



# The Switch Tower

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April 2020

Seacoast Division NMRA

[www.seacoastnmra.org](http://www.seacoastnmra.org)



**Spring event for the Seacoast Division  
Is cancelled , All train shows have been cancelled for April . For shows after that contact  
the presenting group .**

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April 1 on the  
New Brunswick Southern,  
photo by  
Harry Gordon

Enjoy a trip through the [Seacoast Division's Web Site](http://www.seacoastnmra.org).

## The President's Lantern by Tage Erickson

With all that is going on in the world around us, it is my hope that you are all healthy and safe in the comfort of your homes. I just wanted to take a few moments to update you on the status of some of the model railroading events that were scheduled to occur in the next several months.

As I stated in my last email to all the members, our Seacoast Division Spring Event has been canceled. It will not be rescheduled. We have a Division Board of Directors meeting scheduled for Thursday, April 2nd. At that time we will discuss the Division Summer Event, which is still scheduled for Saturday, July 25, 2020. At this point, I would like to wait and see if our Country can get a grip on the Coronavirus and stem the tide of this thing. Even if the virus is in submission or recession, there will likely be concerns about how long we should wait before we have another Event. So there will be more to follow on this. I will do my best to keep you informed.

As you might suspect, all of the local train shows in New England have been canceled or postponed. Some of them have stated that they will try to reschedule for this Fall. It will be interesting to see how many of the shows will actually make that happen.

As of this writing, the NMRA National Convention is still scheduled to happen in St.Louis, MO, from July 12 - 18, 2020. Please check the NMRA website at [nmra.org](http://nmra.org) for further updates. Also, the Northeastern Region Convention, scheduled for October 9 - 12, 2020, is still scheduled to take place in Westford, MA. At this time, it is still too early to predict what the virus situation will be at that time. The NER Board of Directors discussed this at our meeting last night and it was agreed that we should wait until we see what happens in the next several months and get a recommendation from the NER Convention committee. There will be more to follow on both of these conventions .

As I mentioned previously, our Seacoast Division Board of Directors will be meeting via telephone on April 2nd. The main item we will discuss will be the operation of the Chip Faulter Fund. The Faulter Fund Organizing Committee has completed its deliberations and has provided an excellent document with recommendations as to how to proceed. This document has been turned into a Charter for the Chip Faulter Fund, which the Division BOD will hopefully approve. I will provide another email notice to all the members with the details of the document, once we have approval.

So this is a great time for each of us to get busy with our layouts or other modeling projects. I have made good progress on my own layout, to the point where I am ready to plan and then build a helix. I will take pictures of my progress and hopefully provide them to you at an upcoming event.

Lastly, I want to say that I hope you are all heeding the advice of the medical experts in dealing with the Coronavirus. It is vitally important that each of us practice Social Distancing to the maximum extent possible. This is a time in our country when every citizen has to do his/her part to mitigate this disaster. We all have to work together in order to get through this safely. I am very optimistic that we will come out of this, a better nation.

My best regards to you and your family,

Tage Erickson

Seacoast Division President

## Rockingham Jct. by Tom Oxnard MMR

I heard that the Rockingham Junction B&M Station in Newmarket was being renovated and seeing that it is almost in my backyard I thought I would take a look at it. I took with me my camera, a tape measure, a story pole, pencil, and paper. That's because I thought I might want to scratch build a model of this building at some time, and possibly replace another station. I also know there is a kit of this station produced by BEST.

The space I have available is 5"x5", so I was not sure this station would fit. It turns out that the building is somewhat square and would be a good candidate. I also found taped to the glass door an architectural plan and elevation of the building. This gave me dimensions and roof angles. The plans are very helpful because the roof peaks, gables, and valleys are very complex.

With my story pole in place I took several photos of all sides and some details. The renovation is mostly done, but the roof and paint scheme is not finished. The colors are B&M colors. I found a website with pictures taken in 2002 of this station when it was in very bad condition. There were pictures showing some of the interior faded yellow walls on V-groove



pole in place I took graphs of all sides and some details. is mostly done, but roof are not finished. paint scheme is B&M colors. I found pictures taken in station when it was condition. There of the interior faded yellow walls wood.

I drafted some drawings of the 4

architectural drawings, but I scaled it

to about 85% of the original. I shortened the operator's office by 2 feet, and left off the backside wing. I then photocopied the drawings and made a crude mockup of the station. It looks like 2/2 Tichy Windows #8025 (30" W x 62" H) would be a good fit. The current windows are 33"x63", but they are obviously replacements. Construction- I start with a .040" Styrene base that is the exact dimensions of the building I have drawn. I build each wall from 1/16" basswood clapboard sheet, 11 1/2 feet tall, following my drawn plans. Windows and doors are cut. The operator's booth has small delicate walls so I made this section from Styrene clapboard with 6x6" Styrene posts between as trim boards. The basswood walls have 1/16" square posts at the corners and bracing. The operator's room has a shed roof, and I cut that slope in the Styrene walls after I glued the walls together. I sprayed the structure with gray primer.

