

May 2023 Volume 16 Number 5

Sunrise Division Officers

Superintendent	William Boorman
Asst. Superintendent	Dennis Hagen
Secretary	Bob Hochstetter
Treasurer	Dave Clifford
Program Chair	Gary Myers
Division AP Chair	Position open
Youth Coordinator	Position open
Education Chair	Stewart Jones
Modular Layout Chair	Larry Stephens
Herald Editor	Bob Hochstetter

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Layout of the Month

This month's three photographs are from the Sunrise Division's modular HO scale layout. They were taken by the editor at the Rocky Mountain Train Show on April 9, 2023.







May Meeting Notes

The regular monthly meeting of the Sunrise Division of the National Model Railroad Association was held May 4, 2023 at Holy Love Lutheran Church. Superintendent William Boorman called the meeting to order at 7:08. Twenty-one members attended in person. No one signed in on Zoom this month.

Introductions were the first order of business. Along with a self-introduction, William asked each attendee to tell the scale they modeled in and their most recent modeling efforts.

Announcements, Tool Time, Show 'n' Tell, the Clinic and more followed the selfintroductions. All of these are reported on in this issue of the Herald.

The meeting concluded at 9:00 p.m.

Next Meeting

The next meeting will be Thursday, June 1, 2023 in person at Holy Love Lutheran Church, 4210 S Chambers Road, Aurora, Colorado. The meeting will start at 7:00 p.m. The meeting will also be streamed on Zoom with sign-in between 6:30 and 7:00.

Mask wearing is optional for all attendees.

Video of the Month

This month's video features Australian railroads. This is episode 1 of 3. **Railroad Australia, Episode 1, FD Real**

Show.

https://www.youtube.com/watch?v=SdBRCK ZOI3s

Upcoming Clinics for 2023

June – Safety in (Model) Railroading – Dave Clifford

July – Building Non-Flickering Passenger Car Lighting Circuits for DCC and Weathering Techniques for Locomotives – Bill Botkin August – 1903 100' DG Turntable - Gary Myers

November – ????? – Rich Flammini

Upcoming Show 'n' Tell Themes for 2023

June – Industrial Structure July– Special Purpose Car August – Weathered Model September – Photos/Media October – Streetcars/Trolleys November – Anything Goes December - Cabooses

Reminder

In an attempt to reduce problems, especially for those who join the meeting on Zoom, we continue to ask that Show 'n' Tell photos, Clinic presentations, and Tool Time photos be taken before the meeting and sent to Gary Myers

(garymyers06@comcast.net) for presentation at the meeting and to the editor for inclusion in the Sunrise Herald (rlhoch422@gmail.com). (Ed.)

Upcoming Tool Time

June – Decaling Tools – Gary Myers

Announcements

Sunrise Division Layout Tour July 2023

Layouts sought north of Arapahoe Road. If you would like your layout to be included, please contact Gary Myers.

The Foothills Society of Model Railroaders swap meets Green Mountain Presbyterian Church 12900 W. Alameda Parkway Lakewood, CO 9:00 a.m. -11:30 a.m. on the third Saturday of odd numbered months (303)989-0087 or (303)985-1491







June Events

1-3	Friends of the Burlington Northern 2023 Annual Convention Best Western Plus Hotel, Minneapolis-St. Paul, Minnesota.
2-3	<u>42nd Annual Convention</u> Kansas City Southern Historical Society Blue Springs and Independence, MO
7- 11	2023 Annual Convention - The Fast FifteenSanta Fe Railway Historical & Modeling Society DoubleTree by Hilton Houston Hobby Airport, Houston, TX
8- 11	National O Scale Convention Hyatt Regency, Aurora, CO Registration \$45.
8- 11	NWHS 2023 ConventionNorfolk And Western Historical Society County Inn & Suites, Beckley, WV
9- 11	2023 NYCHS ConventionNew York Central Historical Society Holiday Inn Cleveland South, Cleveland, OH
14- 18	29th Annual National N-Scale Convention, N-Scale Enthusiast Nugget Casino Resort, Reno/Sparks, NV
22- 25	2023 Annual Convention, Milwaukee Road Historical Association Wallace, Indiana
24	Red River Railway Prototype Modelers Event, Forest Hill Civic Center, 6901 Witchita St, Forest Hill. TX 9am-6pm cst.

