



***THE NORTH STAR CHRONICLES – a newsletter primarily for the model railway fraternity***

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***Editorial***

As we wind down to the end of the year, this month's NSC is in reflective mood. Because of its parochial target market, the first section may not hold much appeal for those who are not KZN based but there are also some issues raised which may be of more general interest. Here goes.

***Trains of Thought***

Sorry, but I could not resist using the heading of a long running column in Model Railroader because it highlights the line along which the first part of this month's newsletter will be travelling (sorry again).

By way of background, readers of the NSC who have been on the mailing list for a number of years will recall that Highway Model Railway Club was formed some 3 years ago from the merger of two HO former modular clubs namely Durban Modular Railroaders and Roving Rails.

Since that time efforts have been directed at converting the modules concerned into a permanent layout. Phase 1 of that process is now complete and operations involving car cards, waybills, timetables and a fat clock have commenced. The (re)learning curve is quite steep.

Phase 2 of the HMRC layout will comprise a return loop, the positioning and configuration of which have already been mapped out.

The final phase will be the erection of an engine terminal/MPD.

Since the formation of HMRC, all the existing members have retired from work and thoughts have turned to the future of the club. Until now, for various reasons, the membership of HMRC has been deliberately kept low. The club has functioned well and strong bonds have been formed.

Proper operations require a larger number of members. The layout has six 'stations' and assuming a dispatcher is also involved, at least 7 people will be required for an operating session. Given the fact people go on holiday, get sick etc. a membership of about a dozen people seems appropriate.

Another thread to where HMRC is headed is that all the members are aging and recognise the need to bring in younger people to the hobby. As an aid to that, Facebook etc. is all very well but it is no substitute for the real thing i.e. in person interaction.

It becomes evident at exhibitions there are numerous closet railway modellers and indeed people who want to become involved in the hobby but don't know where to start. In the 'olden' days those who ran model railway hobby shops fulfilled this role of recruiting new members but now there is only one physical retail outlook which stocks trains left in the Durban area and it is not known for promoting the hobby.

The final thread to where HMRC is headed is that DMR was responsible for administering not only its own funds but also those which had been raised at a public exhibition to finance a model railway national convention in Durban. As no such convention has taken place, the one planned for 2015 having been cancelled, the funds concerned have been sitting in a bank account for several years now.

Against this background and following strategizing by HMRC members, the following decisions have been made:

- It is time for HMRC members to 'come out of the model railway closet' as it were. New members should be encouraged to join the club.
- The club should promote itself and the hobby by building an exhibition layout.
- Some of the funds earmarked for a national convention should be used to finance the materials required to build the exhibition layout.
- HMRC will build and thus own 4 corner modules and its members a few straights but new members will be encouraged to build their own modules which can be incorporated into the exhibition layout.
- Unlike DMR and Roving Rails which were North American prototype based, the HMRC exhibition layout while it will require the new modules to be built to the prescribed standards, will encourage an eclectic approach. In addition to North American, British OO, SAR, Continental scenes and buildings can be used to scenic the modules and locos and rolling stock can be based on any prototype. As an aside, one of the members has agreed to build a British themed module which will permit the incorporation of the OO items generously donated to the club by Robin Atkinson two years ago. The object of the new layout is to showcase the hobby to the public by running, not operating trains. The latter will be done at the permanent HMRC layout.

There is one point which needs to be highlighted. Increasing club membership carries risks. Sadly, after many years of harmony, DMR experienced a fall out several years ago from former members who felt they should have had a say with respect to the way cash (essentially trust funds) being administered by the club should be spent. This raises a further point: should a club operate as an informal association or should it have a constitution? In the case of HMRC the decision was made for us. As part of the FICA process, in order to operate a bank account a constitution was required.

Fortunately, given the good relationships between the members of HMRC, the club has operated in the best tradition of partnerships which function well, i.e. you require a partnership document but you should never have to look at it.

Hopefully this will also be the case with an expanded HMRC. Of course, there will always be differences of opinion. These can normally be resolved via consensus. The difficult situations arise when issues become personal. In such cases a reversion to the constitution may be required and at worst the individual concerned may have to move on.

