



# CLEAR TRACK AHEAD



## North Atlanta O-Gauge Railroad Club

<http://www.ogauge.org/>

**What is it ????**

The man in the bright pink coat is admiring the person's handwork that built this Union Pacific Class A 2x6x6x4 from 2 Lionel 2018 2x6x6x4 engines. The rear drive wheels are powered by a 2018 motor. The front drive wheels are not powered. It also appears that the leading trucks and platform are from a 2018, with railings and a few extra parts added. The engine does run on 0-72 so far, and I think it will run on smaller curves with some adjusting.

The engine, along with a 671 and a small homemade 4 wheel fantasy engine, were Father's Day gifts from my daughter and her fiance. All were discovered up in Tennessee.

by Rick B.

Open call for more articles of interest for the Newsletter. Please email all submissions to [newsletter@ogauge.org](mailto:newsletter@ogauge.org)



ERIC'S LAYOUT



TRAIN DR. TED

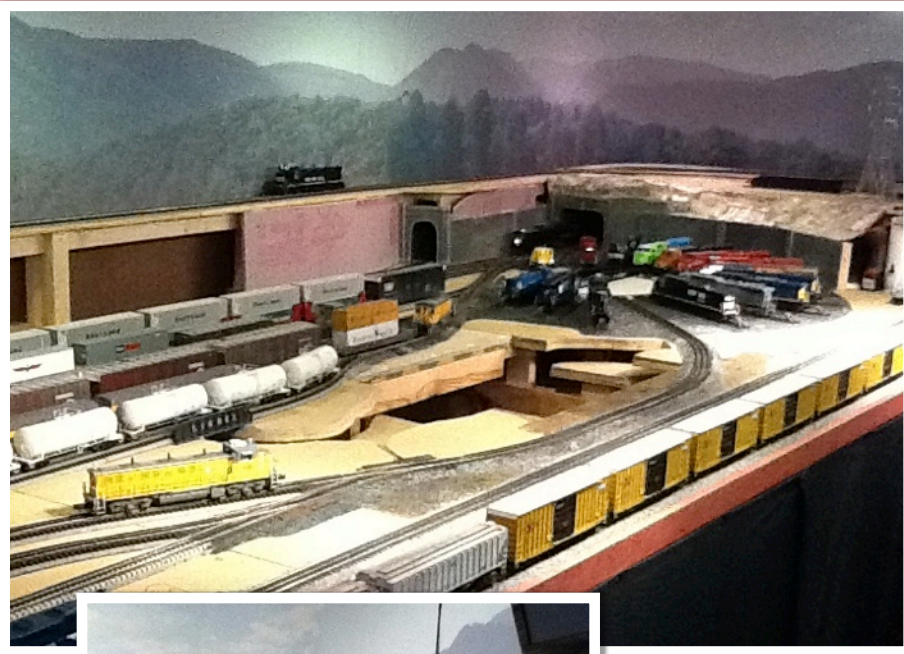
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CAMERA CAR



# ERIC'S LAYOUT- 6/16/11





# Member News

## Camera Car

Rich B. constructed his camera car and it is the most unique car yet. He used the Harold Transport Car to install his X-10 camera and also installed the light array. The car came out great. The electronics are housed in a clear plastic case.



CAMERA CAR

## Piedmont Pilgrimage

Every Autumn, hundreds of train enthusiasts tour train layouts all over the Atlanta area. This year, several of the NAOGRRC members will open up their homes and turn on their transformers to showcase their O-Gauge layouts. In addition, the NAOGRRC Club layout at HobbyTown USA will be on the tour. The website for the Piedmont Pilgrimage is still under construction but we know these members will be on the tour on these dates and times:

Rick B.- Saturday October 22nd from 10am-2pm  
Jim D.- Saturday October 22nd from 10am-2pm  
NAOGRRC- Saturday Oct 29th from 10am-2pm  
Eric S.- Saturday October 29th from 1pm-5 pm  
Cookie H.- Sunday November 13th from 11am-3pm  
Bill D.- Sunday November 13th from 11am-5pm



