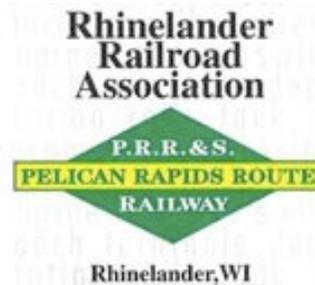


# Warrant



April 2011

## Classes to be held 10 AM March 26, 2011 and 10 AM April 2, 2011

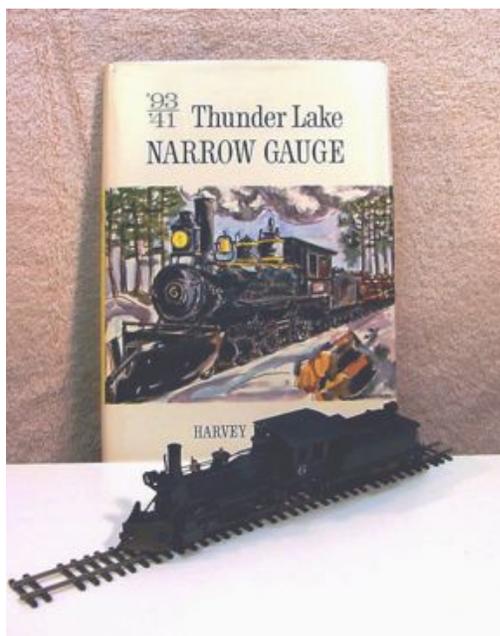
This month and next, Paul A. Wussow will present the 3<sup>rd</sup> & 4<sup>th</sup> in a series of classes that have progressed: from wire, to wiring layouts, and now, this month we learn about Digital Command Control or DCC. The meetings will be in the basement of **Rhinelanders' Library**, 106 North Stevens Street, Rhinelanders, WI. The library phone is 715-365-1070.

Paul created a questionnaire to get a better idea of where we were in our understanding of DCC. It was filled in at the joint training of RRA and TLMRC in Three Lakes on Feb 27<sup>th</sup>. Feedback suggests that Paul will have an audience with a broad spectrum of knowledge: ranging from little to lots. These will be a joint classes with TLMRC on RRA turf. Play nicely kids.

## Changing HO Brass Engine to Narrow Gauge

by Dave Krembs

*The photo on the front jacket cover of Henry Huston's book on Thunder Lake Railroad and the photo on page 109 inspired conversion work of a brass engine to narrow gauge by Dave Krembs. His finished product below is an excellent representation of the period and a good representation of his capability as a skilled craftsman.* Editor RGB



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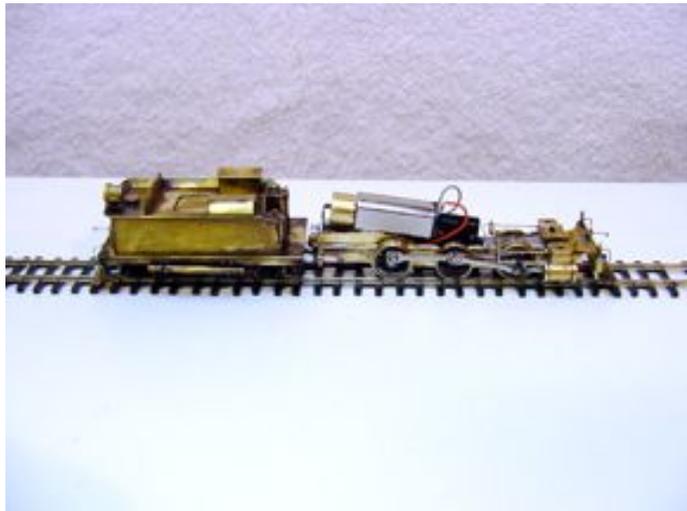
### Background on Engine:

- The Thunder Lake #6 at the RRA Club was a static (gears shot) HO switch engine with a large Open Frame (OF) motor sticking out of the cab.
- Somewhere in its past it had been nicely modified and detailed.
- Sizing it up against Model Die Casting (Roundhouse) (MDC) HO<sub>N3</sub> 2-8-0 it looked small enough to be converted to a narrow gauge.
- A little research showed it to be a Ken Kidder that started as a 2-6-0.



