



CMM News

Official newsletter of the
Chattanooga Modular Modelers, Inc.

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Random Ramblings from the President's Desk:

Welcome to our second newsletter... This one is formatted a little differently than the last one. It has been pointed out that we need something to document our progress and let you (our members) know what is going on with the CMM. We will try to not only tell you where we have been but where we are going in the eminent future.

If you would like to submit an article to future newsletters please send it to the email address above. Along with our web site (listed above) we will continue to post most current information to our Facebook page at <https://www.facebook.com/ChatModMod> and our Google+ page at <https://plus.google.com/+ChattanoogaModularModelers/posts>. We also have a You Tube channel at <https://www.youtube.com/channel/UCwzjEjB8PviA7db537f1ldQ> and a Twitter feed at <https://twitter.com/ChatModMod>.

Some of the things we are currently working on are:

- Annual meeting and election time for the CMM. See more in this newsletter.
- Getting the nonprofit status up to date. We want to be a 501(C)(3) corporation.
- Updating our Module Standards to reflect what we have and want.
- A few <https://www.kickstarter.com> projects that many of you have heard.
- A membership card for each member.
- A mini-meet where we setup some modules and invite local train enthusiasts.
- More group outings to shows and events.
- Operating sessions at local and distant layouts.

Bill Orman's Layout Tour.

After we stopped by Willy's home Layout many of us went to Bill's home. He has a beautiful layout on the second floor of his home. We have been there a few times and it is always great to see the progress that he has made on his layout.



1) Bill Orman explaining about one of the cars on his layout.

Bill has relayed track around the window area and changed the elevation for some of his track. It flows much better now and really looks good as the Locos go by the window.

Since the last time we were there Bill has expanded into the room next door with a staging yard. See figure 2. Note the holes in the front of the layout. They are so the power

can be turned off to any one of the tracks in the yard.



2) Staging yard in adjacent restroom.

Mark brought a train with him and was able to run it on Bill's layout.



3) Mark unboxing his train to run at Bill's



4) Beautiful Bridge



5) Lots of Discussion

Be sure to go by our Facebook page so you can see many more pictures of Bill's home layout.

By Dale Bryant

Treasurers report:

So far we have not done too badly. I say that because we have not spent much, but have not taken in much either.

At the beginning of the year we had \$601.46. We had a few expenses that included: \$22.75 for checks, \$20.00 to the Tennessee Secretary of State for our annual registration and we had \$15.00 that went to the Department of Treasury for taxes we had to pay because we are not tax exempt yet. Our income since the first of the year amounts to \$160.62. This income came from our tee shirt booster and from one new member, "Brendon Brosnan." Just a reminder that every membership that goes through PayPal cost us \$0.59. Our Booster was for \$156.03 and PayPal kept \$4.82 of that.

Total moneys in the Checking account as of 04/21/2014: \$714.33

Total moneys in the Share (Savings) as of 04/21/2014: \$99.00

*John Curtis Watson
CMM Treasurer*

LED Primer

LEDs or light emitting diodes, have been around for decades and introduced to our hobby in *Model Railroader* magazine about 40 years ago, but they still remain somewhat underutilized. Now, I don't pretend to be an expert but have fooled around with LEDs long enough, and done some basis research, to help break open some opportunities that these devices can bring to our modeling. So, subject to correction later on by those of us better in-the-know, here are some of the basics.

LEDs are, as defined, diodes that emit light when current passes through them and, as diodes, current will only pass in one direction. Most LEDs have two leads, one being the "anode" to which the positive voltage or power is applied, and the other being the "cathode" or the lead connected to the "negative", or ground. Some bi-color LEDs, like those used on my turnout controls have 3 leads... 2 which might be anode, and 1 cathode, or vice versa.. so it's best to check the specs online from the LED manufacturer. The anode is usually the longer of the two,

but it is always good to check with a simple battery to find out which lead is which.

Direct current, or DC, voltage...especially a DC power supply that is "regulated" (not an old train power pack).. is critical. You could use battery power but that's too limited in duration and effect, but salvaging an old computer power supply will supply all the regulated DC voltage you'll need. LEDs draw almost no current (in milliamps each), so you can drive literally dozens of LEDs off one computer supply. Wall transformers aren't recommended as they are generally not regulated, meaning that they provide a specific voltage depending on the load, and LEDs are very light on load requirements.