I will do some interior detail so for those lighted rooms I have laminated .040" V Groove Styrene horizontally using 3M Transfer Tape to make interior walls. Where wood and Styrene join I also use Walther's Goo at butt joints. Around the top of the walls I glued two 1x8" wood trim boards, or one on the lower walls. I added a second 2x8" trim board on top of the upper trim board.

I painted the interior and exterior Polyscale Aged White and then added a wooden floor to the wait-

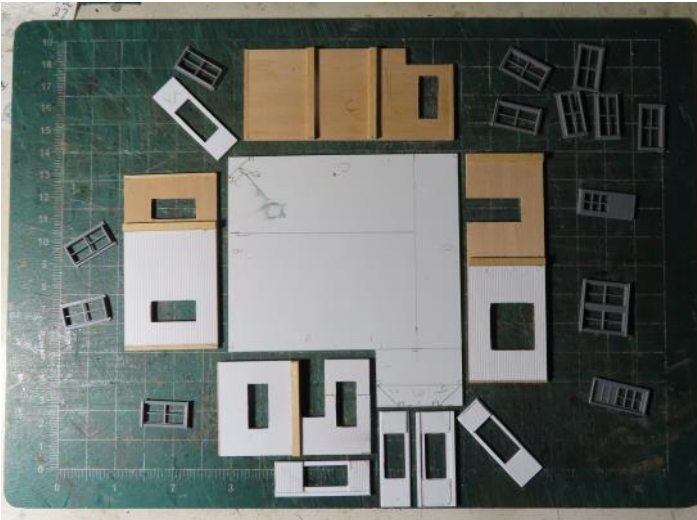


## Rockingham Jct. by Tom Oxnard MMR

ing room. From V Groove Styrene I created some 3foot vertical wainscoting, painted it with Poly-scale Rock Island Maroon first, and added it to the waiting room. The floor plan is not prototypical but the V Groove is. I then painted the exterior clapboard and trim with the RI Maroon.

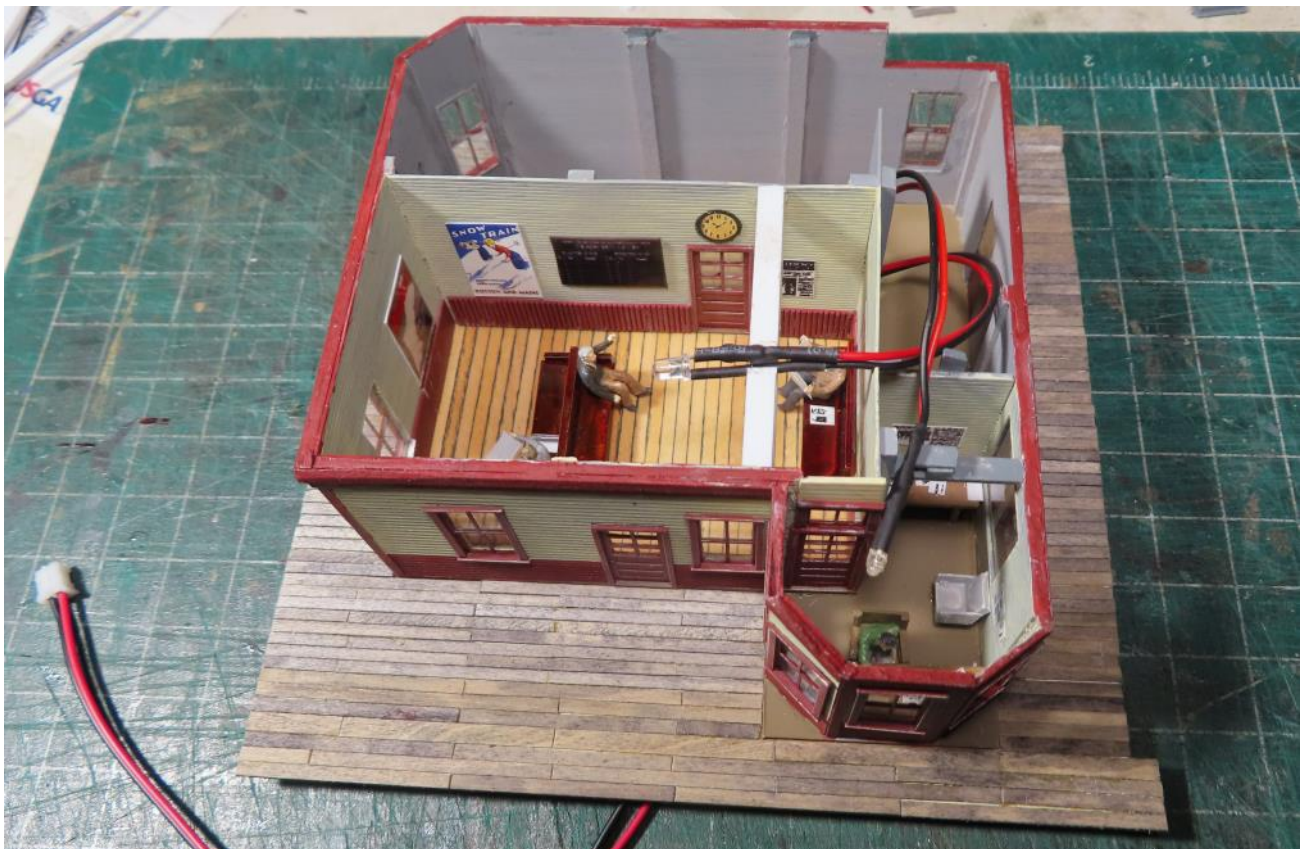
The windows are Tichy 2/2 #8025 (30x62") and the doors are 6 Lite #8150 (33x80"). There is one double window on the right side where I trimmed and glued two together before cutting the wall opening. I glued them in place with Aleene's Tacky Glue. I built 2 operator's desks from Styrene and added chairs and an operator. In the waiting room I build 2 benches, and painted them Floquil Roof Brown and then Tamiya Clear Red X-27. I added 3 passengers reading newspapers, clock, train schedule board, and posters.

