

HUB Headlight

HUB Division Inc., Northeastern Region, National Model Railroad Association - www.hubdiv.org
Volume 38, Number 4, March - April, 2022

RAILFUN TIMETABLE

Hands On: Weathering Engines

By Tim Towle

**8 PM Friday, March 18, 2022, Motherbrook Arts
and Community Center, 123 High St, Dedham, MA 02026**

Tim Towle, grandson of Dick Towle, will present a clinic on his side business of weathering rolling stock and engines. He will show us photos to use as reference for modeling certain effects, and will explain the steps he uses to weather locomotives and cars.

Trains provide great canvasses for graffiti artists. Tim will discuss this phenomenon and explain his techniques for replicating it.

Tim will demonstrate how to apply washes and rust streaks using acrylic and oil paints. Then he will go over painting and weathering wheels using an airbrush. Finally, he will explain the dry brushing techniques that he uses.

Locomotives of the Dickson Manufacturing Company

By Malcolm Houck, MMR

**8 PM Friday, April 22, 2022 (Note date change), Motherbrook Arts
and Community Center, 123 High St, Dedham, MA 02026**

The HUB's most recent MMR will give a presentation explaining his approach to scratch-building locomotives. Mal has built a number of NYO&W locomotives, and most recently won all the scratch-built locomotive categories with his NYO&W Class J 2-6-0 #120 that earned first place and his NYO&W Class S 2-8-0 #153 that earned second place. Mal will explain how he applies the skills he learned in his first hobby, rebuilding Indian motorcycles, to scratch-building steam locomotives.

Trees, Rocks, Ground Cover and Scenery - The Whole Ball of Wax

By Rudy Slovacek

**8 PM Friday, May 20, 2022, Motherbrook Arts
and Community Center, 123 High St, Dedham, MA 02026**

In this clinic a number of tried-and-true scenery methods will be discussed as well as some of Rudy's tips for making believable scenes. We will start with how the locale affects your scenery options. Then we will cover track ballasting, the nitty-gritty dirt, grasses, weeds and bushes, then advance to the tree canopy. Water, rocks and roads will also be covered along with the importance of details.



How to get a 12' Module into your SUV

By Bill Harley

When I first became interested in building a module for the FCSME club in Mt. Airy, Maryland, every idea called for something longer than a 2' x 4' module. My requirements included switching opportunities and industries that took up more space than a single module. The problem was how to get 12' of module into an SUV. My design philosophy developed into flat terrain, and removable sky-boards, buildings, and scenic details with everything labeled as to where they fit on the module in its traveling mode.

(Continued on Page 4)

Also Inside This Issue

Page 2.....The President's Car & Shanty Talk

Page 5.....In Memoriam: Robert "Bob"
Macauley

Page 6.....BOD Candidates

Page 7.....By-law changes

Page 8.....Voting Info & Calendar of Events

Page 9.....Newest MMR in the HUB Division,
HUB Communications & Treasurer's Report

Page 10...Tunnel Vision & Cranberries at
Greenberg

Page 11...What's on Your Workbench &
NERx

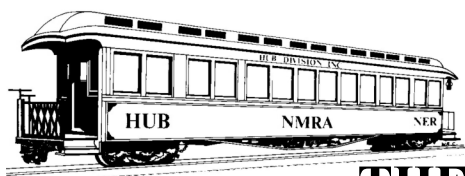
Page 12...East Broad Top Scenery Work

Page 13...Erich's Electronics Notebook

Page 14...HUB Leadership & Photos

Page 15...Order Forms & HUB Apparel

RAILFUN Updates or cancellations will be posted on the division website (www.hubdiv.org) and issued via the HUB email list and via Constant Contact.



THE PRESIDENT'S CAR

By Manny Escobar

We are in the middle of the Model Railroading season. In my opinion we are fortunate, although for some of us it may feel like we have never left hibernation in 2020-21. With a continued reduction in events, whether related to Model railroading or not, the HUB was fortunate to hold some events during the second half of 2021. We had RAILFUN clinics, modular displays and our New England Model Train Expo. The HUB is planning events for 2022, including our annual meeting, various modular events and RAILFUN sessions. Planning is underway to display our modules at the 75th anniversary of Edaville Railroad in Carver this April, (more to come).

As I look forward to this spring and promoting in-person activities for our members, I am very aware that that communication and culture are inextricably linked. It's about trying to bring members

together, understanding there are some people who don't come in-person for one reason or another. The question is, How do we make them still feel like they're part of this organization, so that when we're past all of this, they haven't gone away, or felt neglected.

It's a tall challenge, and each of us must chart our own path. The one thing that is not going to change is how we treat each other. We're not going to change our intention to really bring the hobby to others and participate.

Please take a note of our new members listed in the last issue of the *Headlight*. Welcome to you all! My ongoing reminder to all members: please review the list of these new members and their locations, and coordinate with our membership chair to personally contact and engage these folks in our activities. Or perhaps meet them for a beverage, to trade ideas or the latest Division events. Don't assume someone else will do this. We are all hungry for human connections.

We are having our annual Board of Directors' election, which is being held online again this year. See the information and procedures in this issue of the *Headlight*. Also, please check our website for upcoming events.

We want to congratulate Malcolm Houck for receiving his Master Model Railroader Certificate. We also want to thank all the volunteers that stepped up for the Museum of Science Display. David "Shack" Haralambou and Boris Maznek for their hard work to make this event a success. See you all again at the end of this year.

As you probably know, the HUB modular group did not attend the Amherst Train Show 2022 in Springfield, MA, but some members did. Our cousin Division 4 from Ohio (that usually joins us), did attend with their modules and also a few members modules, with a few volunteers that braved the storm and other circumstances to attend.

I'm optimistic as several indicators show we are making progress on a number of fronts. So, a few closing thoughts: Given the current events, don't get discouraged. Keep your family, friends, and yourself protected. By doing that, I'm hopeful our model railroading community will be able to continue reconnecting through in-person meetings, layout tours, operating sessions, and other events. Each of these is a baby-step towards some level of "normalcy." And a baby-step of progress! Always remain safe, and be healthy!

