



The Mail Car

Newsletter of the St. Lawrence Division – NMRA

Issue no. 77 – January 2014

St. Lawrence Division web site: www.sld-nmra.ca

Superintendent's Report

By Ron Newby

First I would like to wish everyone all the best in the New Year and I hope everyone had a great Christmas. I know we did as we spent it in Lloydminster with our daughter's family. Wish I knew where 2013 went.

In November we tried something new: Operations 101 where members who wanted to had a chance to see what operations were all about and try their hand at it. 14 members signed up to operate on three layouts and the feedback I received was that everyone had a great time. Participants ran the gantlet from raw rookies to experienced operators.

If you were one of the operators taking part in this event, I would like to hear what your experience was. This input is required in order

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Weathering Freight Cars

A Clinic presented by Allen Egan

If you have not had the pleasure of seeing Allen's clinics at the last two Ottawa Rail Expos or have not seen any of his work you are in for a treat. Allen uses a simple method for weathering modern freight cars using oils and he has graciously offered to give us a hand's on clinic using his method to weather a freight car. To take part all you need to bring is a modern freight car to be weathered. Allen suggests that you bring a boxcar with outside posts as this a great car to build up dirt and create weathering effects very easily and quickly.

The boxcar should be light in colour either grey, pale blue, green or yellow or something preferably pale coloured as it is way easier to, once again, create a weathered effect on a lighter coloured car.

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Brian Earl, Steve Juranics (Cambridge), Eric Roth (London) and Paul Anderson (left to right) participated at Trainfest 2013 in Milwaukee promoting the NMRA through the NFR modellers corner.

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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

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to gauge if we should offer this event again in the future. I would like to thank Grant Knowles, Dave Primeau and Tom Badenoch for opening up their layouts for this event.



Picture: OPS 101 at Grant Knowles' (left) Colorado & Southern. Guest operators Steven Glew (center) and David McLellan (right) can be seen in the picture. Dave Steer and Andreas Mank were also present.

Picture: Andreas Mank

The NFR Grapevine Express Convention is coming up quickly on May 2 to 4, 2014. Looking at the website there are a bunch of great clinics planned; a winery tour and layouts to keep you busy and entertained.

There is even a new contest this year that everyone can enter called "Build a Diorama in a Shoebox". The rules are simple:

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Basswood available

I have at least a dozen basswood planks--couple of feet long, two inches roughly thick and eight to 10 inches wide. They have been dry in the basement for years. Time has come to find them a home. If interested please contact Alex Binkley

613.749.7633 or alex.binkley@sympatico.ca

If you have them, bring along the following;

- Oil paints - specifically the colours raw sienna, burnt umber, burnt sienna, and black along with some oil thinners.
- Small paint brush - a minus no.18 preferably or a minus 10 or minus 5. These are numbers that are below 0 and 00 and so on. They are very fine brushes and can easily be picked up at Michaels or Wallacks.

If you do not have the above items, do not worry, Allen will bring some with him.

Allen will demonstrate some basic and quick weathering effects as well as more complex rust patches and streaking. If there is time he will also do a simple graffiti demonstration using acrylics. Essentially this will be a demonstration on how to weather using oils paints.

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- The maximum size of the shoebox is 13" x 9" x 5" high (interior dimensions) when the lid is closed.
- If you don't have a shoebox you came make one out of cardboard.
- The diorama must contain a section of track, a structure, a rock formation and one of the following; brick wall, brick driveway, concrete footing or retaining wall.
- The completed diorama, including the base must fit in the shoebox and the lid must close.
- Exceptions are power supplies, locomotives and rolling stock
- The diorama must be newly built and cannot have appeared at a NMRA National, Regional Convention or a divisional meet.
- Any tall objects like a tree or tower that can prevent the lid from closing can be made removable, however it must fit in the shoe box with the lid closed for transport.
- The diorama can be built to any scale from Zn15 to G.

I would like to see everyone who is attending the convention from the SLD enter this contest, I know I plan to.

