

THE BRASS POUNDER

Newsletter of the Carolina Southern Division 12, Mid-Eastern Region,
National Model Railroad Association

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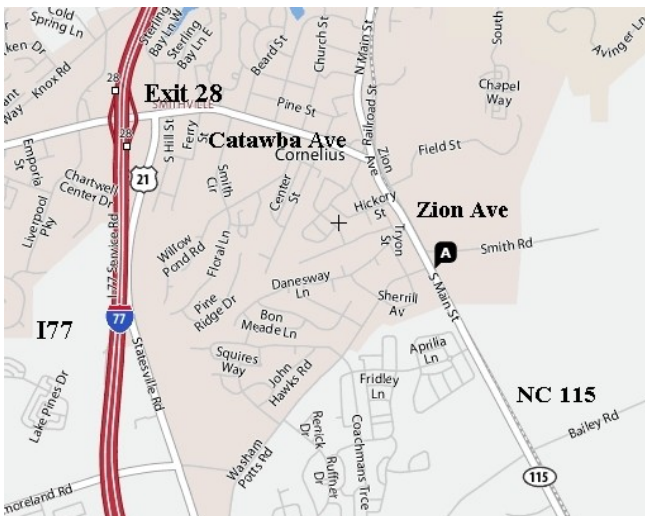
Carolina Southern Division Events

Monday May 14 (new date) 10 am-noon
Tweetsie Backshop Tour
RSVP by May 4- - See Division web site for
locations, times, and carpool arrangements

See additional info at web:

<http://www.carolinasouthern.org/>

See details below and/or on web site.



Division 1st Thursday Meetings

Williams Lodge, 19416 Zion Ave, Cornelius, NC

May 3 7:30 Roy Becker, Layout wiring

June 7 7:30 TBD

Saturday May 12 10:00 - 4:00
Wade's Train Town Open House
Brookford Town Hall

Saturday June 9 10:00 - 4:00
Wade's Train Town Open House
Brookford Town Hall

June 30 Visit to Denton Park
Reservations required no later than June 21.
For more information, contact Bob Halsey at
(704)660-9712

Saturday July 14 10:00 - 4:00
Wade's Train Town Open House
Brookford Town Hall

July 28 9:00-12:00
RMU Extension Seminar
Scratchbuilding by Carl Baumgart
carolinasouthern.org/RMUmmain.htm#RMUEX

Calendar of Events

May 19 Special Division Auction
Marietta, GA
<http://www.piedmont-div.org/event/special-division-auction>

Sat, June 2, 9am – 3pm
South Fork Model RR Train Show
South Fork Recreation Center
4403 Country Club Road, Winston Salem
<http://www.sbmrr.org/newsevents.htm>

June 1 - June 3, 2012
South East Region Convention, Gatlinburg, TN
<http://www.ser-nmra.org>

Jun 23, 2012 Golden Spike Train Show
[Metrolina Expo, 7100 Statesville Road, Charlotte](#)

July 29-Aug. 4, 2012 Grand Rails 2012
[NMRA National Convention, Grand Rapids, MI](#)

Oct 18-21, 2012 Milepost 40
MER Convention, Suffolk, VA
<http://www.nmra-mer-tidewater.org>



RMU Extension Seminar

By Jack Haynes

On April 21, Roy Becker and I kicked off the new program of RMU Extension Seminars with a session presenting the basics of electricity for model railroads. We tried to make few assumptions about attendees prior knowledge and described concepts and techniques from the ground up.

After we explained the common terminology and concepts needed, everyone powered up the throttles, hooked them up to a section of track and started using their meters to measure the characteristics of their electrical circuit. We then explained the differences between DC, AC and DCC power and what meters would show for each.

Next attendees learned about many common components of electrical circuits and what they do. We dispelled the mysteries around transformers, diodes, capacitors, and LED's. Then we showed sample circuits using some of those components and went through how they worked and why.

Next up was wiring. We showed various methods for connecting wires and where each might be used in wiring a layout. Then the soldering irons were heated up and attendees went through soldering feeders to rails without melting plastic ties. We all also managed to escape without any scorched fingers.

We went over the various kinds of turnout motors and explained how each works and what kind of power and control mechanisms are needed for each. We wrapped up with some sample lighting circuits using either incandescent bulbs or LED's and how to control the voltage and current in each to get light out without burning out the source.

Reviews were positive with some good suggestions for improvements. Plans are in the works to extract some sections of this presentation to use in a future RMU 50-minute class.

The next Extension Seminar is planned for July. It will be on Scratchbuilding by Carl Baumgart. another is planned for October by Gil Brauch on Scenery. These sessions give the attendees and presenters an opportunity to cover topics in more depth and allow time for hands-on exercises with individual attention so everyone leaves with some experience and a little confidence to try more on their own.

