

HUB Headlight

HUB Division Inc., Northeastern Region, National Model Railroad Association - www.hubdiv.org
Volume 36, Number 5, May - June, 2020

RAILFUN TIMETABLE

Editor: Due to the Covid-19 pandemic, we've had to cancel many activities. We are working on alternate ways to deliver our RAILFUN program. Those listed as "Online?" are being evaluated as online presentations. Please read more in The President's Car column on Page 2.

CANCELED: Hands-On: Helping the World Build Better Railroads

By Ken Belovarac

10 AM Saturday, May 9, 2020

ONLINE? Presentation: The Colorado Railroad A rail trip your spouse would love

By Bob Peters

8 PM Friday, May 15, 2020

This PowerPoint presentation will start with Bob's September trip to see the Coast Guard Cutter Eagle sailing into her new home port in New London, CT, and some railroad trivia about the surrounding area. After the introduction, we will take a ride on the famous Durango & Silverton Narrow Gauge Railroad. Durango was founded by the Denver & Rio Grande Railway in 1880. The railroad arrived in Durango on August 5, 1881, and construction of the line to Silverton began in the fall of the same year. Bob will also discuss the issues one encounters traveling with a spouse and looking for other sources of adventure.

ONLINE? Presentation: Introducing the HUB Module Group Signaling System Testbed

By Erich Whitney

8 PM Friday, June 19, 2020

The HUB Division began incorporating signals into modules several years ago. There has been some issues plaguing the signaling system and when we lost Dick Johannes, the project lost a bit of momentum. This RAILFUN is a demonstration about the project Erich initiated in December 2018 to build a system designed to address outstanding issues with the signaling system. The testbed is a combination of hardware and software that represents a layout consisting of several modules. The advantage of this system is the ease of interacting and diagnosing problems on a table-top versus trying to do it live at a train show. It is also designed to act as a demonstration platform for model railroad signaling, and can be used to develop and test future hardware and software updates prior to going live at a show.

Presentation: Season Opener and Contest

8PM Friday, September 18, 2020, Cambridge School of Weston

During these unusual times of the pandemic, at this writing, I am being optimistic we'll have arrived at the "new normal." We will have had time on our hands to be creative and entertain our personal aspirations within the hobby. It may have been weathering cars, making realistic water, building a custom or scratch-built kit, working on a layout, building rolling stock or engines, or sprucing up a module.

RAILFUN Timetable Continued on Page 2



A sanding facility for Portsmouth

By Bruce Robinson

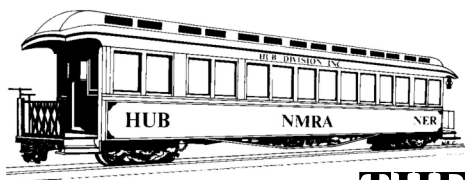
The engine facility at Portsmouth Yard was in need of a sanding facility. The sanding tower had been in place for a couple of decades but had no source for the sand that would be delivered into locomotive sand boxes. Does this sound familiar?

There was a solution at hand. A couple of years ago Brian and Jill Bollinger from BEST Models brought a supply of their single automobile garage kit to Seacoast Division's Derry Fun Night as a make-and-take clinic. We assembled the building on the first night and mounted it on a scenery base the next meeting. Then it sat around on the layout in various locations as a place holder for that structure that was to be built "some day."

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THE PRESIDENT'S CAR

By James VanBokkelen

Hello, members of the HUB Division and readers outside our group. I'm writing this looking out on a lawn that will need mowing soon, pear trees blossoming and a wheat field that's sprouting nicely. At least the Lower Merrimack Valley has had enough rain to make up for the fairly dry winter.

With the Covid-19 virus doing so much damage in Massachusetts, I don't have a lot to say about public events. All the train shows we might have gone to were cancelled: Greenberg, Hooksett, etc. Our RAILFUN site, the Cambridge School of Weston, is closed at least through June 30. The July St. Louis NMRA National Convention has also been canceled.

The Board and Officers are following news and updates from New Hampshire regarding our June 13 Murder Mystery Dinner Train at the Conway Scenic Railroad. We've also got our July 19 Cookout on our minds, though conditions that far out are difficult to guess.

We did conduct our HUB Division election on the normal schedule. We got more votes than we normally do for a Spring TRAINING election, and it was a close race: Dan Fretz and Mike Tylick were re-elected, and Mike Dolan joins the board. My special thanks to Jim Joubert for his candidacy.

I hope the notifications we sent out reached everyone who wanted to vote. As far as I know, only one person's vote arrived too late for the April 13 deadline.

We plan to hold a formal, remote Annual Meeting in May or June. We will be experimenting with different Internet tools to see which has the best combination of function and popularity. Look for notices about trials on hubdiv@googlegroups.com in May.

Achievement Program activity is also limited by the virus. It seems straightforward to earn Author, Volunteer or Association Official. If you already have the operating hours, Chief Dispatcher might even be earned in self-isolation. But the others require in-person evaluation. Many of us are building models or working on layouts in this unexpected free time. Keep the necessary paperwork on the To-Do list too. I hope we'll see a lot of new AP certificates this Fall.