Make sure that you also connect a sufficient sized resister, preferably to the anode lead, before turning the LED on because, even at 5 to 12 volts, the LED will burn out very quickly without reducing the voltage to about 3 volts. While the brightness of the LEDs will slightly vary, depending on the ohm

rating of the resistor, I consistently solder a 100 ohm, ¼ watt resistor to each LED powered by 5vdc or a 560 ohm, ¼ watt resistor powered by 12vdc. You can fudge the ohm value up or down slightly to make your LED dimmer or brighter but, generally, the dimmer the LED, the longer its life. It wouldn't hurt to relearn "ohm's law" when checking the specs for your LEDs, but again generally, more resistance equals longer LED life.

LEDs are marketed by size consistent in the industry. In other words, a "T-1" miniature LED is 3mm in diameter, no matter who makes it. The next common larger size is a "T-1 ¾", or 5 mm in diameter. These two sizes are commonly available, and very inexpensive, so I use the T-1 in large quantities (ordering 100 at a time) to light my layout structures where the detail of the size of the LED is not apparent to the layout visitor. "Warm white" LEDs of that size are now inexpensive and available from Hong Kong for \$10.00 per hundred, postage included. I get my resistors from there also.

However, when smaller size is necessary.. such as mounting in Tichy HO lamp shades for platform lighting where scale appearance is critical, or in the Cal-Scale cabooses marker lamps... those LEDs are "surface mounted devices", or SMD LEDs, and are also uniformly sized by the industry, and cheap from the same sources. These come on a tape roll, sealed by clear plastic and subject to the smallness of the size; adequate lighting and magnification are almost necessities when working with them.



At this point, "660" nm (about 3.2 x 2.8 x 1.90 mm) is the smallest unit size that my current skill can predictably handle. I also have larger SMD "warm white" LEDs that for example, that I use to light

my Kato/Atlas RS-1 and RS-2 diesel headlights, in addition to some structure lighting where the depth of the head of a standard T-1 LED is not preferable.

Finally, a few words on soldering and wire used. This is fine work, so only use a pencil-type, small wattage (20-40 or so) soldering iron, keeping the tip clean and hot. Small diameter 60/40 or 63/37 rosin-core solder (never acid core) is best, particularly Koster brand, and I also use tiny amounts of soldering paste/flux applied with a tooth-pick tip. As for wire, solid stand is always best with LEDs and standard 26awg phone wire is ample for ganged applications, like, lighting a structure floor with a dozen or so LEDs. For single, smaller SMD LED applications, I use ultra-fine magnet wire (36awg or so), but more common and slightly larger "wire wrap" wire (30awg) will also work just fine. Do yourself a favor and color code the wire (such as green for ground) to keep continuity in your work and make trouble-shooting easier down the line.

By Jim Heidt

GETTING STARTED BUILDING YOUR MODEL RAILROAD

For the next 2-3 newsletters, I will be writing about my experiences building my model railroad. The focus of the articles is to outline how I arrived at the decisions, and what I have learned from the process. Please keep in mind that whatever course is chosen, it is just what I found best for me at the time. It is certainly not the “best” path, but usually just one of several that could have been chosen. The layout should be thought of as a background to guide us through the process. My hope is the articles might spark your interest to start building your layout, help you avoid some of my missteps, and impart the great amount of fun I am having along the way.

DECIDING WHAT TO BUILD:

To provide some background about myself and model railroading, like many in the hobby today, I grew up watching the large steam engines around my hometown in Middle Tennessee. Weekend afternoons were often spent with my granddad at the local depot. I was fascinated! My brother and I were given Lionel Trains one Christmas, complete with a bi-level layout that our parents built. I was hooked and continued “playing with trains”. As a teenager, I built some HO cars but continued running the O gauge layout.

As a parent, I built a simple 4x8 HO layout for our three children. It was very simple

and never had scenery. During this time, I had the desire to build a “real” layout, but just did not have the time or space necessary. I knew a layout would probably have to wait until retirement.

This brings us to the present time, retired, and running out of excuses not to get started. So, what will I build? The questions on my mind were:

1. What gauge
2. DC or DCC
3. What time era/industries represented/prototype or freelance
4. Layout size/where to locate
5. Can I accomplish this project

Let’s look at each of these individually.

GAUGE:

This question was the easiest for me to answer. Through research, I chose HO gauge because it had the greatest market share, and therefore much of the innovation and new features were available early on. I felt that it was large enough to handle and see to work on, and was small enough to allow a mid-size layout in a single room. The larger gauges, O and S, were generally more expensive and required more space. N gauge was a consideration because more layout could be built in the same space. But the smaller size, along with Z scale, I ruled out.

