Association of Shrewsbury Railway Modellers May 2021 Newsletter

From this month's.. and who knows maybe the final…. Editor

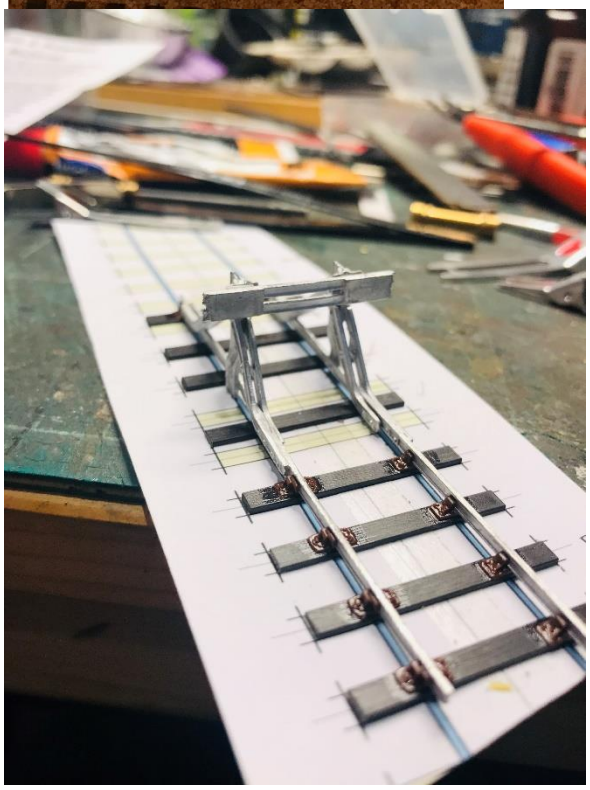
Is Lockdown and all the other Covid Restrictions coming to an end finally? I present a somewhat slimmed down (in contributors) but none the less lengthy for it… newsletter and I take this as something of a positive….. I think we are all taking our foot off the pedal as we look forward to some meeting up, warmer weather and then ending of all this effort to keep ourselves out of mischief and madness. For myself Lockdown has enabled me to get on with many things but alas not a lot of Railway Modelling. But this group has assisted me in staying with it and looking forward to when I will be able to….. so without further ado… I present this months newsletter… Enjoy!

At the end of the line: some comments on building the Lanarkshire Models and Supplies NER buffers.

Gordon Woods

Lanarkshire Models produce some excellent castings of a wide range of prototype detail although I have only had personal experience of their buffers and buffer stops. My North Eastern (1960-64) layout has some colliery exchange sidings and a set of colliery sidings along side and it seemed entirely reasonable to use NER vintage buffer stops for these lines.

The Lanarkshire products are mainly white metal castings and thus soft but they are well detailed and there is relatively little 'flash' to be cleaned up although some edges do benefit from a careful run over with a fine file. The Buffer stops are made up of only six components but chairs and sleepers are required. The kits go together well, however the sleeper spacing and the spacing apart of the support rails has to be got right and I cannot see that this is possible without drawing a small template by hand, or as I was able to do, use a cut off from a Templot print out that I had available. See photo below.



The challenge is that the support rails, which have to be bonded together, need to be at the correct gauge apart, and vertical, before you fix the buffer beam. Whilst this flexibility allows modellers of 00, 00finescale, EM and P4 to use the same components, care does need to be taken, and I have to admit that I did not get the two support rails exactly vertical at my first attempt, with another 5 to go, so I should be able to do better by the end of the run.

I have always been nervous of melting (sorry, soldering) white metal and so I assembled my buffer with super glue for the metal to metal components and butanone for the plastic chairs and sleepers (from C&L). These are an easy fit onto the very soft length of running rail but are essential to holding the bonded pairs of support rails upright and connected to the sleepers. Thought also has to be given to isolation of the structure and I used a very fine styrene card cut to size and glued behind the buffer beams and on to the mounting squares on the support rails. Failure to do this will cause a short circuit unless the rail lengths are themselves isolated from your track. The instructions suggest fine tissue paper but I thought than might be a tad too thin.

Once assembled and set, the next job was to paint and weather. On this first build I used Games Workshop Abaddon black and one of their brown base colours. I have used Abaddon black for wagon chassis with some success but the slight satin finish on the old buffers (!) was not the effect I wanted and I will revert to matt Humbrol enamels next time. I did however used Lifecolour acrylics to weather the sleepers and the chairs, and I used a Humbrol acrylic red for the faces of the wooden buffer beams. The photo below shows the model place on the layout (please excuse the temporally positioned siding track.)

Pleased overall but some refinements from experience will be included in the future builds. When in place, I will ballast (ash/cynders as commonly used by the NER and coal dust in the colliery) and add some subtle grasses etc as illustrated in Gordon Gravett's excellent book "Modelling Grassland and Landscape Detailing." (Wild Swan)

A new burner for an Accucraft Mortimer

By Mike Wakefield

For those unfamiliar with Accucraft live steam model locos, they are small scale and gas fired, with the burner in a tube running inside the bottom of the boiler. The locos are designed in the UK but manufactured in China. Until a few years ago the UK head office was in Much Wenlock, but it's now in Herefordshire. Their cheaper locos are of a freelance design and usually named after landscape features found in the Welsh borders.

All my Accucraft locos were purchased second-hand. I've owned my Accucraft Mortimer since mid 2016, when I swapped it for an Accucraft Leader that didn't get on with the tight curves of my garden layout. The Mortimer has always had an OK-ish performance, but it's never been great, takes a while to get up steam and never managed to get steam pressure much above 20 p.s.i. This was really brought home when I restored an Accucraft Caradoc some 15 months ago and was then able to compare the performance of the two locos side-by-side as both date from around 2003/2004. The Caradoc got to steam far quicker and, although it ran OK at 20 p.s.i. steam pressure, it was happier at around 30 p.s.i. The safety valve started to lift at 45 p.s.i. as expected

I first tried swapping the gas jet holder, complete with jet, from the Caradoc into the Mortimer and there was an immediate increase in power, which made me realise how low the Mortimer's steam pressure had previously been, as now I could now get the safety valve to start to lift at 45 p.s.i. Clearly there was issue with the Mortimer's gas jet holder, but what? I'd already exchanged the Chinese made gas jet fitted in the loco when I bought it for a UK made jet from a reputable supplier.

The other recommended solutions are to fit a small screw to hold the gas jet holder more firmly into the burner, wrap PTFE tape between the gas jet holder and burner to stop any air leaks and fit an air control ring so the gas/air mix can be varied. I did all these and there was still no noticeable improvement in steam generation. Photo1 shows the burner, gas jet holder and gas jet with all the "solutions" applied. The number 5 stamped on the gas jet is an indication it's a UK made jet as Chinese ones don't have markings on them.

Having run out of "solutions" to try, I had a look to see if any replacement burners were available in the UK. The only one I could find simply offered to replace the slotted burner tube with one with holes in it, which I didn't think was the answer to my problem.

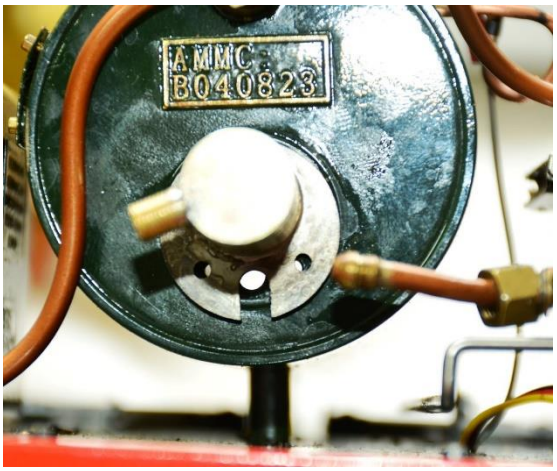
Then last May I was contacted out of the blue to say The Train Department in the USA was making new burners, complete a new gas jet and gas jet holder, for older Accucraft locos. The Train Department was hoping to sell them through Anything Narrow Gauge in the UK, and would I be interested in trying a prototype?