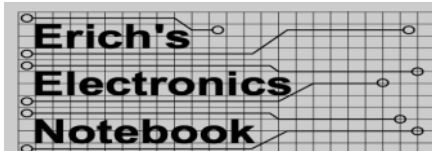
For interior lights I used two LEDs joined to a connector that I use on all my buildings so they can be removed. One is a 3mm warm white and one is a 1.5mm cool white. I built notched Styrene "beams" across the ceiling of the waiting room and operator's room that will not interfere with the roof.





Rockingham Jct. by Tom Oxnard MMR

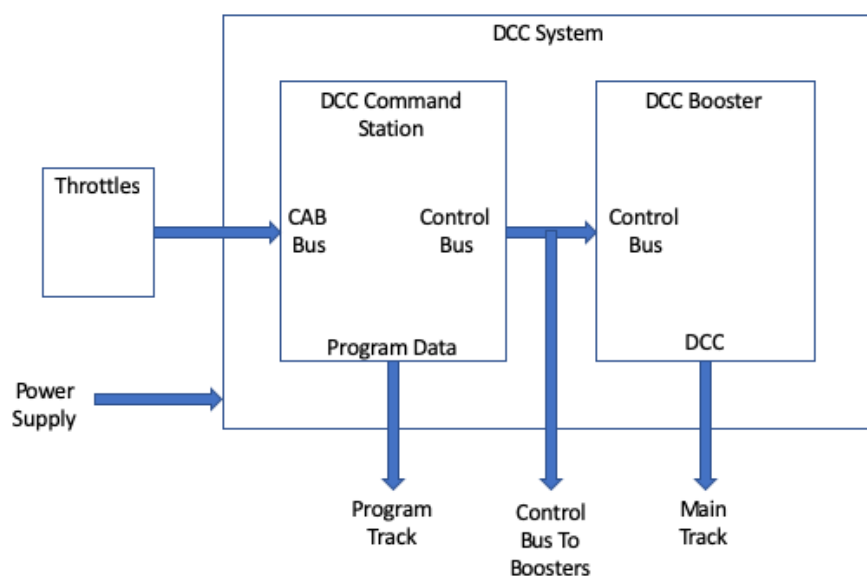




## DCC Boosters by Erich Whitney

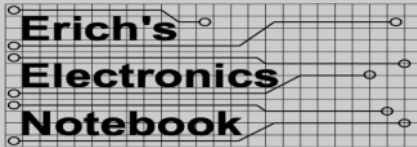
One of the questions I received (thank you) was about how to know if and/or when you need a DCC booster on a layout. So, I thought I'd tackle this question in a broader sense to hopefully clear up any confusion and help modelers decide how to wire up their DCC systems.