"Keep 'Em Rolling"



Shanty Talk: MILK TRAIN

By Rudy Slovacek

In my November column, I mentioned picking up a Funaro and Camerlengo Butter dish milk car kit at the convention. Ever since I saw a display of milk cars at the Springfield show many years ago, I've always been intrigued by their unique design, and I wanted one. When SoundTraxx released its Alco 539 turbo chip for S-2, S-4s and RS-1s, I became convinced I was going to operate a milk train. That Alco turbo wind-up as the train begins to accelerate is music to my ears. Since milk trains made a lot of local stops to pick up milk cans or bulk milk at creameries, it just seemed ideal for this

ALCO fan. Initially I envisioned a Rutland train pulled by an RS-1 on the Addison Branch or an NYC RS-1 climbing the grade from the Hudson River up through the Catskills. Each of the connecting roads on my D&H-themed layout, the B&M, the Rutland, and the NYC, all had milk trains of a sort running through New York State. The D&H itself had creameries for Borden's and Sheffield Farms Select, which later became Sealtest. From the "The D&H 1931 Industry Sampler" published by the NEB&W Green Dot Press, we know that Borden's had plants on the Albany and Susquehanna line at Bainbridge and on the Northern Division at Fort Ann. Sheffield Farms owned 18 plants with one of the newest being in Cadyville outside Plattsburgh. The Dairymen's League Cooperative Association located in Cobleskill had 16 plants along the D&H. Albany was one collection point for the D&H and an express train of milk cars was sent to New



Fig. 1 Borden's Milk car

York City daily at one point in time. Athearn and Model Die-Casting produced express refers which were stock or custom lettered for each of these roads and I managed to accumulate a few cars over the years. In fact, I often choose a milk train to begin operations for the day on the Coastal Mountain Railroad when we began a show. Thus, having a milk train or two, on my D&H-themed layout seems quite plausible. Figure 1 shows my completed Borden's car number 537.

(Continued on Page 3)

Shanty Talk

(Continued from Page 2)

I believe, there were two glass-lined tanks, one each on either side of the access doors. In Figure 2, the Sheffield and D&H cars appear as express refers and would handle milk in cans or, in some cases, tanks within the car. The trains often had a passenger car in the rear for locals either commuting or headed to a larger station for transfer on the journey. Because the trains made frequent stops at every platform populated with milk cans from farmers, or Creameries along the way, this slower-moving train acquired the moniker "MILK TRAIN." They were replaced by large tanker trucks on the highway in the late 50's and early 60's.



Fig. 2 D&H Milk Train

Just a quick side note, I got my January Railroad Model Craftsman the other day and there were several articles related to milk trains, particularly a Creamery and B&M milk cars.

The prevalence of milk trains in the steam era brings me to another topic near and dear to my heart. As a model railroader early on, money for the hobby was in short supply. So I needed to save up from my chore allowance and from birthday money if I wanted something. Since my birthday came right after the holidays, it was a treat for mom or dad to take me to Sears in downtown Schenectady where I could pick up Athearn boxcars with sprung trucks for a dollar or less on sale.

My first diesel was a rubber-band-drive Great Northern GP7 and my first steam engine was a Varney Ten-wheeler kit labeled for screwdriver assembly. Believe me it was not a novice undertaking but required, among other things, assembly of the valve gear with tiny rivets and screws. I still have that engine in running condition for DC. I later purchased a Revell kit having a switch tower, a water tower, a crossing shanty and an interlocking tower. Those early plastic castings were crisp and I did a credible job assembling them back then. They were first placed on my 4x6-foot flat layout with dyed green sawdust for grass. They currently reside on the first module I ever built in the late 80's. As time passed, I was always on the lookout for inexpensive projects where I could hone my repair and building skills as well as perfect new techniques. Since I had very little investment in these I could continually experiment and learn without concern for making mistakes. A recent example



Fig. 3 Water Tower pieces

includes a water tower constructed from a craftsman-type kit that looked to be a demolition project on the donation table (Figure 3). The waterspout was damaged and the entire support structure was just so many loose pieces of wood. The tank was reasonably constructed, and any imperfections could be weathereered over. However, without any instructions or diagrams, this was going to be a challenge. I found an old Plasti-Struct water tower (possibly S-scale) in my collection bin and I inferred the missing structural plan from that. A few additional cross members were cut from basswood strips and a working hinge made for the drop-down spout. A couple of concrete pedestals were carved from wood and, with a bit of chain added along with some weathering, the finished item sits on one of my modules as seen in Figure 4. The Rutland Ten-wheeler was a foreign white-metal engine rescued from a dealer's scrape bin. It is of Japanese origin with Tokyo, Japan stamped on the bottom. I rehabilitated it to a running condition and finished it in a Rutland scheme for #73 as it gave the appearance of the burly F-2k class built by Alco around 1910 and retired in 1952. (See The Rutland-60 Years of Trying by R. W. Nimke, Vol. I, Motive power and Equipment.)

The one positive thing I'm getting from this pandemic is the large amount of time I spend at home and can devote to my backlog of projects. The bad thing is I'm sure I'll not be able to make it to Springfield this year and miss seeing friends. I definitely wanted to run a milk train. For now, stay safe and enjoy your model railroading.



Fig. 4 Water Tower Stop for Rutland # 73

How to get a 12' Module into your SUV

(Continued from Page 1)

The following photo essay provides some ideas for other modelers in how my modules go from storage to being assembled at a show. Also, it provides ideas to modelers to help them take that step to build a HUB Division module.



1. Stored in basement. Modules, sky-boards, legs and stand-offs, boxes of buildings and trees, tools and module parts, and a fold-up handtruck for interim movement.



2. First module bolted into carrier ends. Top module goes in first.



3. Module bolts with labeled bag.



4. Three modules bolted into carrier ends.



5. Module legs and stand-offs in their storage and transport box.



6. Modules, legs and sky-boards ready to load.



7. Modules, legs, sky-boards, building and tree boxes loaded in my Highlander arriving at show. The same setup also fits in my wife's smaller CR-V as demonstrated in the photo on Page 1.



