Risborough and District Model Railway Club

Spring 2007

FOOTPLATE

Chiltern Railways Class 168217 at Haddenham & Thame Parkway Station 26-01-06. Photo by Pete Miller.

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Committee Notes

There has been no formal committee meeting since the last issue but we have been discussing matters via e-mail or on Friday nights.

We have discussed clubroom tidiness (again), the compiling of an equipment list, Risex and Railex.

Our electrical equipment has again been tested by the Community Centre's electrician. It is a requirement of the Trustees that all electrical equipment is tested annually. Members should check items each time they are used and report defects to the committee. Safe electrics also applies to your own equipment that you bring to the club. If in doubt, we can get it checked for you. You will also see we have had a serious clubroom tidy, it gives much more useable space and we can find things.

WELCOME

We are now well into 2007 and the new models for this year have been announced at the Toy Fairs. We have had two major events since the last edition of Footplate: Risex 2007 and the Wheeltapper competition and Railex 2007 is fast approaching.

Risex 2007 was one of the best I can remember with a good trade selection and interesting layouts. It also seemed to go very smoothly during setup and breakdown, no doubt due to all the help available at the time required.

Wheeltapper again showed what skilled modellers we have in this club with an excellent range of models in all categories. This year saw the most models in UK coaching and freight stock and road vehicles etc. It was also pleasing to see that no less than eight members received awards for their modelling and not just the acknowledged experts. The Wheeltapper trophy went to Ian Gearing (below), the Robbie Robinson Award to Ian Roll and the Jack Kine Trophy to Tim Peacock (back page). Well done to the winners and to everyone who entered. Also thank you to Robin Harding who was this year's judge.

While putting this edition of Footplate together I have been watching the original Quatermass TV series from the 1950s, (now available on DVD), which some of you may remember. Looking at the end credits, I saw the following: “Special effects by Jack Kine”. Does anyone know what other programs he worked on?

Our scenic diorama project is progressing with workshops on rocks completed and workshops on buildings, trees and water planned. We aim to have a workshop each month to help you build your dioramas or to give you the skills to join in with club layouts. The techniques can also be applied to your home layouts.

New project planning is progressing. This is slow but it is important to get these large projects right and to look at the whole scheme (including pelmets, lights, storage and transport) and not just the scenic part of the layout. Both layouts are being designed on computers which makes changes easy. A large scale plan if the P4/EM layout has been seen down the clubroom on Friday nights and it is progressing well with the levels being worked out so that trains can be seen from a child's height. The new lamps are making modelling much easier, especially since the main lights in the Carrington room often have failures.

There is a OO layout currently being built, so if you want to join in then talk to Pete or Ant. Any member can help with any project, you do not need to be asked just get involved.

Total Operational Processing System (TOPS)

TOPS was introduced by BR in 1972 to improve the management and control of its rolling stock. Previously wagons had a telegraphic code name, which were replaced by the TOPS code except engineer’s vehicles, which retained their names alongside their TOPS Code. Under TOPS each wagon or coach is allocated a four letter code although only the first three letters are displayed on the vehicle.

The first code letter is given in the table below and the second is simply a sub-group of this. The third letter gives the brake type:

A. coaching stock - passenger carrying
B. bogie steel carrying

C. covered (bulk carrying), also revenue brakevans
D. diesel multiple units
E. electric multiple units
F. flat wagons
G. high speed trains
H. hoppers
I. internationally registered vehicles
J. bogie private owner wagons (was Bogie steel coil)
K. bogie special wagons (was 2-axle steel coil)
L. previously allocated to APT stock (R.I.P.)
M. mineral wagons
N. non-passenger carrying coaching stock
O. open wagons
P. privately owned 2-axle wagons
Q. departmental coaching stock
R. railway operating vehicles
S. 2-axle steel carrying wagons
T. private owner tanks
U. nightstar (EPS) stock, previously allocated to uncovered bulk carriers
V. vans
W. miscellaneous wagons
X. not in use, previously allocated to special wagons
Y. bogie departmental vehicles and track machines
Z. 2-axle departmental wagons

Brake type, third letter:

A. air braked only
B. air brakes and vacuum piped
F. vacuum brake (AFI type)
G. vacuum brakes (AFI type) and air piped
H. dual air and vacuum (AFI type) brake
O. unfitted (handbrake only)
P. vacuum piped
Q. air piped
R. dual air and vacuum piped
V. vacuum brake only
W. vacuum brake and air piped
X. dual air and vacuum braked
Y. unfitted (self propelled civil engineers' vehicles)

FAVERFORD;
the never ending story: PART 4

SCENERY….. was supposed to be chapter 4, with just a sentence or two as an aside to cover the electrics. After all, being controlled by DCC and DCC requiring only two wires (as we were earlier led to believe), the wiring should need no more than: "…..I've now connected the two wires (which is all DCC needs) and so here comes the scenery……"

Alas, due to slight over-simplification on the part of those who would wish us all to adopt DCC, I've found the reality is just a little more complicated, taking a tad more than just two wires to make it go. Much as I'm sure you were all looking forward to reading about scenery with eager anticipation, 'Footplate' just couldn't cope with electrics *and* scenery in one hit. Scenery must now extend this saga into Ch.5. Ed. permitting! (see what I mean about a never ending story?)

ELECTRICS

You saw the layout plan in the previous chapter. From that you may have noticed rather a lot of points (99 in fact!). How nice it would have been to link them all into the DCC system which would enable me to merely switch them all with the hand-held DCC controller? However, with a need for 25 DS64 switch decoders, each operating only four points, at £40 a go, this 'nice touch' would set me back a £1,200 *in addition* to the motors – errrrr… I don't think so!

Similarly, 'Tortoises' would have been nice too of course but would have cost around another £1,200. Therefore, at only(!) about £400 in total, plus a few polarity change switches for complicated points such as the two 3-ways and perhaps the single-slip points for a few quid more, Peco motors it will be!

Faverford will need a signal box style track diagram (panel) of the entire layout. This will be drawn in linear form, each end finishing midway across the storage loop sidings. The panel will be peppered with either 198 electrical studs that will be stabbed by an electric probe in the tried and tested fashion; Or, if I can find some, perhaps 198 momentary contact micro push button switches, ideally with an inbuilt indicator light within the button head, to show direction of last point throw. If such a switch exists only in my imagination, perhaps 198 separate lights (bulbs or led's?) could be harnessed to the push buttons and indicate last set routes. Push buttons and lights would be harder to install but somewhat easier to use. At this time I've yet to decide.

The track panel will be positioned in front of the baseboards. Its top edge will be in line with the baseboard top and sloping down to the bottom edge at about 25-30 degrees from the horizontal, thus giving decent ergonomic operation from either a seated or standing position. The panel's centre will be in line with the station mid-point road overbridge end.

In addition to this 'master' panel, I'm considering wiring in a 'slave' panel on the other side of the layout adjacent to the 'London' end. This will cover just the train storage loops and loco storage sidings, enabling a second operator to very usefully share the workload.

As an aside (because it'll probably be clockwork rather than electric and therefore outside the scope of this chapter!) a fast clock will be used to enable time compression of the recently completed and produced 24 hour running sequence. I envisage one operator could probably comfortably manage a time compression ratio of 3:1 or so, thus completing a full 24 hour running sequence within 8 hours 'real time'. A second operator should enable the same sequence to be run within 5 hours or so, simply by sorting loco's to trains in the storage yard area more slickly than one operator could comfortably manage, in a leisurely fashion, alone.

Using a fast clock, as with one half of a chess clock, enables op's to be stopped at any time indefinitely and resumed at will; and can be acc/decelerated at any time within the 24 hour sequence, depending on who else is around to help operate trains. Oh and by the way, all of the above would be achievable with trains running at around scale speed however fast the clock is set, so a line speed of, say, 65mph through the station would *not* equate to 195mph on a 3:1 time compression ratio! (Eurostars doing close to this speed in Kent from December 2007 would be exactly 50 years into the future from the winter 57/58 timetable that Faverford covers).

