

THE BRASS POUNDER



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

Volume 22 Number 7

July 2022

Division Coming Events

(See [CSD Website](#) for
further details)

DIVISION MEETING

**The Division's
Monthly Meeting for
July will be on
Saturday July 16th
10:00am at
David B Waymer
Recreation Center
14008 Holbrooks Rd.
Huntersville, NC
28078**

Superintendent's Corner

By Andrew Stitt

By now, every one of you is aware of the upcoming Carolina Special MER Convention our division is hosting this October. Many of you have been contacted about volunteering some effort to help the committee make this a success. Well, I'm pleased to report that many have stepped forward to help. Teams have been developed and are working to handle the many aspects of the convention that need attention.

Neal Anderson, MMR, and Dave Thrums, along with others have given many hours of their time to working with the various teams, as well as officials from the MER, to get things done. I have been impressed with the amount of communication going back and forth! I do believe the MER folks want our division to be a success, and have an excellent convention that our visitors will enjoy.

The committee still needs your help to fill in the gaps. While our clinic roster is filling out, there are still vacant slots. I know many of you have experience in some aspect of our hobby that you could share with others. Tree making, rock casting/carving, operations, JMRL, prototypical history to name a few. While standing before a crowd to give a presentation might seem intimidating, think of it as speaking to a group of friends. Certainly, those of us who have been in education or sales know what it is like to talk with folks.

Each of you (I bet) has been involved, at some point, is assisting in a function, whether it was church related, school related, work related, or socially. You know what is involved in getting the event completed. Even if you don't think you have anything to present at a clinic, there are other things that need to be done. Assisting with registration, room set up & clean up. Meeting and greeting our visitors. Helping with the company store. Helping at a layout open house.

So, I leave you with this. I believe we all want this to be a convention that we and our guests enjoy. Wouldn't it be better after it's over to say "I helped with that", than to say "I think they could have done a better job"?

UPCOMING AREA TRAIN EVENTS

REGISTER NOW FOR THE MER CONVENTION IN OCTOBER.
REGISTER AT: https://mer-nmra.com/mer_convention_2022/

Editor's Notes

By Ed Gumphrey

The pace is picking up. June featured a Board of Directors meeting on Zoom, lots of updates to the Convention website, and a monthly meeting on Zoom. I was happy to see that twelve Division members were able to join in.

And things are getting better. Superintendent Andrew Stitt has been researching possible meeting venues, calling various organizations, and prodding members as potential hosts. His perseverance has paid off, and he has secured reservations for our Division to have monthly meetings for July and August in person. Please join us on Saturday, at 10:00 am July 16th at David B Waymer Recreation Center, 14008 Holbrooks Rd. Huntersville, NC 28078. We'll be continuing with tips and hints and sharing techniques constructing dioramas.

And speaking of Andrew, I had a typo in last month's newsletter. Andrew models in On30, not Hon30. My bad.

The bonus picture on the last page is a nice image of some Norfolk Southern motive power. It prompted me to think about one of my favorite places – Cass Scenic Railway in Cass, West Virginia. From this picture, it looks like they know how to celebrate a bit too.

I hope you all have a safe and enjoyable Independence Day.



SUBMISSION GUIDELINES

I target the 1st of each month for publication. Please submit articles for publication by the 27th of each month.

The preferred format is MS Word, but I can convert most other formats.

For questions and help, email me at editor@carolinasouthern.org

DIVISION AND REGIONAL NEWS

By Ed Gumphrey

IN CASE YOU MISSED THE BANNER ON PAGE ONE....

