

# Narrow Lines



The Magazine of the 7mm Narrow Gauge Association



**Issue 195 - June 2012**



**The Dodry, Phugetville And Grumpigh Railroad**

**Tallylyn Railway Bogie Third No 18**

**A Forest Railway in Slovakia - Part 2 \* Backwards Conversion ?**

**Chopper Couplings \* The Java 38 - Sugar Cane Steam \* Girls Galore**

**Watlingford And Sloley Railway: Starting The Scenery - Grass !**

**Cwm Isaf Quarry Yard**

**Esme River Railroad Engines And Stock - Part I**

**Constructing Buildings and Structures From Clay Blocks**

**DCC By i-phone \* DCC - Two Views**

**A Freelance Garratt \* And More**

# Narrow Lines 195

The Magazine of the 7mm Narrow Gauge Association

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## FROM THE EDITOR

Welcome to the June 'Narrow Lines'. If all goes well this issue should land on UK doormats just before our annual Exhibition and AGM in Burton on 9<sup>th</sup> June. I hope to see you there.



The spam filters on the Association's email system are pretty effective. However, it has come to my notice that they will occasionally catch messages that aren't spam. If you send me an email and you do not get a reply from me within ten days, please try again giving the email a different subject line. (I usually respond more quickly - ten days allows for me being away from home.)

As this issue goes to press, my wife and I are putting our house on the market. If all goes well we hope to move later in the year, possibly at relatively short notice. I suggest, therefore, that if you are proposing to send me anything by post you contact me by phone or email first. The Association email addresses for me will not change.

And finally, contributions to 'Narrow Lines' are always welcome. To provide a balanced magazine I need both longer and shorter pieces. It makes my life less stressful if I have a good supply of material in hand, so, in an ideal world, there will often be a delay between submission and publication. At the time of writing a particular need is for interesting, sharp images of model subjects to go on the front cover.

Best wishes

**Peter**

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**Cover photograph:** Javan sugar cane steam - O&K 0-8-0T No 10, Asembagus Mill. 700mm gauge. (See p. 18)

Photo: Keith Willows.

**Narrow Lines is published at the beginning of February, April, June, August, October and December each year.**

Articles for publication are always required and may be submitted at any time. The closing date for urgent material for NL 196 is 30th June 2012.

**It is expected that NL 196 will be despatched to Members round about 1st August 2012.**

If there are known delays we shall put notes on the Association website and the Yahoo Discussion Group. Please check one or both of these first if your copy is delayed. Otherwise, if you have not received your copy by 20th August 2012, or if there are other mailing problems, please email [distribution@7mmnga.org.uk](mailto:distribution@7mmnga.org.uk) or contact David Charlesworth by letter at the contact details given on page 34 or by phone on 01274 787150 (evenings only)

Please note that the Yahoo Discussion Group should NOT be used to get in contact with Association Officers.

# The Dodry, Phugetville And Grumpigh Railroad

**Derek Gregory** describes his two level 0n30 layout.

Photographs by the author.

Having grown up with a tinplate Royal Scot and then 3 rail Dublo in the 1940s, and unsuccessfully trying to interest my children in trains in the 1960s it wasn't until the 1990s that I got round to serious modelling with an accurate 00 scale model of Evercreech Junction and Highbridge. A traumatic downsizing house move in 2008 required the demolition of 10 years work in the attic and in order to keep sane during the 3 month packing and unpacking phase I dabbled in 009 with a 5 foot long micro-layout. The Narrow Gauge bug bit hard, though my attempts to fit decoders into 009 locos exaggerated my grumpiness, that feature of mature years. Then I built a Smallbrook 0-16.5 kit, and lo and behold my universe got larger and brighter with 7mm/ft scale. My next endeavour, alongside rebuilding the Highbridge section of the 00 layout, was to construct a 12ft by 1ft narrow gauge feeder for the new 45ft long 0 gauge layout at the West Camel MRS - more of that layout in a separate article later perhaps.

Discovering the Bachmann 0n30 range emptied my savings account and filled me with enthusiasm for a logging layout at home. There were strict design criteria. While it could begin life in the garage, it had to finish up along a 10 foot wall in my train room. Sections needed to be handled by my ageing muscles up and down stairs, access to wiring needed to accommodate that other symptom of ageing - my dodderly body would no longer rise easily from lying on my back with an overhead soldering iron - and it simply *had* to have a high trestle bridge. Moreover, I wanted to use my budget mainly to buy stock so the rest of the project was to be done as cheaply as possible. After much thought and scribbling I decided against steep inclines to the trestle, and designed a two storey layout. The lower level was the 'main line' bringing passenger and



*The author demonstrates the portability of one baseboard section.*

freight in and the upper level was the logging and mining operation. The two levels joined up somewhere well off scene. I made a 12in long cardboard model of what I had in mind.

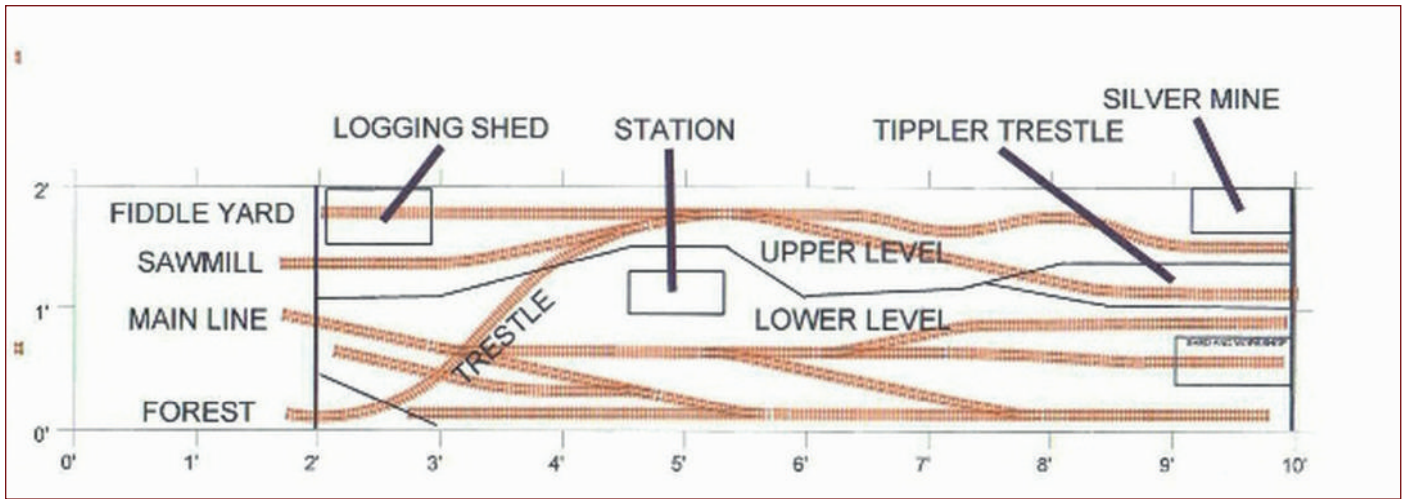
The two levels enabled me to accommodate a station and a workshop/shed on the lower level, with track arranged on a 'tymesaver' shunting puzzle plan from Carl Ahrendt's website, while upstairs would be a silver mine, engine shed, a long curved trestle bridge, a straight tippler trestle feeding silver ore to the lower level and separate entrances to off-scene forest and sawmill. I intended to have a cassette-based fiddle but later introduced a two storey fiddle yard with a turntable below and a six-track traverser on top.

Linked to the fiddle yard there are four baseboard sections, made of plywood, 24in wide and 22in deep (22in so that two would fit (just !) across my 45in wide estate car). The upper section is only 6 inches wide on average, 14 inches above the lower level, and the back boards extend a further six inches above the upper level to carry a backscene. I can handle these boxes on my stairs and into the garage and the car, for I realised that my portability requirements meant I was unintentionally building a layout capable of exhibition. During construction the layout stood on a temporary skeleton of trestles so that the underside was accessible, but it was later placed on two folding tables akin to beefed-up pasting tables. These are 5ft and 3ft long, ensuring that the join does not coincide with the baseboard joints, and they will lie on top of the four box sections when in the car. (The first things to come out !)

Alignment is by simple carpenters' dowels in the lower level of the box sections. There are sprung latches on the front and back of the lower level and one at the upper track level at the back. Once assembled the rear lower latches are inaccessible, so in use at home those latches are left undone. Thus in a second or



*An overview of the layout looking towards the fiddle yards.*



*Baseboard section with raw plasterwork.*

two any section can be unclipped, wires disconnected, and flipped over on its back to access the wiring by a dodderly 80 year-old man in a sitting position. The inter-board connections are 4-pole DIN plugs and sockets in the front board. This is a bit untidy but necessary to allow the use of a solid-topped support table

I covered the near-vertical ply boards between the upper and lower levels with a thin but variable thickness of plaster and moulded and carved the rockface into it as it cured. My other hobby of sculpture came in handy! At first I used Tetraion Filler which gives several hours working time but dries too hard to carve. Later I used plaster of Paris, covering 3 or 4 inch wide sections at a time as setting takes only a few minutes. This produces fairly heavyweight scenery, but as the baseboard sections were only 2 ft square they still handled easily. Board 3 includes a cutaway in the vertical board and in the horizontal surfaces to accommodate a waterfall and stream. This was quite challenging, and I learned what to do next time!

I covered the entire horizontal surfaces with 4mm cork sheet, and drew out the track plan on Xtrkcad, printed it at 1:1 scale on A4 sheets and pasted these on the cork. Next time I will use a non-aqueous glue, or self adhesive paper, so that the track plan does not expand when wet! Track is PECO code 100 salvaged from Evercreech Junction. I cut out just over half the sleepers and arranged the remainder in a slightly random manner. I cut out as many sleepers as I dared from the eight electrofrog points. I decided on hand-operated points, using



*The point lever for hand operation (right) and the retrofitted surface mounted polarity sub-micro switch (left).*

Anchorage sprung point levers from MG Sharp. Later as an afterthought, I added tiny microswitches (from RS, about 8 mm square) to the ends of the point levers or the tiebars and wired these to the frogs, all on the surface. They are not really noticeable amid the scrub, grass and detritus along the trackbed.

## Buildings and Structures

All the buildings are scratchbuilt from inspirations taken from American and Australian websites, mostly from the wonderful collection of Mario Rapinett on his MODVID.com site - inspiration and ideas, but consciously not copies. They are all built on 2mm or 3mm square pine frames (from Hobby's) and



*The first trestle bent in place.*

clad with strips from wooden tongue depressors from a surgical supplies website. (This source avoids the need to eat massive amounts of ice cream or to steal stirrers from Macdonalds.) Careful examination reveals that several water tanks are all the same size as empty Humbrol paint cans.

The engine shed on the lower level has been left with a partly removed roof under repair to provide visibility. Inside, the workshop is still being equipped with working machinery ostensibly driven by a small steam engine bashed from a Pug, and cunningly used to drive a generator, which mysteriously is wired into the 12v lighting circuit and in reality provides the source of movement ! A passenger hoist connecting the cliff top Dry Gulch Saloon with the station has a scratch donkey steam engine which one day will leap into action but is at present still purely cosmetic.

The tippler trestle, which allows material to be tipped from the upper to the lower level is straight and about 15 inches long. I had built one, not so high, out of long matchsticks for the 0-16.5 club layout, so I repeated this using Hobby's pine 3 mm square strip. When I had cut my teeth on this, I tackled the big curved trestle over the main line. I was not aware at the time of the Association's publications and material sources, but I found an advertisement for trestle bents and jigs on the internet, which I could copy. Because my trestle had a double curve in it and it had to cross a double main line track at a skew angle, there was no way I could use a kit. I built five tailor-made bents, erected them onsite using a shaped MDF temporary trackbed at the top and laboriously glued all the horizontal strips on using contact adhesive. I wish I had stained the strips first as the adhesive prevented proper staining afterwards and



*The skew and curved trestle bridge.*

a paint job was required. The Forth Bridge was easier. I was then able to replace the MDF trackbed with a length of unmodified PECO track with all the ties left in place. The next trestle I build will look much more detailed.

## Control And Operation

At first the loco stock was all RTR from Bachmann USA, mainly via ebay. Some came with DCC and some were analogue. My wiring is sectionalised so analogue locos can be run, but by now I have chipped all the stock, leaving the capability to host unchipped locos when desired. I use a Lenz Compact system fitted to my Somerset and Dorset layout for testing and programming, but I find the simplicity of the Bachmann EZ-Command controller best to use on the logging layout. This controller is cheap, small enough to be used as a mobile hand-held, does not need scrolling to select locos, and the push buttons may be legibly labelled. It permits no programming other than address changes and direction of travel, adequate for routine running, and allows all the functions of a sound chip to be readily accessed. It only permits access to nine digital addresses, so locomotives in excess of the 9 maximum allowed have their addresses duplicated and put in isolation in analogue style.



*The mine train tips silver ore from the silver mine behind into full size cars below.*

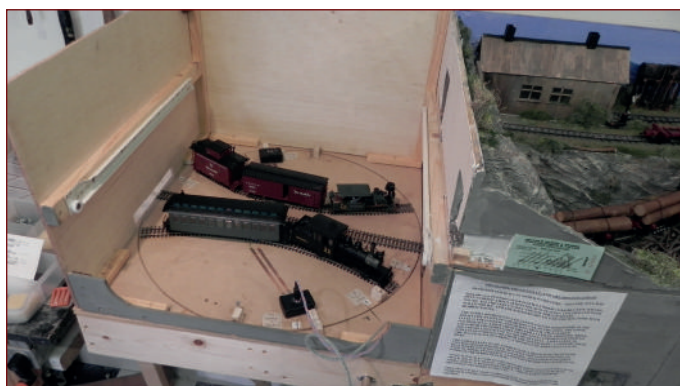
At first I used the points to isolate all the sidings but this required as many as 25 inter-board connections ! With DCC there are now only 4 wires from board to board, 2 for track bus and 2 for lighting bus. Each of the two end baseboards has each track individually supplied through a series of switches mounted vertically along the front of the lower level board. They are surprisingly inconspicuous, and could be fence posts ! The 16v AC train and 12v DC light power supplies plug into a socket board let into the front edge of number 2 board. This socket board also contains plug-in access for the EZ-Command, and a main lighting switch.