Other events on the calendar this year are:

- Rail-O-Rama in Kingston on March 8th and 9th 2014.
- Ottawa Rail Expo on April 26th and 27th 2014.

We will be attending both events promoting the NMRA and the SLD. There will be sign up sheets for the Kingston Rail-O-Rama at the January meeting.

We have planned an exciting clinic for you this month. Allen Egan will be giving us a hands on clinic on weathering freight cars, you can find more about this exciting event starting on the front page. The afternoon session will be a Kitbusters workshop. It will be great to see the progress on the garages and seeing the other projects members are working on.

On the home front work on the Clearwater Valley Railway Co. has come to a screeching halt since last November as my present project has me working in Temiscaming, Quebec until at least the end of July. I found myself a log cabin on a lake to stay on while I am up north. In order to keep busy on those cold winter nights I am currently in the process of building an On30 module set. In fact I brought all my modeling tools with me along with some kits so boredom will not be an issue.

See you all on the 18th of January and until then, may your train stay on the tracks and you never run out of rail.

The new Workshop

by Bill Meredith

About a year and a half ago, I moved into what I hope will be my permanent address for some time to come. I would like to think that the structure has most things an avid model railroader wants; a large empty basement, a real railroad track in the backyard (albeit sadly underused) and living quarters for the maintenance staff on the upper floors. Recently however, the shop area underwent a massive upgrading and overhaul. This short article attempts to describe where I am heading.

The shop is temporarily set up in what will be the train room. In the coming months the wrecking crew will come in and remove the half walls that came with the house. The exterior walls will be re-studded, wired, and insulated for a layout space that is ~20' x 40'. The shop will be moved into the adjacent room. Given that today we hit a high outside temperature of -27C, I opted to leave the existing half walls and insulation in place until the spring whereupon a dumpster bag will be employed to handle the removal of the existing walls.

The temporary shop consists of two 2' x 8' benches bolted to the wall with a separate work desk that will be used for locomotive construction. This article will focus on the two 2'x8' benches. This area is set aside for styrene construction, computer assisted drafting (CAD) work, computerized numerical control (CNC) work, and general machining, lathe, and drilling work.



Figure 1 (Top): Styrene “warehouse”

Figure 2 (Bottom): Miniature table saw and chop saw build from recycled computer components.



Styrene Zone:

For some years I busied myself making patterns for resin rolling stock and building kits. Most of these kits were of narrow gauge prototypes so it should not be too surprising that this would be a little known fact. The last few prototypes were mostly contract work for organizations such as the B&O Historical Society, V&T Society, and for influential modellers such as Jack Burgess and his amazing Yosemite Valley RR in HO. After running this operation for almost 10 years, my partners and I decided to close the resin business down in favour of laser wood and etched brass products. What this experience did leave me with is a nearly complete supply stock of Evergreen styrene and sheets, and a few very handy and somewhat obscure power tools. While I cannot recommend to anyone to run out and purchase several hundred dollars worth of little white strips; I can tell you that once you do this, scratch building does elevate itself to a higher level of fun and satisfaction.

Two of the obscure tools are shown in Fig.2. These tools include a miniature table and chop saw. They were built by a gentleman in the Kitchener area and were picked up years ago thanks to Rick Hunter. They are basically built up from recycled computer components. The blades on the devices are jeweller's saw blades cut from high speed steel. Like the complete assortment of Evergreen strips, having both of

these devices to cut styrene drastically improved the scratch building experience. Note the omnipresent safety glasses.

To complement the power tools and styrene supply, I have several hand tools that I use regularly. These include the NWSL chopper, Vernier caliper, optivisor, scale rule, knives, brushes for the glue, assorted files and sanding films.

