



Smokebox

The Newsletter of the **Bedfordshire Area Group** of the
Association of 16mm Scale Narrow Gauge Modellers

From the Editor

This month's **Smokebox** is a little thinner than previous issues, but perhaps this is to be expected as we approach the end of the running year. I provide the description on modifications to GRS 45mm gauge points which I threatened last month. If you've no interest in modifying points, you might find the use of a Resistance Soldering Unit interesting! Garth has also posed some questions with the description of an elderly model which he's recently been given. And I've included a different smokebox – thanks Ted.

We as a family compile and circulate Christmas Lists. There are fewer surprises on Christmas Day, but greater likelihood that presents will hit the spot. Top of my list is a Bob Moore lining pen, which family members will need to club together to buy. I intend to learn how to line locos and this will be my focus in the dark and cold days of the New Year when the great outdoors is less welcoming than in summer. I don't imagine that I'm the only one with winter projects, so if you have one in mind, why not take pictures as you go and share your success with the rest of the group? I'd really welcome your contributions and the newsletter will be the more interesting for a variety of input and contributions.

But before I get ahead of myself, I have a 2021 job to complete, being a change to a junction on my line. The original, level part of the line has a minimum radius of eight feet, save for one six-foot radius single slip. Trains tended to lurch round this point, perhaps because drivers had built up speed after leaving the station (we generally run clockwise round the line). I've replaced this with a nine-foot radius point taken from elsewhere on the line, leaving me short of a connection to the part of the line which descends and goes under the level section at the back of the garden. I need an additional nine-foot radius point and a diamond crossing to bridge the gap. Rail is formed and hard wood, for sleepers, will be cut today. I can do most of the building inside and the RSU referred to above will again come into its own. If I make astonishing progress, I'll bring it to Eaton Bray on Sunday 5th.

See you at the December meeting 😊.

Alan Regan, **Smokebox** Editor

From the Chair

We are fast approaching the festive season and with that in mind, and with some gentle reminders from members it has to be admitted, the committee intend to provide some Festive Nibbles at the December meeting. We look forward to seeing you on the day and hope everyone will have an enjoyable gossip and even a steamy run.

At the last meeting I ran my recently built "Leeds No 1" "in the gold" as someone charmingly put it. I was feeling quite proud but the well know saying came true after about 10 minutes when the loco stopped responding to the radio control and developed a mind of its own. A couple of derailments later and I gave up. Never mind I thought, I can run my "Lilla" later, but after checking functions before leaving home I found I had left the receiver turned on so no run at all. And the third battery

failure to prove the old proverb? An outdoor run this Tuesday with “Charles” and after fifteen minutes another out of control loco and wagons off the track! All simple to rectify but what are the chances of multiple failures?

Bob’s superb Leeds No 1 – photo Garth Bridgwood



I will try to run “Leeds No 1” again at the next opportunity but I have a list of defects/omissions to “snag”, the most obvious being a very noisy burner, before I dare think about painting. Nevertheless, I can recommend “scratch building” as a very enjoyable part of our absorbing hobby, not least the head scratching involved in solving the inevitable teething problems. With a club like ours there are a number of experienced builders who are only too willing to help with any problems, so don’t be shy – give it a go!

Finally, on behalf of the Committee, I wish you all a Merry Christmas and a Happy New Year.

Bob, Chairman

Meeting Dates

Please note that the start time is 10.30 with close at 16.00.

- Sunday 5th December
- Sunday 2nd January 2022

COVID-19 Notice

Although face coverings are no longer compulsory, with COVID-19 still widely present and the fact that no vaccination is 100% effective, the committee asks that members should consider wearing face coverings in the Hall (unless medically excused) particularly when in close contact with other members.

Tea and coffee facilities will be provided at the meeting, but as a result of COVID-19 and also for hygiene reasons, it is recommended that members bring their own mug & spoon to BAG Meetings for the foreseeable future.

Finally, please note that there is **no** restriction on the number of members attending meetings.

