

Wealden Railway Group Newsletter

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Password this month:~ R355



Editorial

Another month into the year and sorry to start on a downbeat. Earlier this month I was told of the passing of Peter Bossom. He of Hoath Hill Halt and Thundershill fame to name but two projects. A modeller with a great talent in the 3mm/ft format. Also a good friend and raconteur. Another voice and presence who will be much missed not only personally, but in these pages, and at exhibitions.

On the home front, several projects have been struck off the list, some of these are railway oriented, although not all. Given a clear weather window of some size, a large none railway project looms. The result of which should be, once again dry wood storage in my car port!

One of the long put off jobs was to set up The Legs (these live in the car port but allow non furniture moving erection of said fiddle yard (just in case this is a surprise). Having tested, post modification, most of the “coffins” that employ this yard, there was one layout yet to be matched up and if need be modified. That was Eastwood VT. I mentioned in an e mail earlier last month that this had been done and also that the layout concerned was not one of my favourites. This predilection exists with the smaller models too. Of the three “Cats” it is the German one that has the most convincing picture, but least interesting operation. The best operating one is the British one; Sylvester Road. That leaves poor old Catford as the least loved, I suppose. It is the more awkward one to operate. I suppose that is what pushes me away from it to a great extent.

Eastwood too. Why? Well it was the second of the layouts built to use The Fiddle Yard, after Summer Springs. As such, I was convinced that all operations should use said fiddle yard. A series of trains were set out, and for the most part work well. They run through the scene, look pleasing and are, indeed, crowd pleasers. There are two problems with the layout. The first was built in. Everything uses The Fiddle Yard. That means that when the yard is being switched, for a deal of time the roads out of the fiddle yard are obstructed. This means that the layout is either in run through mode, or switching mode. I took care to avoid this and make the scene more attractive in the third layout Draußen. Here the freight side is lower than the main and self contained. Meaning that a single operator can at whim or wish switch from shunting to train running.

A partial solution to this situation was derived for Eastwood. Instead of having a couple of “working” trains, ones with cars that were switched into yard spots. The working trains were dropped. A set of “working” cars (ones with well set up Kadee couplers for reliable (mostly!) switching, are left in the yard and are shuffled according to cards or viewer suggestion. All the fiddle yard spots are used for through train storage. An improvement for viewers, they see more trains, and the operator, there is less to remember when switching modes. Just to close the yard entry points, still occasionally forgotten!

The other problem was/is the American RP25 wheel sets and profile. Not all of the PECO Set Track curved points are the same and some take a dislike to some wheel sets or stock. Never with a one

hundred percent reliability, making correction of this “feature” a little tedious to say the least. Well, the board fit test helped here, as did those legs. Before The Legs I had to set the whole thing up, either in an exhibition, or the village hall. Now the whole can be brought from its various storage locations and set up to run in under a couple of hours. No public, so trains can run and run. Be reversed and generally put through their paces. As a result of the last session, about four items of rolling stock were condemned to the scrap box. The locomotives had been run in, even though some of them have been on show for several years previously. But on an end to end layout there is little effective running in. The stock on Eastwood now is the more reliable items. I also had the opportunity to dig out the Ahern County RR (former HO loft empire) remainders. These were again put through their paces. A couple of locomotives had failed in storage, split gears and axle muffs. Most of the stock was re useable and with the addition of couplers, useful. A set of Eastwood 80’s stock now exists.

Even better, the layout fitted the yard with no need for alterations. This was good, not just for Eastwood’s longevity, but it showed that the same set up of yard entry tracks would work for the Son of Cross Ness, or Wandleford Junction. Wins all round! That gives me an idea. Wandleford Junction was going to be built the usual way round. Depot next to operator and “country” at the far end... Turning this around, puts the depot at the far end and brings the majority of the point work up next to the operator. Shorter wiring runs and a better chance of the trains going in the anticipated directions. Another win!