CNC Zone:



Figure 3: CNC set up

Several years ago, I attended the National Narrow Gauge Convention in Durango Colorado. One of the afternoon activities was to visit the late John Parker's home where San Juan Models was based. San Juan manufactures injected styrene kits of D&RGW prototypes in On3. All of the tooling was done in John's double car garage that overlooked the 3' line of the Durango & Silverton RR. While at the shop, one of John's tool makers showed to us fascinated attendees how to turn a chunk of brass into a mould and then shoot the mould in the span of an hour. Ripping stuff!

The tool maker used Flashcut CNC to drive the Sherline milling machine. Loaded onto the laptop that was driving the CNC was a file that would direct the servo motors on the milling

machine to create the die for a small key chain fob that said "San Juan Car, NNGC Durango". Over the next 45 minutes or so, we watched the milling machine whir away while the servo motors moved the chunk of brass around and voila, the end result; a die that can be used for injected moulding.

When all the motors stopped, the tool maker removed the brass from the milling machine and fixed it into the injection plastic mould machine. Once the die heated to the appropriate temperature, he began to spit out these key chain fobs and handed them out to all of us gathered around. This left an indelible image with me. Upon returning home, as luck would have it, someone was selling a complete, and I do mean complete; Sherline mill and lathe, along with a complete Flashcut CNC hardware set to drive the whole kit and caboodle on ebay. We managed to pick it up at a very reasonable price and it was delivered a few weeks later.

Now my exposure to mills and lathes to date has been restricted to manual operation and as such, I had zero idea what was involved in CNC operations. With that in mind, the CNC portion of the kit sat dormant for a good 7 years. Each time I built up the gumption to tackle it, I was soundly reminded that learning this beast was going to take lots of time.

The time finally arrived. My being housebound and laden with time presented the opportunity to learn this aspect of loco building. I envisioned the milling of loco frames, side rods, and driver rims. I dove into things and quickly realized that the system I had was now 10 years old. I contacted Flashcut and joined the Sherline CNC Yahoo group. A few pointed questions placed on the Yahoo Group answered some questions and also brought up more questions. After some consideration I opted to remain with Flashcut and get a full system upgrade.

Now we are talking about some serious computing and I was pretty sure the IT guys back at the office would start asking questions about my loading a completely unauthorized application on my work laptop. A new PC was in order, more on this later.

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As I did more research into CNC machining I soon discovered that my aged version of Corel Draw 11 (I think they are up to Rel 16 now) was not going to provide the CAD component needed worthy enough of this cutting edge CNC platform. Hence more research was necessary.

I soon realized I needed not just a CAD program capable of 3D imaging and manipulation but I also needed an equally powerful application capable of transcribing the 3D .STL files into what is referred to as "G Codes". G Codes are what the CNC Flashcut operating system uses to control the servo motors which in turn control what is cut away when the system is in operation. Servo motors control the X, Y, and Z axis and when these respective motors turn, the work piece is moved side to side, back to front. And the cutter is moved up or down. My search took me to the Sherline web page which in turn pointed me the Alibre/Geomagic CAD application to create the parts and the FreeMill STL to G code conversion application, the latter being free from their web site.

I purchased and downloaded the Geomagic CAD package through Sherline. By doing this you get a very respectable CAD package that allows one to create extraordinarily precise 3D part drawings. Moreover, you can create entire assemblies and virtually test them in simulations. My good friend Bob has been focused on creating unbelievable patterns and moulds for lost wax brass castings using the industry standard Solidworks CAD application. A single user license of Solidworks *starts* at \$4K whereas Geomagic with augmented import/export utilities starts at \$250. I was in.

Now once you become adept at 3D CAD, you can either use the output to generate G Codes and thus feed your CNC - or - you can send the files to a stereo lithographic printer. In the event that the term "stereo lithography" does not ring any bells, think of an inject printer that shoots polymer plastic instead of ink. Objects are built up in microthin layers over the span of several hours. Boiling things down, you create a part in CAD and then you physically create it using polymers. The resolution of this process has increased so much that anyone would be challenged to discern the layers. The price has also come down substantially. If interested, I would direct anyone to Google Shapeways and check out what is being done. You can even "print" using stainless steel and brass. So you can imagine the day will come when your next brass loco will actually be "printed", one layer at a time. We have developed processes where we now "print" not the master for a lost wax casting but rather we print the mould in latex rubber and it is these moulds that are injected with wax for the purposes of burning out for refilling with molten brass. The day may soon come where high resolution dies are created in CAD and printed in steel for injected plastic.

