



The Mail Car

Issue no. 42 – January 2007

St. Lawrence Division web site: www3.sympatico.ca/gd.knowles/sld/sld_index.htm

From the Superintendent's Desk

By Peter Joyce

A belated Merry Christmas to all. I hope that 2007 will bring good health, prosperity and contentment to each and every one of you.

It's been a quiet time for the SLD with members busy preparing for the Christmas and New Year's holidays. It follows that this Report also will be short in content, particularly since Paul Bullock will report on our November meeting in a separate article in this issue of the **Mail Car**. I trust that Santa was good to everyone: no doubt there will be many projects newly started across the Region.

Our second kitbusters workshop is coming up Saturday January 13th at Emmanuel United Church; hopefully we'll see a number of new projects, along with others still in progress from the October workshop. Plan to make this an opportunity to get out of the house and join fellow modelers for a day of relaxation.

The next meet is scheduled for January 27th, 2007 at Emmanuel United Church with doors opening at 9 am.

As usual at the time I write this, not all activities are finalized! As always I am on the lookout for clinics, clinicians and layout tours. Please don't be shy: volunteer, or nominate a presenter, or suggest a topic and we can keep our meetings interesting and informative.

I hope everyone has marked the weekend of March 16 to 18, 2007 as the **revised** dates for our 2007 NFR Convention in Rochester. Our Division has a history of good attendance and excellent model contest entries and hopefully this year will be no exception.

In closing, let me thank all of you who have enquired about my health and provided support in so many ways. I particularly appreciate the way my fellow executive members jumped into the breach and organized the November activities. While the operation to remove my prostate was aborted, the cancer is in an early stage and the radiation planned for early in the new year should do the trick. I certainly encourage everyone to insist on a PSA test annually: it's the best investment you'll ever make.



The Windsor end of the Detroit River tunnel, a scene from John Mitchell's HO NYC layout on tour during the November meet.
Photo: Andreas Mank

St. Lawrence Division

Executive Officers

Superintendent: Peter Joyce
Phone (613) 841-1950
Email:
galeandpeter.joyce@sympatico.ca

Assistant Superintendent:
Paul Bullock
Phone (613) 345-5553
Email: pbullock@ripnet.com

Paymaster: Gary Baillargeon
Phone: (613) 774-2380
Email: Petworth.ems@cyberus.ca

Clerk: Tom Badenoch
Phone: (613) 225-6641
Email: tom.badenoch@sympatico.ca

Dispatcher: Andreas Mank
Phone: (613) 591-9088
Email: amank@magma.ca

Appointed Positions

Inspector: Grant Knowles
Phone (613) 825-5438
Email: gd.knowles@sympatico.ca

The Mail Car
Editor: Andreas Mank
Phone: (613) 591-9088
Email: amank@magma.ca

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Copy Deadlines

March Issue - February 15
May Issue - April 15
September Issue - August 15
November Issue - October 15
January Issue - December 15

Special thanks to Beate Herzig for proof-reading and general nit-picking

November Meet Report

By Paul Bullock

Saturday Nov. 25th was a beautiful, warm fall day as 28 members of the St. Lawrence Division had a 9:50 am start to their meeting. After the usual welcoming of any new members and announcing the clinics, Paul Anderson explained how the HO Trak modules were arranged and operated. John Mitchell also gave an excellent orientation of his NYC layout so that it would be easier for those visiting for the first time to visualize it. John explained that it usually takes 13 people to run an operating session, which includes a dispatcher.

The participants at Railfair 29 were thanked by Paul Bullock. Grant Knowles went on to explain how the "For Sale" table would operate and then went on to summarize the results from his Internet survey. Grant also mentioned that 10 members attended the October clinic and that the next one would be on January 13th.

After a brief discussion of the Mont Bleu Ford show in Gatineau it was clear that members had a little interest in operating our module at the show. There was an interest in attending the Delson Railway Museum, south of Montreal, as a spring trip. Members felt that arranging individual transportation was the best method of travel.

