

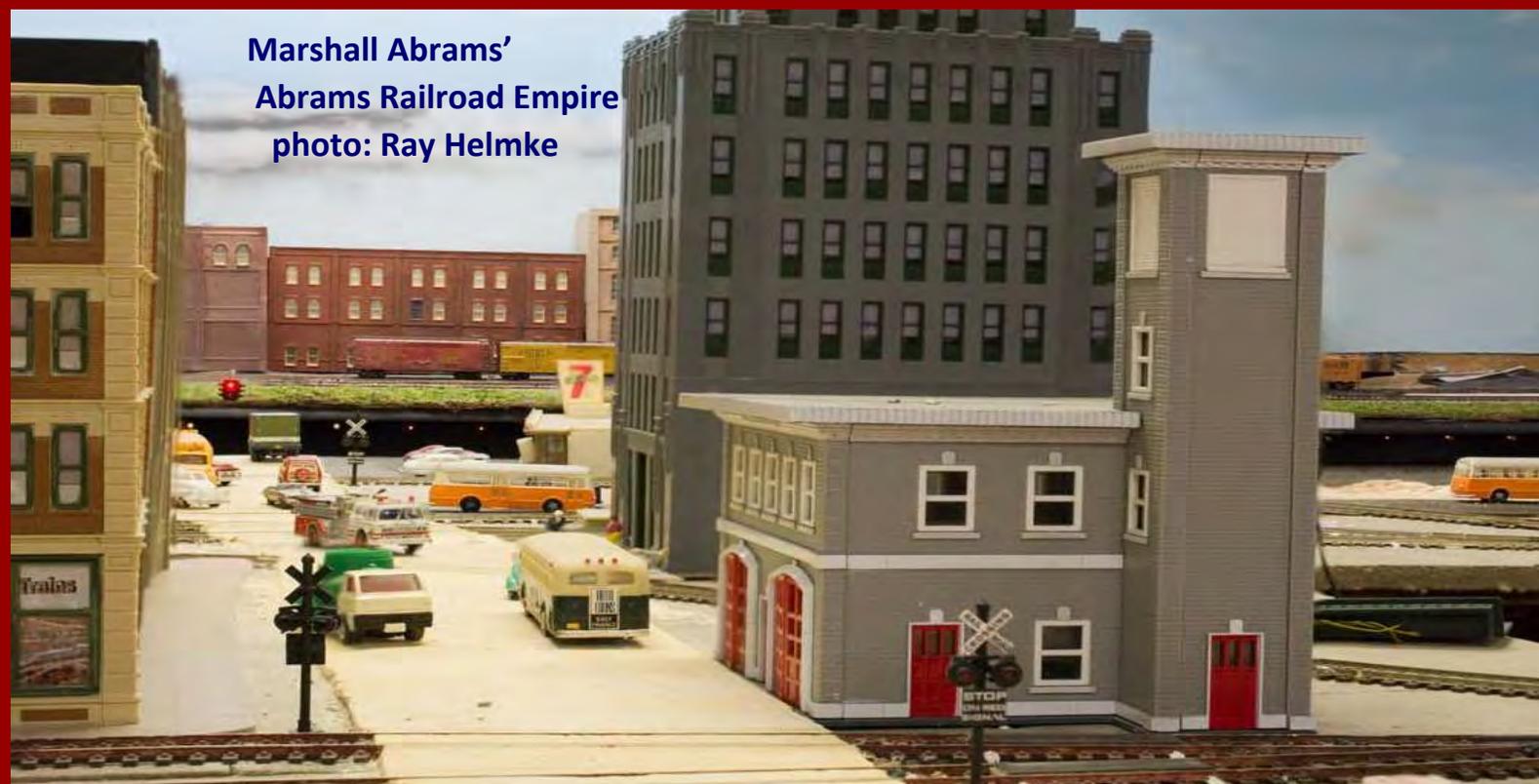
The
POTOMAC FLYER

Fall 2014

Bill Lyder's Whitewater and Virginia photo: Stephen Althem



Marshall Abrams' Abrams Railroad Empire photo: Ray Helmke



In This Issue: Learning About Ops • The Ancient Modeler • Miniatur Wunderland • Hooker Chemical, Niagara Falls, NY • Layout Signs with 3-D Stickers • Automatic Grade Crossing Gate • Capitol Limited 2014 Recap • Model Railroading Calendar • Webmaster Update • Operations Initiative Report • Layout Open House Reports — Bill Lyder's Whitewater and Virginia & Marshall Abrams' Abrams Railroad Empire (ARE) • Upcoming Layout Open House — Bernie Halloran's New York Kittatinny and Western — MMR Robert Reid's & Allegheny and Shenandoah Railroad

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The Potomac Division, Mid-Eastern Region, National Model Railroad Association includes the District of Columbia; Calvert, Charles, Montgomery, Prince George's and St Mary's Counties in Maryland; Arlington, Fairfax, Fauquier, Loudoun, Prince William, and Rappahannock Counties in Virginia, as well as all area independent cities.

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Tip: All of the entries in the Bill Of Lading are links. Point to an entry and click to jump to that article.

Potomac Flyer Potomac Division's Quarterly Newsletter

Submission Deadlines

Winter Issue December 1	Spring Issue March 1
Summer Issue June 1	Fall Issue September 1

On the cover:

Bill Lyder's Whitewater and Virginia photo: Stephen Altheim
 Marshall Abrams' Abrams Railroad Empire photo: Ray Helmke

From the Business Car

by Brian Sheron, MMR, Division Superintendent

This morning (8/26) when I left the house it was 59 degrees outside. While it was predicted to hit 90 degrees today, it reminded me that as we head into September, the nights cool off, it is darker when many of us get up in the morning, and the daylight hours start growing significantly shorter. Fall is typically a time when many model railroaders turn their attentions from outdoor attractions to an indoor one, namely model railroading. Picking up on those projects you started (or planned to start) earlier in the year before the weather turned warm is now in order. With the coming of Fall also comes a number of fun model railroading events. In September, we resumed our monthly layout tours. Marshall Abrams, our Flyer editor, graciously hosted an open house on September 6th. For those of you who saw it, Marshall's electrical engineering background becomes readily apparent. Bernie Halloran, who is an outstanding modeler, will be hosting the open house in November. I have seen Bernie's layout, and it is spectacular. His scenery is exceptional and with great attention to detail.



It is being hosted by the South Mountain Division, just to our north, and will be held in Hagerstown, MD. On the South Mountain Division's web site (<http://www.smdnmra.org/>) you can see all of the activities they have planned, including layout tours, facility tours, Call Board Operating sessions, and several tracks of informative clinics. These conventions are a lot of fun as well as informative, a great place to meet other model railroaders and make new friends. I strongly urge you to register and plan to attend.

Shifting topics, on September 20th, the Potomac Division Board of Directors met at Bob Reid's house. After the usual reports, we focused on starting to plan for the spring, 2015 Potomac Division Minicon. If you weren't aware, we try to alternate the location of the annual Minicon between Northern Virginia and Maryland. The last time we had our Minicon in Maryland, we combined it with the Chesapeake Division Minicon, and held it at the South Columbia Baptist Church, which was about midway between the two Divisions. The Board thought that a combined Minicon with the Chesapeake Division this coming year would be a good idea, so we have contacted the Chesapeake Division to see if they are interested. We are hoping to hold the Minicon around the latter part of March or early April next year. We will keep everyone informed as we firm up our plans. And as a reminder, our Minicons cannot be a success without you! There is a lot of planning and coordination required to make these conventions successful. If you would like to volunteer to help work on the 2015 Minicon, please contact me or any of the other Potomac Division Board members.

Phil Scruggs, who so capably handled the food concessions at last May's Minicon, has stepped

We also resumed our monthly operating sessions in September. Recall we started them last March. Division members who have layouts on which operating sessions are regularly conducted host an operating session on a weekend, for which any division members can sign up. These sessions are a great opportunity for members to learn about the operations aspect of model railroading.

In October, there is the Great Scale Model Train Show at the Maryland State Fairgrounds in Timonium on October 25th and 26th. In addition, the annual Mid-Eastern Region Convention will be held October 16-19, 2014.

up once again and agreed to become the Division's layout tour coordinator. We are always looking for member's layouts to showcase in our monthly open houses, so if you have a layout you would like to volunteer for a monthly open house, please contact Phil ([mailto: Layout-Tours@potomac-nmra.org](mailto:Layout-Tours@potomac-nmra.org)).

The last item I want to touch on is articles. The Mid-Eastern Region publishes *The Local* every two months, and the Potomac Division publishes *The Flyer* every 3 months. In addition to reporting on events happening in the region and division, these publications also include informative material that covers the wide range of subjects of interest to model railroaders. However, this material is not prepared by professional editors or writers. It is prepared by us, the NMRA members. I'm sure all of us that are model railroaders have, at some point (or points) in our modeling journey, experienced (what we call at my office where I work) an "AHA moment". Perhaps you discovered some clever way to simulate on your railroad something in real life, or perhaps

you've developed some device that will improve operation on your railroad, or make operating it easier. For example, in this issue, Marshall Abrams wrote an article about how he went about finding the optimum way to install operating crossing gates on his layout. Sharing our modeling experiences with others helps all of us. Writing an article that explains how you did something will likely help many other modelers when they want to try that. In the years that I have been in model railroading, I've come to conclude that each of us develops unique skills. For some of us, it might be in model building, for others it might be electrical gizmos, or scenery, or operations. Don't be afraid to take pen to paper and document your skills and experience in the form of an article for *The Local* or *The Flyer*. Both of these publications need a steady supply of interesting articles. And, if you are interested in the NMRA's Achievement Program, writing articles is a sure way to get your Author achievement certificate. **I**

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Mark me up! Learning About Ops

by Mat Thompson



So far in the Mark Me Up columns, I have encouraged you to try ops. Now it is time to learn how to operate by turning to the masters.

In the Potomac Division, we have the best resource for

learning model railroad operations in the nation. His name is Steve King.