I run a 'timetable' or sequence, to ensure that each loco or train gets a regular airing. The layout can easily display as many as ten or more locos in steam and there are no less than eighteen isolatable sections available.

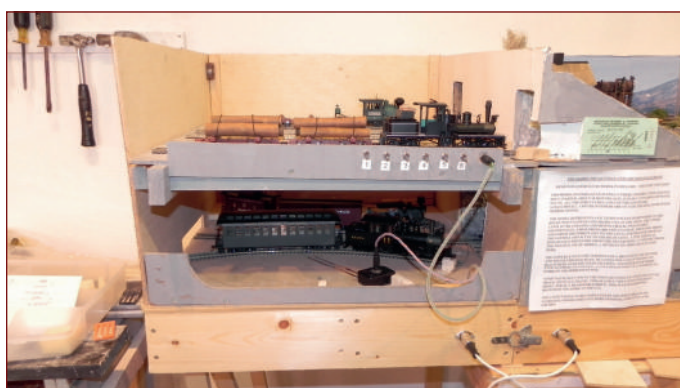
## The Fiddle Yard



*The upper level traverser. When track 1 is lined up so is track 5.*



*The lower level turntable allows three trains to be stored and turned.*

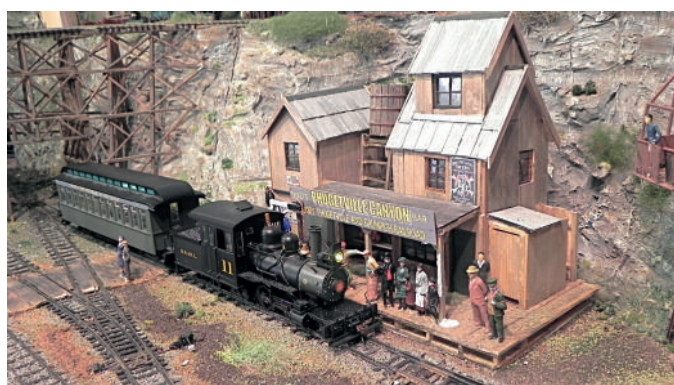


*The two level fiddle yard complete.*

The fiddle yard is constrained by the need to fit into the train room, and had to be only 22 inches long. This just permitted the storing and turning by cassette of trains of one loco and one coach, or loco and three log carriers, or loco and two freight cars. This limit was explained by the presence of a very steep incline off scene, and still provides interesting train movements. Then I realised that a 22 inch diameter turntable would fit in the available space, rather than cassettes. So I built a 22 inch square baseboard section which plugs into the end of Board 1, and is supported by a simple trestle. This board has a 6 mm ply top as do all the other boards, and the cork topping on the main boards is matched by a complete covering of 5 mm MDF on the fiddle yard. I carefully cut a 22 inch circle out of this MDF and glued the corner sections into place. A simple nut,

bolt and washer assembly permits the circle to rotate while lying flat on the baseboard top. Wooden blocks strategically glued to the surface to act as handles. The exit track from Board 1 was realigned to be at right angles to the end face and so this aligns itself to a fiddle track passing right through the centre of the disk. Two more tracks, one on either side, are 18 inch curves spaced to permit three trains to operate independently. Power is supplied by a flexible plug-lead to either of two jacks on the top surface, depending on the direction of travel, and is fed from the jacks to the tracks by surface mounted copper adhesive strip, so the lower surface of the disk is smooth. A fixed block on one corner piece has a powerful neodymium magnet set into it, and six more magnet blocks are mounted on the disk to align the tracks in each of the six positions. With three trains in place the turntable rotates quite smoothly by hand (eased by the presence of a trace of very fine sand) and permits selection of one of the three trains facing in either direction.

Having completed the turntable I faced the entire end of board 1 up to the height of the backscene. Then, using plastic demountable corner blocks from Homebase, and some wooden dowels, I put in a removable backboard and right hand plywood side, and found these to be rigid enough to support an inexpensive pair of drawer runners from Screwfix, supporting a framed 22 inch square 6 mm ply sheet. This became a six-track traverser, the rear two tracks feeding the rearmost siding (leading to the sawmill) and the front four tracks feeding the front track coming off the trestle (leading to the forest). Again magnetic alignment blocks were used. To avoid trains being accidentally run off the traverser onto the floor, each track is fed on the surface by adhesive copper strip from six isolator switches along the front of the traverser, these being fed by a flexible plug-lead. This also provides the ability to isolate analogue locos. This whole fiddle yard assembly comes apart in seconds and fits around the other components when in the car.



*Forney and coach.*

I am now able to take a loaded log train from the forest fiddle track into the layout and out again at the Sawmill exit. Another train with empty log cars is then moved from the sawmill fiddle to the forest fiddle. I would have liked to be able to exchange the full and empty trains while still on the traverser, but the travel width is not enough. Next time I will design the overall track plan to allow this.

## Locomotives And Rolling Stock

The RTR stock is all Bachmann and consists of 2 Shays bought cheaply due to their stripped gears, now repaired, a 4-4-0

'American' tender loco, a Forney, and several Porters, some 0-4-0 and some 0-4-2, mostly bought with a view to butchering them later. More recently I have turned my attention to adding three sound locos, a Forney, Shay and Climax. I have modified two Porters and one silent Shay with Backwoods dress-up kits, and built two different scratchbuilt vertical boilered 'critters', one on a Hornby Pug chassis and the other on a Bachmann Davenport. Two railtrucks await devastation in the workshop. There are two coaches, several freight cars, a caboose and six side tipplers for the silver mine. Finally a Bachmann Mogul, too big to fit anywhere but too cheap to pass up, has been chipped and awaits outside the engine shed for a big decision.

Here in Colorado (Somerset), we have a twinning arrangement with the Camelot Quarry 0-16.5 layout, and sometimes the Alice Quarry Hunslet or the Smallbrook tank appear here, while an unmodified Porter and one of the vertical boilered critters spend much time over in Somerset (Somerset UK).

## Conclusion

The most difficult task was to give the layout a name. I wanted to use my initials on the locos - DPG Railroad. I finally decided

## Some of the Railroad's locomotives.



*The workshop. The posts in front are the track isolating switches for both levels.*

to use three of my personal features (features of growing old) which have manifested themselves during construction. Thus the Dodry, Pugetville and Grumpigh Railroad was born, and the station became Pugetville Canyon. I can't remember why.

The project was begun just two years ago, and is now in an apparently finished state. However more work is planned and I intend to complete it in March 2031, when I shall be 100 years old and even more Dodderly, Forgetful and Grumpy.



*Backwoods Porter 0-4-4 conversion.*



*Backwoods Shay conversion.*



*Backwoods Porter conversion.*



*Two scratchbuilt verticals, one on a pug chassis and the other on a Davenport.*

# Talyllyn Railway Bogie Third No. 18

**Neil Burgess** describes the construction of a model of this coach, with prototype information.

Photographs by the author.



*The north (platform) side of No. 18 seen at Wharf on 31st May 2011.*

bogie vehicle built for the railway to remain in substantially original condition (excluding the restored Corris saloon No. 17, which was, of course, not so constructed); it has been fitted with Talyllyn standard bogies, replacing the originals which were found unsatisfactory in service, and has air braking, but is otherwise largely as it has been for the last 45 years or more.

## Modelling No. 18

The Talyllyn's centenary in 1965 saw the publication of a number of articles in the model railway press including scale drawings of locomotives, rolling stock and structures. On the whole the former concentrated on the original items of 1865, but the June edition of *Model Railway News* included a 7mm scale drawing of the then new No. 18 and this formed the basis on which the model described here was constructed. Further details of the prototype are included in Lawson Little's survey of the line's rolling stock, recently published by the Narrow Gauge Railway Society. (Lawson Little: *Carriages &*

## Talyllyn bogie coaches; background notes

Although the Talyllyn Railway has operated bogie passenger carriages since 1954, the early vehicles bore very little visual or structural similarity to their modern counterparts. The origins of the design to which the present bogie vehicles built specifically for the railway were constructed dates from the appearance, in 1965, of the six-compartment third Number 18, which made its debut in revenue service in the year of the railway's centenary. Designed by Alan Meaden, No. 18 embodied the styling of the two four-wheeled carriages, Nos. 14 and 15, which had been recovered from the Glyn Valley Tramway and extensively restored, being placed into Talyllyn service in 1958 and running as firsts. No. 18 is now the oldest



*Another view of No. 18 at Wharf showing the detail of the east end.*



*The west end of No. 18. Note that the ascending steps are on this end only.*



*The interior of No. 18.*

*Wagons of the Talyllyn Railway: Special edition of The Narrow Gauge no. 212, The Narrow Gauge Railway Society, 2011.) The MRN drawing is sufficiently comprehensive to allow No. 18 to be constructed in its original form, but I am not aware at the moment of any drawings of the modern TR bogies. One of the advantages of being a traffic volunteer on the Talyllyn is that it allows access to the railway's equipment at close quarters; one does become fairly intimate with carriages after oiling them, sweeping them out, cleaning their brasses and windows and shunting them around Pendre yard. The accompanying photographs of No. 18 in its present condition taken during the 2011 season should allow anyone interested to see modern variations from the MRN drawing.*

### Constructional notes

The model is built from styrene sheet, using .040in for ends and floor and .020in for the sides. The latter are built on a sandwich principle below the waist, the inner side going from floor to the lower edges of the windows; it is separated from the full-height outer sides by .030in square styrene strip, so that the .020in thick glazing can be slotted into the gap and attached to the upper sides. This has the advantage of requiring a minimum of adhesive and also helps square up the sides, which can otherwise tend to sag inwards along the waistline. Solebars and headstocks are also .020in styrene with .040in square strip for the truss rods. The roof is another piece of .020in sheet attached to curved formers which sit on a .030in thick inner ceiling, which slots down between the sides, keeping them straight and avoiding the need to seal the roof – always the cue for something inside to come loose and rattle around. Flat beading is styrene strip and the rounded beading on the sides is Slater's .030in round strip flattened on one surface by passing a trimming knife blade along it to produce half-round section.

Until I could get round to making some modern bogies I used a pair of 4mm scale BR-type items from an old Lima model, re-wheeled with 10.5mm diameter Romford wheels. The axlebox fronts were filed flat and a thin disc of styrene rod glued to each to represent the roller bearing boxes; in

reality Talyllyn coaches don't give much away below the solebars, particularly on the north side where there is a continuous footboard. No. 18's original bogies were half-sized copies of the LMS standard 9ft wheelbase carriage bogie, so the Lima type is not too far off the mark.

The buffers were BR-pattern oval headed and extended Mark I carriage type for 4mm scale, from Comet. Smith's screw couplings and drawhooks were used, remembering that TR coaches have only one screw shackle between vehicles, so one coupling is simply a drawhook. Wire and thin electrical cable insulation provided the air brake and train communication connections. The door handles were brass castings from Laurie Griffin's 7mm scale range, while the commode handles were Slater's GWR type; appropriately, since the prototype used second-hand Swindon fittings.

The photograph/s show the almost-finished model, waiting for some Blackham Transfers Talyllyn crests. Painting was with Humbrol no. 62 matt brown and Revell no. 330SM satin red, which rejoices in the name 'Fiery Red'. These are a reasonable match for the originals, having taken some colour samples to the railway and compared them with the real thing. The brown benefits from some satin varnish, which makes the colour a bit richer than plain matt.

If anyone wants to build a model of No. 18 but cannot find a copy of the magazine, I will be happy to supply a photocopy if sent an sae care of the Editor. Also if his patience permits, I will describe some more Talyllyn bogie coaches in a future edition.

### Postscript

I was invited to provide a demonstration stand at the 2011 Tywyn Model Railway Club's exhibition in July and took my model of No. 18, along with an assortment of other standard and narrow gauge rolling stock. Word clearly got round and a man came up to ask if I had a model of No. 18; told that I did, he replied, 'I helped build it'.



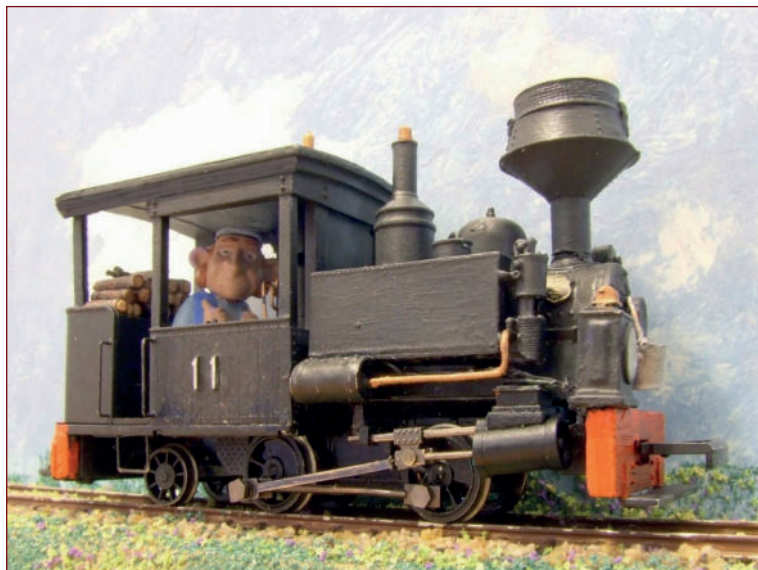
*The completed model of No. 18*

# Backwards Conversion ?

**Phil Massey** gives the Bachmann Porter the Monjouet treatment.



Photographs by the author.



to follow with clear colour photographs of each stage in the process. I think, however, that these should now be reviewed in the light of Bachmann's modifications, perhaps giving some guidance/reassurance to those less willing to trust to luck with a pair of snips than myself.