One of the failed in time locomotives was a puzzle. It seemed to have nothing wrong but a dead short. A proto 2000 SW1200, a potentially useful model, either in US guise or as a chassis donor. I was puzzled and started to strip the model down. Almost everything was wire connected. I cut the motor feeds to no effect. Reconnected that and cut the bogie feeds. No difference. However now only one truck shorted . I reconnected the other one and applied power to the wheels and the chassis ran smoothly and quietly. No clicks or sticking, both signs of gear splitting. I removed the shorting truck from the chassis and then dismantled it down to the wheel sets. One set was fine and both were to gauge. However one axle had a full short. Pulling the wheels out sorted the problem. It seems that the gear/muff was letting the two stub axles touch each other. A little light trimming and the loco was reassembled and test ran, which it did in the most satisfactory manor. Most odd, but a spare loco for any mode of Eastwood display.

The other failed loco will need dismantling completely. Only one axle had any driving capability, one wheel was still firmly gripped by the gear/muff. After a short rumble and click down the track it locked up completely and only hummed to itself. It will in all probability not emerge as a GP9 but a set of power units for the MaP or Mertonford HO. Once I have bought a tube of the original Araldite and find time and patience to pull the whole thing to bits and reassemble the split gears!

The fitting of Eastwood also brought to light another layout’s possible conversion to this format. Köln USW. Fitted into the Fiddle Yard it would be shorter than in its existing format and would offer a more varied operation.

On a lighter note. When I opened my latest edition of Continental Modeller (Feb 2021) I found a delightful article by Giles Barnabe on a French beach tramway, and a small Hungarian narrow gauge loco. The C50, as soon as I saw it I thought “Dock Authority” and went up to the loft to dig around in the spare chassis box. I found three chassis in all, two denuded, bodies to Giles, and a complete loco. The older chassis seemed the most promising and ran out of the box, with some hesitation. Stripped, cleaned and reassembled it ran round the map gleefully climbing over all the frogs it encountered. A short session with power leads, Dremel and cutting disc have reduced this to less than a hop in the majority of cases. The little Hungarian (Granville?) may take shape some time. If/when it does be sure that I will let you know.

Lastly. Yesterday the Kitland’s Light Railway officially “went dark”. As part of the current garden work the last of the old fixed signal system wiring was recovered. In truth this has not been employed for a few years, simpler systems working well for the few occasions when more than one train is running at the same time. A result of this is that the MaP and any future small scale projects will have no shortage of layout wire!

BLOCK WORKING SIMPLIFIED

David Thomas

The Three Position Block Instrument

In the 1960s Tri-ang was keen to add “play value” to their product range. They weren’t alone in offering emptying ore wagons and TPO mailbag exchanges but their “novelty” items went much further.



Ducking giraffes and helicopters flying from flat wagons competed for our pocket money with rocket launchers and even exploding box cars for them to aim at.

In 1964, Tri-ang introduced their most expensive ‘novelty’ of all. This though was rather different and, as a mass produced product, unique.

In the familiar red and white box were two working block instruments, six feet of ribbon cable to connect them and leads to connect each of them from a 12/15 volt dc or ac power supply. A single sheet of instructions explained how to set them up but also the principles of block instruments and the

BR bell codes to use with them. This would “Add a fascination to model operation which needs to be experienced to be appreciated”

Tri-ang’s claims were not unfounded. Their model really did include all the functions of a standard three position block instrument including a tapper and bell to communicate with the other operator, a three position knob (known in S&T circles as a commutator) to control the movement of a needle in the other instrument, and a corresponding indicator controlled by the other instrument’s commutator. The model even bore more than a passing resemblance to the then standard BR “domino” block instrument.

Apart from electrical interlocking with signals and track circuits, but early block instruments didn’t have that either, all that was missing was the second local indicator (just above the commutator in this BR instrument) that confirmed the indication being sent by the commutator. Tri-ang’s model even worked in the same way as the real thing with the commutator energising one of two solenoids in to move the needle left to “train on line”, right to “line clear” or, when neither was powered, allowing it to drop to “normal” or “line blocked”.