I said yes, and shortly afterwards received a payment request from AnythingNarrowGauge. I naturally paid, but was slightly surprised as, in the past I've beta-tested locos for Mamod, and they don't expect me to pay up front. The idea is that they send me a loco, I test it, keeping Mamod in the loop while I do so, and then, if it performs as expected, I buy it from them. Otherwise I send it back so they can iron out any issues.

A couple of weeks later the new burner arrived with the parts nicely sealed in polythene to prevent anything getting mislaid. These parts consisted of the burner, gas jet holder, gas jet and a tiny grub screw to hold the holder in the burner. Assembling the parts took only a couple of minutes. Photo2 shows the original burner at the top and the new one below. The new burner tube was somewhat shorter than the original, measuring 57mm from the collar compared with 70mm. I was told this was deliberate in order to move the heat nearer to the back of the boiler and so improve efficiency.

Photo 3 shows the original burner with it's gas jet holder removed. The brass hex-head screw is one of the "solutions" mentioned above to hold the gas jet holder more firmly into the burner. The cross-head screw holds the burner firmly in the boiler, and the pipe entering the boiler through a slot is the steam pipe, which is routed through the burner tube to act as a superheater.

I expected the holes and slot in the new burner to match up with the old one, but unfortunately this wasn't the case. Photo 4 shows The Train Department burner roughly placed in position in the boiler, where it's rather a loose fit. If centred in position I would have to rotate it some 5 degrees to get the secondary air hole to line up, but that would require drilling a new hole for the mounting screw and some work with a file to allow the slot to accommodate the steam pipe on its way to the front of the loco. The burner flames would also not be directly downwards.



I don't like drilling and filing anything that I'd already paid for and only then to find it didn't work satisfactorily, so I contacted with AnythingNarrowGauge. They said I should simply return the burner for a full refund, which I did.

So I never got to find out if the new burner would perform any better than the old one but it did prompt me to carefully measure the distance between the burner holes of my 2011 Accucraft Edrig, and compare them with the Mortimer and Caradoc. All were different and even the slot for the superheater pipe was in a different place. Not by much, just 1mm – 2mm, but enough to make it a nightmare to make replacement parts for. I've notice that neither AnythingNarrowGauge or The Train Department list the replacement burners on their websites, which I guess means they're not a viable product.

There matters stood for the rest of 2020 and into 2021, but with the success of the Covid vaccination programme and the easing of lockdown, meeting up with other enthusiasts to run live steam locos couldn't be far away, so I decided to revisit the Mortimer's lack of steam pressure to see if I could get to the bottom of it.

As part of getting ready for the new running season I always air test my live steam locos using a small air compressor, and that gave me an idea. I connected the Mortimer's gas jet holder, with various gas jets installed, to the compressor. Photo5 shows how I did this, using a bit of scrap plastic tube.

I was looking for signs of leaks around where the jet screwed in but to my surprise, there weren't any, just a few bubbles from around where I'd connected the plastic tube from the compressor. All the other bubbles were coming from the hole in the gas jet, Photo6.

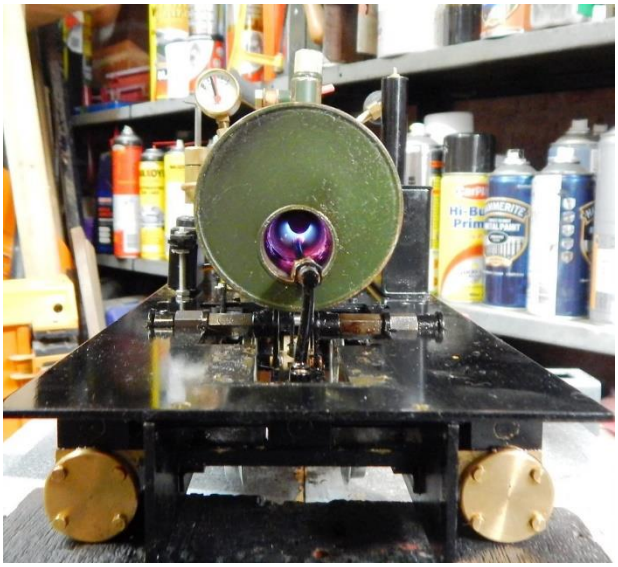
I tried this test with different gas jets, and here are the results:

1. The original Chinese made gas jet that came with the Mortimer produced noticeably more bubbles than other jets, which makes me conclude the hole for the gas was over size.

2. The UK made gas jet I'd bought to replace the Chinese made jet produced fewer bubbles but the stream of bubbles exited the jet at an angle rather than straight, which made me conclude this could be the cause of the problem.

3. The UK made gas jet I bought to replace the Chinese made jet in the Caradoc produced about the same amount of bubbles as 2, but in a straight line out of the jet.

4. The Chinese made gas jet that was in the Caradoc when I bought it, both produced about the same amount of bubbles as 3, and in a straight line out of the jet.



I fitted the jet holder, fitted with Chinese made gas jet that originally came in the Caradoc, back into the Mortimer and reassembled it as much as I needed to run a steam test with the loco on blocks. It was successful and the loco quickly got up steam to around 30 p.s.i., see Photo7. I finished the reassembly and ran the Mortimer outside on my garden line. Success! It ran just as well as the Caradoc, Photo8.

From this rather long winded exercise I've concluded that by replacing the original Chinese made gas jet with a UK made one simply swapped one faulty part for another. You can't assume that because it's made in the UK, it's necessarily going to be better than something made in China.

A Mimic panel – courtesy of DCC Concepts
Stephen Duffell

With 24 switches in the station area of my layout I needed something to tell me which way the point blades were set. I started to build a panel using red/green LEDs but there were various problems. One was that with conventional wiring each LED needed 3 wires, and there were 2 LEDs per switch, and even with a common return this amounted to getting on to 100 wires. Then of course these wires needed linking to a point motor or switch. The other problem was the brightness of the LEDs. One colour would shine brightly whilst the other was dim.

I had already installed a Lenz DCC system to run the locomotives, but I wanted a separate system to work the points and signals. I reckoned it would be too complicated for me to juggle between traction control and route setting on one handset. So I installed the DCC Concepts alpha system.

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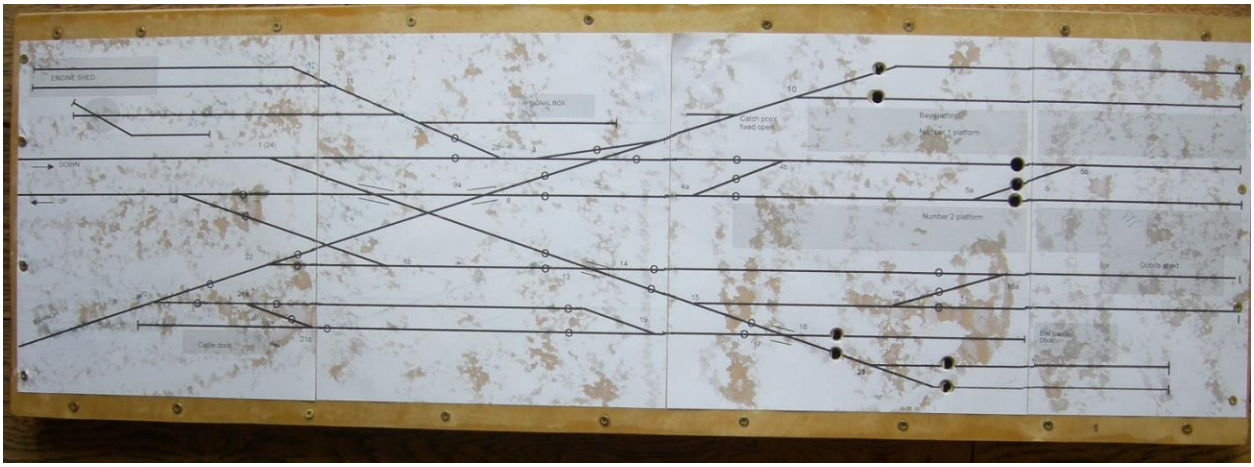
This shows the alpha box that generates the DCC control function. To its right are 2 switch boxes each with 12 pairs of push buttons to change points/signals. The 5 switches above the push button units select the 5 zones of the layout. Hiding below is the Lenz DCC unit.