Ogwen

Garth Bridgwood has provided the following about an “Ogwen” 0-4-0 Industrial Engine which has come his way.

I have recently been given a 16mm gas fired model of “Ogwen”, a typical small, relatively nondescript, industrial engine built in large numbers by a several companies for use in stone and slate quarries, gravel pits and other occupations.

Ogwen was probably one of the first to be a near 16mm scale model of an actual prototype of the same name built in 1933 for



the Durham County Water Board and sold to the Penrhyn Quarry in Wales in 1936.

The engine was made by Roger Marsh in 1982 and was in production until 1984. It has a pot boiler and an external gas fired burner. The gas tank was located on top of the firebox and I am told got very hot and caused erratic running. The boiler is fitted with a window in the cab end to show the water level and a pressure gauge is also fitted. The engine has a displacement lubricator, forward and reverse control lever in the cab and there is a top-up valve by the smokebox. The cylinders are controlled by piston valves and the Walschaerts gear is dummy.

At present the engine is not in a working condition, but I hope to rectify that over the coming months. Although I have the gas tank I doubt if it would meet current regulations, also the control assembly is missing. I will try to fit a Roundhouse gas tank and control on the footplate. The reversing lever and frame are missing, but that should not be too difficult to make.

I would be interested to know if any member has a similar engine to see what modifications have been made.

Modifications to GRS 45mm gauge points using an RSU

The title may already have you scrolling forward to the last page! If you're still with me, as most of you know, my line is 45mm gauge. It has used Garden Railway Specialists hand-made points from the outset to go with the LGB track which I already had from the boys' indoor line. These use code 332 rail (or scale girders if you prefer) and the point clearances are for LGB G Scale wheel sets. This means that the gap between check and running rails is greater, at 3.6mm, than the 3mm standard. This results in 25mm diameter wheelsets dropping into the gap at crossings, because the gap is diagonal and longer with a 3.6mm check to running rail gap than it would be at 3mm. Besides providing an uncomfortable ride for 16mm scale passengers, it wears the running rail where the steel wheel strikes the rail.

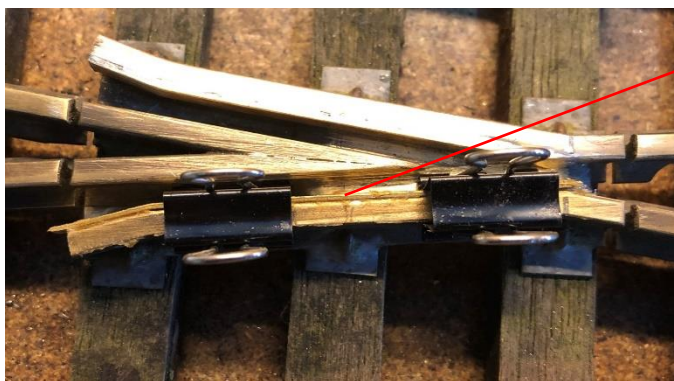


Fillet of brass soldered to check rail reducing distance to vee

Greater gap in running rail in the untreated side of the crossing

Check rail moved towards running rail to achieve 3mm gap

A solution to the problem is to make a new frog, but this is a lot of work which I've only done once, when I needed to change the crossing angle as well as alter the clearances. Easier is to soft solder a fillet of brass, in my case 0.8mm thick boiler band material, onto the outside of the check rail adjacent to the vee as shown in these pictures.



Fillet of 0.8mm brass clamped to check rail using bulldog clips, ends to be trimmed after soldering