Any decent account of British railway signalling will explain their use in detail. Put simply, on a track with a separate up and down line, the signaller uses the bell tapper to offer a train to the next box (the box in advance in signalling jargon). If the section between them is clear they respond by sending back the same bell code and operate the commutator on their instrument to set the indicators for that line to “line clear”. The first signaller can then clear the signals and, when the train enters the section, send two taps of the bell to the box in advance which replies and sets the indicators to “train on line”. Finally, when the train has cleared the section and the relevant bell signals (two beats followed a third) have been exchanged, the box in advance returns the indicator to “normal” after which the next train in that direction can be offered. For trains coming from the other box (from that direction the box in rear) the same process works in reverse. This means that one instrument in each box shows the state of both up and down lines between them. For a plain stretch of double track, each signal box would need two block instruments,



one each side, to communicate with the two adjoining signal boxes. More would be required at junctions and for multiple lines.

From the 1870s, these fairly simple devices enabled the movement of trains to be controlled in almost perfect safety. In some places they still do! It is what is known as a “closed block” system meaning that a signaller needs the active permission of a colleague at the other end before sending a train forward so both need to be present. Other “open block” systems don’t require such constant manning but can still operate safely.

Sadly, Tri-ang’s contribution to authentic operation was not a commercial success. Fans of exploding box cars were just not that interested while “serious” modellers probably assumed (wrongly) that it was just a toy. It was also expensive, costing as much as an express locomotive and, while one pair of instruments would be sufficient for a simple point to point layout, a continuous track layout with a station on each side (or a station and storage sidings) would have required two sets. They were only in the catalogue for three years and fewer than four thousand were ever made. I have no idea how reliable they were but second-hand examples do fetch a good price, probably though as rare collectables rather than for actual use.

Given that at least a proportion of modellers are interested in authentic operation, it still seems surprising that nobody else has ever, so far as I know, offered such instruments as a product or kit. Working block bells are fairly simple to make, as any of us who’ve had an exhibition stand next to a layout using them know all too well. Three position block instruments present rather more of a challenge. Cyril Freezer devoted a chapter to this in his book on model railway signalling and some modellers have built them using centre zero volt meters.

For his Buckingham branch, the late Rev. Peter Denny came up with a simpler idea. Instead of a needle, the commutator (rotating three-way switch) controls a set of lights in both instruments. His block bells (converted front door bells) and their tapper keys are separate from the block indicator (as in many real installations) but the operation is the same.

Denny’s iconic layout is now in the very capable hands of Tony Gee and, during operating sessions, these instruments are still used.

I photographed this one at ExpoEM in 2015 where it was being used on Leighton Buzzard; the small portable section of the Buckingham branch that, together with its own fiddle yard, has been exhibited a few times over the past few years. It worked very well, even with fairly inexperienced operators, and there was none of the usual “John can I send you a goods train” shouting between the terminus and fiddle yard operators.

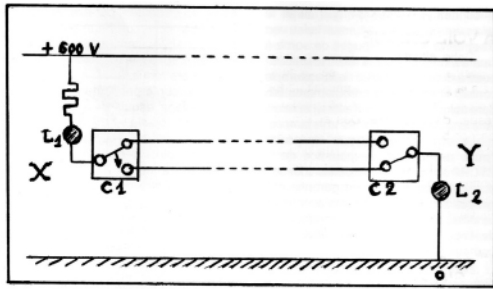
Anyone capable of wiring a layout could put something like this together quite easily but six wires plus a common return connect the two instruments along with two more for the bells and their keys.

Full size instruments did use a few electrical tricks of electrical circuitry to reduce the number of their wires between signal boxes to just three. That may also be possible in model form but we don’t need to run miles of cable on telegraph posts.

A Simplified Block System

Fully working versions of traditional block instrument are certainly possible and operating even a simple layout “by the book” can add considerably to the interest. However, the number of modellers who want to go as far as exchanging bell codes is probably limited. I have though often wondered whether a simpler and, with regard to other exhibitors, silent! system could be devised especially for single track lines. This diagram, from the early 1900s, of a system proposed for single line sections of French urban tramways does suggest possibilities.