Before we dig into boosters, I'd like to clarify some things. When you buy a DCC system, the main box (typically) consists of two things, a DCC Command Station, and a DCC Booster. The DCC Command Station is the brains of the operation but it can't connect to the track without the DCC Booster which is why they're typically in one box. Figure 1 is a generic block diagram of a DCC system. A typical DCC system will provide between 3 and 10 amps with its internal booster. Refer to your specific DCC system specifications so that you know how much current your DCC system can provide before you start adding boosters.



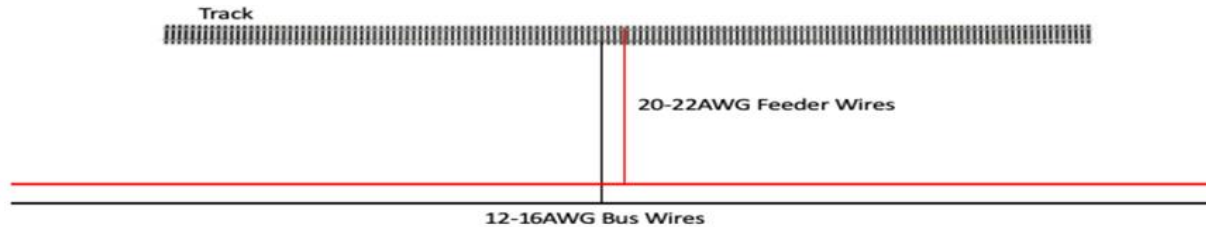
**Figure 1 DCC System Block Diagram**

When you wire your layout, you will run a pair of DCC bus wires under the track and you'll drop down feeder wires from your track to this bus. Rule of thumb is to run a pair of feeders about every three feet and it is highly recommended that you drop feeders for each section of track—do not rely on the rail joiners to carry track current. Rail joiners are meant to just be a mechanical connection to keep the rails aligned—they are not good for electrical conductivity. Alternatively, you can solder your rail joints so that you don't have to use as many feeders, however you should count on at least one pair of feeder wires every 10 feet. Figure 2 is a basic track wiring diagram. The feeder wires don't need to be very large because they should only be a few inches long. Feeder wires should be made from 20-24AWG stranded wire. I prefer to use stranded wire because it will be less likely to break and it's easier to bend and solder to the rails, but solid wire also works. Always solder the feeder wires to the outside of the rail and bend the end so that it fits snugly in the web of the rail. Use a file and some paint to make the feeder connection 'disappear'. The main DCC bus wires need to be larger because they are carrying the total load on the DCC bus. You can use either solid or stranded wire for DCC bus wires. I would recommend 12-14AWG for most HO layouts.



## DCC Boosters by Erich Whitney

Remember the smaller the AWG number the larger the wire. For more details on feeder wires, see the sidebar in installing feeder wires.

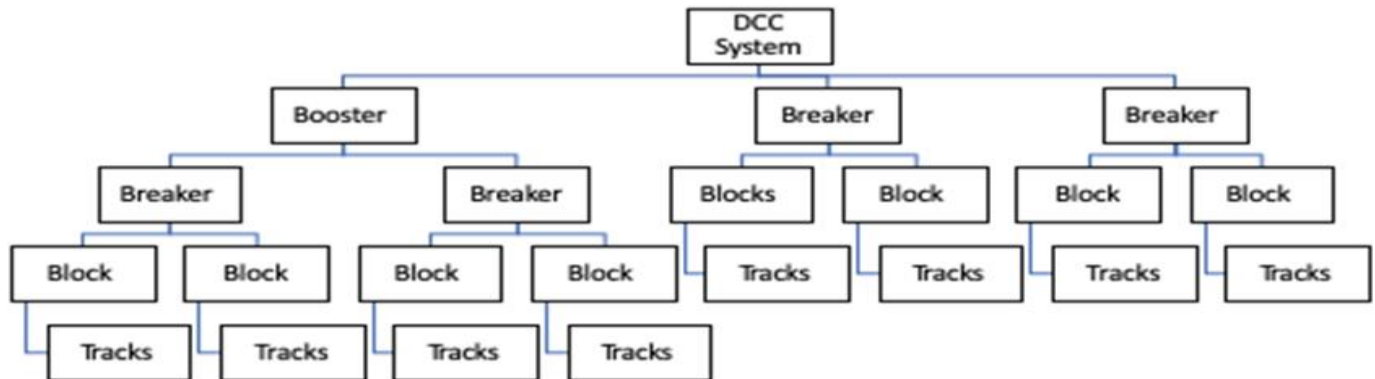


One of the biggest advantages of using DCC is that it greatly simplifies track wiring. That said, there's still a very good reason to wire your layout in blocks. If you wire your layout with just one bus connecting the entire layout, it will be very difficult to isolate/fix wiring faults and the entire layout will come to a halt if someone runs a turnout thrown against them. Electro-frog switches require a gap between each pair of frogs that face each other. Those are a good starting point for blocks in a DCC layout and keep in mind if you're going to have signals, you'll want to design with blocks from the beginning so that your block detection can be added without rewiring your track.