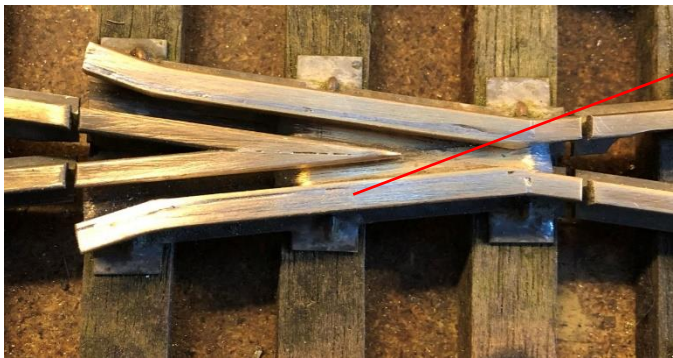
However, the sleepers are hard wood, so a flame can't be used to heat the rail without setting fire to the sleepers (I've tried and failed). Code 332 brass rail conducts heat very effectively, so much so that a conventional iron will never get the big lump of brass which is the crossing frog sufficiently hot for the solder to flow. What's needed is a Resistance Soldering Unit or RSU for short, which can generate a great amount of localised heat but without setting fire to the sleepers. Here's a link to the type of unit I have:

<https://traders.scalefour.org/LondonRoadModels/various/soldering-materials-and-tools/>

It has a number of output heat settings which are selected by plugging the leads into different places on the unit, all of which I'm sure will be in the instructions. I've also found another unit, less expensive, but this seems to have only two heat output settings:

<https://www.frost.co.uk/carbon-resistance-soldering-system/>

My own unit is slightly different to that from London Road Models, but the principle is the same. One lead of the unit is attached to work and the carbon tip of the other lead held lightly against the work. There needs to be electrical continuity between the two, best tested with a meter in advance. The foot switch is depressed and heat is generated immediately at the junction between the carbon tip and the work. If the work has been clamped and fluxed, as shown in the picture above, it will rapidly attain a temperature where the solder flows and a solid and substantial joint is created. With a little practice the tip can be moved along the work to be soldered and a neat joint achieved. Some cleaning up is needed afterwards, which I did with coarse and fine flat files and finally with emery cloth. I find that a small, sharp wood chisel can be used to remove any significant solder (much quicker than filing). You can judge yourself from the picture below.



Excess solder removed, ends of brass fillet trimmed and flared in, gap reduced to 2.8mm

When finished, I've reduced the gap between the running and vee rails to 2.8mm, a tad less than it should be but close enough. The opposite check rail is set to 3mm from the running rail, which I achieved by unsoldering it, again with the RSU, taking a bit of the foot in the mill and soldering it back in place using gauges. The resultant clearance is 39.2mm. It should be 39mm, but it's well inside the 40mm back-to-back of Accucraft or Roundhouse locos and most of the hobby's wheelset. LGB wheelsets have a back-to-back of around 39.7mm (there is some slight variation between metal and plastic wheels), so vehicles with these wheelsets still pass through the crossing smoothly. The ride over the point is much improved and wear is reduced. I've used this technique on over half the point crossings on my line and they've proven to be robust in use. The frogs are a little thick but the improved ride is worth the slightly chunky appearance.

All of the above was done on the bench, but I have modified a number of points in-situ, outside on a mild day. My back didn't enjoy bending over the point whilst soldering or stretching whilst I cleaned up the joint, but it was less disruptive than lifting the point.

As for an RSU, it is a fantastic if slightly expensive bit of kit which can be used when assembling brass bodies. I believe that Fergus used such a unit when he built his Victory kit some time ago. It can also be useful if there's a need to reattach a brass part which has become loose or detached from a painted brass body. If paint can be removed from one side of the point to be soldered, say inside the model, and electrical continuity established to another unseen or unpainted part of the model, the RSU can be used to heat the joint. Both parts ought already to be tinned, so a little flux and the right amount of heat should restore the joint before the paint discolours.

Sales & Wants

Please note that a table will be placed at the back of the hall for members to place any items they have for sale.

For Sale by John Kitchenman

01234 838978 or john.kitchenman@btopenworld.com

Accucraft Talylyn, 0-4-2, 32mm gauge only, internally gas fired, manual control, slide valve reversing, colour Indian Red with lining. Excellent condition, new December 2021 and only test run to confirm correct operation of burner, safety valve and normal running in forward and reverse. Comes with all original paperwork, tools, special packing and double box. Price £1,485.