

The CRM&HA Inc. Newsletter

November/December 2008

Dennis Moriarty/Editor

Volume 17 Number 6

Meetings are held at 7:15 PM on the 1st Thursday of the month at the Central Railway Museum

Don't forget to bring your chairs.

Headline: This year the Christmas party will be held at Bob Folsom's House. See details below.

Christmas Party

This year's Christmas party will be held at Bob Folsom's house on December 4th. Spouses and guests are welcome.

Schedule of events for the Christmas Party.

5-6:30 PM Arrival of anyone bringing hors d'oeuvres, helping with the party, or wanting to run their own trains on the layout (no double-deck passenger cars, double-stacks or auto racks).

6:30 PM Hors d'oeuvres and social hour; running your own trains on the layout

7:15 PM Dinner

8 PM Club meeting; elect officers; see demo of computer driven layout operation - museum possibilities

8:30 PM Dessert; social time; more operation of trains - yours or N&W

Menu:

The beef tenderloin, generic red and white wine, hard liquor, and Coca Cola will be provided; club members please bring other beverages you might want, or other wine, and of course a dish to pass that you signed up for. The tenderloin will cost approximately \$200. Because the club is now incorporated as a non-profit

organization, those kinds of "expenses" are not acceptable to the IRS. Please bring a minimum of \$5 per person to help offset the expense.

Please plan to sign up at the November meeting regarding attendance (how many) and what you might be bringing (Appetizer/hors d'oeuvres, salad, vegetable, or dessert). If you can't be at the meeting, please e-mail Bob Folsom. See your membership list for phone number or e-mail address.

Dues

Remember your 2009 dues are due by December 31st. Still only \$25.

Editorial

By Dennis Moriarty

I have been the Editor of the CRM&HA Inc. Newsletter for the past 10 years. I have decided that this the 60th issue during that time, will be my last issue as Editor.

I want to thank everyone who has supported me and submitted articles and other information to the newsletters over the last 10 years. You have made my job much easier.

I am hoping that the new Editor will bring some new life, excitement and improvements to our newsletter.

It has been a long journey. I remember when I joined the club that the portable layout had just been built and

since then we have been moving it from train show to train show and have stored it in several places. All this hard work has paid off by giving us enough money to put on bigger shows and allowing us to accept the generosity of the Town of Central in letting us use the Allen House as our headquarters. The future looks bright. A new club layout, and the old portable layout revamped to update it and make it easier to move. Plans for more train shows and even the possibility of some real track to play on.

The new members may not know, but the portable layout started in the old building next to the Central firehouse. I don't remember but it used to be a school or library. The city let us use an old work area in the back of the building to construct and store the layout. The building was run down and water was coming in from the roof and damaging the layout so we had to move it to one of the front rooms. The building was in such bad shape that we finally had to store the layout elsewhere. Our meetings were held in the basement of the Bank whose parking lot is next to the club museum. Since then, the old building has been repaired and updated in to apartments. Our Station Master actually lived in the front room that the layout was in. The room was large enough to install a kitchen, bath, living and bedroom.

As in the last issue I will reminisce by searching old CRM&HA Inc. newsletters for interesting articles and reprinting them in this my final issue.

Please print the membership list each time it is updated and sent to you by email, so that you can contact other members when required.

Thank you Jim Reece, Brian d'Entremont, Bruce Gathman, Bob Folsom, and Bob Hanson for your contributions to the newsletter this month. Also, thank you **Howard Garner** for putting the newsletter on the Web.

The dates for the February Train Show have been established as:

Friday 2/27/08	Set-up
Saturday 2/28/08	Show
Sunday 3/01/08	Show
Monday 3/02/08	Table pick-up

The dates for the Central Railroad Festival have been established as:

Friday 5/15/09
And

The Railway Museum Grand Opening
Saturday 5/16/09

Programs

November: 'Work Session, Portable HO Layout' – CRM&HA Inc. Members

December: Christmas Party – Bob Folsom's House
January/February - Volunteers needed.

CEO COMMENTS

BY JIM REECE

In the CEO comments for July/August 2008 I wrote about ten practices of a successful club. At our October club meeting while discussing plans for the Museum layout several of these concepts came up. I have decided to reprint these practices.

A few months ago Bruce Gathman sent me an interesting article. Written by Craig Ross initialed "**Belmont Shores Railroad Club's Ten Practices of a Successful Club.**" Mr. Ross said "the Club is still going strong after 35 years, mostly by learning from our mistakes and playing to our strengths. Much of our success can be boiled down to ten concepts." I have listed those ten practices, each with a short recap explaining its content. As we approach the time for us to start building our new railroad, would we want to consider developing our own Practices of a Successful Club?

1. **"Don't be afraid to experiment because you can always redo it."** Remember new technology and modeling methods are being developed constantly. Look for what will be good for the future, not what was good for the past.
2. **"Keep the tent as big as possible, short of silliness."** Don't set your time period too small or make your railroad theme and terrain too limiting. Also, have free run nights with no limitations on road names or eras for rolling stock. Try to have as much operational variety as possible. Plan for open country running, city and yard areas, small towns and spurs.
3. **"Operating sessions have themes of a general era and part of the country."** Occasionally have northern or western night to give members an excuse to run trains that may have been hidden away in a drawer.
4. **"Know when to get out of the way."** Mr. Ross states that in the earlier days the Club would decide what area of the layout would be open for construction or repairs and all other areas of the layout where off limits for any work. This was done to concentrate the manpower and speed up the process. In reality individuals not interested in the area to be worked on just quit working on the layout. Now any section of the layout can be worked. The layout was divided into sections and each section has a volunteer captain. The captain works with the Engineering Committee to develop final plans. Once approved the captain and his group are free to use their favorite techniques to complete the work.
5. **"Set the quality target before a project is begun."** Use current examples on the layout, how

to articles, pictures and teaching programs to improve the groups skills. Mr. Ross says "Not everything can be a contest winner, but almost anyone can get good results when they have something tangible to shot for."

6. **"Don't rush a project to finish it for the open house."** If you don't take the time to do the planning, construction and landscaping correctly the first time you will have to live with it a long time. It is hard to tear out work you have just finished when it's operational even though you are not happy with the finish product. It's even harder when you are remodeling a building and just starting a large new layout.
7. **"Time is money."** Mr. Ross is talking about time versus money. The need to determine how your club can balance the two. The newer high tech, maintenance-free equipment and ready-built office buildings or the lower cost of make your own. He says " With the ready-to-run aspects of model railroading growing all the time, we can concentrate on the aspects of the hobby we enjoy the most and throw dollars at those we don't."
8. **"Don't put up with trouble makers."** Quoting the article "don't put up with trouble makers. We are all lucky to enjoy a hobby that attracts such agreeable and talented people. Having said that, some people just do not have the personality to function in a club environment. It is difficult to tell someone that their company is no longer appreciated, but when you start losing good members, you will wish you had acted earlier."
9. **"Avoid the entropy trap."** (Process of degradation) Avoid this by making plans that keep the number of members that are building and repairing in line with those running trains. The trap is many more want to run than repair. Work out a reliable and fair system that rewards those working with running time. Mr. Ross suggests several different systems.
10. **"Plan maintenance blitzes."** Real railroads do this now. They will shut down an entire division and reroute all traffic to do major building projects or repairs in a short period of time. They will also bring in all available maintenance personnel to speed up the job. These blitzes can also be helpful at the model train level.

This is just food for thought.
Does CMR&HA need to develop its own Practices for a Successful Club. If so, would we want to adopt some of the above mentioned practices or create ones that better suite our clubs needs.

If you would like a copy of this article, contact Bruce or myself.

Minutes Regular Meeting Central Railway Museum

4-September 2008

Jim Reece opened the meeting at 7:15PM. Treasurer Howard Garner indicates that our next big expense will be electrical supplied for the layout and that a budget of approximately \$12k layout supplies is foreseeable.

Insurance:

The possibility of obtaining personal property insurance was again discussed. Glenn Nasworthy indicates that our current insurer would insure a minimum of \$15k for this purpose. The possibility of requiring NRMA membership for all club members, putting us under the NMRA policy, was also discussed. Mr. Nasworthy will report on our options in this regard.

Central Railway Museum

Material costs of \$1902 were reported for August and payment received for July. Reimbursements to date total \$8691. Mr. Reece estimates, very conservatively, that we have invested 1338 hours in labor.

Jim Reece has the carpet and will bring it to the house. We will also need to request a truck from the city for trash so that stuff can be cleaned out. The possibility of installing new appliances was also discussed, but member Rob Seel recommended against a stove top in the final plan, as a commercial installation requires a fire suppression hood (~\$5000). Appliances will be lined up along the interior wall of the kitchen, leaving counter space on the exterior wall.

Richard Nichols indicated that his crew would install the security system within one week and that each member could have an individual code. Howard Garner offered to fabricate a plaque for the call list to post by the door.

Central Railway Festival

Ron Keith indicates that police and fire departments will close Hwy. 93 on Friday and Saturday and part of Church St. on Saturday. Our own committee will need to arrange the opening. We have committed to man the caboose during the festival with an individual who can explain its history. The city has arranged to lease the NS owned section of the spur line from NS. The City already leases parking along Main St. from NS and this will be added to the lease. Our task will be to put some track down next year. Mac McMillin asked that we request a donation of track material from NS. Mr. Keith will ask for city assistance in grading the right-of-way. Mr. Reece asked that someone knowledgeable about the caboose write a summary of its history. Dale Reynolds proposed the idea of a "backup whistle" for the caboose, which was generally well received.

