THE BRASS POUNDER

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

Volume 21 Number 12 December 2021

Division Coming Events
(See CSD Website for further details)

As usual, there will not be a Division meeting in December.

Details about our January 2022 meeting will be promulgated when the date, time and location are determined.

Merry Christmas and Happy New Year.

Superintendent's Corner

By Alan Hardee

I hope everyone had a wonderful Thanksgiving together with family and friends. I have a lot to be thankful for, God, Family, friends, good health, good job to support my family and my hobbies. I am also thankful for the great members and volunteers of the Carolina Southern Division that I have enjoyed serving as Superintendent for the last 6 years. Don't worry, I will still be around serving the division in some capacity or another.

We had a nice little turnout for our November meeting at Neal's, which included pizza lunch and an afternoon operating session. Just to clear up a little misunderstanding, the Division DID NOT provide the pizza lunch at Neal's. I personally paid for the pizza myself as a treat to the members.

As usual, there will not be a Division meeting in December. Spend your time enjoying the holidays with family and friends. I hope you get more trains to enjoy as well.

Happy Holidays and see you next year.

Train Town Volunteers Needed

by Gil Brauch, MMR – Project Manager

The Wade's Train Town Project sponsored by our Division is in need of support in the coming year. I know it may seem a little early to peek into 2022 in this busy holiday season, but it would be a very good thing to start the new year off right. The Train Town Project Leadership team (Ed Smith, Keith Iritsky, and Gil Brauch) would have a much happier New Year celebration if they knew that most of the first quarter was 'covered' with host volunteers.

For those who may wonder what impact we are having, one of the museum visitors had this to say about Train Town at the Newton Depot Model Railroad Center: ***"Train Town is GREAT, you all have done a great job cleaning it up, refreshing the "workings". I had been to train town a lot when it was in Brookford and it was good. I can now say she SHINES and is CRISP. I cannot wait to see what you do next. The attention to detail during the move is unsurpassed. Train Town will be on my regular visit list. I will encourage all that can to go see this wonderful new asset to our train museum."***

The duties of a Train Town Host are simple. You greet folks as they arrive at the layout, give them a quick overview of its history (we have 'cheat sheets' to help with that), answer questions, and monitor the layout in case a train 'acts up'. The time involved is on a Saturday of your choice between 9:45 and 4:15 at the Newton Depot Model Railroad Center, 1115 N. Main Street, Newton, NC. That's all there is to it. You will have a member of the Leadership Team to co-host with you.

Of course, we would like to know who is coming on which day, so we have a signup process. Simply check your calendar for the weekend that suits you best. Then go to the Division website and fill out a form at this link:
http://carolinasouthern.org/ttvolunteerrequest.html.

As you fill out the form, check the box next to the weekend(s) you have selected. Then hit the "Submit" button. This will send an email to the Leadership Team and one of them will contact you by return email to confirm your date and provide you with some additional information. That's all there is to it. As of this writing, we have a need for at least one volunteer every weekend in January, February, and March (except for January 8). We look forward to seeing you in 2022. Thanks in advance for your support.

UPCOMING AREA TRAIN EVENTS

Fort Mill SC
Model Train Show
December 18th
9:00am – 3:00pm
Clarion Hotel
3695 Foothills Way
Fort Mill, SC 29708

Free Admission

Central Railway Museum
Model Train Expo 2022
Friday Feb 18th, 2022
12:00-6:00pm and
Saturday Feb 19th
9:00am – 3:00pm
Rock Springs Church
Impact Center
207 Rock Springs Rd.
Easley, SC 29642

30th Annual Model Train Show
Friday Feb 25th
12:00-7:00pm and
Saturday Feb 26th
9:00am – 5:00pm
WNC Agricultural Center
775 Boylston Hwy,
Fletcher, NC 28732

Editor's Notes

By Ed Gumphrey

Last month I expressed my hope for some first-hand remarks about the MER Convention at Mount Clare Junction in Baltimore. So, as you can imagine, I am pleased to include Bob Halsey's observations starting on page six. Thanks, Bob, and congratulations on your Golden Spike Award.

I'm also pleased to have received Andrew Stitt's introduction to dead rail operation on his On30 ET&WNC railroad. I've seen this system in flawless operation at Andrew's house and appreciate his well-organized discussion starting on page seven. Thanks, Andrew.