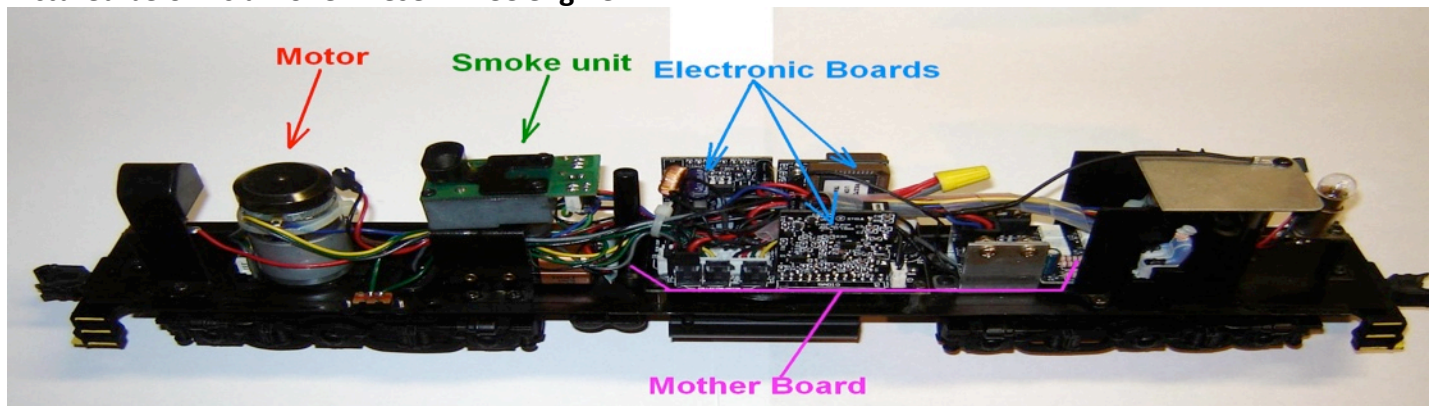
# Train Dr. Ted

## A View of the Electronics inside Lionel and MTH Digital Engines.

Today we are in the digital age of toy train equipment. Fortunately, my years in repairing electronics and my years repairing toy trains allow me to trouble shoot and repair today's digital trains. In prior columns I have written about how to take care and maintain your trains by showing and explaining the function of the 'mechanical' parts involved. For this column I thought you might find it interesting to see what is inside your modern Lionel and MTH digital engines without taking them apart. This article is not intended to show you how to repair your digital engines but to make you aware what is involved in your engines to make them operate beyond anyone's expectations of 30 years ago.

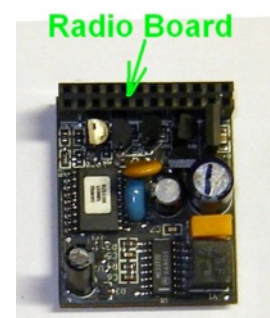
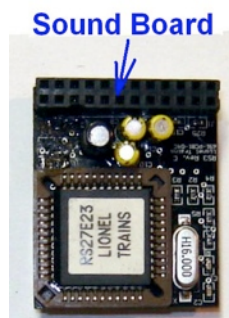
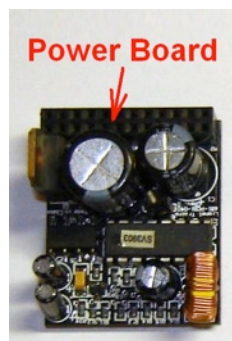
Lionel and MTH each have their own operating systems for using digital signals to make their equipment respond. Each has a remote and each has a processor, Lionel's TMCC, and MTH has DCS. The electronics need to fit into the engines. Diesels have more room to fit the units. Most steam engines need to house the electronics using both the engine and the tender which requires the additional connecting unrealistic 'umbilical' cord.

Pictured below is a Lionel Diesel TMCC engine.



Beginning on the left is a DC 'can' motor which requires a few electronic parts to change the track power from AC voltage to DC. Next is the smoke unit powered by a small electric 'can' motor used to pump out the smoke whether the engine is moving or standing still. Next, are the electronics including the mother board and plug-in modules to control the engine's functions and sound system. On the mother board are the electronic Triacs used in the TMCC system to control the voltage and amperage for the engine. I have covered the Triac issues in my February 2010 News Letter article.

There are three boards that plug into the mother board – the power board, sound board and radio



board.