DC or DCC:

Even though I have 2 DC engines that we ran on the layout built for our children, I knew

that technology had really leap-frogged in the twenty years since that time. The advantages of DCC seemed too great and my previous investment too low, not to consider starting from scratch. For me, DCC simplified wiring, offered multiple engines on the same track, easier path to sound, radio-controlled cabs, etc. DCC just seemed the obvious choice and has proven easy to learn.

TIME ERA/INDUSTRIES REPRESENTED/PROTOTYPE OF FREELANCE:

These three questions took some time to come to a comfortable decision. Although I am building the layout for me, I was hopeful that our grandchildren would find it enjoyable and perhaps become involved. I wanted to have the steam period represented, but as I spoke with our grandchildren, it became clear that they did not relate to steam. Even after a visit and a ride on a steam engine at TVRR museum, the new diesels and long trains that they saw daily, defined their image of a railroad. So the era was set—present day. The question remained for me to find a method to include steam engines in a present-day layout. This was answered by a gentleman whose business is building custom model railroads for museums and individuals—to include an excursion railroad as part of the layout. Problem solved. The excursion railroad concept would allow me to run engines and cars from any past railroads. My goal is to build an inventory of the highly streamlined

engines of the 20's and 30's, as well as unique designs such as cab-forward.

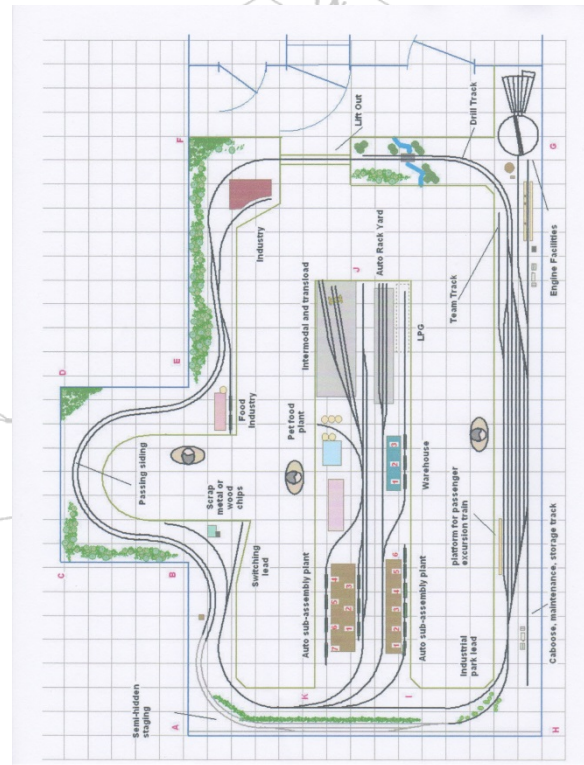
The major industries on the railroad were again determined by what you see in and around the East Tennessee area. Auto-rack operations and container transportation were chosen as the two major industries, with others to be decided later.

The decision to freelance or be prototypical was based in part by thinking the railroad would be operated by me with perhaps one or two of our grandchildren, and freelance did not hold me to a strict criteria. I chose to freelance. I need to interject that I had not met anyone in the club or anyone who operated a layout with others at the time I was making these decisions.

LAYOUT SIZE/WHERE TO LOCATE:

I knew I wanted to build a medium-sized layout and I that I wanted to build it in an air-conditioned/heated space to avoid expansion and shrinkage as much as possible. Since we had an unfinished basement, my first plan was to build there after finishing part of the area for the railroad and my other hobby, hunting and shooting sports. The refinishing project expanded in the process and took more time than expected. During this time, I worked on layout designs, trying to overcome the problem of entrance/exits from the area chosen. The need to have walkways around the layout diminished the size of what was possible and began to question if I would

build a railroad. At this point, my wife suggested that I use the bonus room above the garage and move its contents to the basement. Voila! Problem solved. I was back in business with a 15x28 space.



6) Layout Plan -- Zoom in for details.