Steve, a widely acknowledged expert within the hobby, has given his Time Table and Train Order clinic at many Potomac Division and Mid-East Region Conventions. It's a lively, humorous presentation with plenty to keep you engaged. Normally, he then schedules a practice session, so first you learn, and then you do. Steve's clinic, in written form,

complete with the dry wit that makes it so entertaining, is the second half of the new book 19 East, Copy Three. Check with Phil Monat (phil@philmonat.com) to see if you can snag one of the last remaining copies.

Other useful written material is plentiful. The readings mentioned below are clearly written and well illustrated with photographs and diagrams. Chapters are short, encouraging you to absorb concepts in bite-sized pieces.

You don't need to read them all to start operating, and you aren't studying for midterms. Pick one and use it to get a broad understanding of what you are getting into.



Steve King presenting his Time Table and Train Order Clinic. He uses the schematic in the background to show the progress of trains across the railroad as events unfold.

Tony Koester's Realistic Model Railroad Operations (Second Edition) is THE Operations primer. It's the perfect book to get a feel for the subject and a solid reference as you gain experience and want to dig a bit deeper into some aspects.

How to Operate Your Model Railroad is a special issue Model Railroader magazine released in the summer of 2012 and still available from Kalmbach. The articles have been published before, but having them together in a single volume is well worth the \$8 cost. Andy Sperandio edited this magazine and included several of his best columns from "The Operators." Speaking of "The Operators", Andy's column is always the last page of each Model Railroader, and each column explains a facet of operations clearly and precisely.

My favorite step-by-step book is How to Operate a Modern Era Switching Layout by Lance Mindheim. Don't let "Modern Era" throw you off. It just means no cabooses and the conductor throws turnouts because there is no brakeman. Lance explains rules and procedures he's learned from railroad professionals. You'll see coupling up cars and similar actions as methodical, multi-step

processes you can follow on any model railroad.

Can't get through a book? Go to How to Operate Your Model Railroad (or the May 2011 issue of Model Railroader) and read David Popp's story, "Practical Tips for Switching Fun." In six pages, most of it diagrams, you see what you will be doing in your first few ops sessions.

Google "Tips and Hints for Model Railroad Operations" and you will find four YouTube videos made by two Canadian modelers, Mike Hamer and Chris Lyons. Their homemade productions are 10 to 20 minutes each. Subjects include what to look for when coming to a new railroad, how to switch a mainline train, understanding arrival at a major yard, and switching a yard and industrial area efficiently. While not polished, commercial productions, they are a good introduction to operations.

The first Mark Me Up column told you what to expect at your first operating session. The second column explored some myths to convince you we can all be operators. In this column you have some easy to digest sources for learning a bit about how operations work on a model railroad.

In the next column, armed with knowledge and confidence, we will tie it all together by placing you trackside with a throttle in hand and talking you through the things you will be doing. Get ready for a fun trip. **I**

Engineers and Fireman say "Mark me up!" to get their name on the crew Call Board for their next run. "Mark Me Up" is a quarterly column focused on how model railroaders can become operators and members of the operations community. Mat Thompson's Oregon Coast Railroad was featured in *Great Model Railroads 2014*. Building structures and scenery are his favorite modeling activities. He is also an avid model railroad operator and regularly attends operating sessions.

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Achievement Program News

by Brian W. Sheron, MMR

While summer is usually a “slow” time for model railroading, it did not stop Bill Roman from completing all of the requirements for the “Master Builder-Cars” requirement. Bill’s AP was submitted and approved.

Berne Halloran completed all of the requirements for Golden Spike Award and his scenery and structures AP certificates, and they were submitted and approved.

Also, Lee Kass, a new member to the Division, met all of the requirements for the Golden Spike award, and should be receiving his certificate shortly.

Finally, I reported last Spring that Bob Reid had completed all of the requirements for

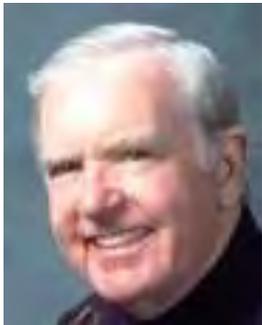
Master Model Railroader, and that his application was pending with the NMRA National organization. I’m pleased to announce that his application was officially approved, and he was awarded MMR #534. Bob’s achievement was featured on page 44 of the June, 2014 issue of NMRA magazine, and Bob will be presented with his certificate and plaque at the October MER Convention in Hagerstown.

[Click here](http://nmra.org/education/achievement-program) to go to the NMRA Achievement Program site to learn all about the program, or paste the URL into your browser <http://nmra.org/education/achievement-program>. 

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Miniatur Wunderland: Backstage at the World's Largest Layout

by Bill Day, MMR



You’ve seen its videos, you know it’s in Hamburg, and you know it’s the world’s largest model layout. But you’ve got to see it to believe it.

Miniatur Wunderland’s¹ statistics are numbing:

13,000 meters (8 statute miles) of rail, 930 engines, 45 cleaning trains, 14,450 freight cars, 1,270 signals, 3,050 switches, 46 computers. In the section called Middle Germany, there are 26,000 LEDs, 205 houses, 13,000 figures, 420 cars and 26,000 trees. Add in depictions of Germany, Switzerland, Austria, Norway and America and the total is staggering. Daily attendance: 10,000 persons. Staffing: 300 persons. Cost: 15 million Euros and counting.

Some things will sound familiar. This HO layout is built on one-inch cabinet-grade

Photo credits: Spencer Day

plywood 3 feet high. Roadbed is cork, often ballasted, sometimes not. In places, usually a passenger station or classification yard, there are as many as 12 adjacent tracks. In Austria there is a funicular railway. Engines are equipped with sound. Radii are generous. A block system controls trains.



Bill Day behind the scenes

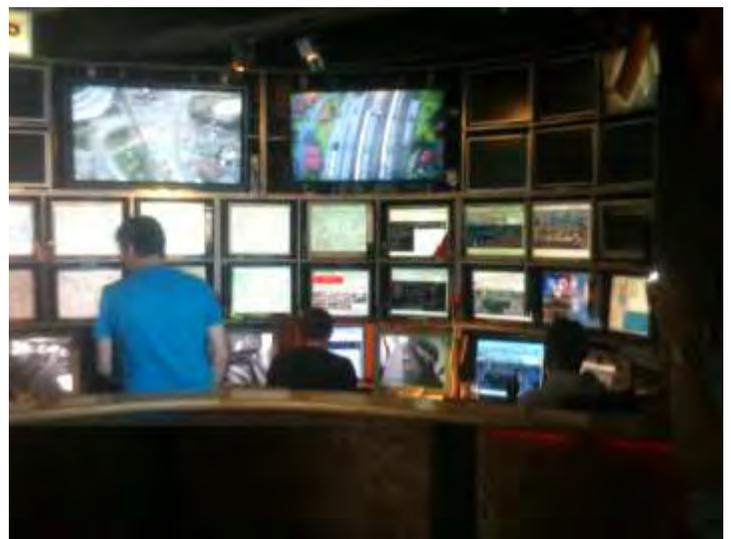
¹ <http://www.miniatur-wunderland.com/>

Although twin brothers Frederik and Gerrit Braun wanted to build a large train layout, the trains, as impressive as they are, are mostly the thread that holds the layout together. The moving cars and trucks with headlights, taillights, stoplights, fog lights, interior lights and turn signals, each moving independently, obeying all traffic laws,

In 2012, 11 million visitors from five continents had seen Wunderland, making it Hamburg's most visited civic attraction and Europe's sixth most visited static attraction. It all began in a hobby shop in Zurich where the twin brothers became excited by the thought of building something larger than their home layout.



Water filtration and leveling system for scale ocean liners



Screens at beginning of backstage tour

slowing or speeding up, stopping, being chased and halted by police cars, stopping at accidents and turning off their lights during daytime--draw as much attention as the trains.

If you go to Hamburg, you can take a backstage tour, seeing the layout from behind, learning firsthand what is familiar and what is different. This is that story.

Scale model ships, exact replicas of prototype container ships, passenger liners, freighters and oilers, among others, move through real water, accelerating, maneuvering, turning, and docking.

Screens, Computers and Infrared Signals

When you enter the exhibit, you are met with some 20 video screens attended by six technicians. The screens display the critical areas of the layout, places where trains would tend to derail or risk a cornfield meet. It reminds you of mission control at the Johnson Space Center in Houston.

Hundreds of animated effects cover the cities and towns: wind farms, animals that move, figures that walk, gantry cranes, earth movers, dump trucks, burning buildings, all responding to interactive push buttons around the exhibit. In Norway, a weather balloon ascends to the ceiling. In America, a rocket roars to the sky. The latest addition to the layout is the airport, with scale aircraft landing, taxiing, refueling, pushing back and taking off.

Trains, including tandem Big Boys in the American section, start, stop and switch by computer, obeying signals, entering sidings, stopping for passengers and otherwise obeying rules of the road. Engine models are exquisitely detailed, authentic for Switzerland, Norway or America or whenever the country or region changes. If a railway is

under wire, Wunderland is under wire. As is the case with American modelers, specific scenes are reflected in each country: Las Vegas, Mount Rushmore, the Grand Canyon, and Florida in America, the City Hall in Hamburg, the Berlin Wall in Berlin, and so forth.

The technology for moving trains, autos and planes is computer-driven infrared signaling. Each engine, each auto, each airplane has a chip inside that guides its movements. The system is the basic Faller Car System, available from Walthers, but Wunderland technicians have taken the System to another level. The chip gives each vehicle a "brain." Vehicles choose their moves on their own based on conditions: traffic jams, accidents, red lights.

One of the most startling demonstrations of this technology is seen on a highway approaching a tunnel where, randomly, a tractor-trailer jackknifes. Emergency vehicles with sirens blaring speed toward the accident. Dozens of cars and trucks on the highway come to a slow stop, their brake lights flashing. When a wrecker arrives, the rig is moved to the side of the highway and the stalled cars and trucks slowly begin moving again, maintaining proper spacing between vehicles, changing lanes to permit faster vehicles to pass slower ones, stopping when traffic lights turn red.

