johnson
MCoR Vice President

John Shaw
MCoR Treasurer, Webmaster

Robert Folkmann
Kate Shelley Division Director

Richard Napper MMR
Kansas Central Director, Membership Dispatcher

Brad Morneau
Turkey Creek Division Director

John O'Neill
Platte Valley Division Director

John Griffith
Western Heritage Division Director

Phil Bonzon MMR
Gateway Division Director

Steve Malcolm
Eastern Iowa Division Director

Robert J. Amsler, Jr.
NMRA / MCoR Attorney

Gary Hemmingway
MCoR Convention Committee Member

Louis Siebel
MCoR Advertising Chairman

Raymond Immel
MCoR Member

Larry Diehl
MCoR Member

Robby Spencer
MCoR Member

There were eight proxies presented:

Whit Johnson for John Averill,
Great Midwestern Division Director

Whit Johnson for Phil Aylward,
Chisholm Trail Division Director

Whit Johnson for Ed Bommer,
Indian Nations Division Director

Whit Johnson for Robert Simmons,
Western Kansas Division Director

Richard Napper MMR for Jim Dimatteo,
Ozark Mountain Area Director

Paul Richardson MMR for Barry Quensel,
Oklahoma Heartland Division Director

Whit Johnson for Robert Wintle, Jr. MMR,
MCoR Secretary

Whit Johnson for Steve Marquess,
Maple Leaf Area Director

Last Train Ride was announced for: Oliver D. Joseph Gateway Division, Thomas Robinson Western Kansas Division, and Willie Pollock.

The minutes of the June 2009 BOD meeting were published by Whit Johnson on behalf of Robert Wintle, Jr MMR, MCoR Secretary. A motion to accept the minutes of the June 2009 BOD Meeting was made by Robert Folkmann, seconded by Richard Napper MMR

PASSED

Sales Manager Report was presented with no new sales since the last report. Patches are still in inventory and available at the convention registration table. Sale Manager John Averill has resigned the position. Whit Johnson will fill in until a replacement is appointed by MCoR President Paul Richardson MMR.

President Paul Richardson MMR called for a break at 10:18. Called to order again at 10:35.

A report on the 2009 donation to the NMRA Kalmbach Library MCoR Section was presented in the handout by Whit Johnson. Whit Johnson advised that a list of needs for 2010 has been requested of the Kalmbach Library. It was suggested that we obtain a list of the items that are currently included in the MCoR Collection at the Kalmbach Library and present that to the BOD in June.

Directors Reports: Reports were presented as published.

Convention Committee: Larry Alfred published a report to the BOD. Whit Johnson addressed the members about bids at the next meeting for 2012 and 2013. Anyone interested in assisting in the contest for the Region should contact Larry or Whit Johnson.

The 2009 convention was held in Wichita, KS with Phil Aylward (Chisholm Trail Division Director) is serving as the Chairman. Whit Johnson reported on the success and presented the report Phil provided. There are still a few convention cars for the 2009 event available. A check for $1400.00 was presented to Treasurer John Shaw representing the MCoR portion of the proceeds from the 2009 convention.

The 2010 convention in Cedar Rapids, IA was discussed. Registration is now open, the event is really coming together, and a grand time is planned for all. John Shaw and Steve Malcolm were available to answer any questions and take registrations.

The AP report was published in the handout.

Webmaster report was published. John Shaw (Webmaster) reminded everyone that space is available to Divisions for a web page.

There was no Heart of America Fund Report received from NMRA. Paul Richardson, MMR and Larry Alfred, MMR to follow up with new NMRA Treasurer, Kevin Feeney.

John Shaw presented the information on the next MCoR car project. The car has been ordered, the decals we being ordered, and the insert to the kit of the history is being compiled. This car is planned for release in conjunction with the 2010 Convention in Cedar Rapids, IA and looks like a unique project.

OLD BUSINESS

The grant application presented in January 2009, by the Warren County Modular Railroaders was withdrawn.

The MCoR LRP / Regulations review is progressing slowly.

The continuing costs of the CK are under review by a newly appointed committee. Whit Johnson, MCoR Vice President, advised the BOD that with the help of Cinthia and Stephen Priest a new printer had been located and the fourth quarter CK was in the mail, and available at the meeting.

NEW BUSINESS

Larry Kelso, Southern Arkansas Area Director has resigned. A new director is needed for this area. Paul Richardson MMR, MCoR President and Whit Johnson, MCoR Vice President is reviewing this position for candidates.

Phil Bonzon MMR, Gateway Division Director started discussion on member retention and recruiting. There was a lot of discussion on this topic. Ideas were shared by several of those present as to what they currently do, have planned, or are looking into as possible activities. Whit Johnson, MCoR Vice President is going to work on a letter or email that should go to all new members as soon as possible after the join to welcome them to the MCoR and NMRA.

Motion to adjourn was made by John Shaw, seconded by Brad Morneau.

PASSED

Respectfully submitted,

Whitney D. Johnson
MCoR Vice President

ACHIEVEMENT PROGRAM REPORT

Since the last report published in the Hand Car, the following certificates have been earned.

GOLD SPIKES

Kevin R. Salvo	Cowboy Line
Richard C. King	Platte Valley Division
Vance Reed	Turkey Creek
Monte Hofmann	Nebraska West Central Division
Pat Boltz Kansas	Central

AP CERTIFICATES 42

Edward Bommer	Official	Indian Nations
Barry Quensel	Official	Oklahoma Heartland
James F. Dimatteo	Volunteer	Ozark Mountain
Brad Slone	Motive Power	South Central Missouri
Brad Slone	Author	South Central Missouri
Howard Junker	Electrical	Platte Valley Division
Peter H. Jaynes	Dispatcher	Eastern Iowa
Peter H. Jaynes	Author	Eastern Iowa
Peter H. Jaynes	Structures	Eastern Iowa
Peter H. Jaynes	Scenery	Eastern Iowa
Richard C. King	Volunteer	Platte Valley Division
Dennis Brandt	Official	Cowboy Lines
Bryan Lidgett	Electrical	Cowboy Lines
Philip G. Bonzon	Dispatcher	Gateway
Vance Reed	Structures	Turkey Creek
Vance Reed	Scenery	Turkey Creek
Vance Reed	Motive Power	Turkey Creek
Dave Jacobs	Author	Turkey Creek
Dave Jacobs	Cars	Turkey Creek
Dave Jacobs	Structures	Turkey Creek
Dave Jacobs	Electrical	Turkey Creek
Dave Jacobs	Scenery	Turkey Creek
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Philip G. Bonzon	Cars	Gateway
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Monte Hofmann	Structures	Nebraska West Central Division
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Nelson Moyer	Dispatcher	Eastern Iowa
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Fran Hale	Cars	Turkey Creek
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Dave Roeder	Motive Power	Gateway
Brad Morneau	Structures	Turkey Creek
Gary Hankins	Civil Engineering	Turkey Creek
Peter Jaynes	Cars	Eastern Iowa

