

# WEALDEN RAILWAY GROUP Newsletter

February 2022

Password this month:~Beale

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## Cover Pictures

Left; 38 years on and re chassied, article within  
Centre; Tom's Tractor and a 20p coin. 5 of these  
will substitute for 2 x 50p. Coins, not tractors!

Right; Wandleford Junction runs and sees the light,  
at last

Pictures Andrew Knights

## Editorial

Quite a few people have sent David, our treasurer, their 2 x 50p subscriptions for the current year. If you are having to hunt around the house to find the two coins in question there is also a thin, non magnetic answer in the form of five x 20p coins! Affix to a piece of card and send them to: **Wealden Railway Group Treasurer, Mr D Willett, 122 South Farm Road, Worthing, West Sussex, BN14 7AP.** So far, our next show is still scheduled for March 2023, and some others are appearing on the planner. I have a one day show coming at Sompting quite soon and some tentative shows for next Autumn.

KLR, all is quiet, at least on the 1:1 version. This still requires a rebuild of Loco No1 along with improvements in its design. Assuming these are managed before the height of Summer, I think an afternoon playing trains in the garden might be fun. If and when I will let you have the date.

The 1:1 KLR (Kitland's Light Railway)? Well, yes I finally finished the garden on Wandleford Junction and the garden railway thereon. This has a 3d printed model of two versions of the original loco No1 as well as the small yellow No2, along with lots of people and flowers. Also a pond kindly given to me by Roy Hickman. The mechanism is a very stretched servo point drive, plus some rail, a couple of fishplates and some kitchen string. At least this will provide an answer to the question of will the train run? I spent a couple of weeks pushing the project along, generally fed up with it cluttering up the spare bed. So instead, after fitting a lid and setting up the Sitting Room legs, Wandleford Junction moved to the Sitting room. Where thanks to storm Eunice, four days of test running, running in, and photography took place. Most of the stock from Cross Ness was able to run, and after years of trundling two metres from fiddle yard to terminus, spend an hour or so trundling round. The difference in their running after this was quite substantial, generally quieter and much smoother. A definite benefit of the tail chaser style of layout.

While the fiddle yard was up, I noticed the assembly date of The Fiddle Yard, or as it may also be called, November Yard (This name appears on the control panel!), it was constructed over nine years ago. I would have said six at the most, if asked. On the phone to David I asked how many shows the fiddle

yard had been to in that period. After consulting the show archive, he came back to say that we have set The Fiddle Yard up at forty shows in that period. I thought it could be quite a few but not that many!

Over the last month my 3d design skills have been expanded. First I had the request for a tractor in N scale for Mr Lloyd. That was definitely at the edge of my technological envelope and that of the printer itself.

More brain taxing was a request for some Boxpock wheel inserts for a Q1. How to make those interestingly shaped teardrop shapes and arrange them around a wheel took a bit of thought. Eventually Les left with a few to fit and some to test. If the rest of his build goes well, I hope he will share the results with us. What I have seen looks promising, so no pressure there!

For my part the printer has been quite useful on Wandleford Junction. It made advertising boards and a station name board (back of). The interior of the Summer House. The pond surround, and from that the retaining wall that runs the width of the garden behind the mini KLR. Lastly, the National Garden Scheme's Tea/Coffee table, complete with Burco and cups. The cake stall, cakes, plates and cake stand. The plant stall, with pots and troughs for sale. Of course it cannot help with painting cakes, stacks of mugs or flower pots, but that is another challenge. It did make the two week Wandleford push a little quicker, as once something has been designed, that file can itself be modified much more quickly than starting from scratch once more, or a fair time spent designing one item can then be used to reproduce said item ad nauseam. Anyone want an OO model cake stand, or refreshment table? I have a few to spare.

The layout itself now out of the way, a day of variable weather has been spent designing a BR 1980's timber carrying wagon. The first run print is currently being squirted out as I type this. These should be one of the main items to be seen running on my British HO layout Mertonford 1983 HO. If I can crack this I will have another go at some BR MK1 coaches.