It's a bit ironic that this edition follows Andrew's dead rail introduction with Ed Smith's progress report as he begins installation of his Digitrax DCC system on his railroad, along with the obvious challenge of the wiring work to come. Ed's work starts on page eleven. My thanks to Ed as well – I don't want to take his monthly contributions for granted. I also want to express my sympathy to Ed that Elway is no longer with us. Ed's right – it's a loss of a family member.

I'll close by wishing all of you a joyous holiday season with your families.

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

As Gil Brauch, MMR reports in his update on page 2, Train Town is being well received at Newton Depot. Here's the Box Score for November. Follow the link to volunteer to help and get our name added to the list

Train Town Box Score

November 2021

Open Houses 6

Attendance 117

Hosts: Gil Brauch, Keith Iritsky (2), Fred Miller (2), Larry Paffrath (r), Ken Riddick, Ed Smith (3), John Yarborough

To volunteer, go to:

http://carolinasouthern.org/ttvolunteerrequest.html

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

In other Division news, Neal Anderson, MMR, hosted our November meeting on Saturday, the 20th. I didn't make it to the meeting, but according to information from Dave Thrams, most of the meeting was discussion about the 2022 MER convention to be hosted by CSD from 20 - 23 Oct 2022. The Convention website, although incomplete, will be active when Gil gets it up soon. Information from Neal added news that some new names have been added to the list of volunteers helping with Convention planning.

After the meeting, the group adjourned to Neal's kitchen for some pizza. Our thanks to Superintendent Alan Hardee for providing the food. Dave Thrams joked that he thought Alan's treat was a way to celebrate the end of his final term as Superintendent. Neal reports that fifteen were attended, including two new members.

On the Achievement Program front, Neal (who is the Division AP Chairman) also reports that Bob Halsey earned his Golden Spike Awared. Congratulations, Bob. It looks like your work on dioramas has helped you start your AP journey.

After the lunch break, members went back downstairs to enjoy an operating session on the KK&L Railroad. Some ran trains along the mainline while others switched various locations. Neal also said new power is being added to the railroad for improved control. Our thanks to Neal for hosting the meeting and operating session.

Finally, my thanks to Dave Thrams for also providing a few snapshots of the event shown on the next page:

Neal Anderson, MMR, discusses status of Convention planning.

A special note of thanks to Alan Hardee for providing the pizza.

After the meeting, members gathered in Neal's kitchen for pizza.

We Went to the Convention!

By Bob Halsey

Only a half dozen of us went up to Maryland for the MER convention this past October, but we definitely found it very educational and very worthwhile!

I usually don't go on layout visits and other tours, but I have been to the B&O Railroad Museum several times, and can easily spend hours there! To me, the clinics, especially hands-on types, are the most valuable parts of these events, and they certainly had some interesting ones this time! "Making and Painting Rock Surfaces" is a real help to anyone who wants to make their layout or diorama more realistic. Although it gets a little messy, it was useful and fun, and lets you use your imagination; similarly for the "Backdrop Painting" session. I expect to use my backdrop from the clinic in a future project. You have to pay a few bucks extra for these types of clinics, but it's well worth it! Admittedly, I learned way more than I needed to know about " B&O Maritime Operations", their tugs, barges, car floats, ferries, loading facilities, etc, but it was very thorough, well-documented, professionally presented and yes, interesting! I spent a few days one summer as a teenager (in a previous century) working for a tugboat company in New York harbor, and got to spend a whole day underway on one while it did typical tugboat duties, like those described in this clinic.

The "White Elephant" room was well-stocked, and each of us picked up some goodies! For our 2022 convention, we are going to be politically correct, and call it the "Company Store". A high point for me was serving as a judge in the contest room, because that is where you get to see some of the finest examples of model railroading! The rolling stock entries (with one exception) and the dioramas we "evaluated" (not "judged") were not just exceptional, they were outright works of art! The one exception occurred when one of the layout operators noticed there was no caboose entry, and pulled one at random off his layout as a contest entry and by default won the prize for that category (he should have left it on the layout!). The dioramas were so well detailed that I and the other judge (in the detail category) could only find very, very minor things that could possibly be subjects for improvement!