### Changing to Narrow:

- I cut the frame and cylinder saddle
- The drivers were narrowed by cutting one axle end and reaming wheel because the axle ends were stepped down from 3mm.
- New tender trucks and pilot truck are from Precision Scale Company (PSC).
- The new motor and gear box are from North West Short Lines (NWSL)  
(Note picture above with bagged items as received)
- The 50:1 gearbox has its HO<sub>N3</sub> axle and gear machined as one piece.
- For these wheels both sides are reamed to 3mm (see second picture)



### Adding DCC Decoder

- DCC decoder is a Digitrax DZ143 with resistors for 1 1/2 volt lights

### Other Info:

- #6 is modeled after the picture on the dust cover of Harvey Huston 's book *The Thunder Lake Narrow Gauge*. Other pictures of #6 are on pages 65 and 110 of said book.
- The snowplow pilot is also from PSC.

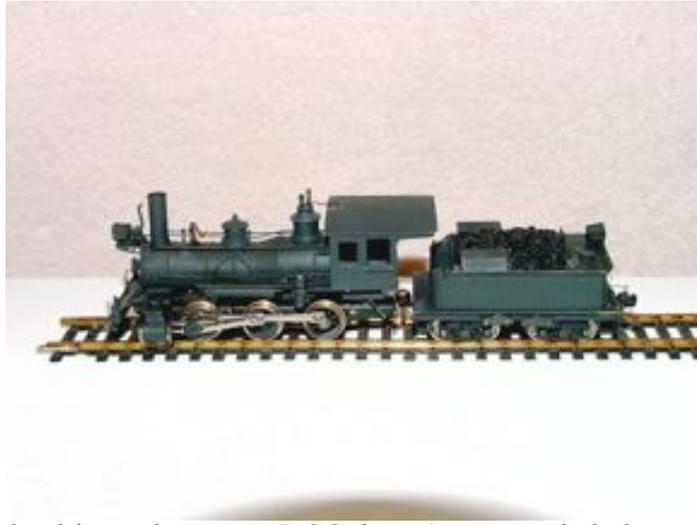


## Rhineland Railroad Association

- I opted to leave the electric headlight and dynamo because Thunder Lake engines were electrified about 1907. (The Soo Line did the installation for them)

### Tools required:

- Exacto saw and files
- Dremel tool and cutters
- Pin vice and bits
- NWSL quartering jig
- Soldering equipment, torch and iron
- And a LOT of patience



### Regret:

- Un-plated drivers get dirty very fast: they are of brass. Brass wheels need to be cleaned too often. Pure DC power would burn the oxide off the drivers; however, DCC doesn't seem to help keep them clean. Thus, fouling (stalls and jerky behavior) is more of a problem with DCC. Consequently I have sent a number of wheel sets out for plating.
- Plating could still be done on this model if the fouling becomes onerous.

## A Fool's Paradise

*by Bob Lake*

It was a fool's paradise. We thought it would never end. Passenger trains had become the greatest human movement corridor in US and World history in spite of dirt, grime and permanent ring around the collar from coal smoke and steam. Just when we thought maybe we could close the patent office once and for all, along came Diesel Electric Locomotives and the romance and enthusiasm for train transportation took another leap upward.

It was doomed! President Eisenhower (Ike) rammed through legislation and budget to fund a means of military logistics and movement that would confound any enemy our country might face. It was ultimately named the Interstate System and was profoundly responsible for the burgeoning personal relationships we all developed with our cars! Even from space it can be seen as a network reaching into every nook and cranny of our country and sublimely supported our love affair with personal and commercial road transportation to the detriment and demise of passenger rail systems. In comparison, other countries have maintained their railroad systems continuously up to the present simply and only because nowhere else did road surface travel develop so thoroughly as did it in the good old USA!