Big Boy Announcement

Larry Stephens sent the following: Union Pacific's famed Big Boy No. 4014, the world's largest steam locomotive still in operation, returns to the rails on June 7 for its Home Run Express Tour to Omaha, Nebraska, where it will be on display for 11 days during the college baseball championship.

The Big Boy will leave Cheyenne, Wyoming, on June 7, en route to Omaha. It will make whistle-stops in Wyoming and Nebraska, before returning to its home base in Cheyenne on July 3. During its Omaha display at Union Pacific's Home Plate next to Charles Schwab Field, the public will be allowed to see the locomotive up close between June 15-21 and June 24-25 from 12 p.m. to 6 p.m.

Scheduled whistle-stops and public display:

- * June 7 Albin and LaGrange, Wyoming, overnight in Gering, Nebraska
- * June 8 Broadwater and Lemoyne, Nebraska, overnight in North Platte
- * June 9 North Platte layover
- * June 10 Cozad, Kearney and Grand Island
- * June 11 Columbus and Fremont
- * June 15-21 Omaha, public display
- * June 24-25 Omaha, public display
- * June 29 Fremont, Columbus and Grand Island
- * June 30 Overton and Gothenburg, overnight in North Platte
- * July 1 North Platte layover
- * July 2 Ogallala and Chappell, overnight in Sidney
- * July 3 Kimball, Nebraska and Pine Bluffs, Wyoming

Details can be found on the Union Pacific Steam Schedule

<<u>https://www.up.com/heritage/steam/sche</u> <u>dule/index.htm</u>>.

A steam tracking map showing No. 4014's location and route will be available at:

https://www.up.com/cs/groups/public/@up rr/@corprel/documents/digitalmedia/img u p steam 2023 steam map m.jpg

Module Report

Due to the weather and members' commitments, work has not been started yet. We plan on starting May 20th. Our plans are to attend the North Platte Rail Days Aug 4th-6th. Improving the image of our layout is the goal before this show. No new projects, just adding details to work already done. More ballasting needs to be done along with a little track work. Adam has acquired Sunrise logos to place on the modules. Adam has also ordered laser made LocoNet panels with Sunrise Division burned on them. They will be countersunk to replace the metal ones which were flush mounted.

As reported by:

Modular Layout Chair, Larry Stevens

Tool Time

Bill Johnson presented this month's Tool Time on a drill called the Wildcatter. His PowerPoint presentation follows.

The "Wildcatter"

The Wildcatter is a small drill for making grab iron holes on model rolling stock and other detail items needing mounting holes. It cuts down on broken drill bits and helps prevent damage to models. The Wildcatter can drill anywhere.







What to look for in the mini adapter chuck

- . It must be able to fit onto the motor shaft.
- The best way is to bore out the center of the back of the adapter. This makes for a better aligned drill bit.
- You can also turn down the motor shaft with files and emery paper.
- It's important that the chuck can hold small (#80) drill bits.

Wildcatter drill with chuck, flywheel, and wire.



Power supply-attach motor leads to the DC variable terminals





Use a dental pick to locate the exact spot



Use thumb drill to make the starting hole



With a finger on the flywheel stopping the drill, position the tip of the bit in the starter hole.



Release the flywheel when the bit is in the exact spot. This will start the drill turning. Use finger pressure to control the drill speed.



Conclusion

- Frequently back the drill out slowly. This will allow material from the hole to exit the drilling site.
- When the desired depth is reached, slowly back the drill out using care not to break the small drill bit.
- Clean the drilling site of residue from the hole before installing detail parts.
- I would like to close by thanking Don Meeker and the late Chuck Shell for their help and ideas to make the Wildcatter.
 - Any Questions ?

Show 'n' Tell

This month's Show and Tell segment featured Foreign Roads. Bill Johnson, Adam Crews, Rich Flammini and Bob Hochstetter presented items.