In fact, there were only minor points in the whole convention that I think we can do better at: All the meals (except the Saturday evening banquet) were box lunches (a cold sandwich, an apple, small bag of chips, a cookie, and a soda or water bottle, for $20 per box!). If you wanted to go out to a restaurant, it was a half mile walk (or drive) to an Outback or another place. Good exercise! (Speaking of exercise, the hotel had a workout room, indoor pool, and hot tub! But I don't think any of us had the time to use them!) I hope we will be able to offer buffet style meals, at a reasonable rate. The other minor point was that we were all required to wear face masks in the convention area and our assigned "dining" area (eating box meals is not "dining"!). If you forgot to put your mask on when you went out to the hallway, you were immediately reminded to do so by a MER staff member, who stood there until you put it back on. Of course, that was part of their duties. None of the other hotel guests, including the large number of visiting sports team members, were required to wear masks.

Okay, enough whining! This was definitely a top-notch convention, well worth the time driving to get there (about 7 hours) and cost (no free gas). As always, meeting fellow modelers and learning new skills is a great experience!

An introduction to Dead Rail

By Andrew Stitt

Three years ago when I started thinking about changing my layout from HO to On30, one of the things I wanted to incorporate was the use of dead rail. I had attended the O Scale National Convention in Maryland earlier that year, and came away impressed with the possibilities it presents for model railroading. I was also able to visit an On30 layout using dead rail and talk to the owner about his experiences with it. By the time the HO layout came to its end in March 2019, I had done enough research to take the bold step of building the layout without provisions for traditional track power (like a track power bus, and gapping frogs in turnouts). By August of that year, I had my first engine equipped to operate, and began experimenting. I was pleased with the performance and decided to go further.

Due to the pandemic, our small operating group did not resume operations until the Spring of 2021. So I now have about 6 months of experience with multiple engine/train operations, and feel comfortable sharing my experiences with you.

So, what exactly is dead rail?

Simply put, it is running an electrically powered locomotive without receiving any of the electricity from the track (which is traditional). Rather, the electricity for the motor is received from an on board source - a battery. Since the motor is not connected to the track, it receives no communication (track voltage polarity or voltage (DC), or DCC signal) to tell it what to do.
This communication is conducted wirelessly to a receiver added inside the locomotive between the battery and the decoder/motor. Some systems have this receiver and decoder combined.
The battery must be able to be disconnected when not in use to prevent any current draw. A simple latching reed switch can be installed to break the connection or a pin connector can be installed to physically make the disconnect.

There's no electrical power on these rails!

What about the battery?

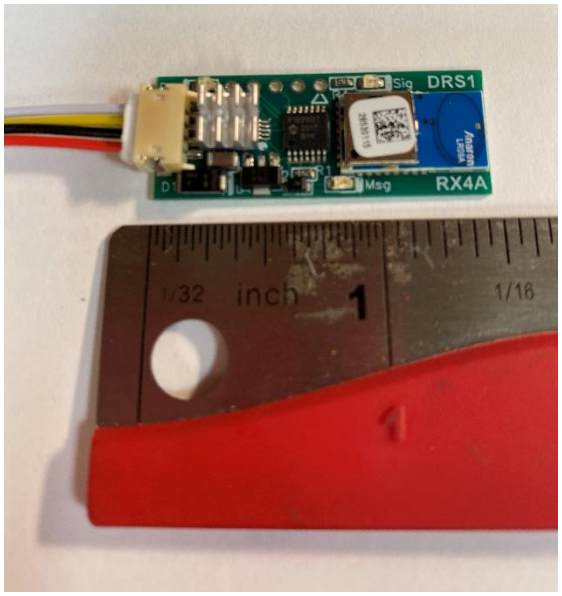
The batteries I use are 11.1 volt lithium polymer. They are well suited for this application. There are various milli amperage ratings available. I use the highest rated batteries I can fit into the tender of the individual locomotive to give me the longest run time possible. The higher the rating, the physically larger the battery. Remember, sound decoders draw more current than non-sound units. Lithium polymer batteries have a nice benefit that they do not form a memory like ni-cad batteries do. You can charge them whenever you feel the need. A battery charger preset to the batteries' limits is very nice to prevent over charging. Do your research on chargers as well as the batteries.