Another reason to wire your layout in blocks is to allow for adding DCC boosters should they be needed. So how do you know if you need a booster? There's two ways to tackle this problem, one is you can add up all of your DCC loads or two, use a meter to measure the load. I'm a huge fan of the DCC Specialties R RampMeter. This device will give you an accurate measurement of the DCC voltage and current at any point on your layout and it comes as either a standalone tool or as a panel meter that you can permanently wire into your layout. Personally, I would install one of these at the output of each booster so that I could quickly see if that booster was operating near its limits. Now if you find that one booster is heavily loaded, but another is lightly loaded, you can simply move some of your blocks from one to the other. Personally, I would not add any boosters to my layout unless I found that the base DCC system was running near capacity. If you have a lot of locomotives on storage tracks, consider adding a switch to each storage track so that any unused locomotive isn't adding to the overall load of the system. DCC locomotives do consume a small amount of power even if they aren't moving—the decoder is always listening. And if it's a sound decoder, it'll make idle noises unless you mute it.

Figure 3 shows a generic track wiring topology. At the top is your base DCC system and that feeds a number of breakers and boosters. Each breaker feeds a number of blocks which in turn feeds your tracks. Of course, how you come up with how many booster, breakers, and blocks is still unanswered and I'm afraid there's no one way to do this. My approach to this is to take a look at each section of your layout and create blocks for each section. For the main line you probably need fewer blocks but for each section where there's a yard, a spur, or some other area for switching, you would want to isolate those sections. Remember, you need to use insulated joiners between blocks.





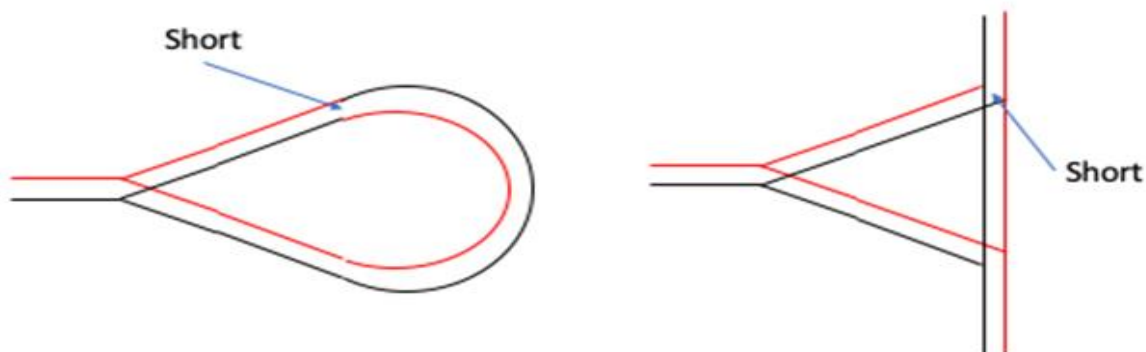
**Fig 3 Track Wiring Topology**

I know that some people are a big fan of using automotive light bulbs in place of circuit breakers. The problem I have with this approach is that a light bulb still allows a significant amount of current to flow when there's a short and that can still do damage. The DCC circuit breakers actually cut the power and are self-resetting which means they will restore power once the short is removed.

When I talk about blocks, I'm referring to an isolated section of bus wires. You can use terminal strips under your layout to connect the blocks to their breakers and boosters as needed. How many blocks and how far to run them is still a bit of an art. I would group blocks into districts which all come to one terminal strip. Then each district has wiring back to a central point where the DCC system and boosters are located. I would install the breakers closer to the blocks they feed. Most of the DCC breakers I've seen have either an LED or a speaker (or both) to tell you when they're tripped. You want to mount these such that it's easy to tell which one is "squawking" when there's a short.

For some perspective on DCC loads, modern DCC locomotives tend to run on about 100mA to 500mA of current. So, a 5 Amp DCC system could run between 10 and 50 locomotives simultaneously. When a DCC locomotive is just sitting still it only draws a few milliamps. Older locomotives might draw more current. So, you really do have to measure the current draw in order to get a sense for how many can run simultaneously.