Show 'n' Tell May 2023 – Foreign Roads American/British Differences – Bill Johnson

USA	UK		
Tie	Sleeper	Freight cars	Goods Wagons
Engineers	Drivers	Caboose	Guards Van
Fireman	Stoker	Round House	Train Shed
Conductor	Guard	Dining car	Restaurant car
Grades	Banks	Freight Yard	Marshaling Yard
Passenger cars	Carriages	Locomotive cab	Foot Plate

Show 'n' Tell May 2023 – Foreign Roads American/British Differences – Bill Johnson

•English Steam Locomotives

- •No head light,
- •No sand dome or box,
- •No cow catchers or pilots,
- •No seats for engine crews,
- •No power stokers, most all hand fired.

•Steam locomotives often named

- •Thomas The Tank Engine 3
- •Flying Scotsman
- •City of Truro





Passenger carriage



Rear of train protected by a guard's van, not a caboose.





King George the II 4-6-0 Express Passenger Engine---4 cylinders Note: to make space for the 4 cylinders, two types of wheel bearings were used on the pilot truck: for the outside cylinders an internal bearing was used on the second pilot axle, while the front axle has an exterior bearing to make room for the internal cylinders





Show 'n' Tell May 2023 – Foreign Roads Dearborn Station – Rich Flammini

Dearborn Station in downtown Chicago in 1960 was a massive structure. It serviced 6 railroads including the mighty Santa Fe with Warbonnets moving in and out. And of course, it was terminus to the good old Grand Trunk in Chicago. I wanted to model a large station but could not find one that resembled the Dearborn station so I chose the Vollmer model of the German Baden-Baden kit. Then I set out to lessen the foreign design appearance. I mostly "streamlined" it somewhat by removing some of the "gingerbread" trim and creating a restaurant on the right end of the building with some kitbashing. In retrospect, I should have tackled a custom build but being anxious to flesh out the Chicago scene,that challenge awaits.

Show 'n' Tell May 2023 – Foreign Roads Dearborn Station – Rich Flammini



Show 'n' Tell May 2023 – Foreign Roads Dearborn Station – Rich Flammini



Show 'n' Tell May 2023 – Foreign Roads – Adam Crews





Show 'n' Tell May 2023 – Foreign Roads – Adam Crews Bullet Train Nozomi



Show 'n' Tell May 2023 – Foreign Roads – Adam Crews Bullet Train Nozomi



Clinic

Stu Jones showed the PowerPoint presentation Affordable Layout Signaling. He has generously taken the time to convert it into this document format to make it easier to understand when published in the Herald.

This clinic on signal systems will demonstrate how you can add train control signals to your layout easily. I developed the components that I describe here 20-30 years ago when there were almost no commercial products available. Since I have always wanted an operating signal system on my layout, my only recourse was to design my own. Today there are many good components on the market, so you may substitute commercial products for those I describe here.

This clinic describes 3 or 4 components needed to assemble a system:

- Signal Controllers for 3-color targets and SA targets
- Track Occupancy Detectors
- Diode Matrices to simulate interlocking

Types of signals include Types D and G; Position Light (color or monochrome); and Type SA (Searchlight.) The two signal controllers will control all of these.



The first component is the Signal Controller for any signal that displays three different colors independently. It has three (four) inputs and three outputs. The inputs include signals for red, yellow and green indications, plus a ground. The outputs include red, yellow, and green leads to the signal target. The black terminal is for the signal ground wire. This controller is designed to display green except when any other input is active. A 6 volt input is connected to the green input at all times. When a 6-volt signal is input to the yellow terminal, the controller will extinguish the green output and show yellow. Likewise when a 6 volt signal is input to the red terminal, it will extinguish both the green and yellow output and output current to the red signal LED.



The second Signal Controller is very similar to the first with red, yellow, green, and ground inputs. But it has only two outputs: red and green. It is designed to drive bi-color LEDs with three leads; red, green and a center ground lead. (Note that this will not work with bi-color LEDs with two leads LEDs where the displayed color depends on the polarity.) The signal LED will display yellow whenever both red and green elements are lighted simultaneously. There is a variable resistor, R5, connected to the yellow input that can adjust the red sautration to show the desired yellow hue. Otherwise, it works the same as the three-output controller.



