

THE FLIMSY BOARD



[BNMR is a 100%
NMRA Member Club](#)

Watch your email and
the website for news and
updates about meetings,
clinics, and clubhouse
status.



Track and hillside with drainage on the new HO layout incline track.

SEPTEMBER CLUBHOUSE SCHEDULE

Dates and times are subject to change — consult the website for updates.

- 1st Open House 12 pm to 4pm.
- 1st Business Meeting, 6 pm at the clubhouse.
- 3rd..... Breakfast social time at All Star Lanes, 8:30 am.
- 3rd..... Open House 12 pm to 4pm.
- 8th..... Open House 12 pm to 4pm.
- 10th..... Open House 12 pm to 4pm.
- 15th..... Open House 12 pm to 4pm.
- 17th..... Open House 12 pm to 4pm.
- 22nd Open House 12 pm to 4pm.
- 24th..... Open House 12 pm to 4pm.
- 29th..... Open House 12 pm to 4pm.
- **No Board meeting in September.**

THE FLIMSY BOARD

Official Publication of the Bremerton Northern Model Railroad, Inc

The club is incorporated in the State of Washington as a non-profit and is recognized by the IRS as a 501 (c)(7) social club. We are a 100% National Model Railroad Association (NMRA) membership club.

FLIMSY BOARD STAFF:

Editor: Bert Cripe
Submit Contributions to: bert@wavecable.com

Submittal deadline is the 30th of the month, publication date is the weekend after the business meeting.
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Unless otherwise noted photos are by the Editor.

MEETINGS NOTICE:

Business meetings are held on the Thursday of the month in the clubhouse. Board meetings are held periodically in the clubhouse on the last Thursday of the month. The January meeting is our annual dinner meeting held at a local restaurant.

OFFICERS:

President:..... Bruce Himmerick
Vice President: John Forsythe
Secretary: Bill Hupé
Treasurer : Wes Stevens
Sergeant-at-Arms: Jerry Enders
Directors:..... Bert Cripe, Ray Hagele,
..... Positions 2 & 3 vacant
Librarian..... Tom Barrett
Web Site:..... <http://www.bnmrr.org>
Facebook: <https://www.facebook.com/groups/1988490354736510/>

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"PUBLIC SHOW IDEAS"

Reprinted by permission from the NTRAK Newsletter Sept/Oct 1988.

This is the second time this article has appeared in the Flimsy, but it remains timely and very relevant to our conduct during an open house with *emphasis* added by the Editor.

....BC

This past April, Northeast N-Trak displayed its NTRAK layout in the Boston Museum of Science. We considered this a significant opportunity to show off our hobby to the general public in an environment that leads one to think that everything inside is of "museum quality".

As a result of this experience, I think we learned something that we might pass on to other NTRAKers.

Prior to our showing at the museum, we were visited by a member of the museum staff at a Greenberg Show where our layout was displayed. She liked what she saw and her young son was fascinated with the layout and trains. However, she commented that she felt isolated from the people running the display.

As a result, she set up a briefing session for us at the museum prior to our exhibit. The subject of the briefing was "How to Interface With the Public". It was determined that our purpose was to display our hobby to the public and as a result, interest others in model railroading and not to just run trains while the public watches.

In general, people do not care how many trains you are running on the same track, if it keeps the operators so busy avoiding catastrophes that they can't answer questions. In other words, don't look so busy or involved with the train running that the public finds you unapproachable. Obviously, someone has to be running the trains, but there should be others who are available to respond to the crowd. Members

should also circulate outside the layout to mingle with the people. All members should wear something that identifies them as part of the display (club shirt, jacket, hat or at least an easily seen badge) so the public will know who to approach.

Actually, prior to this, I thought Northeast N-trak did a pretty good job of interfacing with the public, but from an outsider's point of view this was not the case and is something that we all should be constantly mindful of.

Recently, I visited an NTRAK display, set up for the general public and experienced first-hand what the Museum of Science was talking about. There were six or seven NTRAK people very busy running trains, making sure that they stayed on the track, fixing switches and fiddling with the track interconnections between modules. One happened to be talking to someone standing outside the layout. I stood to one side hoping that I might get a chance to talk to this person next. Needless to say, the conversation between these two went on forever (or so it seemed to me). Then, due to some disaster elsewhere on the layout the NTRAK person rushed away to take care of the problem. I walked away disgusted after waiting so long.