The Division's Monthly Meeting

**for July will be held on
Saturday July 16th 10:00am at
David B Waymer Recreation Center
14008 Holbrooks Rd.
Huntersville, NC 28078**

***A Zoom option will also be available for those who can't
attend in person.***



David B Waymer Recreation Center, 14008 Holbrooks Rd, Huntersville, NC 28078

Train Town Box Score

June 2022

Open Houses 4

Attendance 52

Hosts: Gil Brauch, MMR, Keith Iritsky (2), Ed Smith

To volunteer, go to:

<http://carolinasouthern.org/ttvolunteerrequest.html>

(#)=frequency (r)=first time host

Attendance has slowed as summer sneaks up on us. That said, interest is still on the upswing at the Newton Museum and Wade's. With new displays being planned, the future continues to be bright. All that's needed is a few volunteers. If you are interested in joining us on a Saturday, please go to the following website to volunteer:

<http://carolinasouthern.org/ttvolunteerrequest.html>

ED Smith

MEETING

Since we couldn't find a suitable location for in-person attendance, the monthly meeting for June was held via Zoom. Twelve members checked in altogether. Six logged in from the Back Shop at NCTM in Spencer while operating the Metrolina modular layout. Andrew Stitt and Joe Skorch shared a web camera at Joe's house, and four others signed in from their homes.

Andrew Stitt opened with a follow-up from last month's discussion, and announced that the "shirts and hats" page of our website has been updated to include name tags. Check it out at <http://carolinasouthern.org/shirts.htm>

The meeting then shifted to focus on our preparations for the upcoming MER Convention in October. The biggest news was that registration is now open. Register now, especially if you want to participate in some of the events that have limitations on the number who participate. Register at:

https://mer-nmra.com/mer_convention_2022/

We are making significant progress with preparations. Publicity is starting to gain momentum.

Fellow member Bob Halsey has been forwarding information and articles to both the MER and neighboring Region, SER. For a great overview of the Convention, check out Bob's work beginning on page 18 of the most recent edition of *The Southerner*.

[SouthErneR - 2022 V63.3 - Summer - 2022 06 10A.indd \(ser-nmra.org\)](#)

Also, you should have received an E-Gram email from the MER containing all the links to information and registration for the Convention in one location.

An overview of Convention planning status:

- Hotel registration and reservations are now available on line at
<https://www.hilton.com/en/attend-my-event/clthuhf-nmra-6682155e-1201-4b1c-b058-e01abe299b2b/>
- Convention registration page is open. Go to
https://mer-nmra.com/mer_convention_2022/
- The [Convention website](#) has seen four more updates in June.
- Lots of new clinics added to the list of clinics.
- There is still room for more clinics at the Convention.
- A Z-scale layout will be at the Convention
- General Store and Model Contest procedures have been added.

After the business discussion, discussion shifted to the continuation of diorama construction. Andrew showed the contour shaping and other work on his module. He also discussed his experience with Dead Rail on his On30 layout. He also discussed the emergence of Blue Rail. As the name implies, it's a method of using Blue Tooth connectivity for operation of trains. We also learned that Joe Skorch has been working on testing the feasibility of using Dead Rail in HO scale. He's been working with a GP30 with some success so far.

Speaking of Joe Skorch, I stopped by his house last week to pick up some pieces of foam that Andrew had left there for me. The updates, improvements and expansion of Joe's railroad are absolutely stunning. It was a great railroad already, and it's getting better all the time. I'll have to get up with Joe sometime soon to do another layout feature.