The DCC Mimic system appealed. Here were only 2 wires required to connect the mimic panel to the DCC system and the components were all plug and sockets, so no soldering was required, and modification of wiring is easy.

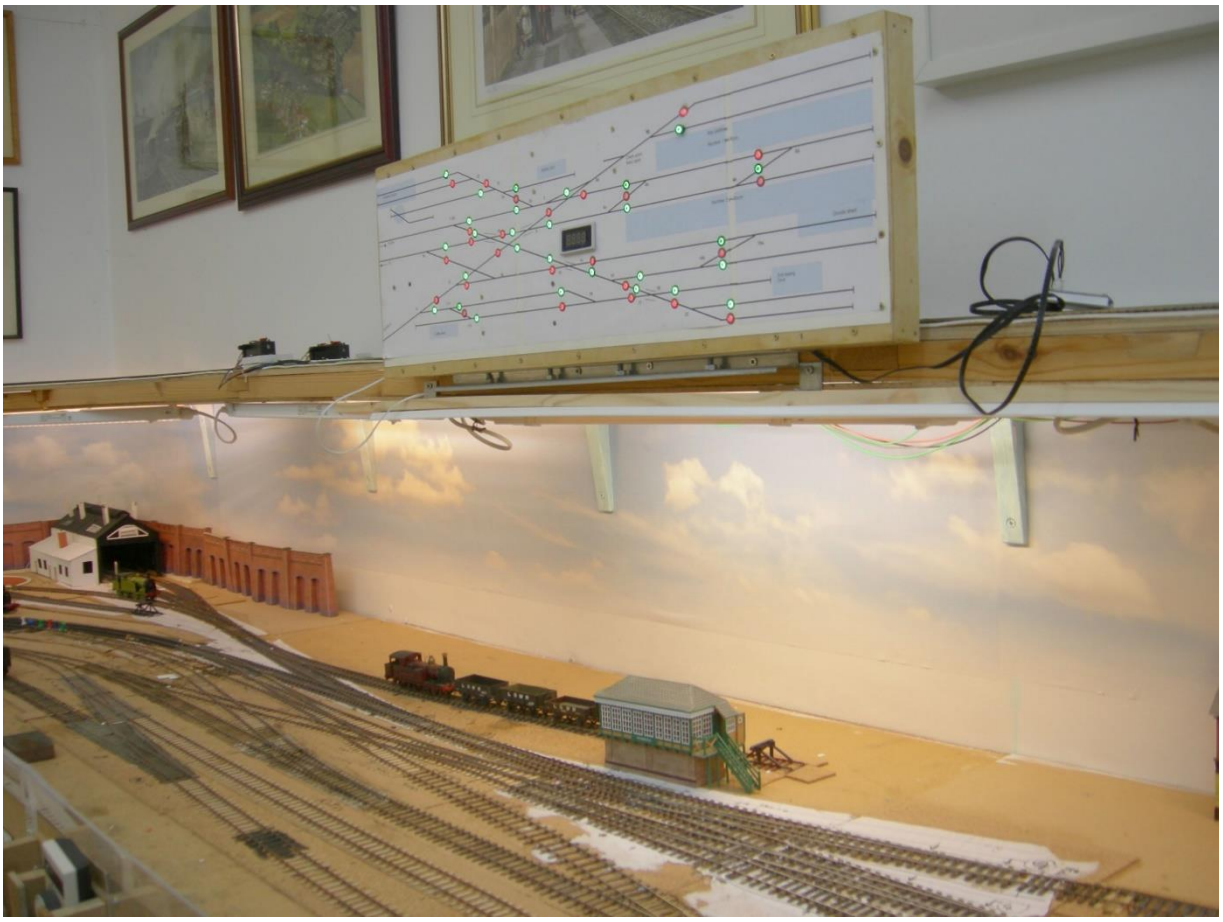
First, one has to make the panel on which the track plan and LEDs are mounted. Mine was made from a softwood frame and covered with a good quality birch plywood (3mm MDF is also suitable).

Your track plan is then stuck onto the panel. My first attempt used a spray adhesive but it did not go according to plan. Having used up all my artist's grade spray I found a can of extra strong adhesive (meant for sticking floor tiles down) and used that. The plan was stuck on well enough but visually the adhesive had bled through the paper and created horrible brown and white patterns. The plan had to be stripped off, the panel cleaned up, and a fresh plan attached. I had varnished the surface of the panel and the new plan was stuck down with Prit stick – so far it has stayed stuck down properly.

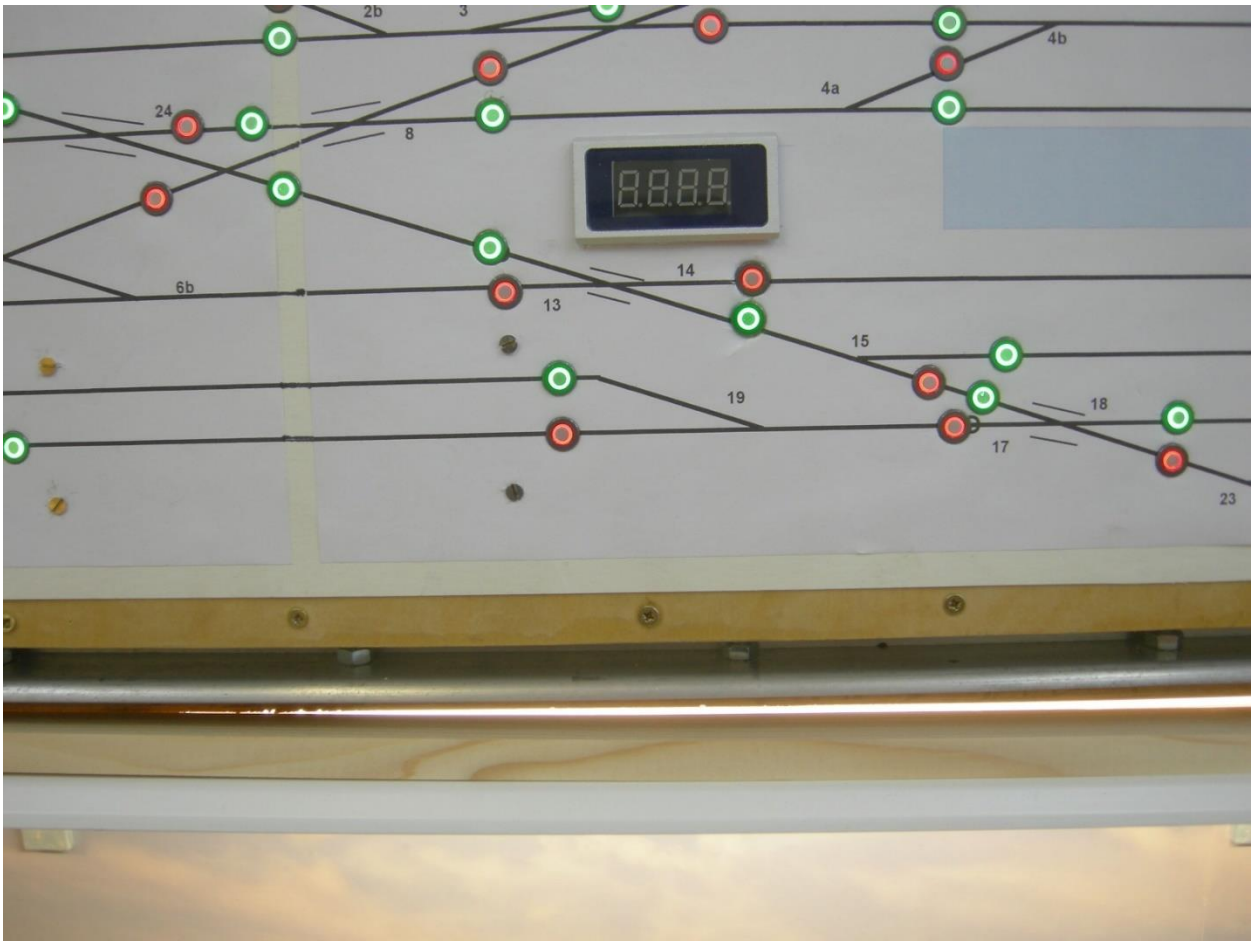
The holes to mount the LEDs were made with a 6.5mm punch which cut through the birch ply easily. Some trial holes are visible. Where there is a diverging road there are 2 LEDs, one in each road, and these will be lit green for the route selected and red for the route not available. There are 3 LEDs on a crossover.



