

Wealden Railway Group Newsletter

January 2021

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Password this month:~ R254



Cover Pictures

Top Left: A new crane on the Isla Blanca

Picture: Giles Barnabe

Lower A picturesque scene on Ian Buck's micro N scale layout
Picture: Ian Buck

Top right New loco and some new stock crosses the trestle on its MaP delivery trip

Picture: Andrew Knights



Editorial

First thing to say is welcome to a continued season of membership to the Wealden Railway Group. This is a chance for me to reiterate what I said back in December. To save our Treasurer having to have a trip or trips to the bank, and as we have no exhibition or great expenditure this year the subscription is being carried on to December 31 2021, to be paid after then, or prior to the close of our next exhibition. Unless, of course, you wish to leave us. In which case simply drop me an email and I will remove you from the round robin list.

I have been working on a couple of projects since Christmas. Mainly involving HO coaches or stock and operations on the MaP (Mertonford and Pinetree RR). A new locomotive, well sort of, a couple of new cars and another new traffic. Space permitting these will all have a mention in this issue.

I did have a couple of Christmas day rides on the Kitland's Light as is the seasonal, weather permitting, tradition. At least this year the points were not frozen. It has happened in the past! With the passing of twelfth night, the decorations came down. Both in the house and on the MaP. The films at the two picture houses have changed too. In case anyone is interested there has been a break with tradition here this year. The Mertonford Star Palace is not showing a 1963 film, instead showing a picture from the Munsters; Munsters Go Home! While the riverside Bijou in Borchester shows the more recent Jaws. The theatre is topped by a most impressive ply wood shark, or two!

Modern lighting has also moved on in Ahern County. I have extended the LED strip/tape lighting around Lornton Junction. At the same time LED tape has been employed in Pinetree depot. The platform canopy, instead of ex battery powered Christmas lights, and both workshop and locomotive shed. The less well illuminated tunnel end of Pine Tree will eventually benefit from some of this tape, once I can find a suitable housing for it.

After this week's attack and updating session on my Eastwood Vt. Layout. I am hoping to do a monthly session with one or other of the "show" layouts throughout the year. Having set up Eastwood fitting it into The Fiddle Yard. It occurred to me that if another set of short ish straight yards were made, the layout could be fitted against a hall wall. Operation being restricted mostly to the freight yard side of the layout, although a couple of RDCs could be employed to provide a little action along the front or mainline.

Watching the latest set of South Eastern based videos coming from Boogies Trains (YouTube channel), he is currently heading down to Hayes (Kent) and the lines in that area. I have a name now for the Son of Cross Ness project. It will probably run with the name of Wandleford Junction. The River Wandle not being too far east of Croydon, and the ford bit suggesting a site closer to the source of the same. All without pinning the layout to a definite location, other than somewhere above and east of Croydon? I now have track rubbings for both ends of the fiddle yard and layout entry tracks so the next step is to draw out the plan to full size. The branch platform needs to have a curve hidden, or the double platform will be extremely narrow. I was thinking of using two points and a single slip as the main point work on the model. However I have decided that four points will look better as trains can snake across from main to Branch. This will look more interesting, I hope.

Currently, or earlier this week, I was doing battle with my Silhouette Cutter. For some reason it wasted four sheets of plastic sheet not quite cutting out the latest coach side tests. I will have another go once this issue has been dispatched. I need another side to have another go at seeing how to treat the LIMA bodies prior to fitting the new sides. Not sure if it is the cutter or the plastic sheet. A short while back it did a fair bit of fiddly cutting making some hands for a couple of grandfather clock stand ins, and that worked well, but it could just have used the last of the sheeting that I have used before? Back to the MaP. The Lornton improvement scheme is gathering pace. Nothing has hit the plywood yet, but I have found some ideas for buildings and what is going to happen. I hope to produce at least the major structures first, or at least the key parts of these. Shop/building fronts first. This should shorten the bomb site phase of the project by quite a while. I have realised that the scenic change to this part of the layout will be extensive, although track wise not too much should need to be modified. This will be the first major upgrade on this part of the line for all of its sixteen or so year history. So it needs more than a little planning as to both what and then how to progress. I will update you as the work moves on.

As you editor, may I ask you to do the same and drop me some articles on new projects, old ones and the such that you are involved with?