8. Attach legs to bottom module and drop the wires.

(Continued on Page 5)

How to get a 12' Module into your SUV

(Continued from Page 4)



9. Right-hand module standing in place.



10. Three modules bolted and clamped together with wires dropped.



11. Top of a module showing marked areas where structures go.



12. Rear of module ready for sky-board. Note two small platforms under edge of module to provide a mounting guide while bolting sky-boards to module. Sky-board bolts have their own labeled bag.



13. Sky-boards bolted in place.



14. All three modules are bolted and clamped together.



15 & 16. 12' module with connector tracks in place, buildings, trees and other details added and under-table wiring connected – awaiting connection to adjoining modules as per HUB Division plan. Leg levelers on center section are raised off the floor about one-half inch so that this module “floats” between end modules. This makes for easier alignment as the HUB layout is put together.

In Memoriam: Robert "Bob" Macauley



The HUB Division lost a dear friend to all of its members with the passing of Robert (Bob) Macauley. Many of you may know that after a tireless battle with cancer, Bob passed on December

14, 2021. Bob volunteered support for the Division by bringing refreshments for members to enjoy at RAILFUN meetings. He also coordinated volunteers for the Mill City 21 NER Regional convention. Bob made himself available many times to ensure the success of programs sponsored by the Division. We will miss his smile and energy. May he rest in peace.

The family's wish to people desiring to keep Bob's memory alive, should donate to their favorite charity in his name. If you desire to make that donation to the HUB Division in Bob's name please send your contribution, payable to the HUB Division, to our Treasurer, Gerry Covino, PO Box 672; Hollis, NH 03049-0672. Gerry will acknowledge your donation by name to Bob's family.

Ohio Division 4 at Amherst Show with some HUB help



Ohio's Division 4 along with some HUB members, pose for a group photo during the Amherst show. HUB Members John Boll, Peter Higgins, Jeff Gerow and David "Shack" Haralambou. Paul Dexter and Ted Shoemaker were also in attendance.

Photo Provide by Peter Higgins.

Candidates for The HUB Division Board of Directors

James van Bokkelen

I grew up in Boston and Newburyport, Massachusetts, and took an early interest in trains, trolleys and history. I started with O-gauge tinplate, but switched to HO in 1968 because I wanted models that more accurately depicted what I saw and rode. I'm still playing with trains, working on my home layout and with the HUB Modular Group.

I attended MIT, leading to a 30-year career in the computer industry as a programmer, salesman, manager, executive and entrepreneur. I have volunteered for my town government for 32-years, presently as Selectman. I also volunteer at Seashore Trolley Museum, where I am VP and Superintendent of Track. I operate trolleys at Seashore and Lowell National Historical Park.

I have been a life-member of the HUB Division for 30-years, and have served on the Board, and as President and VP. If elected, I will look for new and more effective ways to serve our members, and promote our activities and the hobby in general.

Andy Reynolds

My passion, as many of you know, is the artistic side of modeling, winning many awards in Structures, Dioramas and Photography. This led me to five APs, moving me that much closer to becoming an MMR. My work matches our mission to educate hobbyist to our infatuation with trains. I've written articles for our *Headlight*, and prepared local and regional clinics dating to May 2002, when I introduced the membership to creating light-weight foam scenery, after experimenting with my Stuffys Brewery and the club's Tipple Corner modules.

I was instrumental in the HUB securing RAILFUN clinic space at CSW, Dedham's Motherbrook, as well as the Lutheran Church in Hyannis. In all these locations, I have been your RAILFUN Coordinator bringing you lively hands-on and Power Point seminars. During Covid, I introduced many members to Zoom, scouring the National level for world-class clinicians to come into our homes. Volunteering as a member of the board, The Museum of Science, module shows and other volunteer events shows my dedication to our Division. Let me continue to show my commitment to the HUB with your vote.

Malcolm Houck, MMR

I am seeking re-election to the HUB BOD having successfully completed an initial term, during which I earned the final AP Award Certificates to qualify for award and designation of MMR #696. I wish to continue as a BOD member with continued access to the BOD members and President Manny Escobar, to each of whom I have been able to provide input and counsel as requested.

I further wish to continue to provide mentoring and assistance to HUB members and NMRA members everywhere, in pursuit of AP program efforts. I thoroughly enjoy and value participation with and in HUB membership activities, the HUB BOD and wish to continue with the endorsement of election to another term.

Peter Watson, MMR

I became a "serious" modeler around age eight or nine, coming by it naturally since my father was a long-time model railroader. I originally modeled in HO. In 1974, I changed to On2 and modeled the Sandy River & Rangeley Lakes until 1998 when I decided to return to HO and model the New Haven.

Over the years, it has been my pleasure and privilege to have served the HUB Division as President, Vice-President, Office Manager, Clerk and AP Chairman. I am a founding member of the HUB Module Group.

I have served as the Spring TRAINING Chairman for many years and worked to provide the membership with a quality program of well-known clinicians, trade shows and banquet programs. In addition, I have also served on many HUB Division and NER convention committees including, most recently, as the Chairman of the MillCity21 NER Convention in Westford.

I am running for the HUB BOD to continue to build on and strengthen the programs and services the Division provides to its members. I will look for new ways to provide activities and services for our members and ensure that the HUB Division remains one of the NMRA's most active and strongest divisions.

Bruce Robinson

What could I contribute to the HUB Division Board of Directors? What is in my character that could become an asset to this Division? I offer the following to try to answer these questions.

I have been an NMRA member for 52 years and have served as a Division BOD member and as a Division president. Along the way I have put together an adult education course at our local high school, organized six year's worth of monthly Fun Nights that included around 60 clinic presentations and have given clinic presentations at multiple Divisions and at Regional conventions and the NERx convention last year. In 1994, I introduced the New England area to Tour de Chooch which is in its 27th year in 2021.

While giving back to my hobby I also built a basement-sized model railroad operated by a crew of eight that has been hosting op sessions since 1994. Work in the NMRA Achievement Program includes six completed certificates and two more under way.

For all of you that believe in me I extend my heartfelt thanks. I promise to do my very best to add value to the HUB Division.