The first clinic was given by Andreas Mank who entertained us with a series of photographs taken during his vacation in Germany. It was clear from his photos that passenger travel is alive and well with a combination of high speed trains and local traffic. He also showed pictures of a magnificent model railway museum and photos of live steam railways.

After the coffee break, Grant Knowles summarized the display table. This is explained in detail later in the **Mail Car**. The morning was concluded with Paul Bullock's PowerPoint presentation on lighting your layout. Also included was a method of calculating the total resistance in a parallel circuit and some cautionary notes about choosing an adequate power supply.

In the afternoon we had two layout tours to attend. John Mitchell kindly opened his HO scale NYC Detroit to Buffalo layout. Many members commented that they could see real progress from previous visits. We were also welcomed at the HO Trak layout where 400 feet of modular sections were put on display.

Display Report

Compiled by Grant Knowles



50 Ton Flat Car

Bill Meek brought out the flat cars he was working on at the October SLD Kit Buster's Work shop. One car sports a new set of bulk heads. The second car will be receiving a similar treatment shortly.

Potato Cars

Jim Baxter brought out four "tiny" N Scale Potato Cars. These cars were used by BAR for moving potatoes in the winter and other stuff in the summer. These four cars represented the eras of: 1920 - 1930's - blue & white wood reefers, 1930 - 1940's - yellow wood reefer 1950 - 1960's - Red, white & blue insulated boxcar.



Display Layouts

In conjunction to his clinic on railroading in Germany, Andreas Mank also brought out two magazines, one spoke to the huge Wiehe exhibition layout while the other was a museum guide to the Neuenmarkt steam museum.

Tiffany Reefers

Prior to the iced reefers, the C&S ran Tiffany Summer & Winter cars. Grant brought out HO_{N3} and O scale versions of this car. The HO_{N3} car was made from a Clear Creek kit (styrene) while the O scale was a resin kit from Cimarron Model Works. Both cars were lettered with CDS dry transfers.



C&S Reefers

Grant Knowles made a true confession for he had brought out his first purchased "ready to run" HO_{N3} cars. These were two Colorado & Southern refrigerator cars from Kadee. The C&S referred to these as "composite" cars as they had a steel under frame and wood body. This was considered "high tech" back in 1910 when the C&S shops built these. All Grant had to do was swap out the N scale couplers for the HO_{N3} 714's and the cars were then in service. Hopefully Kadee will be coming out with more C&S cars!





Hornby / Mechanno 0-4-0 Robert Peck had a vintage wind up train on display that was once owned by Scott Abbot. This train set came complete with track a couple of cars and building. As the loco has a broken spring, Robert welcomes any input on how this can be repaired so that the train can be put back into service.



CNR Newfoundland Station

Once again, Alex Binkley has brought out his latest S scale project. This is a Trainstuff resin kit that was commissioned by the Sn42 guys. Alex found this to be a most frustrating kit as nothing would fit and the paint wouldn't stick, etc, etc, etc. As Alex states - "but it done"!

2-8-0

Alex also brought out a gorgeous 2-8-0 S scale steamer. This is a commercial model made by S Helper Service that not only looks great but also runs like a dream.



Once again I'd like to thank all who brought out something for the Display Table and as you will note, the theme for the display table is not mandatory, but a "suggestion". Believe it or not this month's theme was Perishable Goods cars.