Portable Layout

Jim McInnis indicates that work on the portable layout

is done and that efforts will be diverted to the museum. Mrs. Rumpy is said to be OK with the idea of the layout remaining in her basement and club members coming in the evening to work on it.

Library:

It was agreed that we should cancel our reservation for meeting at the library.

Respectively Submitted

Brian d'Entremont Stationmaster

Regular Meeting Central Railway Museum 2-October 2008

CEO Jim Reese opened the meeting with 13 members and no guests in attendance.

Upcoming elections

At the November meeting, we will need nominate members for division superintendent (Vice President). The election will be conducted at the December meeting.

Train Show

Bruce Gathman is getting mailings and publications organized for the spring train show.

Central Railway Festival

The committee has no updates. Bob Folsom indicates that the Clemson Area Chamber of Commerce has a new president, Chris Hardy.

501c3 Tax Status

Howard Garner filed the application before he left and had to submit a revised articles of association with the application. When CRM&HA was absorbed by and assumed control of CRM&HA, Inc., the latter had no articles of association, leaving us with none. Mr. Garner proposes reinstating the old CRM&HA articles of association, last revised in 2006, with two changes. First, the mission now includes maintaining a museum and second, the plan of distribution of assets, in the event of club dissolution, has been modified to comply with IRS 501c3-tax status. If approved, the 501c3 status is effective on the date of submission. Under the new tax status, the club must make minor changes to accounting. Mr. Garner indicates that our accounting is compliant with regulations, except that we can no longer spend club funds on the Christmas party or picnic.

The Portable Layout

There was additional discussion of the possibility of buying member Jim McInnis's trailer for around \$4000. The club could park the trailer outside the museum for use during the layout construction, and would probably be able to park the trailer on-site permanently, but

would need additional approval from the city. The trailer would serve to store and move the portable layout to events and could be used to house the table saw and other dirty work during construction. An informal vote was taken indicating unanimous approval of this idea by the present members, but no action was taken due to the absence of Mr. McInnis.

Central Railway Museum

After-meetings programs for November and December will be layout work sessions.

Richard Nichols was thanked for his donation of the security system and indicated that he will donate a projector soon. The security system is off and will remain off until proper arrangements are made. There was again discussion of who will have codes (and keys) and there again seemed to generally agreement, but no official action, confirming access for all regular members. There was discussion of who will be on the call list for alarms. Brian d'Entremont and Bob Folsom volunteered. Phillip from the city has volunteered to be on the backup list. Jim Reece agreed to inquire about whether the fire department or police would get involved. Richard Nichols agreed to call the Phone Company and get a price for service so that we could have centralized monitoring of the system.

Ron Keith indicates that our "original punch list is well, well worked over" and that we need to focus on tearing out the kitchen and rewiring the storage room. It was proposed that hardwood floor in front should be cleaned so that we can assess its condition. Glenn Nasworthy offered to buy mini blinds for the meeting room.

Jim Reece proposed forming an overall layout planning committee. These should be people with experience who can plan the final design and:

- 1) Make decisions about the layout
- 2) Set quality standards for construction and rolling stock
- 3) Determine and follow purchasing procedures
- 4) Keep records and give a monthly report on expenditures.

Howard Garner agreed to chair the committee. Bruce Gathman, Bob Folsom, Richard Nichols, and Ron Keith will also serve.

Richard Nichols commented on the width of shelves in the meeting room. He indicates that we can fit 35 people into the room with simple folding chairs, including those at the table, following proper guidelines for spacing and aisle space. He believes that we are limited to 5 chairs across in 6 rows. Others indicated that higher peak capacity might be possible. There was discussion that perhaps the Allen family (former owners of the house) would be interested in donating

the money for chairs.

Other business

Bob Folsom offered to host the Christmas party. It was agreed that we would chip in \$5 per head towards his expenses. Jim Reece was also acknowledged for having donated a table for the meeting room.

Bob Folsom indicated that he had canceled our reservation at the library. Brian d'Entremont offered to write a letter of thanks for our use of the room.

Respectively Submitted

Brian d'Entremont Stationmaster

Show Flyer By Bruce Gathman

Our show flyer is posted on the web. It is on the following Apple Valley site.
http://www.avmrc.com/prototype_and_model_railroad_news.html

Large Scale Division Super Report By Bob Hanson

[The Worlds Longest Model Train!](#)

EMPIRE BUILDER RAILROAD DESIGNS has for some time been trying to bring home to the USA the GUINNESS BOOK OF WORLD RECORD for the WORLDS LONGEST MODEL TRAIN. A LIVE VIDEO IS ONLINE.
<http://www.ricktherailroadguy.com/longesttrainvid.html>
Worlds longest model train attempt and run Friday 10/10 set train up and test sets
Saturday 10/11
6am crew call.
8am engine and crew test.
12pm lunch.
1:30 PM first run start.
1:54 PM official run start and complete 2 laps of the D R V & E.
Train needs to be a min, of 1275 feet.
Train needs to move in one piece a min of 1820 feet (10 scale miles).
Crew members will be able to camp on site 10/10-10/13 a hobo stew and dinner Saturday night to be welcomed in the "jungle" bring something to share (i.e.) food, drink, a song, poem, story, anything to make one other Bo' happy.
Sunday 10/12 try again to make it longer, and longer and longer, and longer.
Monday 10/13 put the train away

I've Got a Hammer By Dennis Moriarty From January/February 1999

In the last newsletter I talked about using Homosote for roadbed. I saw a question from a reader in the last

Model Railroader Magazine asking where to obtain Homosote. MR's response was to call Homosote for a supplier and that there is a new product that is more stable than Homosote and where it could be obtained. The product is Micore from US Gypsum Corp. MR's response was that Homosote was mainly used because it was easy to put nails in it and that it has some sound deadening properties.

I mentioned in the inside/out article that I don't like Homosote for track bed because it is messy to work with and does not have a consistent thickness. It also swells with humidity and temperature changes. Using plywood solves the problem, but it is hard to put little nails in plywood except with a small hammer.

I received an ad in the mail from Micro Mark the small tool specialists; they sell four styles of lightweight miniature hammers for delicate work. Their phone number is 1 -(800) 225-1066. I weighed my hammer and it is 2 oz's. Micro's 2 -oz hammer sells for \$4.95 and is item # 22119. They recommend their item # 22102 1 ½ -oz hammer for model RR spikes and it costs \$5.25.

For those of you that still want to use Homosote, you can get it ready cut from Homa-bed (510) 614-7629.

ONE OF MAC MCMILLIN'S UNUSUAL HOBBIES By Bryan Sosebee and Mac McMillin

From July/August 1999

The dictionary defines a hobby as something a person enjoys doing in their spare time. For example, guys may list among their hobbies such activities as golfing, fishing, hunting, or sports. One of Mac McMillin's hobbies is restoring and operating railroad motorcars.

What is a railroad motorcar?

Mac explained it this way. Most people are familiar with the railroad handcar, where the track maintenance crew had to pump a handle on the car to make it go down the track. A motorcar is basically a handcar to which a gasoline engine has been added so that the crew wouldn't have to pump the car. The crews' foremen discovered years ago that they couldn't get much track maintenance work out of the crew if they arrived at the work site tired and worn out from pumping the handcar for 10 miles. In the early days, the foremen, out of their own funds, bought gasoline engines so they could get adequate work out of their crews. Later, the foremen were able to convince railroad management to buy motorcars and the handcars gradually disappeared from the scene.

How was a railroad maintained in the early days?

A railroad line was divided into sections of approximately 10 to 15 miles in length. Each section had its own maintenance crew consisting of a foreman and a number of laborers who were responsible for maintaining the track and signals.

What types of motorcars were used?

Basically, there are three types of motorcars: inspection cars, section cars, and gang cars.

An inspection car, or "track speeder," is the smallest of the three and was designed to carry from two to four people and a few small tools. Track that was heavily used required daily inspections. The inspection crew would be on the lookout for anything that might be wrong with the track or signals such as loose bolts, missing spikes, broken rails, burned-out signal bulbs, and objects on the track. This crew made some minor repairs but they mainly noted the location of problems and reported them upon completion of the inspection. Inspection cars typically had single-cylinder, two-cycle, gasoline engines of 5 to 8 horsepower but could run as fast as 50 MPH if required. These cars were lightweight, weighing around 650 pounds, and could be set on and off the track by the two-man crew. The two-cycle engine required fuel that was a mixture of gasoline and motor oil and, since it was designed to burn the oil, gray smoke was produced during operation. The engine would run equally well in either direction. To reverse the car, the engine was hand-cranked in the opposite direction after resetting the ignition timing. A wide canvas belt connected the engine pulley to the pulley on the rear axle.

Section cars were larger than inspection cars and could carry four people with ease, plus a few small tools and small track materials. Some cars had enough power to pull a small trailer with additional tools and materials.

