

The WAYBILL

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The WAYBILL

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Editor's Column

Congratulations to Allen Byrne, ITD's Chief Clerk and Paymaster, being awarded the NMRA President's Award for Service to the Division in the Midwest Region. Thanks for all your efforts in winning this richly deserved recognition.

Railroad Days at the Monticello Railway Museum is coming up on September 17 & 18. There will be unlimited rides on its trains from 10am to 5pm on both days. You can ride a motor car down the rails and have access to the shop. Southern No, 401 will be in steam both days. You can also buy a pass good on both days.

This is a great museum, worth seeing and revisiting.

Trainfest in Milwaukee is back this year. It will be November 12-13 at Wisconsin State Fair Park in Milwaukee. It is being put on by the Great American Train Show in partnership with Kalmbach Media. The show will be open both days from 9am to 5pm. Advance tickets are now on sale. Two day tickets are available as well as for individual days. Adults can save 25% over the Saturday price on Sunday. Kids save 50%. Go to their website for more details.

To all MWR Board members,the fall 2022 meeting of the Midwest Region Board of Directors will be hosted by the Fox Valley Division.

The meeting will be held on October 16, 2022 at the Gary Morava Recreation Center, 110 W. Camp McDonald Road, Prospect Heights, IL 60070

The meeting will start at 10:30 am and adjourn by 12:30 pm. It will be followed by the regular monthly meeting of the Fox Valley Division at 1:30 pm

Coffee, snacks and a light lunch for the BOD will be provided. Of course anyone in the region is invited to attend and stay for the FVD meeting.

The resurrected Naperville RPM will once again be held in the Chicago area. The dates are October 27 and 28, 2023. (NOT 2022). I realize it is a long way off, but it is nice to see it back. This is back to the traditional date. More details to come.

Cover Photo:

Fitting for Fall and Halloween, the photo was taken at the Collinsville, IL RPM meet. It is a diorama in an enclosed box by Matt Gidley. Matt gives the details of how he built it starting on page 9. Photo by the editor.

Here is an interesting project for you scratch builders. It appeared in the February 1949 issue of the Signalman's Journal. This was the era of Buck Rogers and Flash Gordon. The model appears

to be O scale.



Recently on display in Chicago at the American Inventor's Exhibit, was this "train of the future", designed by 19-year-old George Lanwerneyer, of Waukegan, Ill. It is said to be capable of 250 miles per hour—on the ground I presume. Is that gadget on top a rocket or a telescope to enable the engineer to look ahead?

Waybill

Mid West Region NMRA – Fall 2022

President's Report Bob McGeever President, MWR

Several topics to cover this time.

Region Membership

Twice a year I am supposed to give a report to the NMRA Regional Advisory Committee regards the condition of the Midwest Region. An obvious topic for those reports is membership. So, I ran some year-to-year statistics on our membership list. In round numbers, the MWR has 1,200 members with 200 of them listed as life members. Two things popped up when I looked at the results.

There is something not right with the list of life members. Either model railroading has an extremely positive effect on life expectancy, or we have a lot of life members on the list who are no longer with us. I am pretty sure it is the latter. The region will be working on this issue. We need an accurate baseline of members if we are going to judge the effectiveness of upcoming membership drives.

There is something very right with the list of regular members. In the past year, without making any special effort, we recruited enough new members to replace the old members we lost. This is something we can build on.

Regional Conventions

As I said in my last report, the MWR will not be putting on a regional convention in 2023. Mostly because we lack the volunteers to do it. One thing I learned a long time ago about running a volunteer organization is that you can't ask for more than the volunteers are willing to give.

Our bylaws imply that divisions would be competing for the honor of hosting a regional convention. In the time I have been involved with the region, I haven't seen that happen. What I have observed I would describe as the region assigning the host duties to the divisions on a rotating basis. And it seems it is just not a lot of fun to host a convention. When the event is complete, most of the leadership team pledges they will never do it again. This is the kiss of death for an event put on by volunteers.

Adding to the situation, we lost the regional staff that supported the conventions just before and during the

Covid shutdown.

Steve Studley has taken on the task of rebuilding the regional convention and contest staff. We had an impromptu brainstorming session with a few other region members one night in the hotel bar at the Gateway 2022 convention. Based on the success of the Indy Junction convention, it appears that putting on a high-quality regional convention is not a single division task.