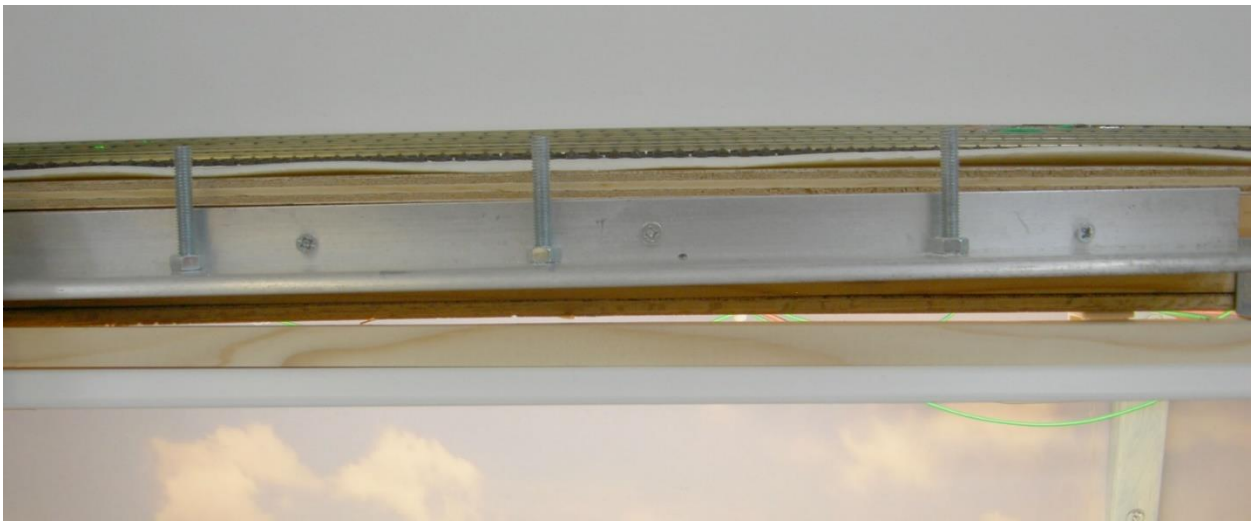
This shows the mimic panel mounted for use. It is attached to the circular test track and can be easily removed if required.

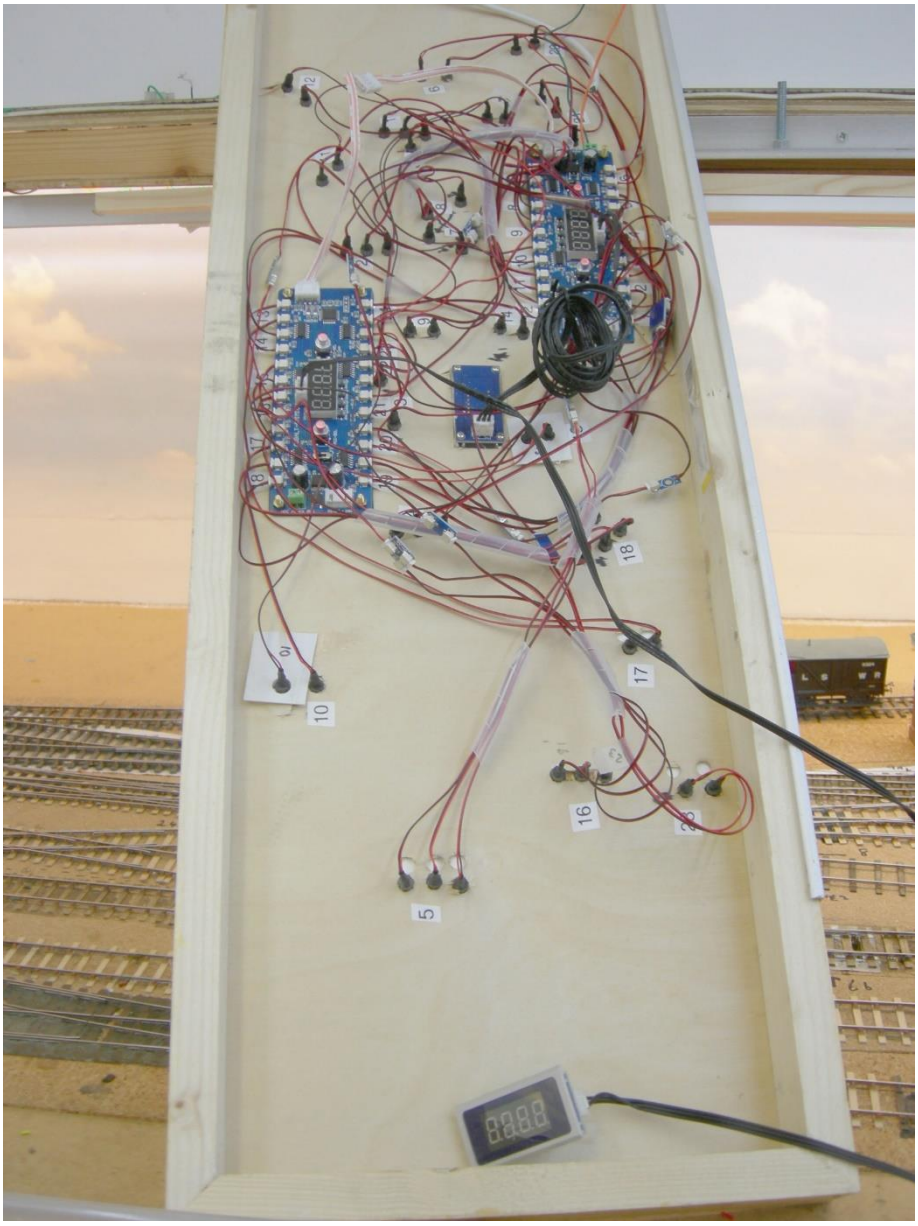


This is the view from the other direction. The black cable on the right is attached to a panel display that requires mounting on the panel.



A close up of the panel. I shall have to make the numbers bigger as they are not easy to read from a distance. The 3 nuts visible under the panel are part of the support system. There are 4 M6 bolts located vertically that slide onto holes in the panel edge.