Gang cars were the largest motor cars and could carry the entire track gang, plus pull several small trailers. The gang consisted of up to 16 people who would perform major repairs and maintenance. Gang cars typically had gasoline engines with from four to eight cylinders, and typically had three or four-speed transmissions. A transfer case enabled the gang car to run equally well in either direction. This car would weigh a minimum of 2,000 pounds and was considerably more difficult to set on and off the track than an inspection car.

Are motorcars still used today on the railroads? Motorcars are very rarely used today. Instead, pickup trucks with retractable railroad wheels are presently used. These trucks are called "hy-railers." The transition from motorcars to hy-railers has taken about 25 years and is largely complete today. During this transition many motorcars were scrapped, but a fair number were sold or given to the public. Public ownership of motor cars spawned a hobby that is continuing to grow, as the final motorcars are disposed of. No new motorcars are being produced.

Mac, do you own any motorcars?

Yes, I own two; both manufactured by Fairmont Railway Motors of Fairmont, Minnesota. I acquired my first car in 1991, a Model M19G inspection car built in the early 1960's for the Southern Railway. This car has items such as the roof, windshield, windshield wipers, headlight, and taillights, which were all, added

by the railroad after purchase. A friend in Columbia had bought it from Southern's motorcar shop in Charlotte and then decided to sell it after he didn't know what to do with it. He doubled his money when he sold it to me. I paid him \$400.00 and also got a spare engine in the deal.

My other car is a Model A4D1 gang car which I purchased from a logging equipment dealer in Greensboro, GA, in 1992. This car was built in 1967 and has the optional factory roof, windshields on both ends, windshield wipers, headlights and taillights, and car horns. I actually discovered four motorcars and four trailers at this location. The Duluth, Missabe, and Iron Range Railroad in Minnesota originally owned these cars and trailers. They were then acquired by the Coastal Plains Company, who had a contract to lay fiber optic cable along the railroad right-of-way in Georgia. When the contract was completed, the logging equipment dealer purchased the cars and trailers at an auction in Dublin, GA, planning to remove the towing pintle hooks and engines to use in some logging equipment he was building. He never got around to removing the engines and I bought all eight pieces for \$1,500.00. Then I moved them all to the South Carolina Railroad Museum near Winnsboro. I was hoping to get enough good parts from all four cars to build one good car as they were all in pretty rough shape. As it turned out, I got all four cars running and I sold three cars and three trailers to other members of the Museum. I sold them at my cost, as I was just glad to have the opportunity to preserve them. My A4 car is presently disassembled as I am doing a ground-up restoration on it. Some of the parts are presently being stored in my 40-foot long former Southern Railway boxcar, which is located at the Museum.

Mac, tell us about the railroad museum.

The South Carolina Railroad Museum is located near Winnsboro and owns not only about 50 different pieces of rolling stock (trains), but also owns an 11.5-mile track to operate the trains on. I am a member of the Museum. The Museum's people are all volunteers. Our only pay is the satisfaction of working on the equipment and knowing that we are preserving examples of trains for future generations. The Museum offers rides to the public on selected Saturdays between April and October. I served on their Board of Trustees for many years when I lived in Columbia. When I moved to Seneca, I resigned from the board, but I manage to get back for visits and work sessions several times per year. I take my M19 motorcar and run it on the Museum's track about every year. The Museum is allowing me to store my boxcar on their property, and in return I let them store some of their property in it. I'll save the details of the Museum and my involvement over the years for another article.

Are there any motorcar clubs and are you a member?

Yes, there are two national clubs and I am a member of each one. One is the Motor Car Collectors of

America (MCCA) and the other is the North American Railcar Operators' Association (NARCOA). These clubs work together and complement each other. They have established rulebooks and minimum safety standards. They set up and sponsor runs on railroads around the country. I, as a member, can pay a fee of about \$25.00 per run and can join about 25 other motorcar owners for a run of typically 50-100 miles on a real railroad. The closest NARCOA runs are on the Great Smoky Mountains Railroad in North Carolina and the Blue Ridge Scenic Railroad in north Georgia. Presently my M19 car is being upgraded to meet the stringent safety standards before being allowed on NARCOA runs. The upgrading involves adding brake lights and a warning horn. I will also have to get the NARCOA insurance before being allowed to participate. These clubs publish quarterly newsletters containing notices of upcoming runs, sources of spare parts, complete motorcars for sale, and write-ups of interesting runs around the country.

We have heard that you have a railroad track in your basement. Please tell us about it.

I discovered when I lived in Columbia that the flanges of the steel motorcar wheels made marks on the concrete floor in my garage. When we built our house in Seneca, railroad rails were imbedded in the floor of one bay of our four-bay basement garage. This way the motorcar runs on actual rails and does not mark the floor. The track extends out into the driveway and on into the woods for about 250 feet. I can take the motorcars on a short run at home to be sure the motorcar is operating properly before hauling it several hundred miles for a run.

How do you transport your motorcars?

A 16-foot tandem-axle trailer is used. This trailer has been modified with 4-inch channel iron serving as rails. Eleven-foot long ramps made of 6-inch channel iron connect the trailer to the track. An electric winch on the trailer easily pulls the motorcar up on the trailer. It is then tied down to the trailer and towed by my pickup truck.

What are the rules concerning operating your motorcar on railroads?

The only safe and legal way to operate is either on the Museum track as a member with permission or through a NARCOA or MCCA sponsored event. It is strictly illegal, not to mention extremely dangerous, to operate in any other fashion. For example, if I put my car on Norfolk Southern track in Seneca without permission, assuming a train didn't hit me, Norfolk Southern Railway could legally destroy my motorcar and send me to jail. I would never consider setting my motorcar on a track without permission. I would like to obtain permission to run on the Pickens Railroad between Easley and Pickens. The Norfolk Southern track between Seneca and West Union would also be a nice run. In the meantime, it's easier to participate in an official MCCA or NARCOA sponsored run.

Unlike trains, motorcars do not have the right-of-way at highway crossings. Motorcars must stop at all crossings and wait for the highway traffic to clear before proceeding. Motorcars have insulated wheels, which do not activate the automatic flashing lights and gates at highway crossings. MCCA and NARCOA runs employ people who stop traffic by flagging the crossing to allow the 25 or so cars to cross quickly. Mac, do you hunt, fish, play golf, or participate in sports?

Yes, I've fished twice, played golf twice, and shot lots of squirrels (which were chewing the wood on my house in Columbia) with a pellet gun. I've also played (when I was younger) on the church volleyball team. I haven't had much time available lately to continue with those activities.

The above article reprinted by permission of Square D Company. This article originally appeared in the summer, 1999 edition of Details, and the in-house publication of the Square D Seneca, SC Plant.

**The Chunnel –
The Story of the English Channel Tunnel
A Book Report by Don Rumer**

From November/December 2003

I recently read a book entitled "**The Chunnel**" written by Drew Fetherstone and published by Random House. Available at the Walhalla public library, the book tells the story of the financing, engineering and construction of the English Channel Tunnel or, as it's commonly known as, the Chunnel. The Chunnel is actually a 31-mile long set of three tunnels that stretch across the Dover Straights from a point near Dover, England to Calais, France. The two larger tunnels, containing standard gauge railroad tracks, provide rail service, one in each direction. The third smaller tunnel is a service tunnel linking the other two. Rail shuttle service is provided regularly for automobiles, trucks and buses. Eurostar trains utilize the Chunnel to connect London to Paris and, now, Brussels. And rail freight service also utilizes it.

The dream of connecting England with the continent of Europe goes back for centuries. Some preliminary boring was actually performed in the late 1800's but it wasn't until after the Second World War that a serious proposal was made. Soil samples were taken across the Channel, drawings created and discussions between governments were begun. Politics and financing stalled the effort.

By the early 1980's interest was sparked again. Margaret Thatcher's Conservative government, initially opposed to such a project, decided Britain needed to be more closely tied with the rest of Europe. A cross channel link would be both the physical and psychological connection needed. However, as far as Britain was concerned, Thatcher insisted the effort be privately financed. A substantial amount of the book is devoted to the efforts to drum up and maintain both popular and financial support for this mammoth project.

While the British were hesitant, the French were enthused. The author attributes several reasons for this. The French public is, typically, turned on by large technical projects so popular support was there. Not so with the Brits who were suspicious of technology and still harbored an irrational fear of invasion from Continental Europe. Also, the Socialist government of French President Mitterrand was looking for a way to boost employment in the economically depressed areas near Calais. Perhaps most significant, the French banks were nationalized so financing was not nearly the problem it was with the British.

Actually, an exclusive rail tunnel was not the favorite of either government. Thatcher disliked rail service and its associated subsidies so the British preferred a dubious proposal to build a combination rail and motor vehicle tunnel. The French preferred a proposal for a series of five suspension bridges, each larger than any previously built suspension bridge. These would carry both motor vehicles and rail traffic. After the usual round of consultant evaluations, the more economical and practical rail tunnel was finally chosen.

The author discusses in detail the haggling between the banks, contractors and the company set up to direct the project. Anyone who has ever been involved in contract negotiation will appreciate the corporate politics involved. The inevitable construction delays and financial requests resulted in constant finger pointing and routine management changeovers. Few in management who began the project were around at the completion. The company set up to run the project, called Eurotunnel, consisted of both British and French engineers and managers. Same also for the consortium of Contractors. The British and French construction crews, however, pretty much worked independently. The British bored east toward the Continent while the French moved west toward Britain.