One other change I discovered was that the front buffer beam (which according to Backwoods was plastic and needed to be replaced with the cast metal one provided to compensate for the lost weight of the saddle tank) is now metal on the model itself, so one step of the conversion is saved. This surplus item has joined my ever-hungry odds and sods box along with lots of other bits and pieces generously provided in the kit. These allow one truly to individualise the end result and, though I'm not a railway buff and have no idea what many of these things are or do, I do like my engines to look interesting, so I shall be scattering them about my loco line-up with gay abandon !

For Christmas 2011 Mere Noël, with a little guidance, bought me a Bachmann Porter 0-4-2 and a Backwoods Miniatures Side Tank Conversion Kit. Since submitting my piece on my mobile menagerie, more animal enclosures have joined the train and I thought I was rapidly approaching the moment when **triple** heading would become necessary. I'd spotted the Backwoods kit while browsing the Internet and liked the more European flavour it gave to the original model.

However, the conversion was not quite as straight-forward as Backwoods suggested due to the fact that Bachmann seemed to have modified their engine since the kit was introduced. On removing the saddle tank, for instance, I found a small printed circuit board underneath, not mentioned in the instructions. As this contained a couple of capacitors I assumed it was a radio interference suppression unit. I could see no alternative but to remove this if the new boiler moulding was to fit properly. Also, although the instructions said that the headlight had to be removed, there were no in-line connectors (as there are in the gas mechanical), just another two leads disappearing into a jumble of black wires which ended up in another electronic gizmo concealed in the coal bunker.

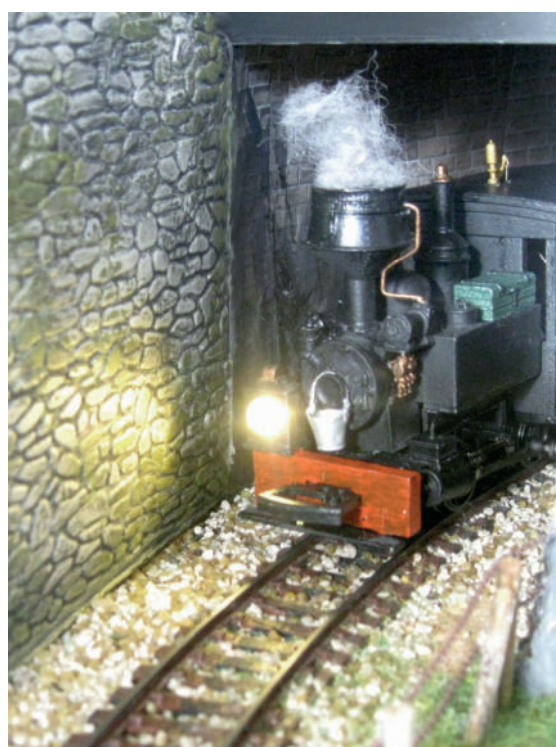
Feeling like a bomb disposal chappie encountering a new, unknown device, I crossed my fingers, thrust the nose of my snips into the midst of the wires and squeezed. Nothing went bang ! Miraculously, after soldering a couple of selected cut ends together, my engine still ran. What's more, after finding a new home for the lantern on the buffer beam, and extending and re-routing its supply leads, I once again had light at the end of the tunnel - and the around the rest of the layout too. (However, if half of France suddenly begins to experience TV interference, you'll know it is just me playing trains !).

I don't want to over-criticise Backwoods Miniatures. The whole package was well presented and the instructions, though obviously based on an earlier version of the Porter, were easy

Anyway, despite my early trepidation and a couple of steps backwards, I now have the engine I envisaged. As well as a view of it emerging from the tunnel (showing off its still working headlight) I've pictured it on my newly knocked up film set, made to let me take photos of trains without a cluttered background.

Phil Massey:- [www.philmassey.com](http://www.philmassey.com)

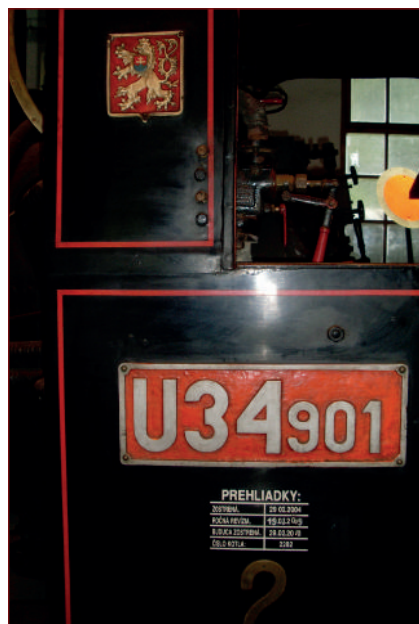
*NOTE: The extended cab roof, logs and driver are my own additions and are not included in the kit.*



# Historická Lesná Úvrat'ová Železnica (HLÚŽ) A Forest Railway In Slovakia - Part 2

**Alex Hume** continues his description of these 760mm gauge railways.

Photographs by the author.



**Photo 1.**

mountain in order to reach that village.

We arrived at the western terminus of the line too late in the day to travel on the last train, although I was able to photograph it returning from its 3½ kilometre journey up to the first switchback. When the restoration is complete, there will be a total of four switchbacks on the route, gaining more than 800 feet in height. I am told that the average gradient over the switchbacks is 50% (about 1 in 20), and the steepest section is an adhesion-threatening 72% (about 1 in 14, but no

At the top of the Beskyd Pass (see Part 1 – NL 194), there is a switchback junction. The right hand route, currently unused, leads about 5 kilometres down the other side of the High Beskyd mountain towards a village called Vychylovka. This link is due to open this year, but at the time of our visit you had to go back the way you came by rail to Tanečník, then take a half-hour drive on a twisty road to cover the 15 kilometres around the base of the



**Photo 3.**



**Photo 4.**

steeper than the Hopton Incline on the Cromford & High Peak Railway, which latterly became adhesion).

As with the Oravská Lesná Železnica (OLŽ), the railway is steam-hauled at weekends, using a 1909 Hungarian-built MÁV 0-6-0T (U34901) purchased for scrap-value from a neighbouring logging railway in the 1970's and fully restored (*photo 1*). This is housed in a rather more substantial shed than the one at Tanečník (*photo 2*), along with another MÁV, this time an 0-8-0T (U459), built in 1916 and which started life on the other side of the mountain with the OLŽ (*photo 3*). In a gloomy corner and awaiting heavy restoration, is a derelict Kraus-Maffei 0-8-0T with an interesting history (*photo 4*). It was built in 1940 for the German military as a "part tank", i.e.



**Photo 2.**



**Photos 5 and 6.**

designed to work also with a tender. It was built to 750mm gauge, but convertible to 600mm, and here it was on a 760mm gauge railway ! Its sorry state is mainly due to a disastrous fire which occurred in 1988, wrecking two locos. Fortunately, U34901 was outside the shed at the time of the fire, and escaped unharmed. Back in the present, the remaining member of the stud, a 130hp diesel hydraulic dating from 1982 and built in Kladno in the Czech Republic was out on the line. After serving some 10 years in a not too distant iron works, the diesel took over the weekday running duties on the HLÚŽ (the abbreviated name for the railway on this side of the mountain). Back in the shed there are also some interesting auxiliary railway vehicles, as shown in *photos 5 and 6*.



**Photo 7.**



**Photo 8.**



**Photo 9.**

As well as the terminus of the railway, the site includes a reconstructed historical Slovak village. While we were looking round this, the train came rattling back down the slope. The loco had not run round at the other end, and the guard stood at the front of the single carriage holding the brake wheel, looking somewhat like a tram driver (*photo 7*).

Piled up near the shed are lengths of rail and brand new wooden sleepers (*photo 8*), presumably for completing the



**Photo 10.**

restoration of the connecting switchbacks. Also on display are some log-carrying bogies and, exposed to the elements, a large out of commission 0-6-0 tank loco (*photo 9*). The accompanying label identifies this as Czech-built (CKD Prague), and it came from the Viglas forest railway in central Slovakia.

*Photo 10* shows the erosion of the track-bed hinting at just how difficult the problems of restoration and maintenance are. The enthusiasts who are working on both sides of the mountain have had to contend with land-slips, floods, fire and heavy snow, not to mention the snakes warned about in *photo 11*! But their enthusiasm seems boundless, and all with next to no public funding. The switchbacks are designated a Slovak national cultural monument, and the area is part of a vast protected region, extending into Czechoslovakia and Poland. They have applied for World Heritage Status. All in all well worth a visit, but start early so you can travel on both sides, unless you're lucky enough to get there when the through connection has been restored!



**Photo 11.**



**Photo 12.**

I would like to acknowledge the generosity and hard work of my Slovak friends, Peter & Danka, who organised the visit, and also the courtesy of Branislav Dolnik, the manager at Tanečník, who showed us round, answered questions and presented me with a framed photograph of the railway in its heyday. We are very lucky to have had friends in Slovakia for 20 years. Although they don't share my enthusiasm for railways (*see photo 12*), with a kindness and tolerance only exceeded by my wife's, they always arrange a number of railway excursions when we visit. On our way back to England we all travelled on the overnight sleeper from eastern Slovakia to Prague, with our friends' car hitching a ride on an attached auto-wagon. The whole procedure would have been a health and safety nightmare to a British TOC, including crossing on foot several intensively-used tracks at Prague's main station to reach the car unloading bay. But that's another, standard gauge, story!

## DCC By i-phone

**Mark Clark** tells a story.

Just a short story brought to mind after reading Norman Raven's article (NL 193) mentioning the use of i-phones to control a DCC layout. I went to the clubroom of the Chatham and District the other week and, as I walked past the main 00 layout, I noticed a GWR pannier tank trundling round with the sound out of sync with the wheels. I mentioned this to the operator and he said he couldn't seem to slow it down enough to match. I told him that he had it too slow and it should be speeded up to 4 beats per revolution, not the 2 he was trying to get. I left him to get on with it as I find that things DCC work better when I'm not involved but passed by again a few minutes later, noticing that he had now got it right. I said so and he said 'That wasn't me. That was my brother over there. He's controlling it'.

I looked and saw his brother texting on his phone.

'He's phoning someone,' I said.

'No he's not.'

'Yes he is.'

'No he's not.'

At that point his brother held up his phone which was showing a control panel on the display. I took it and spent a few minutes playing trains by phone. It's actually easier than using a hand held controller as all the functions are touch or slide and it is obviously wireless, so you can easily follow a train around a large layout or move to a good vantage point not normally suitable for operating. Apparently, when at home, the brothers take great delight in interfering with each other's operating sessions, sometimes from a neighbour's house, as you can have as many i-Phones as you like in the system and Bluetooth has quite a long range. Apparently, all you need for this setup is a Bluetooth receiver and an App for the phone. Of course it does help if you use DCC already, which I don't. I wonder if you can order a pizza at the same time.

# Chopper Couplings

**Mark Clark** looks at ways of using some of the commercially available examples.

Photographs by the author.

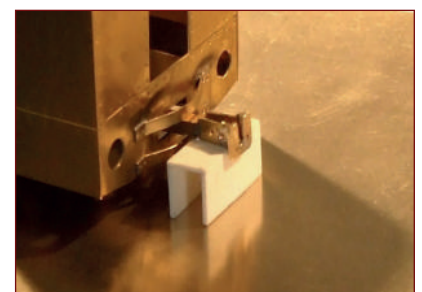
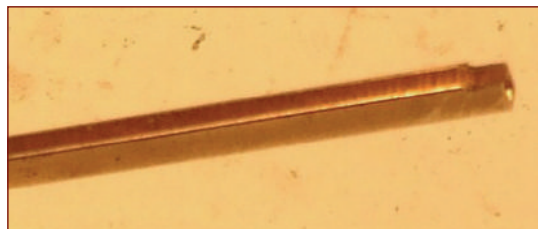
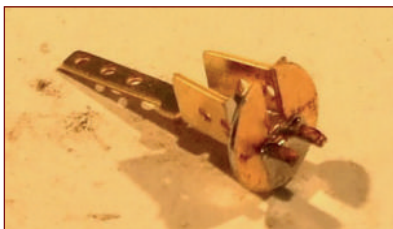


Many of you reading this will have also read John Clutterbuck's epic in NG&IR on the same subject. Any of you who went to Burton-on-Trent in 2011 would have seen his results in the flesh (well, in the nickel silver actually) and marvelled at his DCC operated coupling. As marvellous as it is, it is more suited to a layout with a small amount of stock as the time involved and cost would be high on anything large. I am planning a small layout but with stock from 3 different time periods, so I will need a lot of couplings. I don't wish to detract from John's efforts but I started looking at the possibility of making other couplings compatible with each other, to keep the cost and time to a minimum.