MASTER MODEL RAILROADERS 2

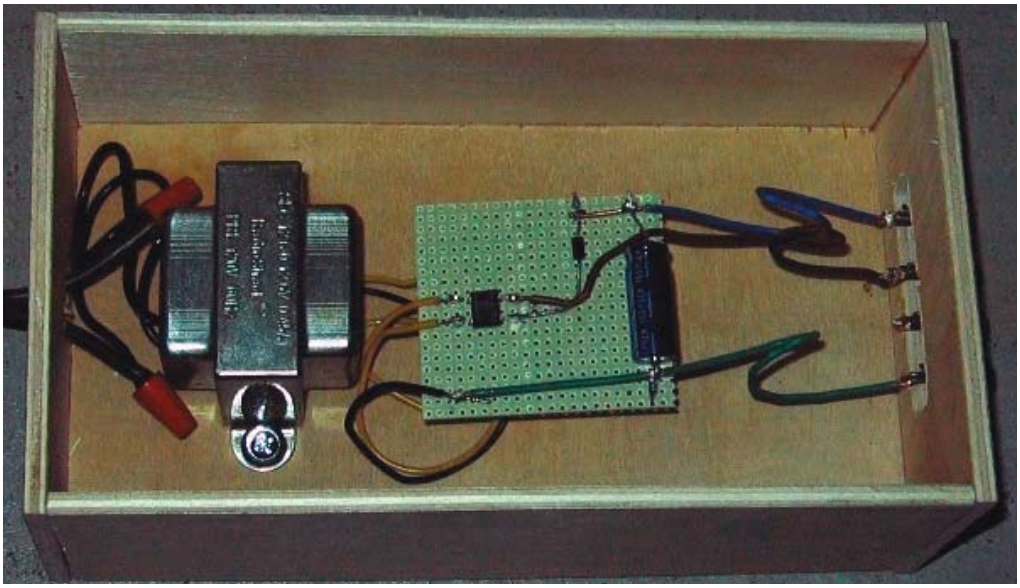
Philip G. Bonzon	MMR 427	Gateway
Fran Hale	MMR 431	Turkey Creek

YARD THROAT CONTROL

HOW TO SELECT FROM MULTIPLE TRACKS WITH A SINGLE ROTARY SWITCH

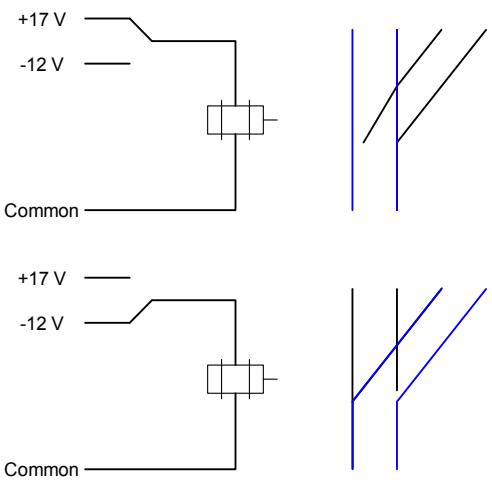
BY RYAN MOATS WESTERN HERITAGE DIVISION

As an Electrical Engineer by education (or to put it another way - "I play one on TV"), a fellow model railroader in Omaha requested my assistance to gather and assemble the necessary circuits and wiring for the four yard throats in his joint line layout. He wanted to use Circuitron's Tortoise motors (see http://www.circuitron.com/index_files/Tortoise.htm for more information) and had found Allan Gartner's excellent "Wiring for DCC" website (turnout control is covered at http://www.wiringfordcc.com/sw_ctl.htm). Looking over his shoulder at this site, I found it to be immensely useful in terms of a power supply circuit and enough information for someone knowledgeable to build the diode matrix circuit to control a yard throat. However, I felt that there wasn't enough explanation for those modelers who aren't "gear heads" when it comes to electronics. That led me to put together a relatively popular clinic on the subject and that clinic in turn led to this article.



THE TORTOISE MOTOR

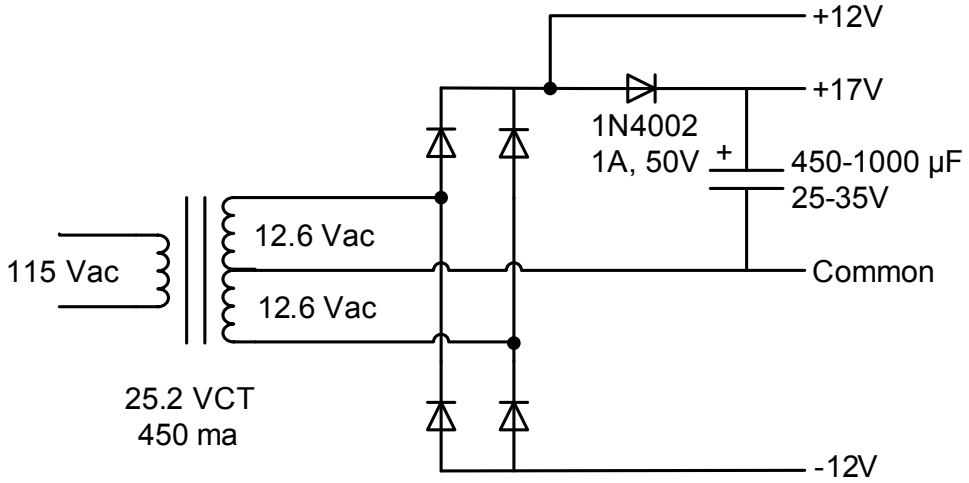
While this article discusses using the Tortoise for throwing the turnout, any slow motion motor that supports simple operation will work. What I mean by "simple operation" is that the motor position is controlled by the polarity of the inputs to the motor. In this operation mode, the switch is in normal position when forward bias voltage is applied and in the divergent position when reverse bias voltage is applied (see the following diagram):

