



January 2007

Next Meetings

See below for a quick glance at what the program is for 2007. And keep an eye open for news of our Post Christmas Family Picnic and the day at the Warner Live Steam complex.

Visit to Darling Downs MR Club

Visiting the DDMRC is always a treat because this large group "invent" good ways of achieving results and always treat us with much camaraderie. Our visit to their club rooms on 4-11-06 gave us a chance to see progress on their layouts, 8 completed and a couple on the way.

And what layouts. Most are large and their N scale layout must have one of the longest mainline runs in the country. One scale layout takes about 20 minutes to cover with the potential of it being a lot longer if they join another layout next to it.

A Division 1 meeting was held and Glenn Stevens told the group that we are planning to hold the convention in the 2nd weekend of September 2008. He mentioned that at this moment the initial planning was being done by him as superintendent, Sandra Stevens and Ian Venables. Since then Graham Emery has been asked to contribute by looking into the clinics programme. More people would be required to make up the committee as we progress into next year.

Another appointment is that of Graham Emery as our new librarian. Those clubs with 100% NMRA memberships will be allocated library material depending on their membership size.

The 2007 calendar is not yet completed nor fully confirmed but here is a preview:

Jan – Post-Xmas Family Picnic

Jan – Warner Live Steam

Feb 10 – Alan Harland, Oxenford

Apr – John Lebsanft Bundaberg

Jun 16/17 – Toowoomba Train Show

Aug 11 – Macleay Island layouts

Oct 13 – Ian Wellings, Sunshine Coast

Dec 8 – Toowoomba Oma Belt & DDMRC

Show and Tell:

Glenn Stevens showed a WM 2-8-0 (Bachmann) with a train coupled with Kadee No.58's to show the

difference in overall length and the distance between cars.

Phil Perry showed a N scale timber mill made by Republic Loco Works but enhanced with many of Phil's scratchbuilt extras. He also showed a wonderful tool, the MicroMark head lenses with white LED lighting.

Geoff Aldridge showed a couple of Glenreagh Railway books (NSW) and DVD. He then showed an Atlas Gold Star Train Master with DCC and sound. Geoff also had a Trix 2-8-2 with LokSound and DCC. He then recommended the latest Track and Signal magazine with its article about the proposed Melbourne – Gladstone Railway which is expected to go via Toowoomba and Wandoan after coming through Dubbo and Moree. Another publication he recommended for anyone going to the US and travelling by train once there, was USA by Rail, a Bradt publication. Finally a recent Trains magazine has an article about the possibility of a Kansas City to Mexico Pacific coast RR that makes interesting reading.

This was a memorable gathering as it was the first together in one place.

Answers to the Last 10 Questions

1. The Missabe & Iron Range M-3 Yellowstone 2-8-8-4.
2. The Canadian Pacific.
3. 4449.
4. The Dan Patch Electric Lines.
5. Delaware Lackawanna & Western.
6. Canadian National.
7. Nashville Chattanooga & St Louis
8. Louisville & Nashville.
9. 120mph.
10. A T & S F Super Chief.

Installing a Decoder in a Brass Steam Loco



Electrical Pick-Up On Brass Steam Locomotives With Dcc Decoders Fitted – Tender Problems.

By Laurie Mclean (NMRA Member Australia)

I would like to share some interesting information I have found in fitting Soundtraxx Tsunami Sound Decoders to my HO_{n3} Brass locomotives.

In particular, this article deals with the locomotive tender and its electrical pick-ups.

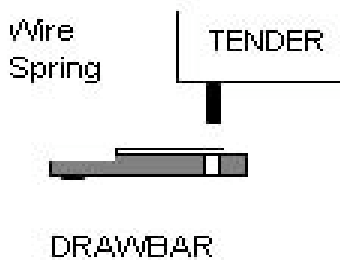
I use a white dot placed onto the underside of each tender truck and a corresponding dot on the tender floor. These dots represent the electrical pick-up side on the tender and helps identify replacing the trucks correctly for maintenance.

