

Rochester Model Rails

Dedicated to Quality Model Railroading

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"Morning Train out of Trinidad" on the HO_n3 Wolf Creek Line of Michael McClure, Whittier CA.
This image took third place at the 26th Annual Narrow Gauge Convention in 2006.

Building a Large HO Scale Sawmill – Part I *by Richard Senges*

Building a Hot Wire Cutter - Part II *by Dick Roth*

Rutland /B & M Ball Signal - Conclusion *by Ned Spiller, MMR*

How to Install Decoders in Older Locomotives – Part 5 *by Dave Mitchell*

Train Events – 2006/2007 Calendar

Builing a Large HO Scale Sawmill I

Part I – History and Planning

by Richard Senges

History

Well – it's been 15 years in the making and my HO scale standard gauge *Oil Creek Rail Road*, including the *Oil Creek Logging and Mining Company* and the *Bath and Hammondsport Rail Road* – Hammondsport and Bath, NY, is completed. By completed it is meant that all the benchwork, wiring, control, structures, scenery, backdrop, etc. are done. Only thing left to do is convert to DCC sometime in the future (ready to implement with an *NCE Power Pro R System* plus five DCC engines).

The ultimate model railroader's dream to be featured in *Model Railroader* magazine has materialized too (see the January issue of *Model Railroader* coming out December 1, 2006).

What to do now? The answer, of course, is to expand the layout! But what?

Having done oil, grapes and wine, logging and mining – what's left? Well logging has always been a fascination for me, partly since my uncle's grandfather was George I. Treyz, who had a chemical and logging empire in 1915 in the Cooks Falls area of NY state. That, plus having spent a summer in Clatskanie, Oregon and liking sawmills in general, a large sawmill appeared a good choice. The *SierraWest Scale Models Twin Mills at Deer Creek* had been purchased some years ago so it seemed logical to build that kit.

This kit is huge and probably the largest most complete kit on the HO scale market today. It includes 20 separate structures, mill hardware and takes up a minimum of nine square feet. The construction manual alone is 127 pages long and in addition there are 36 large page construction plans.

Planning

The first problem was where to put such a large mill. One option was to expand the train room and put it in the expanded room. About two years ago, a Crew Lounge was added to the train room. (see Figure #1) This was an option, but the major disadvantage was the loss of the Crew Lounge. So where could it go?

Another option was to expand the layout where it is today, that is, to expand the layout in the form of a "T". This option was chosen.

In evaluating this option, the space required for the addition was laid out using corrugated boxes and storage cabinets and lived with for a few months. (see Image #1) This appeared to work out so what was the next step?

Contrary to all modelers' and male instincts, it appeared like a good idea to actually read the manual before building the mill. This turned out to be a good idea since in the manual the author and owner of *SierraWest*, Brett Gallant, suggested purchasing and reading a book about the

Mill – *Pino Grande – Logging Railroads of the Michigan-California Company* by R. S. Polkinghorn. Especially helpful was the aerial photograph of the mill on pages 88 – 89 and a map of the mill on page 90 by S. E. Taylor. (see Image # 2)

Additional information was stumbled upon while reading Russ Reinberg's 2006 *Finescale Railroader – Logging, Mining & Industrial Annual*. Both the 2005 and 2006 issues have great articles about the Mich-Cal Lumber Company and the Pino Grande Mill.

Armed with the *SierraWest* sawmill kit, the *Pino Grande* book, the *Finescale Railroader* issues, and many other eastern and western logging books and articles (see *RMR* September issue pages 9 – 12), it appeared that the planning stage was well under way.

But what to build – the real Pino Grande Mill (see Image # 2), a typical western mill an eastern mill, or a fantasy hybrid mill? Having modeled actual railroads for 15 years, I decided to model a fantasy mill, but using the *SierraWest* kit to construct the structures.

The biggest problem was the track plan. Space is always at a premium, so the track plan had to fit the existing space layout, be somewhat realistic, and also fit the mill kit structures. After about 8 plan renditions, it was decided to adopt a relatively simple track plan with few tracks and turnouts. (see Figure # 2)

One interesting feature of the track plan is how one of the tracks connects to the rear of one of the existing engine house tracks. This allows the mill to be entered by engines from the engine house area and vice versa.

The logs entering the mill travel on a track off the main line of the layout. Two tracks will extend to the lumber loading area. One track will traverse the log brow and the unloading donkey. (see Figure # 2)

Another issue was how to lay out the buildings – like the *SierraWest* plan taking only nine square feet or possibly a bigger area with a larger log pond. Since the available area was about 42" x 82", the larger mill site was adopted. This still allowed 30" aisles on each side of the mill for viewing and a five-foot aisle at the end of the mill.

In order to see how things would lay out, the overall drawing of the total *SierraWest Twin Mills at Deer Creek* kit was enlarged. Knowing that the allocated space of the kit was 3' x 3', the drawing was enlarged to this exact size. This facilitated planning the location of the buildings. (see Image # 3).

This plan was produced both in normal image and in reverse mirror image (at *Office Max*). On top of this plan were placed templates of each structure made of foamboard. (see Image # 3). By moving these two dimensional models around the enlarged plan, it was easy to see how things fit together. I am still in the process of moving the templates leading to the final plan.

At the beginning I estimated that this would be a three-year project – one year in planning and construction for the benchwork, trestle, mountain, track and two years to construct the mill. The benchwork went up relatively quickly thanks to Matt Kovacic's help and the individual mill structures are now being built. Next month – *The Benchwork*.