Hope to see you at the next sessions.

Hiding Tortoise Machines on Your Layout— Even You CAN DO IT!!!!

by Dick Beck

This is the story and process I used to hide some tortoise machines on ly layout.

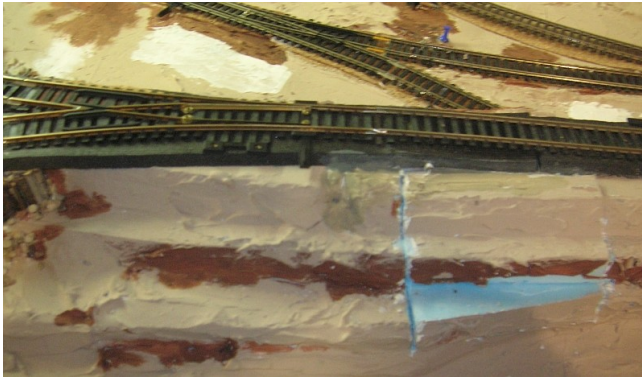
Initially, I never intended to use tortoise machines. But with encouragement and some help from Roy Becker, I now have seven installed on my layout. The first three were mounted under the platform directly under the turnout moving point. Quite simple once you understand the process.

But the next three I needed to install to throw the points on turnouts mounted on a wye “plateau” above the platform and one was directly over a rock—the natural hard kind. So, what to do. After much pondering, here is the rest of the story.

The location selected to “hide” a tortoise is at a “wye” turnout on my layout that leads into and out of a reversing loop. The track had already been laid and the ground was painted beige using interior house latex paint.

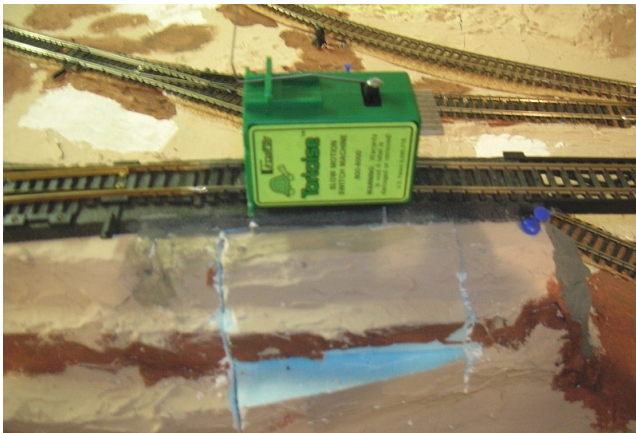
I was not about to take up the track and try to bury the tortoise machine directly under the turnout

throat, but I had read about hidden tortoise machines and was willing to give it a try.



This picture shows the site selected before I cut the cavity for the tortoise.

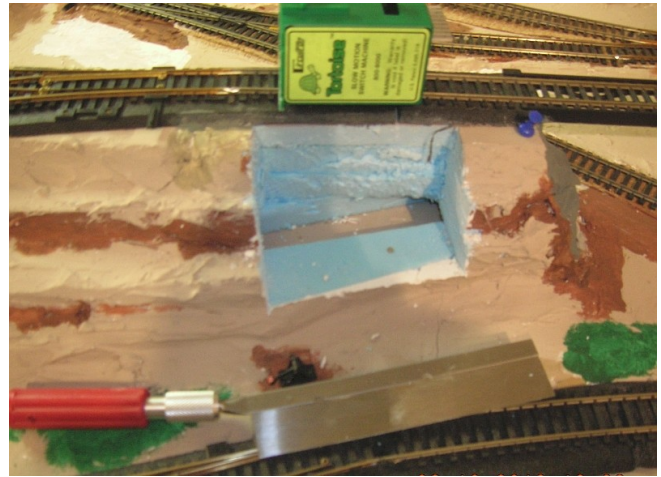
The location chosen is to the left of the turnout, parallel to the wye and behind the built in draw bar for moving the directional rails/points. The track was laid atop about 3 ½ inches of foam board which is on 5/8 inch OSB board...so I had about 4 inches of depth to work with. I had already added some color to the area via some other paints but no other scenery had been added. I was just interested in getting up and running before tackling this project.



Orientation of the tortoise machine before I dug the cavity.

