



The Mail Car

Newsletter of the St Lawrence Division – NMRA

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Superintendent's Report

By Ron Newby

Hard to believe that it is March already, soon winter will be history and spring will be marked with the NFR's Streetsville Junction Convention. We had a great time in January's meeting and again at the February's Kitbusters and have another exciting meeting planned for March.

We have a couple of great clinics lined up. The first one will be "working with Metal" presented by John Steward and for the second clinic, I will be talking about the challenges in designing a free-lanced narrow gauge railway built for operation. If you ever wanted to try your hand at weathering a freight car, Peter Gray, our resident weathering expert will be giving a hands-on clinic on weathering freight cars for those who are interested. For those who are not interested, this will be your last chance to finish your plastic project as it will be the last Kitbusters of the season.

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Engine 14 heading towards Mara from Tunnel #1
Photo: Ron Newby

St. Lawrence Division

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Copy Deadlines

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

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

There will be no Kitbusters meeting in April as April 26, 27 and 28, 2013 are the dates for the NFR's Streetsville Junction Convention that a number of us will be attending including yours truly. It is still not too late to sign up, if you ever thought about going to a convention I highly recommend it. To find out more about the convention and what is planned, check out the convention website, <http://streetsvillejunction.com>

It is also time to think about The Ottawa Train Expo being held on May 5 and 6, 2013 in the Field House at Carleton University. We will be looking for volunteers to man the booth there. If this gets out in time the Rail-o-Rama in Kingston will be March 16 and 17 and we will have a booth there as well.

On the Clearwater Valley Railway Co. front the last of the scenery has been completed which entailed adding some "goop" (celluclay mixed with white glue and water) to bring the road crossing the track up to the proper level, adding various ground foam, weeds, plants etc., and a couple of trees. Lastly ballast was added to complete the scene. I also decided to replace the N scale hotel that has been living in the corner for the last couple of years with a HO scale Dallas Divide Section House by Banta Modelworks. As of this writing the house is about 75% built.

That is all for now and I'll see you at the end of March. Till then, may your trains stay on the track and may you never run out of rail.

Press Release

The annual Toronto Railway Prototype Modellers Meet will be held on Saturday, March 16th, 2013 from 9:00am to 2:30pm. The day consists of clinics by prototype modellers about auto frame cars, detailing prototyped track work and prototype freight car weathering. There will also be the unique "show and tell" component, an open forum for modellers to discuss and display models. Each attendee is urged to bring a model, whether completed or not, for this, although this is not mandatory. The Meet's location is the same as last year: Humber College, North Campus, Building B, rooms B201& B202. The admission is \$10 and parking is free. For further information contact Brian Gauer at: bdgauer@rogers.com

Brass Etchings and Castings

By Bill Meredith

Have you ever wondered why brass locomotives are so expensive? Well there are several reasons really. The intent of this short article will hopefully describe what the processes are involved to create the components and in the event you would like to build your own brass loco, give you some guidelines how.

Brass locos are comprised of several types of components that are hand soldered or secured with screws to form the model. For components such as drivers and wheels, that is a topic for another day. Scratch building drivers is a whole science unto itself and typically requires some special tools and/or mountains of time.

Key components are the brass etchings. Etchings are typically designed with a CAD package or drawing package. The science behind them can be a little hard to wrap your head around at first because what happens is that the artwork is printed on clear films and then used to mask ultraviolet light over top of photosensitive resist coated brass sheets. The ultraviolet light treats the resist to be impervious to acid and when the sheet is dropped in an acid bath, areas of the sheet are eaten away by the acid and some areas are not.

The artwork itself has a front and a back sheet. It is possible to have two front sheets and this is referred to as the Double Pass process. Not very many places can do this properly as it can be difficult to line up the sheets with the films. The sheets typically use solid black images for areas that you do not want etched away. For example, a tender wrapper with rivet detail will have a "back" film that will have a black solid area that has the overall outline of the tender wrapper. The front film will have a dizzying array of small solid black dots, one for each rivet. See the attached illustrations that were done some years back for an HO D&RGW caboose master for a resin kit we did.