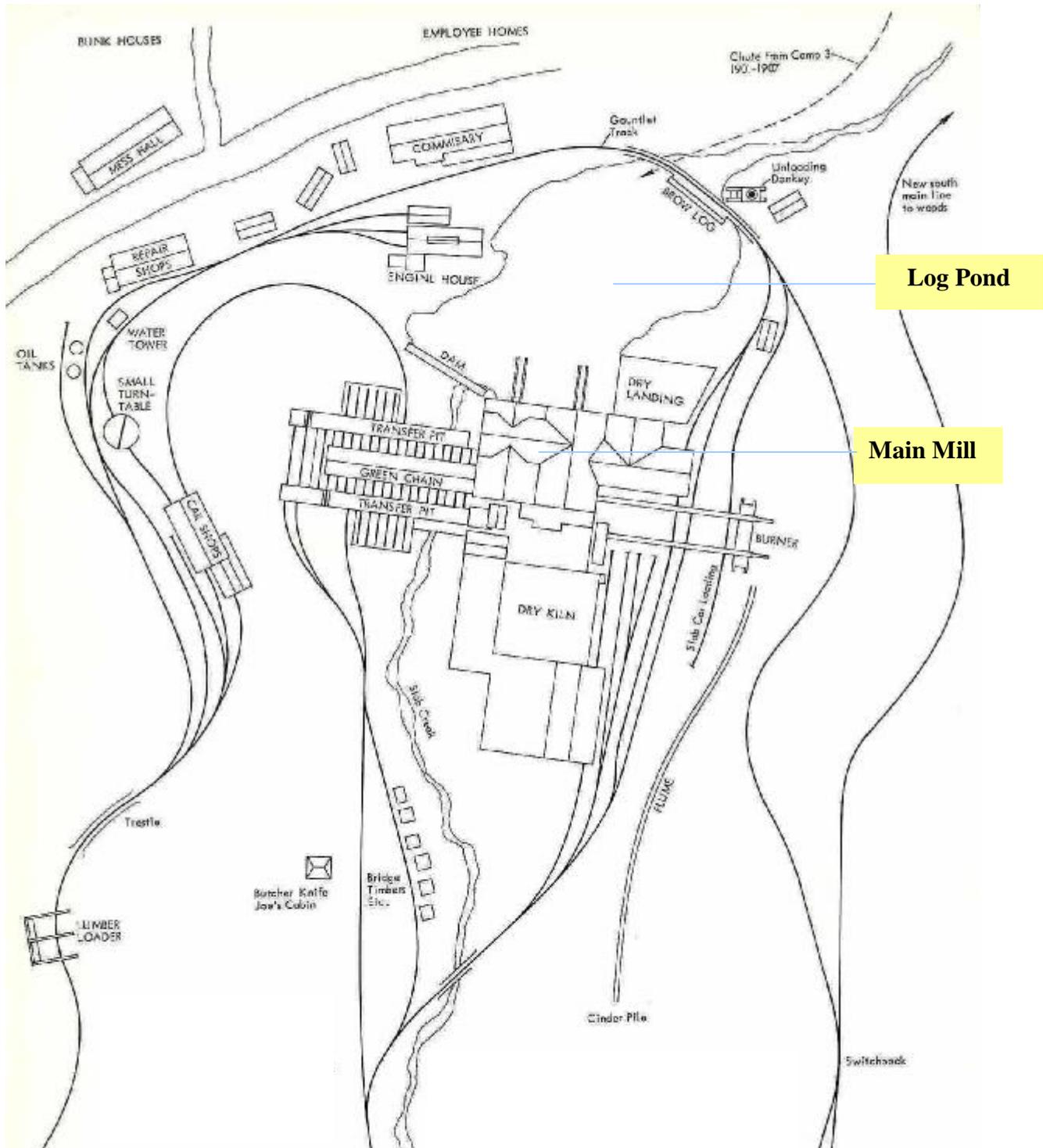
Image # 1



Cabinets and corrugated boxes were piled up to support the temporary corrugated top to see how much space the proposed sawmill and log pond addition would consume. Aisles of 30” are on each side of the proposed addition. Furniture, previously on the left, was moved to the Crew Lounge in the back. The file cabinet, previously on the right, was moved to the shop to the left of the image.

The mountain will be expanded and blended into the new mill scenery. A new trestle will be constructed connecting the mill site with the existing main line.