The author emphasizes the difference in approach between the British and French. The British were less into documentation, training and planning. They depended on experienced Construction personnel. The British engineers were hands-on types who worked right with the Construction crews in the tunnels. The French, on the other hand, created detailed documents, plans and procedures. Unemployed workers in the Calais area were trained for the construction work. The French engineers did their engineering from afar. The French equipment, according to the author, was of significantly better quality. Their tunnel boring machines were better designed than those of the British. An executive from one of the contractors, Bechtel, described the British works as something out of Charles Dickens and the French as something out of Jules Verne.

Ironically, the two seemed to take just the opposite position on safety. No amount of redundancy could satisfy the British safety board. The danger of a tunnel fire, hyped up by Channel ferry owners, became an obsession and added significantly to costs. Later

events, however, tended to justify the concern.

The Chunnel project was completed in 1993.

Maximum speed for trains within the tunnel was 100 mph. Total costs were around \$11 billion. Not exactly a bargain but probably significantly less than either of the proposals for a combination motor vehicle/rail crossing. Three years after completion a serious fire, allegedly the result of sabotage during a labor strike shut down the tunnel for months. No one was killed but safety procedures put in place were not followed. The blame was eventually placed on the decision by the British not to use experienced railroad personnel to operate their section of the tunnel.

In summary, **The Chunnel** provides a detailed description of the problems and conflicts associated with what was one of the largest railroad construction project of the Twentieth century.

New Orleans via Amtrak By Don Rumer

From March/April 2004

In November of 2003 my wife and I celebrated our thirty-first wedding anniversary by taking the train to New Orleans and spending three days in this city. This was our first visit and it turned out to be an ideal time to go. The temperature and humidity were comfortable and we only had rain early one morning. I used to think that San Francisco was the most unique and interesting city in the United States. Now I've changed my mind and consider that New Orleans deserves that distinction.

We stayed at a bed and breakfast, which was a renovated 1850 mansion just out side of the French Quarter. The breakfast was delicious, the price quite reasonable and the location really convenient. We took cabs in the evening but walked and used public transportation during the day. We rode the St. Charles Avenue streetcar several times, as we toured the downtown (the old American Quarter), the garden district and the University section. Streetcars run about every 8 minutes twenty-four hours a day. Beside the St. Charles Avenue line, New Orleans has a riverfront line, a brand new Canal Street line (which replaced a bus!) and is considering a new streetcar line in an area of Frenchtown where the famous *Streetcar Named Desire* play takes place. Let's face it, a town that cherishes its streetcars has to be great!

Regarding the train trip down, we parked at the Clemson station and got the Crescent around 6:30 AM just a few minutes late. Beyond Atlanta, the trip is primarily through pastoral lands and pine forests. You do get a glimpse of the mountains in north Georgia and Alabama. Of course, we did go through industrial areas, shantytowns (but not many) and the large cities of Atlanta and Birmingham. But for a train buff, it's all interesting isn't it? We passed the Honda plant in Alabama but the view was mostly blocked by auto

carrier rail cars. Passed innumerable freights and the North bound Crescent between Birmingham and Tuscaloosa. We arrived in New Orleans around 9:30 PM about 20 minutes late.

The return train left New Orleans around 7:30 AM. This was the most pleasant part of the trip. The coach was clean, the crew fresh and enthused and the food was definitely better. As we left New Orleans, we got a daylight view of Lake Pontchartrain. We arrived in Clemson around 11PM about 40 minutes late. Would we visit New Orleans again? Definitely. You can't begin to do the place justice in just three days. Would we consider taking the train again? Sure! We're retired so don't mind the length of the trip. Actually, we rather enjoyed it. We spent most of the time looking at the world go by. And parking, arrival and departure times are quite convenient. No strip-searches, either.

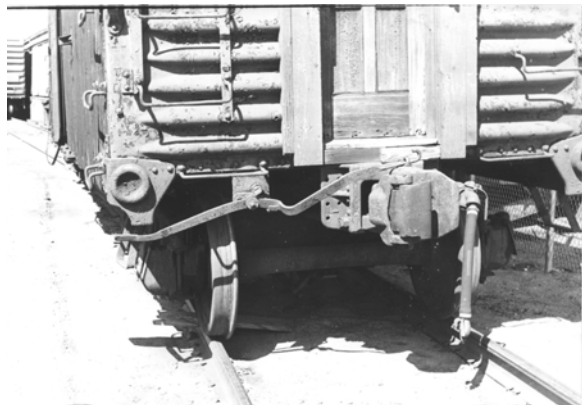
In December, our son came down from Baltimore on the Crescent to visit us right after Christmas and over New Years. Amtrak was on time both coming and going. And our son sat with a young lady all the way to Greenville where she got off. Train travel definitely has its advantages!

Staking Cars By Rodney Cowen

From September/October 2004

Whenver I had any spare time, after I was old enough to walk the mile from my home to the depot, I could usually be found there.

It wasn't long before I got to know all of the train crews and soon it was my privilege to either ride around on the locomotive or mingle with the train crew whenever they had work to do.



At North Falmouth, all cars were flown in. This was done by the cars to be dropped, being cut off the train. The engineer would then get the cars and engine up to speed. When he thought that he was going fast enough with the throttle still open, he would pull the Johnson bar just past dead center. Then fling it forward again. The little engine would leap ahead and the cars would go rolling safely into the team track.

That was done so the man riding the cars could pull the pin. And slow the cars enough so that the conductor could throw the switch between the cars and the engine.

But sometimes those cars with their brass bearings that all cars had at that time; wouldn't roll into clear and would stop on the switch. With one end half in the siding, and the other half on the main line.

Whenever this happened, the crew had to get out a pole that hung on hooks on all locomotives tenders. Then push the cars back with it for another try. This was called staking on both the New Haven and the Boston & Maine.

The stake was also used, when a crew of a northbound train wanted to get a car behind the engine from out of a track with only a switch on its south end.

The stake was usually about eight feet long, eight inches thick and tapered on both ends. It took two men to stake a car. One on each end of the stake to hold it against the stake pockets; that were on both the locomotive and car. When the engine started to slowly push the car, the men had to walk along with it to hold the stake in place.

After I grew up, I went to work for the Boston & Maine as a trainman and was sent out to Mechanville, New York. Where I found most of the men had been working there since before I was born.

One night while working on a switcher, the yardmaster sent us over to the stock pens to get a car of livestock. When we arrived at the stock pens, we found cars spotted at all five chutes. The car that we wanted was at the chute at the lower end of the track.

Now we had to get that car ahead of the engine to place it on the rear of a train.

So, rather than pull the whole track and then having to re-spot the other cars back at the chutes. The conductor decided to stake out the car through the switch on the lower end of the track.

The other brakeman and I unhooked the stake, carried it over and held it in place while the engine came up and put pressure on it. The conductor then told us to leave the stake, as he was afraid that we might get hurt.

He then motioned the engineer ahead. The car began to move. And then things began to happen. The stake, with no one to hold it in place, fell down and lodged against the end of a tie. The other end of the stake still in the pocket on the tender caused one side of the tender to rise up about two feet. Then the stake broke in the middle and the tender fell back down with one terrible clang.

And I came to the conclusion that particular conductor had never seen a car staked before.

How I spent my Summer Vacation, or an Update on the Maine 2-Footers By Dale Reynolds

From November/December 2004

There were five 2' gauge common carrier railroads in Maine. The first began in 1879 and last quit in 1943. Almost all of the rolling stock that was not scrapped went to South Carver, Mass. including the Edaville RR, which ran from 1946 to 1991. By then, the popularity of this small equipment, especially in Maine, spawned three separate events. In Portland, a group obtained a loan and purchased the Edaville engines and cars. They were brought to the Portland Locomotive Works site in 1992. They currently operate 1.5 miles of regauged track along the waterfront as the Maine Narrow Gauge RR. Also, a Railfan in Alna began to build a replica of the Wiscasset engine house of the 43 mile Wiscasset, Waterville, and Farmington Railway. He found an original engine and two freight cars stored in Connecticut, moving them to Alna and forming the WW&F Railway Museum. Thirdly, an historic society in Phillips saved two of the original buildings there and have now rebuilt 1/2 mile of track. This is the Sandy River and Rangeley Lakes Railroad. **Since I spend most of every August in Maine**, I visit these railroads annually. Here is an update for 2004. At the MNGRR, rebuilding of Forney #4 (18 ton, former Monson RR) was completed this spring and was running trains this summer. Since I visited during the week, diesel #1 (23 tons, 1949) powered my train, which did include a 1904 caboose. Since the weather was perfect, I rode in an open excursion coach built in 1958 at Edaville. The Portland railroad is the only daily operation in the summer. A scenic I-hour drive up Route 1 brings us to Wiscasset, and 5 miles north to the WW&F Railway Museum. This is a wonderful place with a 3-stall engine house, machine shop, 7-track yard, and replica freight and passenger depots. I have been a Life Member there since 2000, and work every summer to get grants for them from my former employer. This year two significant events occurred. The railroad was rebuilt to serve two replica depots on their original sites, 1.6 miles apart, via the original 1895 roadbed. In addition, Forney #10 (12 ton, Vulcan 1904, former Louisiana sugar plantation) celebrated its centennial after a total rebuilding over the last year. I also traced the entire 43 miles of right-of-way by car, winding up in Albion, where the original 2-story depot has been externally restored.