After kicking around some ideas, it seemed that shifting to multi-division hosting for a convention would be a good start. Further, the region should pitch in more than just seed money. Since every convention needs a ticketing system, a scheduling system, and a way to handle the money, the region should provide these services to the convention teams so they can concentrate on the important stuff like the clinics, op sessions, modeling contests and tours. How we are going to implement this plan is still to be determined.

NMRA Coming Attractions

Between Indy Junction and Gateway 2022, I have spent a lot of time in conference rooms discussing where the NMRA is going. I am very encouraged. The mothership is working on some real good things these days. There is a movement afoot to provide the tools and services that all the regions and divisions need so that we can concentrate on the important stuff like new members, clinics, op sessions, contests, tours, and working on our layouts.

The first result of this effort we will see is an online member communication and meeting platform called the "NMRA Interchange". Based on the previews, it looks to be an extremely powerful tool that can replace most of the bits and pieces of communication tools the regions and divisions have cobbled together over the years. One example: Zoom sessions. It has been estimated that the divisions are collectively spending about \$24,000 per year on Zoom licenses. The functionality of Zoom is built into the NMRA Interchange and is available to us for no charge. Other membership communications that are currently using Constant Contact could be handled by the NMRA Interchange. More savings for the regions and divisions.

In order to make tools like the NMRA Interchange work, the membership system will be upgraded. Central to the concept of the NMRA Interchange is the idea that we have a firm grasp on who is currently a member, and that we can update the membership information in a timely manner. The current system kind of fails on both characteristics. It is not so much that the current system is broken as we have just plain outgrown it. The NMRA was not an internet focused organization when the current system was brought online. We are becoming one, and we need to move faster than the current system was designed for. A really successful membership drive would bury the current system, so it just has to be replaced.

The NMRA web site is going to be overhauled. It was OK in its day but, just like the membership system, we have outgrown it. As part of that effort, the mothership is looking to provide web hosting for regions and divisions. This is another significant cost savings for the divisions that pay for web hosting. And a big step forward for the divisions that cannot afford to pay for web hosting. The days of a division's web site running on a volunteer's home computer will be a thing of the past. The web service will also provide document archiving. As the past clerk of a division and a region, haphazard would be the best description I could give for our current practice to maintain copies of important documents like articles of incorporation or 501c3 letters in central location.

In order to improve communications at all levels of the organization, they are looking into a national email service for those of us who are on regional or divisional leadership teams. Most of us local leaders use a personal email account for NMRA business. When the division president changes, so does the email address for the division president. Confusion reigns. It is another example of how our needs have evolved and our tools have not.

Some of you are probably disappointed that I have spent all this time on NMRA organizational topics instead of discussing a modeling topic like: "Is 3D Printing a form of scratch building?"

I think the issue of the NMRA becoming 21st century organization is really important. Either we learn how to flourish in the current century, or we will become a historical footnote of the last century. One need only look at the evolution of DCC as a standard technology to understand how important the NMRA has been to our hobby in the past. We need to get our organizational house in order if we want it to be just as important going forward.

And, yes, I think it is it. Bob McGeever

Fall Board of Directors Meeting Gary Morava Recreation Center 110 W. Camp McDonald Road Prospect Heights, IL 60070 10:30 am, October 16, 2022

Region News

Midwest Region Achievement Program Report

by Jim Landwehr- MWR AP Manager

I am happy to report that there has been a lot of activity from our members. They continue to take part in the Achievement Program all over the Midwest Region.

The following members received awards:

John Coy Avon, IN Official Phillip Burnside Avon, IN Structure Gary Children West Allis, WI Electrical

As always, work with your division Achievement Program Manager first, and if there is a problem, feel free to contact me.

Thanks, Jim

2023 MWR Board of Directors Election

In 2023 the Midwest Region (MWR) will elect a President, a Vice President, and three (3) Directors-at-Large. All the positions are for a term of two-years, with a two consecutive-term (four years) limit. If you are interested in applying for any of these positions on the MWR Board of Directors, or have questions about any of the positions, please contact a member of the Nominations committee. Contact information is supplied below.

The Board meets twice a year, in the spring during the MWR Convention and in the fall at a location somewhere in the Region. Meetings are about two hours in length. Being a Board member is a great way to learn more about the operations of the region and to help manage the future of the region. If you are working on Achievement Program (AP) certificates, three years of service on the Board earns the AP Association Official certificate.