The biggest failing of all commercial couplings is the part that fixes it to the vehicle. This needs a universal solution that will work in most cases, although there will always be awkward ones needing a special one off. Unless the vehicle is extremely short, e.g. slate wagons or similar, the coupling will need to swing sideways so that stock is not dragged off the track. The height needs to be chosen to suit your particular stock as the real thing varied from 1ft 3in to 2ft 7.5in measured at the coupling centre, according to John's chart. 1ft 6in works for me and the few items that may be a little too high can always have the couplings mounted under the body, as this looks a lot better than having to mount them too high if, say, 2ft is chosen. John makes a big thing of being able to couple up at all points on his layout whereas, in reality, coupling was done manually

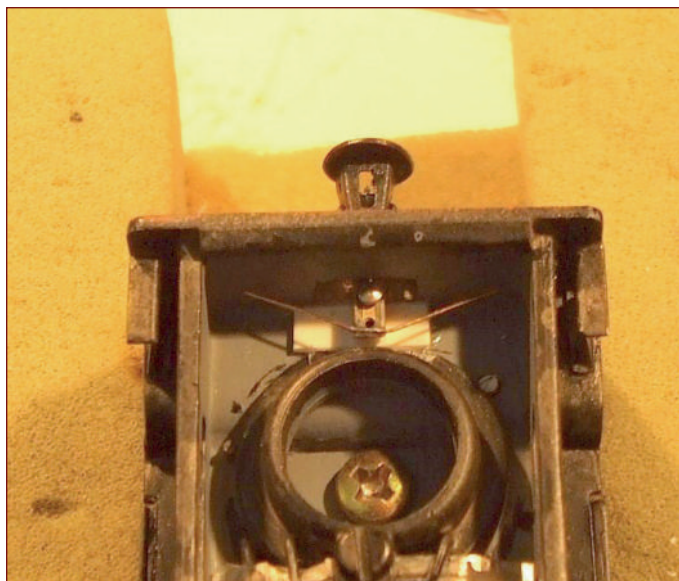
with a shove from the fireman's boot to align the couplings. Auto-coupling was never an option on the real thing. I will be happy if things couple reliably on straight track. However I shall be surprised if this is achievable as, taking into account the facts that couplings won't always centre correctly and that vehicles are different lengths with different overhangs and a certain amount of slop on the track, coupling alignment can vary by +or- 5mm or so. In fact I shall be amazed if they couple at all !

So, to work. . . A rummage in my coupling drawer produced a pair of 7mm scale Branchlines items, 4 pairs of Wrightlines and some PECO ones. Branchlines couplings have an etched arm with holes in, of dubious strength, presumably to attach using a spring and split pin like mainline couplings. The other two are cast whitmetal with a square peg (PECO) or a round peg (Wrightlines). In my metal sections box I found square brass tube, probably K&S but readily available and cheap, measuring 2.3mm but probably an imperial size, plus brass channel of the same size. This is like a square tube but with one side missing and is milled, not extruded, so about three times the price to buy. The etched tag of the Branchlines coupling will just fit in the channel after a gentle wipe with a file, a notch needing to be filed under one end of the channel to clear a wider part of the etch. This is then soldered in place making a strong structure. The pegs of the cast couplings would fit in the tube after paring with a knife, giving 3 different couplings with the same mounting type.



Top row - photos 1, 2 and 3  
Middle row - photos 4, 5 and 6  
Bottom row - photos 7 and 8

For captions see panel at foot of opposite page.



*The cab end of a Wrightlines Sentinel with the spring wire bearing on the back of the draw beam.*

As most of my stock still had Kadees fitted I spent some time removing them and patching the holes with plastic card, about 2mm thick in most cases. A height gauge was made to support the chopper coupling at the correct height and for marking prior to making the hole. The routine became;

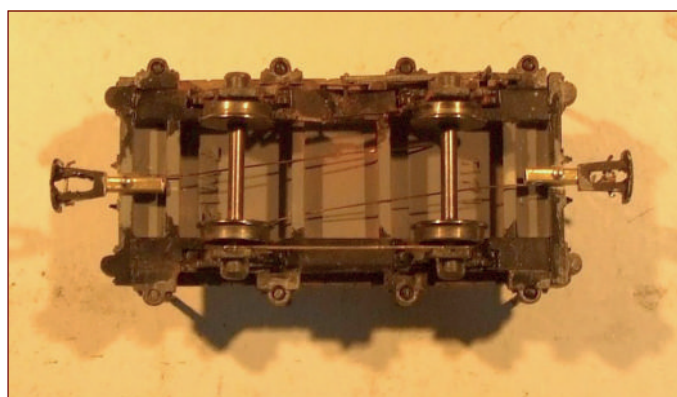
- 1- drill 2mm hole just above the height of the coupling bottom face,
- 2- open out with a sharp knife to take the square shaft of the coupling,
- 3- try coupling for fit with height gauge underneath and make any adjustments necessary, packing with thin plastic above or below if required.

I decided to pivot my couplings on a lace pin. This can be done in many ways but a clearance hole will be needed in the square shaft, usually using one of the etched holes in the Branchlines ones. The pivot point can be just behind the draw beam in most cases but longer wheelbase items or short ones with long overhangs will need the pivot moved a few millimetres further back. If you get it wrong, the pivot can always be moved at a later date. It is always easier to design couplings in when building a kit than to retrofit them and this led to a multitude of different pivot arrangements, some of which are listed.

- 1- If the draw beam is thick resin or whitemetal, just drill through it from underneath.
- 2- Glue layers of plastic under the footplate to bring it flush with the top of the coupling and drill into that.
- 3- Make a plastic box with thick top and bottom to drill through and glue it to the back of the draw beam.

Once the coupling is mounted on a pivot it needs some side play to swing. This is created by trimming with a knife and filing but don't go too far as too much swing will overstress the spring, leading to crooked couplings and the need to readjust the spring regularly. A maximum of around 20 degrees either way will be fine, if it isn't, you need to move the pivot further back to get more swing. The pins need to be shortened so that they don't show but if any are visible, reduce the head in a minidrill to make them look more like a fitting of some kind, rather than an item of haberdashery. If the holes in the plastic are drilled undersize the pins will be a force fit, enabling them to be removed for painting or maintenance.

The springs need to be made from something that will retain its springiness, is readily replaceable and as light a spring as practicable. Steel is ideal but hard to get in small sizes (0.2mm or smaller) and difficult to solder. Brass and nickel silver will not keep their spring but phosphor bronze is good. I use 0.3mm wire which retains its shape and is easy to solder. Spring wire can be used in two ways, a straight wire bending, which will need to be 30 – 50mm long or in torsion mode - I'll explain that later but it's much more compact.



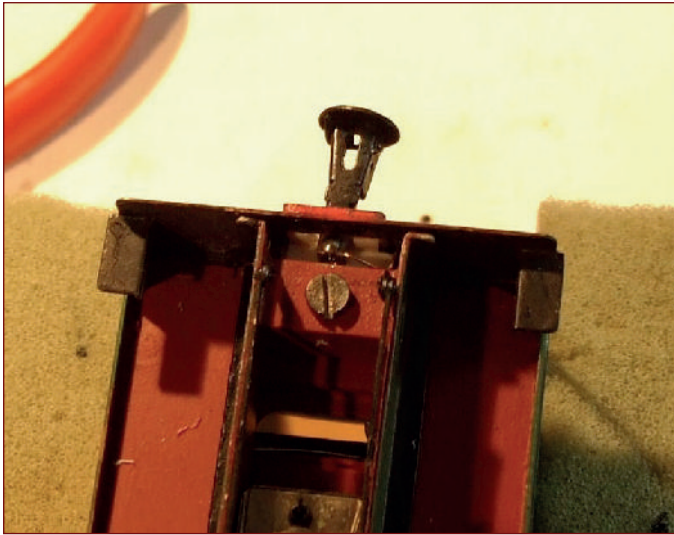
*This is probably the simplest arrangement with PECO couplings seen here on an RPI Decauville stake wagon.*

Start with a wagon. Cut a piece of wire long enough to reach past the centre of the wagon, solder it to the rear of the coupling - usually inside the tube is best - and drill a clearance hole for it in a convenient under floor cross beam. If there is no suitable beam, either glue one where needed or bend the wire 90 degrees and fit into a hole drilled in the floor. When bending phosphor bronze, avoid sharp bends by using round nosed pliers. The wire will fail early at any sharp corners. Refit the coupling inserting the wire into the hole as you go, tweak the wire until the coupling sits square, admire the result then get another one done on another wagon so you can spend 10 minutes playing with them. This is the easy bit. It gets a lot harder with locos.

### Captions to photos on opposite page

- 1- Branchlines coupling etch as first assembled.
- 2- Milled U section with notch filed to clear the bulge in the mounting tag.
- 3- Coupling and U section showing how they fit together.
- 4- In position and ready for soldering.
- 5- All soldered up and filed to a more acceptable square shape.
- 6- Hook with side washers fitted and pivot wire in place.
- 7- Complete coupling cut to length and ready to go.
- 8- Height gauge in use at the cab end of a Dick Kerr PE.

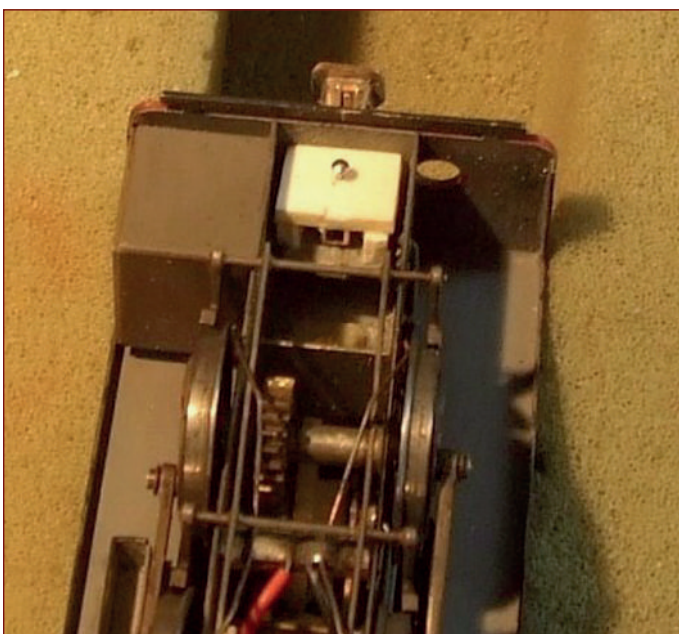
Locos generally have a lot less room behind the draw beams and, since the coupling is going through the beam, you have to check which parts of the loco are attached to the body and which to the chassis, otherwise you won't be able to remove the chassis for repairs / servicing. The wagon type straight wire wouldn't fit on any of my locos but 4 other methods did. This is where torsion springing comes in. Torsion is twisting the spring wire rather than bending it. All coil springs on car suspension use this method but



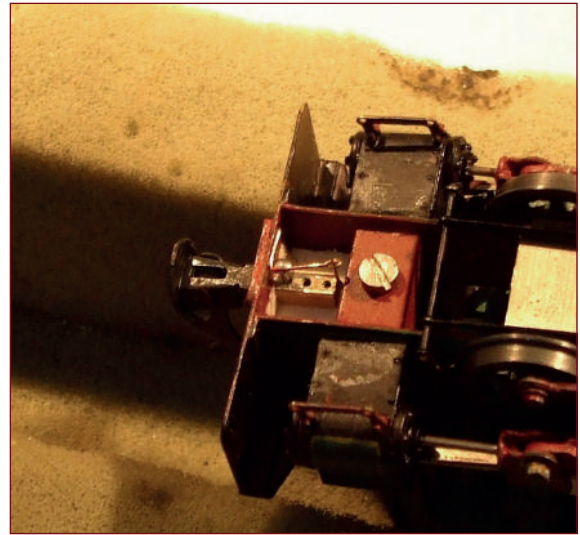
*The cab end of a Wrightlines Bagnall was one of the most awkward due to lack of space. The single wire goes sideways and bends to follow the frames. It works but is stiffer than I'd like.*

the most graphic demonstration is to be found on anti-roll bars. All road vehicles have them to stop the body rolling on corners, basically just a bar around 4ft long with the ends bent to 90 degrees and attached to the suspension and body on opposite sides. Next time you follow a truck the one on the rear axle is usually in plain view. If you follow it over a rough road or round a sharp corner, you can see it twisting as it tries to maintain the stability of the body.