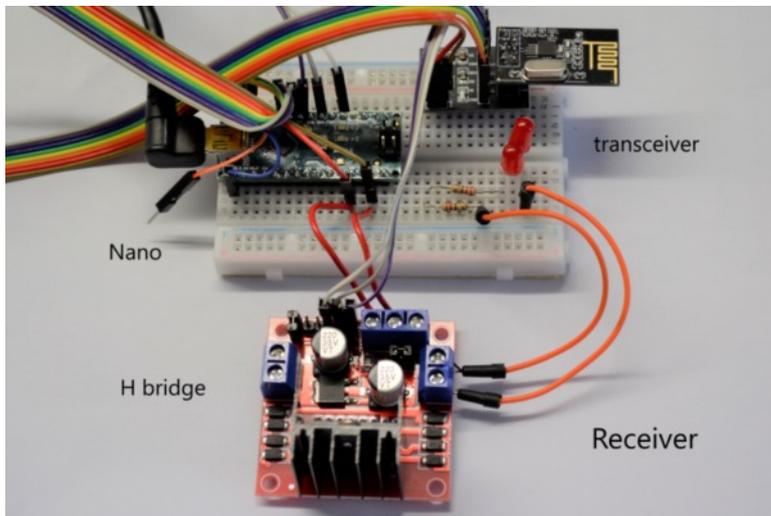
First Steps With An Arduino

Geoff Iatham

Having read about and attended clinics on using an Arduino I had tended to dismiss them because of the perceived difficulty of learning to program them. However, in looking at possible replacements for the radio control receivers used to operate layout accessories, which were in short supply and in danger of being discontinued, I discovered that they both used the same programmable integrated circuit (PIC), the ATmega328.

The various prototyping boards incorporate the chip and some associated components together with a number of analogue and digital input/output pins, and they can be programmed to perform useful layout functions such as driving motors, switching LEDs, driving servos or solenoids, etc. So I bought a couple of Nanos to experiment with and also a Uno clone in a starter set with some LEDs, resistors, etc ready for an online tutorial as part of the NMRA British Region virtual convention. Purchasing genuine boards benefits the Arduino foundation for education, but you can give your money to China by buying one of the numerous (cheaper) clones made possible by most of the Arduino resources and programming codes being open source.

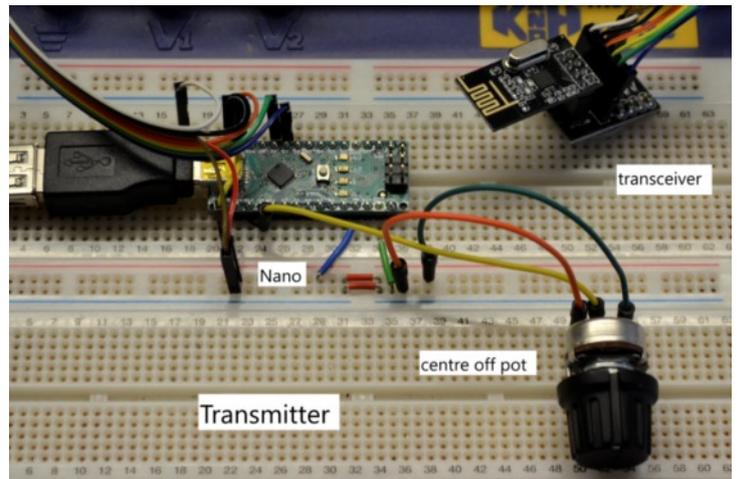
The online IDE (Integrated Development Environment) program is downloaded to a computer to install on the board, if not already loaded, via a USB link and away you go. There are plenty of online demonstrations, however, you do not necessarily need to know all of the details because many of the basic programmes you might require for model railway applications already exist in various online libraries or other locations due to their open source nature. It is a question of finding details of the program (or sketch as it is called) you require, or can modify, and copying it. Not quite so simple because many of the applications are for robotics or radio controlled vehicles. The common (model railway) requirement of a reversible throttle using a single knob seems in particularly short supply. You also learn from your mistakes!