Set aside some time to consider helping your fellow MWR members by serving on the MWR Board of Directors. Let us know if you are interested in placing your name into nomination for the 2023 Board of Directors election. Nominees will be asked to supply a 2X2 digital photo (passport-type photo will work) and a biographical resume that is limited to two (2)

Continued from page 4

paragraphs. Please **DO NOT** embed the photo in the bio. Keep the two items separate. Please forward these items to me at sastudley@gmail.com. I need to receive the photo and bio by October 6 so the slate of nominees can be okayed by the MWR Board at their October 16th meeting. Please contact: Steve Studley

sastudley@gmail.com (812) 876-9726
Or Paul Mangan

pmangan62@gmail.com (608) 835-9577

The NMRA has a new SIG - Women in Model Railroading

We are excited to offer the opportunity to women around the world to become members of this new Special Interest Group - Women in Model Railroading! As a recognized SIG within the NMRA, we expect this group to be vibrant in the world of model railroading. The purpose of the Women in Model Railroading (WIMRR) SIG is to introduce, encourage and connect women in or interested in the hobby of model railroading. The SIG is designed for education, enrichment, social interactions, and allaround fun. This group is meant to be inclusive and supportive of all women in the hobby and railfan world. We plan to host a few social meetings per year including online and at train shows/conventions around the country. The SIG will provide women in their local NMRA regions the support needed to create activities or gatherings, in order to grow the hobby and remove perceived barriers for women modelers.

Join our Facebook Pages:

"Women in Model Railroading" is for women in the model railroad hobby to share their world.
"The Steam Sisters Group" is for women railfans to share their photos of steam AND diesel trains.

Visit the SIG page: https://www.nmra.org/sigs/women-in-model-railroading

Please use this link to join the SIG: https://forms.gle/aKPhcXU1sthKW1MQ8

Contact: wimrr@nmra.org

Thank you!

The Frugal Modeler by Dave Nelson

I'm a guy who'll go to almost any length to avoid firing up the airbrush, and yet this Frugal Modeler is about airbrushing. How can that be? Well, I do have an airbrush, compressor, and vented spray booth. I was even given my first airbrush tutorial by a professional, a guy who's done commercial custom painting for entire runs of expensive imported brass passenger cars.

It's just that I hate cleaning the darn thing, As I've joked in my weathering clinics, I don't need Cody Grivno to do my airbrushing for me, I need Cody Grivno to come and clean my airbrush for me. Please. So, no way should I lecture others about how best to airbrush. But I will touch on three aspects of airbrushing.

Some who visit my hobby-shop-with-no-cashregister (otherwise known as my basement workshop) express interest in how tight against the wall my vented spray booth is. The spray booth itself is nothing special; Testors, by way of MicroMark. It vents out a window well. The screen and storm inserts for that window are guite thick. I built a replacement insert of the exact same thickness using 5/8" plywood with edges of 1"x3" furring strip. This solid wood "window" fastens to the frame with metal clips, just like the regular windows. A 4-inch hole in the plywood is filled with a 4" tube vent of engineering plastic, with a sliding closable "gate" on the interior side. I keep this special window insert in place all year round; the sliding gate prevents animal and moisture weather issues. The tube is a press-fit in the hole, and weather strip around the flat base makes it airtight. Rather than use flexible dryer vent hose, I use a slender adjustable-length aluminum dryer vent duct, with duct tape sealing the sliding parts in place so no fumes or solvents escape. A common adjustable vent elbow permits the little jiggering needed to match up with the tube in the window, and the usual worm gear clamps tighten everything up. The photos tell the story. The only remarkable thing about the whole set-up is the plastic tube with the sliding gate to close it, a lucky find at a hardware store. I can't seem to find anything quite like it on-line, although various products exist to close-off outside venting.

The second airbrush idea was found in "How to Use an Airbrush," by Robert Downie (2nd ed. 2008). This book is part of Kalmbach's Fine Scale

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Figure 1: Interior view of basement window before it was replaced

Outside view of the home-made wooden window with the

plywood insert and vent tube.

Inside view of the closeable gate. It is easily accesable from the basement.

Figure 4 Close-up of the open closeable gate.

Figure 5 Closed gate with the adjustable vent elbow.

Figure 6
Shows the spray booth and long narrow metal ductwork pulled away from the basement well window.