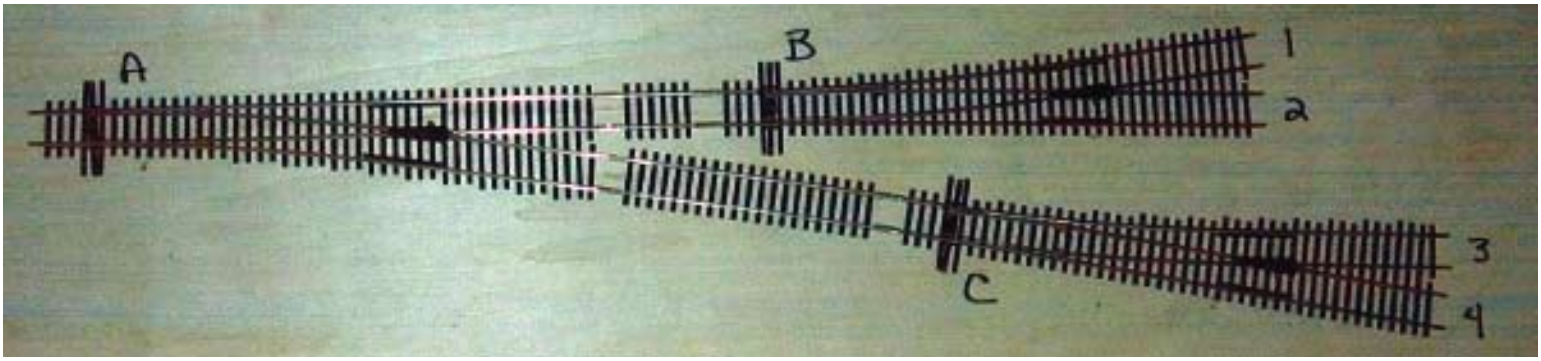


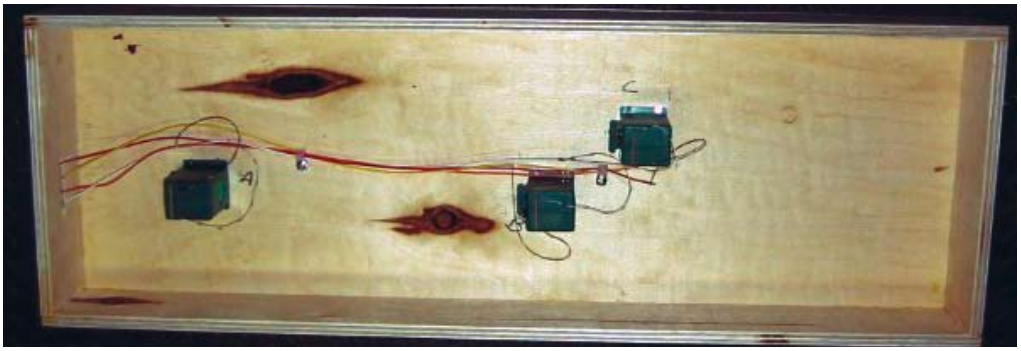
While the diagram assumes three voltage levels to work with (one positive, one negative, and one common), it is possible to control the tortoise with just two voltages by reversing the polarity of the leads to the tortoise. However, I prefer to use three voltages because it supports using a common neutral (or return or ground) for all the motors. This eases wiring the switch motors since each switch motor requires one lead (and one extra lead for the common return). In addition, it eases circuit design because the diode matrix only requires one lead for each motor.

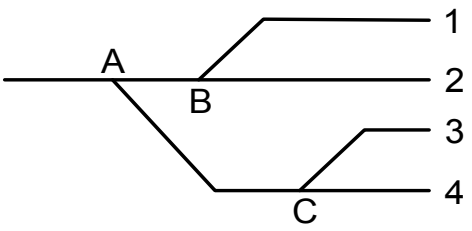
THE POWER SUPPLY

The power supply presented by Allan Gartner has all of the attributes one could ask for of a circuit: simple, straightforward, and uses a minimum of commonly available components. (All the components in both circuits are available from Radio Shack or other electronic part suppliers and the total cost as of this writing is about $20.) The first symbol on the left of the circuit diagram below is the transformer that converts 115 VAC into common and +12V and -12V AC leads. These AC leads connect to a set of four diodes (represented by the triangles with lines at the pointed end) that together form a "bridge rectifier" that converts the AC to DC. The common and -12 V DC leads are used directly by the diode matrix network. The +12 V is boosted by the combination of the diode and capacitor (represented by two parallel lines) to +17 V for the diode matrix network. In addition, the +12 V lead is available for other uses. The photo after









the diagram shows the version of this circuit that I now use in my clinics. I use multi-terminal connectors (or "flea clips") to provide a framework for soldering components together. All the circuits are in separate boxes with RCA jacks to ease transportation and display.

THE DIODE MATRIX

I follow the following four steps when designing and building the diode matrix:

1. Figure out the turnout position table
2. Find the basic rotary switch settings
3. Determine what additional diodes are needed
4. Solder it up and test

For the purposes of this article (and my clinic), we'll consider the following simple three-turnout four-track throat as it fits on a one foot by three foot board (easily transported) while allowing all of the steps to be demonstrated. On it, turnouts are labeled with letters while yard tracks are labeled with numbers. The second photo shows the wiring on the underside of the layout—four leads for three switches. Finally, the diagram following the pictures shows the track topology.

THE TURNOUT POSITION TABLE

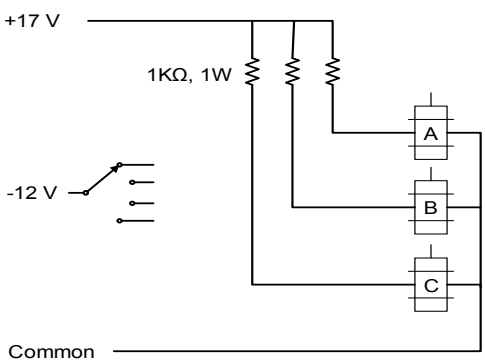
The first step to designing the circuit is doing the turnout position table. This pretty much is a matter of examining the layout diagram and determining the position of each turnout. For example, track four is selected by turnout A by in the "reverse" or divergent position and turnout C being in the "normal" or straight-through position. For this track, turnout B can be in any position as it is not traversed by any traffic for track four. Continuing this process results in the following table:

Track	Turnout A	Turnout B	Turnout C
1	N	R	
2	N	N	
3	R		R
4	R		N

In the table, "N" represents a switch in the "normal" or straight-through position, "R" represents a switch in the "reverse" or divergent position, and a blank cell represents "don't care," so the turnout can be in either position.

STARTING ELECTRICAL CIRCUIT

All the diode matrixes I've designed start with the same basic electrical diagram, shown below. The +17 V lead to each motor passes through a "pull-up" resistor (1Kohm, 1W, represented by the squiggly line). The "pull-up" resistor has two functions:



1. It ensures that the motor stays in the forward bias (or normal position) as a default state.

2. It also acts as a current limiter when the rotary switch is connected to the lead for a particular motor. As an aside, it is the because of the size of this current, that I prefer to use larger 1W resistors in this application.

The rotary switch is connected to the -12V lead from the power supply and will be used to select the track by applying reverse bias voltage to the proper motor(s).

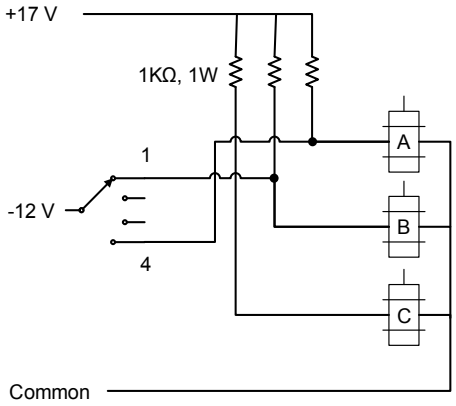
DETERMINE SWITCH SETTINGS

The first step in determining switch settings is to look at the turnout table and find rows where only one turnout is reversed. We can then connect those switch positions to the reversed motor. For the example table, track one has only turnout B reversed and

track four has only turnout A reversed (the green cells in the table below).

Track	Turnout A	Turnout B	Turnout C
1	N	R	
2	N	N	
3	R		R
4	R		N

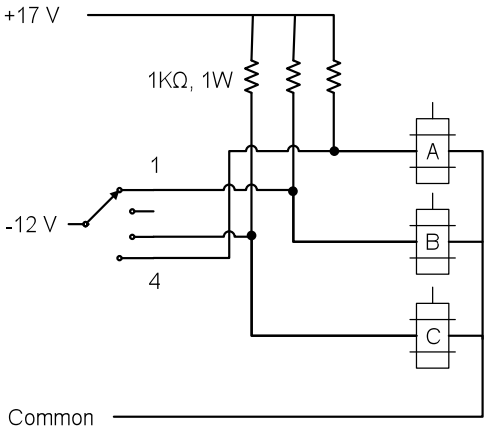
Connecting the appropriate rotary switch positions to turnouts A and B lead to the following interim circuit (in circuit diagrams, when wire meet, the meet is represented by a dot. While crossed lines don't automatically imply an electrical connection, I prefer to use the have circle bypass just for additional clarity):