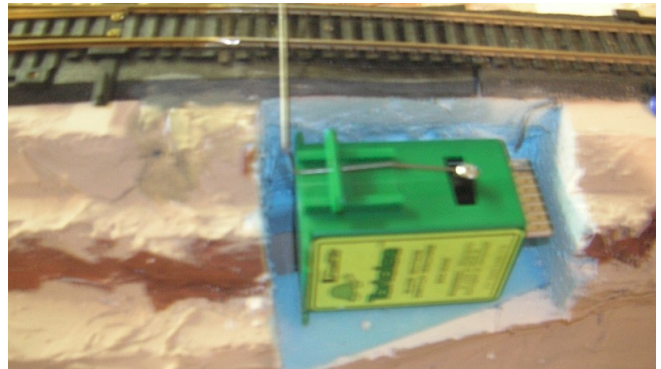
Using a Revell Monogram wide blade 5 ½ inch cutting saw, I cut out the foam to create the cavity. The cavity was made a bit larger than needed to provide enough space to adequately work and later attach the wire harness. I kept the painted edges of the foam that was cut out to be used to rebuild the side walls after everything was in place.

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Cavity has been cut in the foam

This shows the first attempt to position the tortoise in the cavity. The “white” vertical line is the



Initial placement of the Tortoise in the cavity.

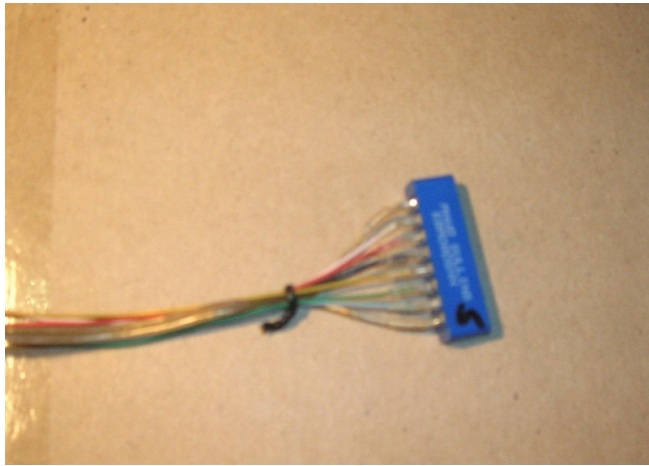
wand before it was bent parallel to the track and in the same plane as the turnout draw bar. The bending was done using two needle nose pliers. The wand was heavier than the standard wand wire that comes with the tortoise.

Looking closely, one can see the wand has been bent in a rising step fashion and then placed into



Final position of the tortoise.

the turnout draw bar receiving hole. Before permanently fixing the tortoise in place, it was removed and a ½ inch wire access hole was drilled through the OSB to drop the wires for access below the platform.



The pig tail bundle.

I soldered all the wires to a pin connector that fits over the end of the tortoise machine. This item was purchased separately. On the underside of the platform, all the wires are then inserted into a European style terminal block. This simplifies wiring up all the signals associated with the turnout.

After attaching the pigtail, the tortoise was glued into place. (Be sure to use a glue that is compatible with the foam or you will be creating a bigger cavity.)



Tortoise machine in place.

Make sure the wand is correctly positioned in the tortoise draw bar. At this point the wand was about 2-3 inches longer than needed. This was done to be sure I had enough total length before I

began bending the steps into the wand. Better safe than sorry.

Test the function of the wand/draw bar to be sure everything work smoothly and there are not points that bind and restrict movement. Using lateral force behind the screw, move it in the direction desired.

This is very important to get the draw bar into the “centered” position BEFORE gluing the tortoise into place. This will then provide free movement of the track point to each rail for proper contact.

I permanently mounted the tortoise using silicone sealer so that I could remove it if everything was not properly positioned. Just use enough to hold the tortoise in place.

Let everything dry/cure overnight and then test the functionality one last time. This is your last chance to fix everything before the tortoise is buried.

Be sure the pigtail is properly seated and begin the hiding process.

I did this over several days as I let each layer of sheet rock compound dry before I added the next level to the foam until I could cover over the cavity top. The top was covered with a cutout from a cereal box carton, glued into place and later painted beige.

Note that I numbered each tortoise machine and its' associated pigtail. This was just in case the wiring coloring sequence on one was different than another as I was placing three machines at this time. Also, I cut off the extra 2-3 inches of the wand since all was working properly.



Hidden tortoise machine.

The tortoise machine is now hidden by some preliminary landscaping. Notice the “wand” coming out from under the green shrubbery and going to the draw bar—to the left of the picture.

This turnout now works fine and can be controlled from three separate positions around the layout using DPDT switches.

The three (3) over (3) signal behind the turnout is wired to this tortoise machine.

This was constructed from some styrene tube, 2MM LEDS, resistors and small aluminum tube and balsa wood to make the base. But....that is another story.

The Division Brass

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Division Website:

www.carolinasouthern.org

Submissions For Brass Pounder

Next Issue	Submission Date
July 2012	June 20, 2012

Articles are welcome on any railroad topic, model or prototype. Your editor is available to assist in preparing the materials.

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