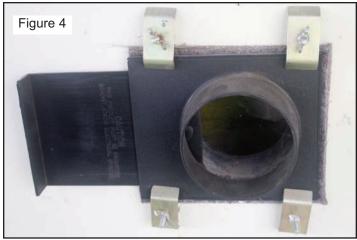










Figure 7: Closeup look at where the two ducts connect with the window vent. Notice how close the spray booth can be next to the wall.

Figure 8
The food dehydrator with the freight car ends on it.

Modeler magazine offerings, which might explain why few model railroaders seem to know about it, but I think they'd find Downie's ideas about paints, finishes, and methods to be fresh and new. One idea I found intriguing is Downie's use of a low-cost food dehydrator (something my wife uses to make "sun dried" tomatoes) to speed up the drying of paints and finishes: these create a warm, dry, updraft so dust does not tend to settle on drying surfaces, which are under a cover. Downie says the ideal temperature is 95 to 100 degrees F, and if it gets at or above 115 degrees, take the cover off and provide ventilation. Since these dehydrators have stackable levels, making the stack higher is another solution. This method strikes me as more practical, or at least less nerve-racking, than placing a plastic model in a low-heat oven to bake the



Unpainted freight car. This model was chosen to demonstrate how the vertical and diagonal truss supports create the trouble spots mentioned in the article. According to his friend, they should be painted first to make sure the coverage is good.

finish. I often see food dehydrators cheap at resale shops; evidently, they are "under-appreciated" wedding and birthday gifts.

The third point is a basic instructional tip I learned from that professional model painter. It is very disheartening to finish a painting project only to later see that you failed to paint, say, the underside of the corrugations on doors or boxcar ends, or the interior sides of a ladder, or sides of running boards or other protruding (or inset) detail. What this guy preached was to study the model for all such potential trouble spots, then paint the protruding or inset details from every needed angle first. The vertical and diagonal steel truss-work on the old-fashioned HO gondola in the photo would be examples of areas that need that primary attention with paint. His point was, once you know you've nailed painting the potential failure traps, you're probably close to being done, and indeed, may even be done. This might seem obvious but differs from some published airbrush painting advice.

Collinsville RPM Meet by David J. Leider MMR

As I was not able to attend the regional convention and RPM meet in Indianapolis, I decided to go to the Collinsville meet outside of St. Louis. The St. Louis area had experienced record floods a few days prior, and my plans to take the St. Louis Metro from the airport to the John Barriger III Library on the USML campus and then to the end of the line in

Illinois where complicated by flooding.

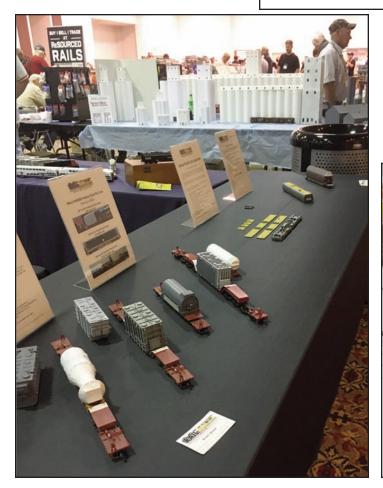
I eventually made it and along with 650 other attendees were treated to a great show. The space in the model room was expanded by 50% and there was plenty to see. This years theme was the kit, and there were many fine clinics on that topic.

It was nice to see people I had not spoken to in several years due to Covid and my move to Florida.

My favorite display in the show was an enclosed diorama of a haunted house. It was masterfully done, with lighting and thunder effects, fireflies in the bushes, lights flickering on and off in the house and a fog that slowly spreads across the graveyard and pond.



Bob Rivard was there with his Shoreham sanding-tower module. With all the locomotives equipped with sound decoders, it was quite noisy in that section of the room.



Left: Looking at one of the model tables and beyond was the sales floor.



Dennis Eggert, an excellent C&NW modeler, was there with a nice collection of assembled and weathered models.