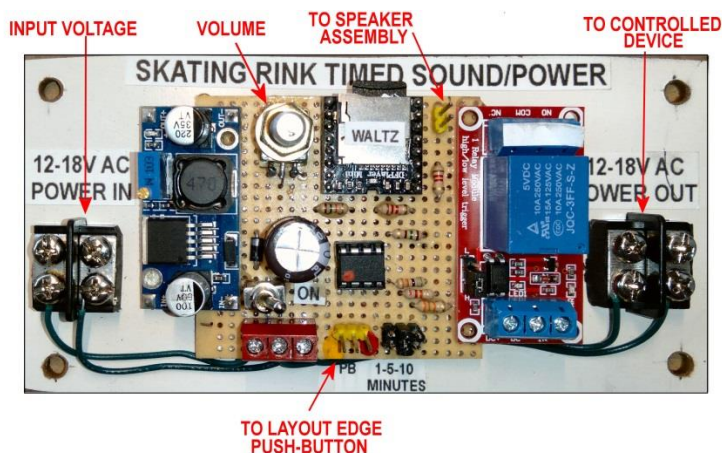
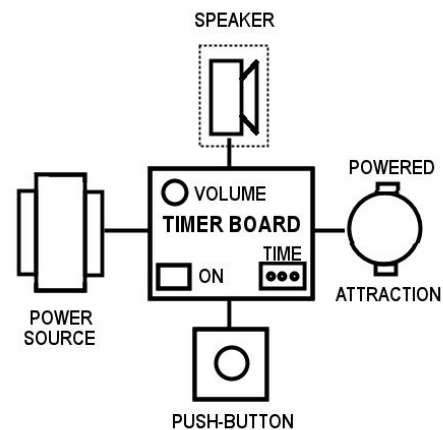
SOUND AND MOTION ANIMATION FOR WADE'S TRAIN TOWN IN NEWTON, NC

By F. Miller, MMR

In conversations with Gil Brauch, the manager of the Wade's Train Town layout, we discussed the possibility of providing some 'visitor controlled' animation for some of the features on the layout. I suggested I could develop a visitor pushbutton facility to start the animation for the Amusement Park. As we discussed the possibilities I added that a concurrent appropriate background sound would be nice to add to the attraction. We later came to identify another layout feature which would be fun for 'visitor' activation – that of the animated skating rink.

Overview

Two identical circuits were developed to operate these layout features including accompanying sound. One of the circuits plays 'carousel-like' sounds while activating power for the Amusement Park rides. The other circuit plays 'waltzes' while activating power for the Skating Rink.



Speaker assemblies were developed consisting of an 8 ohm speaker mounted inside a structure which could be mounted on the layout near the feature.

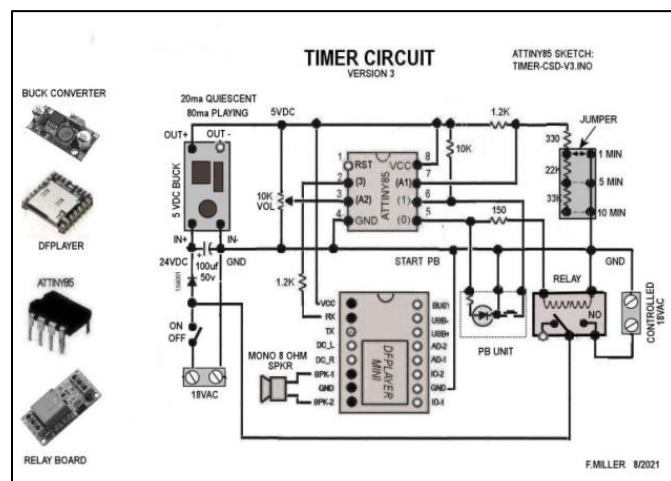


Both circuits are activated by a layout edge push-button. The animation runs for a 1-minute, 5 minute or 10 minute period depending upon the position of an onboard jumper. (5 minutes seems to be a reasonable attention span time.)

