

The Semaphore

On Saturday, March 25 the club meeting will be held at 10:00 am, at Boney's Marketplace, 1820 Oceanside Blvd., Oceanside, Ca. Members, guest and visitors are invited.

Special points of interest:

Clinic of the month

A DCC clinic will be conducted following the meeting on February 25th Saturday. If you have a DCC Engine bring it, if you do not have a DCC Engine that's O.K., call Al Cuevas for info and reservation.

Work Schedule

Every Thursday and Saturday are work days at the clubhouse. There are plenty of tasks to be performed.

Visitor Schedule

Every Thursday 3-8:30 PM and Saturday 9:30 AM until 4 PM are visitor days at the clubhouse.

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North County Model Railroad Society

Volume 2, 3

President's Message by Al Cuevas



April 2006

"The Saga Continues" or "Maybe I can build my own layout". When we last left off

I was waiting for track to arrive. Sixty feet of HO code 70 flextrack finally showed up and I was ready to start work. My track plan called for two Shinohara #4 RH Turnouts as part of the mainline. As these hadn't arrived I made an estimate of where the first one would go and started laying track at the end of the planned turnout location.

Before I laid the track I had sanded down the cork roadbed. This gave a smoother surface and reduced any high points that existed at the plywood joints. The first couple of sections were turns and I jumped in with both feet. I thought they came out pretty good. I noticed that the track I laid towards the end looked better than when I started. Each day I would do another six or nine feet of track. The entire track was glued down with no track nails used.

The first turnout arrived and I installed it with no problems. The rest of the track work took about two weeks to install. I am still waiting on a second turnout that should be here any day. As I was laying track I took my Bachman 3-truck Shay and ran it back and forth over each turn. The three truck Shay seems to have less tolerance than my two truck engines. I pushed the Shay through turns until I powered the rails. One thing I wanted to do was make sure that any track problems were discovered before I started ballasting and scenery. So far I have located one turn, on a climb, that was just too tight. I re-laid that section and widened the radius.

While waiting for the second turnout to arrive I started painting the rails and roadbed. I debated on using the air brush or the spray can for painting the rails. I chose the spray can. While this works OK I think the airbrush gives much more control. If I paint rails, track or anything where I want good control over the spray, I will definitely use the airbrush.

Over the last couple of days I started the dreaded track ballasting. I say dreaded because I had flunked the ballasting class twice. But I had to have ballast on my tracks. Again, I watched Charlie, Tom Ashton and Wally ballasting. Finally the process started to sink in. After laboring over what color to use for ballast I decided on a light color that I saw on a video of the West Side Lumber Co. Surprisingly the first attempt seems to have gone pretty well. Like the track work I expect that the more I do the better it will look.

Back to club activities. We continue to have outstanding attendance during work days. Last Saturday we had over 15 members working on various parts of the layout. Visitors have been noticing the difference. Some of our visitors haven't seen the layout for a couple of months and are amazed at the changes. For those of you with cameras be sure to take a few pictures.

In May we will be hosting the NMRA/PSR layout tour. NMRA members from all over the county will be visiting. In early July Boney's will be celebrating their 10th anniversary. The Show N Go will be a big part of this so mark your calendar. We will need members available for the usual duties.

For any of you who were wondering about the trundle bed, it has become a temporary storage place for my train stuff. At least now it is serving a purpose.

Al Cuevas

President

NCMRS

See you at the club.



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The Wheeler Collection

The Wheeler Passenger cars were grouped into 19 Railroad Consists. (Southern Pacific, Santa Fe, Rio Grande, etc) Each Passenger Consist was coupled with an appropriate engine. Besides the 19 complete Train Sets there are seven passenger consists without an exact matching engine.

There are about 20 Wheeler diesel engines and six or eight Captain Hosp engines left in our archives. Getting the passenger car rolling stock organized was a challenging effort, taking about forty or fifty hours to complete . The committee of Tom Bernhardt, Leo Valley, Dick McGrew and Al Cuevas provided the effort in organizing the Passenger Trains. There were about 280 passenger cars.