Anyway, back from the future….
Progress to date on wiring is slow (fitting motors to points and first-fix wiring them to below baseboard level is unbelievably boring when so many have to be done) but it is getting done, albeit in fits and starts. Just over a quarter of the total are in place and where they are in place, so too are the track feed droppers that will eventually connect to the 'bus wires'. When first conceived, the only buses envisaged on Faverford were to be the half dozen or so East Kent and Maidstone & District ones waiting at bus stops by the station entrance on the bridge for their connecting trains to arrive - Happy days!

Faverford will have eight bus wires because I was persuaded I could usefully divide the layout into up to four segments, called power sub-districts, each

being isolated from the others. Thus if, or in my case *when*, a short occurs, say through a derailment, only the district that suffers a short will lurch to a halt rather than the whole layout. Useful I thought! In 'Digitrax' parlance, a PM42 Quad Power Management Unit; yours (or mine) for fifty five quid, does the business! Having a PM42 demands more thought to determine where best to divide the layout up.

Some would say it's a good idea to separate down lines from parallel up lines by putting them in different power districts, so that if one suffers a short, the other will continue to run. However, it doesn't take much thought to realise if power districts have 'up' and 'down' separation, a short caused by, say, a 'down' line derailment, might easily foul the up line without actually shorting it out. Unless the 'panic' stop button is pressed on the hand-held controller p.d.q., one's favourite loco thundering along on an up line express could end up wrecked - not a pretty sight!

In view of the above, Faverford will have just two 'running line' block sub-districts. These, with the third sub-district, will divide as follows:

1. All running lines through the station between the tunnels at either end of the scenic bit.
2. The engine shed and shed yard on the far (down) side of the running line and the goods yard/transfer sidings on the near (up) side of the running lines.
3. the (non-scenic) bit beyond the tunnels, encompassing train and engine sidings.

As the PM42 can also produce seamless polarity reversing functions, in lieu of powering a 4th district. My PM42's 4th circuit will feed the shed turntable instead.

Okay then, bearing in mind I'm using DCC and only need two wires(?), I've now got eight! Even at this stage none of the track is yet connected as the eight wires are merely the power buses and these all run underneath the baseboards. As I don't have any track under the baseboards, I have to connect the track on top of the baseboards via dropper wires which pass through the baseboard to their respective buses underneath. So that's eight dropper wires?…errr not quite!

Every set of points need to be isolated at the two frog rail ends from the track beyond. This means the track beyond each frog rail will need to be energized with another dropper wire. You're beginning to get the picture I think. 99 sets of points = at least 198 dropper wires; to which must be added even more droppers where sub-districts meet and all rails need total isolation from adjoining power sub-districts.

Conservatively, I reckon I'll need getting on for 300 droppers. That's 600 soldered joints. And it gets worse…….Half of these joints will need to be joined under the baseboards!

For some while, I'd envisaged a dose of r.s.i. or worse, s.i.e.i. ('solder in eye injury'!) caused by soldering lying on one's back with the soldering iron wandering around above one's head loaded with solder while trying to connect dropper ends to the buses under the baseboard. Then out of the blue, through a chance remark about this prospect in the pub one Friday night, I got the best prescription from a doctor I've ever had! Our very own Doctor Tim had recently bought some displacement connectors that partially cut through wire insulation and bridge two cables electrically merely by squeezing the connectors with pliers over two adjacent cables. I think even I can manage to squeeze 300 such connectors to connect my droppers to my buses using just a pair of pliers….. Many thanks Tim! This leaves me with only(!) 300 wires to connect with solder but at least they're all above the baseboard.

So much for the track. Now for the locomotives!
42 loco's = 42 decoders. Luckily, nearly half of the loco's on Faverford are 'DCC ready', meaning they have sockets into which decoders fitted with plugs need no soldering (tho' I'd still have wished for more luck by having all of them DCC ready!) This leaves over 20 loco's, each with four wires to solder decoders in between track pick ups and motor brushes. Additional difficulties are presented by these pre-DCC loco's in finding, or creating, suitable space into which a decoder will fit. Not a problem with the likes of an unrebuilt Bulleid pacific with a huge boiler, but most definitely a tax on ingenuity with most of the others, where bodies are often full of lead or similar from smokebox door to firebox backhead, with barely enough room even for the motor! But with a lot of help and encouragement from Mick M., I'm getting there.