The electrical pick-up is usually on the LEFT hand side of the tender that is the LEFT side when facing forward on the track.

Problems Encounted With Brass Loco Tenders:

I start by checking how the tender sits on a level piece of track and move it along by hand paying particular attention to the wheels rotation. They must all rotate and any that don't need to be addressed by adjusting the truck frame. Look at both sides.

The Drawbar:



I check the connection of the DRAWBAR and have found this to be a major problem often overlooked by modellers.

The standard drawbar used by most manufacturers and fitted to the rear of the locomotive has a wire spring soldered to it to provide side pressure onto the tender pin.

This standard type drawbar does not always suit the tender pin diameter and I have found differences with various models – the pin does not always suit the drawbar hole.

The diameter of the drawbar hole compared to the diameter of the tender pin may be so close in tolerance that it inhibits the free movement of the tender and can prevent the tender sitting freely on its frame and trucks.

If the tightness of the linkage of the drawbar and pin is too severe it may hold the tender to one side or the other and prevent good electrical pick-up and tracking generally. In addition, if there is tightness between the drawbar and tender pin the tender may be “locked or

held” into a position where it sits low or high causing one or the other tender trucks to be unable to sit under its own weight onto the track rails. This will inhibit good electrical contact, something we are trying to achieve.

I have found that a free standing tender, once coupled to the locomotive, may have a “set” caused by the drawbar being too tight and holding the tender against its normal stance on the track.

For the fitting of a DCC decoder the electrical connection is not required through the drawbar as the wire (Black) is soldered directly onto the tender frame. I am assuming the decoder and speaker are being fitted inside the tender.

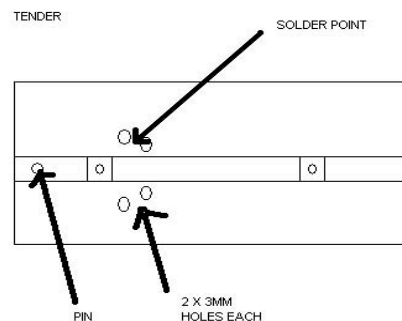
To correct this problem on the drawbar I open the hole out half a millimetre larger so that the tender pin can rotate and rock freely yet still is firm enough to be held in place. I also move the wire spring to be just able to slightly “grab” onto the pin.

Solder Connection On Tender:

The next problem is getting a good solder connection on the tender frame for the BLACK Decoder wire.

I do this by drilling 4 x 3mm holes through the brass floor plate which allows the sound an outlet from the speaker. Place 2 holes either side of the centreline allowing 2mm between. The holes are in a close pattern directly above the front truck's rear axle. The 2mm distance between the 3mm holes allows the “tinning” of the brass tender frame as it is only a small area to heat up and will take solder using a high temperature on my adjustable iron.

As a side note I have found that 2 or 4, 3mm holes are more than enough to allow the sound out from the speaker. Always fit an enclosure on the speaker.



Electrical Path: From Rail Through Wheels / Truck / Body.

The next problem is getting reliable electrical connection from the track through the wheels and brass trucks and onto the tender body frame.

This electrical path is one in which the rotating wheels have a tiny surface contact with the track and again a tiny surface contact with the axle to the truck frame. The truck frame has a rubbing contact with the tender frame. There are no true electrical joins in this path and the reliance is upon metal to metal contacts only!

All of this calls for cleanliness and good alignment. It is good to spray an electronic degreaser such as that available from Dick Smith's or similar to the trucks and especially getting it into the bearing boxes where crud can build up at the axle ends. The use of a multimeter with an audible sound setting allows for positive checking of an electrical path. I use my meter for just this on my checks all over brass locos and tenders and find it invaluable to problem solving shorts or checking electrical connections / continuity.