Most starter tutorials take you through making an LED blink and adjusting the duration of the on and off times as part of the initial set up. One of my aims was to use the Arduino to control the speed and direction of a brushed dc motor by radio. As a first step I had also purchased a dual H bridge module (L298N, unfortunately another clone). An H bridge is an arrangement of four switches, in this case bipolar junction transistors (BJT), which can be used to reverse a motor by altering the polarity of the feeds. I eventually found a sketch that nearly suited my purpose, it was driving two motors, and deleted the parts relating to the

second motor. The remaining parts were copied and pasted into a sketch and uploaded to the Uno.

The H bridge module was attached to one pwm enabled and two other digital outputs on the Arduino and the output from a potentiometer (variable resistor) to an analogue input, to correspond to those in the sketch, but they could be altered, and to a motor. Appropriate power supplies were connected ensuring both components had a common ground and that was it, almost! I had a motor problem, but by connecting the feeds to two back to back LEDs rotating the potentiometer resulted in the gradual increase or decrease in intensity of either of the LEDs thus proving the operation.



As part of the first steps I had also purchased some RF24Lo1P radio transceivers to enable the remote layout operation (apparently clones again) and the next step was to transfer the motor sketch to the Nanos and add the transceivers to demonstrate remote operation, initially as one way but, because the transceivers can both send and receive, it ought to be possible to arrange for the remote to confirm operation by, say, sending signals to light indicators on a control panel. Operation can, however, be checked by using the serial monitor functions on both Arduinos. I subsequently bought some small adapter boards for the transceivers that will take a 12v/5v supply, instead of 3.3v, with onboard regulator and smoothing capacitor – breadboard friendly ones would have been useful.

In cost terms, the motor set up (2 x Uno or Nano, 2 x nRF24Lo1, 2 x adapter, 1 x L298N) is ca £36, with savings for clones and bulk, against a DTRC transmitter module with Rx62 receiver cost of £55.

For layout operations it is £32 against £45 but the Arduino has about 17 in/out pins against the 5 outputs of the Rx105 and they are more easily configurable. The DTRC modules are, however, very much smaller.

The next steps will be extending operations to servos, LEDs and uncouplers, possibly followed by sourcing smaller components to fit into a loco, or designing tailor made printed circuit boards.

Loading up

Giles Barnabe

One thing that has been missing from the railways of Isla Blanca, up to now, is any method of loading heavy freight. This has partly been due to a lack of space beside the goods sidings and the risk of damage to delicate models perched on the front edges of the baseboard. To supply a solution to this conundrum, a mobile crane has been provided that can be posed for photographs and may have a safe space for storage in the goods yard at Arenal, where the sidings are towards the rear of the baseboard.

Internet searches revealed some publicity material from Ransome & Rapier showing their range of mobile cranes was built to a selection of sizes, and two video clips of a still-working example – the largest version weighing in at 6 tons. Meanwhile suitable outline diagrams appeared in Model Trains International, issue 101. Altogether, there is just about enough information and detail to make a decent look-alike model, rather than a slavish copy; we assume the model version was built by a Spanish maker, possibly Rascade y Estoque. From the length of the model's jib and the size of the wheeled chassis it appears that the crane is one of the larger models, so it is quite up to the task of loading anything the railway is likely to carry.



The scrap box was turned out and one or two useful items were found including the chassis of a Gnomy delivery van, a crane jib (possibly an old Jouef spare part) and some styrene girders and U-beams. For the solid-centre wheels there were several solid wheels from a Teamsterz toy coach. A drawing was completed showing the general arrangement and was given a totally shrouded body with which some of the more modern R&R cranes were fitted. However, comparing the chassis with the photographs suggested that the chassis was, in fact, too long and 15mm were removed from the centre. More chassis work was then needed to make a hole to accommodate the closely spaced rear wheels which steer the vehicle. A change of body to the more open style was also decided on, with the driver seated below the A-frame supporting the jib, rather than up front, despite the fact that this would mean having the various winches at the rear fully exposed. This brings with it the need for some quite complicated pulley rigging as there are four falls of cable to raise the jib and another cable (or a pair on some models) to work the hook.

The crane jib needed some modification to provide a pivot at a point roughly a quarter of the way along the length and a rectangular styrene box was made with the jib tapering to a point of either side. This proved very difficult to glue together and several attempts were needed to get everything attached, and in line, and 2mm wide strips of thin card (cut from Westling models) were used to reinforce the outer edges of the jib's longitudinal frame.