Future possible 3d printer projects? Another bash at THAT Brawa Talent. This runs, with some constraints. However it should now be possible to re engineer all of the articulation joints and pivot points. The embrittled plastic components were replaced with various bits of folded brass. A simple printed solution should eliminate short circuits and mean that the center car sits level at both ends and at the same height as the two ends! Well that is the plan. Another possible beneficiary of the printer will be that horrible Hornby 4 VEP. I have a couple of four wheel drive units and these should be able to be fitted into the power car, meaning that it should be able to pull all three un powered cars around the second radius corners that the native drive could not.

The Mertonford and Pine Tree RR (MaP) did manage to have an operating session in the very recent past. Considering it was quite a time since this had occurred, things went quite well. Most of remembered how and what to do. One thing I did notice. Wet water leaves a very nonconductive coating on rails, and one that takes quite a bit of rubbing to remove!

Yes I know that he is to use a modern phrase "Marmite", but I have learnt a lot from the Sam's Trains YouTube video stream, in respect of 3d printing. His efforts building a model of the LBSC Gladstone look fairly impressive, especially as he is, like myself, using an Filament Deposition Manufacture (FDM) printer. Good news, PLA glues very nicely with PlasWeld. That was me, not him!

Website. The other day I was looking to see if an article had been published before. I had a wade into the archive. An interesting afternoon. One that raised several issues. The main one was that there has been some shuffling of file labels. Meaning that some issues are not where they should be. There is a lot in the archive, possibly of interest to others, if there was an easier way of finding it? It is another rabbit hole not quite as deep or convoluted as that of the Internet Interest (Rabbit Hole) page, but an interesting way of spending some time in the past ten years or so.

Talking with Alan Beadle, our web master, we have embarked, well largely Alan, on a new model site. This will feature a more up to date interface and a if some method of finding what IS in each issue an easier way of finding the information there too. Bear with us, this is a project whose scope has expanded greatly. The current site will not be affected to any great extent, for now, but moves are afoot and when we have something to show I will let you know.

# Developments at Arenal

## Giles Barnabe

Autumn last year saw baseboards appear, both for the station at Arenal and the staging yard beyond which represents the rest of the island. The station boards sit on the sill of a large bay window, so have the outer corners trimmed off, but are mainly 24 inches deep – enough for a three-loop track plan typical of continental practice, with the addition of two freight sidings and a small loco depot. Wiring took place over an extended period, with the inevitable result that when “finished”, there were one or two missing connections; however, by early January all these had been traced and trains could operate.

As usual the backscene is a collage of Cuban scenes, some of which were the result of a holiday in 2019. In consequence, the original rather small-scale peasant town is now much smarter, and the town centre behind the station has some Colonial-style 19<sup>th</sup> century architecture, although poorer areas are still visible in the outer streets. Once again, the station building has been rebuilt from the facades of an old Tri-ang model, but the goods shed and the loco depot mostly feature walls made of Foamcore board. In contrast, one of the sidings serves a fruit distributor who has a shoe-box warehouse, dressed up with two-tone tile trim round the doorways and along the roof line, which has decorative corners featuring ornamental “stone” balls – made from costume pearls from an old, damaged brooch. Some roofs hidden behind the warehouse suggest the firm has packing sheds at the rear of the property.



The loco depot is supposed to be an old steam shed, now used by a diesel railcar, and the station’s shunting/spare engine or a small rail-motor. The building is served by a small turntable (Peco N-gauge, fitted with a new deck and 16.5mm gauge rails) from which two tracks enter the building. Unintentionally, the building turned out to look like a modern

Hornby product, owing to the wide arch over the tracks. To provide a degree of individuality this was given a cladding of coffee-stirrer boarding to alter the profile of the arch and provide for a smoke ventilator along the roof peak. In addition, a pair of extensions were added to the structure –

on the near side a Tri-ang water tank which has a slightly raised base and a new corrugated iron roof, and along the far wall a workshop which opens into the running shed and provides an opportunity for a tableau of machine tools and other maintenance equipment. These older extensions also add a bit of history to the building.