Eventually, I did come back and managed to get someone's ear, but at that point the thrill of the moment had long since passed and I left generally disappointed with the experience.

So, if we really want to promote this wonderful hobby of ours, we should try putting ourselves in the general public's shoes. We should cater to what we perceive their needs to be and in particular be identifiable, approachable and available.

....Chuck Lamen

NEW MEMBER REPORT

No new members in August.

A BRIEF HISTORY OF TELEGRAPHY

This article appeared on the Model Railroad Hobbyist forum titled “Add A Working Telegrapher to Your Model Railroad” Written by and Reprinted with permission of Dr. Geoff Bunza. Only the history portion is included here, refer to the forum for the rest of the article.

Modelers building their railroad empires that operate in any equivalent time frame from 1850 to 1961 will often add telegraph poles and lines as their prototypes did in the same time periods. I had collected some prototype telegraph gear over the years, and finally decided that my rail operations needed their own equivalent. This is an article starting with a brief background of the equipment and history of railroad telegraphs, and finishes with the construction details to build your own realistic, telegraph operator, regardless of scale. Interested? ...Let's communicate!

Some History and Basic Equipment for Your Office

This all started when I acquired an old code key made by Lionel (yes, the same Lionel of model train fame) at a local ham radio swap meet many years ago. Lionel built them in the 1940's as part of the war effort, for communicating Morse code via radio, not telegraph. I rarely used it as a ham radio operator, but it spurred an interest in telegraphy since I was also a railroad buff.

Somewhere around 1844 the earliest commercial telegraph line was constructed from Baltimore south towards Washington (completed to



Figure 1. Lionel J-38 Code Key

Washington DC later). It is believed that the Erie Railroad (one of the earliest users) started telegraph operations in 1851. Telegraph was common by the start of the civil war in 1861. Except for the very first lines constructed (with 2 copper wires) most telegraph lines built into the very late 1880's were single wire steel (iron) cables of varying thicknesses. Copper wire came back in vogue to replace the steel cable towards the later part of the 19th century.

Early telegraph was sent and recorded on paper tape by printing telegraph receivers, but were quickly replaced by telegraph "sounders" when it became clear that human operators could send and receive faster transmissions reliably compared to the recorders. Telegraph transmission printed on the recording tapes appeared as indications of short and longer closures of the receiving relay in the telegraph recorder, giving rise to the notion of "dots" and "dashes." However, this was not Morse Code as Radio Operators currently know it! It was a different code now known as American Telegraph Code and later American Morse Code (for radio use) and different from International Morse Code as well! They are not the same codes. Here is a small sample of American code received by a Western Electric (WE) telegraph sounder:

https://www.scalemodelanimation.com/MRH/Random_Tel_msgs30wpm.mp3

Railroad telegraphers were in many cases obliged to accept civilian (private) telegraph messages in agreements with local and national telegraph companies like Western Un-

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ion, and these took low priority over railroad messages. The last Railroad telegraph offices shut down in the early 1960's. Telephone slowly supplanted and then started to replace telegraph in railroad use in the late 1800's, but generally telephone lines relied on dual copper wires for their connections, and in many cases telegraph wire was not a direct substitute. Telephone equipment also required different office equipment for switching and normal operation. The change came slowly and was definitely incremental by locale and business. Like telegraph, phone networks often started as smaller private affairs and grew by assimilation over time.

Railroads experimented with telephones using existing telegraph lines in 1876 and 1877 (1 and 2 years after Bell had his public display). Permanent telephone lines started being built shortly thereafter. Heavy nationwide use of telephone grew after World War I, but overlapped with telegraph usage well past World War II.

As an aside 2-way radio was tried by railroads in the 1920's. CN set up an early telephone network in 1923. NYC experimented with Radio in 1927-1929. Early radio receivers were placed in some passenger trains as entertainment en route. Early radio was used in large yards with local telephone huts scattered in the yard, and also for conductor to engineer communication on long freights.

But this article is all about telegraph usage on American railroads. Figure 2. Shows the basic setup for a set of small telegraph offices, namely three.