Grimm's Diorama Matt Gidley

The story of my "Grimm's" diorama began back in 2009 when Randy Pepprock, owner or Downtown Deco, decided to run a building contest for his latest kit: Grimm's Funeral Home. Being a big fan of building kits and spooky theming. I decided to get to work building my own kitbashed version of his plaster kit. I decided to change the looks of the structure by lifting the entry tower and adding a new entrance with a grandiose set of front doors and a large staircase and to also add a part kitbashed-part scratch-built conservatory on the side of the building. I built the kit on a small piece of 1" plywood that I had lying around and left some space on the left side for a small path that weaves through a small cemetery. Once the kit was finished, some pictures were taken and submitted to Randy for the contest. I tied for second place and had a picture featured in the Narrow Gauge and Short Line Gazette (which was a thrill for me!)



Matt Gidley's Halloween inspired diorama. Note the mist over the swamp in the front and the fire flies as lightening flashes.

One of the judges of the contest commented that they were looking for a spooky, moody, Halloween atmosphere and all of the entrants had submitted pictures of models taken in daylight. I was so focused on the model itself that I forgot that a model has to live somewhere and have some context that helps create atmosphere and a story for its exis-

tence. With that in mind, I set out to build a diorama for my model; a place where it would live and come alive. I wanted that missing atmosphere!

After some serious thinking and day-dreaming my diorama started to take shape. I envisioned a semi-dark rainy night where thunderstorms and lightning would come and go as lightning bugs carelessly hovered by the foggy swamp. A long driveway would lead your eye into the scene, past the large twisted trees and rows of weed covered tombstones. The house would be creepy and dimly lit, with strange things happening with the lighting inside. It would be lit enough that a person would know it's not abandoned, but creepy enough that you wouldn't want to visit.

I drew up a set of plans and revised them as I thought about lighting, access to effects, and what a viewer's experience would be like when checking out the scene. The box is made from 1" plywood and I worked in an access door in the back and a removable front cover that could be set aside when showing the diorama. The scene is framed like a widescreen

movie, and a top view-block keeps viewers from seeing the lighting "truss". Below the scene there is a cutout with speaker cloth installed so that the sound effects would be heard and not seen.

With the box completed, I made a 1" wood base with a 2" EPS foam (pink foam sheet) top that would drop into the box. The layout of the structure, a forced perspective driveway, and a swamp were all drawn onto the foam and revised a few times as I looked at what viewlines I wanted a viewer to have and made sure the scene would look spooky and "deep." I carved the swamp out of the foam and added more foam to build up hills on the sides and back of the diorama base. Then I cut a rectangular chunk out of the foam at the very back where my original building diorama would fit in. The foam was painted with acrylic paints and then scenery was completed.

While all of the scenery work was going on with the diorama base, I was working on putting together a sound and lighting system that would support the creepy atmosphere. There were no commercially available systems at the time that would do what I wanted and that could be left playing all day while the diorama was on display. Luckily, I love Halloween haunts and theming and have been into

that niche hobby since I was a kid. Using techniques and ideas from that hobby, I edited together an audio track of rain and thunderstorms and downloaded it onto an old MP3 player. The MP3 player is hooked into a three piece set of computer speakers (with a bass bin) and together they do a great job of putting out a convincing soundtrack for the scene.

The diorama has three main lighting areas: the house itself, the overall scene lighting and the lightning effect. The house lighting scheme consists of a few flickering lights that are always on, a green light in a coffin that is in the conservatory, and a randomizer that randomly turns on and off the special lighting effects in different rooms. I used mainly Ngineering components for the house lighting. The overall scene lighting comes from a "truss" that is hidden behind the upper valance so that viewers never actually see the lighting directly. Sets of blue, white and UV LED's are dimmed down with home-made lighting cans that help spread the light evenly across the scene.



Same scene but without it being lit by lightening.

The lightning effect actually works off of the audio track. The audio feed is split and sent to an old Christmas light effects controller that was made to make your lights "dance to the music". So when a loud crack of thunder crashes, a set of 5 bright white LED's mounted to my lighting truss flashes with the audio. It's surprisingly effective! (Now you can order a kit to do the same thing, but I hear that Broadway Limited doesn't have them currently available.)

The 2010 Narrow Gauge Convention was being held in St. Louis, which is about five hours away from my home, and I decided to rush to finish the diorama so that I could take it to the show. After many late nights and hours of work the basic lighting was done, the sound was working and I was almost done with the scenery (which I finished in the hotel room the night before the show.) The diorama went over very well and the sound system was much talked about as it was rare at that time. My wife and I had our first of three children before the show and when it was over the diorama went into storage for years. I kept an idea book and along with the fog and fireflies I didn't get to finish, I would periodically add more effects I wanted to try out or new scenes to add.