By-law changes recommended by the HUB Division Board of Directors

Current By-law

Proposed By-law (continued)

ARTICLE VII ELECTIONS

Section 1

There shall be a nominating committee of three regular or life members elected by the board of directors no later than the month of September. Said committee shall prepare a slate of preferably five (5) candidates and no less than four (4) candidates for election to the board of directors for the ensuing year. This slate, which is to be presented at the November meeting of the board of directors, will be included in the notice of the annual meeting and provided to the membership no later than 30 days before the Annual Meeting.

Robert's Rules of Order, Newly Revised, Chapter XIV, Nominations and Elections shall govern the nominating committee.

Section 2

The Nominating Committee will direct the Clerk to prepare the ballots, no later than 60 Days before the Annual Meeting, listing the candidates for Board of Directors, followed by a write-in space, followed by any ballot issues. A biography of each candidate not to exceed 200 words will accompany the ballots. The Clerk will provide the ballots to Hub Division, Inc. members in good standing no later than 30 Days before the Annual Meeting. Proxy ballots returned to the Clerk must be received no later than 7 days before the Annual Meeting. The return due date must be clearly stated on the ballot.

Section 3

Voting for Candidates for Board of Directors and ballot issues will take place at the Annual Meeting. Members present at the Annual Meeting will present their ballots and any proxy ballots assigned to them to the Clerk at the Annual Meeting. The Clerk will tally the votes, if there are no write in candidates, the Recording Secretary may cast one ballot for the slate presented.

Proposed By-law

ARTICLE VII ELECTIONS

Section 1

There shall be a nominating committee of three regular or life members elected by the board of directors no later than the month of September. Said committee shall prepare a slate of preferably five (5) candidates and no less than four (4) candidates for election to the board of directors for the ensuing year. This slate, which is to be presented at the November meeting of the board of directors, will be included in the notice of the annual meeting and provided to the membership no later than 30 days before the Annual Meeting.

The Board of Directors shall determine at the November meeting the method of voting to be used.

Robert's Rules of Order, Newly Revised, Chapter XIV, Nominations and Elections shall govern the nominating committee.

Section 2

A. Notification:

The Nominating Committee will direct the Clerk to prepare the ballots, no later than 60 Days before the Annual Meeting, listing the candidates for Board of Directors, followed by a write-in space, followed by any ballot issues. A biography of each candidate not to exceed 200 words will accompany the ballots. The Clerk will notify members in writing no later than 30 days before the Annual Meeting with all the necessary information concerning the election. This information shall include the time, location and method of voting and how a ballot may be obtained. Voting may be conducted by any or all of the following methods: in-person at the Annual Meeting, by U.S. Postal Service mail, by e-mail or by electronic voting via internet. To satisfy this requirement, this information shall be published in the HUB Headlight or by other means of broad distribution used by the Division and sent to each member in good standing using the information provided in the official membership list.

B. Voting Procedures

Procedures for voting in-person, by e-mail, and by U.S. Postal Service shall be defined in the most current Policies of the HUB Division.

C. Voting by Electronic Voting Service

Voting may be done using online electronic voting software. The invitation to vote will be sent to members in good standing by the election software program. The invitation will be sent to the members official e-mail address on file with the Office Manager.

Members without an e-mail address, or who do not wish to vote electronically, may send a request for a paper ballot to the HUB Division Clerk at the HUB Division Corporate address. Instructions for requesting a paper ballot will be published in the Headlight or by other means of broad distribution used by the Division. All paper ballots must be received by the Clerk no later than 2 days before the Annual Meeting.

Section 3

Voting for Candidates for Board of Directors and ballot issues will commence the day members receive their ballot and will close no later than two days before the published date of the Annual Meeting. At the Annual Meeting, the Clerk will announce the results of the election to members present and will direct the Headlight Editor to print the results in the next issue of the Headlight and the Webmaster to post the results on the HUB Division website.

Refer to Page 8 for Voting Information

The HUB Division Annual Meeting will be held before RAILFUN at 7:30 PM on April 22, 2022

Voting Procedures for the By-Law Change and Board of Directors Election

The HUB Division will again use the Election Buddy electronic voting system. The Division implemented this system starting last year to make voting easier for our members. We will continue to use this system in the future, if the by-law changes are approved.

The HUB Division will be conducting an in-person Annual Meeting this year on Friday, April 22, 2022, in conjunction with the scheduled RAILFUN meeting. During the meeting, the Clerk will announce the results of the election.

All members who have provided the HUB Division or the NMRA with an email address will receive an email directly from Election Buddy with your unique voting code and instructions for submitting your ballot. Emails from Election Buddy will arrive around March 1, 2022. If you do not receive an email, or if you do not have an email address, please contact the HUB Division Clerk by telephone, (508) 378-3582, and ask for Peter Watson. Peter will take your information and will mail

you a ballot with instructions for returning it to him. In order for Peter to count your ballot, he must receive it by April 20, 2022.

Like the NMRA, the HUB Division plans to continue using this online method to conduct elections. The HUB Division also routinely sends information to members using the hubdiv@googlegroups.com email list and the online Constant Contact system. If you have not provided the HUB Division or the NMRA with your email address, you should provide it to Peter so you are informed about the Division activities. You can send an email to Peter at: OfficeManager@hubdiv.org to request he include your email address in our notification system(s). You should also provide your email address to the NMRA.

Email notifications are the primary method of communication so it is important to keep this information up-to-date at the local and national levels.