At this point, the switch will select between tracks where only a single turnout needs to be thrown. For tracks where more than one turnout needs to be thrown, the rotary switch will need to be connected to those multiple motors. This is what the diodes in the "diode matrix" accomplish. So, the next step is to look at the remaining track rows while ignoring columns with turnouts that have already been connected and find those rows where only one turnout is reversed. This allows the motor that needs to be connected directly to the rotary switch to be determined, while we'll come back and take care of the additional turnout in the next step. Now, for this example, once we ignore turnout A (the yellow cell), track three has only turnout C reversed:

Track	Turnout A	Turnout B	Turnout C
1	N	R	
2	N	N	
3	R		R
4	R		N

So, we connect switch position 3 to motor C in the circuit. Note that this is still an interim diagram because at this point, turning the rotary switch to position 3 will cause turnout C to move, but turnout A won't do what it needs to do yet:

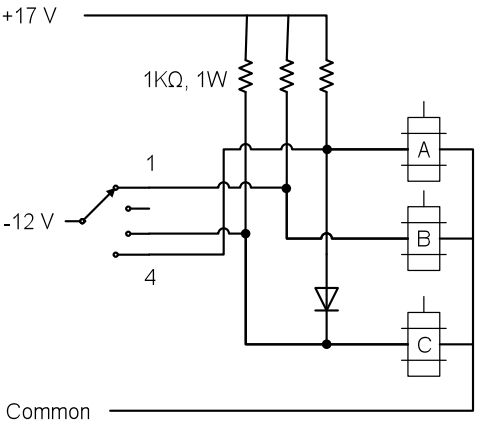


ADDING DIODES

As stated above, diodes are necessary whenever a track requires more than one turnout to be in the divergent position. Furthermore, each additional diverging turnout that a particular track requires translates into a diode connected between the motor selected by the rotary switch for that track and the motor that controls the turnout that needs to divert to reach that track. Because track three in the example network requires turnout A to diverge, we need to add only a single diode between the leads of motor A and motor C:

Track	Turnout A	Turnout B	Turnout C
1	N	R	
2	N	N	
3	R		R
4	R		N

This works because, in this application, the diode acts as an automatic switch: When forward biased, it passes current with a nominal voltage drop of 0.7V. When looking at a circuit diagram, this means the voltage on the side of the diode with the base of the triangle is greater than the voltage on the side of the diode with the "point" of the triangle. Looking at the following circuit diagram, when track 3 is selected, the input to motor C is -12 V. Now, without the diode, the input voltage to motor A would be +17 V, but that means the diode is forward-biased and so it will pass current and pull the input voltage to motor A to around -11.3V, causing turnout A to change. Compare this with when track four is selected; while the input voltage to motor A is -12 V, the input voltage to motor C is +17 V, so the diode is reverse-biased and does not pass current.

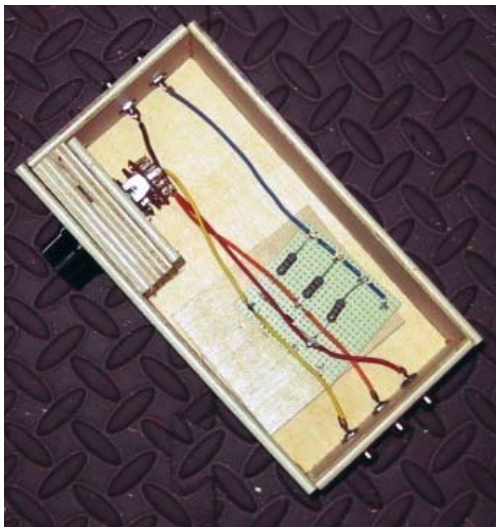


ASSEMBLY

When assembling the diode circuit, I prefer to provide the input bus at one end of the circuit and the motor/switch leads in parallel at right angles to the input bus. The picture shows the above circuit as put together for my clinic. In an actual layout, I would mount the rotary switch where it could be accessed by operating engineers while hiding the diode matrix and power supply under the layout.

SUMMARY

Hopefully this article has provided some insight into a methodology for designing and implementing your own yard throat control switches. This technique can further be extended by using a double-pole switch to carry track power. Such an arrangement ensures that only the yard track that is selected via the diode matrix has power. This prevents yard shorts at the cost of only having one operational engine in a yard at a time.



THROTTLE TIME

BY JON MARX GATEWAY DIVISION

Part of the enjoyment of model railroading is the ability to live in the scale "fantasy world" of our creation. As we run trains around our own or a club pike, we can imagine, at least momentarily, we are in the right-hand seat at the head end of coal drag out of the Pocahontas or pulling stacks over the Tehachapi. One recent technological innovation, the minicam placed at the head of a train, allows us to get even closer to this view. PC programs such as TRAINZ and Microsoft's Train Simulator are another approach. We put men on the moon so we could have these gadgets.

I got my first taste of active railfanning while in graduate school at Purdue in the 1960s. I belonged to the Purdue Railroad Club. On a slow evening, we would head for the junction and visit the tower operator. A friend I met at Purdue introduced me to the fascination of railroad yard visits. One favorite haunt was the former Nickel Plate yards at Frankfort, shortly after NKP's merger into Norfolk & Western. On one visit, the switch crew started classifying an eastbound that had just arrived. The engineer stopped and invited us to ride in the cab. Would any railfan say no? Try doing that today! We got a sample of what one engineer does every day.

Yet, even with all these experiences, modelers can only imagine themselves at the throttle of a locomotive. Wait a minute! We *can* lay our hands on a locomotive throttle and be an engineer. A few of the nation's operating rail museums have a program called "Throttle Time" or something of a similar name. For a modest donation to the museum, you can get a block of locomotive operating time on their trackage.

One museum with an active program is the Monticello Railway Museum in Monticello, Illinois. MRM Throttle Time sessions are conducted each summer and fall. For a $100 donation to the Museum, a participant has the opportunity to spend 30 minutes observing and learning the operation of one of the Museum's diesel locomotives (Wabash F7 1189, Long Island RS-3 301, Milwaukee NW2 1649, or Canadian National FPA-4 6789) and then spends the following 30 minutes running the locomotive under the supervision of one of the Museum's engineers. More than one 30-minute time slot can be purchased. For an additional nominal charge, family members and friends can ride in a caboose or coach that is part of the train. How's that for taking your friends for a ride? For slightly more, one person can ride in the cab while you operate. However, you must be at least 18 years old and be physically able to enter the locomotive cab and operate the controls to participate.

Throttle Time sessions run on various weekends between April and November. Time slots are scheduled on a first-come-first-served basis. For the past four years, my wife has purchased throttle time for me as a Christmas present; the first year for 30 minutes, the last three for an hour. I thoroughly enjoyed the experience and want to share it with you.

On the day of your big adventure, you are requested to be present an hour before your appointed time at the throttle for training (no pun intended). The meeting point is Nelson's Crossing station, the ex-Illinois Central depot from Deland, Illinois, that also serves as the gift shop and ticket agency. Before or after your time at the throttle, you are fairly free to roam around the property and view the museum's collection. The complete roster is viewable at http://www.mrym.org/roster.html.

During training, you are in the cab with a museum volunteer, who explains the controls and operation while the person with the time slot before you operates the engine. For the safety and well-being of not only the throttle time participants, but also for other persons and the equipment, a museum volunteer is in the cab with you the entire time you are at the throttle. Have no fear of remembering all the instructions. The volunteer is there to offer gentle reminders, just in case.