There is one more subject that falls under the category of wiring and boosters. If you end up creating a reversing loop, you will need a solution to prevent short circuits. Reversing loops are created when you have a track turn back on itself. This happens in Wye's, Loops, and Turntables.





## DCC Boosters by Erich Whitney

The simplest solution is to install an auto-reversing device that automatically switches the polarity in the loop. You can do this manually with switches but that's annoying. Some products combine a circuit breaker and auto reverser into one board which saves a few bucks and simplifies wiring. Follow the instructions that come with your auto-reverser for proper gap placement.

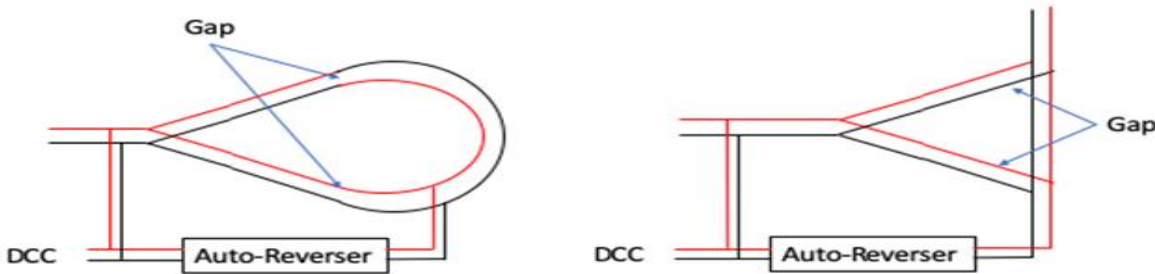


Figure 5 Reversing loop and wye wired with an auto-reverser

For turntables, wire the output of the auto-reverser to the turntable's track. Some turntables may have an auto-reverse function built-in so check the turntable documentation.

I hope this column has helped answer questions about DCC wiring. Please send me an email if you have further questions.

Sources:

I've included some links to the devices I mentioned above. This information is provided for reference, I'm not specifically promoting these products.

DCC Specialties RRampMeter, <https://www.traintekllc.com/rrampmeter-v1-digital-meter-for-dcc-dc-ac-3-rail/>

DCC Specialties PSX4 DCC Circuit Breaker (4 power districts): <https://www.traintekllc.com/dcc-specialties-psx-4-dcc-circuit-breaker-for-four-power-districts/>

DCC Specialties PSX-AR Auto Reverser Circuit Breaker: <https://www.traintekllc.com/dcc-specialties-psx-ar-auto-reverser-circuit-breaker/>

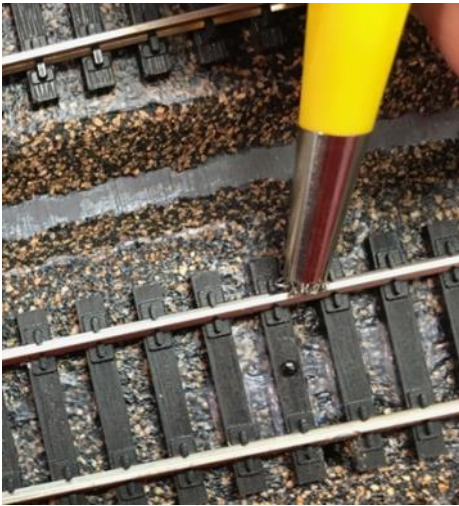
Tix Anti-Flux: <https://www.micromark.com/Tix-Anti-Flux-1-fl-oz-two-1-2-oz-bottles>

These photos show the steps I use to install track feeders. I drill a hole right next to the outside of the rail where the feeder will go. I strip and tin the feeder wire then make two bends in the wire. The first bend creates a small arc in the end of the wire. Then I take that arc and bend it over to about 90 degrees. When the wire is pulled through the hole, the arc at the end will snap tight into the webbing of the rail which keeps the wire tightly in place while you solder it. I like to leave enough bare wire so that you don't see the insulation sticking out of the hole. It's easier to hide the wire without insulation.



## DCC Boosters by Erich Whitney

I think it's helpful to rough up the rail where the feeder will be soldered. This is because it's difficult to get a good solder joint on really smooth Nickle-Silver rail. You can use a wire brush or a sharp tool to scrape the rail.



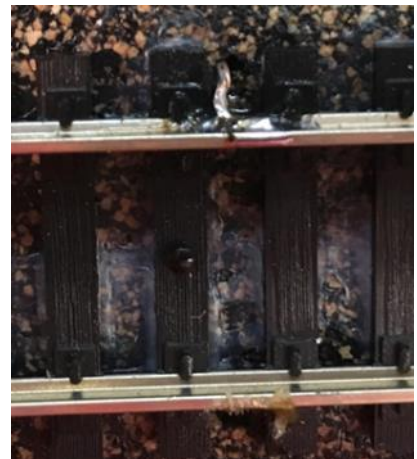
Make sure you use a high-quality (non-acid) flux on the rail before soldering. I will tackle the questions about acid versus non-acid flux in a future column.