The easiest method is to solder a piece of wire across the end of the coupling bar and bend the ends so that they bear on the back of the draw beam. The downsides of this method are (a) that the wire will not go through the coupling hole so must be fitted after and (b) that the wire will deform with use and need realigning fairly often. A variation of this, if the draw beam is attached to the chassis, is to point the wires away from the beam and have them bearing on the insides of the chassis. This type will fit through the coupler hole but will still need regular realignment. A further variation works when you have a plastic



*The front of a Mercian Armstrong Whitworth with a plastic box glued to the back of the draw beam. The coupling has side wires fitted which don't show in the picture.*



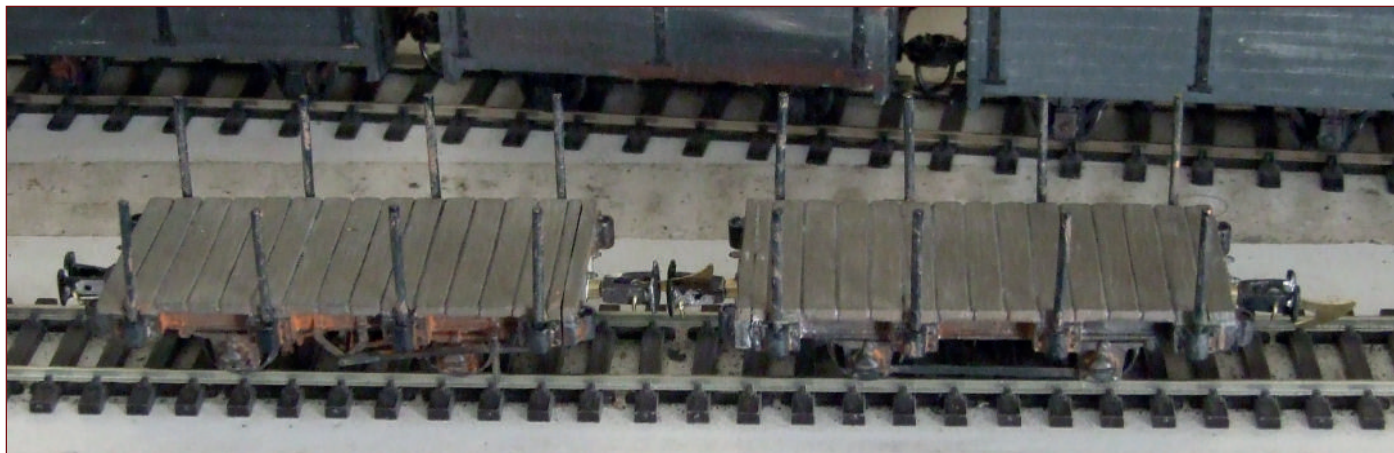
*The front of the Bagnall has more room and I used the wire in loop method which works well here.*

box glued to the back of the beam. Solder wires to each side of the coupling bar to bear on the insides of the box. As the wires will be short it would be best with finer wire or you will get a stiffer coupling.

The last method uses a wire bent 90 degrees to point towards the track and a short piece with a loop in the end, fixed in a hole in the back of, or soldered to the draw beam. The wire on the coupling goes through the loop (do not fix) and gives a surprisingly soft spring effect. Also, since it uses a single wire, it will be mostly self aligning as opposite forces will cancel each other out. Since the twisting of the wire is giving the spring effect, the solder joint must be a good one done with high temperature solder and preferably 5mm – 10mm from the bend in the wire. The further away solder and bend are from each other, the softer the spring and the longer it will last.

One thing that became apparent about now was that the hook designs are all different. They are just not compatible. The Branchlines etch for 2 couplings includes 2 hooks, but only 1 can be used. There is just not enough room for opposing hooks. The spare hooks were used on the non Branchlines couplings which solved a lot of compatibility problems. Another point is that the Branchlines hooks are designed to latch onto a wire just behind the buffer face, the height of which is fairly critical. If it is too low, the coupling is a devil to disengage, if too high, the non hook wagon can be lifted off the track as tension is put on the couplings. The wire must be exactly the same height as the hook pivot wire. The distance of this wire from the buffer face is also important as if it is too far, the couplings are really difficult to disengage and won't couple easily. I also found that the slot in the buffer face needed deepening on the cast buffers and built up slightly on the Branchlines ones. If the hooks are below horizontal when at rest, auto coupling is poor. The top edges of the same slot on all buffers need filing into a gentle V to aid coupling.

After a serious play time - I'm sorry that should have been testing session - I had couplings that flexed nicely on curves and point work, stayed coupled in use but were only about 60% reliable on coupling due to the previously mentioned problems - not bad for a first attempt. All that remained was to tidy up the looks. The buffer faces of the Branchlines coupling look way too big on small stock, so I cut off the top, bottom and



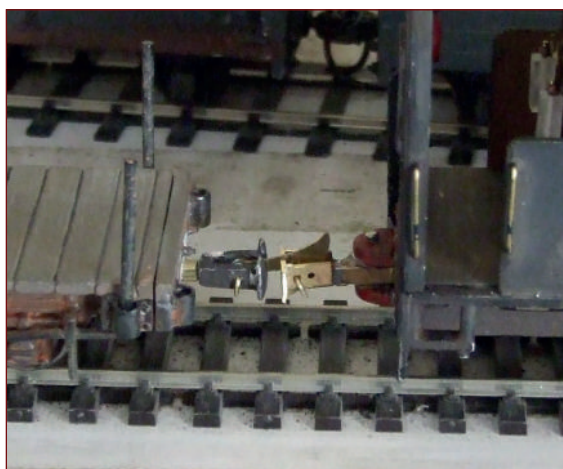
*2 stake wagons with finished but unpainted couplings. The cast couplings are best not glued into the square tube until after the tube is fitted, otherwise they often end up a bit twisted.*

sides with a slitting disc and tidied up with files. The smaller rectangular shape is much more appealing and blends in better with the other makes but I left 3 pairs round to add variety. The hooks also need looking at as they are way too big. I tried filing one down to a better shape but it lost the slope that it uses for engagement and now it won't couple at all. I eventually settled on trimming around 0.75mm off the curved front edge and filing back to the original shape. I also filed the top edge nearer parallel with the bottom edge and with a sharper curve up to the top tip, both tips being rounded off at the same time.

The change was almost magical. The looks were improved with the engaged hook now sitting in the coupling, rather than along the top. Coupling and uncoupling is better as the hooks are not so tall and don't have to lift so high. As the hook is

effectively a millimetre or so shorter, it now doesn't hit the back of the coupling body which used to cause it to lift slightly and sometimes uncouple. The bottom leg of the hook is now shorter which means that it can be lifted and uncoupled more easily by hand. Painting negated some of this due to increased friction but lubricating with graphite (a 4B pencil) restored it again.

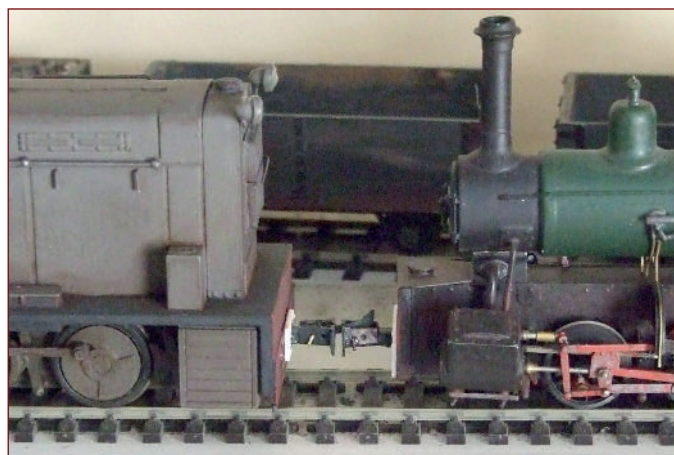
Many thanks to John Clutterbuck for the basic idea and inspiration to actually do all this. I will be trying iron wire on the hook tips and iron droppers for remote uncoupling later on as they worked so well at his demonstration.



*A stake wagon and S&D Barclay showing compatibility of etched and cast couplings.*



*Peckett and Balmforth tanks with Branchlines couplings and an original unmodified hook.*



*Armstrong Whitworth and Hudson Hudswell with the much more discreet modified hook.*



*A comparison of couplings with PECO (left), Branchlines as they come (centre) and Branchlines modified (right) - all are compatible.*

# Prototype Inspiration - The Java 38 – Sugar Cane Steam

**Keith Willows** introduces some of his images of narrow gauge railways working in Java.



*It wasn't only steam - Diesel power hauls a loaded cane train over the weighbridge at Pangka Mill. 600mm gauge. . . .*

Not only was there steam out in the fields and mill yards there was plenty of steam inside - many of the mills are still powered by steam. Huge stationary steam engines of Dutch manufacture drive the massive crushing machines, while others power extensive line shafting. Several steam pumps and winches of English origin were seen.

In addition three 1067mm gauge lines were visited, all with steam haulage on our charter trains.

The tour commenced in Jakarta, the capital, and progressed eastward. All locomotives seen were built either in Germany or Holland with many nearing 100 years of service. Fuel for the locos and the mill engines is either "Bagasse" (the waste from the crushed cane) and/or timber; both make for some spectacular scenes as the locos are worked hard. Our night photo session at Tasik Madu Mill produced some volcanic emissions from the smoke stacks every time a bale of bagasse was tossed into the firebox – see photo below (a still from my video tape).



*. . . . and Water Buffalo power brings two more cane cars onto the mainline. 700mm gauge*

The title records the number of narrow gauge locomotives seen on a tour of the Java Sugar Industry in 2011. The tour took place 16<sup>th</sup> July to 3<sup>rd</sup> August and was organised by FarRail Tours who are based in Berlin. Our tour party of eight comprised enthusiasts from the UK, Denmark, Switzerland and Australia. We travelled the length of Java visiting 13 mills known to be operating steam; these included 600mm, 700mm and 750mm gauges.



*Spectacular exhaust as another bale of "Bagasse" is thrown into the firebox. Tasik Madu Mill. 750mm gauge.*

At the majority of the mills we visited steam haulage was confined close to the mill. While some mills use diesel traction to bring the cane in from the fields, most cane is delivered by lorry with the loads being transferred to rail for the last half mile or so !

Some of the systems had large loco sheds which presented some very evocative scenes with rays of the sun streaming through holes in the roof emphasised by smoke drifting out of the stationary locomotives. In dark corners derelict locos stand forlornly.

The whole sugar mill scene is full of modelling potential – the buildings, the gantries, the stock and the operation. There's a variety of train movements – empty cane trains out to the fields, full ones returning, trains of vans loaded with the refined sugar being delivered to a railhead or local docks. Then there are the ash trains of tipper wagons taking the arisings from the furnaces out to the fields. Steam locos with assorted wheel arrangements - 0-6-0T, 0-4-2T, 0-8-0T and 0-4-4-0T - are found plus a varied range of small diesels in an assortment of liveries.

One other means of haulage was seen – Water Buffalo Power. The mills have a network of track out in the fields on which the steam and diesel locos operate. To link this network to the cutting face temporary lightweight tracks are laid. It is on this that pairs of Water Buffalo are used to haul the cane cars – [see photo on previous page](#).

The photographs have been selected to show the scope for modelling a sugar cane layout and if the editor agrees a follow up article will give examples of the rolling stock used.

**EDITOR'S NOTE:** Keith submitted more photos than are reproduced here. Further examples may be published in later issues if space permits.



An impressive O&K 0-10-0 Luttermoller loco hauls a long rake of loaded cane cars at Tasik Madu Mill. 750mm gauge.



The loading yard at Pangka Mill. O&K 0-8-0T No 9 on left of photo with Jung 0-6-2T No 2 on the right. 600mm gauge.



Pagotton Mill won the prize for loco liveries. This is a O&K 0-10-0T Luttermoller loco. All three steam locos at this mill were converted to fireless operation in the winter 2010/11. 700mm gauge



No 3 drags its train past the rusting remains of some old steam locos at Soedhono Mill. 600mm gauge.



The late afternoon sun highlights another O&K 0-8-0T in the fields on the Olean network of tracks. 700mm gauge.

# Girls Galore

**Frank Sharp** finds a novel way of adding traction weight to a Branchlines Ford Railtruck.

Author photograph 'Guess which one is Frank' by Philip Willis. Other photographs by the author.



*The left side, because they've left the tool box in place in its rack.*

O.K. so I've got a reputation, but the girly crews have up to now only graced my very spoof American narrow gauge locos. This changed on a chance buy at the Trent Valley Group's open day just after Christmas. Bob Cope was there with the Association's secondhand stall and for sale he had an almost completed Branchlines kit for a Ford Railtruck. It was neatly soldered together, the chassis was made up and though the edges had been bent down, the cab roof still needed fitting. Money changed hands.

Once home and on closer inspection there were a couple of things I wasn't happy with. Very minor but the catches on the drop down doors of the back weren't all quite in line, a few minutes' work to correct. Now these catches in real life go over a pin and a smaller pin drops into a hole in the first pin to secure the door from dropping. No way was I going to add the smaller pin, or the fine chain that usually stops it getting lost, but the 'hole' where the larger pin should be niggled. Again only a few minutes' work to drill through the body and add the pins.

I soldered the roof in place. I suspect it had been left off to add glazing and driver but with a bit of fiddling that could be done from underneath. The 'bend over' roof edges were rather uneven - not the previous owner's fault, just how Branchlines etch relief under the cab edges to help one bend the edges down. I just filled the hollows with solder and rubbed down smooth.

I offered up the chassis and found that the front wheels caught the brake shoes. This was partly because the brake shoes were set a little tight; Branchlines make the front axle rock to aid track holding and pickup and at the further ends of the rock the wheels caught the shoes. The other factor is that the front end of the chassis plate bends down at 90 degrees and to this attaches the piece that rocks. Anything less than 90 degrees throws the front wheels forward and so reduces the wheel/brake shoe clearance. At this stage the intention was to 'load' the back with workmen, a sort of small 'paddy train'. I realised that so many white metal figures would be quite heavy and that might tend to cause this 90 degree bend to ease under the weight. I removed the pickup support printed circuit board and motor and then reinforced the chassis plate sides with brass angle. A substantial fillet of solder between the bend down plate and the angle should stop the bent down part moving. I'd dismantled the motor and driven axle and also took the opportunity to reinforce the

gear box sides. The worm and gear have quite shallow teeth and I didn't want any chance of the worm lifting out of mesh. Before replacing the motor I realised that I could cut away some of the now reinforced chassis plate and the floor of the body under the seat and add a flywheel.

Despite the additions of angle there is still a weak spot either side of the gear box. I could see no way to reinforce that, but added a strap under the motor so that it took the strain and



*The right side - that is, the side with the bottles !*

couldn't twist. I was able to add a couple of pieces of brass strip which hook over the underside of the rear body floor to keep the back in place. This was put in place as a U shape, that way it springs tightly into place so that I didn't have to worry about it moving whilst I soldered each end. Then I cut away the bottom of the U.