Image # 2

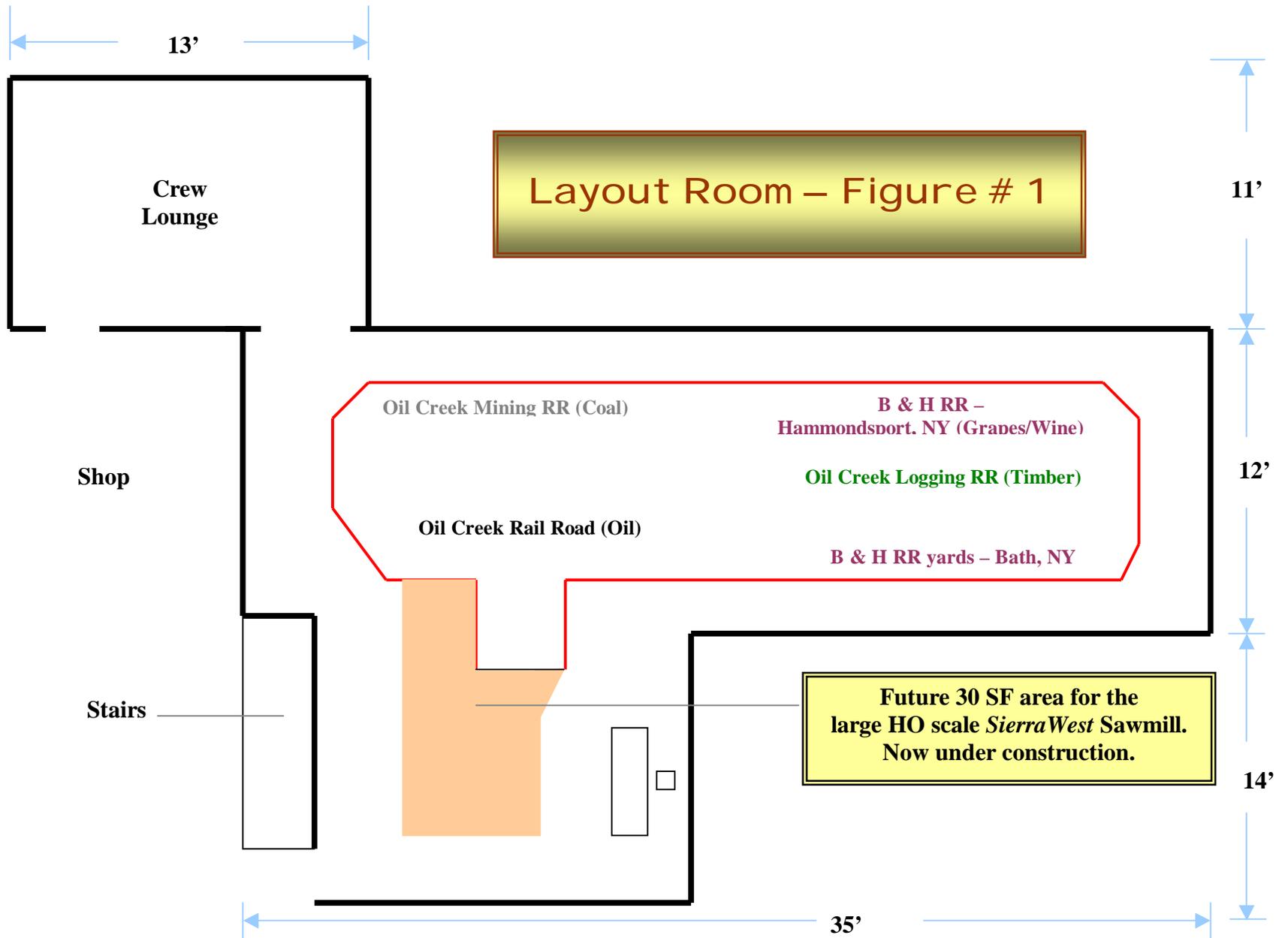


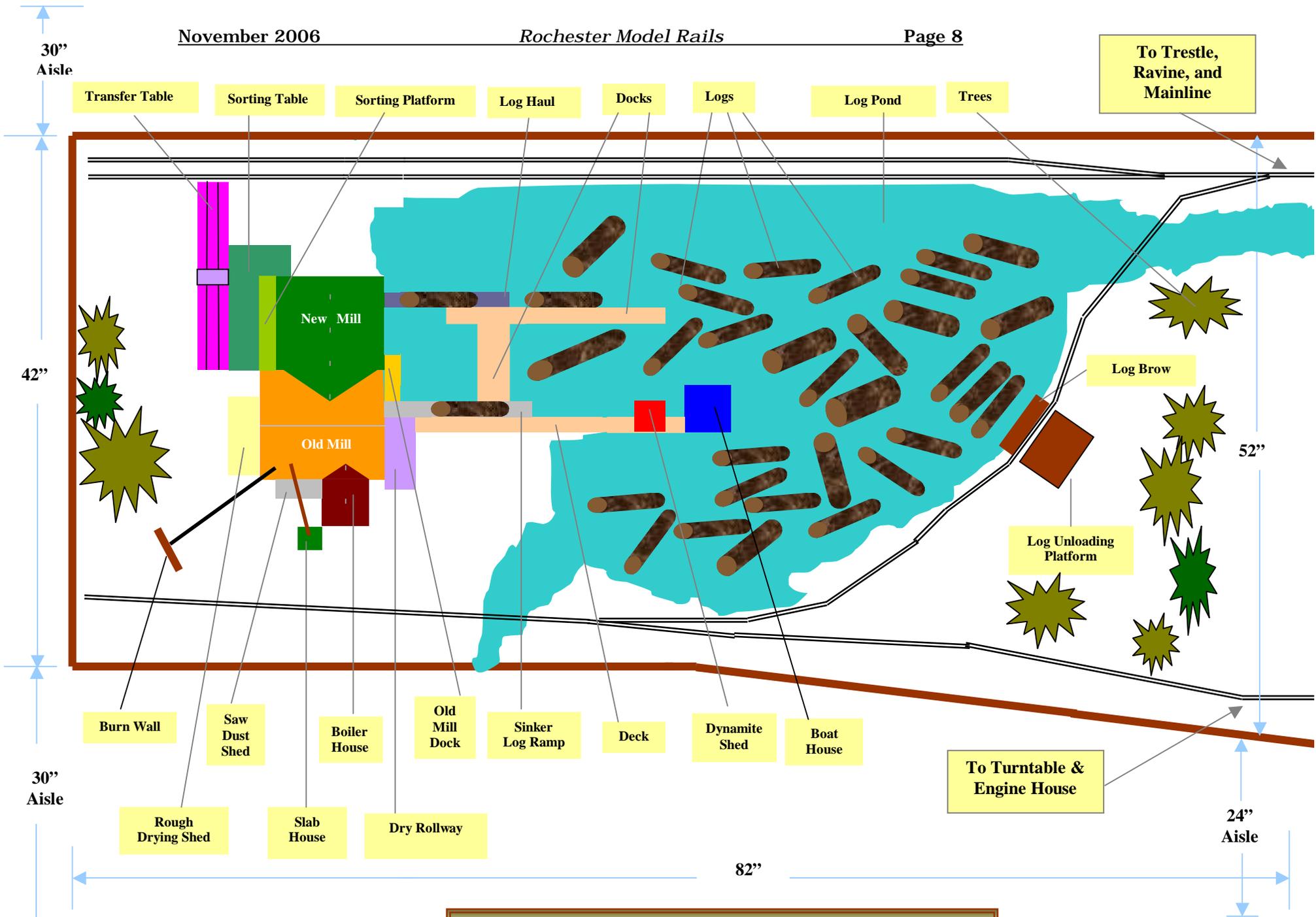
The Mich-Cal Lumber Company – Pino Grande mill site. *Drawing by S. E. Taylor.*