11.1V lithium polymer battery

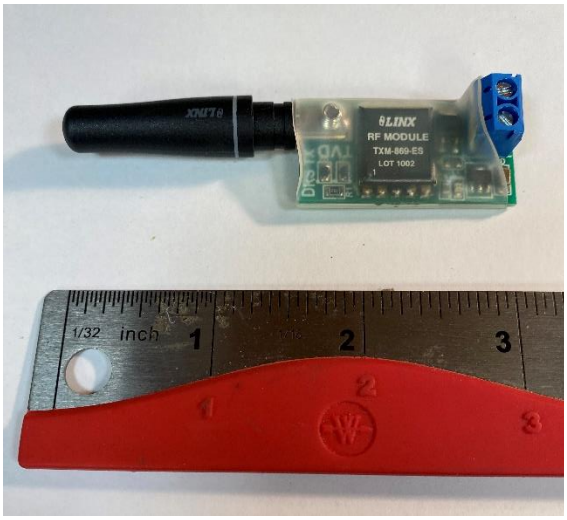
How does the system work?

I already owned a NCE DCC system. I was able to incorporate the wireless throttles, transmitter, and command station in place. On the track output on the command station, I simply removed the connection to the power booster, and placed a wire connection to the dead rail transmitter. No power booster is needed anymore.

Installing the receiver, reed switch, and battery into each engine comes next. Not terribly different than adding a DCC decoder. You must disconnect the connection between the engine and track pick up of course. The first time I ran an engine, I didn't do this. I managed to light up the caboose! Fortunately, I didn't have the engine on a track with no gapped frogs!



Anaren LR09A RF receiver.



This Linx RF module transmits the DCC commands to the receiver (picture on left) mounted in the locomotive tender.

What about programming?

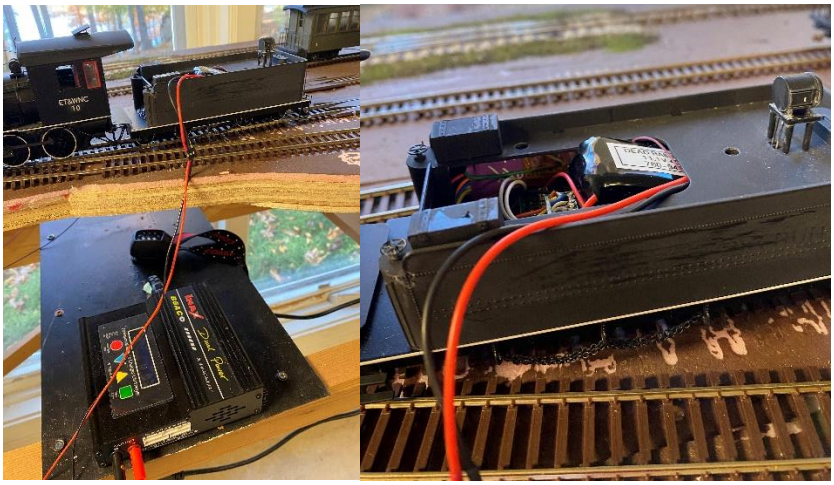
I certainly fell in love with (JMRI) Decoder Pro when I modeled in HO. I seldom used programming on the main, except to make simple adjustments. With this system, since the engine is isolated from the track, I can't use a programming track. While I could install a micro switch, and leave the wired connection within the engine intact, I would also have to clean the drivers every time I wanted to use a programming track. Not for me. I am totally reliant on programming on the main. It took me a while to "get the hang of it", but I can report it does work, albeit some things take longer to program than others.

Time to operate!

After turning on the DCC system, it is time to turn on the engine you wish to run. Since I use the engine number as its DCC address, I dial that up with the throttle. I use a magnetic extension wand to latch the reed switch in the desired engine. It usually takes about 3-5 seconds for the system to find that engine. Frequently the Soundtraxx decoders I use will move the Johnson Bar to make a sound to let you know they have made the connection. Then it is off to run, just like you would normally. At the end of the engine's run, or when there is going to be a delay (from oncoming traffic, or a lunch break), I will turn off the engine to conserve the battery. At the end of the run, if the engine is likely to be used again during the operating session, I will run it over to a charging station. As mentioned previously, you can "top off" the charge on lithium polymer batteries.

What kind of run time can I expect?