Meanwhile, at the airport, special technology is used. Here's how Wunderland describes its design:

"A slide mounted on roller bearings under the runway moves back and forth the entire length of the runway. At its core are two linear drives and two metal rods which move up and down independent of the slide. These metal rods will eventually carry the airplanes. On takeoffs, these two rods attach to the bottom of the plane. Takeoffs and landings are simulated by accelerating the slide and lifting or lowering the rods."

After takeoff, as soon as the airplane disappears behind a baffle, it slows down and parks in a spot called the shadow area. Its battery is recharged, and the plane makes its way under the runway to the start. An elevator lifts the plane to the approach height, the rods attach themselves, and the plane flies out to the correct spot on the runway, flaring to a landing. The rods retract and the plane taxis (using the Faller Car System magnet in front of the nosewheel) to a parking spot on the runway. After an hour, planes take off from the opposite direction.

Familiar Territory

Wunderland is a showcase for German model manufacturers: Marklin, Faller, Preiser, Noch, Brawa and Vollmer are the most familiar. Some 40 staff modelers work on the exhibit, usually modeling at home, generally relying on kits but adding distinctive features. A rural castle ends up with straw nests in its chimneys, storks nesting, guano evident. Near a second-floor window sits a standard Preiser figure but—with a modeler's enhancement—her hair reaches to the ground: Rapunzel. Every once in a while this kind of fantasy intrudes, as it did with John Allen's dinosaurs, and you'll see a Wunderland unidentified flying object or prehistoric animal.

Scenes are chosen from every corner of life: lovers, criminals, police, firefighters, politicians, fairgoers, movie patrons, skiers, bike racers and swimmers. High moments in history are represented, the fall of the Berlin Wall being one. A European World Cup scene shows training camps, some hidden from others for competitive reasons. One arresting scene shows a 2007 Greenpeace Rally in Switzerland. In the snow are 600 unclothed men and women protesting global warming, each figure having been painted realistically.

Initially, modelers were chosen by competition: after an internet invitation to compete, applicants included cooks,



Partially-constructed mountains for Italy



Benchwork for Italy—a new section under construction



Forms for Italy topography

masseurs, secretaries, carpenters, surveyors, students and technicians. They were given raw materials and asked to create something special, with the best-performing hired. Winners, by definition, were rated on functionality, affinity for computers, observation skills, a feel for personal relationships and imagination. Most modelers work in plastic, but some insist on working only in wood.

A concert hall, a futbol stadium and industries unique to their countries are all in evidence. In the stadium, 90 flash bulbs pop randomly during the game. The stadium contains 12,000 figures, each hand-painted by Preiser or the

Wunderland staff, and individually placed on tiers. In the stadium and throughout Wunderland, lights are everywhere. In one country fair scene, 10,000 LEDs are used.

In the Austria exhibit, the Alps rise some 25 feet from one floor of the building through a large cutaway section to the next floor. John Allen would approve! Under the Alps is a helix with 11 levels. All that effort is painstaking; the Hamburg section alone required 28,000 working hours to complete

Some American modelers have designed day and night effects, simulating sunset and daybreak. Wunderland has developed a combination of blue and red fluorescent bulbs on dimmers to turn day to night every 15 minutes. Then a quarter of a million lights go on. Night lasts 15 minutes, as does day.

Maintenance

Track cleaning, the pesky routine of every modeler, is no different at Wunderland. A total of 45 track cleaning trains run throughout the layout, using an alcohol mixture as a cleaner. Then, too, every American modeler with hidden staging faces the peril of derailing engines and cars in inaccessible places. So does Wunderland. Its management admitted that "in the mountainous Scandinavian section most train

operators get their pants wet while putting a derailed train back on the track." And, in long hidden stretches, workers rely on another train to push the disabled one through the space—or technicians resort to extra-long tongs.

In the backstage tour, step ladders are everywhere and—in hard-to-reach areas—there's a wooden board that can be affixed so workers can lie down and reach the middle of the layout. Benchwork is set at 3 feet so that creepers can be used for under-board wiring and repairs. The entire exhibit is vacuumed periodically, and trees and figures that have been bent by tourists, are straightened. Like many of us, technicians have developed an extensive system of color-coded hookup wires. And, at intervals, the exhibit boasts smoke detectors, probably stemming from the time someone used 100 proof alcohol to clean track and was surprised to find that alcohol can explode.



Charging station for cars and trucks

An ingenious series of charging stations, some under the layout, has been designed to recharge the batteries in cars, trucks and planes. If a computer senses that a battery is low, it directs the vehicle or the plane into a charging station where the rechargeable batteries are automatically charged. When complete, the vehicle or plane continues on its way.

Details, Details, Details

Aside from the incredible number of trains, planes, boats and figures on the layout, there is exacting attention to detail. At the airport, planes that have landed are met with interior cleaning vehicles, de-icers, waste water tank trucks, pushback vehicles, catering vehicles, luggage carts, fueling vehicles, shuttle buses, garbage trucks, snow blowers and, occasionally, fire trucks—all moving.

With respect to autos and trucks, xenon headlights shine brighter than halogen headlights, so some LEDs are painted a different color to be correct.

Under wire, Marklin posts and tensioner wheels are used, but catenary is scratchbuilt.

In Short

Over-all, Wunderland rates 9.5 on any evaluation. It's unlikely to be outshone. But that's not to say that its individual features are always expertly modeled. Allen McClelland's rule ("It's good enough if it's good enough for me") sometimes applies. Some of Wunderland's mountains are best seen at a distance. Some tracks are unballasted. Static grass is rarely seen. Some structures, such as the Walther's blast furnace, are undetailed and one of them has no skip incline for delivering raw materials to the furnace. But, however you measure it, Miniatur Wunderland and this magnificent obsession we call modeling allow all of us to stand a bit taller.



Bill Day, MMR, is past Senior Assistant Superintendent, Potomac Division. His HO layout, the D&D Railroad and HO_{n3} Allisonville short line, uses 10 of the animated effects seen at Wunderland. But Bill is an Apostle of Animation. His layout uses 10 animated effects that Wunderland does not have.

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Sound for HO Budd Rail Diesel Cars

by Mat Thompson

Two Budd Rail Diesel Cars (RDC) provide passenger service on my HO scale Oregon Coast Railroad.



Oregon Coast Railroad 240, A Budd RDC 3, is leaving Astoria.

The prototypes are self-powered single unit passenger trains made from 1949 to 1962. Some railroads used RDCs in commuter service. The other common use was passenger service in remote areas replacing conventional passenger trains as ridership declined. Engine control stations are on both ends of the cars so they don't need to be turned.

The most common unit is the RDC-1, an 85 foot all-coach configuration. The RDC-2 has baggage and coach compartments. The RDC-3 has an RPO, baggage, and coach compartment. My RDCs are HO scale models offered several years ago as Proto1000 offerings that Walthers have just reissued. Even though Proto1000 offerings are less detailed than Proto2000 models, they look good even when surrounded by highly detailed engines and cars. They also run well and have directional headlights.

Walthers newest release comes DCC ready. My older model was released before "DCC ready" was common but there may be no engine easier to hard wire. The car body separates from the floor without shaking and no prying - just remove four screws and lift. The light board is big and solder connections are clearly marked. There is a decoder tutorial at http://www.bevteccom.co.uk/Rail/DCC/P1k_RDC.html and a video at <http://www.youtube.com/watch?v=sbdCCQJ2>

w1o. Following the tutorials I added decoders to both my RDCs and put them to work on the layout.

And then along came sound. Over the years, the OCR roster has evolved from a few sound units to all sound units. Well, all but my RDC units. QSI offers an RDC sound decoder but at \$125

and with recommended dual speakers, I thought the cost high for units that are only bit players in my operating sessions.

Still, I investigated. First, at <http://www.budd-rdc.org/>, I read about RDC engines. They are powered by two Detroit diesels with 500-plus horsepower. Listening to videos on the site, the Detroit diesels had a regular rhythm and a slightly muffled engine noise making it quieter than higher horsepower diesel locomotives. In other words, the sound was about what I expected for a relatively modern, modest diesel engine



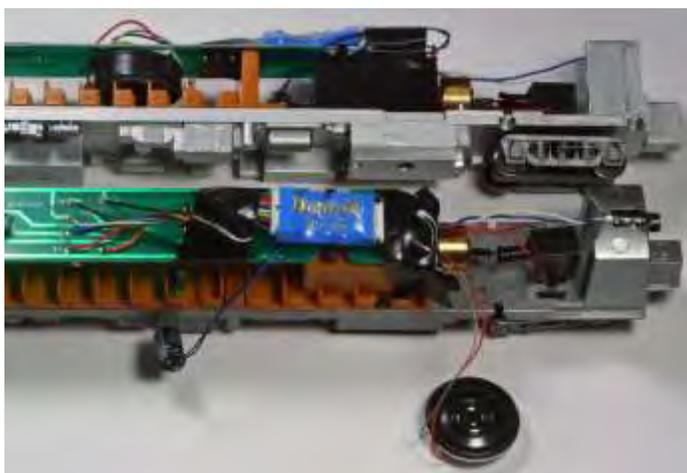
The light board on the LifeLike RDC has well marked soldering connection points.

intended for passenger service.

Digitrax offered the SDH164D, as an inexpensive option for adding engine sound with both DCC command and sound in a single decoder. It looks like a normal Digitrax decoder with a capacitor and a speaker already wired to it.

Since I made my conversion, Digitrax has replaced the SDH164D with the SDH166D. They are interchangeable.

The default sound setting is advertised as an SD38-2. I can't verify the accuracy but it has a regular rhythm like an RDC. Even with the default 1-inch speaker and a baffle, the sound is subdued compared to most sound decoders. Subdued, but I think perfectly adequate for an RDC. The decoder, with speaker, is also inexpensive. Retail price is \$55 but many sources sell them for closer to \$40.



The lower RDC is shown with the SDH164 decoder installed and with the capacitor and speaker that came prewired to the decoder. The upper RDC shows the capacitor tucked into the baggage compartment and the speaker in a baffle taped to the bottom of the light board.

Installation is simple. In my case, both RDCs already had Digitrax decoders installed. All I had to do was carefully work the old decoders off the wiring harnesses and add the new sound decoder. If I hadn't added a decoder, I could have followed the tutorials mentioned above to connect the SDH164D.