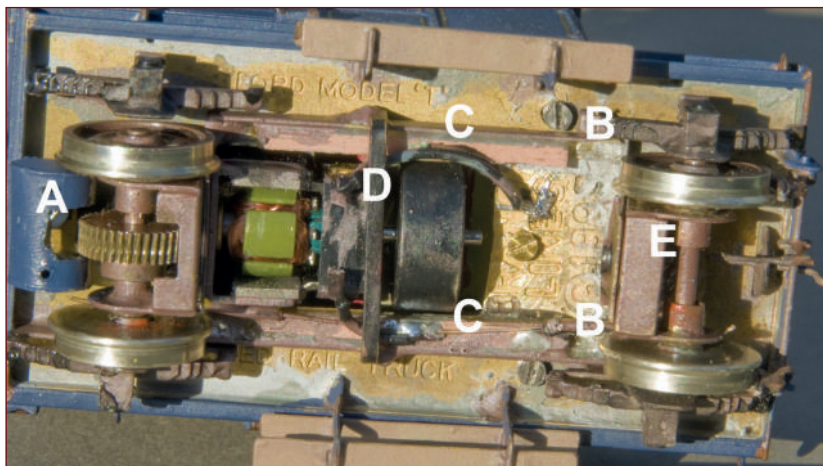
I replaced the pickup and tested the chassis; other than the flywheel catching - a moment's work with a file on the chassis plate cured that - it ran fine.

It was only when I looked in my 'figures' box for workmen that I found I hadn't enough suitable, but I always have a good stock of Omen's young ladies. That's when I decided to make it into a Hen Party.....honest. (Omen Figures has just changed hands, and will at last have a web site, [www.omen-miniatures.com](http://www.omen-miniatures.com))

The body and running plate were grit blasted and then washed and dried. The grit blasting provides the key for two part etch primer air brushed on. Etch primer is acidic so the air brush needs an extra special clean out afterwards. The colour coat was Humbrol thinned with H Marcel Guest thinners and some cellulose thinners. You can get away with cellulose thinners with Humbrol on the first coat. If you let it dry and then try to add another coat with the same mixture you will lift the first coat. The gold lining was Fox Transfers. I've had these a while and with odd pieces the transfer broke. I've seen this before, and though this time I persisted, one cure is to go over the line with gloss varnish from a ruling pen. Applied very sparingly it barely thickens the transfer but once dry holds the transfer together. I also found that the adhesive didn't adhere very well and helped it with some gum off the flap of a lick and stick envelope. Once really set I cleaned any excess adhesive away with a moist baby bud. It was then air brushed with Humbrol Matt varnish, this time diluted with HMG thinners only. Finally I picked out the door handles, hinges, handrail and opening window frames with 'brass', and rusted the drop catches and the edge of the drop doors where they would hit the floor.

I'd seen the 'bottles' on a layout, but never seen them for sale. I asked if anyone knew a source on two internet groups. A reply from America not only knew who made them, he even pointed me to a UK stockist. They are made in the Czech Republic and sold under the Calibre 48 brand. Though Calibre are mainly makers of military figures there are a few other products that might be useful. Calibre 35 is the same maker but for 1/35 scale. The UK stockist I found is Hannants. the bottles aren't cheap - nearly the price of the real thing ! I painted labels on the bottles - anything paper and glued on would be vastly over scale thickness - and added gold paint for the bottle tops. This lot are planning a good time. There are six bottles of champagne and at least two bottles of vodka, plus several crates that could be Newcastle Brown.

I put pins in the heels of the ladies to help them stand up - they're obviously going to need it - and drilled matching holes in the truck floor. I tried to make the arrangement look as if there were conversations going on, and having set it all up unpainted, photographed the group so I could replace the figures in the same places. The pins are held in place both in heel and floor with Araldite. Most of the 'girls' pin in near the



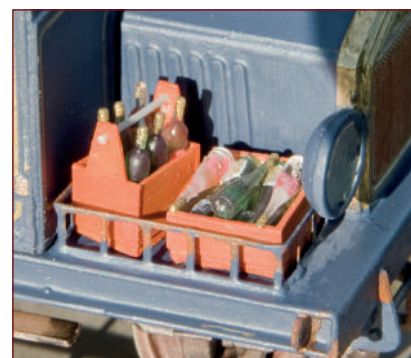
*Under the chassis*

- (A) the added fuel tank with a slot for the gear which the tank effectively hides
- (B) the angle reinforcement along the chassis plate sides
- (C) printed circuit board carrying the pickups on one side
- (D) strap added under motor to stop it trying to move
- (E) the bent down end of the chassis plate and the part that rocks to keep the front axle in contact with the rails

edges and a bit of pin can be left under the floor. Two, however, pin straight over the motor and their pins had to cut and filed flush when finally positioned.

On final assembly two problems raised their heads. Firstly, having added the reinforcing angle to the sides of the chassis, the two forward body fixing screws caught the angle. The screws appear to be 10BA, but the heads are a quite a bit larger in diameter than my stock 10BAs. I simply reduced the head diameter on the provided screws by putting them in a minidrill and running them against a file. The rear fixing screw wasn't a problem, until I noticed how much the gear wheel showed at the rear. I took a very crude drum which had been in a kit, and cut it down to use as a fuel tank. I cut a slot in it so it partly wraps round the gear wheel. It hangs on two pins which have to be carefully located to miss the fixing nut mounting plate on the underside of the body. Making it permanent would make it impossible to get to the screw underneath, so it is held on the pins only by nail varnish. However, as the chassis, with motor, wheels and pickups, is only held by a single screw under the cab front, I cannot see any reason why I should ever need to separate body and floor again.

I'm told that I've no fashion sense, and that no girl would wear some of the colour combinations I've used. I'm also told that for a bachelor I have far too much knowledge of ladies' nether garments - amazing what you can research on the internet ! It is however the only time I've had to paint in eye shadow and varnished nails. Politically correct it isn't. Two of the girls are actually smoking !



*Liquid refreshment, from the off license at Calibre 48. There should be a fuel can here, but with this much booze on hand who cares if the engine stops !*

# Watlingford And Sloley Railway: Starting the scenery – Grass !

**Martin Turpin** describes how he tackled the grass on his layout, which was featured as a 'work in progress' in 'Narrow Lines' 182 (April 2010).

Photographs by the author.

The layout reached the stage where I needed to think about the detailing, and, in particular, the grass. Having seen articles by Maggie and Gordon Gravett on their Pempoul layout could I get anywhere near their level of detail ? The simple answer appeared to be buy a Noch Static Grass Applicator at £135. I needed to treat about 15ft of baseboard which probably had less than 20% of its area needing to be 'scenefied' so I found the £135 very hard to justify in the present financial climate.

I started looking on the internet to see if there were any alternatives. The first one I found was to use the old technology – a Noch puffer bottle. I loaded it with Noch static wild grass 6mm beige, vigorously shook the bottle and puffed onto PVA glue, which had been left for a few minutes to go tacky. For me it didn't work – perhaps it was the way I puffed up the bottle. I then found what I can only describe as a DIY version of a static grass applicator sold by [www.gbmodels.com](http://www.gbmodels.com) for £18.50 plus postage.

**NB:** Gbmodels state: Please note due to the nature of this item, it is intended for use by ADULTS ONLY as a small electric shock will be given if the crocodile clip and the metal tea strainer are handled, even straight after use. Note this is a homemade item and reflects the competitive price. Please only buy taking all the above into consideration.

The price was much easier to swallow and therefore my order went in. It promptly arrived and when I got over the fact that it's a tea strainer on a black handle, I started to try it out. Some experimentation and development was required so that I could get used to this new way of working. The first thing I learnt was don't touch the strainer on the crocodile clip or touch the pin or track you have made the earth – the resulting spark doesn't arf make you jump !



The static grass applicator supplied by gbmodels – it does what it says.



The basic area around the back of the engine shed. Build up any special areas using odd bits and pieces out of the scrap box. Then put down the areas of static grass first with some areas having two or three applications.

The method I have developed for applying the grass is as follows:

1. Paint the areas to be grassed a suitable mix of light greens or browns.
2. Use Noch static grasses primarily 6mm beige lengths and occasionally mix in some 5mm light.
3. Sieve the grass through the applicator, without it on, to separate all the strands.
4. Use Woodlands scenic glue - let it set a little before applying the grass.
5. Either clip the earth lead on to nearby track or a pin put into the glue.
6. The instructions with the applicator say shake the grass on – I could not get that to work, so I use a ubiquitous wooden coffee stirrer to do it.
7. Hold the strainer about 2 inches (5cms) above the glued area.
8. Vacuum the loose grass up, sieve and use again.
9. Go over the same area 2 or 3 times to build up the effect, if required.
10. To minimise the risk of shocks I wear a pair of thin black rubber gloves, available at your local Saturday market, for about £1.

When happy with the grass, I use PVA adhesive to glue down some scenic matting and/or Woodland scenic fibre – foliage clusters medium green, to create large bushes. When the glue has dried I gently tease out, layering the matting to make a suitable base to work on. I then put down a layer of carpet spray adhesive and using a selection of material from the



*The next area I have just started is around the factories. This shows a completed grass area and a Woodland foliage cluster – medium green bush before final treatment.*



*A close up view of the final effect on the siding.*



*A view of the completed area around the engine shed although there are still a few missing items to do on the building, namely barge-boards, filler pipe to the tank, gutters and downpipes.*

Woodland scenic range, build up the effect. I use a mix of the following:

- Extra coarse turf – medium and light green.
- Turf burnt green and soil.
- Turf weeds.
- Turf green grass.
- Various set scenes scatter coat - conifer and winter green.

Once everything has dried and looks OK I seal it using Boots maximum hold hairspray – unperfumed.

## Cwm Isaf Quarry Yard - Layout in Progress

**Rod Briggs** has submitted these two photographs. He writes 'The pictures show my own evolving layout, 'Cwm Isaf Quarry Yard', which represents the upper reaches of a line and the point at which its tracks branch off in multiple directions into various slate quarries, all off scene or distantly glimpsed. The track is deliberately terrible but entirely functional. The layout is still under construction and likely to remain so for some while as all the structures are built of individual pieces of hand-cut slate. The things we do !'



*(Above) General View of Cwm Isaf.*

*(Below) Early morning sunlight at Cwm Isaf.*



# Esme River Railroad Engines And Stock – Part I

**Paul Davis** adds to the description of the layout which appeared in NL 191.

Photographs by the author.



Following on from my article in NL 191 covering the Esme River Railroad in general, this piece is just about the engines and some of the rolling stock. Like the railroad itself, many of the engines are, although based on fact, figments of my imagination. I will not bore you by showing any pieces of stock that have come out of the box and have had nothing more than a good going over with the weathering brush (air or hand). Here will be the stuff that has had the oxyacetylene torch, large hammer or axe taken to it in one form or the other. Apologies for the photos being taken on my English railway 'Minehead Port & Pier' - it was just convenient to do so.

## Passenger Stock



### Number 8: Ex Bristol (Tennessee) Traction Co trolley car.

After many years work as an electric trolley car it was sold in 1936 to the Esme River Railroad who, in their works in Esmeville South Bristol, took out the electric engines (sold on to the Happy Valley Lumber Company) and replaced them with a V6 lorry engine - unfortunately I have not been able to ascertain which manufacturer made the engine. My best guess was a small Mack lorry engine. Whatever it was it was very underpowered when loaded, and had trouble tackling many of the gradients of the E.R.R.R. (See below).

**Fact:** two Gnomy Tram coaches cut and shunted with an Underground Ernie power chassis. £10 each for the chassis, less than a £1 for the bodies plus a bit of plastic card, hours of fun – a bargain.

### Number 4.

Very similar to number 8 and again ex Bristol Traction Co, although unlike number 8, it was never electrically powered. Used as a breakdown engine it was petrol driven – the idea being if there was a breakdown in the overhead electric supply this engine could be used to rescue stranded trolley cars. Due to its limited passenger carrying capacity and because it was not powerful enough to pull more than an empty tramcar it always ran in tandem with number 8.

**Fact:** a Gnomy coach plus a bit of plastic card with Underground Ernie Power chassis.





### Number 6 and the Tower Car.

This is the maintenance tram. Like Number 8 above it had the electric motor replaced with a old truck V8. Its main job was to pull the tower car to repair overhead trolley lines. Sometimes it was used to carry parcels and mail.

**Fact:** Hating waste, this was made from two of the ends cut off the Gnomy coach that made up Number 8 with a plastic card body fabricated to fit between them. The tower car is built using a Gnomy box car with the tower scratch built. It runs on the un-powered car from an underground Ernie (they usually come with one powered and one un-powered).

### Caboose Number 3. (Right)

This is made from two Gnomy cabooses with the end platforms cut off and the two stuck together. Then two of the coach ends from number 6 were fitted to the outer ends. A ladder was added as was the PECO guard's van side window. It runs on an un-powered Underground Ernie chassis



### Mini Goose Number 11. (Below)

The ERRR bought a job lot of 3 Chevy Lorries in 1925. The first one was converted to a passenger carrier, again in their own works, simply by adding the body from an old 4-wheel passenger car. It became known many, many years later as the 'Mini Goose' after some wag had visited Colorado!

**Fact:** Bachmann rail truck (with an Underground Ernie Bogie, as the original engine gave up the ghost) with a PECO coach stuck on the back. 'SVRR' stands for the Swill Valley Railroad, the parent company of the Esme River railroad



**The remaining two lorries:** (Although not passenger stock I will include them here.)

**Number 10: (Left)** Converted to a fire truck, which usually towed a small four wheel tank wagon which carried extra water.