This is the question asked most frequently. It is a bit of a loaded question, but here goes. On my layout, I have two grades, both 2% or less. I limit my train length (mostly) to 8 cars or less. Since I am modeling narrow gauge (the ET&WNC), we run trains at a slow pace. All the engines are sound decoder equipped. Given those qualifying statements, any train on my layout, including the two locals, can make their entire run (typically 50 - 60 minutes) on a single charge! The longest one can be a close call, and if mishaps occur, it may well run "out of juice" before the end of the run. There are no alarms to tell you this is about to happen that I know of (certainly not at this time). The engine simply stops dead in its tracks! When this has occurred, we have simply placed the train in a siding and brought out the charger, or manually replaced the engine with another that does have enough charge to complete the run.



Battery charger is connected to the onboard battery for a recharge.

So why consider dead rail?

No layout wiring! Certainly, there is wiring for switch machines, low voltage for structures, and for track detection, but none for anything track related. I have a reverse loop, a wye, and a turntable on the layout. None of them are wired! Building turnouts and crossings require no gaps.

I don't have to clean track or engine wheels! On the previous HO layout, I evidently got a little too generous when applying graphite to improve conductivity. The rails were always getting dirty, requiring me to clean them as well as engine wheels prior to each session. Now I can paint the rails on sidings or secondary tracks to resemble rusty rails. To me, this adds greatly to a more realistic scene. Actually, it seems that the engines get better traction on painted rail than on shiny rail.

One additional aspect has developed as we have operated. We have become aware of the range limitations, much as the real railroads were about their engines. The mentality of using one (track powered) engine (set) for an entire operating session without stopping to refuel or provide maintenance was discovered to be less than prototypical.

Would I do it again?

Certainly. Everything that is needed can be placed in the tender of the steam engine in the larger scales. Some smaller engines in On30 (Porters, and geared engines) may require an attached water car or such, particularly if you need to make room for a speaker or two.

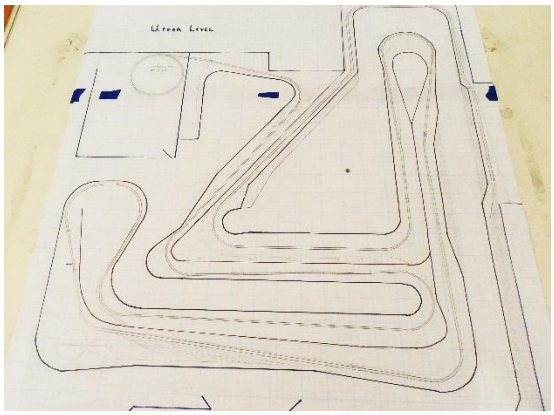
I am confident that the system can be engineered into HO as well. A diesel dummy/ battery car would work very well for a multi engine consist with the right programming. Experimentation would need to be done to see what range could be gotten with different sized batteries, and train lengths. Remember, most HO engines are pretty strong, and will pull quite a few cars individually. Cost would certainly be a consideration as most of us "have fleets" of engines we like to run, but changing a layout theme, or scale certainly would present that opportunity going forward.

This On30 consolidation chuffs merrily along with no worries about track power pickup.

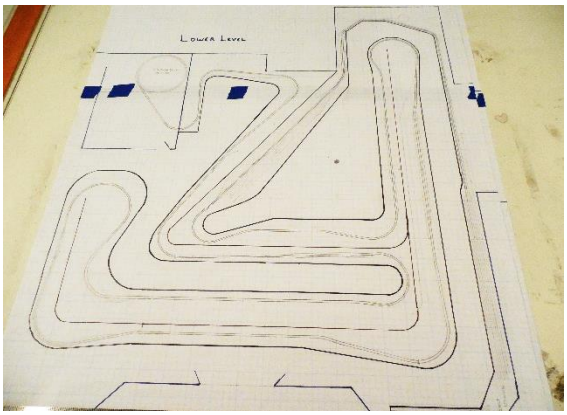
BETTER LATE THAN NEVER - PROGRESS

By Ed Smith

So, I'm finally starting to install my Digitrax System on my layout. My layout is fairly large. I apologize for my photography, but these first pictures show the upper- and lower-level configurations (pic 1, 2). The mainline is approximately 700' long, double track, for East and West orientation. Because of the size, I have accumulated a sizable quantity of Digitrax products.



Pic 1: Upper level mainline diagram.



Pic 2: Lower level mainline diagram.

Pic 3: Upgrading to the Evolution Duplex set includes the items shown on the left. This also replaces the older UR92 Receiver (inset top) with the newer UR93 (inset bottom).