[Sidebar 5](#) I use a small hobby brush to apply the flux to the rail where I scraped it



This photo shows how the arc in the feeder makes a snug fit when the wire is pulled through the hole.



And this is the feeder soldered to the rail. After you finish soldering the feeders, go back and run a small file over the top of the rail to make sure there's no solder sitting proud of the rail. You can also snip or file any wire that might be sticking out. Also, make sure no solder crept over to the inside of the rail. Then you can use your favorite rail brown paint to further hide the wire. Ballast will cover the hole.

## Membership Siding by Lou Champagne

### First Thing First:

I hope this finds you and your loved ones healthy, safe and surviving the stresses associated with the current world health crisis ... take good care of yourselves !! Let's also look out for each other ... check on fellow members, especially those in the higher risk groups, which is probably a large percentage of us. Please get the word out if someone needs help.

### **Key Benefit Review:**

This health crisis will pass, but our wonderful hobby can be a major stress reliever to get us through it. Working and focusing on fun activities can bring an important perspective and help us to better deal with these new outside stresses.

This would also be a great time to take a fresh look at all that the NMRA provides through its National, Regional and Division websites. Explore them in detail ... I know you'll be impressed. They are great avenues for doing research, learning new skills, meeting new friends and staying abreast of what's going on in the hobby. The *Member's Only* section at [nmra.org](http://nmra.org) is especially important ... this is also the place to go should you need to make a change to your membership data on file such as address or contact information. The NMRA store is also a fun spot to visit.

Explore and enjoy ... [nmra.org](http://nmra.org) [nernmra.org](http://nernmra.org) [seacoastnmra.org](http://seacoastnmra.org) !!

### **Recruiting Reminder:**

Help the NMRA and your Seacoast Division grow by keeping it in mind when you're talking with friends & acquaintances who currently don't belong to the NMRA ... tell them about the benefits of membership and encourage them to join or to at least attend one of our meetings to see what we're all about ... they'll be glad you did !!

### **New Seacoast NMRA Members:**    *Welcome Aboard !!!*

Maine: David Aspinall, Parsonsfield; Charles Hastings, Yarmouth

New Hampshire: Dave Delorey, Frankestown; Angel Williams, Middleton; Eric Williams, Middleton; Paul Zayac, Sanbornville; Tim Moore, Center Harbor; David Taylor, Exeter

### **Returning Members:**

Maine: Brian Jewell, Winthrop; Wesley Hohfeld. So.Thomaston

New Hampshire: Joe Brodbine, W.Chesterfield



## What's on my work bench by Larry Cannon MMR

Jake's Tree Service is not a user of freight cars on my railroad, but it is a "line side" business. The Otter Valley Railroad subcontracts the clearing of brush trees if it cannot be cleared mechanically with the operator in a protected cab. The cost of worker's compensation for anybody who works with trees "hands on" makes subcontracting cheaper..

As far as I can tell the availability of wood chippers in HO scale is about zero. Walthers imports a version of the Boley tree service truck with a man lift, but the chip bin of the truck is a bit small for a significant land clearing effort. The wood chipper needed to be scratch built and a fairly large truck to haul the chips was also needed. I started the construction of the chipper with the frame from an HO single axle military vehicle, a narrowed axle and wheels from a cheap HO automobile and then added numerous very small pieces of styrene until it resembled a wood chipper.

The box truck was much simpler - a Mini-Metals Borden truck with the refrigerator unit and one axle removed. The rear doors were cut out and removed above the middle hinge. The Borden's lettering on the truck was removed with a pencil eraser and the filled holes for the refrigerator unit and the door opening were touched up with white and yellow paint. The decal were done in Excel and printed with a laser printer.

At the Seacoast Division 2020 annual meeting, I found an early version of the Walthers truck with the man lift that dates from when Boley marketed them as "Dept. 1/87". I removed the truck chip body, masked to panels, primed and painted them white, and added decals leftover from the earlier truck. I hate wasting decal paper so I make extra decals to avoid ending with a lot of small pieces of used decal paper.



## Get On Board Facebook

What has your social life been like, these days? Not that social life! I mean your on-line social life. Facebook, to be specific. Do you Facebook?