The decision of which locomotive to use is made that morning. The first two years that I operated, the museum used Wabash No. 1189, an ex-Wabash No. 725, ex-N&W No. 3725, F7A built in 1953 by GMD, Ltd. Previously, the museum used its GP11, No. 8733, built in 1980 for Illinois Central. On this trip, I was back in the 1189.

The museum also adds a cut behind the locomotive, so you have the feeling you are working a local peddler freight or mixed train. For this trip, my train included IC caboose 9831, NKP (ex-W&LE) flat car 1907, Rock Island (ex-commuter) coach 2541, and IC coach 2920. Since operation is forward/reverse with no place to turn around, there is always a museum staff member on the

rear of the train to act as our set of eyes for reverse moves.

Operation is over about two miles of the museum's track and 30 minutes is about time enough for two round-trips. In the vicinity of the station, the speed restriction is 10 mph, but past the turnout just east of the station the limit is raised to the breathtaking speed of 20 mph. This line has some slight grades, so you get practice in notching out to maintain speed and notching back on the downgrade. On this trip, we ran facing east with the 1189, and the year prior, we ran facing west with the IC 8733.

So, here I am in the cab of the 1189. I have had my half-hour of instruction and observed the operation by the previous engineer. Now it is my turn to put my hand on the controls. Although a little apprehensive, I know it will all come together with the gentle guidance of the volunteer instructor. Set the forward/reverse to forward. Turn the headlight to bright. Release the engine brake. Turn on the bell. Two toots on the horn. Set to Notch 1, release the train line brake (referred to as the independent by this year's instructor) and the locomotive starts to move. As the locomotive gets underway, turn off the bell and notch it out to get to 10 mph, the speed restriction near the depot. Wow! I actually got this multi-ton power unit to move and, as we said at Purdue, now I are a engineer, and with cars to make it a train.

The 1189 is sometimes used by Norfolk Southern for a Christmas train in the area and needs an additional safety appliance on the console that engines operating only on museum trackage do not. It is called an Automatic/Train Independent/Loco Alerter, the equivalent of a dead man control and consists of a spring sticking out from the console with a one-inch round light above it. As long as the engineer does something, such as adjust the speed, the unit is very happy. But if no control is adjusted for a few seconds, the light starts to blink. (This time I tried to determine if there was a specific time of inactivity needed, but it seemed to vary from a few seconds to almost a minute). At that point, the engineer has to bat at the spring to let the system know he is still there and aware. If he were to not bat the spring or adjust one of the controls within the next few seconds, the system would then assume that the engineer was incapacitated in some way and apply the train brakes. One more thing to keep in mind.

After we pass the switch just east of the station, we can notch out to increase our speed to 20 mph. Someone is doing some track maintenance ahead. Two toots on the horn to let him know we are approaching, although he probably knows we are coming and has seen us. Basic safety is job one, even in museums. Watch your speed and as you approach 20, notch back so you do not exceed the limit. Now we are going up a slight grade, so we need to notch out to maintain speed. After cresting the grade, we begin to approach the stopping point so drop to Notch 1 to let the train start to slow. Drop the train air ten pounds so all cars slow evenly. If we had a train load of passengers we would not want to shake them up too much. Using only the engine brake would cause the cars to bunch up and possibly result in passenger instability and falling. When the train has stopped, set the engine brake, and get set for the return trip.

Turn the headlight to dim, turn on the bell, move the forward/reverse to reverse, three toots on the horn, notch out one to get started, and release the train brake. Once we begin to move, turn off the bell and notch up to approach 20 mph. It will take a little extra power since we are pushing uphill for a few yards. We are under way to return to the station and a short distance beyond. Because we have four cars in the train, the last of which is a passenger coach, another museum volunteer is on duty at the rear of the train to keep watch in that direction, operate a whistle attached to the train line, and alert us by radio that the line is clear. Even with rear-view mirrors on either side of the cab, an engineer cannot know to location of the other end of the train with any certainty. There is a grade crossing just west of the depot, and when the train is in reverse, the rear man radios to the cab that all is clear and blows for the crossing. I am instructed to continue to just west of the trestle about a quarter or half mile west of Nelson's Crossing. There is a grade crossing there that we do not pass during this operation. As we approach, I begin to slow the train until it stops. Now we set the controls to start the train forward again. This time, as we approach the grade crossing, it is my responsibility to blow for the crossing. My instructor tells me the last long should last until we are into the crossing.

One more round trip and my time is up. Already?! Are you sure we were out 30 minutes and not just five or ten? Yes, time truly flies when you are having fun. Your are so intent on making sure you are doing everything right that the time indeed does speed by, even at 10 and 20 mph.

I have done this for four years now and have enjoyed every minute of each session. The instructors are great and will gently remind you when the various adjustments of the controls should be made.

If you have ever thought you would like to experience what it is like to operate on a 12-inches-to-the foot railroad, I recommend the program at the Monticello Railway Museum. Monticello is close enough to St. Louis that the trip there and back can be made in one day, including the throttle time session. They have almost finished rebuilding their steam locomotive, but are not presently considering offering throttle time on this engine. Now that would be the ultimate operational experience for a steam fan!

There are other museums that regularly offer throttle time on their locomotives. One that comes to mind is the Nevada Northern Railway in Ely, NV (http://www.nevadanorthernrailway.net/). They call their program "Engine Rental." Here you have the option of buying time on a diesel, for a 22-mile trip, or on a steam locomotive, for a 14-mile trip. There is also the "splurge option" where you can rent both locomotives for a total of 36 miles. The donation to the railroad is significantly higher, of course, being $495, $695, and $985, respectively. How long will I have to stand on a street corner with my Styrofoam cup to raise the rent?

The Fort Wayne (Indiana) Railroad Historical Society has a program called "Engineer for an Hour." Unfortunately, this is not at the throttle of NKP Berkshire 765. They use former U.S. Army diesel 1231. See their web site http://www.765.org/operations.html for more information. The cost is $129/hour. Consult the web sites of these organizations for most recent information.

For anyone who has ever dreamed about operating the "real thing," I urge you to check out the Monticello Museum or any other that offers a throttle time program. It is an excellent way to give financial support to that institution and have fun doing it. Now, where did I leave my Styrofoam cup...

I would like to thank John Downing and the staff at the Monticello Railway Museum for making this program available and for assistance in assembling this article.

THE BIG BRIDGE

BY RICHARD NAPPER, MMR KANSAS CENTRAL DIVISION

I have always wanted to build a really big bridge on my J-shaped layout. Between the small leg of the "J" and the large leg of the "J" is a five-foot aisle; so I decided to build a big bridge across it. Since there is a track coming up a grade on the short leg of the "J", I needed to set that end of the bridge back from the edge of the aisle. The bridge is 88 inches long (580 feet in HO scale) and is 100 percent scratchbuilt out of styrene structural shapes. This bridge was so big that I could not build it in my shop, so I built it on the table for my CTC machine, which is in the middle of the short leg of the "J".