The next job was to fit the rear deck, to carry the winches. This attaches to the inside of the mudguards at the rear of the chassis, a departure from the original design. The rest of the chassis was modified to accommodate which presumably hides the motors, as there are access panels at the rear. In the event, the question of the winches off no longer. Another trawl through the scrap box yielded a pair of N-scale driving wheels and some plastic caps and washers. Following and with much use of the Pause button, I had a slightly better idea of what the rear platform should look like, and it took no time to have strung the lower pulleys before attaching the winches. In the event, by omission, all the operating cables are glued to a winch,



to the next pulley, there being no room to pass the cables (linen thread) round the lower pulleys. At all events the ruse works and, with the cables stiffened with superglue, the lines look relatively taut. However, I shall leave fitting the hook until I've decided what work the crane will be performing on the layout.

Exton Road to Exham

Ian Buck

Some of you may have seen this exhibited at the last WRG meeting in Lancing in 2020, didn't see what was coming next. Since then like most of us with time on our hands I have been able to develop, detail and tweak the layout which has kept me occupied.

The inspiration for this layout came from an article in May 2019 *Railway Modeller* of a small layout called Collings Lane by John Turner. I was looking for something to exhibit at the Wealden Railway Group annual exhibition in 2020 and this seemed to fit the bill. I normally model in N scale and had just returned from a holiday in Devon so I thought this is what I would do.

I followed the track plan meticulously and purchased the required PECO starter set ST 300 and found a piece of board 850mm x 570mm in my shed. I covered the board with a large piece of foam board and started track laying.

I wanted to model a Southern Railway station in the West Country that had somehow made it into the 1980s which is my usual chosen era. The siding was to serve an agricultural warehouse rather than a goods shed.

Along the centre of the layout is a backscene which came in handy later as you will see. Behind this was on the original plan what passed as a fiddle yard which basically consisted of two loops.

The sharpness of the curves in the starter set meant that the gap between the station platform and the trains is unrealistic but as railway modelling is all about compromise so I can live with it. The station itself is small with a Peco station building. Extensive use of Exmouth Junction concrete has been used which strangely enough I find quite attractive and immediately shouts "Southern".

Most of the buildings are from the Graham Farish ready to plant range but seem to fit in with what I am trying to do here. The agricultural warehouse is scratchbuilt as I couldn't find anything that fitted what I wanted. Since lancing I have added numerous small details to the scene courtesy mostly of Langley Miniatures.

Scenery was built up using traditional methods of ceiling tiles and plaster with Woodlands Scenics used for ground cover and trees. Finding vehicles for this era was not easy and they all come from the excellent Oxford range.

As pointed out to me by my wife Jane the fiddle yard looked a bit bare so something had to be done about it. The notion of a two sided layout hit with an urban scene on one side and the country scene on the other.



This meant a bit of a rethink. The lack of a fiddle yard as such would not change anything as I could still run two trains so operationally nothing would change but what sort of scene to depict?

For those that remember the seventies and pre Network South East eighties the railways in South London were in a semi derelict state especially on the more minor routes and this is what I wanted to depict. If anyone asks Exton Road is located somewhere in the borough of Lambeth but you won't

find it. The name was chosen to link in with the Exton side of the layout.

The station assumes that once it had two platforms but only one is currently used, no doubt this will be replaced thirty years later at great cost. Therefore one platform is derelict and has no track. Behind this is a goods line which means when operating one passenger and one goods / parcels train can operate.

The station is in a cutting the intention is that it is lost within the urban sprawl rather than dominating it. The buildings try to represent what I remember of South London streets of the time. When I look at photos from that time it is surprising how grubby everything looked. The buildings are industrial and commercial with a LCC fire station and important to me a Baptist Chapel. There is a row of Victorian terraced housing and a small park together with a “block” of buildings awaiting demolition but which will probably become “gentrified” with the rise of the yuppies. There is also a small café where I can get my breakfast. In the middle of all this is a small park.

The station itself is but a poor shadow of what it used to be but there is a Southern Railway moderne style signalbox and at least it is still open. The sharp eyed will notice the provision of third rail on the Exton Road side, this is eagerly waiting someone to produce an RTR 2-car emu or when I make one, whatever comes first!