Once the wheels are clean the next thing to check is the bolster. I use a wooden ice-cream stick with 400 grit wet-&-dry glued to it to polish the bolster and the truck mating surface to ensure that the surfaces are clean and flat. Remember this is part of the electrical path and must have a good contact. Check the wheel are in gauge by using the NMRA HOn3 gauge too!

The free movement of the truck is usually determined by the spring tension on the screw holding the truck to the frame. Too much tension and the truck will be stiff and derail especially on curves and turnouts. Too little and the electrical contact is made worse. Finding the happy medium is not that hard.

I cut the springs on each truck so that they have a LIGHT tension and I also add weight to the tender using lead. This helps to provide better contact between bolsters and tender frame. The springs need to fit loosely on the screws and must have the end of the wire turned over so it does not dig into the screw head or truck frame – this is very important.

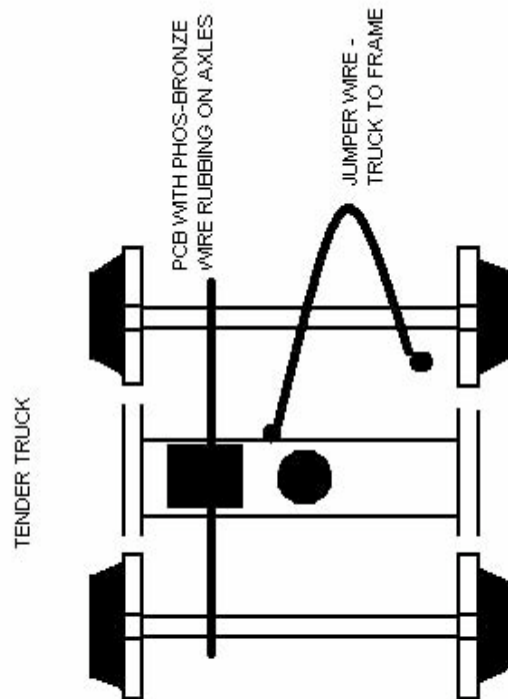
The screws are designed to accommodate the springs and also fit through the centre hole of the truck without binding. To check that the screw doesn't clamp onto the truck cross plate, lightly push the screw through the truck when assembling it and then check it will freely move and tilt a little. This movement is to allow the truck to maintain contact with the track even if there are some uneven sections.

The next thing is to recheck that the trucks have just enough free movement to rock from side to side slightly. If they are too stiff then electrical contact and operation will suffer. Of course don't make them too loose or the tender will wobble.

The next thing is to add extra pick-ups if the electrical contact supplies are erratic. This is done by super-gluing a small piece of printed circuit board to the inside of each truck frame and soldering a piece of phosphor-bronze wire to it so that it wipes on the axle or the back of the pick-up side wheels. In addition to this, a tiny wire can be soldered from the PCB to the

tender body to assist in creating a better electrical path.

A further improvement is to solder a tiny wire from the brass truck to the frame allowing free movement – I use decoder wire and place a small "S-bend in the wire.



The above figure shows the added Printed Circuit Board (PCB) with the phosphor-bronze wire soldered to it and rubbing against the axle.

A jumper wire has been added, this being soldered between the truck and tender body.

Adding Weight To The Tender:

The addition of weight is sometimes needed to provide enough "downward pressure" to the tender upon the trucks to permit sufficient metal-to-metal contacts in the trucks.

It should be noted that this may inhibit the amount of rolling stock the locomotive can pull so go a bit at a time.

A good test is to get some lead fishing sinkers of different sizes/weights and place them on the tender and run the loco before fitting a decoder. I have a timber length with 2 pieces of flex-track on it for testing purposes and an old 12v supply via a transistor throttle. It is amazing the difference weight on the tender makes to brass locomotive (and also in the loco too!). If the pick-up improves with weight it may be

that the axle to truck frame is a poor connection or that the truck to tender through bolster has a poor surface connection or both?