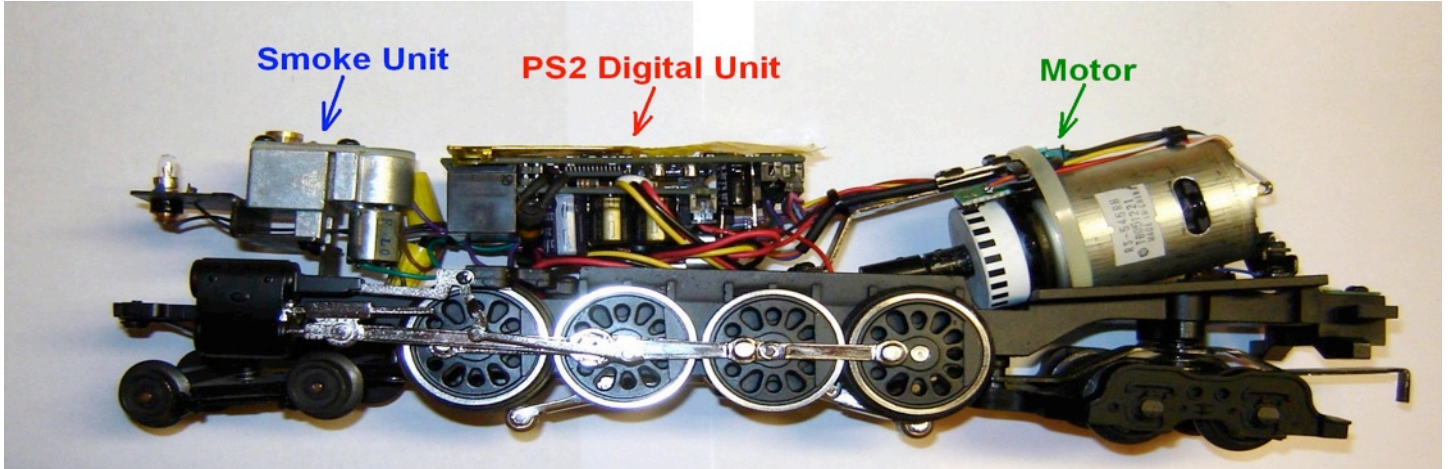




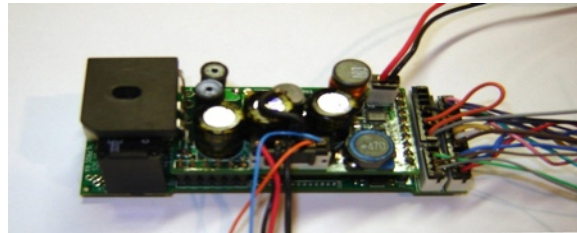
## TRAIN DR. TED CONTINUED

The power board is used by the sound system to control the voltages. The sound board has 2 sound chips that are usually plugged into this board although some boards have their chips soldered. The removable chips can be changed for different engine sounds. Also, the sound board can be totally replaced by another board that has different sounds. The radio board controls the signals for the different commands to the engine such as – horn/whistle, back-up lights, smoke on/off, engine address, and more. A lot of the maintenance repairs to TMCC engines have involved these boards becoming loose and not making the proper contact with the mother board. The vibrations from running the engine often cause these boards to disconnect.

**M**TH has their digital system. Pictured below is a MTH Protosound steam engine.



MTH has 2 PS2 board systems and you need to be careful. Under the hood in this engine is the 1 piece PS2 DCS module. In most of the other MTH engines and as a replacement part the PS2 unit is a 2 piece module as pictured below.



**The Tender that is used for the 2 piece PS2 unit cannot be used for the 1 piece unit or vice-versa.** If you connect the incorrect tender to the wrong engine you will severely damage the PS2 unit. Unfortunately MTH has made the umbilical cord from the tender to the engine the same on both systems allowing the user to make the incorrect connection. The usual repair is to replace the PS2 unit at a cost of \$150.00 from MTH plus the installation cost. I have been able to repair some of these units although it is not done by others.

**W**ith the use of a PC computer the DCS system can be upgraded. One of the best features of the MTH system is the easy ability to change the engine's sound system.

**T**he best way to maintain your Lionel, MTH, K-Line, Atlas and all other digital engines is to use modern fast acting circuit breaker transformers to guard against voltage spikes and meltdown from derailments. These digital engines are fun to run and have much more play value than the standard conventional engines of years prior.

# Camelback Steamer

This Camelback is an L-1 class Erie locomotive as seen on Bill D's layout.

This looks like a very silly place to put the cab of a locomotive- halfway down the boiler. But as usual, there was a very good reason for this apparent piece of whimsy.