Until Midsummer's Day, at least, my planning horizon is October 9-12 (Columbus Day Weekend) for our Mill City 2020 NER convention in Westford, MA. The schedule is pretty much complete, but if you or someone you know wants to add a layout to our Tours, please let us know. We will also need volunteers for the Convention site and activities, let us know if you can help out.

Speaking of Volunteers, the HUB is always looking for them: There will be room for more Board Member candidates in the 2021 election, and we need help in show management, RAILFUN events to serve members who can't get to Weston on a Friday evening, and model railroad operations for members. Talk to me or another Board Member/Officer to get involved!

Also, if you want to earn the Association Official AP certificate, I'll designate you the HUB's NER Director. Participating in their quarterly telephone meetings will qualify you in three years. The only annual face-to-face meeting is at the NER convention, but with 30 members on the Board, one absence isn't much risk to the quorum.

Personally, I've spent all the rainy days (and some sunny ones) on my layout. Since February, I've worked on two scratchbuilt houses and made a lot of progress on scenery for my major urban area: Inter-track fencing for the depot and detailing a residential area. I also experimented with posting a "cab ride" movie to the NER Facebook page.

Layout progress may be viewed at this link:

http://railroad-line.com/forum/topic.asp?TOPIC_ID=20091&whichpage=80

If there's something on your mind about the HUB or its activities, email me at president@hubdiv.org, call me at (603) 394-7832 or catch me at a HUB event.

Until next time, High Green!



One of the houses. This one is 28 Winter Street in Newburyport, dating from 1750.



Inter-track fencing including scratch-built rolling gate.

RAILFUN:

(Continued from Page 1)

Come show your work with actual models, dioramas or, if too large to bring in, send photographs of your layout or project in advance of the meeting. If you could email Andy Reynolds at Railfun.coordinator@hubdiv.org anything we can include in a PowerPoint, it will expedite the clinic.

This meeting will also be a chance to recognize your craftsmanship in a RAILFUN clinic contest. You will be judged on what you have learned from previous clinics. We will not limit this to the past 12" x 12" dioramas, but anything you've made that you think is contest worthy. Think of this as the precursor to our HUB Division's Mill City NER Convention.... If you complete the NER contest paperwork, we'll review it for you and offer suggestions. You can go to <https://nernmra.org/index.php/contests> and learn more about contests and download the forms.



Shanty Talk: Spring 2020

By Rudy Slovacek

First off, I find the winter months a time to relax and catch up on my reading. This past summer, I picked up several issues of an old publication called "Railroad Magazine" that was originally founded in 1906 and called "Railroad Men's Magazine." The issues sold for 25 cents, and I was given four by our previous editor, Lyle Sorenson, when he was cleaning out the last remnants of his train stuff. In the February 1946 issue, there were several interesting articles. To name a few, there was a feature on Horse Car Days, describing trolley systems across the country by Freeman Hubbard, while another was on the development of the Rogers Locomotive works before it became part of ALCO.

In one of the departments "On the Spot" or as it is called (Switch Shanty Gossip), there were a couple of paragraphs under the heading "ATWOOD'S FOLLY." And no, I was not aware of this written feature before I named my own column 'Shanty Talk' years ago, but the thought process was clearly the same. Anyway, the article goes on to read:

As we go to press, several readers report that equipment of the Bridgton & Harrison has been retrieved from Bridgton Jct. Yards, where it has lain rotting since 1941 (Iron Pike, p. 80). Purchased then by Ellis D. Atwood, South Carver, Mass., the 2-foot-gage pike has been carted 180 miles to its owner's backyard—1800 acres, including cranberry bogs.

Enough track has been laid to accommodate all rolling stock, but no more. However, before next year six or more miles will be laid. Employees have dubbed it the "Cranberry Branch RR," but Atwood intends to call it "Bridgton & Saco River," original banner of its equipment. He hopes to use his so-called Folly to service his bogs, and preserve the names of Maine's now extinct narrow-gage roads.

According to Atwood's plans, the road will soon pay for itself. It will be used for sanding, spraying and harvesting the bogs for New England's largest cranberry grower. Besides, owning this fulfills a lifetime dream of its purchaser.

As a kid I used to listen to a syndicated radio talk show host, Paul Harvey, and, after each show, he would end the segment with "And now you know the rest of the story!" I find these old magazines to be a treasure trove of stories and information and will hopefully bring you more excerpts from time to time.

Now on to a modeling topic, I have several modules strung together in my basement comprising 18 feet with a loop or a rough equivalent of over 36 linear feet. In HO, this is greater than a half scale mile of track. I can run a train out and back over this stretch of track and scenery, which I do regularly to get my fill of the sights and sounds of model railroading. To this effect I have a 45-car freight train that has a caboose and several D&H engines for motive power. I noticed there is considerable slack in this train; and I measured it to be roughly equivalent to 30 scale feet.