Parts List

Plastruct

40 pkgs. BFS-20 5/8-inch I-BEAMS
30 pkgs. BFS-18 9/16-inch I-BEAMS
60 pkgs. HFS-12 3/8-inch H-BEAMS
20 pkgs. TFS-8 1/4-inch TEE
40 pkgs. TFS-4 1/8-inch TEE

Micro Engineering

1 Code 100 nickel silver rail

Campbell

2 (500 pack) Campbell bridge ties

Micro Mark

2 (1000 count) 1/4-inch rail spikes

Above: Richard used simple hand tools to build this bridge: a scale ruler, a flat bastard file, an X-acto knife with No. 11 blade, a pencil, machinist squares, a coping saw, a miter box, and a modified copper one. The various styrene shapes in the upper left corner of the green pad are many of the custom-cut splice plates for the bridge.

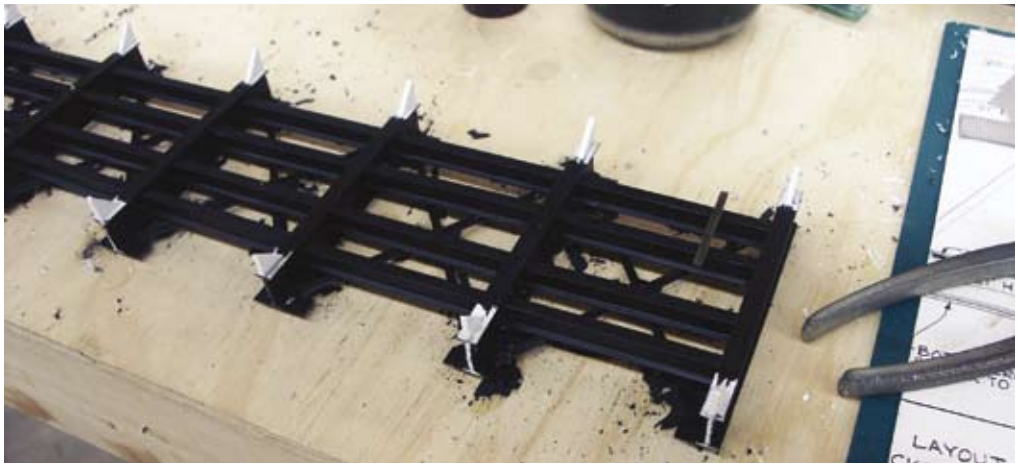
Below: The single track is installed with hand-layed bridge ties — about 800 of them — and hand-layed spiked rails. Guard rails and guard wooden stringers are not yet installed.

The bridge is wide enough to hold a double track, but I only installed one track on the bridge. The bridge width is 26 HO scale feet, with 13 foot track centers.

The bridge was constructed in five phases. Phase one was the construction of the bridge track structure base using the 5/8-inch I-beams, 26 feet long on 20-foot centers. Between these, and perpendicular to them, I placed the four 9/16-inch I-beams, which were centered under each rail held below the top of the 5/8-inch I-beams slightly to avoid the I-beams radii. When the bridge ties were placed on the 9/16-inch I-beams, they brought the rail up far enough to go over the tops of the 5/8-inch I-beams. On the bottom side of the 5/8-inch I-beams, 1/8-inch tees were placed in an X pattern with a 0.030-inch, three-foot square styrene piece glue in the middle of the X formed by the tees. Next, 0.080-inch styrene three-foot triangles were added on the top of both ends of the 5/8-inch I-beams. I painted this base section black.

Phase two was to hand-lay my track across the bridge base. I super glued about 800 stained wooden bridge ties to the bridge base. I then spot-glued two Code 100 nickel silver rails to the top of the bridge ties, making sure they were in gauge. I used four spikes, one on each side of each rail, and every fourth tie spanning the total length of the bridge — approximately 800 hand-driven spikes. Each hole had to be hand-drilled because the spikes wouldn't penetrate the styrene. I super glued two guard rails inside the running rails and added two wooden stringers at the tie ends for outside guard timbers. These two wooden stringers are actually bolted to the tie ends every fourth tie. However, I did not add this detail because it would not have been visible in the finished bridge.

This bridge was going to be a curved chord



Above: Bridge ties are being hand-laid on the base after adding the triangular braces to the ends of the bridge stringers.

Right: This is the completed bridge looking down the single track on this double-track width bridge.

Below: This is the finished truss.

truss bridge. There is a vertical H-beam attached to each ⅝-inch I-beam at the connection with the triangle piece I installed on the base. All vertical trusses are always broken down into triangles, so a slanted H-beam was installed between each vertical H-beam turning all sections into triangles. After the first angled H-beam at the very end of the bridge, the top cord angles up at 20 degrees for five sections, then the top cord angles up at 10 degrees, with the middle section being horizontal. I built two such trusses in phase three. At every intersection, I installed 0.030-inch styrene splice plates on both sides of each truss.

During phase four, I attached the two trusses to the bridge base that had the track on it. Alignment was critical to get the vertical H-beams aligned with the I-beams on the base.

Above: The finished bridge in place on the layout without the bridge piers. The completed bridge will be painted black, weathered, and red LED safety lights installed.

Middle Left: This shows some of the cross bracing between the two trusses in place.

Bottom Left: The second truss has been glued to the bridge base.

Phase five, adding the cross bracing between the two side trusses, proved to be the most difficult phase of construction. I used ⅝-inch I-beams with a ¼-inch tee glued to the edge of the I-beam, so ⅛-inch tees could be installed in the X pattern at the bottom of the lower I-beam, vertically between the bottom and top I-beam, and on top of the I-beams. This was done on both ends of the trusses. I did the same thing in the middle section, which is horizontal top and bottom, except I added another I-beam with two tees on it on the center and doubled up on all the X bracing. This added visual interest to the bridge's internal bracing system.

I added 0.030-inch styrene pads to the lower truss H-beam at both bridge ends, so I could attach the bridge shoes with super glue.

To finish the bridge, I plan to install ten 3mm red flashing LEDS on the bridge truss sides and paint the rest of the bridge black. Although the bridge will be almost six feet off the basement floor, the LEDS are added to keep people from running into it.

I used scrap homemade styrene spacers anywhere I needed to insure the spacing was equal throughout the bridge structure.

This big bridge empties into a deck girder bridge wye on the long leg of the "J" on my layout. It will have an interlocking tower on the wye bridge structure.

Celebrate the 25th Anniversary of the Turkey Creek Division

August 7, 2010
Turkey Creek Division Train Show

Lenexa Community Center
13420 Oak, Lenexa, KS (Pflumm & Santa Fe Drive)
Times 8:30 to 3:00
Layout Tours 3:30 to 9:00

- **Clinics** – a full slate of clinics covering many aspects of the hobby.

- **Model & Photo Contests** – by NMRA judging and popular vote. *Each model (up to a maximum of 5 models) you enter in the model contest will automatically qualify you to be entered in to a special drawing to receive a $50.00 gift voucher.*
  Special Youth Award for the best overall youth model entry.

- **Door Prizes** – Additional door prizes will be set aside for advance registrants.

- **Display Layout and Layout Tours** – In addition to the display layout at the meet, several local modelers will be opening their homes to layout tours in the afternoon and evening. Layout tour maps will be available at the show to paid registrants.

- **Swap Tables and Railroad Groups** – Expect to find more than 90 tables from area dealers, local hobbyists and other railroad groups. One table includes 1 registration; two or more tables include 2 registrations. For information on tables contact Robert Jefferis at jeffbobj@everestkc.net or 913-634-4441.

- **Food and Refreshments** – Scout Troop 92 will have food and refreshments available during the show.