**Number 9: (Overleaf)** Used as the track and permanent way maintenance truck, it had a small 4-wheel truck attached to carry ballast etc.



**Fact:** Both of these are the Bachmann rail trucks with scratch built bodies. The water tank on the fire engine is from a 4mm/ft scale Esso tanker (Airfix kit) while the water cannon is from the old Phoenix (now S&D) line - I believe it's the rock drill with a brake hose attached! The tools on the track gang car are from Italiari and Tamiya 1.48 military kits.

### Ex-combine coach Doodlebug Number 17. (Right)

Bachmann combine with one end turned into a cab (a bit of plastic card plus a radiator from a 1:50 scale lorry) powered by an Underground Ernie inspection car bogie. (Bachmann PLEASE reintroduce the Ernie range - especially the inspection car - lovely chassis and DCC ready!)

### 'Old Yeller'. (Below)

A small railcar that was used to shift miners, quarrymen, and loggers - in other words the inside was not of a very good standard. It also carried parcels, mainly on the roof or on the rear rack. Starting life as a 1929 V8 Oldsmobile Viking engine road bus, the back axle was taken out and a two-axle bogie put in to give better traction.

**Fact:** toy bus 'about the right scale' with an Underground Ernie motor bogie and a few bits, like the rear end, stuck on.



**Number 14 street car.**

By the early 20's Bristol had grown and the small town of Esmeville on its southern side became no more than a suburb so the Bristol Traction Company extended its trolley line in 1919.

**Fact:** Corgi 1:50 diecast street car (American for 'tram') with an Underground Ernie chassis. It is powered from the track not the trolley pole.

**Mack delivery truck.**

Davis's Stores delivery truck which could be seen parked up anywhere on the line if it was waiting for a scheduled train to pass. It acted as a mobile post office as well as a store.

**Fact:** a diecast toy lorry of about the right scale with an Underground Ernie inspection car bogie as the power plant and a bit of detail added. The net over the roof rack is net curtain.

**Part 2 of this article dealing with the freight locomotives and stock will appear in NL 196**

## Harz Mountain Railways

**Keith Willows** has pointed out that the correct spelling is as above, and not as was given in the title of Stuart Marshall's photographic contribution to NL 194. Keith has also submitted these images from his own visit back in 1992.



(In addition, Roger Jones has indicated that there were other mis-spellings of German place names in the piece. The 'Narrow Lines' proof readers are not German speakers, so we apologise for those errors which slipped the net.)

# Constructing Buildings And Structures From Clay Blocks

**John Mileson** describes a method for constructing buildings and structures.

Photographs by the author.



Modelling clay is often used as a facing material on model houses to represent rendering or when scribed, to represent stone or brickwork. This article describes the use of Das modelling clay as a medium for constructing buildings and structures (for example, retaining walls, tunnel mouths and viaducts, etc.) from clay blocks. In other words, a way to construct the building as it would be in real life.

Mileson has flipped I hear you say ! However, I maintain it is equally as fast to build block-by-block as it is to scribe the clay to represent blocks. To illustrate the point I will describe building a viaduct, in this case for '0' gauge standard gauge although the technique is equally applicable to narrow gauge. The same method is used for cottages, houses and retaining walls. The equipment and materials required are very simple. I use Das white modelling clay available from craft shops and stationers, and suggest buying the large blocks as it is more economical and will stay usable for some considerable time. As far as equipment is concerned, you will need a pastry board, rolling pin, two pieces of strip wood (see later), scalpel and straight edge. You will also need some talcum powder and PVA adhesive. (Photo 1)



Photo 1.

The basic structures are made either from mount board, foam board or any other medium you would normally use. Make sure the overall size of the building is reduced to accommodate the width of the blocks - usually between 5-7mm per face. If modelling a house or cottage cut out the window and door apertures. For my sample viaduct I have constructed the frame onto which the blocks are to be stuck from scrap plywood. I could just have easily made it from thick card, suitably braced. It is important to ensure any structure is fairly rigid.

The next part of the process is the production of the blocks. For the 0 Gauge group of scales these are made approximately



Photo 2.

12-15mm long, 4mm deep and 5-7mm wide (front to back). The 4mm depth dimension is the more critical and should if possible be maintained throughout. To make the blocks the procedure is rather like making pastry (Photo 2), with one exception being that the thickness of the clay being rolled out needs to be controlled. To control this dimension cut two strips of scrap material, in card or wood, to approximately 300mm long x 20mm wide and to the thickness of 4-5mm (depending on the depth of the blocks to be made).

Dust the pastry board and rolling pin with talcum powder, then cut approximately a third of the block of Das. The secret to making the critical depth of the clay constant is to place the strips of wood previously cut either side of the clay being rolled



Photo 3.

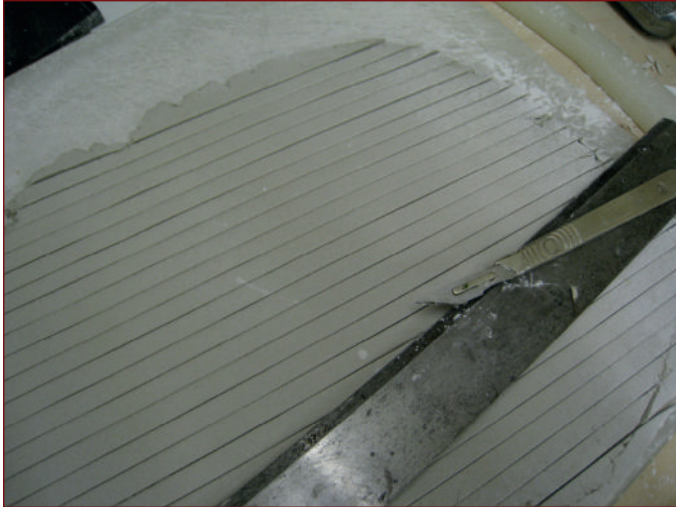


Photo 4.

out so that the rolling pin will ultimately roll along the strips of wood, thus controlling the thickness of the clay. (Photo 3)

Next, take the straight edge and scalpel and cut the clay into strips. (Photo 4) There is no need to be too fussy about the width of these strips, this just being judged by eye. I dip the scalpel into water before cutting each strip. Don't attempt to cut the strips in one pass of the scalpel, but make two or three



Photo 5 (Above).

Photo 6 (Below).



passes, thus avoiding squashing the clay with the blade. When all the strips have been cut, select one at a time, and chop the strips into separate blocks. Notice I say 'chop' rather than attempting to drag the scalpel across the strips. (Photo 5) The length of each block is not crucial but I attempt to maintain 10-12mm. The cut blocks are then transferred onto a tray or similar (I use the lids from shoe boxes) to

dry. Under normal conditions this will take 2-3 days at room temperature. (Photo 6)

Construction of the walls now takes place and follows the same procedure as conventional brick laying. I stand the building/viaduct on paper, and then start daubing PVA onto the structure and paper using a large coarse artist's brush. In other words, I start at the bottom and work up laying the blocks in courses overlapping the vertical joints as normal. You will notice that each block when viewed from the outer edge is flat on one face and slightly radiused on the opposing face. When laying the blocks place the first down on the flat face, the second on the radius face, the third on the flat face, and so on. This will make the courses easier to lay in a straight line. You don't have to wait for each course to dry. (Photo 7) In fact, it

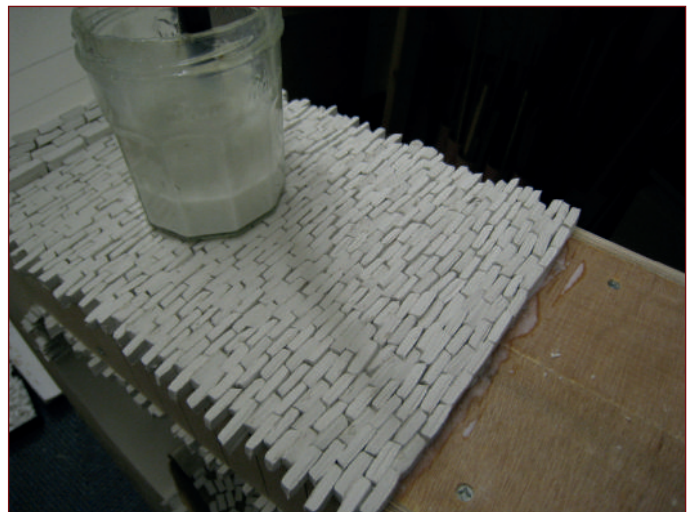


Photo 7

is better to continue building block upon block and every now and then at the end of a course, say after four or five courses, to take a straight edge and carefully press down on the top course to align the courses. Do this carefully as you may find all the blocks will start popping out beneath the pressure exerted from the straight edge. Continue the construction using plenty of PVA. (Photo 8) Don't worry about leaving the 'mortar' gaps between the blocks. In fact, the more gaps the better. If building a house/cottage attempt to interlock the blocks at the corners. Don't be too fussy as the mortar mix used for the grouting will ultimately hide any major discrepancies. Allow the walls to dry overnight.

Next, and this is optional, the faces of the dried blocks can be sanded down using a coarse abrasive paper.

Photo 8.



Don't make them too smooth as the effect of the individual blocks will be lost. For the viaduct, I am not sanding these down at all unless a particular block is standing too proud. Door and window apertures can be cut out at this stage using a junior hacksaw blade to trim the blocks around the apertures and finishing the reveals with an old file. You will find, when dry, the Das cuts very easily. Vacuum the finished walls to remove any dust etc. prior to filling the gaps with mortar.

It is at this stage any 'corner stones' can be added. For domestic buildings, these are not critical, but for tunnel portals and viaducts etc. they are essential. They also cover up a multitude of sins at the corners! The process to make the cornerstones is exactly the same as the blocks, but they are of course larger, but because they are to be glued onto the existing blocks, they need to be rolled out thinner, i.e. about 2mm thick. (Photo 9)



Photo 9.

Now we come to the mortar/grouting process which is very easy to do. However, it is a critical part of the finishing of the structure as at this point the blocks will be coloured. First of all, decide whether you wish to represent granite (blue grey), limestone (grey cream), ironstone (rich brown/ orange) or any particular colour to suit the area of the country being modelled. For the viaduct I have chosen light grey to represent granite. The mortar mix is made from water, PVA, Polyfilla (or similar) and watercolour or acrylic paints. Two important things to remember: the first is to mix enough to cover the whole building (better to have too much) and secondly, to add the colour a little at a time. Finished colours should be lighter rather than darker. Start with the water and add approximately an eighth by volume of PVA. Then mix in some filler until a wet creamy solution results. This should not be too thick as it has to penetrate between the blocks. Next, add



Photo 10.

the colour and test on some scrap blocks. Take your time to get the colour right. Using a coarse artists' brush, scrub the solution into the block work ensuring all the cracks and holes are filled, but try not to obscure the rough texture of the blocks. If too much mix is used wipe the surplus off with a cloth. I usually start this process from the top of the structure letting the excess mix dribble down. Whilst the mix is still wet a small brush can be used to add a minute amount of neat dark watercolour, say black or sepia, around the base of the building to illustrate where water has splashed up from the ground. This should gradually blend into the original stone colour. If when dry the desired colour is not quite right, just wash over the blocks with a dilute mix using plenty of white to lighten the effect or more of the chosen pigment to darken it. (Photo 10)



Photo 11.



That's about it ! Any water staining or weathering can be added to the dried block work using weathering powders. However beware, since only very small amounts of colour should be used to get the right effect since the rough surface of the blocks will absorb the powder making it very difficult to remove. Subtlety of colour is the secret. (Photo 11)

This whole method of producing a building or structure may sound very tedious. It is however very relaxing and more importantly, as far as I am concerned, suits me down to the ground – I am not particularly skilled and certainly not artistic! Give it try. (Photo 12)

**Editor's Note:** Although John has illustrated the techniques with a viaduct carrying standard gauge trains, those techniques are clearly applicable also to modelling narrow gauge railways.

Photo 12.

## Camelot Valley Railway - A Preview

**Derek Gregory** has submitted these two photographs. He writes:

The West Camel Model Railway Society, near Yeovil, Somerset, exhibited its Camelot Valley Railway for the first time at the Swordfish Centre, Fleet Air Arm Museum, Yeovilton at the end of March. Here are a couple of shots showing the contrasting size of 7 mm NG locos and stock with those of the Standard Gauge. This is the transfer platform at Camelot Quarry. The locos are a Smallbrook tank on a Hornby chassis and an Alice class quarry Hunslet on a Bachmann Porter chassis (both by Derek Gregory).



# DCC - Two views

## 1. For -

### Don't be frightened of DCC

**Paul Davis** describes his experience of DCC on the Esme River Railroad

I would like to support the article by Brian Lunn titled 'Thought Control' which appeared in NL 193. Esme River was built as a DC layout. After much soul searching I decided to go DCC (besides a very reasonable priced Digitraxx Zephyr came my way). I spent months reading about it and asking questions at exhibitions. To be perfectly honest I was told so many scare stories about chips going bang and short circuits every time an engine crossed a set of points etc. that I thought 'No, not for me. I'm not brilliant with electrics. It could cost me a fortune!' But as I said I had the Zephyr and to cut a long story short I eventually took the plunge and all the scare stories I was told just proved to be just that - stories. Such as:

1) 'You can't use PECO live frog points as the wheels will touch and cause a short. You must wire in a DPDT switch'. NO YOU DON'T - PECO live frog points work perfectly well straight from the box.

2) 'You must have a bus bar and dropper wires from the track every 3-4cm.' NO YOU DON'T - if your layout is wired for DC it will work fine (well mine did).