As some final thoughts on clubs versus doing your own thing, the following draws on a letter from Scott Dunlap to Model Railroader:

- A club offers an opportunity to work on a layout that's bigger and better than anything the typical modeller can build alone
- It can be a great learning environment, one that enables members to pick up new skills and increase their knowledge about model and prototype railroads
- With the larger pool of talent available, members can usually concentrate on those aspects of the hobby they find the most interesting
- A good club can be more than just a place to talk trains, build layouts and enjoy operating sessions
- Many clubs have open houses and other activities that help promote the hobby

To the foregoing I would add one more important reason to become involved with a club. Research has shown the single most important factor in promoting longevity is socialising. Of course other factors are involved (stopping smoking and excess drinking, losing excess weight and exercise etc.) but interacting personally with your fellow man or woman is the primary issue. The Covid-19 lockdowns have created mental health problems (mainly stress, anxiety and depression) by preventing a basic human need to socialise. If you wish to research this further I suggest you look up Susan Pinker TED 2017 on Youtube:

[https://www.ted.com/talks/susan\\_pinker\\_the\\_secret\\_to\\_living\\_longer\\_may\\_be\\_your\\_social\\_life?language=en](https://www.ted.com/talks/susan_pinker_the_secret_to_living_longer_may_be_your_social_life?language=en).

## **HMRC Roving Rails Exhibition Layout - Module Standards**

The Roving Rails name was resuscitated as it was felt to be the most appropriate under the circumstances. But from now on, unless otherwise specified, Roving Rails refers to the new exhibition layout.

Consideration was given to adopting Freemo (for origins refer <https://en.wikipedia.org/wiki/FREMO>) specifications eg [www.free-mon.net](http://www.free-mon.net); <http://www.free-mo.org/>; <http://gfgsa.co.za/#main>;

These were rejected for a number of reasons: Freemo is often a single mainline track system, the layouts often running end to end. This limits the visual impact of trains running continuously on two track loops.

Return loops with single tracks create wiring and operational problems.

The Gauteng Freemo club uses code 85 rail. This would have prevented the use of the code 100 spare track and points to which HMRC/Roving Rails have access thus raising the cost of the new layout. So, while the installation of a “jumping off point” to a Freemo type branch line has not been excluded, it was decided that the new layout would be a code 100 dual track continuous run with 4 x 90° corner modules.

Other sources investigated for inspiration included:

<http://railwaybobsmodulebuildingtips.blogspot.com/2010/01/how-i-build-my-model-railroad-modules.html>, <https://www.vikaschander.com/track-across-modules/>,

<https://www.vikaschander.com/alignment-module/>

and YouTube videos at: <https://youtu.be/E5NkhG61AQ>,

<https://youtu.be/TXbWWZ-DNAs>; <https://youtu.be/58axori6ICA>,

<https://youtu.be/ox3G3XCp-r4> and <https://youtu.be/xBeov6uY0n8>.

In order not to lose sight of the modular approach, the standard dimensions for each straight section of the layout are 1200mm x 600mm.

To accommodate his or her chosen track configuration, the length and breadth of the section/module can be increased at the discretion of the builder, as long as the former incorporates a filler piece to make it compatible with the layout configuration.

Rail height is 1250mm from the floor, probably requiring benches or chairs for the smaller members of society to stand on to view the layout.

One of the, if not perhaps the main reason why DMR ‘went permanent’ and the original Roving Rails effectively disbanded, was the weight and hassle of transporting and erecting the modules concerned. Accordingly,

the primary requirements for the new Roving Rails were that the modules had to be as light and as easy to erect as possible. As part of these requirements, they should be able to fit in a family car. Inspiration

for a structure which would accommodate these primary requirements was sought from AMORS, the Swiss HOn3 Freemo group ([http://hOn3-amors.ch/onewebmedia/%40HOn3 AMORS Guidelines latest%20\(01\).pdf](http://hOn3-amors.ch/onewebmedia/%40HOn3%20AMORS%20Guidelines%20latest%20(01).pdf)).

The approach to the Roving Rails module construction is broadly based on the AMORS guidelines.

The main materials are 15mm plywood for the framework and legs and a strong baseboard in the form of 50mm thick high density polyurethane foam supplied by Rigifoam [www.rigifoam.com](http://www.rigifoam.com).