I also unsoldered the speaker so I could run the wires into a readymade baffle. After running the wires through holes in the side of the baffle, I re-connected the speaker wires and glued the speaker to the baffle. I then used two-sided tape to attach the speaker to the bottom of the light board. In one RDC, the speaker's silver body was visible through the RDC's windows so I painted it black.

The decoders took the new addresses on the first try with no problem. CV 58 sets the sound volume. The sound range is 0-15 and the default is 9. I set both my units to 15. There are three horns. I left mine at the default selection of 0. I also set CV 11 (Sound Time Out) to CV 6 so sound does not start until the unit is selected and sound stops when the unit is deselected.

At a modest price and with minimum effort both units now have believable sound and are back at work on the OCR. **I**

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Improve your modeling with a few sheets of paper.

That's exactly what happens when you participate in the National Model Railroad Association's Achievement Program. One Merit Award here, another there, and pretty soon you're on your way to becoming a Master Model Railroader. All the while learning and having a ton of fun.



The Achievement Program is modelers helping modelers become better modelers and get the most out of their hobby. And it's yet another benefit of NMRA membership. Visit www.nmra.org. Then improve your skills. And your hobby.

The Ancient Modeler: Round Three Passenger Travel

by Bob Rosenberg



I've always been partial to full length passenger trains and cars; I designed my own railroad with 30" radii and long runs to accommodate them. When I got back into HO gauge modeling after graduation in 1965 the first thing I purchased was a set of four Rivarossi PRR heavyweight passenger cars (combine, Pullman, diner, and open platform observation) from a hobby shop in Norfolk for \$2 each. I

believe the prototype for them was Santa Fe, but we were a lot less fussy about that sort of thing back then; we were just grateful to have a reasonably nice looking train at a reasonable price. Not too long after that, Rivarossi produced a streamlined set of cars. These were modeled on the PRR prototype and painted up in Pennsy and numerous other railroad paint schemes. Those sets came with a blunt end observation as used on the

Broadway limited or DL&W's Phoebe Snow, and although the prices had gone up some it was still within reach for most of us. Tenshodo produced a very nice car but I felt that most of them were too short to be very realistic looking; Balboa imported a really good looking series of full length smooth side cars built by KTM (and later picked up by Westside) in several different railroad paint schemes, all with lighting and interiors. Although the original prototype was Great Northern, the paint and decal work for all of the railroads was very well done (laser painting and printing had not yet been invented). Unfortunately, they were about \$75 for a set of five (a sleeper, coach, diner, dome, and round end observation) at Clark Kean's little hobby shop in downtown Washington, a bit too rich for my blood at the time. They also sold matching



Rivarossi PRR Open Platform Heavyweight Observation



Two Rivarossi P-70 coaches painted for N&W and "The East Wind."



Balboa PRR Round End Observation.



Balboa NYC E-8 A and E-8 B.



Rivarossi PRR Pullman Catawissa Rapids and PRR Observation Tower View -Both Broadway Limited cars.



Same two cars in reverse order.

baggage and RPO cars as add-ons making a train of seven different cars if you wanted one that long, and there were matching EMD E-8 A/B sets and Alco PA/PB sets in the same paint configurations as the cars, which now show up on eBay selling for an average \$40-\$60 apiece.

Walthers and jc both made full length passenger car kits of various types. The jc (they spelled it with lower case letters) cars came with embossed paper or metal sides known as the “silver sided” kits. They came with embossed paper or metal sides. Either way they had to be painted but the real problem was correctly shaping the roof ends from a straight piece of wood. The same problem occurred with the Walthers kits; the sides were either painted or plain metal and were also a substantial amount of work to complete until they finally went to pre-formed plastic roofs. When they said “craftsman type kits” in those days they were serious. The Kaisner—later taken over by Herkimer—series of extruded aluminum fluted side Budd cars, mentioned in a previous article, available since the 1950’s in both O and HO scale and in 60’ and 80’ lengths, could be decaled for the railroad of your choice whether they had them or not, and retailed for about \$20 each. I accumulated quite a few of them over the years, mostly off of the White Elephant Table at GST Shows. They were available as a baggage car, RPO, combine, coach, sleeper, dome, and round end observation.



American Beauty “Empire Builder” GN Coach Kit.



Balboa GN Diner



Kaisner Pullman and Herkimer Round End Observation.

The earliest models that I recall that could approach the Japanese imports of the 1960's in appearance were produced as kits by American Beauty in the 1950's. These were made right here in the U.S. of A., a statement that seems almost quaint these days. With silkscreen lettering over sprayed enameled metal sides, they really looked great, even with the wooden floors and under body parts and soft metal/foam rubber diaphragms that may have been somewhat lacking by today's standards but again, that was then. The price on one of the boxes is \$5.95, reasonable at the time for the workmanship involved. I don't know the extent of the American Beauty product line, but have one of what has to be among the more unusual of their items, a GN Empire Builder Baggage/Dormitory kit - still unassembled, of course; like most modelers, I have a wide assortment of various types of un-built kits in my collection because the price was right at the time I bought them and I always thought that I would eventually put them together; I could have used one of the late John Armstrong's famous "round tuits" that he would hand out at his talks to encourage us to be more productive, or at least discourage from using the excuse of not getting "around to it" - not doing whatever "it" was, such as building



Balboa NYC Baggage and RPO add on cars.



American Beauty GN "Empire Builder" Baggage/Dormitory Kit.

those kits - a bad pun but a good idea nevertheless. **I**

Bob Rosenberg's current railroad, the Berkshire Air Line Railroad Company, is a fictional bridge/short line set in western Massachusetts in the 1950's that uses New Haven, B&M, and NYC equipment.

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Not getting the bi-monthly NMRA eBULLETIN?

The new **NMRA eBulletin** comes out every other month near the 1st of the month. Either your SPAM filter is blocking it, or you need to update your email address with us. Go to <http://www.nmra.org/member/content/member-info-update>

We'd Like You To Meet: Scott Henry

by Roger Sekera

This column will spotlight model railroaders in this area who have achieved notable progress early in their careers. The concept is to focus on one person who is a strong modeler, has or is working on his or her own layout, has some "standing" in the model railroad community in this area, evidenced by their participation in either a club or some other communal activity.

Raised in Southern Ohio, Scott Henry got his first model trains from Bubble Yum Bubble Gum give-away at the age of 8. With his Grandfather's help, it grew into a model railroad over the next 6 years. Model trains were set aside for undergraduate



school at Webb Institute in Glen Cove, NY completing his degree in Naval Architecture and Marine Engineering.

Scott started his career with the American Bureau of Shipping in NYC, followed by three years with Metro Machine, a repair shipyard in Norfolk, VA. Moving to Prince William County in June 2013, he joined CSC's in their Advance Marine Center where he is now Manager of Concepts, focused on ship design concepts modeling and simulation. He also attained an MBA from William and Mary.

Active in the Prince William Model Railroad Club, he designed the DCC system for the club's Quantico based layout and is now the Operations Session Coordinator. While the club is HO scale, Scott, an avid N scaler, models the NS Tug Fork Division from Welch, WV to Gary, WV. The 8' by 9' l-shaped layout is based on the Appalachian Central plan as it was published in Model Railroader in the early 2000s. It's a Digitrax DCC layout with JMRI software for the Dispatcher. The website is www.scotts-dale-division.net.

His 6 year old DCC by Design business (www.dccbydesign.com) helps "fellow model

railroaders gain full enjoyment from their layout by tailoring DCC to their givens and druthers and budget." Projects have included converting layouts to DCC, designing DCC systems for new layouts, and developing computer based and physical control panels. Clients have been from all over the US as well as five different continents.

His personal interests include sailing, cycling and autocross as well as playing trains (and everything else) with his two children. Thus, Scott has leveraged his Naval Architecture into a nice career with CSC, balanced with his work with the PW model railroad club, a strong outside business and a full family life.

In short, this is a busy young man. **I**

Roger Sekera, a retired executive search consultant, lives in Potomac Maryland. His HO scale Clinch Valley Lines (CVL) models railroad activity (heavy coal balanced by general merchandise traffic) in 1959 in the Southwestern area of Virginia. The CVL has been fully TTTO operational for over four years.



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Company Cars

by Mike White



It occurred to me that it would be interesting to know a little about the companies named on some of our modeled freight cars. There are many kits and ready-to-run cars available decorated with the names of companies that use or used the type of car modeled. Some are long gone but others are still in business today. The old billboard reefers are the most familiar example but there are other types as well. This series will look at some of these and provide some background information on the company behind the name.

Hooker Chemical, Niagara Falls, NY

The Hooker Chemical Co. is best known for burying drums of waste chemicals in Love Canal in Niagara Falls, which became a major environmental site in the 1970s. Hooker Chemical was founded in 1903, as The Development and Funding Company by Elon Hooker, of Rochester, NY. He was from an old line New England family and had degrees in civil engineering from the University of Rochester and Cornell. A search for a suitable business for investment identified the Townsend cell, which converted salt to sodium hydroxide/caustic soda/lye, chlorine, and hydrogen by electrolysis. The chlorine was sold for "sanitation" (and chlorination of drinking water) and bleaching as chlorinated lime. (This was before the development of steel cylinders allowing shipment of liquid chlorine.)

Electrolysis of salt had been known since 1807, but the Townsend cell was the first practical cell. It used an asbestos diaphragm to keep the products from recombining in the cell. Hooker called in experts to assist in testing and improving the cell. Elmer Sperry, founder of Sperry Electric, and Leo Baekland, inventor of Bakelite (and Velox photographic paper) consulted for the

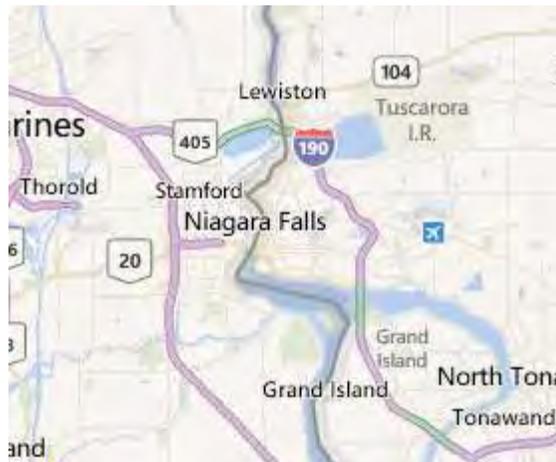


company. After a cell was successfully tested at a rented site in Brooklyn, NY, Niagara Falls was selected as a plant site, taking advantage of low cost electricity from the Niagara Falls power project (completed in 1895), nearby salt mines (within 60 miles), and abundant water from the

Niagara River. Syracuse, NY is the historic salt mining site in North America (known to the Indians and French Jesuits from 1654), but salt mines were also in Wyoming Co., NY near Mt. Morris, and salt deposits are known to extend from Albany, NY, through Detroit and Saginaw, MI, and on to Iowa and Wisconsin.