Turkey Creek 2010 Division Meet Registration Form				
Advance Registration: $4.00 ◆◆◆◆ Full Registration: $6.00 ($5.00 NMRA member) at door Children under 12 free with paid registration				
Vendor set up Friday August 6th 5pm to 9pm				
		Tables ($20.00)each	No. Registration $4.00	Total Cost
Name:				
Address:				
City				
State Zip				
Telephone #:		Total Enclosed:		
E-Mail Address:			Scale Modeled	
More Registrant Names:				
Make Checks Payable to: "Turkey Creek Division" Mail to: Turkey Creek Show, C/o o Jim Gameson 5717 W 61 Terrace, Mission, Kansas 66202-3512 For more information contact Louis Seibel L-seibel@comcast.net, or 913-927 6850 Cell, or 913-393-3495 Home				

THE SWITCHING LIST

FOURTH QUARTER 2009 BY GARY HEMMINGWAY

The Switching List contains all known Mid-Continent Region, NMRA, train shows and Division meetings. It also lists all known club shows and swap meets in the Mid-Continent Region (IA, IL, MO, AR, NE, KS, and OK). To list your event, send it to: garyonho@cox.net, or Gary Hemmingway, 3201 SW Stone Ave., Topeka, KS 66614. To subscribe, or unsubscribe, to The Switching List send an email to the above link. Look for us on the MCoR web site: www.mcor-nmra.org.

DIVISION MEETINGS

KANSAS CENTRAL DIVISION Meetings are at 1pm. For the full schedule check the MCoR website or email: garyonho@cox.net. The next meeting is June 5, Robert Stewart: 249 Redbud Estates, Manhattan, KS: To get to Robert's home get on HWY 113 on the west side of Manhattan, KS. Turn East on Farm Bureau Road, turn North (left) at the mobile home park office building. After the road turns east (right) continue across the intersection to Robert's mobile home, #249 on the North side of the street. Please do not block entrances to other mobile homes. Following the meeting we will tour Les Kuehne's DCC home railroad.

GATEWAY DIV. (ST. LOUIS, MO) meets 3rd Monday each month, 7pm. Odd numbered months: Trinity Lutheran Church, 14088 Clayton Rd at Woods Mill Rd (Hwy 141), Ballwin, MO; Even numbered months: VFW Hall, O'Fallon, IL http://www.gatewaynmra.org/division.htm

TURKEY CREEK DIV. (KANSAS CITY) monthly meetings 4th Tuesday, 7pm. Johnson County Offices, NE Branch, 6000 Lamar, Shawnee Mission, KS (DMV Building on SW corner of Lamar and Martway)

WESTERN HERITAGE DIVISION (OMAHA, NE/COUNCIL BLUFFS, IA) meets second Saturday (except June and December) at noon. Sump Memorial Library, corner of Washington & 2nd Streets in Papillion (across from Runza). Visit www.whdnmra.org for more info and a map.

KATE SHELLEY DIVISION now meets the 4th Thursday at the Ames Public Library in Ames, Iowa. Time is 7–8:45pm. Due to Thanksgiving being the 4th Thursday we usually try to meet on the 3rd Thursday. Call Superintendent from NMRA website for latest info. All are welcome to attend the meetings. The library is located at 515 Douglas Ave. We meet in the upstairs meeting rooms. December we have NO meetings due to the holidays.

PLATTE VALLEY DIV. (HASTINGS, GRAND ISLAND, KEARNEY, NE) meets 2nd Tuesday of each month at 7pm in member's homes on a rotating basis. Info: John O'Neill, MMR, Div. Dir., 308-384-5011 or jponeill@computer-concepts.com.

WESTERN KANSAS DIVISION (GARDEN CITY, KS) Meets every Monday evening from 7–9pm at 4091/2 N. Main St. (second floor above "Stage" department store) 7 layouts on display (2-HO, 5-N) Operating sessions available Info: Robert Simmons, Division Director (620) 521-3591 or ras@odsgc.net.

INDIAN NATIONS DIVISION Meets 5 times a year, remaining 2010 meetings: September 19, Theme - Freight Cars; November 14, Theme - Structures/Dioramas. Meet from 9:30am-12:30pm at the Hardesty Library, 8316 E. 93rd St, Tulsa, OK. After the meeting we visit one of the local layouts. Web page: www.tulsanmra.org Superintendent - Dave Salamon (918)272-5512 or drs_rr@yahoo.com

Steve Smedley Photograph

ABOVE: Blue Island, Illinois, played host to myriad Rock Island freight cars representing various eras. The last year that the Rock showed a profit was 1964; the starving railroad endured to 1980 when this image was captured.

TRAIN SHOWS & MEETS

JUL 17, 2010—CENTRAL ARKANSAS MODEL RR CLUB OPEN HOUSE, McGee Sports Center, 3800 College Ave., Conway, AR, 9 am—3 pm, FREE; Info: Daniel Gladstone, 501-269-3030, ca_mrc@yahoo.com, www.artrains.org.

JUL 22-25—TOPEKA MODEL RAILROADERS AND TOPEKA N-TRAK ASSOC AT SHAWNEE COUNTY 4-H FAIR, Kansas Expo Centre Exhibition Hall, Topeka, KS

AUG 7—25TH TURKEY CREEK DIV NMRA TRAIN SHOW & MEET, Lenexa Comm. Center, 13420 Oak Dr., (Pflumm & Santa Fe) Lenexa, KS, Adm: $4 advance, $5 at door for NMRA, $6 at door non-NMRA, Tables $20 vendor setup Aug. 6 5–9pm; fees and admission payable to Turkey Creek Show, mail to Bob Jefferis, 6000 W. Richards Dr., Shawnee, KS 66216-1721; Contests, clinics, door prizes; Layout tours 3:30–9pm; Info: Louis Seibel, l-seibel@comcast.net

AUG 21 & SEP 18 & OCT 16—CENTRAL ARKANSAS MODEL RR CLUB OPEN HOUSE, McGee Sports Center, 3800 College Ave., Conway, AR, 9—3, FREE; Info: Daniel Gladstone, 501-269-3030, ca_mrc@yahoo.com, www.artrains.org.

OCT 16–17—TWO DEPOT TRAIN SHOW & SWAP MEET, Kingman Activity Center, 101 S. Main, Santa Fe Depot 201 E Sherman & Missouri Pacific Depot 201 S. Main Kingman, KS, Sat. 9–5, Sun. noon–4. Tables $20 each concession stand available at the Armory. Displays also at the depots. Art and crafts show on Sat. in the Kingman Armory. Info: Anita Cheatum sfdepot@sbcglobal.net or 620-532-2142 (mornings).

OCT 23—The Ozarks Model RR Assoc. Fall Train Show, Springfield Catholic HS, 2340 S. Eastgate, Springfield, MO 9–3, Tables are $20. Adm: $5 adults, children under 12 free w/paid adult, family $10. Info: Ron Williams, MMR, rjwilliams1@mchsi.com.

OCT 23—24—3rd WESTERN KANSAS TRAIN SHOW, Ellis County Fairgrounds, 1343 Fairground Rd., Exit 157 on I-70, Hays, KS, Sat: 9–5, Sun: 11–4, Adm: $5 adults, 12 and under free w/pd adult, 100 tables @ $25 each, large operating layouts, food vendor on site, door prizes, KND Collectibles sponsor, Info: Kevin Keeler klk@mchsi.com.