HUB Division Calendar of Events

(Subject to Change)

2022

Mar 18 (Fri)	HUB RAILFUN Meeting, 8 PM, Motherbrook Arts and Community Center, 123 High Street, Dedham, MA 02026
Mar 21-24 (Mon-Thu)	NERx Online Convention, 6:30 PM to 10:30 PM, www.nerx.org
Mar 26-27 (Sat-Sun)	HUB Modular Railroad display at the Greenberg's Toy & Train Show, Shriner's Auditorium, Wilmington, MA
Apr 1 (Fri)	Submissions deadline for the HUB <i>Headlight</i> May-Jun issue
Apr 22 (Fri)	The HUB Division Annual Meeting and Election, 7:30 PM, prior to RAILFUN
Apr 22 (Fri)	HUB RAILFUN Meeting, 8 PM, Motherbrook Arts and Community Center, 123 High Street, Dedham, MA 02026
May 20 (Fri)	HUB RAILFUN Meeting, 8 PM, Motherbrook Arts and Community Center, 123 High Street, Dedham, MA 02026
Jun 17 (Fri)	HUB RAILFUN Meeting, 8 PM, Motherbrook Arts and Community Center, 123 High Street, Dedham, MA 02026
Jul 15 (Fri)	Submissions deadline for the HUB <i>Headlight</i> Sep-Oct issue
Jul TBD (Sun)	HUB Summer Picnic, Waushakum Live Steamers, Holliston, MA
Aug 7-14 (Sun-Sun)	2022 NMRA National Convention, Gateway 2022, St. Louis, MO, www.gateway2022.org
Sept 15-18	NER Convention, The Connecticut Yankee, Windsor, CT, www.ner-conventions.org/connecticut-yankee
Sep 23 (Fri)	HUB RAILFUN Meeting, 8 PM, Motherbrook Arts and Community Center, 123 High Street, Dedham, MA 02026

Achievement

Mal Houck: Newest MMR in the HUB



Malcolm "Mal" Houck, MMR (left) holds his newly received MMR plaque, while AP Chairman, Peter Watson, MMR (right) holds Mal's Civil AP Certificate. This was Mal's seventh AP certificate, making him the newest MMR in the HUB Division. Congratulation!

Photo by Mike Tylick

Treasurer's Report

By Gerald Covino, Treasurer

Stated below is our financial position as of December 31, 2021, the mid-point in our fiscal year July 1, 2021 through June 30, 2022.

The HUB Division has financially weathered the ongoing pandemic and has resumed some of its in-person activities. We have held four RAILFUN meetings, one in Marlborough in September and three in Dedham. Attendance has been modest as expected given the uncertainty still surrounding the virus. The Module group did display at both the Greenberg Train Show in November and our NEMTE show in December. The Division did meet its obligation to the Boston Museum of Science "All Aboard Trains" exhibit from mid-November through mid-January. Another very successful run, according to the Museum. Under our new contract, we are committed to operating this Exhibit for the next four years. We were also fortunate to host the Regional NER Convention in Westford this past October and successfully operate the New England Model Train EXPO in December, which is our largest fundraising effort.

We are extremely fortunate to have so many dedicated Volunteers who tirelessly contribute their time and talent to ensure the success of our organization. Sadly, we lost a dedicated volunteer this December with the passing of Bob Macauley. Most recently, one of our longest members of the Division, Dick Towle, lost his beloved wife Diane. Our hearts go out to their families.

Please continue your generous support of time in making the Division successful. Without you, the volunteers, the Division could not exist. Please remember the Division is a 501(c)(3) charitable organization and, as such, any cash donations made to the Division might be tax deductible on your Federal Tax Return.

Continue modeling and keep safe.

Mid-Year Account Balances

Checkbook	\$ 1,252.22
General Savings Account	538.48
Reserve-Life & Restricted Savings Accounts	60,114.83
Program Checking Account	272.82
PayPal Account	923.12
USPS Permit Account	0.56
Total Funds Available	\$ 63,102.03

HUB Communications

The HUB Division has two ways it communicates directly with it's members: via the hubdiv@googlegroups.com email list and the online Constant Contact system.

The Google Groups email list can be used by anyone already on the list to email everyone else on the list about division, model or prototype-related topics. For example, you can ask for modeling tips or advice from fellow members, or see if someone has a copy of that MR you've been trying to track down. It's definitely an underutilized member benefit.

The Constant Contact system is just for notifications from the Division to the members.

To get on the hubdiv@googlegroups.com email list, please email Peter Watson at: OfficeManager@hubdiv.org to request he include your email address on the list. Peter will also make sure that you are added to our Constant Contact list. You should also provide your email address to the NMRA and NER so that you receive communications from the national and regional levels.



Support Your Division!

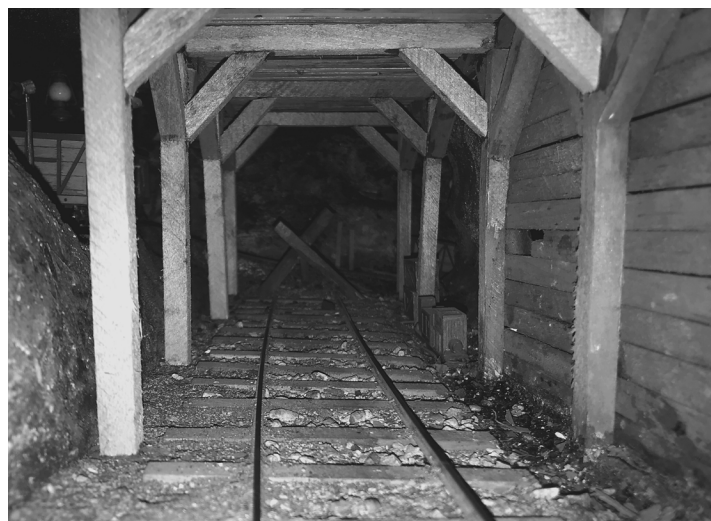
Tunnel Vision

Michael Tylick, MMR

Not long ago we traveled to Palmer to remove the cobwebs from our F-Scale Chester & Becket Railroad in preparation for the Amherst Railway Society's truncated Rail Hobby Show. The sections are stored disconnected from each other in a warm, dry place, so it was easy to stick my nose into the tunnel portals near the end of a section. I'd never done that before and I'd long forgotten we had detailed the interiors, even though we were unsure if anyone would ever see them. The views looked more interesting than I thought they would. On a lark I placed my iPhone 7 in front of the portal and fired away.

Although I think there are still limits to cell phone cameras for model photography, I must say I was impressed with the results of my phone efforts. Because of the extremely short focal length of the iPhone's lens (the shorter the focal length of a lens, the greater the depth of field or area in focus) quite a bit of the scene was either in sharp or acceptable focus. There wasn't much light inside the tunnels, but the exposures came out well. Digital photography is not plagued with reciprocity failures (when photographic film is subjected to long exposures – usually several seconds or longer – the image is breaking down while it is being recorded so actual exposure times can often double or triple). Color shifts are also quite common with film media subjected to very long exposures. A little tweaking of the color and contrasts of the images and I was pleased with the results. For the future, I'd like to re-shoot the tunnel photo with a locomotive – headlight on of course – peeking around the bend. Maybe I can try this when we set the C&B up for a photo shoot this spring, and by then I may have the latest and greatest iPhone.