The trains that run on it are quite simple. I have a large collection of “bubble car” dmus, not quite Southern but they did run in the West Country and West London. One day I will get around to building a 2-car DEMU or even an emu. Freight and parcels are run by my collection of class 73, the finest loco ever made and I am totally biased, and class 33 so pure Southern there. Very occasionally my Southern class 171 will make an appearance but its my railway so there.

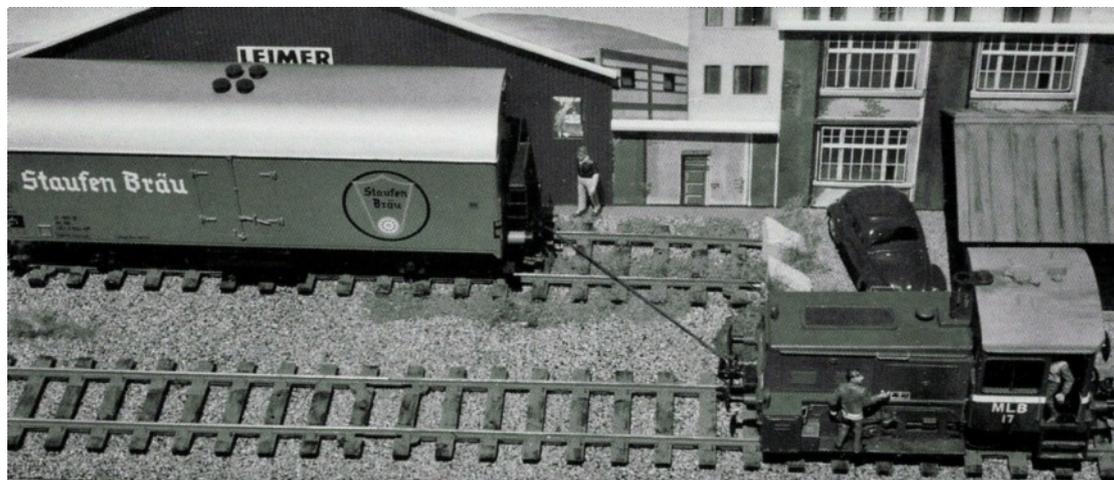
What is left to do?

They say a model railway is never finished. The biggest absence are signals. There will be semaphore on the Exham side and colour lights on the Exton Road side. Otherwise it will be the adding of small details to the buildings and perhaps some little cameos. But I don't intend to develop it too much more but unlike most of my previous layouts I have no intention of disposing of it.

Pole Shunting

Chris Ellis

A passing reference to pole shunting in a recent issue here, brings to mind my ownpleasing experiment on my then new Minimo O gauge layout back in 2004. Minimo was actually a



copy of Eastham, Graham Weller's OO gauged shunting layout. Basically it comprised of two parallel tracks with a cross over half way along. With warehouses and factories on the back scene. The fun was in serving all thecustomers without the shunting loco becoming stuck in the sidings whle tring to spot a particular wagon.

The trick here was to employ either a pole of chain. Attached between the wagon being moved and the locomotive on the adjacent track. The picture shows The locomotive doing just this, pullig the wagon and not becoming trapped whilst so doing.

In the picture the beer wagon is being pulled up to the Leimer warehouse to unload crates of beer. The pole, or chain if you prefer, is cut from stout wire, then ends being bent down to fit the coupler hoops. You may need to experiment to obtain the suitable length for your tracks. The Kleinlok shown here is a conversion from the ugly freelance shunting engine in the LIMA O gauge range at the time. The pole or chain should work on OO/HO, although I have yet to try this.

Cut, Shut, and Scratch.

Andrew Knights

After last month's final bashing of the Christmas train set. The latest work has been a little more mundane. A while ago, while cleaning the wheels on a recently derailing Bachmann mogul, I found that the insulating muffs on the driving wheels had started to crumble. Yes, the main set of driving wheels did fall off too. After some fifteen or so years, probably outside the Bachmann Limited Lifetime Warranty too. The chassis was stripped of useful components and set aside as a source of spares. I found a couple of Mehano Moguls that had not run since the days of Eagle Vt.



