Newsletter for NMRA Mid-Central Region Division 10

The Lantern

October 2021 Volume 23 Issue 10

From the Superintendent

Our September meeting was suppose to be the first meeting in quite awhile to have members come in person, along with having Zoom for those who could not attend in person. This would've been a true hybrid meeting. However, it did not turn out that way since many thought it was too dangerous to meet in person. The situation has not improved since then so the October meeting will be Zoom only. Hopefully someday we can experience a hybrid meeting and some of us can meet in person.

Speaking of meeting members in person, we had a chance to do that at the Ravenna Railroad Festival. A good time was had by all who attended and the festival was a success for the KY Steam Heritage Corporation, our division T-Trak group, the Ravenna area, and for persons who love railroading in the Kentucky and surrounding area. The KY Steam Heritage Corporation did a great job of hosting and we were glad to be a part of the event. **Frank Stevenson**, **Bob Belt**, and **Randy Coffman** did a great job of leveling the modules so the trains ran well considering the concrete floor of the CSX building and the available tables. They kept the trains running while yours truly mainly did socializing with the different persons I knew from the different railroad clubs around the Lexington area. The event brought together a number of persons who just liked trains. Our T-Trak was well received as we were right in the middle of the action in the CSX shop building where the KY Steam Heritage group was running their rides on the steam engine Sadie #126. They ran rides from about 10 AM to 6 PM every half hour and each ride was sold out. I met one guy from Michigan who came to see the steam engine, and I got an invite to visit #1225, a 2-8-4 in Owasso when I am in that area. Lots of local people came out to visit and enjoy the day. **Rich Murphy** and his wife and **Shawn Harley** and his wife visited along with **Alan Bourne** and **Kevin Ellis**. **Thomas Bookout** was busy running Sadie and shoveling coal into the firebox.

The clinic for our October meeting will be presented by Sam Swanson who I think is one of the best modelers in our area, if not the country. Sam will present a clinic on "Finishing Models" and I know it will be good and interesting and it will give you probably something to think about when you do your own models. He does a great delivery. Be sure to get your Zoom up and see Sam's presentation this coming October 2, a SATURDAY. It will be worthwhile. October 16th tour information is on page 2.

One thing I would like to do, and it is something we all can use and appreciate, is to provide more modeling and general train information to our members. It is also a situation where members can just communicate with other members. What I am referring to is adding some more pages to our newsletter where members can tell about their experiences, modeling and otherwise. **Harold** is presenting a modeling idea about LED's below, and I hope others will follow. Our division has a lot of talent, knowledge and experience to share. It can be short or long in length. It can be any subject dealing with model railroading, or dealing with railroads which will relate to model railroading in some manner or another. I am fairly wide open on any subject you can write on. So think about it, and if you have something to inform for the members, please email text, photos,or a document to Stew who does *The Lantern*.

Our subject for Monthly Modeling in October will be to present and discuss your T-Trak module or a one foot square diorama you have completed or are currently working on. I do not have my T-Trak module completely done but I will show you what I have so far.

Remember to take care of yourself and your family, and stay safe. — Larry Smith

LED Lighting for Model Railroad Structures

By Harold Weinberg

I have been installing LED lights in or on buildings and other structures. This process has been fun and a good learning experience. This article's purposes are to share that experience with you and to elicit your questions, comments, and suggestions. The article does not discuss technical aspects of LEDs except to the extent that they are reflected in information provided by the vendors identified on page 5.

LEDs. Photo 1 shows two types of LEDs. These LEDs go by various names (surface mount LED, chip LED, nano LED,

For the NMRA MC Region officers link to **www.midcentral-region-nmra.org/bod2.html**