To prove a point, on Christmas day (she who sits on the right hand of God was working) I took the DC controller off Esme River and plugged in the Zephyr - nothing else, just one off one on. Everything ran like clockwork. OK I did run a couple of wires to the far end just so I could use a second controller and again excellent. I took it to the Bristol 0 Gauge show - operating for a whole day under exhibition conditions with not a problem. So don't be put off by some of the things you read/get told. I have come to the opinion that there are those that play trains using DCC and those that play DCC. I heartily recommend you have a go; it's excellent fun and you really do 'drive the engines'.

Again, don't be put off with all the different decoders and the like. I have been told 'these are rubbish' or 'those don't work properly'. Well, I've tried Hornby, Digitraxx, Bachmann, Lenz and up to now I've not had a problem with any of them (OK I had one Hornby one that did not work but I returned it to the shop and the replacement was fine - and still is). I know DCC is not cheap but I am very happy with my experience so far and the 'driving' aspect of it is brilliant. You really can do almost everything a real train can do without miles of wire, or making sure your engine is in the right place or you have changed the right switch.

This is just my personal experience with DCC and having read Brian's piece thought I would have my two-penny's worth. I will thank one person, my good friend Terry Lee for his support and for selling me the Zephyr! He has no idea what he started!

## 2. Against -

### Chris Peacock (Calstock (Cotehele)) writes

I read Brian Lunn's article on the case for DCC at least twice. Perhaps we exponents of DC do not really need to put our case forward in such a way, but I considered his arguments for DCC over DC years ago and frankly came to the exact opposite conclusion.

Yes DCC does allow you to configure your locos to accelerate and slow down properly and not do 200mph, but surely the sign of a good skilled operator is the one who can simply replicate that with any control method. Simply using DCC to do this reminds me of the motorist who, having left the road due to excess accelerator, complains that it was not his fault as his car did not have traction control. No, sorry - simple but good, realistic operating is a skill that needs to be learnt, not just dumbed down.

I sometimes believe that the excuse that DCC simplifies the wiring is the basic argument used. However with the live frog points as used on Calstock, all the frog polarity switching still needs to be in place. Indeed with DCC extra wires and section breaks are then required just to jump around the point to ensure sidings are live at all times. I once had to do this on a customer layout. One unexplained advantage of DC is that it totally isolates the siding and hence does not allow you to select a train and then push it through incorrectly set points, in doing so derailing the whole caboodle. I know. I have seen it done enough times already.

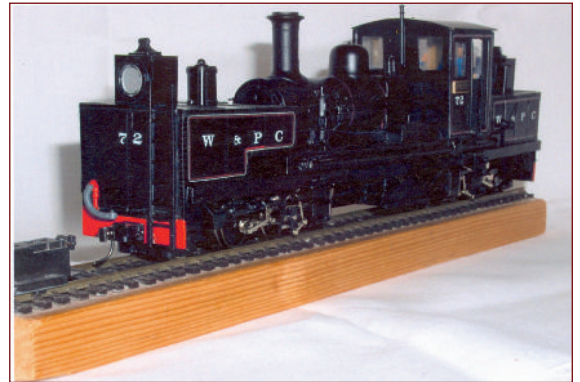
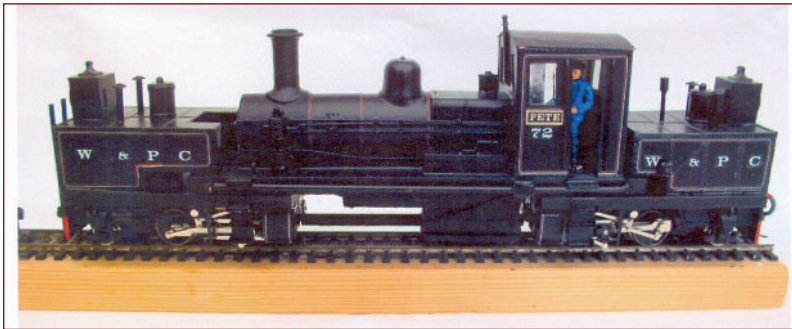
It has been explained that the cost of basic chips and controllers are low, but to equip Calstock even at that rate would still exceed my year's modelling budget. Adding sound would cost even more, besides which it is very antisocial to those either side of you in an exhibition. Neither would a chip, let alone a speaker, be easy to fit in any of my small locos which are totally filled with lead. I know Roy C Link did it in an LBT loco, but none of my locomotives were originally built with this in mind. Two have solid boilers and fireboxes full of motor while two further ones have the boiler isolated from the motor. Practical suggestions and not permanently coupled wagons only suggest complete scrapping and rebuilding, which is not practical. Sound, even that which automatically follows the locomotive around, can be added to a layout often for less than that of a single locomotive. I designed it all in for Calstock, but never implemented it because of the nuisance issue.

No, sorry, as an electronics engineer who spent 20 odd years programming, testing and debugging semiconductors (silicon chips to all) using multi million dollar testers, I am neither luddite nor afraid of chips. Quite the opposite, but DCC is not always practical or the way forward, and is definitely not the be all and end all to the exclusion of everything else as exponents make it out to be. At best it is another option that you may wish to try. At least with conventional DC if it goes wrong it is repairable. Try replacing that multipin leadless programmed (oh yes it is) black object on the decoder, which the manufacturer wouldn't sell you anyway - without specialized equipment it is not an option whatever you might think.

# A Freelance Garratt

**Barrie Watkins** writes:

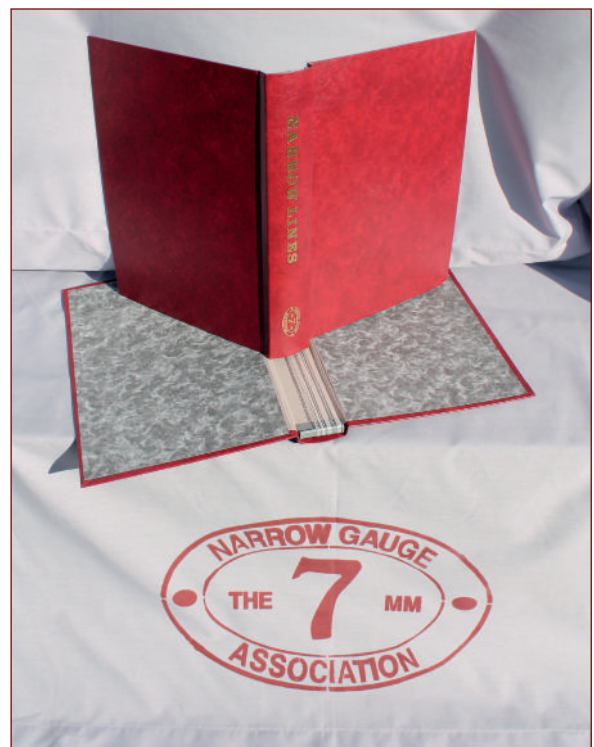
Enclosed are a few photos of the freelance Garratt that I had a go at building. I had a couple of Mehano 0-4-0 dock tanks (American) from which I decided to use the chassis as the power units. As I did not want to alter them at all I built the loco tanks around them (front tank water and rear tank fuel oil). All the body and tanks are plastic card. The boiler and firebox are a Hornby 'Patriot' body cut down in length. The chimney, dome and safety valves are white metal 0 scale castings. As the chassis is a little long I used two pony trucks off a Bachmann loco. They help to fill in the overhang each end. I maintain that the larger tanks are for long distance work. The model is roughly 0-16.5 scale. It runs well and with two power units it is powerful.



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# The 7mm Narrow Gauge Association

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## 7mm Narrow Gauge Association Exhibition and AGM

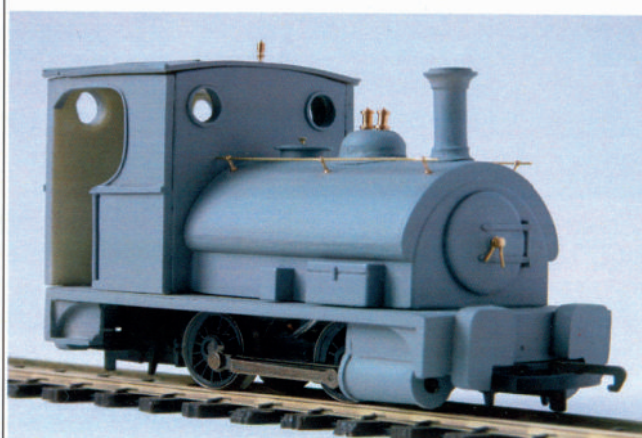
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For Full Details See Narrow News

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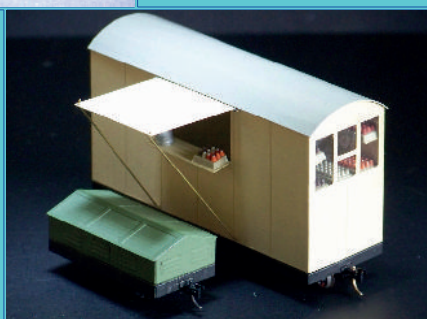
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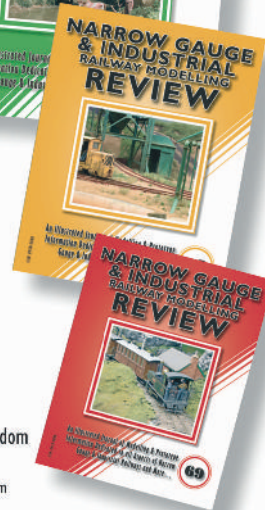
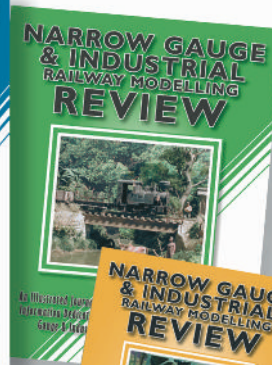
For full pricelist, see website or send a S.A.E to

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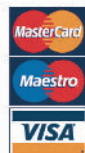
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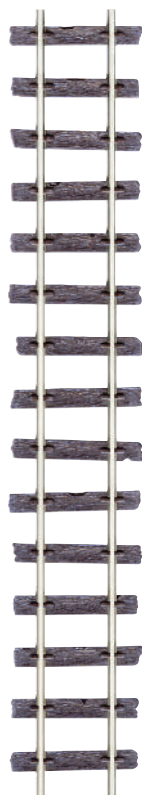


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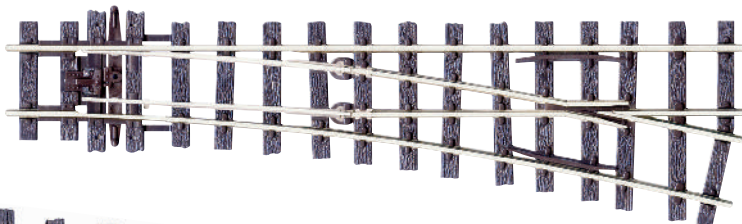
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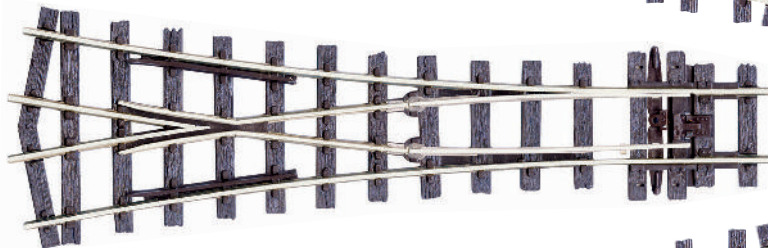
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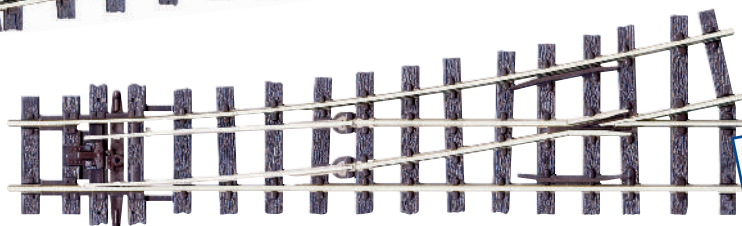
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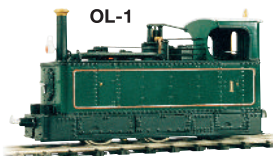
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SL-E595



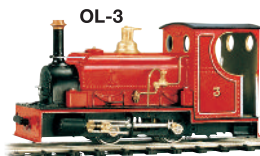
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OL-2



OL-3



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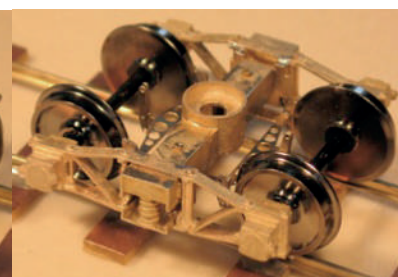
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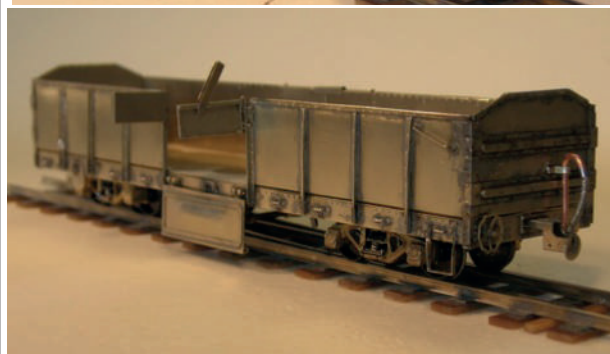
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