As previously mentioned, I now have the CAD application, an application to convert the CAD output to G codes, and the platform to convert the G codes into physical output that we can use to build locomotives. A suitable PC was sourced and now everything is ready to go. This is where things are as of this writing. I am now hammering through the tutorials on the Geomagic as this is where things begin. This all said, if anyone has some experience in this arena, I would thoroughly enjoy picking your brain!

As I mentioned, this shop zone is only temporary as I plan to renovate the basement in time to start building "the layout" next fall. The new shop area will be close by in the adjoining room. It was my hope to present a clinic at the November meeting but a commanding dose of the stomach flu put the kibosh on that. My intent with this article is to hopefully open a dialog on the emerging technologies that lie within our grasp to create extraordinarily precise models by unleashing the power of the PC. In the past few months there have been a plethora of applications that can be used to help us build amazing models. The bulk of these are powered by the PC loaded with drawing packages. Even a relatively simple drawing package such as Corel Draw11, can be used to create artwork for decals or complex etchings. The advent of 3D CAD allows us to create truly outstanding parts at a relatively low cost. I would recommend to anyone with a slightest interest to purchase a low end drawing package and let the creativity begin!

The Move of the Bonnechere and Braeside Railway – Part 8

By Peter Nesbitt

I hope Santa was good to all of you and perhaps some train things in the stocking. As I write this it is -25C outside and it feels good to be in the basement either at the computer or the model railway.

Barry's Bay, staging at the extreme western end of the railway, is comprised of three tracks. Each of which is ample to hold a train. The one used for the passenger train also has room for the Gas Electric. As was the case with most of the railway, I brought this trackage with me not knowing whether or not it would be used. After a review of the location, it was an easy decision to reuse this track work. Risers were cut and installed and the track work, which is mounted on one piece of plywood, was set in place. It is over the Arnprior staging, including a couple of turnouts thus, I have made it removable – Murphy's law!

The last town to do is Deacon. It has three industrial sidings and at the western end, the main and passing siding have another track added to feed into the three track Barry's Bay staging. The town's major industry is Canada Packers and the ice plant is on the siding that serves Canada Packers.

It has ended up that the siding is accessed via a short switchback. This will make the switching time consuming and hopefully more interesting by limiting the number of cars that the locomotive can move to and from the industrial siding at any one time. Canada Packers will have loaded stock cars coming in and loaded reefers leaving. As well, any through reefers will have to be set aside for icing before proceeding on the next train to their destination.

As described in more detail in part 6, the meat plant will have a track going into it such that reefers are loaded inside. This inside track is in fact a turntable and between operating sessions I will use it to turn the locomotives at Barry's Bay staging. This will avoid manual handling or running them to the other end of the railway to turn them at Braeside. The stock cars are unloaded at a small stock pen facility beside the plant.

Deacon is fifteen feet long without counting the Canada Packers siding or the switchback to it and has nine turnouts. The western three feet or so also have to be removable as it is over one of the switches in the lower staging. Since the upper staging was in place as was the Canada Packers trackage (both from the old location) and there is a curve in the middle of town I choose to lay the track with the plywood in place.

The commercial turnouts all need some modification to make them more DCC friendly, improve the shape of the points as well as improving the point/throw bar attachment method. Amongst Christmas decorating and shopping the track laying gang (me) kept busy. The happy result was, the last of the track was installed on Boxing Day! This Golden Spike occasion was celebrated by my wife and I with a glass of bubbly in the afternoon.