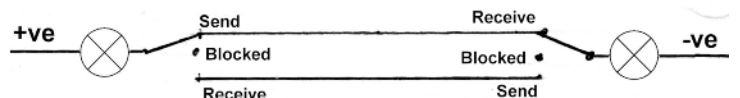




It was based on the very familiar arrangement, by then already used in houses, where an upstairs light, is controlled by two switches. Unlike normal light switches these are two-way so operating either of them will switch the light between on and off.

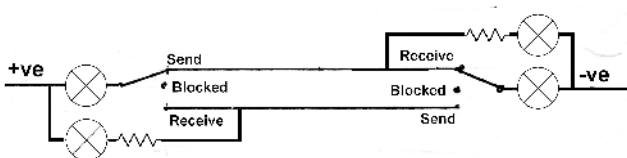
In this system the two lights would normally be off. When a tram reached the start of a single track section, the conductor would use a key to throw the switch at his end and the light at

both ends would come on. The tram would then enter the section and the crew of any tram, approaching from either direction, would know that the section was occupied. When the tram reached the other end of the single track section the conductor would throw the switch at that end and both lights would go off indicating section clear for the next tram. This system wouldn't have been fail safe if a lamp failed and there could have been problems if conductors at both ends operated their keys simultaneously. I don't know if it was ever actually used in this form but, with additional circuitry, two wire systems developed from this idea were adopted by several tramways including those in Paris and Le Havre.



Something like this could be used on a single track layout, perhaps to communicate silently between a station and fiddle yard operator. The very simple "tramway" system could be used but wouldn't indicate whether the other end was able to receive a train. A more sophisticated system would use a couple of centre off switches and a light at each end but still have only two wires between them.

At each end, the three switch positions indicate that the operator is ready to **Send** a train, is able to **Receive** one, or that his end is **Blocked**. The **Blocked** position is simply the centre off and used if the operator is carrying out local shunting or has no empty track available, in which case both lights remain off whatever the other operator does. When an operator is able to receive a train, they turn their switch to the **Receive** position. That is connected to the **Send** position at the other end (and vice versa) Normally the lights are off but when an operator is ready to dispatch a train they move their switch to **Send** and, if the switch at the other end is set to **Receive** (as it normally should be) the lights illuminate at both ends to indicate that they can send their train into the section and to warn the other end that the section between them is now occupied. Once the train arrives the receiving operator moves his switch to **Blocked**, the lights go out and the sending operator also move his switch to **Blocked**. As soon as either operator is once again in a position to receive another train they immediately move their switch to **Receive**. An operator only moves his switch to **Send** when ready to dispatch a train.



This is a very simple system but it does have one weakness. If both operators want to dispatch a train and move their switches to **Send**, the lights stay off but they don't know if that's because the other end is **Blocked** or because its operator also wants to dispatch a train. The answer is to add another lamp, perhaps

through a resistor so it's less bright. connected to the receive terminal but by-passing the switch. Now, whatever the position of their own switch, the second lamp lights to indicate that the other end wants to send a train. If they've forgotten to switch to **Receive** after shunting etc. that light will alert them. When both his lights are lit the operator knows that a train is being sent to him.

When both operators are ready to dispatch a train at the same time there would need to be a priority rule to determine who goes first; passenger over goods trains, terminus over fiddle yard etc. or simply first come first served. The advantage of this over the bell code system is that it is "open block". Sending trains between stations doesn't require constant two-way communication between the operators, only that each sets their end to indicate when it is clear.

Downloaded Printed Paper Building Kits Part 3

Andrew Walters

This is the third and final article about assembling the kit. Parts 1 and 2 covered the progress and problems with preparing the various parts in advance of the full assembly of the factory. I'd made enough progress at the end of part 2 to be able to place the various parts together unglued, and the overall effect looked good and looked right. At this stage I decided that I would continue to final assembly with the end result in mind, and almost at times making up the next stages instead of following the instructions. As an aside, developing years of experience, plus being able to visualise the finished product instead of work in progress, was a great help to me in being able to carry on and finish the factory.