The "L and L1" represents the telegraph lines between offices, usually made of a single conductor of steel (iron) wire. The wire size originally ranged from No.16 to No.4 GA iron wire. Around 1880 a new process for drawing copper wire appeared which increased its tensile strength, and copper wire and copper coated iron wire started to replace iron wire for telegraph lines... slowly. Wire was strung on

poles from 25-120 feet in length placed 150-300 feet apart. Wire was attached to poles insulated by porcelain or glass insulators of varying sizes and colors.

(Continued on page 6)

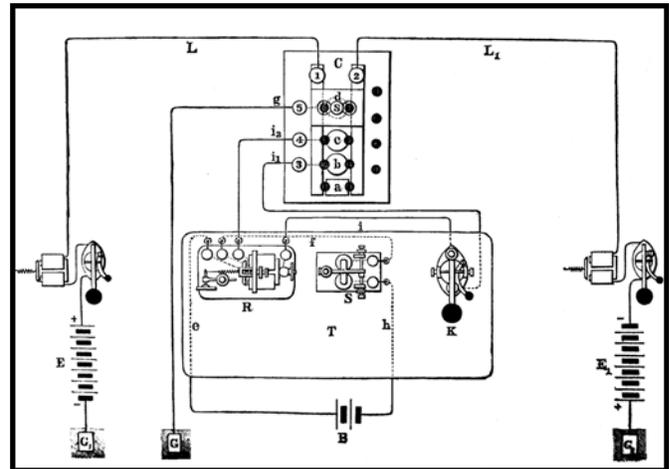


Figure 2. Telegraph Offices Diagram

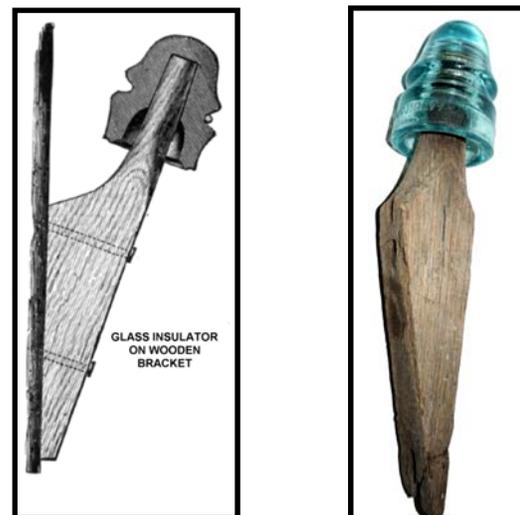


Figure 3. Typical Single-Line Pole Insulator and Bracket

The long distance telegraph wire came out of the office and care was made to insulate the wire (galvanized iron) and to protect against a “water path” to ground during storms. Wire was supposed to enter the building with the telegraph wire slanted down so water would not follow the wire into the telegraph office. It was common to find single telegraph lines connecting offices and small stations on branch lines. Single wire lines would be attached to wooden poles (and in some locations – trees!) with a side mount bracket and a line insulator usually made of glass, but glazed earthenware, and rubber were also used.

A small point for modelers: telegraph wire was never wrapped around an insulator. It touched the indented side of the insulator, and a smaller tie wire was wrapped around one end of the line, then around the insulator, and finally around the opposite end of the line. It’s unlikely one would want to model the tie, but gluing the line wire to the side of the insulator would be prototypical