Image # 3**Tracks to Trestle
and Main Line****Main Mill****Enlarged
Mill Drawing****Track to
Log Brow and Engine House**

Foam board templates were made to represent each of the sawmill buildings. These were placed on the enlarged overall drawing of the mill. This allowed visual inspection of the relationship of each of the mill buildings and allows the modeler to rearrange the buildings.

The placement and relationship of the mill buildings may evolve as each of the structures is completed. Final attachment of the structures to the scene will occur after all the buildings are completed. The mill log pond, including the water, will be constructed last.





Sawmill Plan – Top View - Figure # 2

Rutland/B & M Ball Signal – Conclusion

by Ned Spiller, MMR

The Model

The door is a Tichy casting. I could not find windows that were the correct size, but I had some MicroEngineering windows that were the right width but too tall. I cut off the bottoms to the correct height and made new sills and mullions from styrene strips. The details came from various sources. I couldn't find a chair like the one in the picture, but I did find a similar chair to put in front of the shanty. The shanty was painted with Floquil paints.

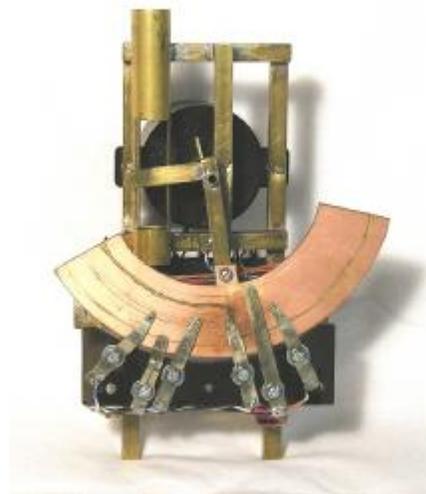


Once I was done with the shanty, I found that there were so many windows that, if you looked closely, you could see that it was empty inside. So I made a simple interior with a desk, chair, and wood stove.

The tower is almost all brass, soldered together. I used various sizes of tubing and strips, and a ladder and filial from Tomar. The bell is a Details West casting. I could not find any pulleys the right size, so I put some styrene spru material in an electric drill, filed the groves, and cut them apart with a razor saw. I made several pulleys, then kept the best two.

The “balls” are made from brass tubing with a styrene center. Here again, I made a whole bunch of them, then picked out three that were nice and square and the same size. The real signal used a chain, but I couldn't find model chain that was fine enough, or that I thought would be reliable enough, so I used button thread.

The mechanism that moves the balls up and down is made mostly using brass square and round tubing soldered together. I wanted to be able to make all of the fine adjustments before I installed the tower on the layout, so I made the mechanism in two parts. The upper part is fastened to the tower itself. A piece of 1/2” brass tube is soldered to the brass plate at the base of the tower. The thread that the “balls” are fastened to does not loop around the bottom pulley, but fastens to a spring and to a sliding bar inside the tube. Sliding the bar up and down moves the balls up and down.



The tube that the tower is mounted to goes through a hole in the layout surface and extends below.

The motor and electrical control plate are fastened to a 17/32" tube that slides up over the 1/2" tube coming through the layout surface and is held on by a pin. A tube fastened to the motor shaft has a lever the pushes on a screw in the slider in the upper tube and pulls down the "balls".

Also fastened to the motor shaft is a plate made from printed circuit board material. A set of wipers made from old telephone relay contacts control the motor movement to show 0, 1, 2, or 3 balls. I can move the wipers to make fine adjustments to the positions of the "balls".

I designed the mechanism around an old Hanksraft motor that I had on hand, but once it was done, I was not happy with how it operated. Hanksraft motors, which are often used as switch machines, come in many variations. The one I had was rated for 12V. I had to run it on 9V to get a reasonable speed of operation, but then the motor did not have enough power to pull down the "balls" against the return spring reliably. I found a company on the Internet, Train America Studios that sells an equivalent to the Hanksraft called the Torquemaster. The Torquemaster is rated for 3V and 4 RPM so I was able to run it on D cell batteries for display and it was stronger than the 12V motor.

Conclusion

I finished the model just before the NMRA Lone Star Region's (Texas and Louisiana) convention, and I wanted to bring it to show. I made a display stand out of some MDF board and some Plexiglas I had on hand, and used some D cell batteries and a rotary switch to allow the signal to operate. It generated a lot of interest, and managed to get third place in On-line Structures.