I've yet to discover if I've got the right combination of loco/decoder for each loco in the fleet. I've largely forsaken back-e.m.f. for economy. A back-e.m.f. decoder costs about £12 more than a non-back-e.m.f. decoder and quite honestly, I've yet to be convinced as to whether the 10 or so locos that will rarely, if ever, stop at Faverford would need such decoder sophistication, so they've just got a £15 DZ123. About half a dozen loco's will have back-e.m.f. decoders, being shunters, the old station pilot (a kit-built Wainwright 'D' 4-4-0) and a couple of local freight engines that will spend more time than most pottering around the yard. Most of the rest of the loco fleet (well over twenty) that will stop quite frequently will not have back-e.m.f. decoders as most of them ran very smoothly at low speed/start/stop when they were running on DC. So, given this, I can't envisage that any of them would run less well on DCC.

As for the remaining dozen, they're kits which haven't been built yet, so only time will tell if I've pinned my hopes in favour of them eventually running acceptably well with non-back-e.m.f. decoders. While such hope may, in a few cases, prove to have been in vain when everything is up and running, I'm sure I'll find some comfort in the fact that the decision was a strategic one based on a decoder cost saving of around 400 quid!

Pete J.

Railex 2007 preview.

Railex fast approaches and we need to get all the details organised for this major event. This will be our third 2 day Railex in Stoke Mandeville and it promises to be every bit as good as the previous shows. This year we are expanding the club stand to provide more display area to promote the club and extra space for storage. Last year you will remember we had an information and talking area plus a "room" at the back for the Treasurer. This year there will be a second "room" fitted with shelves where we can put all our coats bags and most importantly purchases. Do feel free to exercise your wallets and credit cards and support our exhibitors who are:

247 Developments, Bill Bedford Models, C&L Finescale, Comet Models, Connoisseur Models, Dart Casting/MJT, David Stapleton Engineering, D&E Video & DC Kits, Dragon Models, Eileen's Emporium, Exactoscale Limited (including the P4 Track Company), Finney and Smith, Freestone Model Accessories Golden Arrow Productions, G.W. Models, Hobbyview, Ian's Trains, Intercity Models, International Models, Judith Edge Kits, Kevin Robertson Books, London Road Models, M.A.R.C. Models, M.B. Models, Model Loco Resprays, Model Signal Engineering, Modern Structures in Miniature, N Brass Locomotives, N-Gauging, Neal's N-Gauging Trains,

No Nonsense Kits, Parkside Dundas, Peter Cowan, Plus Daughters, Phoenix Precision Paints, Radley Models, Railwayania, Roger Carpenter Photographs, Roxey Mouldings, Rural Railways, Skytrex, Sunningwell Command Control, Tools 2000, Totally Trains and Wild Swan Publications.

If you need to know what they do, look on the website for more details and website links.

This year we have the following layouts covering scales from 2mm to 8mm and includes Happisburgh at just over 50 feet! I still don't see how this can be pronounced as "Haysboro". There must be strange people in Norfolk!

Aldbury Town, 4mm Scale P4, Mike Gosling, A small GWR station on an imaginary short single-track branch line somewhere in South West Midlands in 1946.

Alton, 4mm Scale OO gauge, The Railway Enthusiasts' Club, Scale replica of Alton and its approaches as it was in the mid 1950's, when services continued to both Winchester and via the Meon Valley to Fareham.

Burwell Fen, 2mm Scale, Mark Fielder, A sleepy terminus set in East Anglia in the 1950s.

Cascade Yard, On3 North American 3 foot gauge, Bob Harper, Set in Southern British Columbia.

Cement Quay, 4mm Scale OO gauge, Chris Nevard, Depicts a slightly down at heel cement terminal somewhere on the banks of the Severn in the Gloucester/ Somerset area. The era depicted is generally the present day.

Dinas Ddu, 8mm Scale Narrow Gauge, Peter Booth, Based upon the approach to Dinas Junction Station.