The general siding has a small goods shed, and the yard’s hard standing extends both sides of the track. A small wooden weigh-house masks the road





entrance to the yard and the mobile crane built last year will be posed nearby as if waiting its next task. The final structure is the station hotel, although this is no more than a low-relief façade, converted from a toy house of roughly 7mm scale, found in a junk box and missing some of its original detail. This was sawn up into three sections and cardboard inserts were provided to change its proportions; all this was hidden under a coat of plaster to disguise the alterations. Recently, the front door has been enlarged and the windows have lost their glazing bars and now have casement windows fitted. The frontage has been given some decorative trim from thin card, including decorative lintels for the windows, while the finishing touch is the suggestion of a hipped roof, partly hidden by the parapet of the front wall – a spare image from the back-scene collection being exactly the right size. Extra details have since



been added – the Tourist Office plate carrying the hotel's star rating (2-star) and its Alcohol License, both displayed by the front door.

Two tracks leave the station, as it represents the junction where the FCO strikes off on its path across the island to the capital while the Este completes its journey along the coast. There is, in fact, another unmodelled station locally (Arenal - FCO), where most services from Ciudad Nueva terminate, although a small proportion of them continue to Puerto Paseo, and so appear on the layout. Where there is no convenient path in the timetable, the FCO railcar can shuttle in to make connection with a passing Este service. The staging yard has six tracks, three for each company, and will feature a backscene and scenic treatment, as it is visible from outside the room if the door is left open it would look more attractive than bare plywood..

## *De-Futaba (A worst case)*

### **Andrew Knights**

Those that know me will be aware of the luddite tendency I harbour. Whilst I enjoy fiddling with computers and their bits, I tend to think that if the answer is add a computer, the questioner is barking up the wrong tree? Starting on that personal and, for some, delusional stand point we come to the topic of this note. I have looked at manyways of driving points remotely. Wire in tube, many wires and several tubes. Solenoid actuators- favourite of these is still the H&M. Real motors, here I have only tried, being a tightwad too, the Conrad motor. One failure in 16 makes me a little reserved in my recommendation. The fact that they are currently over fourteen pounds a piece (but DCC ready), when I bought mine for a shade under four a piece, debars them as far as I am concerned. In last month's edition I mentioned how I used, or misused, the small 9g servo motors. Here I outline the worst case scenario for the removal of that interface.

“Servos are the way to go.” Someone said, to an extent I agree. The extent being the use of pc, arduino, or Rpi or other data means. I have had enough “fun” at shows on Saturday afternoons, or mid Sunday mornings, Mayor hovering into view and solder dripping down from a hot iron half kneeling beneath a baseboard because of a recalcitrant point motor. At least there I can see what is needed and, generally, do something about it. I don't want to add a small oscilloscope to the cheap multimeter and coil of wire to my layout faulting kit.

I looked on a well known trader and saw that servo motors of the G9 variety were available for fourteen pounds for a box of twenty. Many discussions on RM Web were scanned and read, mainly on how to emulate the Futaba interface and prevent the dread shudders which can affect this otherwise reliable system. I then came across a letter which basically said that the writer just removed the Futaba interface and use micro switches and a couple of diodes to control them. That was more than a couple of years ago no, and I am on my fourth box of servo motors. No, I have not used eighty, the last boxes were ten per box and the price has risen to around two pounds a piece. However, I keep an eye on the prices on said well know site and tend to pick a box to make up an order when the price is right. The micro switches cost somewhere around twenty to thirty pence each, the screws nearly as much! Screws are needed to fix the switches, the servo motors come with fixing and apparatus setting screws included. Diodes, 1amp rated 100v are five pence each. Up until now I have used a section of tin can lid cut and folded to make a mount for servo, two to four switches and two diodes. A genuine point motor for under three pounds. One that at 3v dc can pull a PECO tie bar clean out of the point, assuming nothing else breaks first!

We will get to the real point of this in a moment, promise.

The first motors were easy to doctor. Just a case of undoing four screws, pulling out the interface, cutting the wires from this to the motor and, after extending the motor supply wires, reassembling it all.

Our Chinese manufacturing friends are great at working out how to assemble things in a more efficient and cheaper way. With a standard form factor the G8 servo is no exception. The next lot had a slightly different method of driving the Futaba interface, and a tab on one gear to prevent complete rotation. Still, all was held together with four screws. The last batch had two screws and the interface was soldered directly to the motor brushes. It is this worst case scenario that I will detail.