That was just a warm up, doing the passenger cars. The next effort will be a real challenge with 1000 freight cars to dispense with. In round numbers there are:

- 100 Flat Cars 90 Gondola
- 60 Tankers 512 Box Cars
- 100 Hoppers 75 Caboose
- 100 Assorted misc.

Very few freight cars are equipped with metal wheels. The vast majority have plastic wheels. All the freight cars have Kadee couplers. The plan right now is to sort like cars into groups of ten. With three grades of quality.

1) BEST Weathering, steel wheels
 Good Detail

2) FAIR Weathering, plastic wheels
 Some Detail

3) AVERAGE No weathering, plastic wheels, no detail

Note that all wheels are dirty to gumie and at least need cleaning.

By Tom Bernhardt





Demystifying DCC Decoders – Part 2 by Leo Valley

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This is the second of several articles designed to assist members with the selection of a Digital Command Control (DCC) locomotive decoder. My aim is to keep the descriptions and procedures as non-technical as practical.

In the first article, we learned the difference between DC Analog and DCC. In addition, some general descriptions were given about locomotive decoders.

In this article we’ll describe how to check your locomotive to determine if it can use a DCC decoder and what type to purchase.

The scale designation of a decoder is basically a designation of its physical size and general current (amperage) output. Typically, HO-scale decoders will handle larger power requirements than N-scale and less than O/G-scale. As long as the decoder will physically fit **and** provides adequate current capacity, it can be used in any scale.

In some cases decoder selection is simple – such as using a decoder made specifically for the locomotive you have. In this situation, there is little advantage to using any other decoder than the one designed for your locomotive.

However, with many locomotives, especially in HO-scale, there will be several “universal” decoders to choose from. In these cases the primary differences will be the number of functions (features), price, and installation differences.

There are two absolutes in selecting a locomotive decoder and one primary consideration. The absolutes are:

- 1) Power output (read peak or stall current) of the decoder – will the decoder provide the amperage needed to drive your locomotive motor?



time to cool off the motor.



provide a constant and peak current



CAUTION – Do not hold the loco

- 2) Size/space- will the decoder fit into your locomotive?
- 3) The primary consideration is, naturally, price.

There are some rules-of-thumb that can be normally used. If the locomotive is advertised as “DCC Ready”, it means the manufacturer provides a plug for a decoder and the drive motor is meant to handle currents of less than 1 amp.

If the decoder is described as a “Drop-In” designed for your specific locomotive and manufacturer, you can safely assume the decoder will handle the requirements of that locomotive.

Generally if the locomotive is described as equipped with a “can motor” or equipped with a “5 pole can motor”, it can be safely used with most decoders designed for that scale (in this case we are talking about HO-scale decoders). But there are always exceptions to the general rules such as: early Proto 2000 PA locomotives were equipped with can motors that drew almost 2 amps for normal running and almost 3 amps in a stall test. Proto corrected the problem in later versions of their PA’s.

It’s always better to be safe than sorry after frying your new decoder. If you’re not sure about your locomotive, perform the stall tests listed below. Although the hope is to be able to use DCC to power your locomotive, we need to use DC Analog to test the locomotive for current requirements.

There are two basic ways that you can use to determine the power requirement of your locomotive. The first one we’ll discuss is the easy method using equipment at the Club.

This easy method involves using the DC Analog capabilities of “Show-N-Go” layout and following are the step-by-step procedures to use. (These instructions assume you are familiar with the “Show-N-Go” operations. If you’re not, ask someone to help you set up).