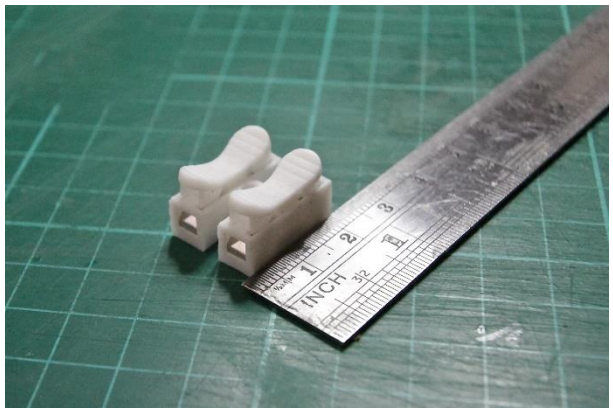
The underside of the panel. The LEDs are push fit into the punched holes and their leads are plugged into the blue control panels.
Setting up the units is straight forward. The system thinks for itself. My points are numbered 1 to 24 and the first blue box recognised points 1-12 and these functioned straight away. The second board didn't work, but then I read the instructions and discovered there was an on/off switch, and hey presto all was well. I followed the instructions and entered the first number, which was 13 in this panel and it added all the numbers up to 24. I am at the commissioning stage, checking that I have the wires plugged in the correct way round for each switch.

I am very pleased with the system and would recommend its use.

EARL'S HALL MPD – Mike Bennett

Last month I pondered as to what could possibly go wrong as since the 'link was linked' I could proceed with the final part of the MPD. What a negative attitude! Nothing did go wrong to halt progress. But only because the weather went wrong and living on an exposed mountainside is not always conducive to achieving anything outdoors. Thus the second half of the MPD was taken into the workshop and set up vertically in the workmate to enable both the track and the underside to be worked on whilst sitting comfortably with the fire and radio on – what bliss! Thankfully this board only has 5 wire-in-tube points (counting the 3-way point as two) and my first attempt at getting the the frog polarity correct was wrong on 3 of these – it could have been worse. But the track really took some cleaning as it had been laid and sprayed more than 4 years ago, kept in storage for some of that time and not been touched since. With over 50 ft of track, cleaning was no mean feat but very rewarding when the test loco ran faultlessly at slow speed over this half of the MPD.

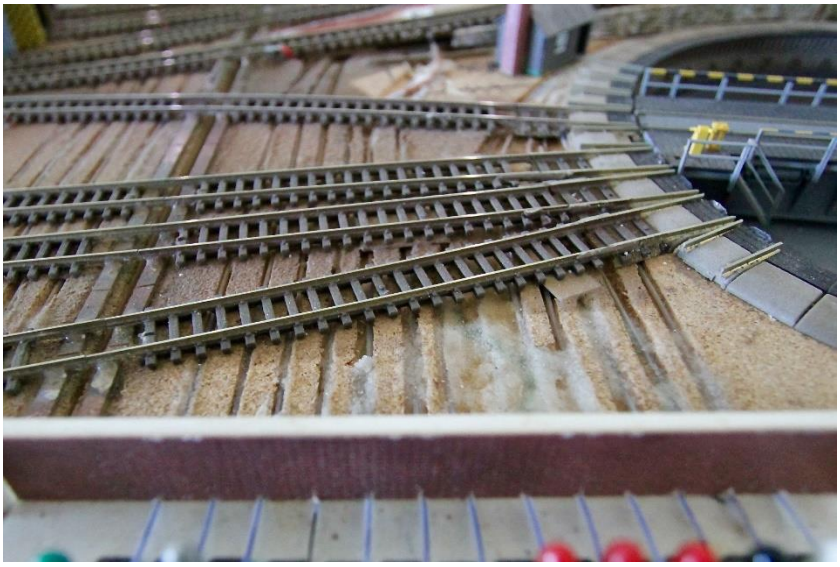
The copper tape DCC bus had been fitted to the underside before the house move and this was both around the perimeter and across the board so that the 102 droppers were relatively short. I had recently installed lights in a number of the buildings so these and 4 yard lamps required 12v DC power. With little room under the baseboard this needed some longer lengths to connect to the only remaining location for this bus. As the buildings will have to be lifted later either for track cleaning or scenery work I felt it necessary not to make a permanent joint to the bus but to use a connector that would permit easy disconnection. Back in my model boating days at Chatham Dockyard I used to buy an excellent click-fit splice connector from the model boating shop. This was now closed during the lock-down but after some searching I located the same item on eBay (where else?). These enable the lighting wires to be easily inserted and removed without the need to unscrew or de-solder. I include a photograph of one. They are available 2 way as shown or, if required for colour light signals for instance, 3 way. I bought 30 x 2-way for £6.49 with free delivery.



When I connected the two sections of the MPD I encountered 3 irritating problems. First was a track join that a class 66 was happy to traverse in one direction but came to an abrupt stop in the other direction. The fine tolerances on these new models mean that the running gear can be very close to the track and upon investigation I found that the join was far from perfect. Unfortunately this was the track furthest away and against a wall but luckily was easier to overcome than I dared hope as there was sufficient solder on the copper-clad to remelt and press the track down just a fraction of a millimetre.

The second problem was that one section leading to the turntable was dead. It did not take much investigation to discover an isolation cut but for some time I could not work out why I should have

made such a cut all that time ago. But then realised track power to and from the turntable is provided from a feed on the turntable bridge and must be isolated from the rest of the track. This been had done on the other side of the turntable quite correctly but it was unnecessary on this side as the baseboard join was so close to the turntable it would provide a natural break in continuity. Clearly I must have realised after I cut this gap and stopped short of making any further cuts.



Furthermore, running under the tracks at this point are 13 wires-in-tube making the positioning of droppers almost impossible and certainly endangering the integrity of the point control wires. And so with the soldering iron to the rescue again the gap was soon closed and the track made live. A photo shows these wires-in-tube and why I need to rely on the baseboard join to isolate the turntable approach tracks.

But the third problem, which took rather longer to resolve, lay with the square section brass connector I had created on the surface of the board as previously it could not be underneath, and now it was firmly in place with 2 ton epoxy resin. The answer seemed to be to leave it in situ and build over with a platform, part of which would have to be removable for future access. To have a platform in the middle of an MPD has probably caused a few raised eyebrows but my reasoning, or excuse, is that this would be a loading platform serving 2 tracks for the Royal Mail and parcels trains. Well, has it not been said there is a prototype for everything?

While the board was conveniently in the workshop the opportunity was taken to complete the quarry with scatter, some static grass and a fence, the latter essential to satisfy health and safety freaks. This hole in the board is where 4 main running tracks used to pass through in a deep cutting in the days when the MPD sat on top of the main layout in our previous abode. Now with this greater accessibility in the workshop I was more easily able to complete the sewer pipe and supporting gantry before returning the board to it's rightful place on the layout. Ideally I suppose I should, at this stage, lay ballast and make the ground surfaces to suit a depot location, but I was anxious to get the board in place and working [aka playing] and whilst

it will not be so easy to complete whilst in situ that will be a problem for another day, which will probably be added to the ever growing long list of my follies.

So I am now at the stage where all 12 boards are wired up, connected and tested which is really a great milestone in reassembling the layout after so long. This means I can now rummage through my rolling stock collection, take them out of the storage boxes and place them on the track at last. I can also now concentrate on developing the scenery but whether there will be any further advance by this time next month will be dependant upon the vagaries of the weather as jobs outdoors tend to take preference as soon as the sun shines.