The radius of the curves is again tried and tested - 36" or 915 mm on the outer and 860mm on the inner. Track spacing between rail centres is again as with previous modules – 52mm.

One significant difference from earlier modules is that track joiner pieces have not been used. Rail ends are soldered to printed circuit board screwed to the baseboard. To ensure good alignment with its neighbouring modules, use is made of a jig to drill the holes for the joiner bolts and legs.

4mm cork is used for the track bed. This combined with the use of polyurethane foam ensures good track sound deadening.

A development of the AMORS system is used for inter module electrical connections namely female terminal blocks at the ends of the modules joined by loops with male terminal blocks at both ends.

Locos will be controlled using a laptop or tablet and 3 Digitrax items: a DCS controller, probably a DCS 240, a PR4 USB to Loconet Interface and a DGTSE8C signal decoder. A router will obviate the need for a wired loco net. Further, downloading the JMRI Engine Driver app onto one's cell phone, enables the phone to function as a throttle for controlling locos. We believe this feature will help attract younger people to the hobby.

A document containing Roving Rails standard specifications, and to which all members will have to adhere, is in the course of preparation and will be made available to interested parties.

Some parting thoughts: the approach adopted by Roving Rails, particularly in relation to the Digitrax equipment, is not the cheapest entry to the hobby that could have been adopted by quite a long way.

Assuming the modeller wants to go digital – considerably more expensive than straight DC - a Digitrax Zephyr Express ZEPE – DCS52 is a cheaper and probably more appropriate option. The approach adopted by Roving Rails in particular the choice of the DCS 240, was to enable a large number of locos to be operated at the same time and so at exhibitions to ensure trains are running the entire time. The use of this controller will enable 7 or 8 or more operators to be running trains simultaneously – all off the one command station and obviating the need for a loco net and hence Interconnect Panels.

### ***Progress on the North Star Railway***

This month's newsletter was supposed to end with the announcement that following the addition of two passing loops, trackwork on the North Star Railway was complete. Well it is not and the reason is explained below.

Not having any points and hence sidings/spurs on the line was limiting from an operational viewpoint as it required all trains to run in the same direction. Thoughts had turned to building dual gauge points/switches but immediately turned to something else.

Rodney Proud came to the rescue by suggesting that the points concerned (Peco SM 32 in the case of the narrow gauge) should be modified in such a way that only the 32mm track came off the mainline. This simplified matters considerably. Starting with such a point and by snipping gauge 1 sleepers which incorporated a chair and then gluing them to the existing SM32 point sleepers, a third rail was added, creating a 45mm track on the mainline. Refer photograph below.



***Mark 1 dual gauge point with third rail on the mainline (straight path). Not pretty but functional***

Arguably, the aesthetics of the result were improved with the construction of the second dual gauge point (below) using a different approach. In this instance holes were drilled in the point sleepers, new chairs inserted and a third rail to widen the gauge to 45mm slid into them.