The publication I've referenced above, often has stories describing problems controlling the slack in a train and the resulting couplers being pulled out when the slack is too rapidly taken up. Thus, I like to start with a slow acceleration to get all my cars rolling before bringing the train up to speed. The prototype's engineers were also advised not to jerk a 100-car train lest they encounter a coupler separation. This is especially dangerous and was the source of many bad accidents caused by runaway trains in the earlier days of mountain railroading before airbrakes became universal.

On another modeling topic, this fall I picked up a couple of nice early D&H covered hopper kits from Bowser and put them together according to the instructions. They go together well and after some weathering with the Pan Pastels they were added to my 44-car freight. While I was in the mood, I decided to finish an upgrade I

had started long ago on an Athearn D&H PA1. I had discarded the motor and gears and added nickel silver pickup wheels to convert it to a sound-equipped locomotive with an early Soundtraxx DSX decoder. It only produces sound and has no drive functions. Their sound for an ALCO 244 was spot on and there was plenty of room in the unit (See the chassis in the back of Figure 1) to use a film can enclosure for a 1.1-inch diameter Radio Shack speaker. As I've said before, if I'm going to the trouble of converting a locomotive to a sound decoder, I also like to upgrade the detail if needed. In this case I had added the horn and lift rings while also enclosing the wide front coupler opening. While it has functioned as such for years, I thought a little more detail work would bring it up to snuff with a couple of Proto 2000 D&H PA units I acquired several years ago.

I had installed the complete STX-DSD decoders from Soundtraxx in these units before the Tsunamis came out. The Athearn unit had a nice paint job good enough to pass for the repainted PA-1 units acquired from the Santa Fe. However, the cast-on grab rails had to go, so they were shaved off and the grabs added to the nose for when they were outfitted for passenger service under Buc Dumaine's rule. The black plastic evident in the photo shows where this removal was done. After adding some pre bent brass wire forms and some touch up, I now have a fine functioning sound unit to add to a powered passenger train, or any train for that matter. I have several nice modern coaches, domes and baggage-type cars in the blue, yellow and silver scheme, and can't wait to couple them up for a train at the next show.

Well that's it for now and I hope you all stay safe with social distancing in the time of this COVID-19 crisis. Use the time wisely for more modeling activity. It'll keep you and perhaps your family members sane while forced to stay at home.



Figure 1 Athearn D&H PA1

A sanding facility for Portsmouth

(Continued from Page 1)

Sometimes it takes years for thoughts to come together and this was no exception. What if the automobile garage that wasn't needed could be turned into something that is needed? Slowly a plot was hatched. If the garage could be modified and a wet sand bin could be added to it, maybe that needed sanding facility would appear? Then a few small details could be added and the deed would be done.



Starting with the BEST Models auto garage, an end door was cut in to access the sand bin and a sand-drying heater smoke stack was added. The second "stack" on the roof is an air intake for the air compressor housed inside that is used to distribute dry sand with compressed air through underground delivery piping.



A base made from 0.060 styrene was cut with mounting pads for the oil tank and air receiver. This will be painted "concrete" later. Then the wet sand bin was fabricated from 0.060 styrene. The bin walls were scribed on both sides and vertical posts of 0.060 square stock attached. Holes were drilled for the tie rods and nut/bolt/washer castings that were added after painting.



The finished sanding facility has been painted and weathered and the wet (untreated) sand has been added to the bin.

Additional detail pieces included piping from the oil tank into the building, air piping to/from the air receiver, lights over the doors and service entrance conduit for electric service. Notice there is not any nut/bolt/washer castings on the inside of the wet sand bin. The planks forming the bin would be lag bolted from the outside so the inside of the bin would be smooth and there would not be any fasteners in contact with wet sand that would corrode quickly. This model was put into the contest room at the NER Mahwah, NJ convention.



The new sand bin is ready for final installation in the Portsmouth engine service area. Note the sanding tower installed twenty years earlier behind the new building. It only took a couple of decades to get this far!



I wanted to photograph the sand hopper that serves the engine terminals at Portsmouth, Essex Yard and Valley Branch lines in Thornton for this article but could not find the car. It wasn't spotted at any of the engine facilities and it wasn't at the New Hampshire Sand & Gravel loading facility in Tiverton.

Then I thought maybe it was mixed in with the NHSG unit train hoppers. Gee, guess what I found!



How did this hopper, painted BLACK (so it would not be confused with the NHSG hoppers and way billed to Portsmouth) get into the middle of the unit sand train going to the NHSG sand unloading facility in Valley Junction?

Remember, always check your bills!