- 1) Turn the “Bias” control to maximum clockwise.
- 2) Position the throttle pointer, for the track you are using, to XX. This should give you a track voltage somewhere between 12 and 14 volts DC. Leave the throttle at this setting.
- 3) Place your locomotive on the appropriate track.
- 4) Power on the “Show-N-Go” system and ensure the track you are going to use is in the DC Analog configuration.
- 5) Let your locomotive make a round or two to warm up. While it is running observe and note the current reading on the Ammeter Dial. This is your normal running current.
- 6) As your locomotive passes the control panel, stop it with your hand and ***momentarily*** press down hard enough to stall the drive wheels. Now note the current reading on Ammeter Dial. This is the maximum current your locomotive will draw.

Note: For some of the big diesel locomotives it could be easier to stall them with the shell removed and hold the flywheel from turning. This method can also be used for a steam locomotive.

CAUTION – Do not hold the locomotive stalled for any extended time! Damage to the motor or drive gears could occur if held for a long time or repeated frequently!

7) Release your locomotive and let it run around the track several time to cool off the motor.

Now you know the current rating needed for a decoder in your locomotive.

Most decoder manufacturers will provide a constant and peak current rating. Some will also provide a stall test rating but be cautious when using this rating. Sometimes the stall test rating is calculated about half-way between the constant and peak current rating. In this case, a 1-amp decoder with a peak rating (stall current) of 2-amps would be restricted to motors with a stall test rating of 1½-amps or less. It's best to err on the side of caution, especially when dealing with older locomotives with "open frame" motors.

For those of you who want to test your locomotive at home, here are those procedures.

First the assumption is made that you have three items: a piece of test track; a DC Analog (also called a Power Pack) Controller; and a multi-meter (or ammeter) that can handle 3 or more amperes of current.

- 1) Connect the Power Pack to the test track and place the locomotive on the track.
- 2) Connect a DC voltmeter across the two rails.
- 3) Turn the Power Pack ON and adjust the throttle until the voltmeter reads 12 volts.

*Note: If you are using a short piece of test track, hold your locomotive from running off the end and let the wheels spin. **DO NOT STALL THE WHEELS YET!***

- 4) Leave the throttle at the 12 volts position and turn the Power Pack OFF.
- 5) Connect the ammeter between one lead of the Power Pack and a rail of the track.
- 6) Turn the Power Pack ON and while holding the locomotive with your hand, ***momentarily*** press down hard enough to stall the drive wheels. Now note the current reading on Ammeter Dial. This is the maximum current your locomotive will draw.

Note: For some of the big diesel locomotives it could be easier to stall them with the shell removed and hold the flywheel from turning. This method can also be used for a steam locomotive.

CAUTION – Do not hold the locomotive stalled for any extended time! Damage to the motor or drive gears could occur if held for a long time or repeated frequently!

7) Turn the Power Pack OFF.

Now you know the current rating needed for a decoder in your locomotive.

See Figure 1 on the next page for an illustration.