In the end, I actually wasn't too crazy about the colors in the photos although they resembled an old sepia-toned image. I converted them to black-and-white and prefer its retro look. The images remind me of the old photographs from the Colorado mining era and the construction of the Hoosac Tunnel.



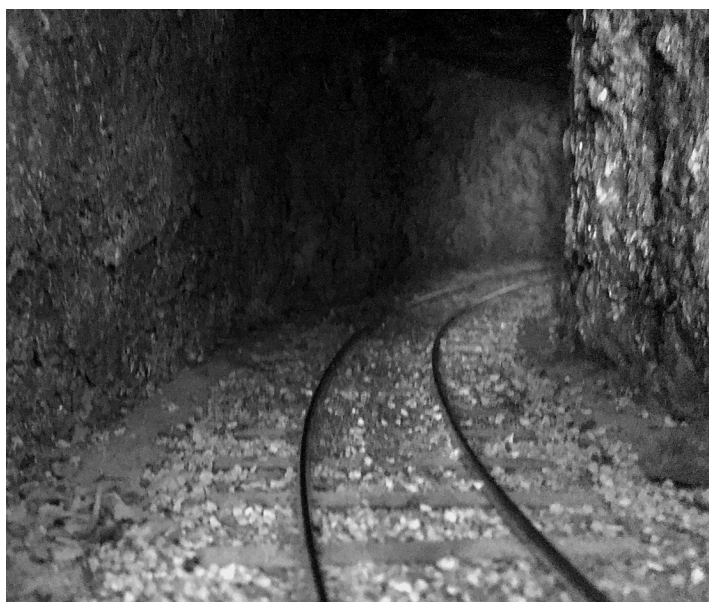
A mine shaft on the F-Scale Chester & Becket Railroad.

Cranberries at Greenberg



An Ocean Spray screening house and bog beyond are key features on Andy Reynolds' module as seen at the November Greenberg Train Show.

Photo by Andy Reynolds



One of the main-line tunnels on the F-Scale Chester & Becket Railroad.



New Haven Alco Unit "The Cranberry" leads a train through Andy Reynolds' cranberry-themed module.

Photo by Andy Reynolds

What's on your workbench?

By Bruce Robinson

How much time do you spend at the workbench and what kind of projects do you pursue there? That is a pretty universal question. Modelers need to split their time between working on the layout building benchwork and slopping vast amounts of plaster, and spending time at the workbench doing sometimes delicate operations. The balance of these endeavors makes the hobby so attractive.

I spend vast amounts of time standing at my workbench working on various projects, usually more than one at any time. The layout building phase was completed many years ago and the monthly operating sessions (over 300 now) have been happening for 27 years. So, modeling time is confined to working at the workbench.

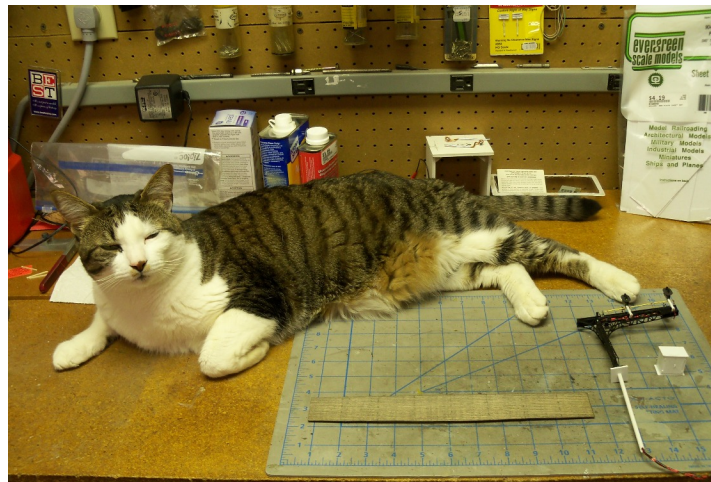
One such project was installing signals on the man line. There are three passing sidings that each have three double-head signals at each end and a signal bridge over the crossovers in the center of the sidings. Additional signals are installed at approaches to the yards and at a diamond crossing. Some signals are brass NJ International signals, but most are Oregon Supply plastic kits, which includes the three signal bridges. Two bridges are a cantilevered design and one is a two-legged bridge. Each bridge has four two-light signal heads.

Each signal head has three magnet wires that are routed down through the bridge to a plastic tube that installs in a hole drilled in the layout to mount the signals. So far, so good. Routing 12 very small wires down through a delicate signal bridge comes with a touch of danger. Enter Abigail.

You see, all those long, small wires being tossed through the air over the work bench as the process of pulling wires and soldering them to tiny LEDS is the perfect attraction to a cat. Abigail likes to lounge somewhere near where all the "action" is on the bench and when all those moving wires appeared that was a call to

action. Now I find myself in a defensive position trying to keep Abigail from pulling on the wires as I am trying to route and solder them without damaging the fragile bridge. Yup, there were several "man-to-cat" discussions regarding proper cat behavior, usually resulting in a brief stand-off only to resume sometime later.

The good news is, however, that the signals were completed and installed and nine o'clock is still "kitty treat time."



Abigail lounging on the work bench waiting to "help" build signals.



Signal bridge installed with Abigail's approval.



NERx returns for its virtual engagement on March 21-24, from 6:30-10:30 PM Eastern Time all four evenings.

Layout Tours:

- "B&O Buffalo Division" by Mike Pysczek
 - "New Hampshire Division B&M Layout" by Tom Oxnard, MMR
 - "Central Maine & Aroostook" by John Newick
 - "Greenland Valley RR" by Dave Katsonis
 - "Ramapo Central Railroad" by Fred Dellaiaco
- Visit the website for complete layout info.