Get On Board Facebook

By NER Marketing Committee

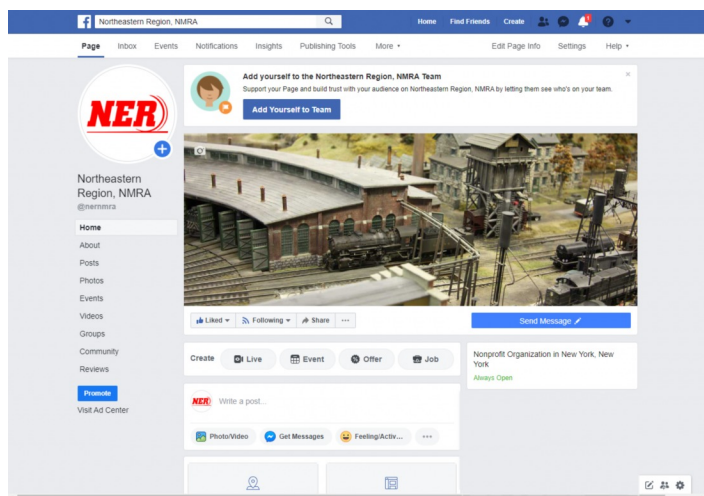
What has your social life been like, these days? Not that social life! I mean your on-line social life. Facebook, to be specific. Do you Facebook?

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

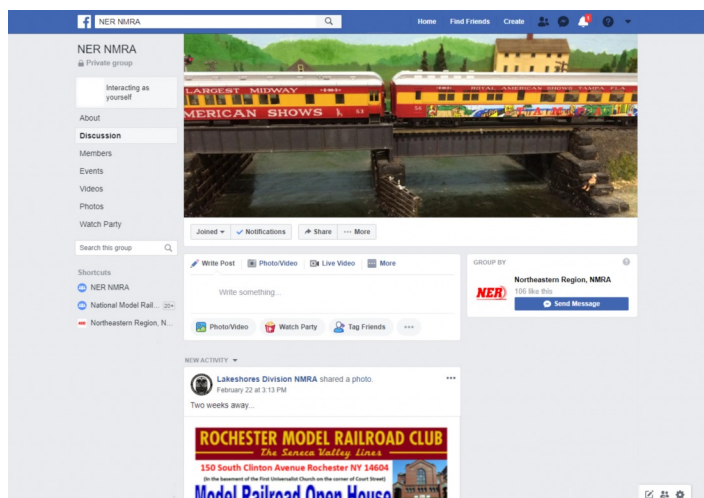
Facebook pages are used by their moderators to announce upcoming events. The NER page lists events that will occur within the borders of the region that may be of interest to its members, including each division's membership events. Maybe there is a train show that you never heard of in Connecticut that 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.

To the right are screenshots and links for the NER Facebook page and group. Get on board and join them!



NER Page: www.facebook.com/nernmra/



NER Group: www.facebook.com/groups/1884645128243966/

HUB Division Calendar of Events (Subject to Change)

2020

May 9 (Sat)	CANCELED HUB Cape RAILFUN Meeting, 10AM, First Lutheran Church, West Barnstable, MA
May 15 (Fri)	ONLINE? HUB RAILFUN Meeting, 8 PM, Cambridge School of Weston, Weston, MA
Jun 13 (Sat)	Conway Scenic Railroad Murder Mystery Dinner Train sponsored by the HUB Division
Jun 19 (Fri)	ONLINE? HUB RAILFUN Meeting, 8 PM, Cambridge School of Weston, Weston, MA
Jul 12-19 (Sun-Sun)	CANCELED 2020 NMRA National Convention, St. Louis, MO
Jul 16 (Thu)	Submissions deadline for the HUB <i>Headlight</i> Sep-Oct issue
Jul 19 (Sun)	TENTATIVE HUB Summer Picnic, Waushakum Live Steamers, Holliston, MA
Sep 18 (Fri)	HUB RAILFUN Meeting, 8 PM, Cambridge School of Weston, Weston, MA
Oct 1 (Thu)	Submissions deadline for the HUB <i>Headlight</i> Nov-Dec issue
Oct 9-12 (Fri-Mon)	HUB-Sponsored NER Convention, Mill City 2020, Westford, MA, www.millcity2020.org
Oct 16 (Fri)	HUB RAILFUN Meeting, 8 PM, Cambridge School of Weston, Weston, MA
Nov 20 (Fri)	HUB RAILFUN Meeting, 8 PM, Cambridge School of Weston, Weston, MA
Nov 22 (Sun)	Submissions deadline for the HUB <i>Headlight</i> Jan-Feb issue
Dec 5-6 (Sat-Sun)	The HUB-sponsored New England Model Train EXPO at the Best Western Royal Plaza Trade Center, Marlborough, MA

Modules for kids and those that want to be kids again

By Jim Harter

- Do you remember your first train set? How old were you then?
- Was it a family Christmas tradition, running the train around the Christmas tree?
- Did your family go to a department store to see a large layout each year?

Well we know that kids still love watching the trains run around, even on small layouts.

Train shows today like the HUB Division show or the Amherst Railway Society show draw reasonable attendance but are targeted more for the adults. These shows allow adults to show their modeling skills and allow the club members to get together. When small children are brought to these train shows, the layouts are at a height that is not comfortable for the average 5- to 8-year-old. And forget the 3- and 4-year-old, they are just too short. So, Mom or Dad or Grandparents are either carrying them or have brought a stool or chair so they can see the trains. By the way, little girls love trains too. Even some of the big girls still do.