Two screws are removed and the bottom of the case is lifted off. This exposes the Futaba interface and the pcb solder connections to the brushes. While the iron is heating up, carefully pull off the top of the motor body.

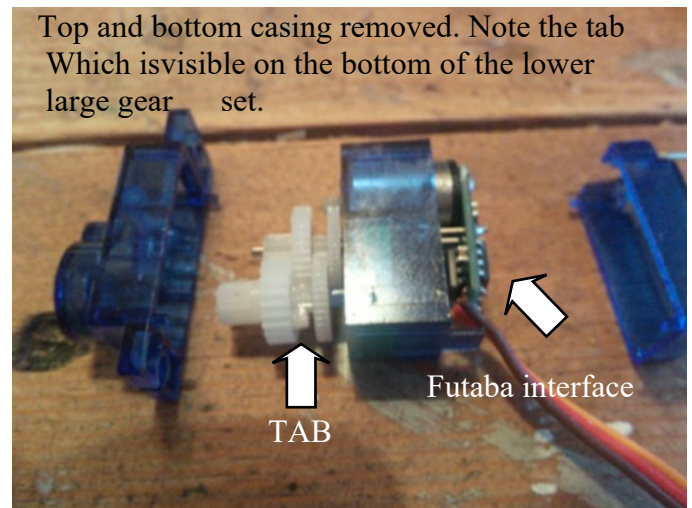
You can now see the gears, it is the final drive which connects down to the potentiometer on the interface board. The bottom of this axle is keyed to drive the pot around. Don't worry about shortening this, that pot is going. But draw the gear out, not losing the gear that idles on this shaft. Gear out, use a sharp knife to trim away that tab. That done you can slide it back through the idler gear and servo case, you will have to twiddle it a bit so that it can sit in the pot again. Push the top of the servo body back on.

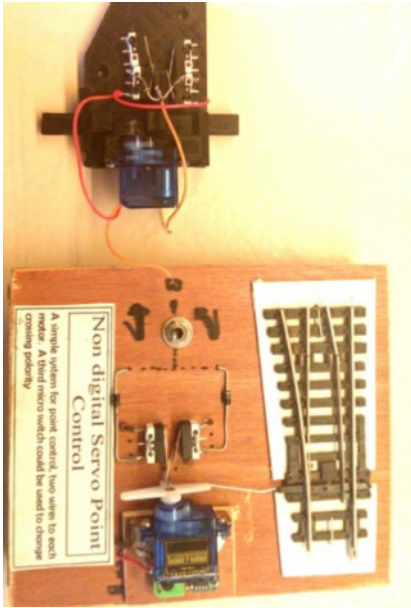
The iron will now be hot. Add a small dab of solder to each brush terminal. In your third hand(!) hold a small screwdriver between the motor and circuit board, gently heat each terminal in turn while pushing the screw driver in and the motor away from the board. Alternating between terminals, do not over heat them, the solder needs to melt, not the motor.

Motor free, the board can be pulled out of the servo using its feed wires. Cut two of these off, trip the ends, tin them and solder them to the motor. Replace the bottom housing of the servo and secure those long screws. You now have a G9 form factor dc motor capable of a full 360 degree rotation, or more and reversible to.

So far these are the worst ones that I have come across, but nothing insurmountable. I suppose if you were going to do forty or so in a session, it could be a little boring and I will bet that some fingers will be warmed in the process. So far I am unscathed, should I have said that?

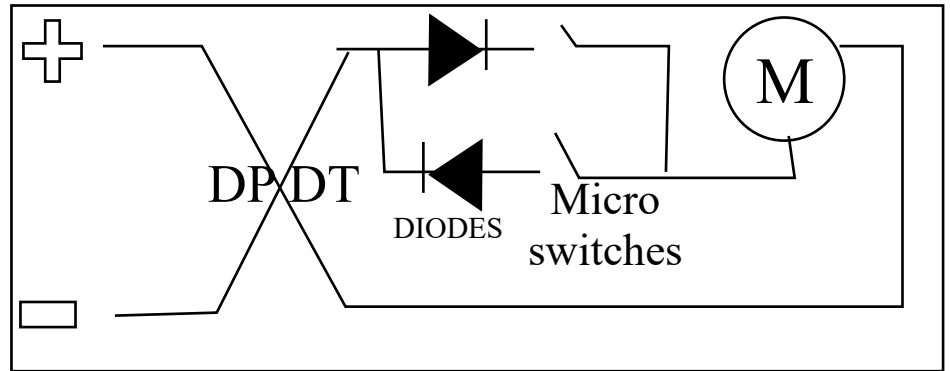
On the subject of purchasing the servos, the main thin to ensure is that they are screwed together. I have had four and two screw variants, this latest batch are two screws, I have not, yet, seen any that