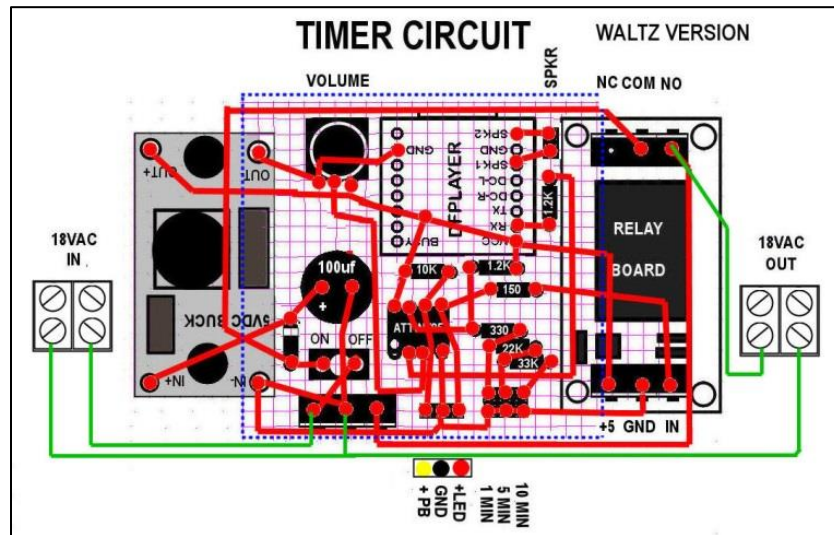


The fascia push button is illuminated when the circuit is active running the features and playing sounds.

The circuits are designed to operate with the already present layout 16-18VAC power supply. That same power is delivered as output for the feature motors when the circuit is active.

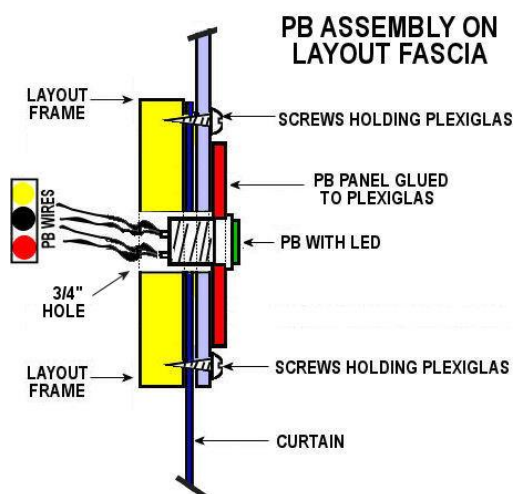


The electronic circuit makes use of an Arduino-compatible ATTINY85 micro-controller with a program running the animation features. The



micro controls a DFPlayer unit which plays the applicable sound files resident on the DFPlayer's SDHC card. A DC Buck board is used to generate the necessary 5VDC for the ATTINY85 and DFPlayer from the 18VAC Input power.

A Relay board is used to control the output 18VAC power output for the feature motors.



Installation

The circuit boards are mounted under the layout within reasonable distance to both the speaker assemblies and the layout-edge push-button.

The standard 18VAC (from existing Bell Transformers) is connected to the INPUT. The OUTPUT is routed to the controlled feature.

The layout-edge pushbutton assembly is mounted on the layout edge Plexiglas with a $\frac{3}{4}$ " hole bored through the Plexiglas and layout support. The red-black-yellow lead is plugged into the circuit board. In a similar manner the speaker assemblies (buildings with speakers installed) are arranged somewhere near the controlled features and the speaker leads are plugged into the circuit board.

Operations

The circuit boards include an ON-OFF toggle switch which completely disables the circuit. However the toggle can be left in the ON state and the board will be powered up when the layout Bell-Transformer 18VAC is turned on. A change to the circuit's ON time (1-min, 5-min or 10-min) is made by moving the jumpers. However, this setting will not be effective until the board is powered OFF then back ON. The onboard toggle can be used for that purpose.

The boards also contain a sound volume control. Rotating the control clockwise increases the volume. The volume can be changed at any time.

Note that the Amusement Park and Skating Rink animation circuit boards are identical. Only the sound files stored on the included micro-SDHC card are different, and appropriate for the feature. Labeling on the fascia Push-button plates identifies the animated feature.



JULY 2022 LAYOUT UPDATE: DCC on the FLY

By Ed Smith

Well, after totally gutting the electrical system, I've spent the last 6 months re-wiring everything. There are ups and downs, but I can say it's been interesting. I can see the light at the end of the tunnel and I feel encouraged that it's not a train bearing down on me. As you read this article, I'll be in the process of firing up the new brains, heart, and soul of the electrical system, The Digitrax Evolution Xpress Duplex System. Hopefully, this will work as well as the last 6 months of wiring. The only glitches were operator errors. So, how did we get here? I'll try to give you a quick review of the process.