On my layout, the signal is at the entrance to Springfield, my major town. On the prototype, the signal indications were: One ball – Rutland trains have clearance to cross, two balls – B&M Cheshire



Branch trains have clearance, and three balls – B&M Fitchburg Division trains have clearance. On my layout, the signal is wired through the switch machines so: One ball – routing to the main line, Two balls – routing to the passenger station track, and Three balls – routing to the yard.

This was a fun project. I enjoy working from old photographs to build a model that represents something that doesn't exist anymore, but is prototypical for my railroad's location and era. And a working ball signal is something you don't see on many model railroads (I don't think I've ever seen one). I'll have to keep the prototype photos handy though, in case some visitor questions the validity of a ball signal in 1954.



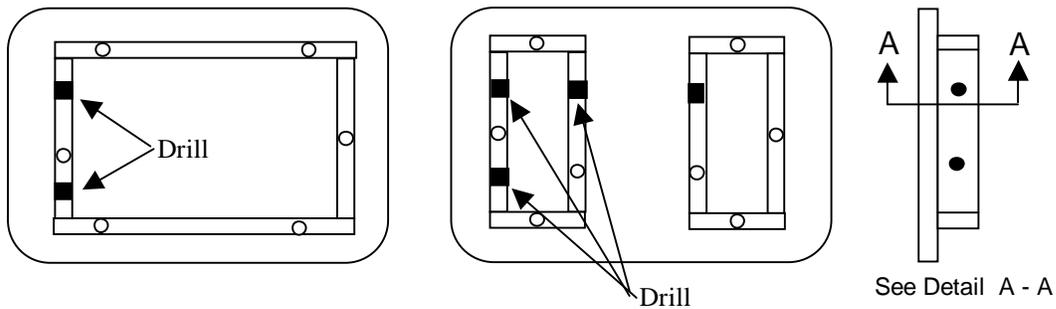
Digital images by Ned Spiller.

Home Built Hot-wire Foam Cutter

Part II

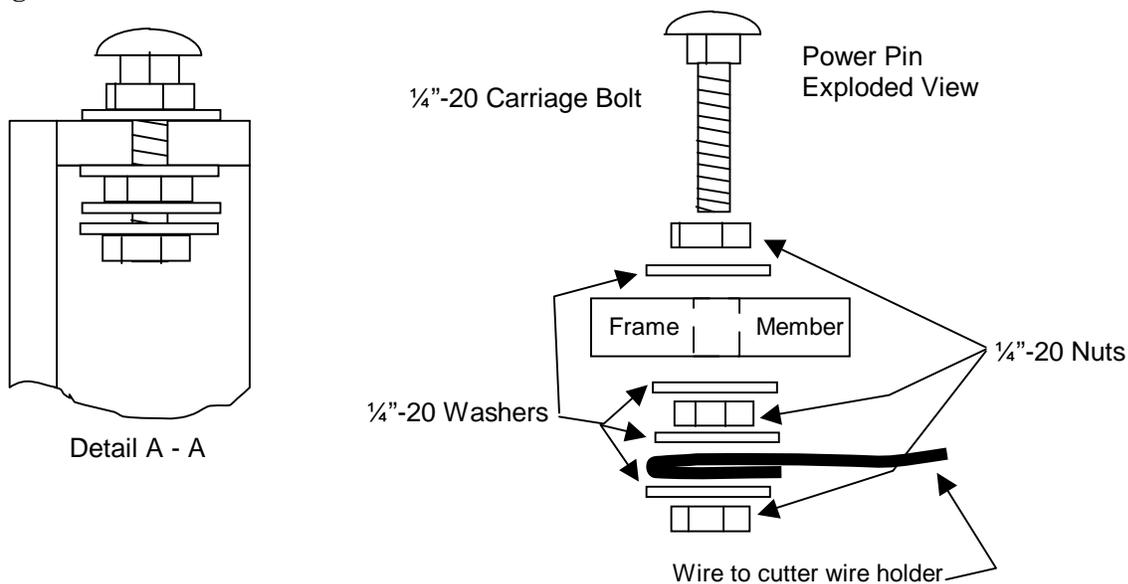
by Dick Roth

Figure # 2



Two 1/4"-20 x 2" carriage bolts are used to provide the beginning of the electrical circuitry. Thread nuts down against the shoulder of two bolts followed by a washer. They are then pressed through the holes drilled in the base frame. This will become the rear of the unit. Place another washer on the bolt followed by another nut. Tighten the nut down very snug so that it will not turn later when the wires are added on the inside and tightened. (See Figure # 2 and Detail A-A above.)

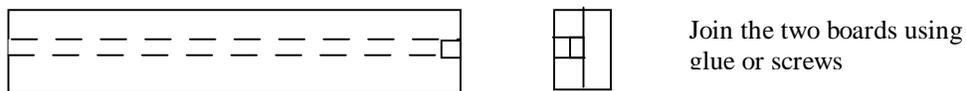
Figure # 3



The next step is to construct the upper portion of the cutter. This can be done several ways with the easiest being to use 2 lengths of 1" x 3" boards and a 1 length of 1" x 2". Cut 2 pieces of 1" x 3" about 12" or so long. The exact length is not important, only that both be the same length. These will become the uprights and will control the possible length of cut. Next cut a length of 1" x 2" about 8" to 10" long to serve as the upper wire support.