In the early seventies one passenger route in particular fell by the wayside and my family and I were aboard the last passenger train from Valencia Valley California (Newhall Station) to Tehachapi (famous for big earthquakes). It was called the Tehachapi Loop and a ride never to be forgotten.

The engineering in even making the right of way possible was astounding! It was possible to arrange for a gradual incline up into the mountains that needed to be crossed to get to Tehachapi. But once there, a quick descent in a grand loop was necessary to achieve the lower elevation. Kind of like a helix in modeling parlance.

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The right of way was both a double main line, side-by-side track where two trains could pass each other, a three track main and a single track main where width would be expensive. There were six single and six double tracks under CTC by the mid forties. Two track mainline became three with time. Most folks call it the busiest single-track system in the USA. I call it cool!

The grand loop began at a high elevation, wound back and ducked under itself into a curved tunnel and headed into Tehachapi. The tunnel was dug from both sides of the mountain simultaneously and the meeting and joining of the two mining crews was right on the money!

Taking that final trip was a thrill a minute. Once into the loop, we were side by side with a freight train headed for Los Angeles. It had four units of power up front, three in the middle and three or four more in the rear. These were necessary as much for the needed horsepower as for ballast on the curve! As we passed by, both trains at ultra slow speeds (about 15 mph), the rails sang with a bell like quality almost of tuned frequencies, beginning as a screech, it settled into ringing tones of almost ethereal origins. Every bit of rolling stock was protesting the torque on the flanges of every wheel.

Standing in the vestibule between cars, one could almost touch

the cars of the other train on the inside of the curve. Close. Very close. On our way back, we were treated with another engine on our rear for extra push back up the loop. Coming back up we encountered no other trains and were heading home at the fun speed of about thirty mph.

In deference to this once and former world-class system of travel, we are joined in common thought to build our own track layouts. Welcome to the worlds' greatest hobby: A fool's paradise of another kind!



## Programs and Stuff of Interest:

March 20, 2011-WISE Division Meet-Country Springs Hotel-Waukesha, WI where R.G. Blocks of RRA & TLMRC speaks on “Basic Wiring” 3PM Info at: [www.wisedivision.org](http://www.wisedivision.org)

March 26, 2011 DCC Class 1 by Paul A Wussow at Rhineland Library 10 AM. This is a joint meeting of RRA and TLMRC (invite a friend).

April 9-10, 2011- 10th Annual Model Train Show- Menomonie Middle School  
Menomonie, WI Info Call: (715) 505-4044

April 10, 2011 NMRA-WISE Division Annual Meeting, Best Western- Airport Milwaukee  
Info at: [www.wisedivision.org/owlcar/OwlCar201103.pdf](http://www.wisedivision.org/owlcar/OwlCar201103.pdf)

April 15-17, 2011- NMRA Midwest Region Annual Convention- Madison, WI Radisson Hotel  
Info at: [www.nmra-swd.org/Badgerland](http://www.nmra-swd.org/Badgerland)

April 16, 2011 NMRA Midwest Annual Meeting of Members, 8PM Saturday Radisson Hotel, Madison  
Info at: [www.mwr-nmra.org/region/waybill/waybill20111spring.pdf](http://www.mwr-nmra.org/region/waybill/waybill20111spring.pdf)