In 1922, Hooker bought S. Wander & Sons and undertook retail sales of lye and chlorinated lime. The venture was sold in 1927. A West Coast chlor-alkali plant was built in Tacoma, WA in 1929. Later products included sodium

sulfide, sodium sulfhydrate, sodium tetrasulfide, and aluminum chloride. In World War II, Hooker was a leading supplier of dodecyl mercaptan for the synthetic rubber program. Other wartime products included arsenic trichloride, thionyl chloride, and hexachlorobenzene. In the era of plastics, Hooker developed Hetron epoxy



vinyl ester resins, and in 1955 acquired the Durez phenolic resins business.

Hooker was acquired by Occidental Petroleum where it continues as part of Occidental Chemicals. Vinyl chloride monomer and PVC/vinyl plastic are now major chlorine derivatives.

For more information, see "Salt & Water, Power & People: A Short History of Hooker Electrochemical Co.," by Robert E. Thomas, Hooker Chemical Co., Niagara Falls, NY, 1955

<http://boards.fool.com/hooker-chemical-company-29250894.aspx> **I**

Mike White is a member of several clubs and historical societies all rail oriented. Mike is currently MER Secretary and Potomac Division Paymaster. His Solomons and Patuxent Railroad, inspired and informed by the Maryland and Pennsylvania Railroad, represents a rural north-south line between Owings, MD and interchange with the Chesapeake Beach Railway and Solomons Island.

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Update: Deane Mellander's HOn3 Loco



Deane Mellander displayed this model at the Minicon. Dean wrote to clarify a few points on the provenance of the model that your editor had missed. The loco is a parts-built, scratch and kitbash effort. The boiler, cab, and part of the frame are from the old Kemtron D&RGW C-16. Deane believes that the tender come from an old NWSL Spartan model. The model is patterned closely on Eureka-Nevada No. 7, a narrow gauge 2-6-2 that still exists in amusement park service in Idaho, of all places.

Calendar of Coming Events

by Marv Zelkowitz



This list of conventions, open houses, and swap meets may be of interest to NMRA members. The list contains the following events:

- National meetings of the NMRA and other model railroad associations
- Local meetings that may be of interest to NMRA members. In general these are restricted to locations approximately no more than 200 miles from Washington DC.

[Click here](#) to open the calendar or go to <http://potomac-nmra.org/Calendar> . If you find errors in this list or want to include additional items, send corrections and updates to: Calendar@potomac-nmra.org

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Enhance Your Layout Signs with 3-D Stickers

by Brian W. Sheron, MMR



In a clinic on "Details" that I gave at the recent Potomac Division Miniconvention, I pointed out that everywhere you look, you see signs. Signs give you directions on what you can do and what you can't do, they provide guidance, and they advertise, just to name a few of the functions of signs. However, in addition to words, signs can also convey messages with images, either by themselves or in addition to words.

A neat way to enhance the signage around your layout, particularly the signage for your retail stores and businesses, is to use figures that advertise the product the store or business is selling. These figures are 2-D stickers that you can find at most well-stocked craft supply stores (e.g., Michaels). They are inexpensive (e.g., \$3-\$4 each), are of a scale suitable for model railroads, and can really jazz up an otherwise routine sign or business store front.

In figure 3, I added the donuts and coffee



mugs to the front of a downtown cafe. In figure 4, I added the coffee cup to the front of a coffee shop. And in figure 5, I added the



guitar figures to a music store sign I made on my computer.



Figures 1 and 2 show typical packs of 2-D stickers.

These stickers have adhesive backings and can be attached either directly to buildings, or added onto flat billboard-like signs.



So the next time you are in a craft store, look for these stickers and see what unique ones you can find that will add some pizzazz to your layout signage. 

Island Rail Road in HO scale. He earned Master Model Railroader (MMR) certificate number 469 in 2011 and is currently the Superintendent of the Potomac Division.

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Brian is a long-time model railroader, and models the Port Jefferson Branch of the Long

From the Webmaster

by Bill Molsteller



As you may have noticed, we've made some changes to the web site. The visible change is a new address for the web site,

<http://potomac-nmra.org/>

The new address is shorter and, we hope, easier to remember.

Beneath the surface, we've also moved to a new hosting service. We did this for two reasons, first, the prior hosting scheme was out

of space, making updates challenging, and second, we wanted a more permanent environment for the Division's data.

When I last wrote about the Member Exchange section of the web site, I inspired a couple members to send in postings. I've had no further input since then. If business doesn't pick up in this area of the web site, I'm going to close it down. To see what you could lose, [click here](#) or connect to:

<http://potomac-nmra.org/Exchange/Exchange.html>

Around the Bend

Ready to share your layout with fellow enthusiasts? Well, we would love to see it. Currently, the schedule is open and we are taking requests for layout tours for 2015. Your layout does not need to be complete. In fact, it is often better that way. When is a layout ever complete anyway?

Hosting an open house is also a great way to meet other model railroaders in the Potomac Division area. And it is not a big deal! The Potomac Division sponsors tours of members layouts approximately once every month. They are held on a Saturday from 1 pm to 4 pm. The Division 1.) can provide you with pointers for preparing your layout for the open house, 2.) will advertise it on the Division web page, 3.) remind the membership about it a week before it is scheduled, and 4.) will provide a greeter to greet visitors, have

then sign a guest register, and show them the way to your layout.

So if you are ready to have some great folks over to complement your layout and to share some good stories, shoot Phil Scruggs an email at Layout-Tours@potomac-nmra.org or give him a call at 571-235-6105.



Installing an Automatic Grade Crossing Gate

by Marshall Abrams



I've always wanted an operating grade crossing gate with flashing lights on my layout. This article describes what I did to create that device.

Research & Selection

I started by researching what products were commercially available. I like searching on the Internet and I usually find products I didn't know existed, product reviews, and all kinds of related information. My initial question was whether I could buy a complete system or would I have to assemble sub-systems from different manufacturers? Cost was also a consideration.

I found that MTH offers a motorized HO operating crossing gate² equipped with sound, flashing LEDs and eight optical sensors. This package includes everything needed: two masts with interchangeable short and long barricade arms, metal setup template, speaker with enclosure, master and slave motor enclosures, signs, and wires. The MTH user manual was on-line³. There was a caution about the amount of space required under the layout. I hadn't given this a lot of thought previously. Upon examination, I determined that I didn't have the necessary space for the MTH system, so I moved on.

I ended up buying three sub-systems from independent sources. This fit the available space—a requirement I didn't know I had before I started—and was the least costly.

Tomar⁴ makes an HO railroad crossing signal and gate that features four LEDs: two on the front, and two on the back and is powered by

a Tortoise™ turnout motor. The flasher and detection unit are not included. I thought this product too pricey for what it included. These were the only complete, integrated systems available. Thus, my only alternative was to buy independent sub-systems, so that became the selected approach.

Walthers sells a pair of pneumatic crossing gates without the crossbuck sign and flashing lights for about the same price as a pair of NJ



International⁵ crossing gate signals that include crossbuck, gate, and two working LEDs on one side only. The gates swing freely, but are not motorized. I decided to use the NJ International product [1]. When I received these gates, I discovered that there was an internal lever and actuating rod that went down through the bottom of the main housing. This rod is pushed and pulled up and down to make the gate raise and lower. I managed to disconnect the rod inside the base on one of the gates (i.e., I broke it) and replaced it with an external push rod that is not noticeable unless you know where to look.

The second item I needed was an electronic circuit for detecting a train and controlling the gate operation. I had previously researched similar products and selected Rob Paisley⁶ as my preferred supplier. He provides wiring diagrams on his web page; printed circuit boards, parts, kits, and fully wired units are available. Rob's controller [2] uses six visible and infrared light sensitive phototransistors to detect a train and control the circuit. I use it with ambient lighting.

There are many sources of controllers. Dallee Electronics⁷, offers a current sensing

² <http://www.mthtrains.com/content/80-10001>

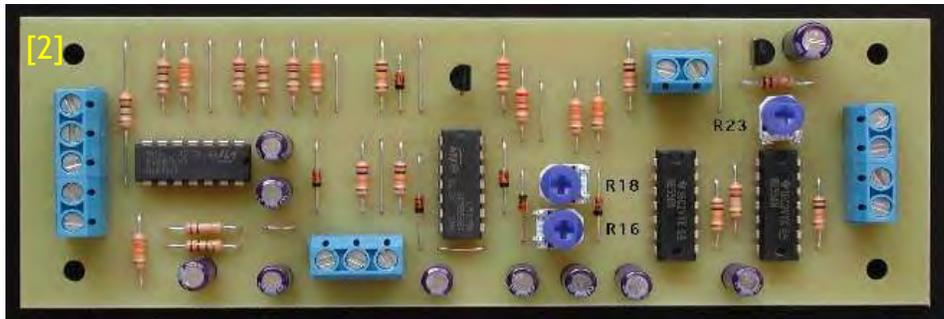
³ www.jimsmodeltrains.com/userguides/MTH8010001manual.pdf

⁴ <http://www.tomarindustries.com/signals.htm>

⁵ <http://www.njinternational.com/hoscale1.htm>

⁶ Email rpaisley4@cogeco.ca, web page <http://home.cogeco.ca/~rpaisley4/CircuitIndex.html>

⁷ <http://www.dallee.com/GradeXing.htm>



controller. Logic Rail Technologies⁸ uses photocells with an option for infrared (IR). You select the number of IR sensors to include with Azatrax⁹ controllers. Google will help you find more.