CAN I ACCOMPLISH THIS PROJECT:

This might seem like a strange question coming from someone who had been thinking about a railroad layout for 20 years and had read everything he could about the process. I think all of us may have some block that keeps us from actually getting started. My "hurdle" was two-fold. Did I

have or could I develop all the skills necessary to succeed and would I stick with it until completion? I was able to answer these questions by discussions with a friend from my previous workdays, who is a life-long model railroader and has an excellent home layout. He convinced me that any of the techniques may be learned by anyone. The quality of execution may vary, but you become better simply by doing. You can also re-do anything you don't like. My concern of "sticking with it" was mostly time-based because I was thinking of this as a project, not a hobby. Once I digested the hobby concept, I could break down the stages and see portions completed in a much quicker fashion. I have never set timelines to complete these stages, which has proved helpful to me. I have found my plans on which days and time that I will work on the railroad do change, and factors beyond my control in ordering supplies have caused unforeseen delays. For someone who has always worked in a highly goal-oriented and timeline environment, keeping the "hobby" concept in perspective has helped maintain an attitude of "rolling with the punches". If one task can't go forward, there always seems to be something else to work on.

THE TRACK PLAN:

During the time I was involved in finishing the basement, I researched layouts through Model Railroader, videos of layouts and real railroads, searched the track plan index of Model Railroader, etc. I picked out 3-4 of these layouts that seemed interesting and

tried to adapt them to my chosen area. I also tried designing the layout from scratch. The features that I wanted on the layout were a yard area for fueling/maintenance, etc. with a roundhouse or diesel shop, a double-ended yard, an auto carrier yard, a container yard, and perhaps an auto assembly plant. Other industries could be added for additional places to bring cars in and out. As I worked on the plan, I had room for a peninsula, the ability to run around the room or perhaps even a reversing loop. The size of the reversing loop would shorten the peninsula. After several efforts at the design, I felt that I was about 90% complete, but couldn't get to the finish line. By this point, I knew that if I had a solid design on paper, I could follow the plan, but I wasn't quite there. I started researching companies that design and build model railroads to see if any would do a design only, since I wanted to build it myself. The other part of the equation was cost. If the cost of the design was not more than 10% of the cost of building and equipping the layout with engines, cars, and scenery, that would be a reasonable investment and provide a sense of proceeding with a high degree of confidence that the layout would work as intended.

I found two companies in MR and spoke with each detailing what I wanted to accomplish. Both of them would do a design only and seemed highly competent. I had seen one company's layout in a museum. As it turned out, their pricing schedule was well beyond my 10% desire. I had to find

another avenue. I had just read an article in MR by Lance Mindheim and was aware of his ads for layout services. I had not called him because his business name is, The Shelf Layout Company, and I wasn't building a shelf layout. My call to Lance turned out to be better than expected. Lance explained that if he could go back and rename his company, he would. The word "shelf" was too limiting compared to what his business actually does. Over the next several weeks, we went through a process of questions, trial designs, etc. I provided Lance with a drawing and dimensions of my space and the final layout drawing that I had done.

One series of questions he requested was concerning who would be using the railroad and a list of the individual areas of the modeling process to find out my thoughts on what I liked best. At this point, I thought I would be running the railroad myself, with perhaps one or two of our grandchildren helping. The answer to what I like best turned out to be the most influential in the design process. I thought the greatest enjoyment would be actually operating the railroad, switching cars, etc. I could start the operations before scenery. Just the track work would have to be completed and the real purpose for the railroad would begin. Certainly, operations is not everyone's "cup of tea"-- just read the President's Car article in May issue of NMRA Magazine. For me, operations would give meaning and an extended use of the railroad for years to come.

After Lance had reviewed my drawings, and we were coming up with test designs, he commented that my problem with completing the layout plan was that I was trying to put too much into it. Sometimes, less is more. My experience with Lance was excellent and his help was well beyond providing the layout drawings. Lance has made himself available to answer any question or to get an opinion after he completed the design. The material he provided not only covered the general design, but absolute dimensions of all curves, critical placements, etc., electrical layout (including switching), and a detailed set of helpful hints in the construction process. This was invaluable for me. Again, I had not met anyone in the club at this time and was unaware of a SIG group in the NMRA for layout design. Lance did make me aware of the operation SIG group, which I joined right away. My path to go to a professional is not the one that most would take, but it was the right decision for me in order to achieve a high degree of confidence in the plan.

I've attached the layout of the completed design. As we continue in future newsletters, you will learn of changes that have been made during the building process. The next issue, we will talk about benchwork, track laying, wiring and locomotive control. Until next time.....

Bill Orman

Willy Clonts Layout

We would like to thank Willy for having us at his railroad layout. It was a great layout and we had a tremendous amount of fun. It was a good turnout of the group.



Willy builds many of his models as dioramas and then puts them on the layout. His separate little work room from the layout has many tools and is a great place to work.