The first thing I did when the system was in a skeletal state, was create 6 power districts. Each will handle multiple isolated mainline bus circuits to be integrated into signal districts. I ran #12 AWG for the bus feeders. Red and black wires were used for the East mainline, and brown and blue for the West mainline. #22 AWG wire was soldered to each piece of track and multiple joints on the turnouts. Once again, the wire was color-coordinated with the bus wiring. 3M suitcase connectors were used to connect the drops and bus wire. At this point, with 34 isolated bus runs, divided into each proper booster station, wire seemed to be sticking out everywhere. This is where the first major test was done. Using 2 EMD GP-7 units, an Alco RS-3, and a 2-8-4 Berkshire (pic 1), 2 DC powered and 2 DCC, one with sound, I tested each of the 34 districts.

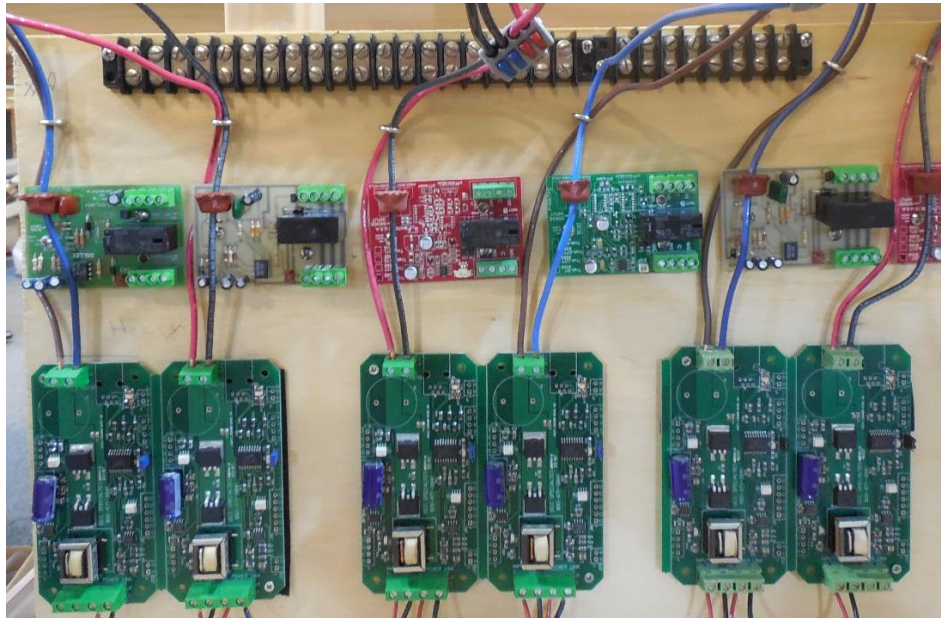


Pic 1: Four locomotives in various configurations were pressed into service for testing 34 districts.