This past February I saw a little girl at “The Great Scale Model Train Shows” in Timonium, just north of Baltimore. She looked to be about 3 or 4 in a bright pink snow jacket being carried by her Dad. While he was looking at some N-scale stock across the aisle from a small simple O-scale winter scene layout, his daughter with a big smile on her face, starts pulling on his coat collar trying to get him to turn around. He puts her down and she pulls him over to see the trains that are at table height, which she can see on her own. Then she starts to follow one of the trains as it goes around the layout.

That is the potential future of the hobby, kids and families.

The upper right picture is of the modular layout she was so happy to see. The picture was taken Sunday morning before the train



Six module layout at the Timonium, MD – The Great Scale Model Train Show 2020.

show opened. The layout was composed of six modules in O-scale running Lionel starter sets.

So, if anyone is interested in an O-scale three-rail train group, or modules, and maybe interested in doing a show or two, contact me at harter@newenglandcustomrail.com and let's have fun running trains.

Two more modules with switching are being added this summer. Additional module kits will be available later this year if anyone is interested. As shown in the second photo, we currently use the four corner modules as a Christmas layout next to the tree.

Have fun running trains!

Just a little duck boat model

By Marty Klein



This model is an HO GMC DUKW Amphibious 6x6 Cargo/Personnel Transport with some embellishments including a diver flag. This is a Walther's SceneMaster kit by Kibri. These divers are going out to investigate some suspicious targets found on the side scan sonar. I had my own experiences on real World War II landing craft duck boats in the South Pacific back in 1964. I had planned to put some decals on the side but it turns out most of my decals are very old and they disintegrate easily. I have ordered some Micro Liquid Decal Film that will hopefully restore them.



Four corner modules set up as a holiday layout.

Editor: Due to the Covid-19 pandemic, we are monitoring the situation in regards to our June Dinner Train. As of press time, the event was still scheduled to go ahead. If things change, we will contact those registered directly and send an announcement via the HUB email lists.

Murder on the Disorient Express Dinner Train

With the Conway Scenic Railroad and the HUB Division

When: Saturday, June 13, 2020
Departing at 6:00 PM

Where: North Conway Station
38 Norcross Circle
North Conway, NH 03860

Cost: \$125.00 per person
Reservations due by Friday
May 15, 2020

The HUB Division is pleased to present an exclusive offer to join other HUB members on the Conway Scenic Railroad for a murder mystery dinner train experience. The train will leave the North Conway station and proceed to the famous Frankenstein Trestle on the Mountain Division of the Maine Central Railroad. Your ticket includes a full dinner as well as a performance of "Murder on the Disorient Express" where you will help to solve the ultimate mystery.



Seating is limited to the first 96 passengers. Register today to save your seat for this event.

A special offer as part of the reservation is a photo run-by at the "Frankenstein Trestle." Space for this is limited so only those taking photos will be allowed off the train at the trestle. Sign up when registering.

For complete registration information, including menu and seating chart, along with lodging suggestions, please visit:

www.hubdiv.org/events/murder-mystery-dinner-train/

Note: Price includes meal, First Class train ride, Murder Mystery performance, tax and gratuity. All beverages and beverage gratuities are additional.

Due to the mature nature of this event, the Conway Scenic Railroad has an age restriction of 14.



Please direct questions about the trip and reservations to:

Peter Watson: (774) 259-0647,
Conway.info@hubdiv.org



HUB Summer Picnic

July 19, 2019

The Summer Picnic is tentatively scheduled to be held at Waushakum Live Steamers in Holliston, MA, on Sunday, July 19 (rain or shine) from 11AM to 2PM. Visit www.waushakumlivesteamers.org. Due to the unknowns with Covid-19, this event will be confirmed closer to the event date. Look for this confirmation and more information that will be emailed or posted on the HUB website and Facebook page.



Introducing NMRA-X!

Christina Zambri
NMRA Marketing Consultant

The NMRA-X is the new virtual experience formed to bring some of the benefits of the organization live, right to your computer screens!

The first NMRA-X Virtual Convention was held on April 24th to 25th and consisted of 25 straight hours of clinics and tours from around the globe, featuring a new presentation every hour. NMRA-X was streamed through the NMRA Facebook page and group. All the videos are posted to the NMRA Facebook group and page and are being added to the NMRA YouTube channel. See links to the right.

Four more, 12-hour, NMRA-X Virtual Conventions are set for May 16th, May 30th, June 13th and June 27th. These can all be accessed from the NMRA Facebook group and the NMRA Facebook page. It is our plan to add additional streams soon.

We hope to see you all there!

www.facebook.com/NMRA.org

www.youtube.com/channel/UCHw-7-1FWB5zQgTM0ZVY-Yw

nmra 
virtual model railroad convention

Erich's Electronics Notebook

By Erich Whitney

Electro-Static Discharge Protection

Electronics has a silent killer called Electro-Static Discharge (ESD) that tends to lurk in the dry months of winter, but can rear its ugly head at any time and, for the most part, goes completely unnoticed. The goal of this article is to introduce you to the problem, why you should care, and what you can do about it. Everyone experiences static — it's the invisible sticky force you see when you brush your hair or pet a cat and when you find hair and dust clinging to you. Touch a doorknob on a dry day after dragging your feet across the carpet and zap!