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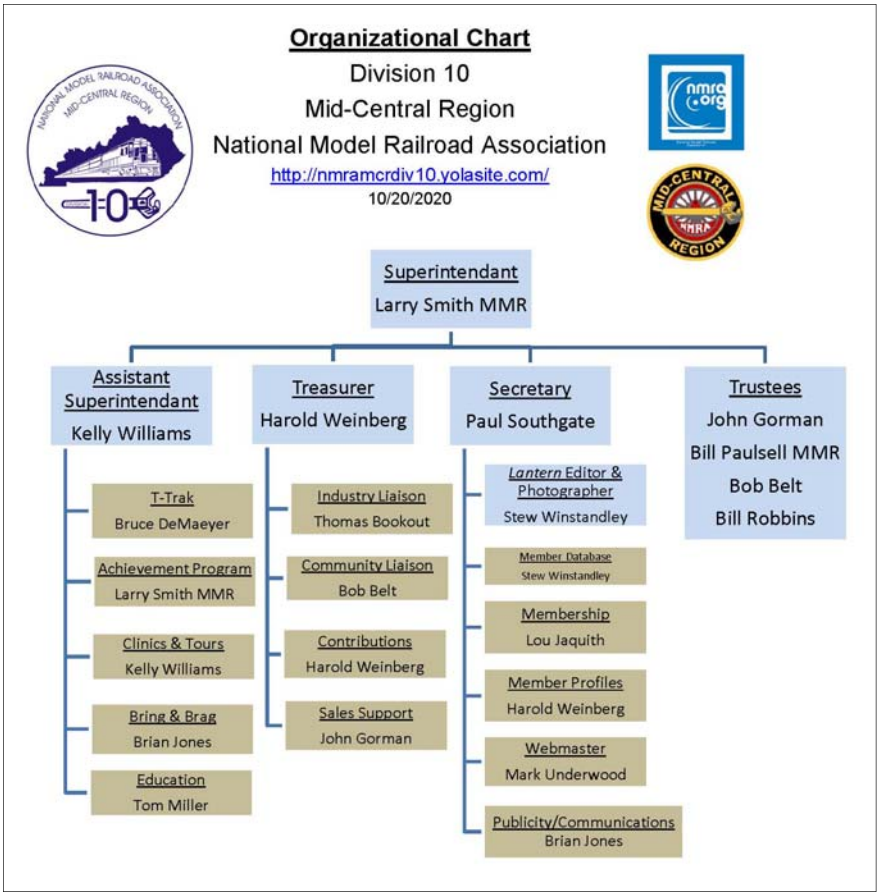

In Recognition...

Many thanks to folks listed in the column below. They have given their support for our club. We encourage all NMRA members to help with financial support to *The Lantern* and our website and the Division 10's activities. **Send your monetary contribution to our Treasurer**.

To be listed here your contribution needs to be at least $20 in cash, or material valued at $50, or a total of 20 hours time within the last year. Division 10 receives NO monetary support from the NMRA or the MidCentral Region. Div.10 is recognized by the US government as a 501c3 corporation and your cash or material donations may be tax deductible.

Report materials or time to Stew Winstandley. To the right of each contributing member's name is the month of his or her latest contribution. Whenever one makes a contribution of money, material, or time, his or her date will be updated, and for new contributors, their name will be added. Anyone making a contribution will be listed below for 12 months.

John Wilshire	4/2021
Lou Jaquith	1/2021
Rich Murphy	1/2021
Chester Myers	3/2021
Fred Plymale—Slide Projector	
John Gorman—Contributions to T–Trak	
Harold Weinberg—Treasurer's Materials	

Division 10's advertising policy:

A. COMMERCIAL AD RATES 1. Newsletter • $10/month for business card • $15/month for 1/8 page or less • $25/month for ¼ page • $45/month for ½ page • $80/month for full page • Multiple separate ads can be aggregated together for the above price structure. 2. Web site: No commercial ads allowed.

B. MEMBER AD RATES 1. Newsletter: Member rates will be at 20% of the commercial rates Members that have a commercial business will pay the commercial rate. 2. PAYMENT Payment is by cash or check to the treasurer in advance. No credit/debit cards..

Website addresses are: 1) above at top of Organization Chart,

2) https://www.facebook.com/NMRA.MCR.Div10/ and

3) http://ttrak.wikidot.com/nmra-mcr-division-10-the-kentucky-division

Division 10 Treasurer: Give or send your contribution to Harold Weinberg, 8 Lansdown Estates, Lexington, KY 40502-3322.

We have scheduled a visit to **John Bowling's** layout in Danville (406 N. Maple Ave.) on Saturday, Oct. **16** from 1 to 4 PM. Masks would be appreciated but not mandatory. John has a very nice large layout featuring the L&N in middle Kentucky with many details and scenes. Maple Avenue is business US 127 and is north of W. Main Street. His layout is in a separate building behind the home.

continued from page 1… hobby LED, etc.). In this article I refer to both types as LEDs. Their size and shape make them particularly suitable for use with model structures because they can be mounted in small spaces and on flat surfaces such as walls and ceilings. Other beneficial attributes of LEDs include that they (1) do not get hot (unlike incandescent bulbs); (2) are relatively inexpensive (about $2 to $4 each); come in a variety of colors (soft white, cool white, red, green, yellow, etc.); and (4) last a long time. LED power requirement are modest. For example, a 9-volt battery can power up to 50 LEDs.