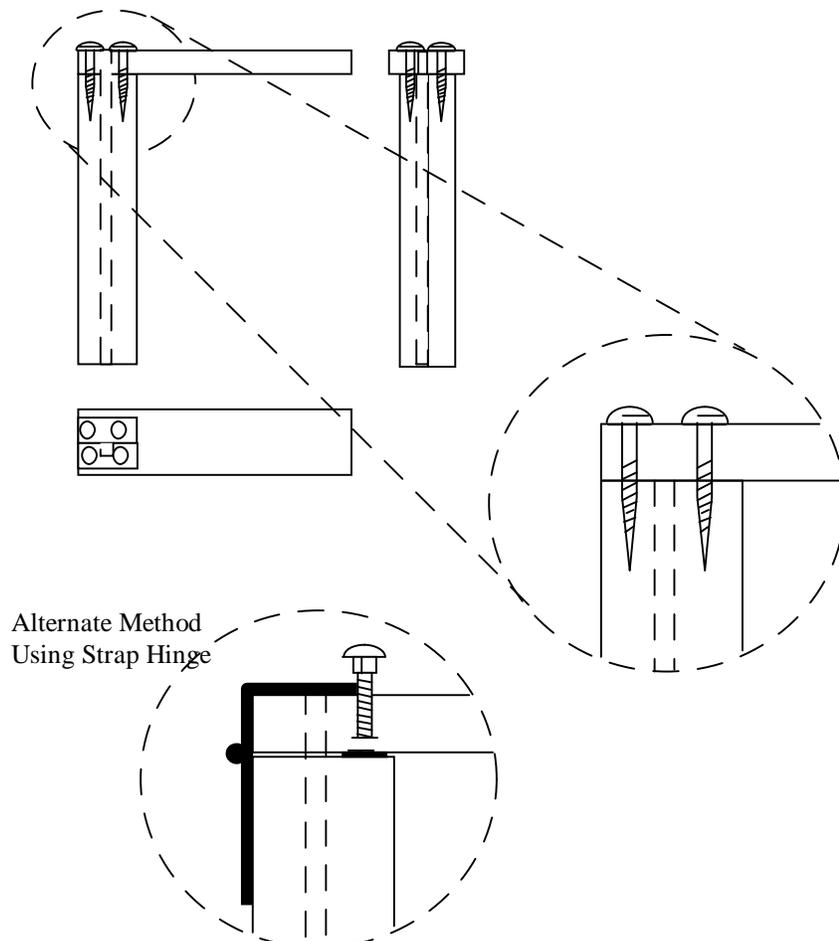
The two 1" x 3" boards will be joined together to make a double thickness as shown. If you really want to get fancy, you can route a channel down the center as shown for the upper wire. This too is not totally necessary; it does make it look a little more professional and affords one less thing to catch foam strips on later. If you are going to hide the wire, either make the channel large enough that it fits loosely or use screws to join the two pieces so they can be separated later if you want to change the wire for any reason.

Figure # 4



Next is added the upper wire support as shown below. I do it in this way that the upper support board provides a bit of spring to aid in maintaining some tension on the cutting wire when in use. For ease of construction, I try to limit myself to simple design for the frame. It has been suggested that a hinge and tensioning bolt could be added to make adjusting the tension easier. You can see this alternative in the sketch below.

Figure # 5

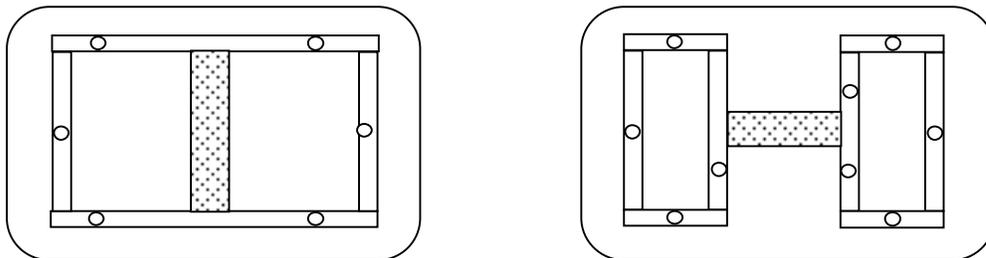


When the alternate attaching method is used, one end of a strap hinge is bent as shown and attached using short wood screws. A thru-hole is drilled through the upper wire support board to allow the bolt to fit through. A small recess is also drilled on the underside to allow a nut to be press-fit. The bolt is then threaded into the nut. A washer, with a hole slightly smaller than the bolt is placed on the upper end of the vertical support column. (If you use a 1/4" – 20 bolt and a # 10 fender washer and file a slight shoulder on the end of the bolt, the bolt will be piloted into the washer preventing it from wandering.) —

To tighten the wire, the bolt can be turned down slightly against the washer. This method will allow plenty of adjustment if necessary. I consider this an alternate method mostly because it requires extra hardware and a little more time to assemble. I tend to be an advocate of the “quick and dirty” mentality; that gets things up and running a bit more readily.

The next task is to prepare the base section for attachment of the upper and lower wire supports. Depending on the style of base frame that was made, the lower wire support will be attached either in line with the length or the width. See Figure # 6 below for details.