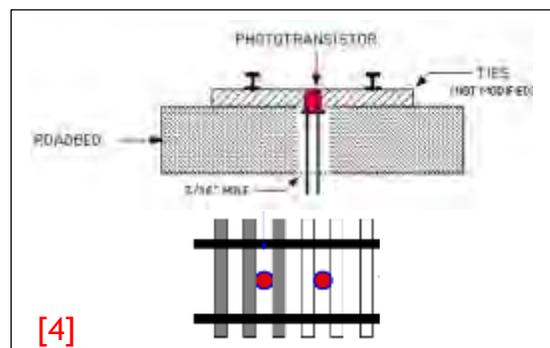
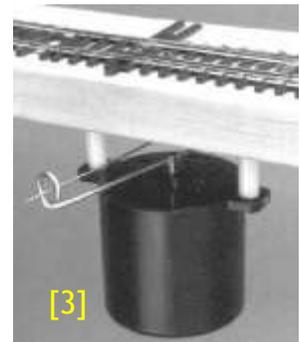
Rob's circuit automatically controls railway grade crossing signals and gates in a prototypical manner, as do most of the others. The circuit has time delays that stagger the activation of the signal lights and lowering of the gates so that they operate as would be seen at a typical grade crossing when a train arrives or departs. The delay times are adjustable for both arriving and departing trains. The circuit is designed to directly control crossing gates that are powered by stall-motor type switch machine drivers.

I bought the wired controller configured for flashing crossing signals and gates. When a train enters the protected section of track the flashers operate for a set time before the crossing gates start to lower. After the train clears the grade crossing, the signals will stay flashing until after the gates are up fully. Both time delays can be adjusted. The controller has a dual output signal driver allowing it to directly drive most signal wiring configurations without added circuitry. One circuit board can also be used to protect multiple tracks by using additional phototransistors. The circuit board has

outputs to control a mechanical Grade Crossing Bell Ringer. The experience of my operating group is that frequent ringing of a bell gets annoying, so I opted to not install the bell.

The final selection was the powered mechanism to move

the gates. I rejected the Tortoise™ Slow Motion Switch Machine¹⁰ as being difficult to adapt for a purpose other than the one for which it was designed. I also had reservations whether one Tortoise could activate both crossing gates. Several sources pointed to rotary switch machine motors as being more appropriate. I rejected the Micro-Mark® Switch Tender™¹¹ based on several reviews that mentioned inadequate torque. I settled on the SwitchMaster™ [3] from Builders In Scale¹².



Operation

Phototransistors are installed in the roadbed between the rails [4]. Figure 5 shows the notional positions of the six phototransistors along a protected section of track. The

⁸ <http://www.logicrailtech.com/>

⁹ <http://www.azatrax.com/>

¹⁰

http://www.circuitron.com/index_files/Tortoise.htm

¹¹ <http://www.micromark.com/switch-tender-switch-machine,8394.html>

¹² <http://www.builders-in-scale.com/bis/sm-mount.html>

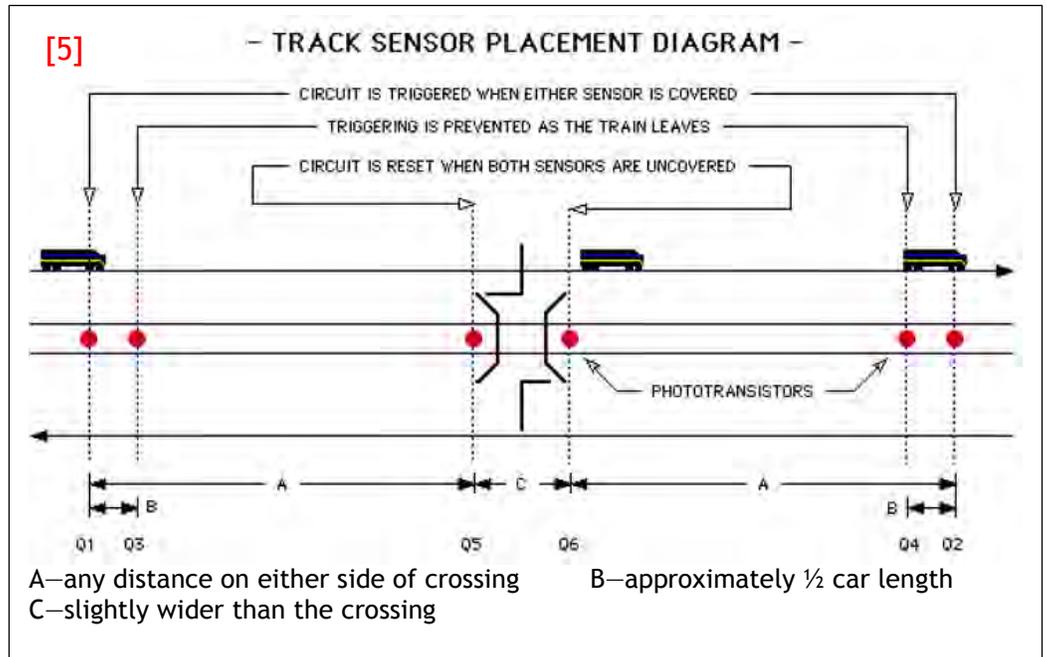
protected section of track can be of any length on either side of the crossing. The grade crossing circuit works in both directions.

The grade crossing flashers and gate operation sequence is:

1. When a train traveling in either direction covers one outermost sensors, the crossing signals will start to flash.
2. After a delay the crossing gates start to lower. (Adjustable delay)
3. When the train has cleared the crossing the gates will start to lift after about 2 seconds. (The grade crossing is occupied until both of the last sensors are uncovered.)
4. The signals will remain on for a short time after the gates are fully up. (Adjustable delay).
5. As the train leaves the protected section of track, the next-to-last sensors prevent the flashers from starting again by deactivating the outermost sensors.
6. The outermost sensors are reactivated approximately 5 seconds after the next-to-last sensors have been uncovered.

Installation

While I had several grade crossings on the layout, none were on the main line, so I added a T junction to an existing road [6]. My roads are made with molding plaster, including between the tracks, and the flangeway is opened with a hacksaw blade soon after the plaster sets. When I pored the road, I included a base for each of the crossing gates. There was no obvious way to mount the crossing gate base; I glued it to the



plaster, which provided a solid mount. Now let's look under the layout.

I inserted a piece of plywood just behind the two push rods that activate the gates [7]. The plywood provided a flat surface to which I attached level arms and linkage. The plywood was cut to fit and attached with glue and screws. Figure [7] is a side view photograph taken under the layout.

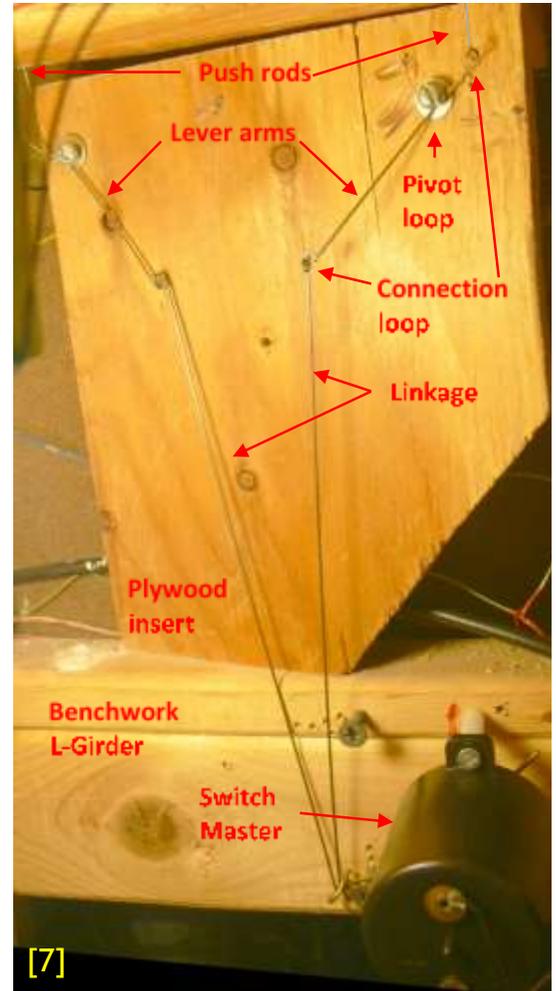
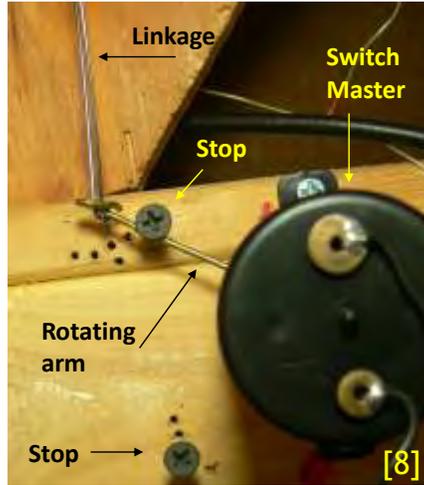


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I made lever arms from .047" piano wire. The lever arms have loops for pivot and at the ends. The lever arms are connected to the Switch Master by 0.32" piano wire linkages. The advantage of using piano wire is that it flexes if the travel is excessive. Screws are used to limit the rotation of the arm on the Switch Master [8].

There's a certain amount of cut-and-fit experimentation in the length of the lever arms, linkage, and stops for the Switch Master rotating arm. If you look at [8] closely, you will see many holes where I tried locating the limit screws. The circuit board is screwed to the benchwork close by [9].



The circuit board provides connections for push buttons that activate and deactivate the crossing gates. These are useful for demonstrating the action



and for occasionally resetting the controller. **I**

Major Parts

2011 Grade Crossing Circuit Board, Rob Paisley, <http://home.cogeco.ca/~rpaisley4/AGC11.html#PCB>
 Crossbuck w/"A" Type Gate (red, white) & 2 Working LEDs (On One Side Only), NJ International #1160
 Switchmaster Switch Machine, Builders in Scale, [#1001 / SM-1](#)

He is currently Senior Assistant Superintendent and Editor of the Potomac Flyer.