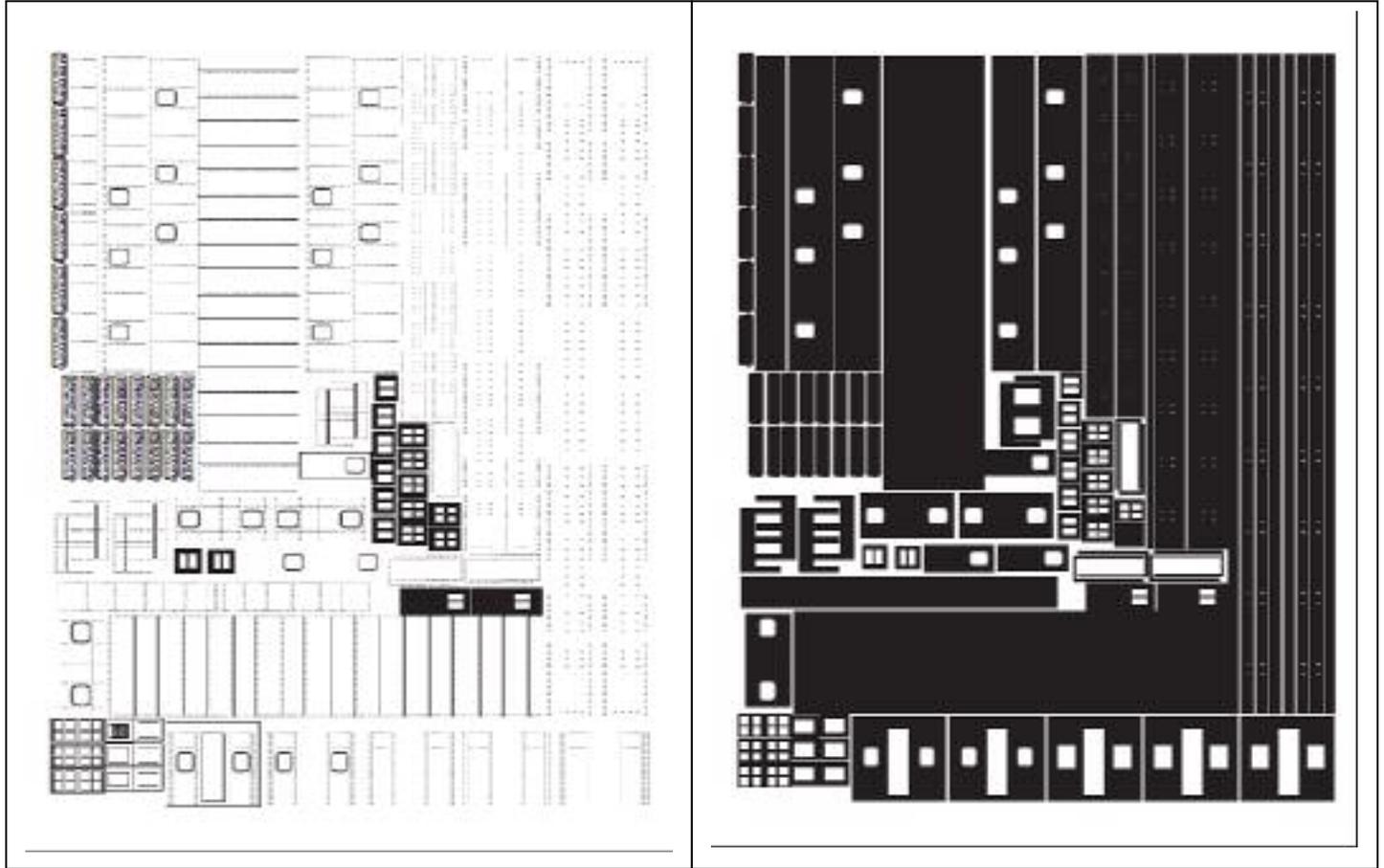
There are several places on the net where you could have etchings made using your own artwork. Depending on the material thickness, an 8"x10" sheet could cost ~\$70. For more information on this

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TimeTable

Date	Meetings / Shows		SLD Workshops
March 16 & 17 2013 10:00am to 4:00pm	Rail-O-Rama Ambassador Hotel Kingston		
March 30, 2013	Emmanuel United Church 691 Smyth Road Ottawa		Emmanuel United Church
April 26 to 28, 2013	NFR Regional Convention Four Points by Sheraton 2510 Argentia Drive Mississauga, ON		
May 25, 2013	Kingston, ON		
September 28, 2013	tbd		

process, see http://www.ppdLtd.com/web_site_3/page_1_intro.html. If you are handy with the PC and a drawing package such as Corel, you truly are well on your way.