The track needs to be wired and the switch machines installed after which trains will be able to run the entire length of the railway. This should all be done before the next SLD meet. Next up is the installation of the fascia along with all the turnout and uncoupler controls. Once that is in, my wife can start making the skirt out of the material we bought a year or more ago and this will certainly improve appearances as the items stored under the railway disappear from sight.

There has been a small change in the work crew that comes over on two Monday evenings a month. Brian Lilly, another Kanata resident and OVAR member has joined us. I expect that we will make some good progress on the scenery this winter. Once the base scenery is in, such that a derailment does not mean the train heads to the floor, operations can resume. That might get us to a position where half the sessions are operating ones and the other half are devoted to detailing and scenery building.

Display Table

By Grant Knowles

The theme for the November Display Table was "Maintenance Of Way" though I do not recall if there were any models on display that adhered to the theme.

It appears Mike Hamer is now making the move outdoors with the recent acquisition of a Bachmann G scale "Annie". Preparing the engine for use was a group effort with Paul Norton installing the



Picture 1 (Top): Colorado & Southern section house

Picture 2 (Bottom): Binkley Machine shop with full interior detail

All photos: Andreas Mank



Revolution wireless remote control system in the 2-6-0, Gord Bellamy providing the inspiration for the road name (Ironwood & New England) and Chris Lyon for the dirty weathering job. Mike plans on running the loco at Fred Mills outdoor railroad (once it is warmer outside).

Grant Knowles brought out his completed Colorado & Southern section house. This is a HO scale laser cut kit made by Rocky Mountain Models. The kit included a cast plaster foundation and Grant replaced the tar paper roof with Northeastern Scale Model shingles.

Stan Conley presented the club with a Photo Challenge. Stan picked up the photo at a garage as it did include what appears to be a Canadian railroad train. The question is, where was the location? Most people felt it was on the east coast due to the topography, the town's architecture and large river. Stan would love to hear from you if you can provide some insight into the time and location.

Bob Farquhar brought out his Binkley Machine shop project. Each month Bob updates us on his progress with this large laser cut industry (made by Laser Modelling 3). Bob has included interior lighting, machine equipment (with belt drive system) along with a fully detailed office on the second floor. One wall will be made removable so that the interior may be viewed.

Paul Anderson participated in the Modellers Corner at the

recent Trainfest event in Milwaukee. While there Paul assembled a number pieces of rolling stock while talking with the public.

Peter Gray brought along two great Pat Harriman structure plan books for us to review. Pat's drawings often appear in the NMRA magazine and have inspired a number of our members to build models from his plans.

David Steer displayed a number of Westerfield resin kits has recently completed. These included a PFE R50-1 early 47 ft refrigerator car circa 1930, NH steel frame 36 ft boxcar fish belly circa 1902 and a B&O steel frame 40 ft boxcar with "indestructible ends".



Picture 3: Westerfield Resin kits assembled by Dave Steer.
Photo: Andreas Mank

That does it for this month. Thank you to everyone who brought out their pride and joy for us to examine. Additional photos are available on the November meet web page:
http://sld-nmra.ca/meets/nov_13/nov_13.htm

TimeTable

Date	Meetings / Shows	SLD Workshops
January 18, 2014	Emmanuel United Church 691 Smyth Road Ottawa	Emmanuel United Church
February 22, 2014		Emmanuel United Church
March 8 & 9, 2014	Rail-O-Rama Ambassador Hotel Kingston, ON	
March 29, 2014	Emmanuel United Church	
April 26 & 27, 2014	Ottawa Train Show Ernst & Young Center	
May 2 – 4, 2014	NFR Regional Convention Niagara on the Lake	
May 31, 2014	tbd	



Next Division Meet

St. Lawrence Division – NMRA

When:

Saturday, January 18, 2014

Where:

Emmanuel United Church

691 Smyth Road,
Ottawa

East of CHEO at Dauphin Road
Doors open at 9:00 am -- Admission \$7.00

What's on:

Morning:

Division Business

Clinics:

Allan Egan

Weathering Freight Cars

Display:

Something Red

Afternoon:

Kitbusters