Another 2-hour drive northwest is Phillips, site of the SR&RL RR. They built a new 4-stall engine house on the site of an earlier roundhouse and expanded it recently, so all of their equipment is out of the weather, making the site much more attractive. The ride has not changed recently, behind a gasoline-powered Forney replica in an original 1894 coach.

It is a major problem for me to go a whole year between visits to Maine and these railroads.

Therefore, I plan to attend next April's work session on the WW&F. This semi-annual event typically draw about 75 of the groups 950 members and a lot of work, usually track laying, gets done in

the 3 or 4 days. The people and conditions are great, and it is lots more exercise than working on the G-gauge in the backyard in Pendleton.

HO HO HO

By Dennis Moriarty

From January/February 2005

I guess by the title of this article that I should have included it in the December issue. However, it does not have anything to do with Santa Clause. I was curious about what the letters HO in HO scale model trains stood for. After doing some research I found some interesting things about model railroad scales.

In the early years model railroads were mostly homemade and the scale was whatever the builder decided to use. Probably the earliest manufacturer of electric toy trains is a German company called Marklin. Previous to this period carpet trains were manufactured. These had wind up engines and were meant to be used on the floor. Marklin started it all in 1891 with the first standard track scales. Their first scales were called **1** (1/32), **2** (1/20), and **3** (1/16). These sold well and after a few years they decided to add a smaller scale and called it **0** (1/43.5 Eur or 1/48 US). This stood for zero the one size smaller than one. Today we call it "oh" scale.

The Bing and Basset-Lowke Co., designed by Henry Greenly started what they called table top trains in Britain. Their tooling was used for UK, US and German trains. They introduced even smaller trains than Marklin. They called the new scale half-0 or 1/87 scale. Hence we finally get the answer to our question – **HO stands for half-0 scale**. Which we call H-"oh" (HO) today, They also introduced an 00 scale which is 1/76 scale. 00 is the most popular scale in the UK while HO is the most popular in the US. In the US the first standards were set up by the formation of the NMRA in 1934.

By the way, there is a difference between scale and gauge. Scale is the relationship of the size to the original prototype train while gauge is the measurement between the rails of the track.

Some of the other popular scales have letters to define them.

G scale 1/22.5 (LGB) 1/32 (Gauge 1) was derived from the "G" in **Gross** which means big in German. Some people think it stands for G in Garden railway since it is often used for narrow gauge prototypes and uses the same track as Gauge 1.

S scale 1/64 was originally called H-1 because it was half the size of Gauge 1. The name S came from the "S" in **Sixty-fourth** from 1/64 scale.

N scale 1/148, which is the second most popular scale used today, got its name from the "N" in **Nine-**

millimeter track gauge. It was developed in the UK in the 1960's.

Z scale 1/200, which is almost our smallest scale, (Zm is smaller) was introduced in Germany by Marklin in 1972. It is sometimes called the cockroach scale. I have not been able to find the origin of the Z. Maybe the German name for cockroach starts with a z. If anyone knows, send me the information and I will report it in a future newsletter. PS no one did.

Railfanning the Clinchfield

By Dale Reynolds

From July/August 2005

The Blue Ridge Division of the CSX was the Carolina, Clinchfield and Ohio Railroad. It was known as the Clinchfield Railroad from 1924 until the merger forming the Seaboard System in 1982, becoming CSX in 1986. The Clinchfield was the last big railroad built in the U.S., completed in 1915. It was built through very rough and beautiful country, connecting the ACL in Spartanburg, SC with the SW Virginia coalfields and a northern connection to the C&O at Elkhorn City KY. Since steam shovels and other mechanized equipment were available, it was built to very modern standards, and has never been rebuilt. The majestic steel bridges are all original.

For a railroad of only 277 miles in length, it has attracted a disproportionate number of fans, in my case due to the scenic and remote location of the line and the very heavy-duty nature of its equipment. Each October, about 25 rail fans from all over the country gather for 5 days of informal railfanning of a portion of the railroad. The group is an offshoot of the Clinchfield's Yahoo list on the Internet.

In 2004, the north end of the line, where all of the coalmines are located, was the focus of the group. We began in Johnson City, TN on Wednesday evening, October 20, gathering to discuss the planned trip locations and showing slides and videos. Early Thursday morning, we took off in several vans, trucks, and cars for St. Paul, VA. Checking scanners, the route to see the most trains was set, and the rest of the day was spent heading north, ending at the lodge at Breaks Interstate Park. Along the way, we stopped at the Dante VA yard office for a list of the trains running in the area. The leaders of our group, serious local railfans and retired CSX employees, took us to several known photo spots where trains were shot, arranged a tour of the small Clinchfield museum at Elkhorn City, and led us on a hike to and across Pool Point Bridge. Having CSX retirees along smoothed the way regarding finding train locations and obtaining at least tacit permission to trespass on the railroad.

Friday we knew would be a rather slow day on the Clinchfield, due to a shortage of crews, so most of us traveled to Norton, VA where we checked with the Norfolk Southern yardmaster for a lineup of trains on

the former N&W line that day. NS was fairly slow too, but by mid-afternoon activity picked up in the area. We toured several active and abandoned tipples in the Norton area. The old Norfolk and Western had a major presence in the area, competing for coal traffic, which they forwarded to their huge export facility near Norfolk, and NS still does. We also followed some of the abandoned right of way of the Interstate Railroad, an independent short line that was purchased by Southern Railway in the 1960's.

On Saturday, we retraced part of the lines around Dante, as activity was heavy in the Clinchfield's coalfields again. Most Railfans left for home on Sunday morning. In 3 plus days, we saw probably 30 trains, some multiple times, in spectacular fall scenery in my favorite part of the eastern mountains, all only a 2 to 3 hour drive from Clemson. This year, the south end will be explored. The dates are October 20-23, open to all. Photos from the 2004 trip are the program for the July meeting.

To everyone who asked about our trip!

By Rob Seel

From July/August 2005

Well, we went up to Bryson City to see the Little Engine That Could. And, as it turned out, it was the Little Dummy (railroad term for a non-powered unit) that couldn't.

Since the Strasburg shops did such a great job building a live working 0-6-0 Thomas the Tank Engine that really did pull 2 loaded coaches, I was curious as to how they would accomplish a little 4-2-4 storybook character. Generally, locomotives depend upon weight on driver wheels for pulling power, which is why only having one pair of drive wheels has been impractical for over 120 years for anything but a self-propelled inspection engine.

The Little Blue Engine looked great – a perfect life-sized rendition from the book. It even had a clown in the cab. (No, it was not me.) The poor guy must have gone nuts by the end of the day, though, from the constant chorus of "I think I can, I think I can" substituting for what would normally be steam chuffing and snorting. The bell rang, and the cute, toot toot whistle was blown by compressed air. Little wisps of smoke spilled (but did not blast) out of the flower bouquet stack. But, the Little Engine was too quiet; three coaches behind the blue teakettle were a rumbling, snorting GP-7 diesel doing all of the work.

So, it turned out as I had suspected. The amusing irony of it all was how it relates to the current self-esteem pop psychology. The flashy little star of the show assumed all of the credit and was very proud of itself while doing nothing but going along for the ride. It was kind of like Tiny Tim trying out for the Boston

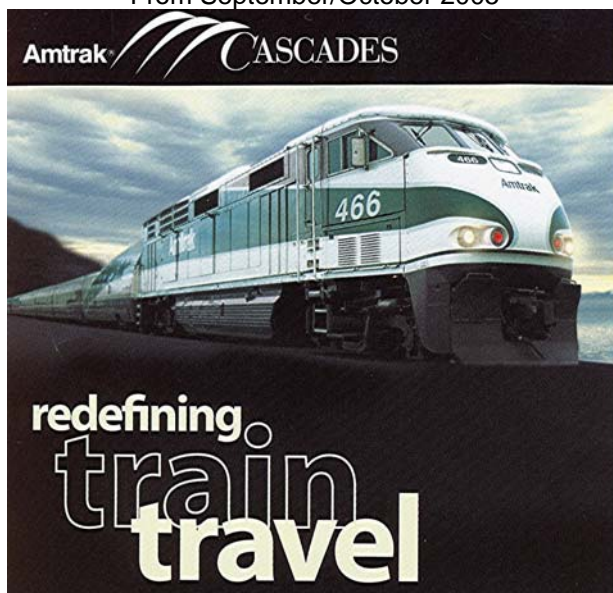
Celtics: determination will only get you so far when you are physically incapable of doing the work. Sure, we should keep trying and never give up – but if we have a remote chance in the first place we might get there for real!

Regardless, it was a beautiful day and we had a nice time together.



Riding the rails in Canada By Curt Ehmann --- Retired!

From September/October 2005



In May of 2004, Jeanne and I went on an Elder Hostel tour to Canada, something I had wanted to do for years, but just never got around to doing. Our particular tour was called **Canadian Explorer** and it took us by train across that country, from Montreal, on the French-speaking end, to Vancouver, on the Pacific coast. The program goal was to explore the history of Canada and the importance of railroads in the settlement of their western territories. Sounded good to me!