The next component is an occupancy detection unit. There are a few good ones currently on the market, but if you use a commercial unit, make sure that it will output a 6-volt signal. Some commercial units use an induction coil for detecting track current but this may not work reliably for DC control unless the DC current is pulsed. For considerably less cost you can build the unit described here. This detector uses a design published in the *NMRA Bulletin*, March 2001: *Block Occupancy with 100K Isolation* with small modifications. One of the features of this design is that it has a 2-3 second time delay between when it ceases to detect track current before it turns it output off. This keeps signals from flickering when running on dirty track. This unit will work for both DC and DCC.

Note that these controllers cannot produce flashing yellow (or other) indications. If you want such displays, you can substitute a programmed Ardino.



The two blue terminals connect to one track power bus and one track of the block being detected. The orientation is arbitrary. D1 and D2 are power diodes rated at 5 amperes. They are arranged back-to-back so they pass DCC signals successfully. Diodes have about ½ volt drop across them that shunts a small current through R2 to the "Twin T" detectors Q1 and Q2 that detect the presence of a track current. This small voltage drop does not affect locomotive operation noticeably. The rest of the circuit basically amplifies the current through Q1 or Q2 to the full 6-volt red output. Capacitor C1 provides the "keep alive" ability to maintain the red output for 2-3 seconds after the unit stops detecting.

How are these components wired together on a layout? The next figure shows the configuration for a single block:



There is one Detector Module for the block and two signal controllers for the signals at each end of the block. The Detector module connects the power bus to one track of the block. The detector red output has a red wire going to each signal controller. The red output also has a yellow wire going to the adjacent blocks in each direction (if those blocks are signaled) and a yellow wire coming from

the adjacent blocks (if those blocks have a detector.) These wires power the yellow input of the signal controllers. The black and green wires are the signal power supply and the purple wire is one side of the track power (that should already be in place0. No additional wiring is required.

The next diagram shows the configuration for a branching track, such as a passing siding, a branch line or one side of a crossover. Here block 2 includes the main line through the turnout. Block 3 has both a main line and a passing siding. This diagram is more complicated because there are now three Detector Modules and four Signal Modules (display modules). This is just a variation on the previous single block example. The signal before the diverging turnout has two targets. The upper target indicates the condition of the main line and the lower target indicates the condition of the diverging track (passing siding). One addition to this configuration is an SPDT relay (shown in green) connected to the switch machine that throws the point rails of the turnout. N and R indicate the normal (straight ahead and reverse (diverging) setting for the turnout. (Tortoises have a set of contact available for this.)

The box at the top is a simple diode matrix that connects inputs to outputs. For example, when the turnout is aligned in the normal (straight ahead) position, the lower target of the approach signal and the siding signal must be red. When the turnout is aligned in the reverse (diverging) position, the upper target of the approach signal must be red as well as the opposing mainline signal. The arrows indicate 1N4001 diodes that connect inputs to outputs so that signal controller operate as required. You must determine the configuration for each installation.



Figure 14 Sample Interlocking Wiring

This may sound complicated and confusing, but this signal aspect tells a crew (or model operator) whether the turnout is aligned in a favorable position (i.e. to avoid a short circuit) or whether a train is about to enter an occupied block. This may be helpful if the block is not visible to the operator. Wiring is essentially the same for each signal.

The signal power is independent from the track power and can be provided by any 6-volt source. A four AA battery pack could be a possible source. A more permanent source would be a 12-volt center-tap transformer with a bridge rectifier. The combined output from D1 and D3 is 6-volts, and

the input through D2 is the ground. Capacitor C3 provides smoothing of the current and is not strictly necessary. Likewise diode D2 is not necessary.



T1 12 volt, center tap transformer, 3 amp or higher D1, D3 1N5400 Diode D2 1N5400 Diode (optional)

If you decide you want to add signals to your layout, remember this system is very modular and you don't have to implement everything at once. You can add additional blocks as needed. You also don't need signals and signal modules at block boundaries that are hidden from sight. Or you may want to have signals only at busy junctions or other points of interest.