The first thing I did was update the command system. I have a Digitrax Super Chief Duplex set, but I replaced it with a newer version; Digitrax Evolution Duplex set. By doing this, the UR92 transceiver for radio control was updated to a UR93 transceiver (pic 3). I'm planning on using the old Super Chief in my shop for configuring locomotives. Because of the layout's size, I've cut in twenty-four UP5 LocoNet Universal Interconnect Panels in the fascia for tethered controls. These are distributed about 10 to 12 feet apart (pic 4). Also, I added a LNRP LocoNet Repeater Module in the middle of the UP5 run (pic 5). The reason for this is twofold. First, it amplifies the signal in the series run on the UP5s, and the LNRP unit has connections to isolate the command station and boosters from the UP5s in the LocoNet system. The UR93 will also be added in the middle of the series UP5 cable, along with PS14 power supplies every so often to enhance the signal.

Pic 4: Twenty-four UP5 LocoNet panels are mounted to the fascia and distributed around the layout.

Pic 5: One LNRP LocoNet Repeater Panel will be mounted along with the UR93 transceiver in the center of the LocoNet run..

This may be overkill, but I'm installing 6 boosters along with my command station. The command station will have nothing connected to it, other than the Loconet. There will be 4 DB150, 5 amp boosters and 2 DB200, 8 amp boosters. The DB150s will each have a 5 amp power supply and the DB200s will share a PS2012 20 amp power supply. Each of these boosters will power a collection of PSX breaker boards to isolate and control sections of my track. I'm planning on signals, so each mainline will have 17 power districts, totaling 34. Add to that, yards, spurs, interchange tracks, and facilities, and I have 42 PSX boards. These boosters are distributed around the layout. There are 5 booster stations around the layout with a typical installation shown (Pic 6). The boards are secured to the wood by Velcro strips.

Pic 6: Top shows a typical booster installation under the layout. Circuit boards are mounted with Velcro as shown on the bottom.

I have installed two 15 amp, 110 VAC circuits with outlets throughout the bottom of the layout infrastructure. Both circuits are switched. I color coded the outlet cover plates, using white colored receptacles for the DCC, and grey colored receptacles for accessories. I also labeled the outlet cover plates.

I'm using #12 AWG wire for my bus. Black and red will be the East mainline and brown and blue will be the West mainline. Eventually thirty-four TRAK-DT boards from Dallee will be installed on each of the main bus lines for detection and signaling (pic 7). I haven't decided on the available district colors yet. At present, I'm suffering from sticker shock, because wire prices have almost doubled. I'm using screw eyes to hang my bus (pic 8).

Pic 7: Thirty-four TRAK-DT board from Dallee will be used for detection and signaling.

Pic 8: I'm using screw eyes to support wire runs under the layout.

Pic 10: A collection of wire so far hints at how much work remains.

So, there you have it. Now all I have to do is install all this, (Pic 9 on previous page). But it's a start

In closing, my wife, Cindy, and I would like to wish all of you the best of holidays. On a sad note, Elway is no longer with us. He was welcomed into dog heaven on Nov. 19th. He became my celebrity assistant in these articles, but more than that, he was a huge part of our family and he is sorely missed (Pic 10).

ED

Pic 10: Elway, who had been my celebrity assistant is no longer with us. He is sorely missed.

CLOSING PAGE BONUS

I don't know about you, but The Polar Express is my favorite Christmas movie.

Image from internet search

Division Brass

Superintendent	Alan Hardee	superintendent@carolinasouthern.org
Asst. Superintendent	Andrew Stitt	assistsuper@carolinasouthern.org
Clerk	Ed Gumphrey	clerk@carolinasouthern.org
Paymaster	David Thrams	Paymaster@carolinasouthern.org
Director 2022	Ed Smith	director1@carolinasouthern.org
Director 2023	Scott Perry	director2@carolinasouthern.org
Director 2024	Larry Paffrath	director3@carolinasouthern.org
AP Chairman	Neal Anderson, MMR	Apchair@carolinasouthern.org
Webmaster	Joe Skorch	Webmaster@carolinasouthern.org
Newsletter Editor	Ed Gumphrey	editor@carolinasouthern.org
Program Chair	Scott Perry	program@carolinasouthern.org
RMU Chair	Doug Algire	RMUchair@carolinasouthern.org
Publicity Chair	Marcus Neubacher	publicity@carolinasouthern.org
Membership	Nancy Campbell	membership@carolinasouthern.org