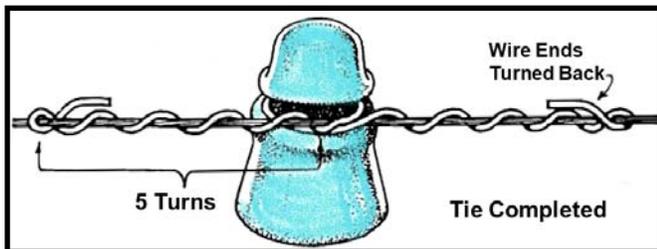


Figure 4. Telegraph Wire Tie to Glass Insulator

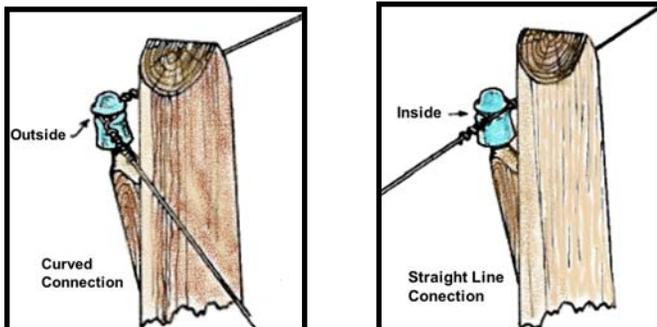


Figure 5. Telegraph Wire attachment to Glass Insulators

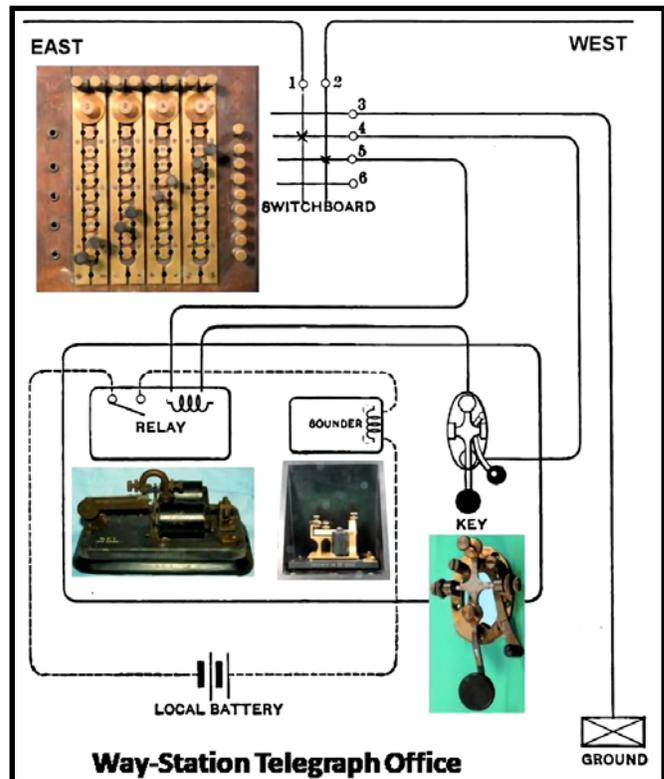


Figure 6. Telegraph Office

Let’s start with a look at the basics instruments found in a small telegraph office.

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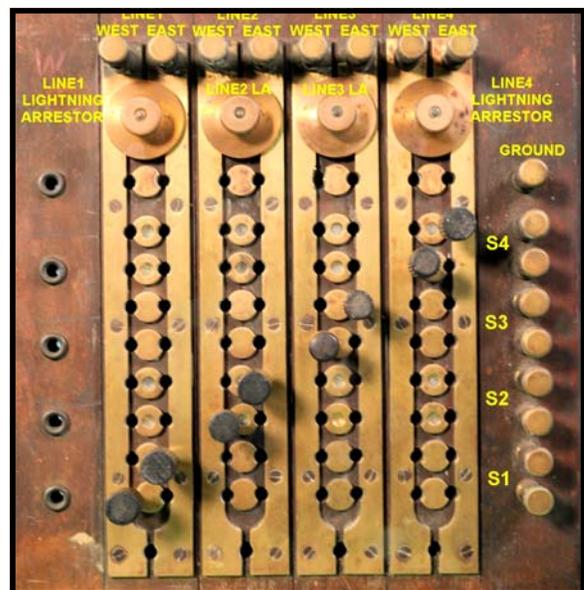


Figure 7. Four Line Telegraph Switch Board

The diagram in Figure 6. shows one possible configuration for a telegraph office in a small station, or rail tower along the right of way. The typical office would be equipped with a small plug switchboard directly connected to the incoming lines and equipped with lightning arrestors to protect the inside equipment. When a remote key was operated at a sending office it would open the telegraph circuit and be picked up by a sensitive relay connected to the line via the switchboard.