Elder Hostel programs call for all kinds of learning experiences. We heard lectures on the political and commercial development of the country, and visited many historic buildings in the cities, and natural wonders in the plains, forests and mountains of the

Western provinces. We learned that railroads did not really get started in Canada, until the United States connected the lines of the Central Pacific with those of the Union Pacific at Promontory Point.

Suddenly the Canadian Parliament saw that European immigrants were staying in the USA where the railroads could take them all the way to the West Coast. They needed those settlers badly, to populate their own vast provinces! So the Canadian government under-wrote the cost, and sustains it to this day.

Building their own cross-country lines close to their boundaries around the Great Lakes they made settlement in Canada an easy for settlers.

The physical aspects of the tour were excellent. We stayed for two nights each in very good hotels in Montreal, Toronto, Edmonton, Jasper, and Vancouver. We also had an 8-hour ride on a double-deck commuter train between Montreal and Toronto. But the best part was three full days and nights aboard the streamlined **VIA Rail Canada** as we traveled across the country.

Each couple had a compartment like the crack trains of yester-year, with big, double, bunk beds by night and 2 easy chairs during the day. There were 32 cars on our train, including 3 diners, 4 domes, and an observation car! Three diesel engines provided the power. These trains run each day—in both directions, so it was easy for us to catch another train after our 4-day stopover in the Jasper National Forest.

The dining cars were beautiful—just like I remembered from the 1940's and 50's! There were hostesses to seat us, at tables for four, with white tablecloths and napkins, and fresh flowers. There were printed menus with multiple choices, smiling waitresses—and excellent food! Memories revisited!

The dome cars were popular alternatives to our compartments during the day, with beautiful full-range windows up-stairs, and comfortable chairs and tables on the lower level where coffee and snacks were available. The favorite occupation was watching for a glimpse of a bear, moose, or elk!

All in all, the train ride was great! Smooth and quiet, we were barely aware of starts and stops, but as I lay in my bunk at night, I thought of the days of my youth, growing up in Central Iowa. My dad worked for the Chicago & North Western Railway, and that entitled him to an occasional train pass! In 1933 we took the train to the Chicago World's Fair. A few years later we moved to Chicago, and often traveled back to Iowa to visit relatives. Those were over-night rides, and my brother and I were thrilled to ride in those curtained upper bunks! And we thought it was keen being lulled to sleep by the gentle swaying of the cars, and the soft clickety-clack of the wheels on the tracks. I noticed the same swaying on this modern-day train, but the clickety-clack had turned into a bumpety-bump! How did that happen?

They gave us a half-hour rest stop at a town called **Sioux Lookout**. The main street was only a block long, so most of the passengers tried to walk the length of the train and still get back to their own cars before the whistle sounded. Few made it!

A highlight of the trip was our visit to a brand new—and yet unfinished **Canadian Railway Museum** in Delson, Quebec. The Director, Kevin Robinson opened the doors for an exclusive showing to our group. There were at least 12 tracks, separated by wide concrete platforms, and they were full of beautiful engines and rolling stock. That will be a first class museum soon, since they seem to have a very generous budget!

Since my brother lives near Portland, Oregon, I had arranged to take the American Amtrak down to visit for a few days before flying back home. It seemed a fitting ending to my Canadian train adventure, so Jeanne and I went down to the train station to catch yet another train. I found the Amtrak window, but it was unmanned. When I located the stationmaster, I learned that I needed to catch **a bus** outside and ride it all the way to Seattle, where I would go through customs, and **then board the Cascades Amtrak!**

It was a letdown from VIA, but it was a clean and roomy coach, with comfortable seats, so we could watch the beautiful coastal scenery all the way to Portland. Returning to reality, after an all-inclusive Elder Hostel Excursion, we went to the lunch car, where we **purchased** our soup and sandwich lunch, in something less than dining car luxury!



The Museum is at Delson, Quebec near Montreal.



Where are you, Jeanne?



Compartments are Nice!



Another Retiree



Dining Car Service is Great!



Look at the Scenery!

**Chapter One of Canoe Trip Log
Lake Miniss to Sioux Lookout Ontario
By F.C. Moriarty**

Ed. When Curt wrote the above article he mentioned Sioux Lookout Ontario. I remembered that my father and I visited there by train about 50 years ago on our way to a canoe trip. My dad always kept logs of our canoe trips and I found the chapter he wrote about Sioux Lookout and put it in the 2006 newsletter.

From January/February 2006

The train rolls smoothly across the long, monotonous miles between Toronto and Sioux Lookout. Darkness comes promptly as scheduled at 8:45 p.m., four hours and 45 minutes out of Toronto. It is good to ride in a Pullman again. Riding into the darkness if the Canadian North is also good, and it is comforting to think of the canoe and packs ahead in the baggage car. It has been many years; and now memories return of the sights, sounds, and smells of David Thompson's "Musk Rat Country".

The train wheels click in speeded tempo, and the sway of the cars indicates that we are well under way. Here, "up North" there are few railroad crossings or station stops to delay us.

We are headed northwest across the roof of Canada onto the Canadian Shield, where ancient pre-Cambrian granite protrudes from the earth and intermixes with green trees, blue-water lakes, great rivers, and the sky. A big country. So bitter in the winter and so lacking in soil that even today it remains a frontier barely touched by man, and then only by airplane or canoe, except for a few isolated spots along the two thin lines of railroad track by which the Canadian National and the Canadian Pacific connect the cultivated prairies of the west with the settled portions of the east.

These forces are working in me as, musing to the click of the rails, I remember past days and nights upon the Shield. My companion is my son, Dennis, with whom years earlier I had shared many miles of wilderness. Together we had explored the Minnesota-Ontario border areas and the Quetico, and farther to the north, we had run the Missinaibi from Mattice to Moosonee, the English west of Ear Falls, the Spanish, and on one memorable trip, had run from God's Lake to Shamattawa.

Dawn comes over Nakina and the Nipigon country, and we breakfast to a passing pageant of blue lakes and dark forest. The only towns are whistle stops--a few loggers' shacks and a scattering of Indian cabins. Nothing large enough to attract the attention of this long, sophisticated transcontinental train. At noon, we pass Collins, then Jacobs, Savant Lake, and finally at three in the afternoon arrive at Sioux Lookout. It looks smaller than I had remembered it, here on the shore of Pelican Lake.

They say that Sioux Lookout is so named because the marauding Sioux's would sometimes send war parties this far north, and the warriors would lie in wait upon the high bluff, which is now the town site. Since this was a natural crossroads for canoe travel, the Sioux must not have had to wait long for victims.

Our friend Ray is here to meet us as we step down into the North. All is well in the baggage car: one canoe, three packs, a tube of fishing rods, outboard motor, and paddles. With the help of Ray's pickup, we stop at a grocery for a few loaves of fresh bread, a dozen eggs, and a thick steak. Next, the matter of permits, then to the dock where a bush plane, the familiar Beaver, awaits us. We change into woods clothing in Ray's slab-pine office and feel more at ease. The clothing and the packs smell of past campfires.

Ray introduces our pilot, who is tying the canoe to one of the pontoons. The cabin is small, but, as usual, everything fits in with room to spare, and in a few minutes, we're off from the lake. It is a fine day: barometer high, temperature 65, scattered clouds, clear clean air, with visibility unlimited. Flying low, we pass over the long arms and deep bays of Lac Seul,

then across a group of emerald lakes to the Vermilion River. From a few hundred feet, we see several of the Vermilion rapids and spot a number of moose. At one point, we identify woodland caribou swimming across a small inlet.

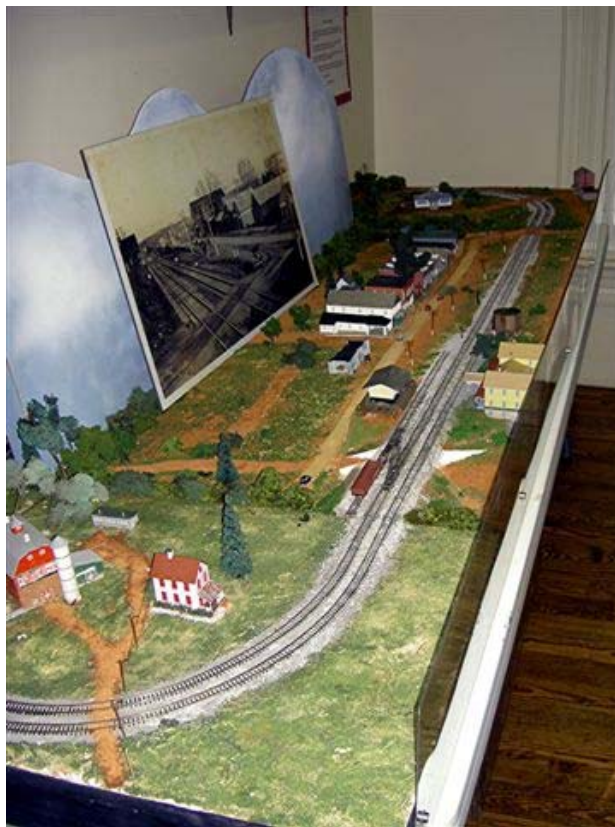
Spirit and Ghost Lakes, the latter with long arms in the shape of a cross; St. Raphael; Ragged Wood; Vincent; Arc; and finally, our destination, Miniss, with the big waters of Lac St. Joseph in the background. How much more remote these lakes will seem when we step from the airplane into our canoe.