Artwork for a HO D&RGW caboose master for a resin kit. Courtesy of Bill Meredith

The next major component is the brass castings. Every brass casting starts life as a master, from which brass copies are cast. For years, the masters, or patterns were painfully hand assembled in brass and silver soldered together. Silver solder was used because of its higher melting temperature. The use of silver solder was a requirement due to the fabrication of the rubber mold.

The rubber molds of the past were prepared using the vulcanizing process. This involved placing the master between thin sheets of rubber and then heating the rubber to very high temperatures whereby the rubber melted around the part to create the mold. If regular solder was used, then there was a risk of the part falling apart in the mold. Once the mold cooled down, the craftsman carefully cut the mold into two halves.

Once the mold was made, it is injection loaded with hot liquid wax to create a copy of the part. These parts are then ganged up on a tree to create a wax assembly of parts to be cast. When the tree is full, it gets dropped into a can of liquid plaster. After that, the can is popped into a kiln and subjected to very high temperatures. Over time, the plaster sets and hardens. Over longer time, the wax melts and eventually evaporates leaving a complex cavity of where the parts were. Now molten brass is poured into the cavity and using a centrifuge, the brass finds its way into all the nooks and crannies. The can is cooled, the plaster chipped away, and there you have it! A tree of neat little brass parts!

As you can tell, there are no shortcuts to this process and as such, a lot of expensive hot manual work. However over the last few years the master requirements have changed making the production of patterns a little easier. With the advent of some sophisticated RTV (room temperature vulcanizing) liquid rubber, we can now make our patterns out of pretty much anything as no heat is involved. My preferred medium for making patterns is styrene. With the RTVs, you also do not have to compensate for mold shrinkage. See the attached photo of a pattern for an Sn3 freight truck.



Master pattern for a Sn3 Freight truck
Picture: Bill Meredith

I have been making my own brass castings for years. There are several places that will do that heavy duty molding and casting with your patterns. I have found that the best work I have seen is by David Sciacca at Valley Brass & Bronze (<http://www.tracksidedetails.com/>). I should mention that Dave is not cheap, but his work is outstanding and he delivers on time. At the end of the day, his quality speaks for itself.

One warning here is that Dave's work is so fine that your master has to be near perfect. Any scratch or blemish will be faithfully replicated.

For those who are highly CAD savvy, you have the option of creating your master using the burgeoning rapid prototyping method. Basically you have to create a 3D model of the part in AutoCAD or SolidWorks and then contract out to an organization

to "print" the part out in polymers. In the past, the resolution could at best be described as "ok" as the process basically lays down thin layers of polymer using something like a 3D inkjet printer. Under scrutiny, one can discern the layers, especially where rounded corners are the order of the day. I have been told however that the resolution has become such that this is no longer an issue. It is now possible to print legible raised letters on truck side frames in O scale!

Your can take away from these random thoughts is that it has become a lot easier to make your own etchings and brass castings. For etchings, having a simple CAD program or drawing package such as Corel is a great start. For brass castings all you need is a good grasp of working with styrene and you are well on your way to getting the parts that you want.

Modellers Tip

By Mike Rozeboom

Have you ever struggled with designing a Helix? Here is the link to a webpage that will give the answer to most of your questions:

<https://docs.google.com/document/d/1sbEsXTiWltBCL1JdWwViiHhNkqC46tPUta-oLWLQHDQ/edit?pli=1>

The document not only discusses Helix design, but also grades in general.

Display Table

By Grant Knowles

The January meet included a rather extensive collection of models on the display table. The Display theme, not un-expectedly, was “Goodies From Santa”. Stan Conley did the honours of walking us through the models.