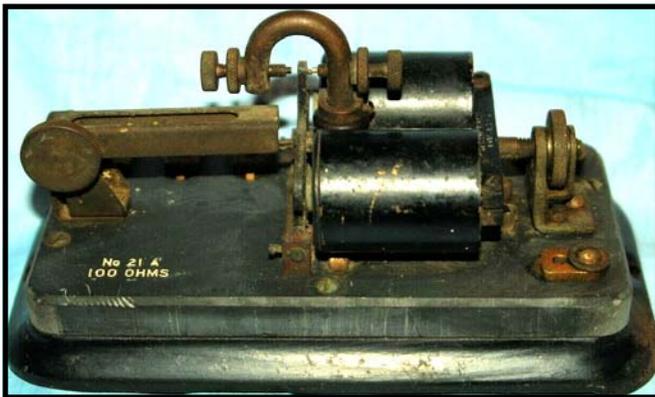


Figure 8. Main Line Relay

The relay acted as a vintage amplifier in the sense that its contacts would then carry a stronger local current fed by a small local battery to operate a local “sounder” which for all practical intents and purposes was a relay with intentionally noisy contacts. This would generate the audibly recognizable clicks representing the transmitted telegraph message.

Samuel Morse’s original telegraph recorded the short and long clicks by marking a paper tape fed through a “telegraph register” generating the original “dots and dashes.” It was found in short order that trained telegraphers could “hear” and interpret the message as it came in faster by ear with as much or more accuracy than one could read the paper tape. That quickly ended the use of the register machines. Operators used different techniques to more clearly hear the message clicks on the sounders. A sounder was often placed in a “resonator,” an open triangular half-

box often depicted with the “typical” telegraph operator. The resonant sound was a bit louder and directed the sound towards the operator too. Sometimes the operator would take a tobacco tin (often a Prince Albert can) and wedge it behind the sounder in the resonator. By opening the top of the can in different angles, differing sounds could be produced. Operators working with more than one sounder on their desk could then differentiate which line was active, all by ear.



Figure 9. Western Electric Telegraph Sounder Mounted in Resonator

To send a message, the telegraph operator would “open” his key with a blade switch on the key – remember in North American telegraph used normally closed, and energized circuit lines. Europe, interestingly enough, used normally open circuit lines. After the operator opened his key, he would tap out the message which would include the telegraph station identification – typically a two letter designation. This should sound familiar to prototype modelers as most stations, towers, dispatchers, and supervisors had a 2 letter abbreviation. These may well have originated with the telegraph ID. The recipient of the message was included too. But railroads had agreements with telegraph

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companies like Western Union and Postal Telegraph to handle personal public communication too. These were sent as lower priority messages relative to official railroad traffic.

Telegraphers were trained to send messages in abbreviated forms, using standardized common abbreviations (like dep – departed, ar – arrived), using message numbers for entire messages (like msg#21 happy anniversary, etc.), and codes. Some codes were straight word and phrase substitutions from an official railroad company code book (a couple of which are in my personal collection) meant to hide the message from casual observation.

The original Morse Code – correctly called American Morse Code or American Railroad Code is not the code ham radio operators use today. It has fewer symbols (characters, numbers, and marks) for transmission, and uses more timing variations than modern Morse Code, today often referred to as international Morse Code. When American Morse code was adopted for European use, it lacked the necessary accent marks for international European use, so it was expanded and changed. American Morse Code continued to be used by American railroads as long as into 1961! Separate rule books for telegraphers were sometimes issued too. One that I have, listed every rail company officer, division manager, and supervisor to-



WE Key Switch Closed Normal



WE Key Switch Open Ready to Transmit

Figure 10.

gether with their two letter ID and in priority order for transmission – dispatchers were high on the list, but road president was number one!

It was discovered (in Germany) early on that the (literally) earth-ground could be used in conjunction with a single telegraph wire for long distance transmission (hundreds of miles). Obviously, this saved half the wire cost for the telegraph line. The first U.S. telegraph line from New York to Baltimore was run with two