This is fun and all but there's a real and present danger that static poses to your favorite electronics. A normal static discharge can unleash hundreds of thousands of volts to an unsuspecting piece of electronics. Hundreds of thousands of volts and it doesn't kill you? Remember, it's not the voltage that kills, it's the current. In the case of static it's high voltage but very low current. However, it's this high voltage that has the potential to literally tear down the microscopic features of transistors found inside our fancy (and often expensive) electronics. Unlike a high-current short circuit that lets the magic smoke out, you may never see or even know that damage has occurred. You see, engineers design ESD protection into most electronic devices but these protection circuits can be sacrificial. This means, zap me once I may be ok but zap me again and it's lights out forever. A device might take several good zaps and be ok because none of them were enough to cause permanent damage. Then one really dry day it takes that one hit that destroys the ESD protection circuit and now the device is vulnerable to the next slightest zap.

I'm not trying to be all doom and gloom. ESD protection does its job most of the time and you might never see a problem. What you might see is a piece of electronics suddenly stop working or start acting flaky and you don't know why. There's a reasonably good chance that static got to it and there's pretty much nothing you can do but replace it. Electronic devices are most vulnerable when they are disassembled. Any time you see a circuit board with integrated circuits on it, you need to start thinking about ESD and take preventative measures to minimize the risk of damage.

You've been saving your money to buy that really cool new DCC decoder and you order it online because you're stuck at home during the Coronavirus pandemic. The package arrives and you can't wait to install the decoder into your carefully rebuilt old locomotive that you've had since you were a kid. So with caution to the wind you rip open the plastic package and break out your soldering iron, frantically reading the wiring guide while solder smoke is spreading everywhere. It is much more likely that you screwed up the wiring and you'll blow up the decoder from that rather than killing it with ESD, but there are some very simple things you can do to help reduce the chances of static discharge causing you bitter disappointment. As for the chances of screwing up the wiring—well, you're only human. Do the best you can or ask for help.

If you're going to insist on doing your own decoder installations, there are some simple measures you can take to prevent ESD damage. Static discharge occurs when two things are at a different voltage potential. Your body is really good at picking up a static charge, and touching something metal that's grounded can cause a zap. Movement creates the oppor-

tunity to pick up a static charge — you literally rub electrons off of things and pick them up. When you handle circuits, you want to reduce the overall voltage potential that the circuit will come into contact with. The easiest way to do this is to use ESD protection devices on your workbench. You can purchase an anti-static ESD protection mat and wrist strap as shown in Figure 1 for about \$30.00 on Amazon:

www.amazon.com/gp/product/B07F2GHB9D/ref=ppx_yo_dt_b_asin_title_o03_s00?ie=UTF8&psc=1.

This particular mat claims to be high-temperature resistant and it includes a wrist strap and a wire that you will need to attach to the nearest convenient electrical ground (like the screw in the middle of an outlet cover plate).

Figure 2 shows a device that plugs into an outlet and provides a convenient ground connection:

(Search Amazon for: "STI - DES - 09838")



Figure 2 Ground Plug

And if you really want to make sure that you are properly grounded, Figure 3 shows a plug with a ground connection and lights that tell you if it is properly grounded and it even tells you if there's a wiring fault with the power:

www.amazon.com/gp/product/B0085RWBZ2/ref=ppx_yo_dt_b_asin_title_o00_s00?ie=UTF8&psc=1

The mat is connected to ground and you connect the wrist strap to the ground on the mat so everything is grounded. You wear the wrist strap any time you are handling circuit boards and wiring. When you take a brand-new decoder out of the package, make sure you're wearing the

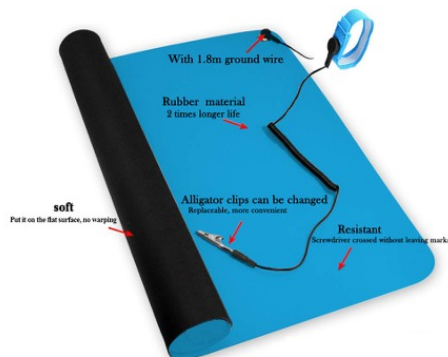


Figure 1 Anti-Static Mat Kit

(Continued on Page 9)

Erich's Electronic Notebook

(Continued from Page 8)



Figure 3 Ground Plug with Circuit Check

wrist strap and that it is properly grounded. I like to rest my hands on the mat while I'm opening the packaging so that everything I am handling is, in theory, at the same voltage potential. I should point out that unless you are using a modern soldering iron that was designed to incorporate ESD protection (i.e. grounding) your soldering iron is not likely to be ESD safe. You can mitigate this somewhat by remembering to tap the tip of the soldering iron on a grounded piece of metal before touching it to a wire or a circuit board just before soldering.

I hope this has helped raise your awareness of an important issue and what to do about it. Please let me know if you have any questions!