Many of us really liked his swing-out section that allowed him to come through the door but yet still passed trains over that area. It was not the typical swing-out section in that it had some real depth to the models that were on its surface.



The harbor scene was really exceptional.



We hope to see his layout again soon.

By Dale Bryant

Upcoming events that are close to Chattanooga

6/18/14 TRAIN SHOW Carnegie Hotel and Spa, Johnson City, TN, 9am to 3 pm. Admission: Adults \$5, Children under 12-Free with a paid adult. Sponsored by East Tennessee & Western North Carolina Railroad Historical Society

Not So Close Event

5/29/14 through 6/1/14 is a four day event at the North Carolina Transportation Museum at Spencer NC. The Museum is scheduled to have 29 streamliners (may add more) and the N&W J 611 which the NC Museum is rehabbing for the Virginia Transportation Museum so that 611 can start participating in Norfolk Southern's 21st Century Steam excursions in 2015.

Go to

<http://www.nctrans.org/Streamliners-At-Spencer-May-29---June-1-2014.aspx> to see

pictures of the Locomotives and for more information and ticket prices.

ADVERTISING:

Rates are for electronic-format of scanner-ready ads. Preferred formats are Plain Text, MS Word and JPEG. Some Text or Text & JPEG ads can be done by the editor.

Include the company name, address, email address and/or a day-time phone number (email preferred). All ads must be prepaid before publication.

Make Checks payable to: CMM

ADVERTISING RATES

Page Size	Number of Issues		
	1	2	3
Full	\$120	\$240	\$360
3/4	\$ 90	\$180	\$270
1/2	\$ 60	\$120	\$180
1/4	\$ 30	\$ 60	\$ 90
1/8	\$ 15	\$ 30	\$ 45
1/12	\$ 10	\$ 20	\$ 30
Pike Registry: \$12 for 3 issues			

Deadlines For Submission

1st Trimester (Jan) – Dec. 15th

2nd Trimester (May) – April 15th

3rd Trimester (Sep) – August 15th

CMM News may be mailed on a per-cost bases. Please send material for publication to chatmodmod@gmail.com. All submissions become the property of CMM News unless otherwise contracted. Please don't send previously printed materials.

Scott Denson's Modular Updates

During the last few months, I've done a few things with my modules. The two most important things are the addition of a walk-thru module, thanks to Klaus Peucker. With the addition of the walk-thru, I can now run trains completely around my layout, all without having to crawl under the layout. The second thing that I had done was the installation of the DCC system. This was done with the assistance and instruction of Dale Bryant. A BIG thank you to both of you!

Some of the other things that I've accomplished were completion of the fencing and scenery on the campground module. This personal project is one of my favorite achievements in the last few years. In addition, I've completed several buildings for my Depot/Industrial modules. These two modules, when completed, will be twelve feet long, with a depot, several town homes, several blocks of retail shops, four or industrial buildings. All of my industrial buildings but one are background kits, and I'm looking at adding a couple more background buildings in order to give me more switching opportunities.

The final project is to put skirts around the layout. I found tablecloths at Costco made of poly/paper for about \$1.00 each. Like at the Hamilton County Fair, they are attached with staples. While they aren't the best looking curtains, they sure are an improvement by hiding

the supplies that I store under the layout.

I'm hoping that I can finish a little more scenery soon so that I can possibly have an operating session. Stay tuned for that in the future.

Scott Denson

Announcement:

CMM will celebrate with its 1st Annual Meeting. As a corporation (by law) we have to hold an Annual Meeting every year to elect the board members and inform our members of previous and future activities.

The meeting will be held May 17th, 2014, at Wally's Restaurant, 6521 Ringgold Road, East Ridge, TN from 11am to 2pm. Guest are welcome -- so bring someone with you. We plan to have a short presentation for the meeting.

Tentative schedule:

Board meeting will start at 11am (everyone is welcome)

Orders taken for lunch at 11:45 am, Lunch from 12 noon to about 12:45, presentation from 12:45 till 1pm, Annual Meeting from 1pm till 2pm

We hope to see you there.