Clinics:

- "Modeling Rural Scenes" by Steve McMullin
- "Anthracite Mines, They are more than just a breaker" by Chuck Diljak, MMR
- "A View on Perspective" by Mike Tylick, MMR
- "A CTC Machine for the CS&P" by Drew James

- "Adhesives and Fillers" by Jim Walsh
 - "Making Rolling Stock Layout-Ready" by Ed O'Connell
 - "More Than Just A Pretty Light – A Railroad Signaling Primer for Modelers" by Scott Gothe
 - "Modeling the rail-served Diamond Glass Company, Royersford, PA." by Rich Newmiller, MMR
 - "Building The Pie Town Stage" by James Gore, MMR
 - "Learn How to Laser Cut and Assemble a Box Car" by Craig Bisgeier
 - "Layout Design Considerations" by Jim Heidt
- For clinic details and updates, visit www.NERx.org.

Model Showcase:

During NERx, the work of our members will be shown in between the clinics and layout tours and on the NERx website. You have until March 7 to submit your entries into the NERx Model Showcase. Just identify yourself, write a description of the work, the scale, and attach 1-3 photos to an email addressed to info@nerx.org.

East Broad Top Scenery Work

Russ Norris, MMR

Attached are some photos of the recent scenery work on my East Broad Top layout. I constructed a spur that curves around a mountain on a rising 2% grade. The tracks below belong to the main line on a descending 2% grade. The spur passes through three different scenes. The first and lowest scene is a logging site as it appeared in the 1920's. The middle scene is an ore tippie for a high-grade silica ore known as ganister rock. The tippie was operated by North American Refractories in Mount Union, Pennsylvania. The ore was used in steel furnaces and other high-temperature applications. This scene is modeled as it appeared around the end of common carrier operations in 1956. The tracks continue to rise and curve around the mountain until they end at the EBT coal dock at the Rockhill Shops, a scene that would have been typical from the early 20th century through today. The remaining photo of Ewing's Mill was created to fill an empty place on the layout. The mill is a replica of a structure that stood along the EBT right-of-way just south of Mount Union.



The E.B.T. Coal Dock



A view of the Logging Site from 1920's with E.B.T. #15 in the foreground.



The Ewing's Mill with a long steel trestle beyond and the hills of Mount Union in the distance.



The NARCO Ore Tippie towers over the scene of two trains passing.



Rockwork adjacent to the main line with the NARCO tippie beyond.

Erich's Electronics Notebook

By Erich Whitney

Crossing Gate Project



Figure 1 Bruce Robinson's Franklin Station Road Crossing

This issue's column is the start of a series that is going to cover several issues. It began as a seemingly simple answer to a straightforward question that turned into a bunch of fun challenges. The question that inspired this adventure was, "Why is a functioning crossing gate so expensive?" My reaction to that question was, "Well, it shouldn't be." And so here we go. I know this subject has been addressed many times and I won't claim that my solution is particularly special, but I had fun doing it and I hope you get something useful out of it.

Back in 2019, Bruce Robinson purchased this pair of NJ International crossing gates (Figure 2) to install on his Valley Junction Railroad at Franklin Station (Figure 1). At the time, they cost about \$35 for the set. However, the cost of the installation kit was about \$170. At over \$200 per crossing before we've touched the layout seems a little steep. I don't know if these signals are still available or not. At the time of this writing, the website (<https://njisignals.com/collections/ho-scale-crossings/products/1171-crossing-gate-2?variant=3648898116>) indicated that they are currently out of stock. Since the rest of this article doesn't depend on the specific crossing gates, or the scale, the information will apply to whatever model crossing gate you use. I did make some minor modifications to these models before I got them working properly. The way these are

made, there's a very small fulcrum on the inside of the base at the gate arm axle. To make the servo motion work more smoothly, I installed a small piece of brass rod on the arm outside of the base as shown in Figure 3.

The one topic I'm not going to cover in this series is how to find or build alternatives to these NJ International crossing gates. I do believe, with some effort; these could be 3D printed. I have considered covering the topic of 3D printing model railroading projects, but I don't think it fits the theme of this column.

In subsequent issues, I'll discuss how grade-crossing track circuits work, the hardware design, the software that controls it, and how this was installed on Bruce's layout. We started with these \$35 crossing gates and for less than \$50, I was able to design and build a custom circuit board with a programmable computer module. All the logic for the crossing circuit is done in software. I also designed the circuit board to accommodate different track occupancy detection schemes and the flexibility to handle both common-anode and common-cathode LED light circuits. The same circuit board can be used on crossings that just have flashing lights and no crossing gate. And by changing the software, the same circuit can be used to control single- and double-arm semaphores.

Bruce's layout is double track at the station where this crossing is located. We decided to use photocells for the occupancy detection because gapping the rails and adding multiple new feeders for current-sensing detectors would have been too disruptive. There is a total of eight photocells needed: four for each track, two near the crossing and two for the far end of the approach blocks. The photo-

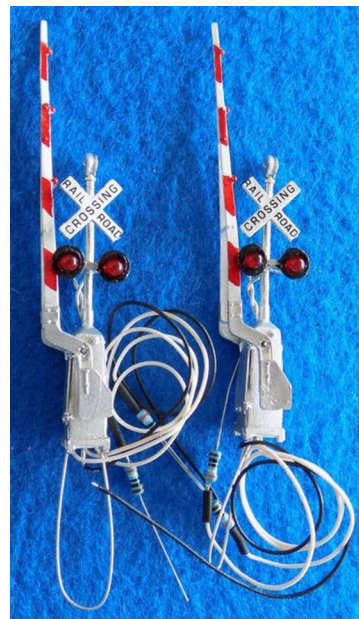


Figure 2 NJ International 1160 HO Crossing Gate



Figure 3 Gate Arm Modification

(Continued on Page 14)

HUB Headlight

Volume 38, Number 4

March - April, 2022

HUB Headlight, published by The HUB Division Inc., Northeastern Region, National Model Railroad Association, is issued in January, March, May, September and November. Contributions may be sent by email to the Editor or by mail to the Office Manager.