Figure # 6



Next Month – Part III

Installing Decoders in *Old Locos*

Part 5

Clinic Given at the NMRA NFR LSD Meet in the Fall of 2005

by Dave Mitchell

Examples 9 & 10

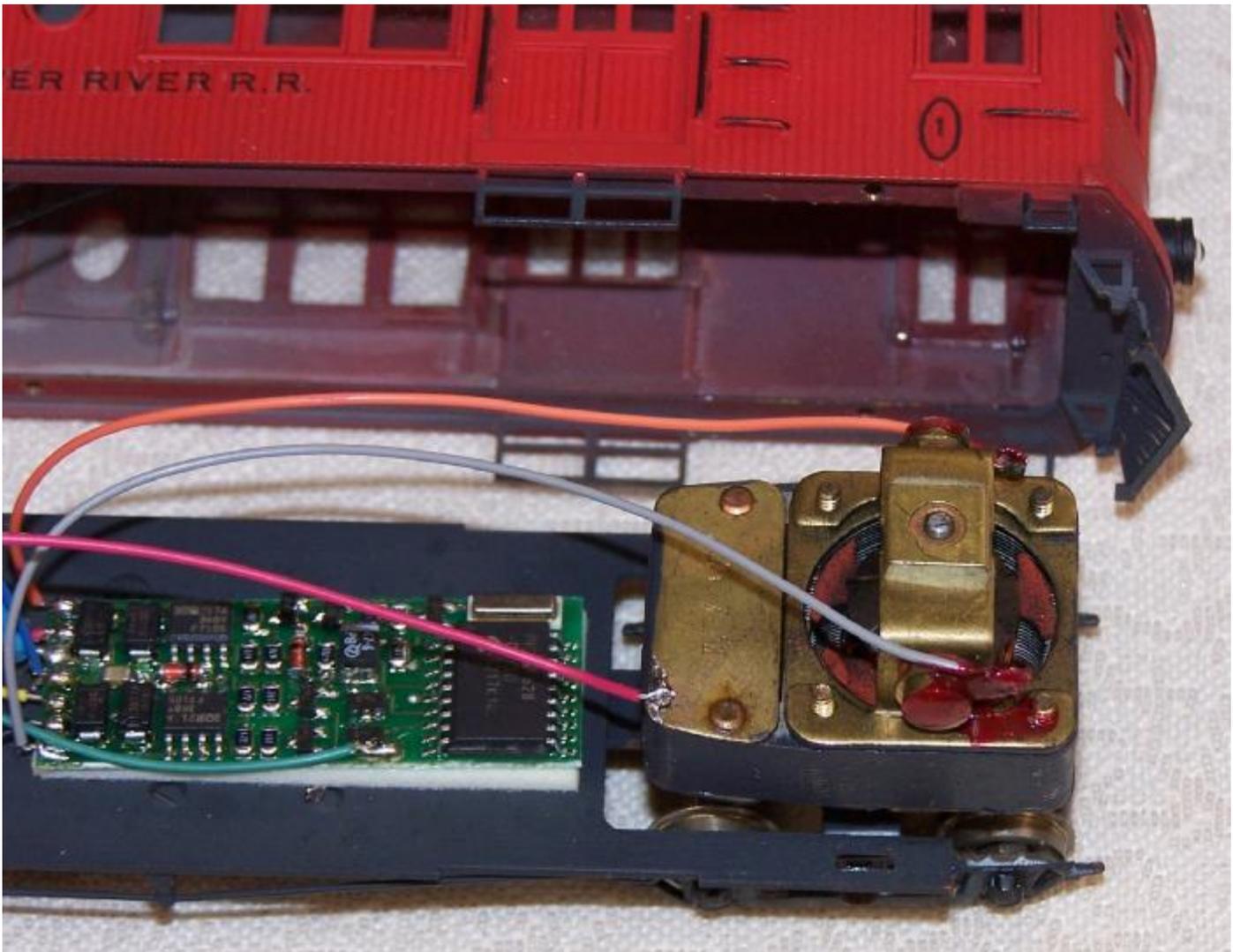
Gem Models Alco-GE-Ingersol Rand Box Cab Diesel Model Engineering Works Hall Scott Gas-Mechanical Rail Motor Car

I purchased these models in the 1960's. They were brass models imported from Japan, and are no longer available. Both of these use a large vertical shaft motor attached to a power truck that is fabricated from brass bar stock. Upon checking the current draw, I found that these motors had the required low current draw at stall. The large armature acted like a flywheel, which contributed to the smooth operation. Since both operated smoothly, and replacing the motors would have been difficult, I decided to retain the original motors.

Grounding on the original model was accomplished by soldering a tab from the insulated brush holder to the motor frame. This was unsoldered and used for a terminal for the decoder wire. The decoder was mounted on the weight in the Alco, and in the floor of the Rail Motor car.



Digital images by Dave Mitchell.



Next Month – Part 6

Future Articles

The Wolf Creek Line

The Santa Fe CF - 7

A Trip Down Nostalgia Lane

Resin Casting

Modeling Keuka Lake - Hammondsport

Siegel Street Revisited

Tortoise Installation Made Easy

The Climax Locomotive

NEXT MONTH

**A Model RR Club Chief Engineer's
Trials and Tribulations
by Peter Darling**

**Building a Large Sawmill
Part II - The Benchwork**

**Building a Hot Wire Foam Cutter
Part III**

**Decoder Installation in
Older Locomotives - Part 6**

Rochester Model Rails

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Editor and Publisher
Richard A. Senges

Web Master
Ted Larson

Columnists
Leo Adamski
Gerald Brimacombe
Bill Carr
Fred Cupp
Peter Darling
Jim Hutton
Betty James
Ray Howard
George Irwin
Steve Levine
Jack Matsik
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Lou Nost
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Frank T. Smith
Gordon Spalty
Ned Spiller, MMR
David L. Thompson
Otto Vondrak
Norm Wright



www.railroadmuseum.net

Authors: Articles, digital images, and plans are welcome.