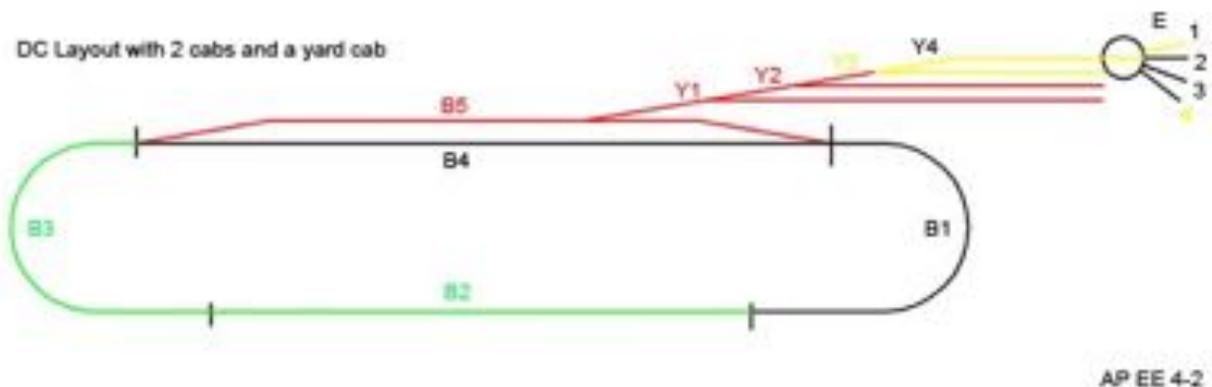
April 30 & May 1, 2011- Titledown Train Show- Shopko Hall- Green Bay, WI  
Info at: [www.ttsbllc.com](http://www.ttsbllc.com)

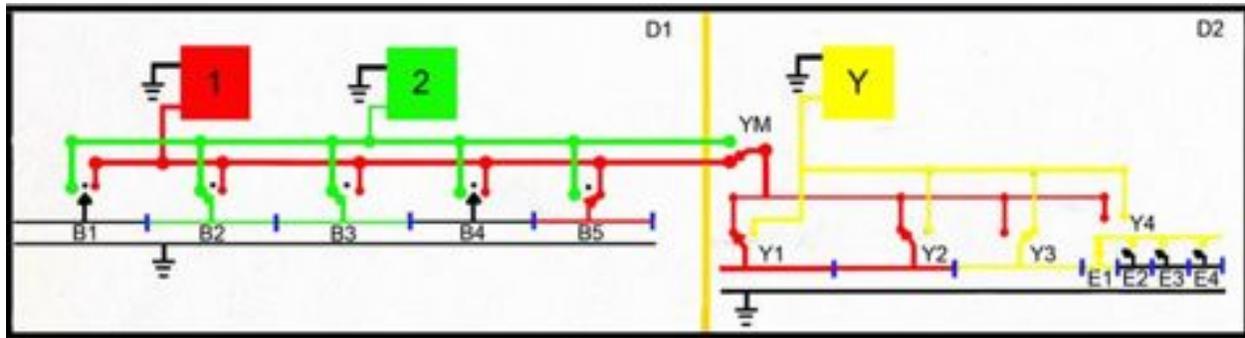
May 14, 2011 NMRA Winnebago Division Spring Meet – partnering with the Soo Line Historical and Technical Society for a first time joint meeting. Public welcome. Many Clinics, Layout Tours 8AM-8PM  
Info at: [www.mwr-nmra.org/region/waybill/waybill20111spring.pdf](http://www.mwr-nmra.org/region/waybill/waybill20111spring.pdf)

## Connecting and protecting your DCC investment *by P. A. Wussow*

When a model railroader decides to move from DC to DCC it is a costly step. In this article I hope to provide information to help the molder protect the investment while maintaining enjoyment of the hobby.

We will start with a simple layout having two mainline cabs and one yard cab with provisions for operating at least two trains at a time on the main lines and two trains in the yard. I will use the NMRA Achievement Program minimum layout as an example.





*For conventional DC wiring, five electrical blocks that can be controlled independently. Provide one mainline passing siding, one reversing loop, wye, turntable, or transfer table. Have a yard with a minimum of three tracks and a switching lead independent of the main line with facilities for the storing of at least two unused motive power units.*

If you have a layout running DC with blocks using block control switches that select the throttle that controls a given section of track, you are well on your way to have a layout with DC and DCC.