NMRA Dates

SLD Meetings		NFR Spring Convention	
January 27, 2007	Emmanuel United Church 691 Smyth Road, Ottawa		Flower City Flyer NEW DATE: March 16 - 18, 2007 RIT Inn & Conference Center 5257 West Henrietta Road Rochester, New York 14586
March 31, 2007	Emmanuel United Church 691 Smyth Road, Ottawa		SLD Workshops January 13, 2007
			February 24, 2007
May 26, 2007	TBA		April 21, 2007

Layout Tour Report

Compiled by Andreas Mank



John Mitchell opened his layout for visitors. It is a selectively compressed, but functionally correct representation of the NYC shortcut through Ontario between Buffalo and Detroit. The layout includes the Detroit passenger station, the Detroit River tunnel and ends at the main classification yard in St. Thomas. Interchange traffic between several major railroads is faithfully modeled. Industries along the mainline and several branches allow for local freight service. John has done extensive

research into the prototype to develop his model, which is spread out over two levels in the basement. The layout is controlled by DCC and several staging yards support operation on a regular basis.



The HO Trak modular group has regular meetings at St. Anthony's Soccer hall, where they assemble layouts in varying configurations from the members modules. The November meet coincided with their meeting weekend, and they were nice enough to invite us. The layout consisted of over 400ft of modules in various configurations of mainline, yard, industrial switching area and branchline. The modules are in various states of finish, ranging from bare benchwork to completely scened. The layout is controlled by DCC and as expected for a layout of this size, the operation is directed by a dispatcher.

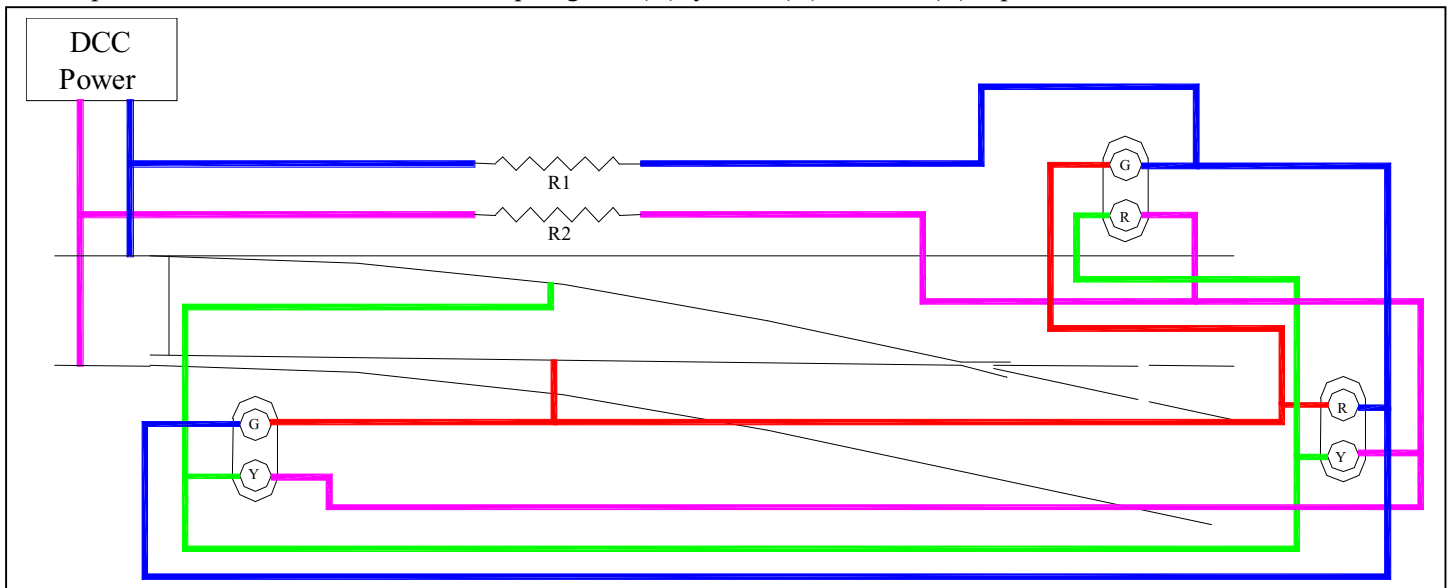
Turnout Signals

By Paul Anderson

This is a method for use on a DCC powered layout for adding a simple signaling system to a single turnout using the points of the turnout as a selector for which lights should be lit. In order for this method to work, the turnout needs to fulfill the following conditions:

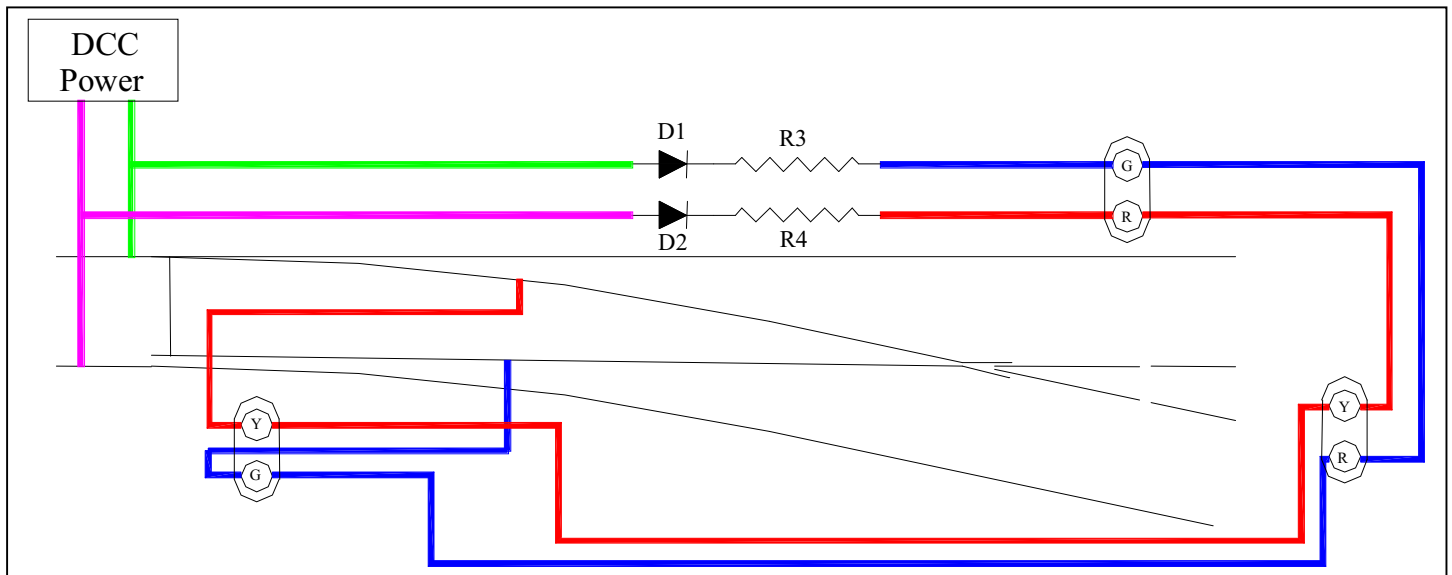
1. The frog rails have to be gapped to prevent power from flowing back into the point rails. They could be gapped on either side of the frog. As a result, you are now relying on the points to supply power to the point rails and the frog, which might become a problem in the future when the contacts get dirty. Furthermore, if the point rails are gapped before the frog, an auxiliary set of contacts needs to be wired in to power the frog.
2. The Point rails must be isolated from each other.

The signaling system can be implemented in two different ways, using micro bulbs or Light Emitting Diodes (LED). The first implementation uses micro bulbs to depict green (G), yellow (Y), and red (R) aspects:



1. All bulbs in this diagram are rated at 12V and the three bulbs in each set are connected in parallel.
2. Resistors R1 and R2 are used to drop the voltage to the bulbs since DCC Command Stations in HO mode tend to put out up to 14V which will decrease the life of the bulbs significantly. These resistors will also help protect the bulbs in the event the Command Station is accidentally put into G mode. (*Note by the editor: DCC systems output a high frequency voltage of up to +/-18V amplitude. As Paul Points out, some systems have the option of changing the actual track voltage. Please check your system manual. Since the DCC signal is high frequency, a standard multimeter will not return accurate readings of the actual track voltage. Only a "true RMS" voltmeter or an oscilloscope will give reliable readings of the actual track voltage.*)
3. To calculate the value of each resistor with the bulbs connected in parallel, take the rated current of one bulb and multiply it by the number of bulbs, i.e. 1 bulb = 15mA, 3 bulbs = 45mA (.045Amp)
4. Use the formula $R = E / I$ where $E = (14V \text{ [track voltage]} - 12V \text{ [lamp rating]}) = 2V$ and $I = .045A$. $R = 2/.045 = 44.4$ ohms.
5. Since 44.4 ohms is not a common value of resistor you should pick the next higher value which is 47 ohms.
6. Another factor to take into account is the power dissipation (heat) of the resistor. To calculate the power dissipation use the formula $P = E * I$, i.e. $P = 2 * .045 = .09$ or 90mW.
7. Alternatively, you could also use 1.5V bulbs (Change the voltage to 12.5V in step 6) or rearrange the wiring so all the bulbs are in series. When used in series, the bulbs should all have the same current rating and to calculate the resistor value, use the simple current rating.

In the second example, LEDs are used to display the signal indication. The advantages of LEDs are pure colour that never fades, no heat, low power consumption and they will probably outlive you if treated properly.



1. This circuit uses green, yellow and red LEDs connected in series. First a few points to note about LEDs:
 - a. When selecting your LEDs you have to read the specification sheet carefully. Red LEDs will have the lowest voltage across the terminals; yellow LEDs will be higher and green LEDs the highest.
 - b. The brightness, measured in mCd (milli candles), will vary with the red LED being the brightest, the yellow LED next and the green LED the lowest. LEDs come in different efficiencies so by picking the right ones you can balance the light output.
 - c. If you set the resistor values so that the current flowing through the LEDs is about half of the lowest maximum rated current of the three LEDs in the string then they will last forever. This also gives you lots of protection from over voltage (G scale).
2. The diodes are in the circuit to protect the LEDs from the reverse voltage from the Command Station. You could probably get away with out them but you would be pushing your luck.
3. LEDs are current dependent devices, therefore it is important to control the current through the devices as opposed to the voltage that will appear across the leads. Varying the current will have no significant effect on the voltage across the leads.
4. To calculate the value of the resistor add the voltage of the three LEDs together and subtract this from the track voltage, in this example 14V, i.e. red = 1.8V, Green = 2.1V, yellow = 2.2V therefore for R4 string the voltage across R4 would be $14 - 1.8 - 2.2 - 2.2 = 7.8V$.
5. For a current of 10mA through the string we would use $R = E / I$. i.e. $R = 7.8 / .01 = 780$ ohms. The next higher standard value is 820 ohms. The calculation for R3 would be similar and in this case the value would end up being the same since there is so little difference in values between the two series circuits.
6. If you find that the apparent brightness of a LED is too bright compared to the others you may decrease the brightness by bypassing part of the current around the LED. For example, if the red LED is too bright you can reduce the current to 5mA by adding a resistor in parallel with the LED (across the leads).
7. To calculate the value of this resistor, we would take the voltage 1.8V and apply it to the formula as in step 5 and get 1.8 ohms. The closest standard value is 1.8 ohms.
8. **IMPORTANT** all voltage and current specs used in this article are typical values and may not be correct for your components. Check the specifications of your components and use them in your calculations.



Next Division Meet

St Lawrence Division – NMRA

When:

Saturday, January 27th, 2007

Where:

Emmanuel United Church

691 Smyth Road,

Ottawa

East of CHEO at Dauphin Road

Doors open at 9:00 am -- Admission \$5.00

What's on:

Morning:

Division Business

Clinic

- TBA

Display

- TBA

Door Prizes

- You never know what to expect!

Afternoon:

- Layout Tours