Coming Events

5/3/14 TC Excursion Nashville, TN To Monterey; Dogwood Spring Festival

5/3/14 Train Show 124 E Ritchie, Marceline, MO 9 am to 4 pm; \$4 admission

5/3/14 Train Show 2320 S. Grand Ave., Carthage, MO 9 am to 3 pm; \$3 admission

5/3/14 Train day Celeb. AMTRAK station, Toledo, OH 9:30 am to 4 pm; no charge

5/3/14 Train Show 3610 S. Florida Ave., Inverness, FL 9 am to 3 pm; \$5 admission

5/3/14 Train Show 277 Expo Rd., Fishersville, VA 10 am to 4 pm; \$5 admission

5/4-7/14 Train Meet Hilton Garden Inn, Chattanooga RR Industry Modeling SIG <http://watt.rrsig.org> Cost \$150.00

5/4/2014 Train Show Fishersville, VA 28th Annual Shenandoah Valley Train Show; Admission \$5 Adults, Children under 12 free, 277 Expo Rd, Fishersville, VA

5/10/2014 National Train Day For events go to <http://nationaltrainday.com>

5/17/14 TC Excursion Watertown, TN To Watertown; Train Robbery Trip

5/17/14 Steam Trip TVRR, Ludlow, KY To Danville, KY; Fees vary

5/17,18/14 N Scale Weekend Franklin Co. Fairgrounds, Hilliard, OH 10 am to 5 pm Sat.; 9am to 3 pm Sun.

5/17,18/14 Open House K & I Model RR Club 10 am to 4 pm Sat, 11 am to 4 pm Sun. 3713 W. Hwy. 146 Buckner, KY no admission charged

5/18/14 Steam Trip TVRR-Ludlow, KY To Danville, KY; Fees vary

5/24/14 The Piedmont Division will hold its Train N' Camp Session at Hobbytown USA in Kennesaw, GA The topic is "How to Operate Your Model Railroad" Session is open to all NMRA members. Check the Piedmont Div. website for time and additional information. www.piedmont-div.org.

5/29-6/1/14 Streamlines NC Transportation Museum Spencer, NC 4 day event with 29 streamliners and the VA Transportation Museum's N&W J 611 go to <http://www.nctrans.org/Streamliners-At-Spencer--May-29--June-1,-2014.aspx>

5/31/14 Steam Trip TVRR, Lexington, KY To Oneida, TN; Fees vary

5/31/14 Train Show 6436 Broad St., Brooksville, FL 10 am to 3 pm; \$5 admission

6/1/14 Steam Trip TVRR, Lexington, KY To Oneida, TN; Fees vary

6/6-8/14 CSX Transportation Historical Society 2014 Convention Pikeville, KY. For further information, visit: www.csxthsociety.org

6/7/14 Steam Trip TVRR, Chattanooga, TN To Stearns, KY; Fees vary

6/13-15/14 SER Convention 1100 Cherry Road, Memphis, TN Joint with Mid-Continent Region. To register on line visit the convention website, www.mrtm.org/convention. Facebook page is at www.facebook.com/#/RailingAcrossTheRiver

6/14-15/14 Train Show 900 SW 20th St., Ocala, FL 9 am to 4 pm Sat., 10 am to 2 pm Sun \$4 admission

6/21/14 TC Excursion Nashville, TN To Baxter; DelMonaco Winery Trip

6/26-29/14 East Tennessee & Western Carolina RR (Tweetsie) Convention Carnegie Hotel, Johnson City, TN

6/28/14 Train Show-Carnegie Hotel, Johnson City, TN 9 am to 3 pm, Admission \$5.00, kids under 12 free

6/28/14 Train Show 441 Paul Russell Rd, Tallahassee, FL 9 am to 4 pm see www.bbmra.org

7/12/14 TC Excursion Nashville, TN To Watertown; Murder Mystery Trip

7/13-20/14 NMRA Convention Cleveland, OH Website: www.2014cleveland.org

7/18-20/14 Train Show Cleveland, OH National Train Show

7/19/14 TC Excursion Nashville, TN To Baxter; DelMonaco Winery Trip

8/9-10/14 Greenberg Show Dullas Expo Center, Chantilly, VA 10 am to 4 pm (both days) \$8 admission

9/3-6/14 Convention Kansas City, KS National Narrow Gauge Convention www.34thnngc.com

9/19-20/14 Atlanta Prototype Meet Kennesaw, GA Southern Museum of Civil War and Locomotive History, Sponsored by the Southern, ACL and Seaboard Airlines, Central of GA, and NC & ST L Historical associations. To learn more go to www.srha.net

9/27/2014 SER of the NMRA-fall mini-meet, Huntsville, AL Come for clinics and layout tours

8/28-30/15 NMRA Conv. Portland, OR website: www.nmra2015portland.org

8/28-30/14 Train Show Portland, OR National Train Show