Editor Bill Barry - Editor@hubdiv.org

Chief Grammarian - Jay Stradal

HUB Division Board of Directors

President Manny Escobar - President@hubdiv.org

Vice President Malcolm Houck - VP@hubdiv.org

Secretary Mike Dolan - Secretary@hubdiv.org

Donations Chairman Dan Fretz - Donations@hubdiv.org

Membership Chairman

Peter Higgins - Membership.chairman@hubdiv.org

RAILFUN Coordinator

Andy Reynolds - Railfun.coordinator@hubdiv.org

Mike Tylick, MMR - HUBboard8@hubdiv.org

Office Manager

Pete Watson, MMR - Officemanager@hubdiv.org
65 Branch Road, East Bridgewater, MA 02333-1601

Online Activities Coordinator

Erich Whitney - onlinecoordinator@hubdiv.org

Other HUB Division Leadership

Treasurer Gerry Covino - Treasurer@hubdiv.org

Module Coordinator Ron Noret - ModCoordinator@hubdiv.org

Webmaster Dave Insley - Webmaster@hubdiv.org

Librarian Ken Belovarac - Librarian@hubdiv.org

Model Train Expo Show Director

John Russo - NEMTE.Director@hubdiv.org

Assistant Model Train Expo Show Director

William Harley - Assist.NEMTE.Director@hubdiv.org

Model Train Expo Business Manager

Mark Harlow - NEMTE@hubdiv.org

Public Relations Director

Barbara Hoblit - PRDirector@hubdiv.org

MOS Coordinator

David "Shack" Haralambou - MOSCoordinator@hubdiv.org

NMRA North Eastern Region - Eastern At-large Director

Erich Whitney - MA.NERdirector@hubdiv.org

NMRA Achievement Program Chairman

Peter Watson, MMR - HUB.AP.Chair@hubdiv.org

Membership: National Model Railroad Association members residing within the boundaries of The HUB Division: zip codes 01400 through 02699. (Barnstable, Dukes, Essex, Franklin, Middlesex, Nantucket, Norfolk, Plymouth, Suffolk, and Worcester counties of Massachusetts.)

Headlight Printers

Versatile Printing Services, LLC, Burlington, MA

Erich's Electronic Notebook*(Continued from Page 11)*

cells are calibrated each time the circuit is powered on to adjust for ambient room light. When a train enters any of the approach blocks, the lights start flashing and then a short time later the gate arm starts to come down. The gates stay down for as long as it takes for the train to clear the crossing and there are no other trains approaching. The servos that control each gate arm are mounted under the benchwork directly beneath the tube where the control arm passes up to the gate arm.

The primary motivation for this project was the fundamental question about building something to animate the grade crossings without spending a lot of money. My "back of the napkin" calculation went something like this. If I want to keep the cost down yet make the design flexible, then using a microprocessor made the most sense. You can get an Arduino Nano for two-to-three dollars, the servos are about two dollars, and there's a handful of connectors and electronic components. The printed circuit board cost was about 20 dollars to have it fabricated, but if I ordered a larger batch of them that cost would come down considerably. There's a decent chance you've heard of Arduinos before. There have been many articles about using them in model railroading applications and I used one to build the HUB Module Tester. If there is sufficient demand, I can do a more detailed article on Arduino. If you want to know more about Arduino programming, please leave me feedback.

January RAILFUN

James VanBokkelen leads a presentation about lineside signals at the Motherbrook Arts and Community Center on January 21, 2022.

Photo by Andy Reynolds

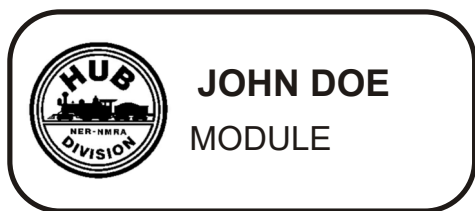
Submissions Wanted

The *Headlight* is always accepting photos and articles relating to model and prototype railroading. Articles about model building or home layouts would be much appreciated. Earn credit towards your Author AP certificate. Please email editor@hubdiv.org.

Make checks payable to:
“The HUB Division, Inc.”

**Mail to: Gerald Covino, Treasurer
The HUB Division, Inc.
P.O. Box 672
Hollis, NH 03049-0672**

***To pay using your credit card, email
Treasurer@hubdiv.org and an
electronic invoice will be sent to you.***



Badge with magnetic holders and first line of printing is \$16.75, plus \$3.00 S&H. Each additional line is another \$2.00. You may have up to three lines on your name tag.

Cost: \$18.50 (1 line) \$20.50 (2 lines) \$22.50 (3 lines)

[illegible]

Name _____

Address _____

City **State** **Zip**

I enclose \$7.00 for a subscription to the HUB Headlight for 2022

Name _____

Address

City **State** **Zip**

It Takes All of Us Working Together!

() \$25.00 () \$50.00 () \$100.00 () Other \$

YES, I am happy to support The **HUB Division, Inc.** to foster railroading through displays, modeling and educational opportunities to members and the public at large. I show support with the enclosed gift.

Name _____

Address

City **State** **Zip**

The HUB Division offers to its members a complete packaged module kit for \$165. The kit has everything you need, including all pre-cut lumber, hardware, a complete wiring harness for the DCC and inter-module connections, a panel-jack and wire, and even the roadbed and track! A module is the perfect solution if you do not have the space for a full-size layout or just want to experiment or learn new techniques without committing the time and money to a larger setup. Please contact Mark Harlow at modulekits@hubdiv.org with additional questions and to order the module kits.

By Barbara Hoblit

To order HUB Logo branded merchandise, the HUB Division is partnering with Queensboro to bring you a personalized shopping experience. Within the HUB store you will find shirts, hats, outerwear and accesso-



ries in an array of sizes (men's, women's and youth) that you can purchase directly online and have sent directly to you.

In order to access the merchandise for ordering, please visit the website at:

<https://nmrahubdivision.qbstores.com>

Create a log in with your personal details and start shopping.

Each week, Queensboro will send a promotional email to all registered HUB Online store users with special pricing on selected sale items. Sale periods normally run for about three days.

Shipping rates to the contiguous US are always a flat \$7.95

Please reach out to me at PRDirector@hubdiv.org if you have any questions or concerns.