Algonquin Bottlers from an Ed Fulasz kit (now by Railroad Kits).
Picture: Andreas Mank

The Algonquin Bottlers was built by Grant Knowles for Don Leger. This is the first Ed Fulasz kit that has been brought out under the Railroad Kits banner (<http://www.railroadkits.com>). Jimmy Deignan purchased rights to the Ed Fulasz line recently and continues to produce all of Ed's kits along with adding new ones. Good news is that Jimmy is also enhancing the kit instructions and I am pleased to announce they are very good. I picked up this kit at the 2012 Ottawa TrainExpo at a very affordable price. Don has been helping out in the kit build which will fill an empty lot on his Shadetree RR.

Paul Anderson has once again demonstrated why he is the Tortoise King with his double cross-over mechanism. Through the artful use of styrene, levers and cranks, Paul is able to throw all four turnouts (at the same time) in the double cross-over

with a single tortoise. Since the mechanism is buried in the foam on the HO Trak module, Paul also brought out a separate unit so we can see how the parts fit together and function. The wiring needs to be completed on the module installation where the tortoise will power all of the frogs.

David Primeau brought out the O.V. Hooker & Son monster structure kit by South River Modelworks (<http://www.southernrivermodelworks.com/>). David has plans to install this wonderful kit on his layout.

Don Leger had his 50ft ICG boxcar on display. This model was expertly weathered by Peter Gray.



Blue Ridge Coal Company by Full Steam Ahead as assembled by Stan Conley.
Picture: Andreas Mank

Stan Conley brought out his “in progress” build of the Blue Ridge Coal company from Full Steam Ahead (<http://www.fullsteamahead.ca/>). Though the assembly is progressing well, Stan did express some concerns that the construction sequence in the instructions does not quite make sense and the cross bracing on the model in the photo does not align with the plans. None the less, it makes a very nice structure (when finished).

When travelling on our summer vacation this past summer, we dropped into a tourist shop in Medora, North Dakota where we stumbled across a collection of jigsaw puzzles portraying a number of Colorado narrow gauge railroads. The images were a close representation of reality so I picked up the Telluride Homecoming (located on the RGS) for Santa to hand out. Needless to say, my wife assembled the



ACL Watermelon car from a Westerfield kit by Dave Steer.
Picture: Andreas Mank

puzzle though left the last piece for me to install – my contribution!

David Steer brought out a rather unusual watermelon car that was built from a Westerfield resin kit. The interesting feature about this car is the side doors contain a mesh panel to allow air circulation around the melons. There are also solid panel doors that can be slid into place should the car be used for regular service. David noted that through research on the web he was able to understand how the melons were loaded to minimize damage during transit. A rumour has it one of these cars did end up in the Walkley yard at one time.

David Gardner has shown us that it is never too late to start building a model for the display table. The Metcalfe Platform Shelter (GWR) was a free insert in the January Railway Modeller. David started building this model last night in time for today's meet! He plans to add a few more details to finish it off.

Steve Glew, who recently joined the club, has his brand new Japanese C56 on display along with a couple of cars. This represents a vegetable train that ran on the East Japan's Koumi Line. According to Wikipedia (yes I had to look this up), The Koumi Line is a railway line in Japan operated by the East Japan Railway Company (JR East). It links Kobuchizawa Station in Hokuta, Yamanashi with Komoro Station in Komoro, Nagano and stretches 78.9 km through the mountains with a total of 31 stations. It roughly follows the route of national route 141, running directly alongside the road at some places and crossing it at least twice. Steve's 2-6-0 steamer and cars are beautiful models.

The rest of the display table was "consumed" by numerous models from Peter Gray. Peter had 9 modern heavily weathered freight cars many of which included graffiti. Peter also had a number of (as he calls them) plastic craftsmen kits on display that he has brought to life through painting, weathering and adding details. Finally Peter had a number of dirty diesel locomotive out.

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 January meet web page:
http://sld-nmra.ca/meets/jan_13/jan_13.htm



Peter Gray's Graffiti enhanced freight car collection.
Picture: Andreas Mank



Next Division Meet

St Lawrence Division – NMRA

When:

Saturday, March 30, 2013

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:

John Stewart

Working with Metal

Ron Newby

*Designing a Narrow Gauge
Layout for Operations*

Display:

Rolling Stock

Afternoon:

Peter Gray

Intro to Weathering

Kitbuster