Non-Universal versus Universal LEDs. The LED on the left in Photo 1 page 1 is "Non-Universal," meaning it runs only on direct current (DC). The LED on the right is Universal, meaning that it can also be powered by alternating current (AC) which is converted to DC by components hidden beneath the black shrink insulation.

If you are an N or HO gauge railroader employing DC track or accessory power in your layout, you might reasonably assume that your best choice is Non-Universal LEDs because they work with DC and are less expensive than Universal LEDs. Not necessarily so. Non-Universal LEDs may be damaged when polarity is reversed to change a locomotive's direction. Also, the DC power from many (but not all) model train power sources can harm Non-Universal LEDs which may also be at risk in DCC systems. Universal LEDs do not share these vulnerabilities. Therefore, the vendor's general recommendation is that only Universal LEDs be connected to DC from model train power supplies. Non-Universal LEDs must be powered only by a battery or a plug-in DC power source specifically designed for LEDs. These "wall warts" cost less than $20.

If you, like me, are in O gauge railroading employing AC track power, and if you want to use that power to illuminate LEDs, you must use Universal LEDs. I did this when, as shown in Photo 2, I affixed LEDs to track bumpers. I do not use track power for LEDs installed in or on buildings. Rather, I use Non-Universal LEDs powered by a 9-volt battery.

Battery or Wall Wart? I assumed that I would purchase a LED wall wart (see above) and install a below layout LED power bus. But I am changing my mind for a few reasons. I decided to group most of the LED structures near the front of the layout. I remembered that I already have lots of wires running underneath the layout and poking up to its surface. And I dislike working below the layout. So instead of a wall wart with a bus, I may make a small LED lighting "system" (including a battery, wires, and possibly a small terminal strip) and bury it in the layout's 1.5" foam insulation surface. (Yes, I better remember to make a map.) I may also place some of the system's components on the foam's surface and hide them using the usual camouflage techniques. (E.g., disguise with foliage.)

Matching LEDs with Power Sources. LEDs come in multiple sizes and voltages. There is good vendor guidance for matching them with power sources. One vendor automatically checks your order to be sure the components in it will work together, and both vendors solicit questions. Although I use a 9-volt battery for my LEDs, it is possible to employ smaller batteries including a coin-type which is 0.5" across. Battery cases, switches, etc. are available.

Wiring. LEDs have 2 leads, a red and another color, usually black. So do power sources. You simply match red-to-red and other-to-other and then twist the matched wires together. Presto: Light! If you don't want to solder, a vendor suggests you use shrink tubing or (believe it or not) duct tape to hold wires together. I prefer soldering because it is durable and most of my LEDs are intended for mounting in permanently closed buildings. I like to insulate soldered connections with Liquid Electrical Tape (available at Lowe's, etc.). If you power multiple LEDs from a single power source, you should wire them in parallel. If you are not familiar with this scheme, there is a vendor explanation. Because my O scale buildings are comparatively large, I usually extend the LED leads by soldering on additional pieces of wire of equal or larger gauge.

Optimizing Light. As shown in Photo 3 and Photo 4, you can use LEDs to illuminate figures and scenes that are viewed through windows.

The best way to obtain optimal illumination for a particular application is to experiment. Here are a few suggestions.

Continued on page 5

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NEWSLETTER FOR NMRA MCR DIVISION 10

210 BRANNON RD.
NICHOLASVILLE, KY 40356-9711
nmramcrdiv10.yolasite..com

OCTOBER 2, 1:30

MEETING VIA ZOOM

MONTHLY MODELING

T-TRAK MODULE OR SQUARE FOOT DIORAMA

MEETING AGENDA

FINISHING MODELS, SAM SWANSON

TOUR, OCT. 16

406 N. MAPLE AVE., DANVILLE

Without in-person meetings, photos of the presentation of member's Merit Awards is not possible. Shown here are three awards, one recently received by Bill Parker, and two by Bruce DeMaeyer. Next April, a clinic will be presented about qualifying for a Merit Award.