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A layout tour of Marshall's layout, the Abrams Railroad Empire, is described elsewhere in this issue. Marshall has served the Potomac Division in one position or another since 2003.

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Operations Initiative Report

The monthly operations program, similar to the monthly open houses, continues to provide an opportunity for division members to experience operations as practiced on layouts around the division.

September 20 Bob Rodriguez's Nickel City Line



The September 20th Ops Group (l to r) Joel Hoffman, George Meyrick, Alban Thiery, Ernie Little, Roger Boyce and Bill Lyders.

The Nickel City Line is located in Dumfries, Virginia. The layout is free-lanced and situated in the Allegheny Mountains of Pennsylvania. Time period is modern day (1990s to 2000). Operations include freight, coal, local freight, passenger and commuter service. Operation sessions work a 2:1 fast clock. The layout is powered by Digitrax. Session 37A hosted the NMRA Potomac Division Ops Initiative. Seven operators spent the day moving a variety of freight and passengers. The session kicked off at midnight (fastclock timer) with an inbound freight to Nickel City along with an outbound consist for the industrial area and the consist to be broken down from the evening turn (arrival at the end of the previous session). The yard crew went right to work sorting and clearing the arrival / departure tracks and planning moves for the rest of the session. Their efficiency was recognized during a lull in the session which was a result of the yard crew clearing out all inbound traffic and having outbound consists ready upon the arrival of the next

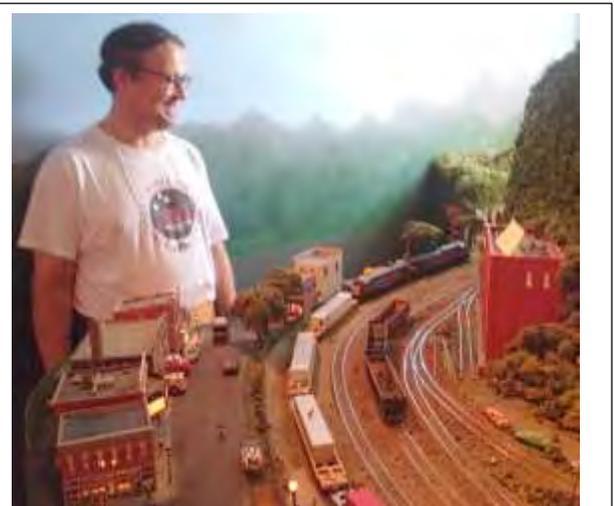
freight(s). Trains did not stay in Nickel City long which cleared the mainline and gave the yard crew a chance to set up cars early for the next session.



George Meyrick is busy as the yard engineer in Nickel City Yard coordinating moves with the Yardmaster.

Passenger trains wrapped up the day and everyone was done by 5pm.

Beside the regular NMRA members, the NCL welcomed Alban Thiery who joined the group



Alban Thiery works an intermodal train in the town of Sheppardsfield.

this session and was quickly pressed into service at the start of the fastclock.

Job well done by all crews.

**Coming Saturday, November 22
Brian Sheron's
Long Island Rail Road**

On November 22nd from 1:00 to 5:00 PM, Brian Sheron MMR will host a session. Brian has room for five operators, better sign up now.

Brian Sheron was born and raised on the north shore of Long Island and has fond memories of the Long Island Alco C420 diesels with their 1964 World's Fair paint schemes rolling past his high school in Greenlawn, New York. Like so many others raised in the New York metropolitan area, the imprint of Manhattan is a permanent part of his heritage.

Brian has, therefore, chosen to model the Long Island Rail Road (LIRR), including its connection into Penn Station. The impression, as you turn the corner into the first layout room, is an overwhelming sensation that you are approaching Manhattan. The more you examine the details of the urban canyons, the more you feel like you're in the city, right down to the Sabrett Hot Dog venders.

Brian's layout captures the mainline tracks from East Northport to the Hicksville Divide to Jamaica Station in Queens as the scenery gradually shifts from a suburban to an urban atmosphere. He has extensively illuminated the buildings in the towns of Huntington and East Northport, making for beautiful nighttime scenes. The model of New York City



includes a unique cutaway of the LIRR's underground platforms in Penn Station and elevated subway tracks with two sets of circling trains.

Brian's layout was featured in the September 1997 issue of Railmodel Journal. The layout is DCC-powered by Digitrax. Brian hosts frequent operations using manually generated waybills.

If you've never participated in an operating session, these are excellent opportunities for you to try your hand at it. If you'd like to participate, or have questions, E-mail Bill Mosteller (wsm@greatdecals.com). Please register by sending a check for \$5 made out to Potomac Division, NMRA to Bill, 2813 Hogan Court, Falls Church, VA 22043. The nominal fee helps to defray incidental costs with carrying out this initiative. Signups will be on a first-come, first-served basis. We intend to schedule additional sessions in the coming months. Thanks. 

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Potomac Module Crew (PMC) News

by Doug Hess

It has been some time since the "PMC News" column has appeared in the Potomac Division Flyer. The Module Crew has been as active as ever, but our reporting function faded across leadership transitions. So, let's start from scratch and remind everyone, both new and old members of the Potomac Division, what the Potomac Module Crew offers to the members of the division, the public, and the hobby.

First, a brief history. The PMC began in the late 1980's when Bob Minnis brought modules back from a club he belonged to while stationed in Alaska (the model railroading season is 10 months long up there). He encouraged others like Bruce Strickland to build modules and PMC was born. In the early days of the crew there was overlap between the Potomac Division BOD and the crew but that has not been the case for several years now. We are not officially connected with the Potomac Division. Our name merely reflects that past history and that our active members draw mainly from within Potomac Division territory. We seek to promote the hobby with the general public, encourage active membership in the NMRA and the Potomac Division, and—of course—just have fun running trains.

We have a very informal structure unlike most clubs do—no elected officers, no by-laws, no dues, no meetings. We communicate via an email list and just gather from time to time to run trains and have fun. We set up modular layouts on almost a monthly basis somewhere in the DC area. A look at our website www.potomacmodulecrew.org will lead you to a schedule of our upcoming events.

You don't need a module to enjoy membership in PMC and you don't have to be in attendance

for the entire time if you do attend a show. If your trains are equipped with DCC decoders, they will run on our layouts. (If they are not decoder equipped, you can still run using the one analog slot open in DCC.) If you don't own a Digitrax throttle, we have spares that you can borrow. If you are a total "armchair" modeler and don't own a train, a member can "loan" you a train to run at a show. We also often hand throttles to kids and let them run trains.

Modules are all individually owned by our members. Our show layouts vary in size depending upon space available at the show venue. Help is available for anyone who later decides they want to build a module. If you don't have the tools, we will cut you a "kit" of module parts and even help you assemble it if you are not "handy" or don't have the time. A simple 2' x 4' straight module is easy to transport to shows and store at home.

Our members run many types of trains from many eras—late 1800's to today. European prototypes, trolleys, Colorado narrow gauge, only passenger or only freight—you are likely to find someone who shares your railroad and modeling interests no matter what they may be. The same goes for roadnames found among our membership—we have the usual NS, CSX, N&W, B&O, C&O, Pennsy, and NYC from the east, as well as D&RGW, SP, GN, CB&Q, and others from the west and points in between.

So come join us at a show and run some trains. Join our discussions of model railroading (and learn from our mistakes). See the website (potomacmodulecrew.org) or contact Doug Hess (PMC coordinator) at dbhess1@verizon.net. 

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Capitol Limited 2014 Recap

by John Steitz, NTNRAK



Between August 7 and 10, 2014, two-hundred and one registrants from twenty-one states and Canada joined Northern Virginia NTRAK at Capitol Limited 2014 at Chantilly, VA, the third national N Scale convention our club has hosted. In addition to filling half of the Dulles Expo Center with N Scale modules, there was a regular Greenberg Train Show over the weekend, including modular layouts in other scales (HO, S, Z and Lego). This allowed thousands of the general public to experience a cornucopia of model railroading, and, hopefully, become interested in joining our hobby.

For this show, in the same venue where we hosted Capitol Limited 2004 ten years ago, we decided to do a different layout plan than in our two prior conventions. There, we had pushed the envelope in layout size, creating NTRAK layouts of 330 and 524 modules, respectively, both world records at their times. But the current record is 700 modules in an NTRAK layout, set at Louisville in July, 2008. We couldn't squeeze more than 700 modules into the sole remaining hall of the Dulles Expo Center without crowding out the rest of the Greenberg Show.

[I believe *somebody* will try again for the NTRAK record in the future, in some location (like Louisville) where convention floor space is a lot cheaper than it is in the Washington DC area.]

Moreover, the face of N Scale modular has changed over the past ten years. In addition to N-TRAK, there is now oNe-TRAK (a single-track mainline version of N-TRAK), Nn3 (narrow gauge N scale using Z-scale track and mechanisms) and T-TRAK. T-TRAK uses Kato Unitrak on smaller-sized modules that rest on table tops, which are easier to transport, set-up and store than larger NTRAK modules. T-TRAK is the fastest growing segment of N

scale modular today, though there are still more NTRAK modules in circulation. There are also N Scale variations of Bend-Trak and Fremo, and an imaginative group of local modelers have created a Japanese bullet-train and Godzilla-themed mobile layout using Unitrak. Another local group uses the T-TRAK format, but does mostly traction modeling on Kato's street-track format of Untrack. All different styles, themes and formats. But all modular, and all N Scale.

We decided to showcase the variations of N Scale modular in our layouts on the convention show floor. There were three NTRAK layouts: a) traditional 3-loop, large mall-sized NTRAK layout with modules from multiple clubs (and a oNeTRAK subdivision on the east end), b) an operations-oriented NTRAK layout from the N-Eastern Lines Partnership (which sets up the same general layout, with some variations, and various conventions and meets throughout the year), and c) a smaller NTRAK layout from the Carolina Central club. Joel Salmons had two civil-war era diorama layouts. There was an Nn3 layout where a logging Shay crept around the layout for most of the weekend.