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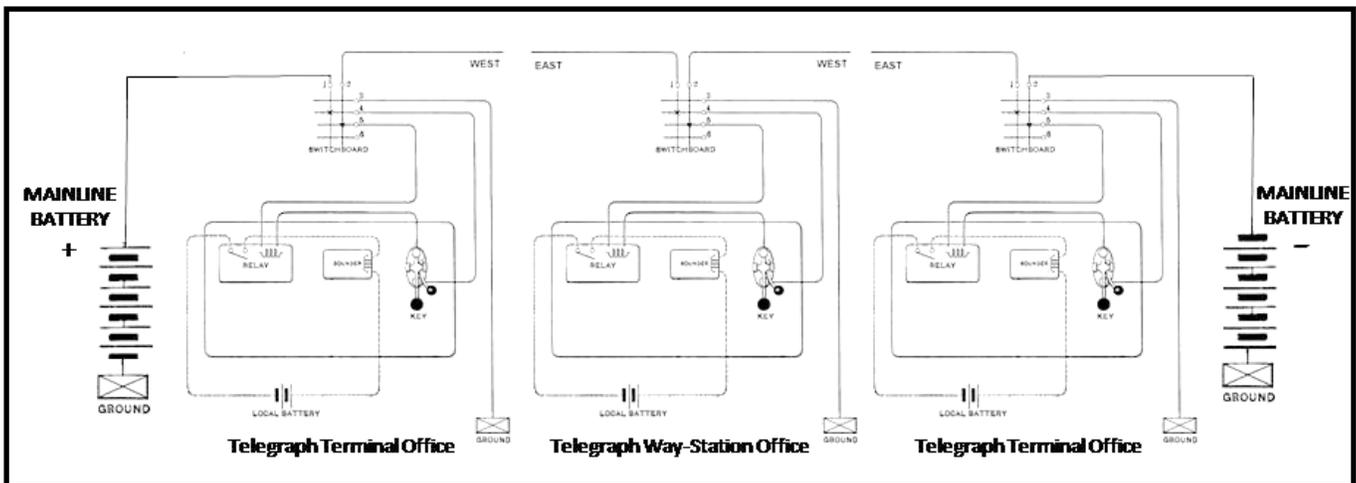


Figure 11. Inter-Office Telegraph Line

copper wires, and was later changed to a single galvanized iron wire. The new line was a larger wire, utilizing the earth ground.

Figure 11. Shows the general inter-office telegraph connections from one major endpoint to another with a single intermediate way station example (local office). Note that each terminus connects its end to a large battery of opposite polarity, often over 100 Volts. Early on, these would be wet-storage cells maintained by the telegraph office at the site. The smaller local batteries in each office would be maintained by the local operators as part of their normal responsibilities. Maintenance included battery jar cleaning and chemical replenishment on a daily and/or weekly schedule.

As an engineer, I have to comment about the “earth ground” connections. The earth ground line connected to a buried plate, usually of nickel or copper, whose surface area was often specified to be 20 square feet or more! The wire connection to the plate was supposed to be regularly inspected for cracks, breakage, and corrosion.

....Dr. Geoff Bunza

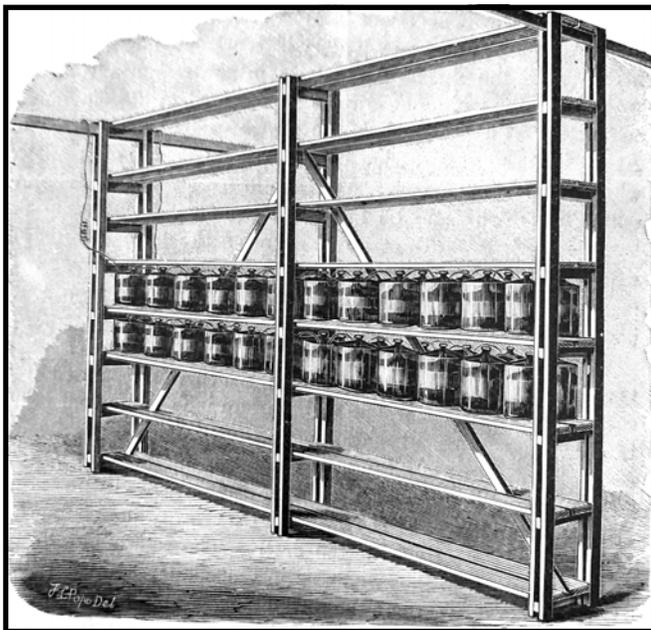


Figure 12. Telegraph Wet Storage Batteries

This concludes the history portion of the article. The remainder of the post is titled “A Telegraph “Operator” for Your Model Railroad using Arduino”.

If that is of interest to you the forum post can be read here:

<https://forum.mrhmag.com/post/sma43-add-a-working-telegrapher-to-your-model-railroad-12396729?pid=1333020997>

....BC



FROM THE EDITOR'S DESK

The club was incorporated in 1973, thus 2023 is our 50th Anniversary!