The factory has been glued in place on the layout, and the Club seems pleased with the result. I am. As with previous stages, the glueing together of the various parts was done on a sheet of glass (which is flat and any glue is easy to remove). First, the glass was cleaned by scraping off and old glue with the end of a steel rule. The sides of the walls were folded over the edge of the glass, to preform them. To give depth and support, I made two side wall formers and a flat roof former from rectangles cut from a sheet of foamboard. Where final edge trimming was needed, I did this with a scalpel ad steel rule, with a sheet of paper over the printed surface to avoid scuff damage. After the problems of wiping off excess glue described in Part 2, I used a damp cloth and this time there were no problems of gunging-up.

The foamboard pieces were glued on with PVA adhesive. I decided against a petroleum-based contact adhesive in case it melted the foam (as happened on part of our Club layout when lamp standards were glued onto a foamboard platform surface). The assembly was placed between two sheets of glass with a weight on the top sheet, to gently hold the assembly in place under pressure as the glue dried. The side walls of printed paper/cardboard layers were glued using a school gum, and again weighted between two sheets of glass as the glue dried.

Once the full assembly had been glued together, some acrylic paint the same colour as the brickwork was mixed in a plastic palette and with a very fine brush any white edges on the assembly had a light touch of make-up applied so that they blended in with the rest of the assembly. The end result was packed in a metal box with kitchen roll packing to protect it, taken along to Club and placed on the layout, and after a brief discussion regarding the best place for it, glued in place with PVA.

Looking back, if I was to ask myself a) did I enjoy making this kit, b) was I happy with the results and c) would I do it again, the answer to all three would be YES. Things won't always go perfectly, as I have described in parts 1 and 2, but with perseverance and the opportunity to discuss with others, the problems can be over-

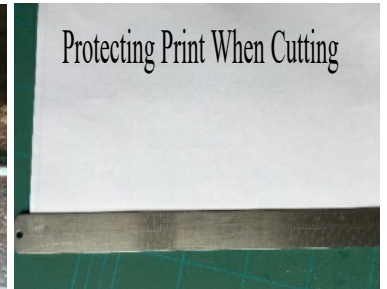
come. A summary of the learning & experience stages is given below, as an overall guide to helping other modellers in making a building of their own,



Cleaning Glass Ready to Glue



Folding Wall Edges



Protecting Print When Cutting



Weighted Under Glass as Glue Dries

of which they can be pleased.

Have the desire and confidence to do it : see visualise below

Have the appropriate skills to do it : experiment with cutting, folding, glueing and painting offcuts

Have an appropriate good set of basic tools, materials, paints and glues

Have an appropriate work area : temporary or permanent are each good if they are managed well



Be ready to expect problems : when they occur, stop, have a tea break and assess what needs to be done

Share experiences : fellow club-members gave me invaluable advice when I had problems

Be able to visualise the finished item : this helps to overcome the problems and strengthens the desire and confidence to do it

Carriage & Wagon News

Giles Barnabe

The C&W Department at San Juan has been busy this past year and since March it has turned out



around two dozen vehicles. My stock of cheap wagons is now much depleted, but there are now more flat wagons, including a bogie machinery truck and around six assorted Este open wagons, about half of which have brake cabins. Other new additions are three more slat-sided vans (one from Tri-ang stock car bits, the other two adapted from 3D printed banana cars) with

enough spares left over for another. An unusual addition to the tanker list is a 6-wheeled milk tank, re-purposed from an old Dapol Esso tank with the addition of dummy centre wheels. Meanwhile the CyO has not been forgotten, and a rake of five assorted small hoppers and another bobber cabooses have been provided for the night mineral train. Another unusual vehicle is a pickle car, the design based on the old Tri-ang version but built to suit On30. The tanks are slices of card postal tube clad with coffee-stirrer planks, all mounted on an old bogie underframe.