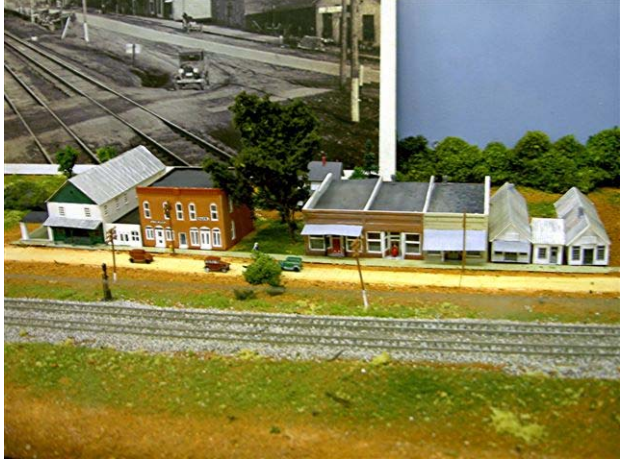
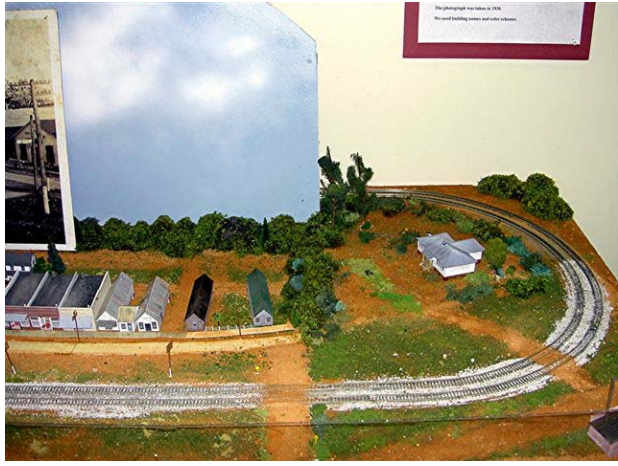
Circling, we choose a beach on the northwesterly end of Miniss. The Beaver noses down into a gentle north breeze and we coast forward until the pontoons make contact with the soft sand bottom. It is a small beach in a minor bay of a large lake whose shores are mostly granite.

We unload into the canoe and watch as the plane taxis far down the lake, turns, and, water spilling from its pontoons, passes directly over our heads. The roar diminishes to a gentle hum and then silence.

**Central History Museum
Photographs of the Model of Central
Constructed by CMR&HA Members
By Dennis Moriarty**

From November/December 2005







Tips

Coming from old newsletters

After painting plaster rock formations and highlighting, spray the area with a dilute solution of ink. An old window cleaner spray bottle works for this application. The ink flows into the crevices and tones down the bright colors so that they look more natural. The only source for ink I have found is the kind that is used for inkpads. Be sure to get the water-soluble kind. Experiment to get the proper concentration of ink to water.

Save pill bottles to store small parts and to mix small amounts of paint in. If the cap seals tightly you can store small left over color mixes for touch up and future use. Paint a little of the paint on the bottle cover to identify the color. When storing nails, screws, brads, train wheels, light bulbs etc., keep a roll of Scotch Tape available and tape one of the contents to the outside of the bottle to identify the contents.

If you drop small parts on a carpet you can find them by vacuuming them up. Just put a piece of nylon stocking over the suction nozzle with a rubber band and the parts will not be pulled into the vacuum.

Storing extension cords in the shop, garage, or train room can be a problem. If you hang them on a nail or hook there is a chance that the insulation on the cord can be damaged. If you put them in a box, they can get tangled. An easy solution is to obtain an empty clean metal paint can. Screw the bottom of the can to the wall and drape the extension cords over the can. If you have several cords, use more than one can. Since

the cans are round and have no sharp edges, your cords should last a lot longer. If you plan to store heavy 100-ft. cords, putting a wooden disk in the can over the bottom before you screw it to the wall will reinforce the thin metal of the can.

In the last issue, it was mentioned that to help pick up dropped parts, especially on a carpet, vacuum them up with a sock over the end of the hose to keep them from going into the vacuum cleaner. Another way to pick parts up, if they are made of steel, such as screws and nails is to take a plastic bag and turn it inside out over a magnet. Pick up the parts with the magnet then turn the bag right side out and all the parts will be in the bag. This method can be used when sorting parts also.

Keep a vinyl drain board in the shop, the flat kind with turned up edges that is meant to be placed next a sink. When going through a can of miscellaneous screws or nails etc., dump them on the drain board. After finding what you want bend the drain board and pour the unused parts back in the can. The drain boards can also be used to protect the workbench from paint and other materials.

When starting a new layout many things have to be considered. One of the most important is the selection of track curve radius. As the scale increases so must the track radius. Manufactures of locomotives and other rolling stock often will give the modeler the minimum track radius to use with their item. In general, make the radius as large as your layout size will allow. In addition, it is important to remember that track turnout's effect the radius that a train will have to transverse. The beginner often is confused by the meaning of #4 or #6 turnouts. #4 will only allow some locomotives to pass without derailing, mainly diesels. In most cases, #6 should be selected as a minimum.

Some liquid dishwasher soap comes in a plastic bottle with a cap that has a pull up feature. The empty bottle can be used to hold a mixture of 50 percent white glue and 50 percent water. In addition, a tablespoon or more of the dishwasher soap should be retained or added. The pull up top can be **adjusted to the proper position** to allow any amount of flow required. This mixture is usually used to glue the ballast between the RR ties. In HO scale, you pour in enough to fill the area between the tracks to the top. The wet glue then soaks down into the ballast and out between the ties to permanently attach the ballast. Short pieces of cut off 2X4 lumber can be dragged over the track using the end grain of the wood. This removes any excess glue off the rail tops. The end grain absorbs the glue. (In addition, this method can be used to remove excess paint off the rails tops.) The soap is required to make the mixture wet. If not added the wet glue bubbles on top of the ballast and will not soak in. Some adjustment of the quantity of soap may be required. A small amount of wet glue may be required outside of the ties depending on how much

passes out between the ties. Be sure you paint your rails and ties before applying the ballast.

When searching the Internet for information some of the dimensions are given in centimeters. Divide the centimeters by 2.54 to convert to inches

A simple but effect way to clean train engine wheels is to lay a piece of paper towel over the track. Soak the towel at the track with liquid track cleaner using a small paintbrush to apply the cleaner. Place the front half of the engine on the wet towel and the back half on the track for electrical contact. With the power on, let the front wheels rotate and move back and forth on the towel. The cleaning fluid will make the wheels sparkle. Turn the engine around, move the paper towel to a clean area, reapply-cleaning fluid and do the other half. You can do it on the layout or use a board with about two feet of track attached at the workbench for this purpose. I use a toy train transformer with alligator clips attached to power the track. It really works.

Model RR Scale Dimensions

Scale	1 Inch equals
G - 1/22.5	1'- 10.5"
O - 1/48	4'- 00"
S - 1/64	5'- 4"
HO- 1/87	7'- 3"
N - 1/160	13'- 4"
Z - 1/220	18'- 4"

Current Sensor Control of Trains and Accessories

By Dennis Moriarty

Rev. 6-10-2002

The Current Sensor Control System can use the location of one or more of the trains on the layout to automatically activate other functions. Such as:

1. Starting or stopping other trains
2. Activation of signal or other lights
3. Changing the polarity of the track to change to forward or reverse
4. Changing the polarity of the track so that trains can run both directions on the same track.
5. Activation of track turnouts
6. Activation of road crossing gates
7. Activation of sound systems
8. Activation of other accessories
9. Automation of the main line leaving more time to manually operate yards, sidings etc.
10. It can provide light indication on the cab system map to tell which blocks are occupied.

The Advantages of the Current Sensor Approach

1. The system uses existing wires to the track blocks so it doesn't require extra wires except to accessories.

2. Parts and other materials are easy to obtain at local stores. The parts are inexpensive locally and are even less expensive if obtained from surplus stores.

3. The system is very flexible and can be used for many things.

How does it work?

(Note: With this, as with any electrical system, follow all established safety rules. Such as fuses, circuit breakers, proper insulation etc. Electrical safety information is available at Radio Shack.)

1. Many model track setups have blocks in the track. A block is an electrically isolated section of track. An isolator can be a plastic spacer in the track or simply an air gap. Wires are run to the block to provide power. A switch is usually provided at the cab (control center) so that the block can be shut off to stop and start trains manually.

2. The current sensors are located at the cab on the wires to the blocks. To make mounting easy they can be soldered to the block switches.

3. When there is no train on the block there is no current in the wire because there is an open circuit between the two tracks.

4. When the train reaches the block it acts like a switch closing the circuit and current is then flowing through the wire to the block.

5. Since the current sensor controllers are at the cab where all the block wires terminate from the entire train board, it is easy to use it to control other trains in different blocks.