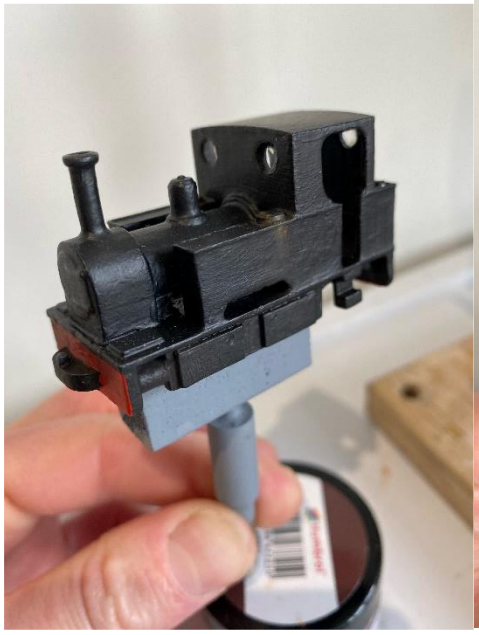
‘Diorama update’ – Sam Ryan

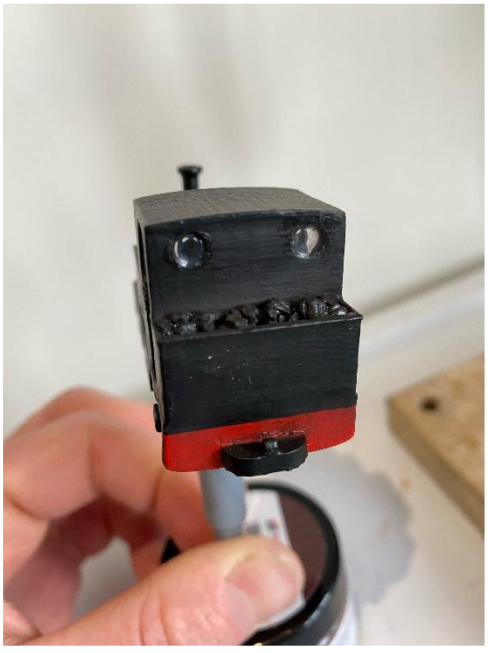
Finally made a bit of a leap in progress on my diorama! Adding in some bushes and overgrowth onto the slope and around my ‘muddy’ footpath, the general look is starting to really come together.

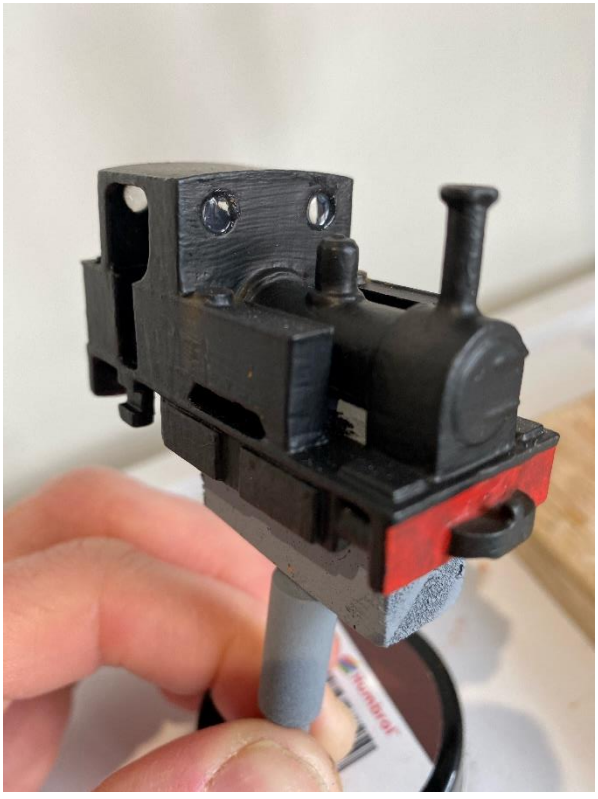
I also took the time in weathering the siding to look more rusty and overgrown. Obviously once my weather rolling stock gets added in the track bed won’t be prominent on show, but it’s the little details that make the scene. Hopefully the buffers look more detailed to fit the scene than looking rather plastic looking. I’ve added in a little hut in the scene and will tart it up to make it look a little more rundown. I’ll also be adding in some workman figures at some point.

I’m hoping to start working on the back scene that will (all being well) capture the mood to fit the scene. Whist it would be easier to either print or use an existing backdrop scene, I’m going to attempt to actually paint my back scene in the hopes I can create a wet, grey day that’ll work in junction with my muddy footpath and so forth.

Once that’s painted and secured on, I can then hopefully begin the task of the main centrepiece of my diorama, the tattered weathered rolling stock!







Update on the coal mine railway – Nick Coppin

It wasn't supposed to be like it has turned out. What started as a North Wales narrow gauge exhibition layout, has morphed into a fixed layout, screwed to the wall, depicting a line connecting a coal mine to exchange sidings. It is circular so I can run live steam (whenever I finish a loco!). It is inspired by 1960s coal mine railways in South Wales and the Midlands. There is an old, worn out ex-GW pannier, 9792 on its last legs pulling 16 ton steel mineral wagons of coal. This ran at Mardy colliery before being scrapped.

The stone wall running close to the railway is from Merthyr Vale colliery.

From Williamthorpe in Derbyshire, there is a BR Jinty with a few NCB wooden coal wagons. These locos were hired out to the NCB from the BR shed at Westhouses, 16G.

I am also building a diorama of the locomotive facilities at Williamthorpe. These comprised an old Lancashire boiler mounted on three brick piers used to store water for the locos. There were a couple of sheds and they parked a wagon of coal nearby or had heaps of coal for the locos. There is still another brick pier to make and I think I could do better than the beer can!

The Jinty and pannier tank are both Dapol, modified with radio control so I can run them outdoors. The part-built steam loco is a Kitson side tank from Coppice Colliery on Cannock Chase and will be manually controlled. However, I have wired this layout for 2 rail electric and have a Connoisseur kit for an ex NE Y7 0-4-0T, one of which was used by the NCB at Bentinck Colliery near Mansfield.

To carry the coal, there are nine BR 16 ton steel mineral wagons, a 21 ½ and a 24 ½ ton wagon and three ex-PO wooden bodied NCB internal use wagons with an ex-LNER 20 ton hopper wagon still to build. (One of these features in a photo of Williamthorpe.)

Almost all this work has been carried out during lockdown and has helped fill the time. I wonder if I shall get as much done in the future?

Nick Coppin

Logging – Peter Cox

There is something fascinating about geared locomotives, and for some time now I have had a three truck Shay and a two truck Climax, both by Bachmann; and with my layout set in the Appalachians there is plenty of opportunity to model the logging industry in which they were so widely used. However, I have not had the logging cars necessary for them to pull. Over the last couple of years I have managed to find some good deals on Ebay for the Kadee log car kits, and I have now set about building them. If you buy these at full price they are pretty expensive, but they do make up into very detailed models. The instructions state that these are craftsman kits and a good degree of skill is needed for assembly – and they are not joking. As it is unlikely that any of you will be building them yourselves I shall spare you the agonising blow by blow detail of just how taxing they are, but should any of you feel the need to try them, it might be worth asking me for 'don'ts', because I have found out the hard way, as I now approach my fifth kit, a great deal of what I wish I had known at the start!

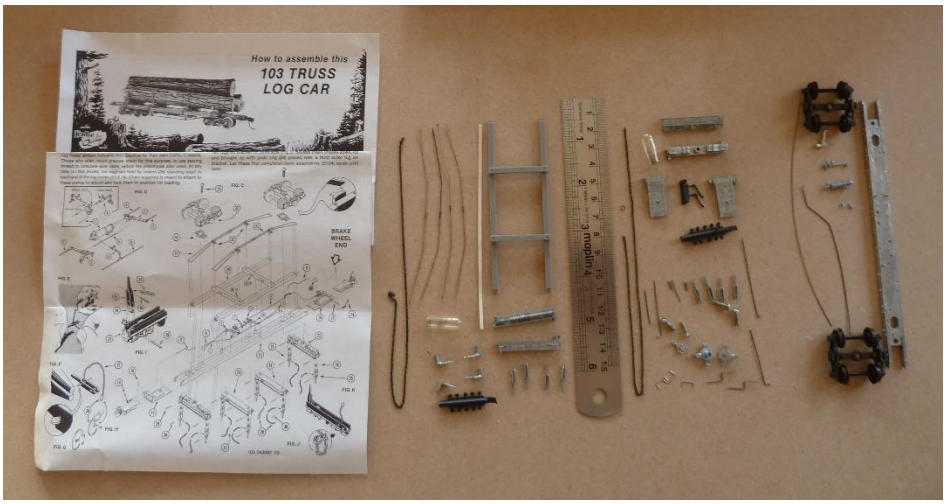
Some of you will already have seen at the April Zoom meeting the first car I attempted, which was not too tricky, apart from trying to make the plastic logs provided look like real trees. This is a disconnect log car, comprising two trucks with the logs themselves forming the spine of the car. I have not yet found twigs that look sufficiently like full-grown trees, so I tried painting and powdering the plastic ones in the kit.