Fast forward to 2020 and my friend James Powell told me about a contest that Wiley's Scale Modeling Podcast was running; a spooky Halloween structure contest. Well, procrastination and contests are the two things that seem to get me going, so I

decided to get Grimm's out of storage and refurbish it. The base that the diorama sits on wasn't designed to be removed, but I busted it back out so I could work on the fog system I wanted to add. Some of the house lighting effects had stopped working also, so I tended to those first and then moved on to the fog.

I looked at commercially available smoke generators, but the problem with them and other "fog machine" type products is that they use heat to produce fog and the heat makes the fog rise. Halloween haunters use fog chillers to take the hot fog and chill it before using it. The chilling gives the fog that creepy, stick-to-the-floor look, which was what I was after, but I couldn't figure out how to make that system small and simple. So, I looked around and ran across terrarium foggers. These systems for reptile cages use an ultrasonic transducer and water to make "fog" which is actually just a cool mist. Perfect!

But, how would I make a small system that was enclosed, could run all day, and could get the fog only where I wanted it? I prototyped a few ideas and came up with a two layer tank system where the ultrasonic transducer would sit in a well on the top layer and make the mist, and the water would fall back down into the lower tank to be recirculated. The lower tank is larger and allows me to add enough water to run it all day. A small 5 volt fan pushes the

mist through tubes that run up to hidden ports on the scenery. This results in a nice low lying "fog" that comes out in two different places in the diorama.

Once the fog system was working and installed, I turned my focus to the fireflies. I had been working with my son on a basic Arduino kit and the first few lessons dealt with controlling LED's. (Arduino's are small microcontrollers with inputs and outputs that you can program to do a variety of neat tasks.) Looking at the real fireflies in my backyard on summer nights I noticed a few important things: some appeared to fade on and off and others just appeared as quick blinks. Taking that observation I wrote a program that would blink some LED's and fade others in and out. There are 12 outputs, so I came up with 12 differently timed blinks and fades.

The next step was to purchase some prewired 12 volt 5mm LED's to use for the lights. In my research I also learned that different types of fireflies have different colors of illumination, so I used white, yellow, orange, and green LED's for some variety. I took each LED and drilled a small hole directly in the end to add fiber-optic cables to. A great source of cheap plastic fiber-optic cable comes from those cheap little fiber optic lighting decorations. I bought one and cut all the fiber strands off and used them exclusively. Each LED had 4 cables attached with superglue and then were covered with shrink tubing. The last couple inches of each cable were painted black so the cable wouldn't let any light shine

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through. The cables run from under the diorama base up to the scene through holes drilled through the base. Once locations for the fireflies were decided upon, I would drill a hole, feed a cable through and then glue it in place with tacky glue. I would then snip the top of the cable at an angle to reveal the light.

Much of the illusion relies on the placement of the fireflies. You want them to come out of bushes or just behind something that can hide the hole in the base. Also, since you have 4 cables that flash at the same time (all coming from one LED) you need to make sure these cables are spread out on the diorama. If they are flashing in unison too close together it ruins the illusion.

In order to attach everything and mount it, I bought a breakout board for the Arduino Mega that I was using. This board snaps right onto your Arduino and lets you attach the LED leads with convenient screw terminals. I used plastic wire retainer clips to hold the LED's up under the diorama base. The Arduino was mounted on an "L" bracket to the base.

I finished everything up in time to take it to the 2022 St. Louis RPM show for its trial run. The diorama looks much better in dim lighting, so I chose a back corner of the room to set it up, which worked but did cut down on the foot traffic. I received a lot of great comments and questions and had a great time talking with other attendees. The diorama ran fine all day, both days, so I think the effects passed the test!

My ideas notebook still has plenty of things I want to add to the diorama, so after a few months of recovery I'll be back at it; adding creatures with glowing red eyes and hopefully a spooky ghost animation-illusion.

SHERMAN SCALE TRAIN SHOW



SUNDAY, OCT. 16, 2022

4th 10 am / 3 pm

ANNUAL! FOLLOW US ON facebook

4,000 SQ / FT OF TRAINS

SCALE TRAINS ONLY - NO TOYS OR COLLECTIBLES

SHERMAN ATHLETIC CLUB

300 S. First Street - Sherman, IL 62684

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