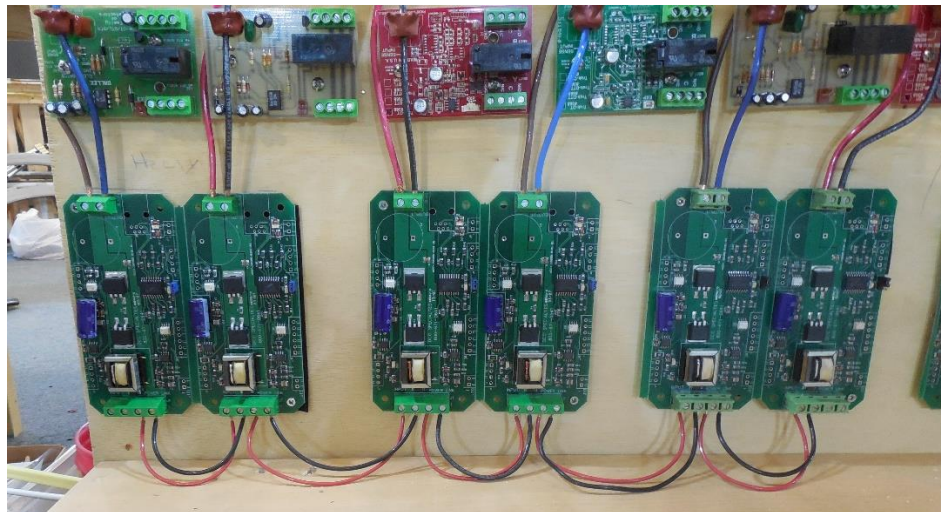
First, with a DC Power Pack, I ran the RS-3 and then the 2-8-4. I felt the steam unit would show any problem track or turnout areas. To my amazement, everything went almost flawlessly. Using a Digitrax DCS Power Unit, I performed the same tests, first with the GP-7 with a Basic Decoder, then with the GP-7 unit with sound. Same results. The DCC performed great and I haven't cleaned any track yet. There were a few areas where the Micro Engineering weathered track did impede performance, but never caused a stall. And I have to admit, listening to the sound move around the layout was inspiring. Testing was a success.

Next, was adding the PSX overload boards to each booster station to protect each isolated mainline bus segment. Since I'm still a dinosaur in this hobby, I'm using hardwired current detectors for signaling by Dallee. These boards were mounted above each PSX district and the corresponding bus wires were routed through the Dallee board and connected to the PSX board (pic 2). Once again, using the DCS unit, I checked each

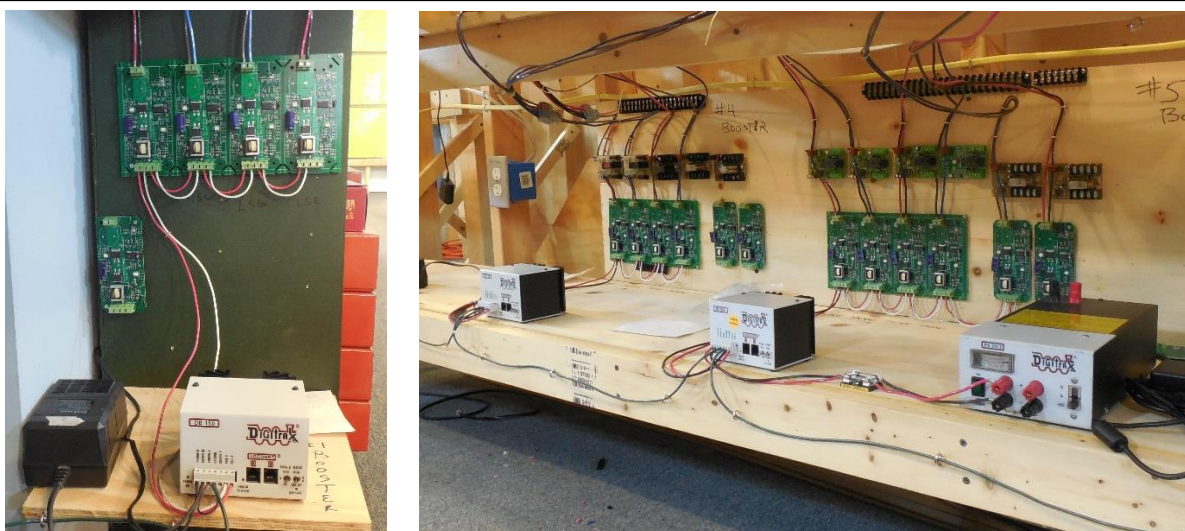
PSX unit by connecting the DCS output to the power terminals on the PSX board. No problems. Now I added jumpers to the PSX boards, so one set of power feeders from a booster can power up all boards in a booster station (pic 3). Using the faithful DCS, I powered up entire booster stations. This allowed the GP units to travel through multiple districts. An overwhelming success. I now have all 6 booster stations wired up and ready for the new power unit. Typical booster stations are shown below (pic 4 on next page).