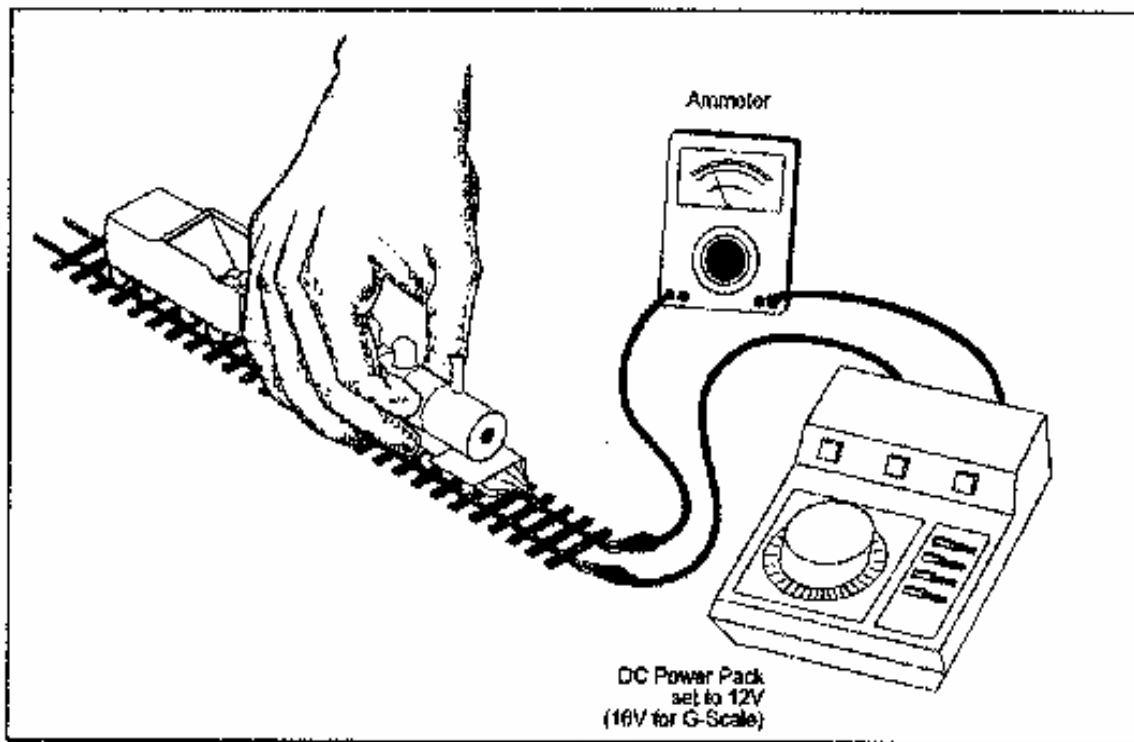


Figure 1 - Stall Current Test Setup

While these methods of testing for power are somewhat exacting and tedious, they should be considered a **MUST** for older and/or unknown locomotives. Many of the older “open frame” motors require a larger current capacity than the normal decoder rating of 1 amp so, **don’t even think about using a 1 amp decoder.** *The cautious rule of thumb is – if there is any doubt, perform the stall tests as outlined!*

It is erroneous thinking, that if a locomotive starts at a very low throttle setting (voltage), that it isn’t drawing much current. Remember, it’s not the voltage we’re considering – it’s the amperage (current). A motor can draw too much current even if it does start at a very low setting. The fact is that normally motors draw more current at lower RPM than at higher RPM – that’s why we test them at zero (0) RPM, the stall test.

In the next article, we’ll discuss the second absolute – **SIZE**. We’ll also discuss other considerations, including price, when selecting the right decoder for your locomotive.



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“PARIS” IN THE SPRING

On Sat. March 4th, a group from the club made the trip to the Orange Empire Railroad Museum at Perris for the spring swap meet. Al Cuevas, Tom Brunner, John Castaneda, Kevin Harper, Larry Kent, George Benton, and myself made the trip. Mrs. Brunner was along to add a little dignity to our group.

It was a first trip for me. I was knocked over by the amount of good stuff that was for sale on possibly 140 sellers' tables.



Treasure Hunters

The seasoned treasure hunters arrived early and moved from table to table very quickly in search of that special item.

I found four Athearn Santa Fe heavy weight passenger cars that looked to be in very good shape. Just the thing to put behind my Santa Fe Pacific. A close examination of the cars when I got home revealed that they needed metal wheels, Kadee couplers, and weights. Oh well, the fun is in the search.

There is a lot to see and do at the Orange Empire Museum. Especially interesting if you are a trolley or streetcar fan. It's a great place to take your children or grand children for a day outing. If you go, be sure to take your picnic basket. There is a very large shaded picnic area for you to enjoy.



Very Cool Streetcar

After we had carefully canvassed the entire swap meet and examined every item that might possibly find a place on our railroads, we made the short trip to Train Quest for our obligatory hobby shop visit.



The Train Gang

After Kevin made his final purchase we all headed for home.

Dick Miller



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