Surge Protection

By Erich Whitney

On a subject closely related to ESD, I'd like to talk briefly about surge protection. You probably have an outlet strip that advertises surge protection and you paid extra for this. Surge protectors are designed to remove voltage spikes on the power line and prevent them from causing damage to your electronics. While this isn't static, it's still a danger and can cause device failure or decreased product life.

Unfortunately, most surge suppressors don't give you any indication that they are actually working, and the clever little device that's often inside these surge suppressors (called a Metal Oxide Varistor or MOV) fails open. This means that once the MOV takes an energy hit that exceeds its ability to protect the circuit, it opens up like a fuse. But because it sits across the power line, you end up with a regular unprotected outlet.

What can you do about this? You either buy more expensive surge suppressors that have a diagnostic indication telling you that the protection circuit is still intact, or you go around every so often and just replace your surge-protected power strips.

HUB Modules in Need of Maintenance, Repair and Upgrade

By Ron Noret

HUB Module Coordinator

Dick Ball and I are looking for volunteers to perform work on HUB modules. Dick Ball has the modules at his house in Holliston, MA, and can be reached at (508) 429-1467. Please call and leave a message and he will get back to you. You may also email me with any questions.

There are several HUB modules in need of maintenance, repair and upgrade. Two 2-foot modules need scenery, Twin Peaks needs repairs, and some other modules need various repairs. Dick can elaborate on what each module needs.

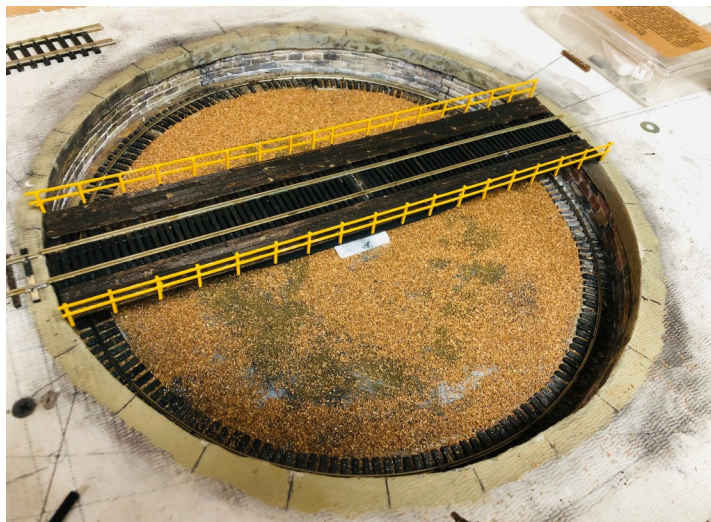
The HUB will supply all needed supplies, scenic materials, paint, cement/glue and whatever else may be needed to repair and upgrade the modules. You may use your artistic ability to update and add scenery. It would be good practice for you and will be greatly appreciated by all.

You can pick up the modules and supplies at Dick's to work on at your house and return them to Dick in late August.

Turntable project finally comes to fruition

By Ken Belovarac

Below are pictures of a 12" turntable and pit I built while "staying at home." The two main girders for the turntable are plastic parts from a kit I bought in 1964 (yes 1964) and had always planned to use for building a turntable. The tie bed was made using a Campbell bridge deck template and Kapler bridge ties. I used Kemtron Code 70 rail glued to the ties with Goo, and I borrowed Mike Tylick's rail bender to make the circular pit rail. The pit sides were made with plaster stone wall rubber castings curved to match the pit radius while still wet. Power comes through the rail, electrically divided into a positive side and a negative side, based on Bruce Robinson's design. The table is turned manually by hand. The walkways and railings are wood. The table girders are separated by Central Valley lattice girders. For the dollies, I used Northwest Shortline wheels held in place with homemade brass brackets.



Overall view of the turntable with the table in place.



The table removed to show the girder

Layout Room Progress and Layout Planning Update

By Robert Manna

Greetings everyone! Since I provided an update at the September Railfun we've removed the remaining layout sections from Dick's house. I had to build a rack (with castors) to help store them while I play the chess game that is basement re-organization. With the layout "in storage" I've started on finishing the basement by putting up insulation, drywall and new interior walls, while also working on the RR plan incorporating sections of Dick's original layout. Re-optimizing the yard was an interesting challenge, and a couple of the sections I'm planning to elevate to my second deck. The existing sections are graphically distinguishable in the current plan.