Here are the very plastic-looking logs as they come. You fill them with sand to provide weight before sticking the ends on:

The completed car and weathered logs. The trucks have been painted with track grime:

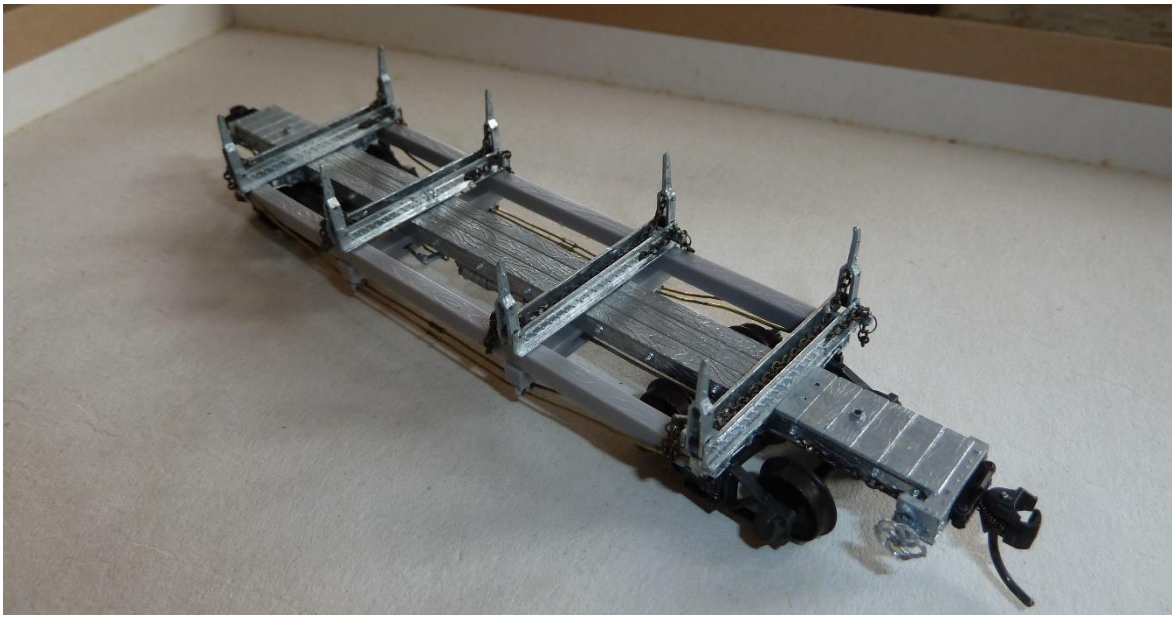
I have six kits altogether, two disconnect, three truss cars, and a skeleton car. The second kit I attempted was a truss car, and this was a stinker! The white metal parts are very well cast, but there is a lot of fettling to be done to make sure everything fits precisely. (This is the biggest lesson I have learnt, to make sure <u>all</u> the parts fit before starting assembly. Filing, sanding

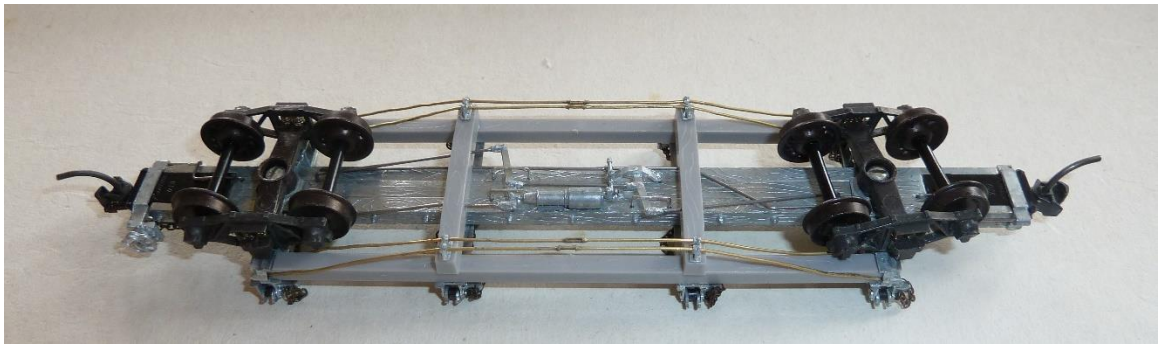
and scraping parts to fit once you have begun gluing things together plays merry hell with delicate items.)



Here are the parts of the truss car set out to give some idea of how comprehensive/difficult the kit is. (And this does not show the sprung couplings provided, a fine piece of engineering, but worst of all, almost impossible to assemble whilst avoiding bad language and/or apoplexy.)

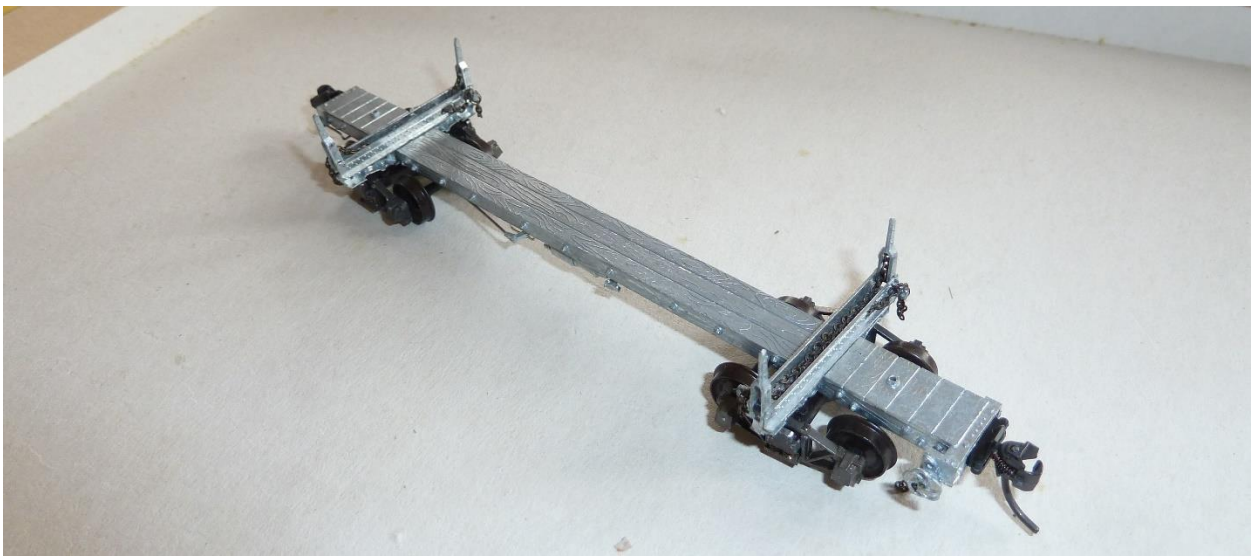
Here is the completed, though yet unpainted car about eight days later:





Somewhat chastened by my experience, and by the fact that the truss rods, though beautifully presented with their tensioning screws, were made of very soft wire and thus bend every time they are touched, I decided to tackle the skeleton log car next. To my surprise, I found on opening the skeleton car box, another truss car. I rather shuddered at the thought of making four of these, so consulted the Kadee website, finding that the truss log car (priced $44) is the same basic frame as the skeleton log car (priced $37) with the added framework for the trusses and two extra bolsters. So, as I paid a lot less than $37 anyway, let alone $44, I forged ahead with a skeleton car.