What is a "Current Sensor Controller"?

1. The current sensor consists of three diodes wired in series and placed in the wire to the block. A diode has a .6 to .7 volt drop across it. Since there are three diodes the voltage drop is about 2 volts. A 2-volt light bulb (I use Christmas tree bulbs) can be wired across the 3 diodes and it will not burn out even at maximum voltage to the train. Of course there must be at least 2 volts on the wire to get the bulb to light. LED bulbs also work great at this voltage. Inferred LED's can be used also. *This becomes the current sensor because when there is current flowing the light bulb will light.* (Note: Two diodes can be used if the more expensive 1.5volt light bulbs are used.

2. Diodes are also used for rectifiers, which means they can be used to change AC current to DC current. It also means that they only allow current to flow in one direction. So if we used the current sensor as indicated in the paragraph above, the train engine would only go in one direction. This is easily solved by placing three more diodes in the opposite direction and in parallel with the other three diodes. Now current can flow in both directions and we can back up our train. See the attached sketch to see how it goes together.

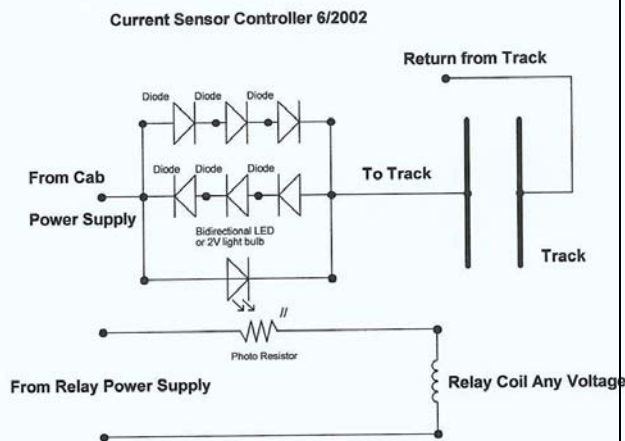
3. Incandescent bulbs are bi-directional so will work with no problems. Because LED's are diodes, the LED bulbs will only light when the current is one direction. A red LED can be wired in one direction and a green

LED can be wired in the opposite or a special bi-directional LED can be purchased that will light in both forward or reverse.

Note: The above circuit is similar to the circuit used in some engines between the wheels and the motor to provide constant lighting in the engine.

4. What can we do with this light source? If we have a map of our train layout in the cab we can locate an on/off switch on the map at each block. We can solder a current sensor on each switch and run a Bi-directional LED up next to it so by looking at the map we can see which blocks are occupied.

5. We can also solder an incandescent light bulb in parallel with the LED and mount it under the Map on the blocks where we want our train to control functions. (Only use one incandescent bulb per current sensor because if you put more than one on a current sensor the current will start to flow through the bulbs and not the diodes). To use the current sensor for control, simply put one or more cadmium-sulfide photocells next to the light bulb. (Radio Shack cat. no. 276-1657 or equal). (Note: I have had problems with some of the smaller photocells. Try to get a package with the larger ones about 1/2 inch across). The photocell is a light sensitive resistor and is also called a photo resistor. When the bulb lights, the photocell drops from about 1,000,000 ohms to about 100 ohms. You can wire the photocell in series with any light duty relay coil and the relay will close when the bulb lights. We now have a Current Sensor Controller.



6. Some last points about the sensor: Since there is a 2-volt voltage drop across it, two additional volts must be added to make the train go the same speed. Also if sensors are not placed on all the blocks the train will see a 2-volt difference between blocks making it speed up and slow down. Because there is no electrical connection between the train block wire and the relay coil wire (activated by light) relay coils of any voltage from 6v to 28volts can be used. I would not recommend relay coils of higher voltage for safety reasons.

7. The actual voltage to operate the relay coil will vary because of the photocell resistance. I use a train

transformer to find a voltage that activates the relay cleanly. It is interesting to note that when using a 6 volt relay, the photocell must be touching the bulb next to the filament to activate the relay; at 28 volts the photocell is so sensitive that the ceiling lights in the room will activate the relay. The bulb and photocell must be enclosed in a dark box or taped with black tape to keep extraneous light out or the relay will stay closed. (Short pieces of plastic pipe taped at the ends make great boxes.)

Some control suggestions: (for all suggestions below you can wire an electrical switch across the relay contacts for manual control)

1. One train controls another train. For example we may want to start a train in the block ahead "A" when our train hits the block behind "B". Simply put a current sensor controller in block "B". Run the wire to block "A" through the relay contact in the block "B" controller. When our train hits block "B" the train in block "A" starts. Our train then rolls into block "A" and the light bulb in block "B" shuts off so the relay opens and our train stops in block "A". The other train goes around enters block "B" and the whole process starts over again. This is useful when running two trains of different speeds on a circle or for starting trains in passing sidings or return loops. It can also be used to keep trains from crashing on figure 8 layouts. Remember to make the track in block "B" long enough so that the train in block "A" clears block "A" before the second train enters it. For HO scale block "A" should be about 3 feet long. Block "B" should be long enough so that the cars in front have a chance to clear before they are hit in the rear. (Or you could control from block "C" instead of "B").

2. You can use it for road crossing gates, bells and flashing lights by being sure that the road crossing is in the middle of a block. Put a current sensor controller on that block and when the train enters the block the relay will close which can be wired to any or all of the above items. Just be sure the block track insulators are located where you want the train to be when the gates come down and are far enough away that the train cars clear the block when the gates come up.

3. Trains can be made to reverse because using double pole double throw relays can change the polarity of the track. For example this can be used to make a street car go back and forth on a single track. Current sensor controllers are placed at short blocks at each end of the track line but instead of using conventional spring return relays a double pole double throw latching relay is used. A latching relay has two coils in it. When you power one coil it pulls the contacts one way and when you put power on the other coil it pulls the contacts back. So when the street car enters the block on one end the current sensor activates one coil and when it enters the block on the other end the current sensor at that end activates the other coil in the same relay and the streetcar returns.

Timers could be used at each end to stop the car at stations.

4. Have trains go from one return loop to another so that the trains go back and forth on one track. Since I am using "HO scale" which uses DC current, the polarity of the track between the loops must be changed or the train cannot return. I do this by controlling one latching relay from the back of both loops. I also have a block in each return loop set up as in paragraph 1. Each return loop has three blocks in it. When a train enters the loop (always in the same direction) it enters block "C" which allows the train with all its cars to clear the track turn out. At block "B" it throws the latching relay which changes the polarity of the track between loops. A second photocell on the current sensor "B" light bulb closes a conventional spring activated relay and starts the train parked in block, "A" which takes off for the other loop. The controlling train enters block "A" and stops because it is no longer on block "B" the block that holds the conventional relay closed. When the other train goes into the loop at the other end the same thing happens at that end and a train returns from that loop enters this loop and the process starts all over again. Three trains running automatically from loop to loop. By adding two passing tracks between the loops I actually have 7 trains running automatically with no problems of over taking each other because the trains are controlling the system by where they are.

5. Controlling track turnouts. As an example, in paragraph 4 when the train hits block "B" it also activates a latching relay set up to throw the track turnouts at the return loops and the passing tracks. This works fine with motor operated track turnouts but will keep the power on full time to solenoid track switch activators which will burn them out. I use the solenoid activators but use a capacitance discharge circuit to keep from burning up the solenoids.

6. The operation of train signal lights. The relay contacts can be used as desired to activate them. The current sensor controller on the track switch can also activate switch signals if desired. One neat trick in the example of the return loops above is to add another latching relay at block "B" and run two wires under the board near the track main line. Power the wires with two volts and use the latching relay to change the polarity as the trains change directions. For signals red over green at tunnels, switches etc. use Red and Green LED's any where along the track wired down to the 2 volt line, being sure to line up the polarity of the LED's to match the desired color. Of course they will change as the polarity of the 2volt wires change.

7. The activation of accessories: Your imagination can be used to full advantage. A few examples: have an out house door open as the train goes by, activate town or farm sounds, automate mining cars, water towers, or building lights, or have pedestrians wave to

the passing train. Anything you would want to happen as the train passes by.

Summary

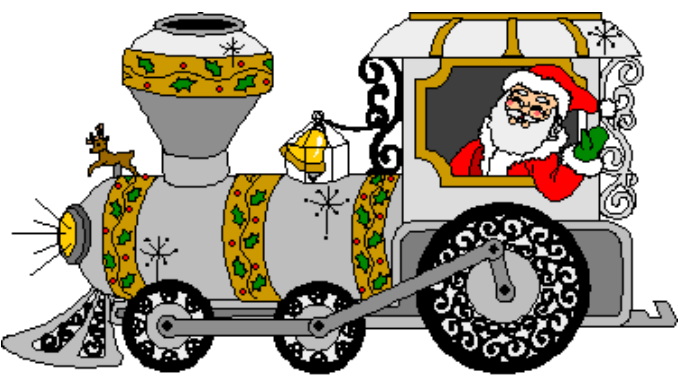
Use the trains location to activate current sensors where you want to have an LED or light and current sensor controllers where you need to have relay contacts to control other functions. A current sensor controller is simply 6 diodes, a light bulb, a photocell, and a relay.

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- Preparing a short program for monthly meeting.
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