With the HO body removed it was easy to fit said chassis under the Bachmann body. The fit was not too bad, even if the cylinders were a little on the weedy size, they were good enough for now.

A few experiments showed that I would need to fill the boiler, and most of the cab with lead sheet to give the engine enough traction to pull four cars through the trestle bridge boards, as they have a double reverse curve and a rising grade.

The lead cab filling ended below the cab windows and I used more pieces to pack up between the chassis and the cab floor. To further prepare the body, I cut the rear of the boiler off and moved the boiler back head to the front of the cab, both crew can now sit in the cab.

The body was re assembled and at this time I moved the bell forward of the sanding dome, it sits just behind the funnel. This left a large space clear atop the boiler and in front of the turbo generator. Here is where I fitted the new MaP switch. These allow locomotives to be isolated in situ, where there are no track isolation sections. The switch was super glued into place, the feed wires running over the boiler up to the switch/steam generator. I have left these white, they look rather like asbestos wrapped steam pipes anyway.

On the frames, beneath the boiler I fitted a bridge rectifier and resistor. These are connected to the Mehano original headlamp feeds and still feed the MaP LED headlight, a 3mm brilliant white fitted inside the Bachmann unit. This unit sits directly across the track, the aforementioned switch only cutting power to the motor. Thus you can tell if the engine has power applied.

Once the whole thing had been reassembled I covered the lead beneath the cab with some Plasticard hiding it quite efficiently.



Next came the new tender. I decided to manufacture an entirely new tender. This used the Mehano trucks and pick ups. The original tender trucks being put to one side for another project. The new tender is a modern square affair, shorter than the old one too. While constructing this I decided to use as much of the donor locomotive as possible.

Thus the oil tank was shortened slightly and fitted, along with the water filler and tool boxes to the tender top. The MaP now had its first oil burning steam engine. Its only one, this gave rise to another project later in the month.

The locomotive has had a couple of outings and has been stabled in the shed at Mertonford. For reasons that will be come clear, probably next month, this will be its home base.

That about concludes the loco cut and shut, apart from to say that the original driver, minus lower extremities was put into the cab. The cab roof was repainted grey, and a Bachmann fireman was added to the tender.



Some press studs made up various supply valves on the front of the tender.

...And Scratch?

For a while now, the formerly five now four (thanks PicoPECO), four wheeled side dump cars have been under threat of replacement. They have been used as a means of taking coal from the Pinetree plant out to the smaller depots and users. The big hoppers being loaded at Mertonford Fuels via their flood loading facility. They have a few failings. They are hard to uncouple manually, having a tendency to tip up end wards, tangling their couplers with adjacent Kadee trip wires. They are awkward to pick up, as if you are not care full the mechanism trips and the car flips out of your fingers. If this happens and the car reaches the floor they are fragile in the extreme, hence the reduction in the fleet by agency of the house feline!

While digging around for a suitable chassis donor for the loco project, I came across my last unused Ahern County RR forty foot cars. Two Vermont Railway boxes and a Pennsylvania flat car. I realised that each of these, over the couplers was the same length as two of the side dumps. An idea was born and in a couple of days, manufactured.

T made six open boxes, each about the size of the original side dump cars. These were constructed from 1 and .5mm styrene sheet. The box car bodies were removed from the chassis and a length of 1mm sheet was glued on edge down the chassis centres. The same was done on the deck of the Pennsy flat. The sheet was the same height as the hinge mechanism on the Backmann cars. A pair of boxes was glued to the edge of this new support. And all allowed to set securely overnight.

Next day, I used various sections of Evergreen strip to make up the rest of the "tipping" mechanisms.

In the case of the ex box car chassis and press stud and wire brake wheel was added to the middle of the cars. The centre section of each support rib having been cut away. The flat car already, or still had its original brake wheel.

With seasonal familiarity the box bodies were all painted Christmas Green (That's what it says on the pot!) and then lightly weathered. Unlike their predecessors the cars have been numbered. Rather than just being "n of five" these are cars 91-3. They can carry the same loads as the four wheelers, just two of these per car. The car cards specify that mixed loading is not permitted, the cars run empty, or loaded with loco ash or coal, depending on destination.

The cars seem to work, they are on their first session so far.