There have been some ideas voiced about how to celebrate, but the board wants to hear for the membership.

Please contact an officer or board member to make your voice heard.

Some ideas put forward are a BBQ for members and family, a commemorative piece of rolling stock, and a special decal set.

There must be other idea the board has not thought about—let's hear them.

....BC



Prototype Photo by Russell West.

UPCOMING EVENTS AROUND THE REGION

North Olympic Peninsula Railroaders Twenty-second Annual Train Show & Swap Meet

September 17 & 18 2022

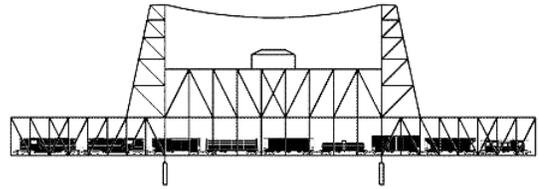
Free Admission & Parking

Clallam County Fairgrounds

1608 West 16th St, Port Angeles

Operating Layouts

Contact Steve at 360-582-1316 or steves-
tripp9@gmail.com for table rental info.



BRIDGETOWN

RAILROAD PROTOTYPE MODELERS
PORTLAND, OREGON

October 1, 2022
At the Airport Shilo Inn
Portland, Oregon



Prototype Photo by Russell West.

If you have never attended one of these prototype modelers shows you should! It is difficult to find work of this quality on display anywhere else!

Watch their Facebook page for details:

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

Check out Tony Thompson's blog for some photos of a Bay Area show:

[Bay Area Prototype Modelers, part 1](#)

[Bay Area Prototype Modelers, part 2](#)

DECODER PREFIXES

The decoder prefix & consist numbering scheme was approved at the August Business meeting. Participation is optional but the aim is to prevent any two members' locomotives from having the same decoder address.

If you have questions about the scheme please contact John Forsythe. The listing of address prefixes and consist numbers will be posted inside the HO layout area.

.... BC



Lewis County Model Train Show & Swap Meet

October 8-9

SWW Fair Grounds, Blue Exhibition Hall, 1909
South Gold St, Centralia

Hours Saturday 10 to 4 and Sunday 10 to 2

Contact Ted Livermore 360-985-7788 or 360-
269-0921 or tedstrains@lewiscounty.com

FROM THE LIBRARY

I again thank all those who have donated their collections of magazines, books and reference material. Items have come from members, past members, friends and the general public. The number of items to catalog is much reduced from earlier in the year. The "Donation" box is now almost empty, but there still are plastic totes filled with items that need to be catalogued. Much of that remaining are items that will need some thought as to how to catalog. However, I'm working on it.

Please, if you have items, place it in the "Donation" box. Do not place on the shelves and I am attempting to keep the list of items up to date. The master list is on the Club's computer as an OpenOffice spreadsheet. A shortcut to the file is on the computer's desktop.

If you want to check anything out, fill out and file the checkout sheet as per the sheet's instructions. The checkout sheets are in plastic holders on each of the two sets of shelves.

Speaking of checking things out, I noticed the binder for 1984 Railroad Model Craftsman is missing. If you borrowed it and forgot to sign out for it, either let me know, bring it back or fill out a checkout sheet. If this is not resolved by next month at this time, I will remove the 1984 RMC issues from the catalog listing. Unlike Model Railroader, we do not get many RCM donations so replacement of the missing issues is unlikely.

Tom Barrett, Librarian



JIM'S AMERICAN FLYER LAYOUT

I started my home layout intending it to be 5 x 11 feet. With storage/displace above it. The layout was about 24" above the floor and was on casters. Because I use only transformers, I could run only 2 trains at a time, but with switches and alternate tracks, I could have 4 trains available at any time. I had mountains, farms, mountain cabins and lakes, seacoast docks featuring the Rogue Brewery from Newport WA.



My grandchildren always wanted to switch out different cars so I would have roll the layout away from the back wall so I could reach that moment's desired cars. I reduced the layout to 5x9 so I could turn it by 90 degrees as shown below. Now I need to create/paint a canvas to hand behind the layout.

....Jim Hochstein



Photos by Jim Hochstein.