are glued together, but that would be a non runner as far as I can see for such conversion.

I will say that using one of these, four micro switches ( two for motor control, one for point crossing power switching and an ancillary set of contact (signals?)), plus a DPDT switch to operate the point, all in it is possible to electrify a point for remote operation for around five pounds all in. Plus it is a simple, easy to set up, fault, dc circuit with two wires only from control panel to each point. Plus the power supply for this is a pair of AA batteries...



## ***The Start of Something Small – Practical oo/Ho Part 9 – Low-Relief Detailing for Narrow Baseboards***

**by Andrew Walters**

This part of the article describes how I have added low-relief detailing to the narrow baseboards of the layout. There is completely low-relief detailing on the back scene, and lowish=relief detailing at the front of the layout. This article describes why the approach was taken, and then how it was done. As always, this is how I have approached the subject, and I appreciate it might not be the only way of doing it, but it suits my design ideas and also fits in with my skill set.

Concepts : The low-relief detailing idea started with a different requirement which was to have exchangeable detailing for the British or French versions of the layout, and was described in Part 5 of this series. When the detailing of the baseboards was started, the idea of the visual benefits of low-relief detailing was sown. The choices of what detailing to place where were made to try and keep the detailing prototypical as well as producing a balanced and pleasing effect. It's not always possible to achieve both!

Approach Taken – Back scene : I have always preferred to have completely plain back scenes painted sky blue ( using emulsion paint ). However, the low height of the back scenes on the layout, plus the narrow baseboards, made the ensemble look like a row of blue shoe boxes. This was the prompt to have some detailing on the back scenes. The Ho scale buildings don't look too small in the oo scale format presentation, as being at the back they provide a small amount of decreasing perspective.

Approach Taken – Front of Layout : The original details were a station building using a grounded coach body, plus a row of trees. Once these were placed, it was decided to have additional rows of trees and bushes that could be placed at the front of the layout, so give the eye something to “ look round “ when viewing the layout, and to give the trains something to pass behind.

How it Was Done – Back scene : The house was made from the end piece of a Jouef semi-detached house kit, with a piece of concrete fencing placed next to it. The fence was glued onto a strip of plastic that was painted green to ( crudely ) represent growth and avoid seeing blue sky through the fence posts. The roof was made from the kit's roof, sawed to one tile width with a razor saw, then glued on, and short pieces of gutter plus down pipes were added. The ensemble was glued together on a sheet

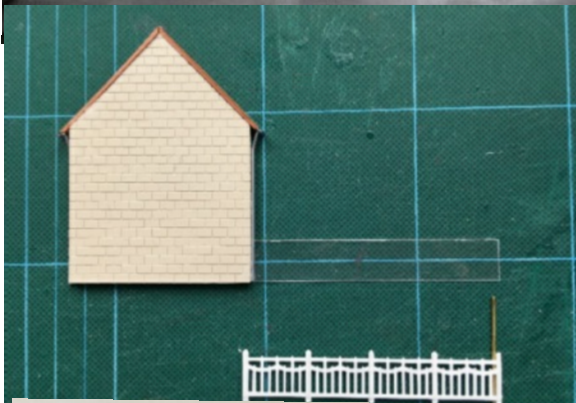
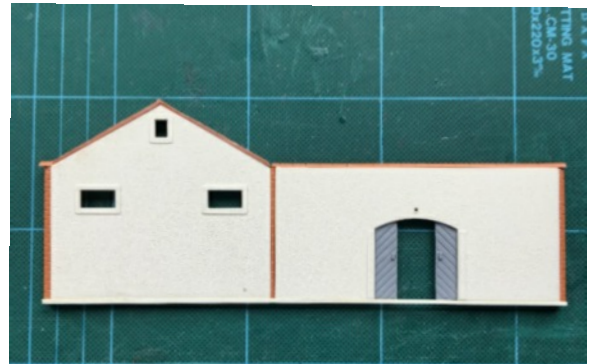