To remedy this you may swap a tender from a locomotive you know performs well onto the new loco and test them together. It is a process of elimination – finding the fault and learning more along the way.

Another way is to replace the tender wheels or trucks completely with good quality replacements.

I hope this helps you solve the electrical pick-up problem/s on your loco. Don't forget to clean the wheels too.

Comment

We as humans, seem to like being the same in many things. It's comfortable. In MR just think how this effects us as modellers. There has been many a comment lately about a geographical group of modellers all using a single brand of DCC controller. Fair enough. For most, it is a complicated affair and the more of us using a single brand in one locality, the more likely we are to find answers from our friends living in the neighbourhood. Is this what drives most Australians modelling US to model western roads? Or is it because the west coast of US is the closest part to Australia and thus if we get to railfan in the US we start as soon as we land? Is it the Santa Fe's eye catching warbonnet scheme or any other western road paint scheme that attracts us? That's like asking which comes first, a shop full of western road locos or the demand for western road locos causing traders to stock them. Perhaps it is the Big Boys, Challengers, Cab Forwards, etc. Some of us are driven the other way. That is, because there are so many western roads, we like to do something different. That certainly influenced my choice and why I'm interested in the L&N, SR and other roads connecting to them. But these other lines also have beautiful colour schemes on the diesels and they had some classy steamers. They went through nice scenery including in some places great mountain scenery. They generally interchanged with more roads than western roads did. Some of these Eastern roads would make really great models. Think of the tiny Interstate with only 88 miles of trackage (1960). It had freight and passenger operations, traversed lovely scenery, had many interesting structures and industries, had a reasonable variety of steam locos including mallets and had diesels, RS-3's with one of the most startling colour schemes in the US. Then there is the Clinchfield with similar features but still quite different in some things. The CRR had lots of coal tipples of which a model would easily fit in a very small corner and most of them, a scratch builders paradise. I've never heard of a model of the Charleston & Western Carolina nor the Atlantic and East Carolina (a Branchline boxcar is available) nor

Sumpter & Choctaw nor the Columbus & Greenville (the original Delta Line). But each of these railroads had features that are most appealing and call out to be modelled. There is information about them if you look hard enough. Models can be bought, the lettering removed, the odd detail added or perhaps removed, cars and locos re-decalled and you begin to have something almost unique. What you can't fill in from reference sources you can surmise and who can criticise you? But you don't have to hunt down the really small RR's. The Monon, the Alton, Tennessee Central, Chicago & Eastern Illinois, Chicago and Illinois Midland and the Nashville Chattanooga & St. Louis are roads that are very attractive in many ways. Then there are many others in New England and along the eastern seaboard. If I go on much further the retailers will be wanting my blood! What I'm really saying is, "Don't be afraid to go out on a limb and do something different". Having to delve into your chosen RR a bit deeper because there is less information about may give you a greater sense of achievement and fulfilment. You might also be surprised at the attention you'll get.

Some History

On 2nd July, 1913 General Electric completes construction of the first commercially successful locomotive powered by an internal combustion engine. The loco goes into service on the Minneapolis St.Paul Rochester & Dubuque – The Dan Patch Lines as #100.

On 12th December, 1922, the long Island RR #401, a 100 ton, 60 hp diesel locomotive, makes the first move of a road freight train with diesel power in North America. The train of 379 tons travelled 537 miles.

On 25th June, 1925, Baldwin Locomotive Works places locomotive #58501 in service, the first to be powered by a diesel engine.

Confused? Yes so am I, but that's history!

Who's Doing What?

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Webmaster: Lynn Zelmer.

2008 Convention Committee:

Glenn Stevens (chairman)

Sandra Stevens

Graham Emery

Ian Venables.

Get Well Soon

We all wish our friend from Gosford, John Saxon, a speedy recovery after a recent operation and may he recuperate fully at the controls of the Cedar Valley Lines.

Greetings



May you and your families all have a very
Merry Christmas and may most of your
dreams come true in 2007.