Pic 2: PSX boards are mounted below the Dallee current detectors at each booster station.

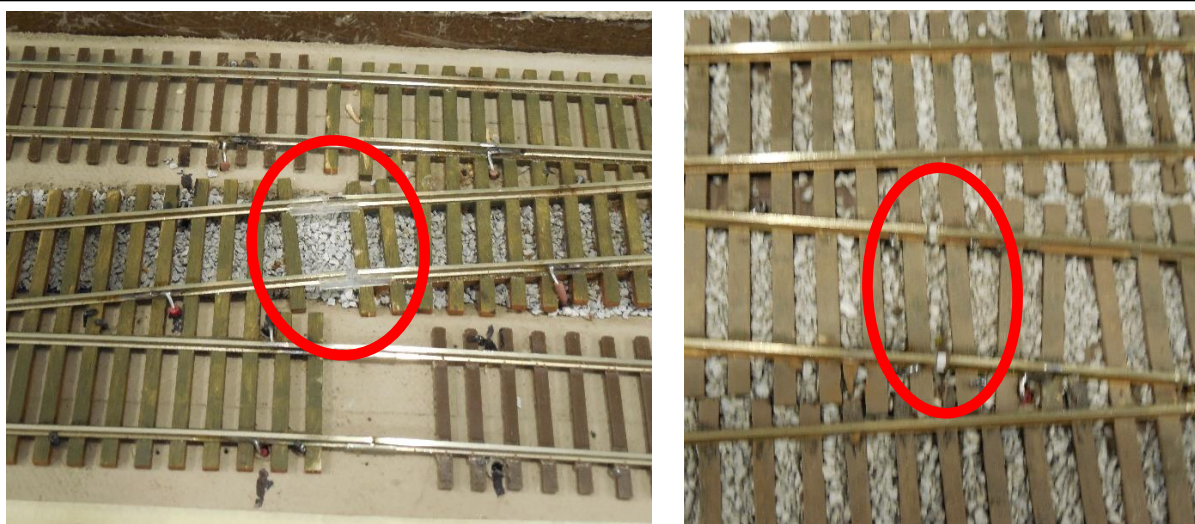


Pic 3: Jumper wires at the bottom of the PSX boards allows all the boards in a booster station to be powered up with one set of feeders .