of glass to keep it aligned, then sprayed with automotive grey primer from a rattle can. Colour washes of matt acrylic paint were then applied. Once dry, the house was glued onto the back scene with contact adhesive, and gently clamped overnight until the glue had dried. Some kitchen rolls were wrapped round the piece of wood holding the house against the back scene, to minimise the risk of the paint being scuffed or marked.

The factory was made from the front and one side of an SAI goods shed kit. Brick piers were added at the edges, and as with the house, the kit's roof was reduced to one tile width with a razor saw and glued on and some moulded plastic coping was added. Down pipes for rainwater were added, plus the shed doors part-open. The ensemble was painted the same way as the house. Before gluing onto the back scene, thin pieces of card painted matt black were glued behind the windows and part-open doors. The factory was glued onto the back scene the same way as the house.



The factory under construction



The house under construction



The factory and house being glued onto the back scene



How it Was Done – Front of Layout : The station building was made from a Wills grounded coach body kit, badly painted (!) to give a weather beaten appearance. The trees and bushes are of various unknown makes collected over the years, mounted in wooden blocks that have been painted and have earth / grass flock powder applied to the tops. Other than the station building that needs to go next to the platform, the other details can be placed in different places.

Conclusion : I'm pleased with the visual results. They have helped make the layout look bigger and I'd like to think more interesting.



The finished result : detailing at the back of the layout



## *They Nearly Got Away!*

### **Andrew Knights**

I recently acquired a couple of second hand locomotives; a tatty Dapol Terrier and a non working Bachmann J72. These came in very useful to complete some long term unfinished projects, very long... The Terrier first. Around thirty eight or so years ago, I finished the body of my last Keyser Kits Terrier for my layout of Hayling Island. Unfortunately for this specimen, by then the layout had been operated for around five years or so, exhibited a few times and moved house. Rather tired looking, I did not wish to spend the needed time and effort to rejuvenate it. The layout was sold and this body was put away in a box and forgotten. Would it be possible to meld a Dapol chassis and Keyser body I wondered?

Dremel and large bur in hand and a lot of metal was milled from both tank sides and the inside of the running plate. Those Keys wheels must have been a tad finer than the Dapol ones. On the next try it nearly fitted. The Cab sides needed a little bit of thinning, they mostly survived this almost intact. The wiring and motor mount preventing a good fit. I chopped off all the wires and narrowed the motor mount. A little bit of the chassis needed to be cut off the rear to allow the buffer beam to fit. I also had to thin the top outer corners of the front sandboxes, as I had used Tri Ang buffers on the model and their mounting shafts obstructed the fitting of the chassis. All done, and the two parts had a snug fit. To connect the pick ups to the motor, I took an old PECO point motor and used a couple of lengths of the coil wire to connect all the pick up wipers to each other and finally to the motor brush tabs. Applying power after wheel cleaning showed all was in order.

The paint work which had suffered over the years or during the conversion was touched up. She even "adopted" the crew from the Dapol Terrier!

An exhibition layout that came along post Hayling, was Thaxted. This used J69's for the main motive power. I scratch built two bodies to fit on cut down Mainline J72 chassis. Again the locos worked well and on a couple more layouts, home and exhibition. One of the two "lost" its chassis over the years.

The non working J72? I untangled the wheels and put the keeper plate on correctly. Applying power to the chassis all was well, the motor worked, if a little stiffly and wheels turned. A gentle touch of a file and then much 6B graphite and the chassis ran sweetly across the test track. Success.

Next day I brought the loco down to the kitchen and portable work bench. One centimetre was sawn from the top of the chassis block and a little less from the lower chassis ahead of the leading wheels. The chassis now fitted the scratch built J69 body. A little gluing was needed to attend to age cracks in the PlastiCard. But now it has not only wheels but is able to move under its own "steam". No layouts for either yet, but at least they have been restored to working order...