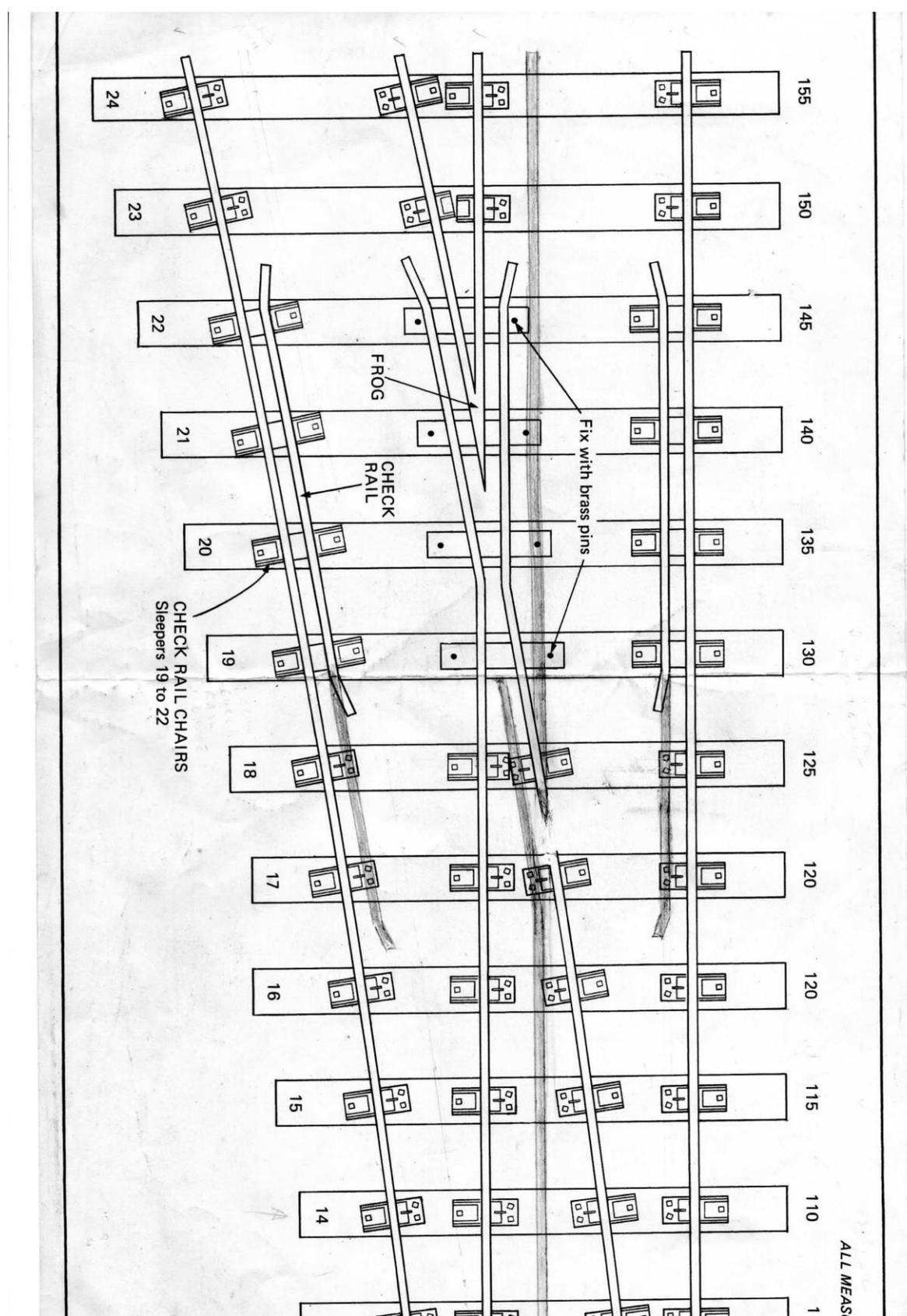


***Mark 2 dual gauge point. Third rail on diverging track at top of point***

Tony Bird from the UK suggested a third approach which aesthetically gives the best result. Starting again with a SM32 point and a length of SM32 track, snip the ends of the sleepers on the side of the point where the third rail is to be added and cut the sleepers on one side of the piece of chosen track leaving you with a rail still embedded in its chairs. Then join the new piece of 'track' to the SM32 point effectively converting it to 45mm on one side. The added 'track' can be secured to the point under the sleepers using an appropriate piece of styrene.

Then it was on to creating a passing loop on the gauge 1 track. A broadly similar approach was adopted. Working on the principle of 'use what you have', I started with two partially assembled left hand Tenmille

gauge 1 points. The difference on this occasion was the additional rail had to be added between the 45mm gauge rails to enable 32mm gauge locos to continue to travel on the existing 3 rail track.