Some 55n3 scale coaches were obtained on eBay and two full brakes have been completed. The bodies have been made slightly taller by the addition of thin strips added to the top and bottom of the sides, while the same was added to each side of the ends. They now match the look of the Peco coaches already in use. The smaller one will stay with the Este,



while the other is in the dark green livery of the FC Norte. Other coaches from the same manufacturer are awaiting some pre-construction conversion, as a Brake/3/3 is about to lose one compartment, and the offcut and a 5-compartment coach will become two three-compartment coaches. This should allow extra short coaches to be added to passenger trains without over-filling the staging sidings – when they are built; at least a full survey has been undertaken and construction materials are to hand, although work will probably be postponed until better weather arrives, so that baseboard building can be done outdoors.

Another 2020 arrival has been a new Este diesel. This was built from a 3D printed kit but owing to changes in the loco department it is no longer the double-ended version that was planned, as the motor unit was transferred to another model. Instead, it has been given a short rear hood and mounted on an old steam o-6-o chassis. Although “finished”, it could do with some more details, including headlights.

20 & 90, more on Maguffins

Andrew Knights

last month I told of the construction of the Mertonford and Pine Tree Rail Road's (MaP) first oil burning steam locomotive. We have a system to deal with the local distribution of diesel oil, obtained in bulk from Mertonford Fuels main supply.



But a steam engine does not need light diesel oil, it can burn almost anything. Old automotive oil? We have two sources of this on the line already. Two sources intimately interconnected with the main non bulk freight traffic handled by the MaP. The car restoration operation conducted by our Australian interloper Carpenter's Cars. The restoration plant in Borchester and the scrap yard at Castle Rock Salvage (Lornton). Between these they should be able to keep one small loco in fuel? The problem being there was no simple way of collecting this or transferring it to the tender having done so.

A quick bit of work between Angus McPhwatt, our resident engineer, and Mr Carpenter, (over a meal in Phillis?), produced an order for supplies from Peter Allan's (a pump), and Lloyd Fabrications, (a tank) and some scrap trucks lurking at the back of the work shop.

A few weeks later a new car was delivered from the Lloyd Fabrications works at Lornton hit the rails. A moderately sized tank with a dual operation diesel pump mounted on a short wagon frame. This can pump oil from a bulk tank at either Borchester restoration or Castle Rock Salvage, then convey it to Mertonford Loco shed where it can pump said oil into the oil burner's tender tank.

During this project, it was mentioned to the Lloyd's team that a set of tender trucks were going spare. They had just finished constructing some road trailers for another customer. They thought that these may be adapted to MaP rail use? The tender trucks were removed from the tender, that going to Castle Rock Salvage. The result is a steel bodied freight box car, the first for the line.

The forgoing is fiction, mostly.

It was the emergence of the oil burner that lead me to construct the car no 90. A means of collecting and distributing old auto oils. I dug out an unused 50ft Greenville HO scale box car. The plastic chassis and trucks were cut down and glued to a PlastiCard base. A Dapol tank car supplied supports and tank. A Jouef 40ft container was cut down to half size and made the box body to cover the pump. A goodly length of solder made up a three inch hose for fuel gathering/delivery. Some ladders, and bits from the scraps box added to the project. The result was numbered 90, an unused number series on the MaP car numbering system. The car looks rather different and operates in similar vein. It has a car pocket as per normal, but only one loading slip. This has one destination for the full load; Mertonford Loco shed. It has two choices for empty destinations. In operation it has to pass through Lornton to be delivered to Borchester, so depending on what the Dispatcher is up to at the time, it may go to either place for filling.

Having chopped up the freight car running gear, I was left with a new body to play with. The body was the same height as a Bachmann box car. The HO scale moulded ladders were at each end and if these body sections were removed, along with the ends then the sides were the same length as a Bachmann box car. That was enough!



A new floor, ends and roof were made from 1mm PlastiCard and the box car's sides glued to this set up. More strip was fixed to the floor to make up an under frame. All the bits of the tanker that had been hacked off for car 90 were now glued onto the under frame (Maguffins). Its brake wheel is mounted for ground level access. To make it stand out further the car was painted a Royal Blue, with pale blue doors and white lettering on a blue background. Across the top of the door slide ends there is a note saying the cars was constructed by Lloyd Fabrications, no reason not to advertise!

All in all reality sort of parallels the fiction that is Ahern County