2023 RMR Annual Convention

RAILS ALONG THE RIO GRANDE



The 2023 Rocky Mountain Region Convention Rails Along the Rio Grande, November 10-12, 2023 Albuquerque, New Mexico

Convention Hotel

Marriott Pyramid North, Albuquerque, NM 505-821-333 <u>https://marriott.com/abqmc</u> Convention Room Rate: \$131/Single

Hotel Link for Special Rate (Ctrl+Click): https://www.marriott.com/events/start.mi?id=1683843866138&key=GRP

Hotel Virtual Tour Link (Ctrl+Click):

https://www.weselfwalk.com/atrium-marriott-pyramid-albuquerque/virtual-tour

IMPORTANT DATES

Early Registration Normal Registration Late Registration **Convention Hotel Special Rate ends** Contest Forms 901 & 902 Contest Entry & paperwork for NMRA judging Contest Entry for Popular Vote only

Convention Activities

Friday, November 10

8AM - 11AM	Set up	Gallery Room,	Marriott
1PM – 4PM	Model Entry,	Gallery Room,	Marriott
6PM – 9PM	Clinics, Model Entry, Refreshments	Gallery Room,	Marriott

Saturday, November 11

7AM - 9AM	Breakfast Buffet	Gallery Room, Marriott
8AM – 12PM	Model Entry, Clinics	Gallery Room, Marriott
12PM-1PM	Lunch for Contest Judges	Gallery Room, Marriott
12PM – 4PM	NMRA Contest Judging	Gallery Room, Marriott
6PM – 9PM	Clinics, Model Popular Voting, Refreshments	Gallery Room, Marriott
9AM-5PM	Rails Along the Rio Grande Train Show	Balloon Fiesta Park

Sunday, November 12

7AM - 9AM	Breakfast Buffet	Gallery Room, Marriott
8AM – 9AM	Model Contest Awards	Gallery Room, Marriott
9AM-4PM	Rails Along the Rio Grande Train Show	Balloon Fiesta Park

Full Convention Registration:

Primary \$70 early / \$75 normal / \$80 late Household Family Member \$45 Non-NMRA Primary Registrant Additional Fee: \$20 includes Saturday & Sunday breakfast buffets includes Friday & Saturday evening refreshments

1 Day Convention Registration

Primary \$50 early / \$55 normal / \$60 late Household Family Member \$30 Non-NMRA Primary Registrant Additional Fee: \$20 includes one breakfast buffet includes one evening refreshments

before June 15th after June 15th after Sept 15th

before October 13th

due by Nov 1st due by Noon, Nov 11th due by 4 PM, Nov 11th

2023 RMR Annual Convention

RAILS ALONG THE RIO GRANDE Albuquerque, NM November 10-12, 2023

Early Registration Form (Until June 15th)

ATTENDEE Primary Each Household Family Member Non-NMRA Member Primary Additional Fee	1 Day \$50 \$30 <u>\$20</u>	*	A	II Days** \$70 \$45 <u>\$20</u>
Total Registration			_	
 * includes one breakfast buffet, evening refre ** includes two breakfast buffets, two evening 	shments js refreshn	nents		
Primary + Family (household) members attending:				
Names (to appear on badges):				
Local Division:				
Please circle: 1 Day or All Days Dates:	Nov 9	Nov 10	Nov 11	Nov 12
Please Circle: Planned Arrival Date	Thurs	Fri	Sat	Sun
Please Circle: Planned Departure Date	Thurs	Fri	Sat	Sun
Please make checks payable to: Rocky Mou	intain Reg	ion		
Drint this name fill out and Mail form and	ahaak ta			

Print this page, fill out, and Mail form and check to: Rocky Mountain Region Convention c/o Denny Krausman 9609 Silver Hill Cir Lone Tree, CO 80124-5420

Prices subject to change, registration cost increase after June 15th

Point of Contact: Gary Myers, <u>garymyers06@comcast.net</u>, 720-837-4393 Point of Contact: Denny Krausman, <u>dkrausman@msn.com</u>, 303-880-1879



ALBUQUERQUE, NEW MEXICO

Old Town Albuquerque



AT&SF 2926 Restoration

ALBUQUERQUE, NEW MEXICO



Petroglyph National Monument



Museum of Nuclear Science & History

Sandia Peak Tram



San Felipe de Neri Church

Explora Science Center & Children's Museum