Necessity dictated the cab be located on the center of the boiler instead of on the rear as normal, and this was due to the availability of anthracite coal in the Eastern U.S. It should be noted, these locomotives have 100 sq. ft. of grate area, and were hand fired!

As anthracite coal was harder than bituminous (soft) coal, and taking longer to burn, locomotives using anthracite therefore needed more "grate area" to sufficiently "fire" a locomotive. As a result, oversized fireboxes took up most if not all of the space on the rear of the boiler, and the cab was relocated to middle of the boiler. Such locomotives became known as "Camelbacks" or "Mother Hubbards".

The Camelback steamer was designed to allow eastern railroads efficient use of this fuel. It boasted a wider, shallower firebox that allowed coal to burn hot. However, this firebox displaced the cab, which had to be moved to the middle of the engine, straddling the boiler. While the engineer worked from this cramped cab, the fireman remained at the rear of a locomotive on an often unprotected deck.

Working conditions on a Camelback were difficult at best. The engineer and fireman could communicate only with great difficulty, the small cab had little room for the controls, and the fireman had to do his difficult task of feeding an extra wide firebox with even less protection than traditional engines afforded.

At this same time there was a need for a larger and more powerful steam locomotive so in 1907 three L-1 class steam locomotives were built. Not only was Erie's L-1 locomotive the largest and most powerful steam locomotive of its era, but it was the only camelback style locomotive built over an articulated 0-8-8-0 chassis. The L-1 0-8-8-0 was developed by the Erie for "pusher service" on its Gulf Summit Grade and Susquehanna Hill and crossing over the famed Starrucca Viaduct on the New York- Pennsylvania border. Featuring almost 95,000 pounds of tractive force gave the Angus nearly twice the power of a Decapod and allowed the engine to contour grades that rose 60 feet every mile and curves banked at 5 degrees.





# NAOGRRRC CALENDAR

July 2011						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2 July 4 <sup>th</sup> Weekend
3 July 4 <sup>th</sup> Weekend 	4 Holiday 	5 NO Work @ at Hobby Town 	6	7 6-9 PM Work @ at Hobby Town 	8	9
10 NAOGRRC Trip to CASS RR 	11 NAOGRRC Trip to CASS RR 	12 6-9 PM Work @ at Hobby Town 	13 NAOGRRC Trip to CASS RR 	14 6-9 PM Work @ at Hobby Town 	15 NAOGRRC Trip to CASS RR 	16 NAOGRRC Trip to CASS RR 
17	18	19 6-9 PM Work @ at Hobby Town 	20	21 NAOGRRC Meeting @ Hobby Town 	22	23
24	25	26 6-9 PM Work @ at Hobby Town 	27	28 6-9 PM Work @ at Hobby Town 	29	30
31						

## Meeting Minutes

6/16/2011 at Eric's House  
 Members attending- 23  
 Guests- 1  
 New Members- none

### NEXT MEETING

THE JULY NAOGRRC MEETING  
 WILL BE HELD AT  
 HOBBYTOWN ON THE 21ST.

OFFICERS  
 FOR 2011-12  
 REMAIN  
 THE SAME

### Layout Update

We are working on basic frameworks now. Learning opportunities for all. Hobby Town feedback is always positive. 25% of the time customers come up and we talk to them about their train interests. Club actually owns the layout now. Hobby Town is still taking care of the maintenance and replacements. Track cleaning team has been working.

### Children's layout

Railroadiana one day show on August 13th at the Norcross North Atlanta Trade Center. If you wear the shirt and sign up to work at the show you will get in free. Contact Dave

### Club Picnic

Al is going to SAMs for bulk groceries on Friday night and will deliver to the park. Also will be able to set up tables, etc. Need help. Families attending are asked to

bring a dish. Al's wife will make sure that there is a variety of dishes.

Door prizes at the picnic? John R. has a donation for a door prize. Ted will also contact Scott G. at Trainz.

### Member news

- Jay C.'s layout- John L. said it was to be envious of. Jay has a background in model building and professional layout making.
- Scott F. giving out train magazines again. He has about 400 magazines.
- New train store in Canton Road Plaza called American Hobby Supply. Open from 1 to 8 on weekdays and Saturday 10 to 6. Excellent prices on scenery supplies.
- Swap sale in the plans
- Legacy Station- Eric says the basement of the store is amazing. Not just train stuff but old toys. Ask to see.