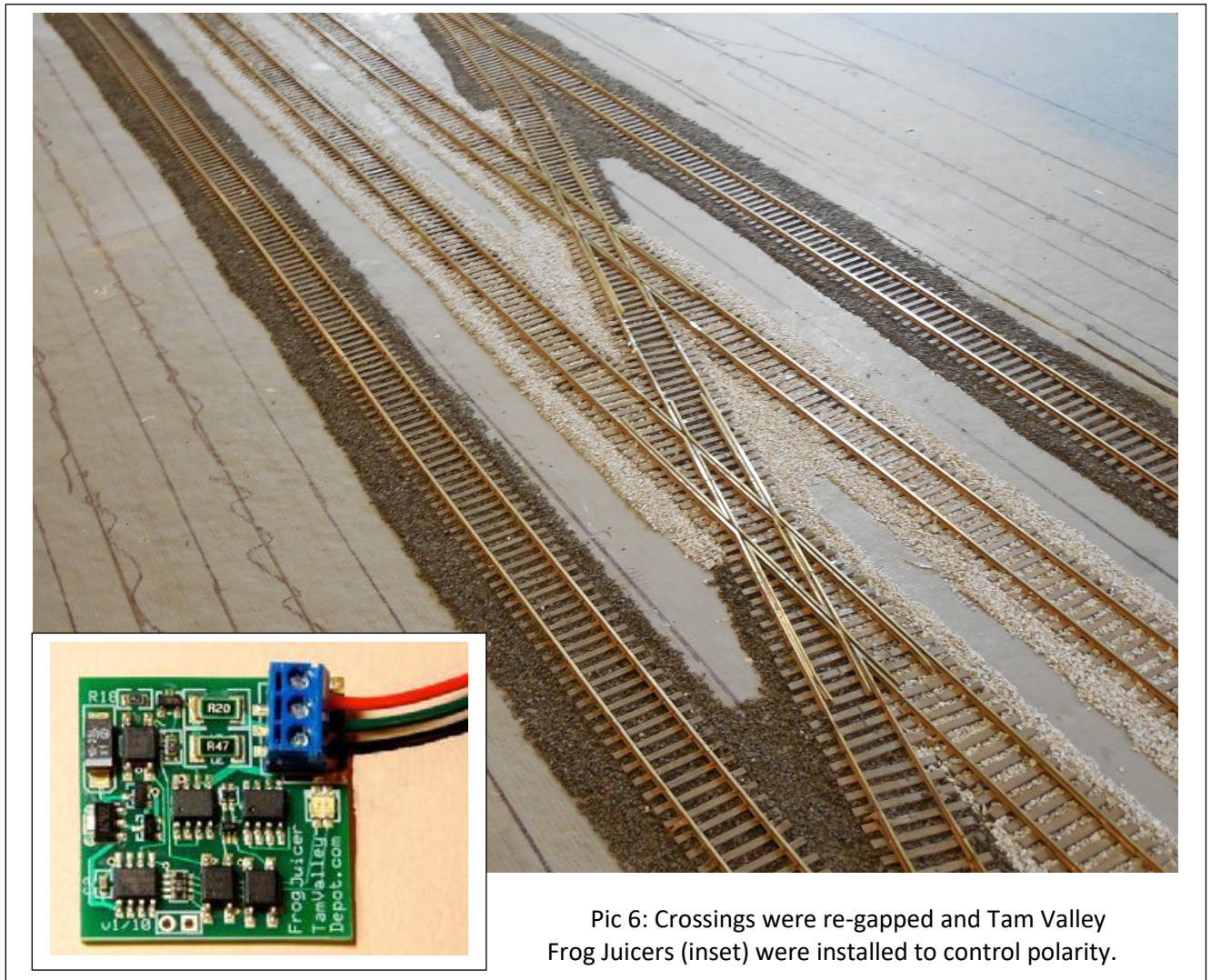
Pic 4: Booster Station #1 on the left, and Stations #4 and #5 on the right are typical of the booster station layouts and connections.

There was one major snafu. I had to re-gap twenty-five #8 crossovers. When I built these, I thought the gaps at the frogs would be sufficient to isolate individual bus lines on the East and West mains. I didn't take into consideration the 3-inch piece of track between the turnouts that allowed the wheelsets to bridge 2 different bus lines. I re-gapped this track so the wheels would cross evenly. I used plastic insulators and styrene to insulate (pic 5).



Pic 5: Twenty-five #8 crossovers were re-gapped using two methods. Plastic insulating joiners shown on the left image, and styrene shims shown on the right.

Also, I gapped the 3 crossings I have and added [Tam Valley Frog Juicers](#) to control their polarities (Pic 6).



Pic 6: Crossings were re-gapped and Tam Valley Frog Juicers (inset) were installed to control polarity.

So, the whole process has been painless and a success. That's encouraging as I get ready to fire up the Digitrax Evolution, but a little scary. This system consists of 6 booster stations, one command station, one UR93 for wireless control, 25 UP5's, and one LRNP in the middle of the UP5's. I know the track works, so all I need is everything to communicate with each other to drive this system. Hopefully, the success will continue. Maybe next month I can tell you about the celebration.

Until then.... ED

CLOSING PAGE BONUS

HAPPY INDEPENDENCE DAY



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Director 2024
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-
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superintendent@carolinasouthern.org
assistsuper@carolinasouthern.org
clerk@carolinasouthern.org
Paymaster@carolinasouthern.org
director1@carolinasouthern.org
director2@carolinasouthern.org
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