NOV 6–7—MIDCONTINENT PROTOTYPE MODELERS, Lions Activity Center, 150 S. Main, Benton, KS, Sat: 9–5, Sun: 10–4. Adm: $10 if preregistered by Oct 22, $15 at the door. Admission includes all clinics, display space for your models and a great time. Please note that space is limited. Contact mcpmmeet@hotmail.com website http://www.midcontinentprototypemodelers.org/.

REGION CLUB ROSTER

This roster was created for the benefit of members of the Mid-Continent Region. It identifies those clubs that are presently active in MCoR. Any group that wishes to be included in the listing should send the Editor the club's name, contact address and scale interest. Listings in this section are free of charge.

Big Bend Railroad Club
8833 Big Bend Blvd
Webster Groves, MO 63119
(O)

Capital City Model Railroaders
PO Box 243
Jefferson City, MO 65102
(HO)

Central AR Model RR Club
P.O. Box 1825
Conway, AR 72033-1825
Daniel Gladstone 501-269-3030
www.artrains.org
(all)

Claremore & Southern
3049 Clover Creek Dr
Claremore, OK 74017
(HO)

Columbia Model Railroaders
410 Camelot Dr
Collinsville, IL 62234
(HO)

Eastern Jackson County Mainliners
Model Railroad Club
Outlet Mall, Odessa, Mo
www.easternjacksoncountymainlines.com

Greater Omaha Society of Model Engineers
Post Office Box 67
Council Bluffs, IA 51502
402-895-0296 or 402-491-3692
GOSOME@TheHistoricalSociety.org

Green Valley Baptist Model RR
11993 County Rd 162
Savannah, MO 64485
Nancy Adams 816-262-0304
nadaams@bi-vetmedica.com

Kansas Area N-Trak
2046 S Elizabeth #1306
Wichita, KS 67213
(N)

Kansas Central Model
Railroad Club
530 E Third St
Hutchinson, KS 67501
(HO)

Kansas City Garden RR Society
David Roberts
24595 Hedge
Paola, KS 66071
GScalefun@hotmail.com
913-406-3400

Kansas City O-Scale Modulars
10334 Ash
Overland Park, KS 66207
(O)

Kansas City Soc. of Model Engineers
John Teeple, President
9539 Perry Ln.
Overland Park, KS 66212
913-492-4142
jsteep@aol.com

Manhattan Area Rail Joiners
1223 Pierre St
Manhattan, KS 66502-4331
Contact: Don Clagett
dclagett@ksu.eda
785-587-9075

Mississippi Valley N Scalers
20 Apostle Ct
Fenton, MO 63026
http://mvns.railfan.net
mvns@railfan.net
(N)

Missouri Northern Railroad Society Inc.
PO Box 12591
North Kansas City, MO 64116
(HO)

Modular HO Narrow Gauge Society
914 Summer Leaf Ct
Saint Peters, MO 63376
(HO)

Mo-Kan RailJoiners
1069 N Logan
Olathe, KS 66061
913-393-3495
l-seibel@comcast.net
(all)

Nishna Valley Railroad Society
1303 Eighth St
Harlan, IA 51537
(HO)

Northeast Kansas Garden Railway
Society (NEKAN-GRS)
1308 SW Caldon
Topeka, KS 66611-2412

Northwest Kansas Model Railroad Club
603 S Smokyhill
Oakley, KS 67748-2321

Ozark Model Railroad
Association
424 W Commercial
Springfield, MO 65803
(all)

Parsons Model Railroad Engineers
Cherryvale Depot
Cherryvale, KS 68335
(HO)

Southern Illinois Train Club
PO Box 1633
Mrion, IL 62959-7833
(HO, N, G)

Southwest Independent
Modular Railroaders
3107 W Capitol
Little Rock, AR 72209
(HO)

The Sugar Creek Model Railroad &
Historical Society Inc.
PO Box 5452
Bella Vista, AR 72714
(all N modules for shows)

Tri-City Model Railroad
Association
607 S Shore Dr
Hastings, NE 68901
(HO, N)

Warren County Modular Railroaders
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John Averill 515-961-3018
14910- 92nd Lane
Indianola, IA 50125
WCMR1@cs.com

Wichita Model Railroad Club
PO Box 48082
Wichita, KS 67201

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REGIONAL WEB DIRECTORY

MID-CONTINENT REGION
www.mcor-nmra.org

INDIAN NATIONS DIVISION
www.tulsanmra.org

TURKEY CREEK DIVISION
www.tc-nmra.org

KATE SHELLEY DIVISION
www.mcor-nmra.org/Divisions/KateShelley

EASTERN IOWA DIVISION
www.thewigwag.org

WESTERN HERITAGE DIVISION
www.whdnmra.org

KANSAS CENTRAL DIVISION
www.mcor-nmra.org/Divisions/Kansas Central

GATEWAY DIVISION
www.gatewaynmra.org

OKLAHOMA HEARTLAND DIVISION
http://oktrains.com/

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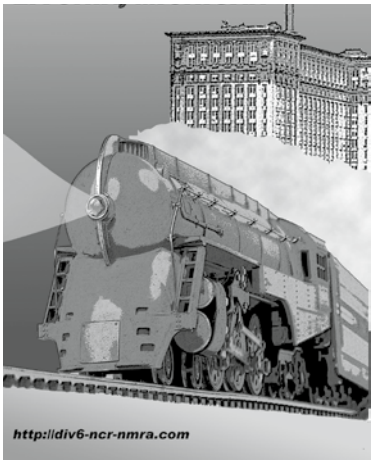

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*** Operation sessions available Thursday, Friday, Saturday**
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*** All-you-can-eat Pancake Breakfast on Sunday morning**
*** Keynote speaker, Art Fahie of Bar Mills Products on Sunday morning**
*** Special event HO & N scale billboards on sale**
*** 15+ Workshops on Friday and Saturday**
*** 20+ model layouts to visit**
*** Door Prizes awarded Friday and Saturday**
*** Silent Auction Fund-Raisers!**
*** Special DAY PASS entry available!**
*** Event site- Livonia Marriott, Laurel Park Mall**
*** Prototype tours available on Friday**
*** NMRA Model and Photo contests**
*** Limited special event shirts on sale**
*** Online Registration available, see website!**
*** EVERYONE welcome to attend!**

For more information or questions answered, contact - Barry Hensel 734-397-5182 (5pm-10pm) email- ***barry76Lt@wowway.com***, OR Glenn Joppich 734-464-6004 (5pm-10pm) email- ***steambigot@yahoo.com*** and visit our web pages at- ***www.div6-ncr-nmra.com***

DEALER DIRECTORY

ADVERTISING RATES

MCoR invites you to consider the *Caboose Kibitzer* for your advertising needs. This magazine serves over 900 National Model Railroad Association members within a seven-state area: Iowa, Nebraska, Kansas, Missouri, Illinois, Arkansas, and Oklahoma.

Single issue Commercial ad rate is 35% of the yearly rate. Want ads are free to current MCoR members. They are subject to available space and acceptance at the discretion of the Editor, and are limited to 25 words or less.

Ads need not be identical throughout the year. Prices listed above are for camera ready copy. Design and typesetting services are available on request, at extra cost.

All inquiries and payments should be sent to the Advertising Manager: Louis Seibel, 1069 N Logan, Olathe, KS 66061. Make checks payable to the Mid-Continent Region.

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paulwmyers@kc.rr.com

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