The Northeastern Region is on Facebook. Here is why you should join these pages and groups:

Facebook pages are used by their moderators to announce upcoming events. The NER page will list events that will occur within the borders of the region that may be of interest to its members, including each division's membership events. Maybe there is a train show that you never heard of in Connecticut that caught your interest, for example. Or, a division other than your own is holding a meet that features interesting clinics you may want to see. Or, there is a tour of a museum you want to visit. Without joining the NER Facebook page, you may miss the opportunity to learn about these events.

Facebook groups are different from Facebook pages. Groups are where members can interact with other members, sharing what they are working on, ask questions, and talk about anything of interest to other NMRA members. A Facebook group is only successful when more and more people post to it. The more activity that appears on the group, the more activity it draws. And, let's be honest, everyone likes to see what everyone else is doing or share what they are doing. That includes you, too. Post your photos, comment to a post, or even just like a post. In time, like the NMRA National Facebook Group, it will grow. You can help grow it, by joining the group.

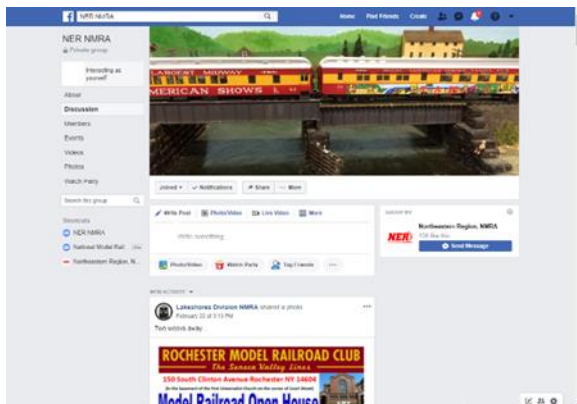
Below are the links for the page and group for the NER. Get on board and join them!

NER Page:

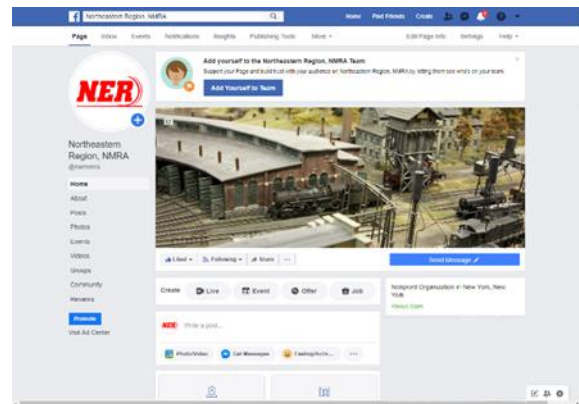
<https://www.facebook.com/nernmra/>

NER Group:

<https://www.facebook.com/groups/1884645128243966/>



The NER's Facebook Group is where members can interact with other members, asking questions, sharing photos, and providing information



The NER's Facebook Page is where you will find announcements of events that are of interest to its NER members.



## What's on my Workbench by Geoff Anthony



The model on the left is from the now defunct Northeastern Scale Models line. Paint in line with Maine Central practices. Floquil SP gray and Tamiya dark green. Roofing is from Bolenger&Edgerly Scale Trains.

Bottom model is again from an out of business manufacturer Monster Model Works their Fellers Garage. These are great kits and I am sorry they are out of business.



I plan to put an interior in the garage with details from JL Innovative and lighting . Going to put walls in to separate the office from the shop plus a bathroom and furnace room. I moved the chimney from the front corner to the middle to make mor architectural sense . Paint is Floquil reefer white and Tamiya blue



## A.P. Report

Larry Cannon Maine

Tom Oxnard New Hampshire

Brenna Whitney Chief Dispatcher

Tage Erickson Association Volunteer

Congratulations to both and hope to see others in this Column soon!

## Timetable

As everybody knows by now everything is on hold until this virus pandemic is over. Everybody please follow the CDC guidelines and stay safe so we can once again enjoy our hobby with our fellow model railroaders

## Editor's Ramblings by Geoff Anthony

Hi in these uncertain times I hope everyone stays safe and healthy. As I have been following Facebook there has been an dramatic increase in model railroading posts as the lockdown orders expand throughout the country. As I write this we have had our first confirmed case in Hancock county here in Maine. I am glad I have had the distraction of the hobby and putting together the Switch Tower. I am very grateful to able to give back to the hobby given what it has meant to me over the years. I want to thank everybody who contributed to this issue. I think it's one of the best yet. With all your help that can continue. We will get through this and I will see you at the next available show. All the best . Geoff Anthony



New Brunswick Southern April1 ,2020

Photo by Harry Gordon, as he said the last free day of train watching fo awhile .

# Seacoast Division NMRA Leaders



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