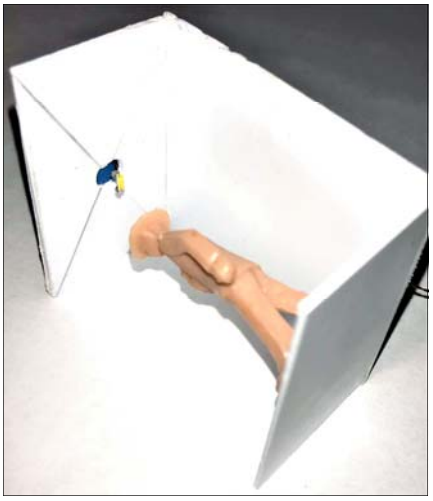
AROUND THE BEND

MON.	DAY	HOST	PLACE	EVENT / PROGRAM	TOURS	MONTHLY MODELING
Oct.	2 (Sat.)	**Div. 10**	Zoom	Finishing Models, Sam Swanson	**John Bowling's, Oct. 16th, see bottom of page 2 for details**	Completed T-Trak Module OR Square foot diorama
Oct.	9-10	**Div. 7**	Lakota West High School, 8940 Union Centre Blvd, West Chester, Ohio 45069	Train & Trade Show	**Layouts**	
Nov.	6 (Sat.)	**Div. 10**	?	Railroads Around Lexington, Charles Bogart		**Signage and Billboards**
Nov.	13 (Sat.)	**Div. 8**	3938 Poplar Level Rd., Louisville, Ky. 40213	Train Show and Sale, 10-3, $6	**Layouts**	
Dec.	**4 (Sat.)**	**Div. 10**		Card Stock Structures,Tony Gutteridge		**Background Buildings**

https://zoom.us/download - The web browser client for Zoom meetings will download automatically when you start or join your first Zoom meeting. Whether you are doing a Zoom for the first time or have done it before, use the link (web address) that will be emailed to you in the last week of September.

continued from page 3… (1) Use warm white and (obviously) nonflashing LEDs for room interiors. (I made an exception for a tavern that has red internal lighting.) (2) Generally place LEDs above or perhaps just behind figures and other elements you want to illuminate. (3) Generally mount LEDs at scale height or higher. (For example, in O (1/4) scale a prototype 8' foot ceiling is 2" high.) (4) Consider using multiple small LEDs instead of a single large one. (4) Space multiple LEDs to obtain an even light. (5) If you install a LED and then decide it is too bright, cover it with paint. (A vendor suggests that acrylic paint will reduce brightness by 50%.)

Mounting LEDs. You can affix a LED to a structure's walls, ceiling, or to an internal component such as a beam. Because I generally use LEDs to illuminate figures or objects, I prefer to make a "housing" as shown in Photo 5. You can add 1 or 2 walls to the housing as needed. With walls, the housing becomes a "room."



I do not glue the LED itself into place. Rather, I prefer to temporarily tape the LED's wire leads to 2 points on the housing, top and back, and then permanently affix the leads with dabs of glue. I like Gorilla Clear Grip Contact Adhesive for this purpose, but other glues should work as well. I also affix the leads to at least 2 points inside the structure, most importantly just before they exit the structure to connect to a power source. This reduces the high probability that I will carelessly yank a LED from its mount or break a wire inside the structure. One vendor sells a wax for affixing LEDs and it worked fine on my track bumpers shown in Photo 2. However, I would go with glue for LEDs mounted inside structures.

Vendors. I purchased my LEDs from Evan Designs (https://evandesigns.com/) and Lights4Models (https://lights4models.com/). (I have no personal or financial interest in either and there may be other sources.) I have had no problems with these vendors' LEDs and related products. You may want to start with Evan Designs because it provides a wealth of user information and tutorials. Lights4Models sells Evan Designs LEDs, among others, and has a broad selection of specialized LEDs and animations including signs and sound effects.

Conclusion. I am certain that I have more to learn, so please send me your ideas and tips (weinbergharold1@gmail.com). And please let me know if you have questions or comments. A comment from Harold: Resistors, rectifiers, etc. are incorporated at the factory for the leds used by me.

Below is a photo from the Ravenna Railroad Day. Left is Larry Smith, center is Frank Stevenson at our T-Trak layout, with 0-6-0T 126 in the background, above Larry is the 2-8-4 2716 that is being restored in Ravenna.

Above is Larry presenting to Joe Nugent a Division 10 contribution to the KY Steam Heritage.

Photos by Randy Coffman