Mailing Address
1231 Wellington Drive
Victor, NY 14564

Old Issues
of RMR

Web Site:
www.trainweb.org/rmr

Train Events for 2006

Updated 9 - 27 - 2006

- October 14-15** **Timonium, MD** – The Great Scale Model Train Show. Info: www.gsmts.com
- October 14 – 15** **Bowmanville, Ontario, Canada** – 20th Annual Train Show, Bowmanville High School, 49 Liberty Street North. Sat – 10:00 am - 4:30pm, Sun. 10 am - 4:00pm. Adults \$5, Senior \$4, Family \$10. Presented by the Soper Valley Model Railroad Association. Contact: Ron Radcliffe at 905-987-3099
- October 19-21** **York, PA** - The Eastern Division - TCA York Meet is at the York Expo Center, York, PA. The hours: 12:00 n - 5:30 p.m Thursday, 9:00 a.m. - 5:30 p.m. Friday, and 9:00 a.m. - 2:00 p.m. Saturday. The meet is open to TCA members and their guests.
- October 20 – 22** **Parsippany, NY** – NMRA NER 2006 Fall Convention
- October 21** **Auburn, NY** - Lakeshores Division NMRA Fall Meet, Cayuga Valley Railroad Modelers Knights of Columbus Hall , Auburn, NY
Clinics, Model Contest, Election of Officers, Layout Tours
Info: Dave Mitchell, LSD Superintendent dbmitch@rochester.rr.com
- October 21-22** **Chicago, IL** - International Hobby Show – Largest Hobby Show in the Country
Donald Stephens Convention Center. Info: www.lhobbyExpo.com
- November 4- 5** **Syracuse NY** – 32nd edition of the Central New York Train Fair. One of the largest train shows in the Northeast covering 150,000 square feet in two large buildings at the New York State Fairground. More that 100 vendors; more than 50 operating layouts; all scales. Sat. 10:00am – 6:00pm. Sunday 10:00am – 5:00pm. Sponsored By Central New York NRHS.
<http://cnynrs.org/> Show Info: http://cnynrhs.org/train_show.html
- November 11-12** **Milwaukee, WI** – Trainfest, Wisconsin Exposition Center at State Fair Park.
Info: www.trainfest.com
- November 12** **Batavia, NY** - The Great Batavia Train Show, Batavia Downs Gaming, 9:30am – 3:30pm.
Donation \$5.00
- November 18-19** **Syracuse, NY** - Open house for Central New York Model Railroad club and Historical Society
18 Nov 2006 10 AM to 4 PM, and 19 Nov 2006 Noon to 4 PM
Info: <http://www.cnymrc.com/>
- December 9-10** **Rochester, NY** – The *New and Expanded* Two Day RIT Train Show and Sale,
Location – RIT Field House, many layouts displayed, largest train show in western NY.

Train Events for 2007

Updated 9 - 27 - 2006

2007

- January 27-28** **West Springfield, MA** – Amherst Railway Society Big Railroad Hobby Show, Eastern States Exposition Grounds, Memorial Avenue. Info: www.AmherstRail.org
- February 16-18** **Denver, CO** - 22nd Annual Sn3 Symposium. Contact: Doug Junda 303-275-8926
- February 18** **Syracuse, NY** - Syracuse Model Railroad Club Train Show
18 Feb 2007 10 AM to 4 PM. 2 HO layouts, LEGO train layout,
family oriented vendors Info: <http://www.wyrmodelrr.org/>
- March 10 – 11** **Rochester, NY** - Rochester Model Railroad Club Annual Show,
Basement of First Universalist Church, 150 Clinton Ave South, 585-454-2567 (club room)
Saturday 10 AM - 5 PM, Sunday 1 PM - 5 PM
- April 15** **Batavia, NY** - The Great Batavia Train Show. The events will be held at Batavia Downs
Gaming from 9:30 to 3:30. Admission is \$5 for adults, \$3 for under 18, and under 13 free.
- April 27- 29** **Rochester, NY** – NMRA NFR convention. The “Flower City Flyer” event will
include the usual – model railroad clinics, model contests, and layout tours.
Info: Mike Roque at mike@tsny.com
- May 19-21** **Kimberton, PA** – Mid-Atlantic Narrow Gauge Guild - Module Meet
- June 30 July 1** **Galeton, PA** - Bark Peelers' Convention, Pennsylvania Lumber Museum
Info: info@lumbermuseum.org
- July 22-28** **Detroit, MI** – NMRA National Convention – Great Lakes Express
Info: www.NMRA.org/2007/
- November 11** **Batavia, NY** - The Great Batavia Train Show. The events will be held at Batavia Downs
Gaming from 9:30 to 3:30. Admission is \$5 for adults, \$3 for under 18, and under 13 free



Medina Railroad Museum 2006 Fall Train Schedule

Two-hour scenic train rides from Medina to Lockport and return.

All trains depart from Medina, NY at 11:00 and 2:00 unless marked otherwise.

Oct. 10 Tue 2 pm only

Oct. 14, 15 Sat, Sun

Oct. 17 Tue

Oct. 21, 22 Sat, Sun

Oct. 24 Tue

Oct. 28, 29 Sat, Sun

www.railroadmuseum.net

2 pm only

Nov. 25 Sat

2 hour Train Rides with Santa

Dec. 2, 3 Sat, Sun

Special one hour Santa Train from Brockport only
Trains depart 165 Park Ave. at 12:00, 1:30 & 3:00

Dec. 9, 10 Sat, Sun

2 hour Train Rides with Santa

Dec. 12 Tue

2 hour Train Rides with Santa

Dec. 16, 17 Sat, Sun

2 hour Train Rides with Santa