And I had my own two T-TRAK quads and my wife's T-TRAK double in the large T-TRAK layout in the northwest corner of the layout space. All told, we had 402 N Scale modules in our layout space, with several other modular layouts scattered about the show floor.

We also had most of the usual convention fare: clinics, model contests, live and silent auctions, a manufacturer's breakfast, prototype tours by bus, and self-guided home layout tours.

After being glued to the large layout on the show floor for the past two conventions, I decided for a change of pace this time around, and took on organizing those layout tours. So most of my own convention time

was spent riding around with my brother-in-law to all eleven (11) HO and N Scale home layouts, the highlight of which had to have been Monroe Stewart's N scale empire (the Hooch Junction) in Oxon Hill. But several other members of the Potomac Division also hosted their layouts on the tour, some of them museum-quality and testament to the high quality of model railroading in the nation's capital.

For those of us in NVNTRAK, it was a lot of fun, but a lot of hard work before and during the convention to pull it off. My personal thanks to all the home layout hosts who opened their homes and their layouts for our conventioners. Thanks, too, to all of the volunteers from NVNTRAK and from other clubs, who each took on a small piece of the work.

We hope all our conventioners had fun, and we look forward to seeing everyone again, at *their* conventions and public shows in the future! **I**

John Steitz is a 20-year member and former Superintendent of Northern Virginia NTRAK, and also runs with the Potomac Division HO Module Crew from time to time. Except for one HO module and one HO North Central Division coal drag, he models exclusively in N Scale, with a dozen NTRAK modules, two oNeTRAK and a growing roster of T-TRAK modules. When not serving as President, Superintendent, and Head Brakeman of the Atlantic Terminal Railroad (a northeastern terminal and transfer road, with a steel mill focus), he's been known to slobber over the Standard Railroad of the World. He's fairly confident that nobody else is modelling a sintering plant on an N Scale T-TRAK quad inside corner.

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Layout Open House Report Bill Lyder's Whitewater and Virginia

MAKING A SPLASH

by Bob Rosenberg



Photo: Stephen Altheim

On Saturday June 28th, after an unintended and unguided 45 minute scenic country roads tour of western Fairfax County (so much for Google Maps), I finally made it to Bill Lyder's Whitewater and Virginia railroad in Manassas, and a very nice railroad it was indeed. Based on a free lanced design in HO scale, it represents the steam-diesel transition period of the four major class one railroads that operated in the Appalachian mountain areas of south western Virginia in the early 50's - the N&W, C&O, Southern, and the Virginian.

There are many scenic excuses for the "Whitewater" part, another one of Bill's interests; bridges and trestles of various

shapes and sizes abound, using commercial kits and parts available from sources such as Micro Engineering, along with various detailed industries and structures from Walthers and DPM that also provide multiple sites for dropping off and picking up cars. In fact, the layout is pretty much designed for operation, utilizing four separate staging yards each representing a different distant feeder area to provide the trains. One of them is in a smaller room connected to the main layout room by a duck-under bridge. That room also has the s



Photo: Clarence Guenther



Photo: Bob Rosenberg

team servicing facilities that include a sizeable turntable and a six stall roundhouse. Another is housed in a closet; there are no wasted spaces on the W&V. The railroad is constructed on two levels that are connected by a helix, and all of it is DCC radio controlled. In addition, several of his projects have qualified for the division's AP certificates.

All of the track work is in place, as is most of the scenery, although there are future plans to move some of it to provide additional locations for operation; I thought that the clouds on the backdrop along with the three dimensional effect and some of the rockwork used to separate the levels were particularly well done. The aisles are "tight" as he points out, but he still can accommodate five or six engineers to run trains at operating sessions. He has also has included a continuously operating loop so non-operation inclined visitors (me, for example) can get to enjoy watching trains run too. On this day a short freight was being hauled around by a former NYC K- 5 Pacific lettered for the W&V. It was altogether a pleasant afternoon and the brownies more than compensated for my getting lost.

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*First published in 1897 as **Railway Track and Trackwork**, the 1926 Fourth Edition of this classic MOW guide was reprinted by the NMRA in 2003 and quickly sold out. This reprint has been anxiously awaited ever since!*

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Layout Open House Report Marshall Abrams' Abrams Railroad Empire (ARE)

THE NON-CASUAL OBSERVER

by Bob Rosenberg



Photo: Ray Helmke

There's a difference between going to someone's home to see their railroad and going to see their railroad with the objective of writing a review of it so that people who were unable to be there themselves can get some idea of what it's all about. I had seen Marshall Abram's layout previously on past Potomac Division home tours, and the biggest change for me this time was that instead of just showing up, watching some trains run, and casually conversing with my colleagues on various aspects of model railroading theory and practice, I actually had to pay attention to what was going on.

Unlike most model railroads we get to visit, there is no prototype or overriding theme such as Chris Smith's N&W O scale line or Bill Lyder's combination of several 1950's Appalachian coal haulers in south western Virginia; Marshall describes it as "urban anachronistic." I would concur with that assessment and might be inclined to add "eclectic" as well. It's designed for operation using Digitrax DCC, with both their plug-in's and radio controlled throttles. With an abundance of industries, towns, yards, and interchange tracks, the 20' by 22' walk-around has adequate activities and aisle space to keep as many as 8 operators busy during a session although only two were helping him

for this tour. Motive power running that day included a SW1500 switcher, a road switcher (probably a GP-7) in C of G paint pulling a freight train, an older GG1 made by IHC and decorated for the Abrams Railroad Empire hauling three heavyweight passenger cars because the newer MTH version was having problems, and a more recent (1970's?) Amtrak electric with four Amtrak cars in tow. All of them were running quite well and many of them have sound. Among those available but not running were a BL-2, a NYC FA unit, a two car self-propelled train of European ancestry, and two gas electrics—one a Bachman—the other a scratch built model over an Atlas frame that looked like it began its life as a LaBelle kit. There was even a freight car fleet painted and lettered for the 13 original colonies, something you seldom see at all, much less running in revenue service. The scenery and track ballasting were about 70% complete. There were operating dwarf signals to indicate the throw direction of the turnouts, operating block signals, and additional repeater signals above the back drop to indicate the traffic situation with some of the less visible track for the convenience of the operators.



Photo: Phil Long

Photo: Phil Long



hard to install, and they really make a dramatic contribution to the overall appearance of a scene.

“Urban Anachronism” is probably not how most of us would think to described our layouts, but it does give you the freedom to run anything you want to run anytime you want to run it rather than locking you into, say, trying to replicate the New Haven and the B&M in a 1950's rendition of rural New England. Such a concept may not be for everyone but it works well for Marshall, and it makes for an enjoyable afternoon whether you're operating it, taking notes on it, or just enjoying watching it run. **I**

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In the past Marshall has presented clinics on those aforementioned dwarf signals as well as on freight car forwarding procedures for use in operating sessions and creating backdrops from scenes available on the internet. A new waterfall was flowing down from the rock face bordering a cut. There was a pair of crossing gate/flashers that were triggered by approaching trains (see the separate article in this issue) and some lighted animated signs representing various past and present corporations—Esso, GE, “Reddy Kilowatt” (remember him?), and a couple of those three ring Ballantine Beer signs in two different establishments. Marshall gives much of the credit for the gates and signs to Bill Day, whose advocacy of animation inspired him to add them to his layout; I don't know why we don't see more of that sort of thing on other layouts. They're not that expensive or that

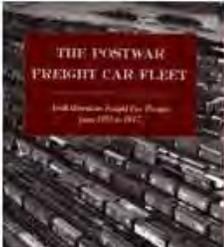


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Layout Open House – Bernie Halloran’s New York Kittatinny and Western

When: Saturday, November 15, 2014, 1:00-4:00 pm



The New York Kittatinny and Western, last seen in the Oct 2006 issue of Model Railroader, is being rebuilt anew in Owings, MD.

The one and a half level Kitty is still under construction, but nearly a third is fully scened. The road occupies a 1,000 square foot basement, which is slowly becoming northwestern New Jersey in the summer of

1963. The Kitty follows the tracks of the New York Susquehanna and Western with Butler, Green Pond, Ogdensburg, and Sparta modeled, which leaves Weehawken, Hainesburg, and Warwick to go. Featured are the New Jersey Zinc mine and yard, the Lime Crest Quarry and yard, connections with the Jersey Central, the backside of the Picatinny Arsenal, Charlottesville Reservoir and a nosy slaughter house.



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Layout Open House—Allegheny and Shenandoah Railroad Robert Reid, MMR

When: Saturday, December 6, 2014, 12:00-5:00 pm

The Allegheny and Shenandoah Railroad is a very large double decked HO railroad with a logging branch that extends upward from the upper level. Radio DCC is used to control the trains over the main line that extends for over 720 feet. Scenery on the layout is 100% complete and has over 600 cars and 50 sound equipped locomotives. Operations occur on a regular basis usually with a crew of 7-10. The layout depicts a mountain climbing journey from Strasburg Va. to Elkins WV. The



A&S is jointly owned by the Western Maryland RR, the Northern Pacific and The B&O RR's so lots of foreign equipment is seen on the line. The traffic is mainly agricultural products such as grain and cattle hauled in 20-30 car trains. Petersburg is the division headquarters and locals are assembled in and depart from the small yard there.



The mythical railroad has branches from Alexandria Va. and Waynesboro Va through Strasburg Va. to Elkins WV. Only the mountain branch from Strasburg is modeled. The layout completely fills a 975 square foot basement. The railroad area is fully carpeted and skirted. Over 35 fluorescent fixtures provide ample lighting. Nine towns are modeled, most with a 25+ passing siding and multiple industrial locations. The layout is home to more than 300 structures, many are craftsman

kits and kitbashed industrial structures. The impressive mine complex in Dry Fork is over 3' long and features a breaker building and a company town. A 40' ten track staging yard supports the operation.



It is dark territory and the design of the railroad prevents operators from seeing the next town from the one they occupy so they must rely on their timetable to prevent "cornfield" meets. No cheating. Home built car cards and a 5 to 1 fast clock control operations that center around moving livestock from the local stock yards to the packing plant in Strasburg and shipments of grain from the large grain elevator complex in Moorefield to milling operations off the railroad.

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