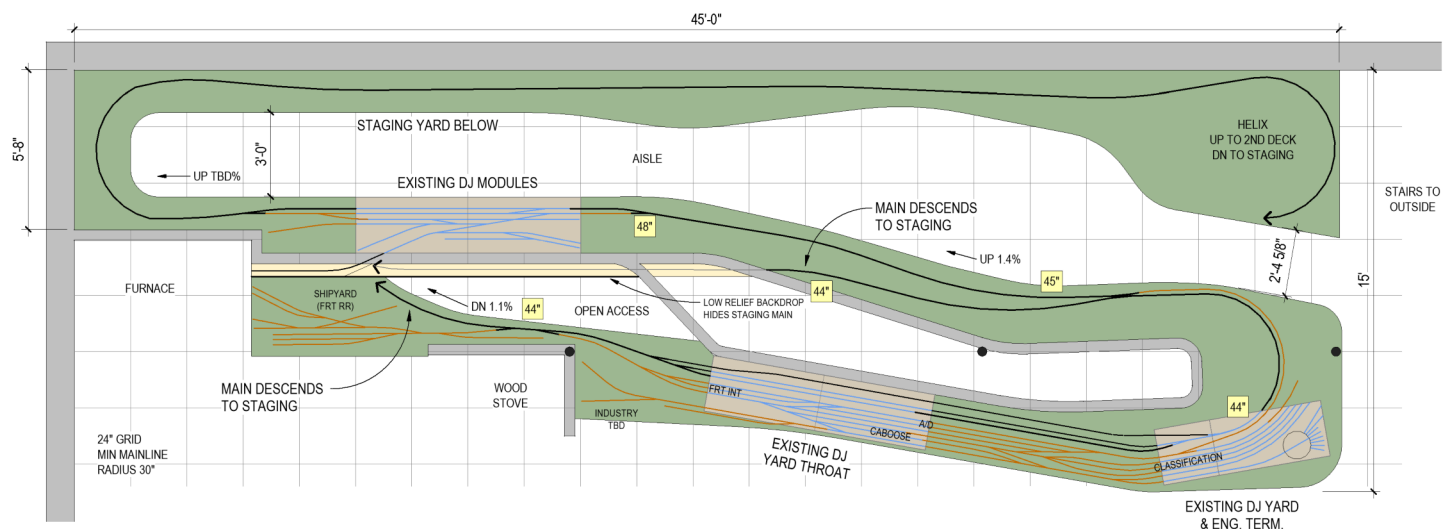
Sections of Dick Johannes' layout on my new storage rack



Insulation installation against the basement foundation walls



Drywall installed over the insulation



Latest layout plan. The sections from Dick Johannes's "Guilford Rail System: Newton Subdivision" layout are highlighted.



Seacoast Division Activities

Virtual Derry Fun Night

May 8, 2020 and June 12, 2020

Meetings are canceled, but you can send Bruce Robinson (brobinson8577@comcast.net) a couple of photos with a short description. These will be assembled into a "share the fun of model railroading" notice. Visit www.seacoastnmra.org for more info.

HUB Headlight

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Directions to RAILFUN Meetings

RAILFUN is usually held at the Cambridge School of Weston (CSW) in Classroom G6 on the second floor of the George Cohan Building. The school is located at 45 Georgian Road, Weston, MA 02493.

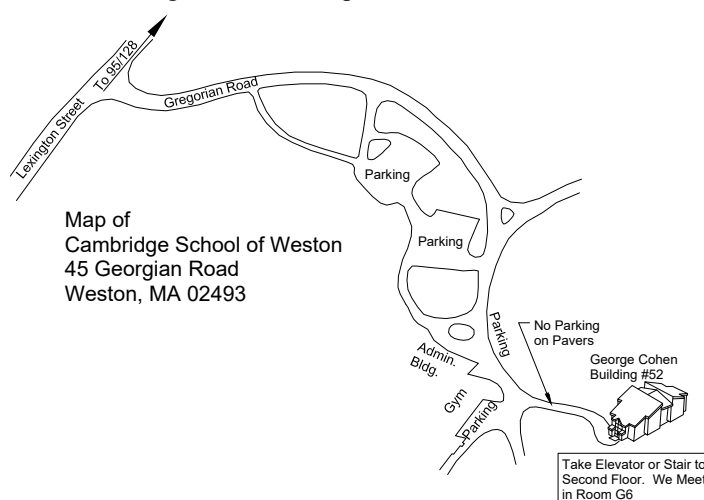
From Route 128 / Interstate 95:

From the North, take Exit 27B towards Winter Street.

From the South, take Exit 27A-B for Third Avenue toward Totten Pond Road/Waltham. Take Exit 27B towards "Winter Street" Bear right onto Wyman Street and continue to the traffic light. Take a right onto Winter Street at the light.

Continue on Winter Street to the second traffic light. Turn left on West Street, which becomes Lexington Street as you cross the Weston town line. At the crest of a small hill is Georgian Road and the CSW school sign; turn left on Georgian Road into the CSW campus.

Follow Georgian Road. There is a parking lot on your right, or you can park along the left side of the road and down the hill by the gymnasium. Please do not park on the stone pavers leading to the Cohen Building. See detail map below.



RAILFUN Weather / School Closure Note:

If the school is closed, we will NOT have RAILFUN that evening. School closings are broadcast over the radio at WRKO 680AM and WBZ 1030AM, and on TV Channels 4, 5 and 7. The Cambridge School of Weston recording is at 781-642-8600. Check the radio or TV stations early on the morning of RAILFUN! You can also check www.hubdiv.org and we plan to post notices on Facebook and Twitter.

HUB Division Nametag, Headlight Subscription and Donation Forms, Module Kit and Branded Merchandise Store Information

Please see the March-April 2020 Headlight for all order forms and module kit information along with information about the online HUB Branded Merchandise store.