If your block control uses Double Pole Double Throw switches and you have gaps cut across each rail at the block-to-block transitions you are not running common rail. If you use Single Pole Single throw switches as shown in the drawing, like the Atlas block control switches, you have a common rail system with only one rail cut at the blocks. This is ok for now but as you build out your DCC system you may wish to remove the common rail and add power feeds to each rail.

One of the first things to do is to test your DC layout on each throttle to be sure that there are no shorts and that all the wires are connected and operating correctly. When the layout is operating without problems on DC you are ready to add a DCC system. If you are using common rail it is time to remove both DC power supplies and throttles. This is to avoid the possibility of shorts or ground loops that could destroy your DCC and maybe your DC system. If you do not have common rail and are careful not to run trains across blocks between DC and DCC you may keep one DC throttle hooked up but it is taking a big risk.

For Starting out in DCC there are a number of sets of equipment that are relatively inexpensive and will operate a small layout. The NCE Power Cab and the Digitrax Zephyr are good starters that allow you to learn and operate DCC and still be able to expand and your layout gets larger.

With DCC you will have a power supply that will supply the current to run the train and operate the digital control circuits. The power of the starter systems run between 2.5 and 3 amps while full system boosters may be purchased at 5 amps or even 10 amps (for large scales).

With your DC transformers removed from the layout circuit you may set all the block switches to one cab and connect the track connection from your DCC system in its place. The layout is now 100% DCC so be sure you have removed any DC locomotives, as they will look like shorts on the system.

Now it is time to place your new DCC locomotive on the track and give it a try.

Most locomotives come preprogrammed with a short address of 3 or 03 when they are shipped.

So let's place the new loco on the track, turn the system on and select locomotive 3.

If your locomotive has sound you may hear it as soon as you turn on the DCC system but you must select the locomotive (3) to control the sounds.

Now the big test, advance the throttle and watch the locomotive move down the track. Turn on the headlight and if you have sound ring the bell and blow the horn. Welcome to the digital world your running DCC.

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With one locomotive having the starter system and the locomotive at address 3 will work fine but as you add locomotives you will want to program the locomotive's number into your system and adjust other features. But for now enjoy your DCC operations. By the way the reverse loops, wye or turntable will need polarity control that you used in DC. We will cover automatic control alter in this series.

Next time I will start with basic programming.

**President's Message: Greetings from the "Old Man"** *by Jim Brown, President RRA*

Another month has flown by, cabin fever is still in the air but warmer days are coming up. RRA has been busy with new ideas.

There has been talk of building a "Free Mo" layout and would we as a group be interested in doing so. So, at the last business meeting it was voted on to go ahead with plans for the layout. We have three committee members at the present for its construction. They are: Mike Koltz, Brendan Marquardt, and Thomas Melancon.



Progress on the layout will show up in future newsletters.

Congratulations are in order for two members of our group, one being a new member, Paul Wussow, and the other Roger Blocks on receiving awards from the NMRA.

Paul received the Golden Spike award (see Paul's Perch Lake & Superior 1993 calendar photo on left) and the other,

Roger, received the Author award. We wish to welcome Paul to our group who is also a member of the Three Lakes crew along with Roger.

We at RRA were present at a joint meeting with the Three Lakes crew held at the home of Roger Blocks. Together we were able to enjoy viewing his layout, hospitality and just plain getting together with other people that share the same interests. Thanks again Roger for a great time and informative program.

Plans are being made to attend the Green Bay train show by members of RRA on Saturday, April 30th. Anyone interested contact Jim Brown.

A spring cleaning is planned for the Depot on Saturday, May 21st, at 9:00am to get the Depot ready for its opening for the summer months starting Memorial Day weekend. Help with cleanup would be appreciated.

The next business meeting for RRA will be on Wednesday, April 6th, at 7:00pm at the Depot. Hope to see you there!

Take care, Jim Brown, President, RRA.