Here it is, simpler, but more rugged looking:



I have now built two of these, because I think they have the rather more spartan, basic appearance I associate with logging lines. I am undecided whether to make a third one of these or to drive myself potty with a second truss car. I shall assemble the second disconnect car and the little four wheeled caboose I have to complete the train while I make up my mind.

Here are the three types on the rails. I have put some smaller, as yet unpainted logs on the truss car, as I think the extra bolsters would have been useful in transporting smaller logs of more varied size.

Peter Cox

A short road

Gordon Woods

A significant feature of my Dearness Valley Junction layout is the colliery. The railway junction is being modelled as close to realty as I can make it for the period 1960-64. Broompark Colliery is accurate too in terms of location, but I have exercised a fair degree of modeller's historical licence in extending the operational life of the colliery to the period modelled. The life of the real colliery was much shorter and the mine never re-opened after a devastating fire in August 1904 when the wooden pit head gear and screens were destroyed. The site however remained a coal concentration depot, coal washer and loading point up until the 1980s when other nearby collieries west of Durham City closed: Bearpark Colliery, only 2km to the north, closed as recently as April 1984 and Sacriston (6km north) in November 1985.

Thus, my colliery has a plausible back story and the mine itself produced high quality coals during it's working life and it was a small enough colliery (as were most west Durham mines) to make a feasible model. I have also been able to track down a large scale OS map of the site which provides details of the mine layout and in particular the colliery track plan. All of which is to provide background context to the approach road to the Colliery!

As modelled, this is a sloping straight road with a footpath on one side, and having done some research on photographic archives, I decided to model it with a surface of granite sets. The next decision was how to produce the surface. Several options were available; I have seen DAS clay used with home-made stamping tools, Redutex make reasonably convincing textured surfaces, Slaters rather less so, but I came back to Wills sheets which I use quite extensively.

As many of you will know the Wills sheets are relatively small and rigid (i.e. thick which makes cutting/shaping a challenge) which is a strength and a weakness. In this case, I could live with the weakness if the surface effect could be made to look right. Thus the thing is to try and mitigate Wills sheets looking like Wills sheets on the layout! If I have a criticism of these the depth of the space between the sets seems to be too deep but I felt I could disguise this by a careful use of paint and in places some filler.

Before I committed myself (see pic below) I experimented on an offcut from a previous model. Normally with brick sheet for example I would paint the whole sheet with a base colour, then flood in suitable mortar (as on left of the pic) then dry brush subtle surface tones over the top. With the sets, this just did not look right so I reversed the process (as on right) and flooded the dark 'mortar' (true granite sets are not laid with mortar) onto the raw Wills sheets. The immediate advantage was that the slightly smooth and shiny sheets allowed the thinned paint to 'flash' along the lines easily. The wash was sufficiently thin to also add variation

to the sets themselves. Next a little dry brushing over sets then completed the job, and very much more easily than it might have been.

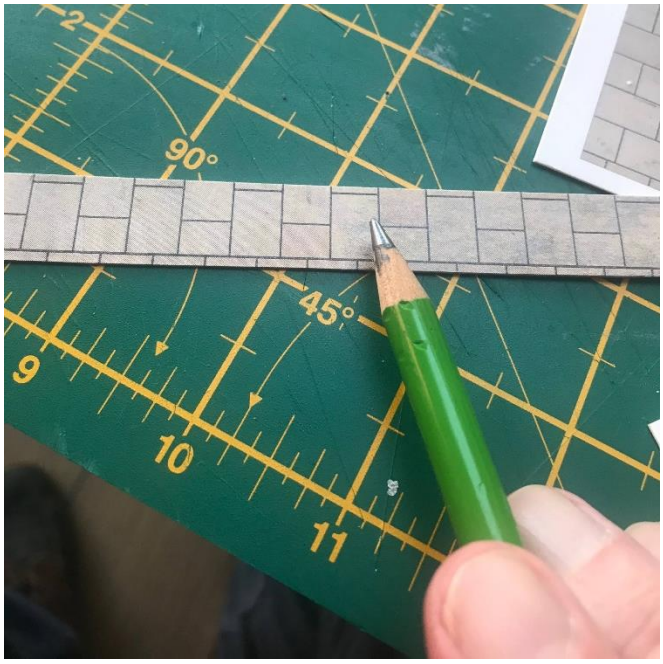
Both these techniques require a little practice but are easily manageable. The key is subtlety. Andy Vaughn uses acrylics to fantastic effect, but my own preference is to use enamels for this work. In either case the techniques involve stretching the painting method to polar extremes. For the gaps between the sets, I used Precision Paints 'Dirty Black' (this is in fact anything but black, being a dirty grey.) I remember being taught by my mother (who was a trained architect) never to paint with pure black as it does not occur in the landscape. The dirty black was thinned (using Precision Paints own thinner) to a really runny consistency – probably something in the region of 8 parts thinner to one part paint. This was then touched into the spaces with a fine (000) brush and hey presto. (left)

Dry brushing (right) on the other hand is all about neat paint on the tip of the brush, most of which is wiped off on a bit of kitchen paper so the paint is almost dry on the brush. It is then used very gently over the surface to be painted to add the faintest tone / hint of colour. In this case I used a relatively narrow, short bristled (No3) flat brush.

Prior to the painting, each of the sheets (I used five) had to be 'prepped' by trimming mould lines and marks from the edges. The sheets come with edging stones on only one long edge as well as a shorter edge. I wanted edging stones along both sides, and a degree of careful cutting and re-using made this possible. The joints between the edging stones and the sheets, and indeed each of the sheets were pretty good but not perfect and I disguised the gaps with 'Perfect Plastic Putty' from the Deluxe Materials which is easy to use (and has no fumes/vapours unlike some other modelling fillers.) See pic left.

The footpath

Again, there are several options but my recent illness has prompted me to take a route where if there is a quicker way of doing something that can still be made to look right, then I am going for that. ("*You know it makes sense*…").



I had previously used Metcalf pre-printed paving slabs and had plenty in stock, but as with the Wills sheets, the trick was going to be how to make them look anything but 'out of the packet.' As printed, the Metcalf paving is of quite a sandy tone compared with the concrete grey of most cast paving. The answer here was to use the side of the 'lead' in a very soft pencil to lightly tint areas and then use the Mk1 finger to smudge that (which it does easily) to provide a greyer overall tone. Further light weathering was with artist's crayons using the same finger smudge technique.

The pic right shows the Metcalf sheet out of the packet and the weathered version above (NB this was toned down a little before final fitting)

Next, I wanted to get some variation into the surface. Again, this can be done in several ways. Careful use of the back of a Stanley knife blade can be used to deepen the cracks between slabs, or a sharp, relatively hard, pencil can be used to suggest cracks in the paving slabs themselves. I also wanted to give some hint of depressed paving slabs and I did this by gentle shading with a dark green pencil in the corners of random slabs to suggest green staining where water 'ponds' because of a depressed/broken slab. This is not easy to photograph but the effect is relatively pleasing.

If nothing else, the key thing when using pre-printed card for modelling is to disguise the cut edges, and I used my soft pencil (using the side of the lead rather than the tip) to shade any exposed edges. Simple to do, and well worth the time.

The footpath was not put in place until the sets had been laid and painted. It was necessary to pack underneath the footpath so that it was marginally above the level of the road giving a nice, but subtle

kerb. The packing and the carefully cut footpath sections were glued in place with neat cheap builders PVA. The Wills sheets were fixed to the ply base with Copydex and cemented to each other with liquid polystyrene cement.

The final pic (below) shows the road and footpath in place. The truck by the way is a Base Toys model, weathered with the airbrush and powders, but that is a whole different story. No surprises about the materials used for wall on the left either.

Footnote
With the Wills sheets and the Metcalf card, I cannot emphasise enough (as others have done) the benefits of using really sharp, ideally fresh, blades when cutting out, and letting the blade do the cutting – i.e. don't force it. Not only do you get a significantly better cut, it is also in my view significantly safer.