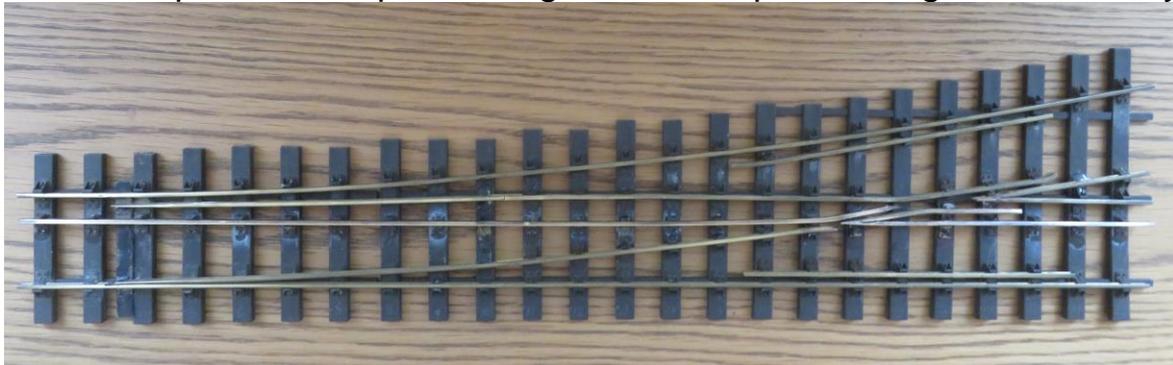
**Business end of a Tenmille gauge 1 point template with additional track required added in pencil.**

Using the template supplied with the Tenmille point kits (above) the first task was to draw in the rails to be added. Then it was a case of cut, bend and shape the additional rail to fit and then secure it to the point using Tenmille AG091 plug in chairs reinforced with epoxy.

Tenmille point kits are supplied with brass strips to space the point blades and secure the frogs to the sleepers. The stretcher bar to which the point blades were attached at the toe of the point was replaced with pc board with a notch cut in the middle of the copper laminate.

The brass strip on which the blades pivoted was replaced with a piece of styrene to which the rails were attached with epoxy. The metal frog will have to be cut (one leg at a time and the resulting gap filled with epoxy) to prevent short circuits if electrically powered locos are to be run.

As only the gauge 1 track of the North Star railway is electrified, from a wiring perspective converting the point to dual gauge was a simpler task than it would have been if the 32mm track had also been powered (albeit the SM32 points have plastic frogs which simplifies things considerably).



***The (almost) finished article: dual gauge on the mainline. Gauge 1 diverging track to the siding to the left. Metal frog still to be dealt with to enable electrical power on the gauge 1 track.***

The first modified gauge 1 point was cut in temporarily and the track for the gauge 1 passing loop laid, the SM32 point diverging to the 32 mm loop having already been installed.



***The two cut in points at the east end of the line at Neal Doon in Glen Tilt. Peco SM32 on left and Tenmille gauge 1 on the right.***

So far so good. Now to cut in the second gauge 1 point.

What had escaped me was that although a left hand point was required, to be compatible with the already laid track and the curvature of the line, it could not be identical to the one already laid. At the west end of the siding the new rail for the 32mm had to be on the diverging track (i.e. the one branching off to the left not the line going straight. I had missed that point (sorry). What a muppet!



***Houston, we had a problem! End of gauge 1 siding/spur top left.***

So back to the drawing board. A new point had to be built from scratch if I wanted a passing loop on the gauge 1 track rather than just a siding/spur.

Who said 'model railroading is fun'?

Probably the most difficult part of the job is cutting the frogs and soldering the "sharp" end to a piece of brass strip without the frogs separating. The result has to be pinned to a sleeper via the brass strip and then electrically isolated. The other end of the frog can be slid into plastic chairs.

Steam locos can be run on the gauge 1 siding but if electrical power is to be used the frog has to be cut and insulated fishplates installed.

The foregoing approaches do not result in true dual gauge points as to simplify their construction, as noted above, only one of the gauges branches off in all cases.

In this instance there was another small difficulty to overcome. My track uses code 200 brass bullnose rail and the Peco SM32 points use flat bottomed rail. With a slight redesign of the Tenmille brass fishplates it proved possible to join the bullnose and flat-bottomed rail.

Trackwork on the North Star Railway is still not complete but it is nearly there.

### ***Wayne Thompson – in memoriam***

It is with sadness I have just learned Wayne Thompson died on the 1<sup>st</sup> January this year. Wayne's garden railway and his collection of Aster live steam gauge 1 locos were featured in the April 2019 North Star Chronicles. He and his wife Dawn were in the process of moving to Willowmore in the Cape. What a shame they will never live there.

Our condolences to his widow Dawn.

The end