East Street Wharf, 4mm EM, Margaret Evans, An interchange for general goods between rail, road and canal. the region is GWR,BR-W set in the Midlands. The layout featured in December 2006 British Railway Modelling.

Ellis Road, 7mm Scale O Gauge, Crawley Model Railway Club, A 1960s goods yard in British Railways Southern Region, somewhere west of Eastleigh.

Halifax King Cross, 4mm Scale P4, Steve Hall

Hamilton, N gauge, High Wycombe & District Model Railway Society, USA current.

Happisburgh, 7mm Scale O gauge, The Model Railway Club, A real town on the coast of East Anglia - pronounced 'haysboro' set in the early 1960's.

Hoath Hill Halt, 3mm Scale, Peter Bossom, Depicts the railhead and exchange sidings of an industrial concern on one of the two non-electrified lines of British Rail (Southern Region).

Midland Sidings, 4mm P4, Westinghouse Model Railway Club, Represents an imaginary Midland Railway location somewhere on the heavily industrial eastern side of Birmingham in Midland Railway days. Period is just pre-Grouping.

Mill Street Goods, 7mm O Gauge, Luton Model Railway Club, An inner city yard in the West Midlands set in the 1950s and 1960s with ex GW/LMS ownership.

Morse Junction, 3.5mm Scale HO, Roger Epps, A small rural town in Texas Panhandle and is served by the Rock Island railroad set in the 1950s. Featured in December 2006 Continental Modeller.

Mostyn, 4mm P4, Barrowmore Model Railway Group, Summer 1977, North Wales Coast Main Line.

Oldshaw, 4mm EM, Andrew Bartlett, A small station and nearby factory and sidings on a Western Region branch line in the late 1970's or early 1980's.

Sykes Bridge Shed, 7mm O Gauge, Trevor Gibson, BR loco depot of the 1950's.

Vine Street, O Gauge, Jon Dening, British Railways Western Region during the last days of August 1964.

Wibdenshaw, 4mm EM, Kier Hardy, Set in the conurbation of West Yorkshire, and portrays the approaches to a large station within an urban landscape.

As before there are plenty of jobs for everyone, including car park duty, ticket checking, marking out, shifting boxes, and most importantly talking to our exhibitors and visiting public. It is so mush easier to organise an exhibition if everyone wants to come back. Hopefully the weather will be kind to us this year, 2005 saw many of us with sunburn and in 2006 we got very wet, maybe it will be perfect this year. Well, inside will be at any rate!

David/Paul

Modelling tips

When building an item from scratch, I start with a photo and then try to imagine the item as a series of simple blocks. These blocks can then be cut from the excellent Evergreen series of sheet and strip to form the model. The Evergreen range has accurately cut edges to the strips which are available in a wide range of sizes and saves a lot of time in marking and cutting out. The sheet materials are available in various wood planking or square designs and you can also get channelling, rod and tube.

Continued on page 17:

High Wycombe Part II

Since I last wrote, baseboard tops have been fitted sandwiched onto a layer of 3mm foam to try and reduce baseboard sound. Prior to fixing the tops, main power bus wiring was installed – easier to do from the top. Track laying has commenced and I've enclosed a photo to show track construction using Templot templates.

I spent some time doing mock ups with foam underlay to create the ballast bed and considered the idea of introducing super-elevation into the main curves sweeping through the platforms. After much experimentation I decided getting it to look smooth and just right wasn't worth the effort. I also experimented with laying flexitrack using the lay and ballast in one go method (see below). This means it is difficult to conceal the webs between the sleepers and I also thought it would be difficult to get the nice sweeping 16+' curves I had so carefully produced on Templot. In the end I have built the entire track from scratch and I have found this easy to keep to the intended curve with the added bonus of correct sleeper spacing at rail joints.

Track Laying. First I glue down the foam using cheap PVA (Febond) across the whole of the trackbed (4 lines). I then pin the track in place (still on its paper template) with drawing pins and cut the ballast edges where needed with a plasticard cutting jig. This sets the knife blade at the correct angle for the ballast shoulder and the right distance from the rail. The jig is designed to fit between the tracks so follows the curve correctly. The jig can be turned round so a vertical cut can be made at the correct distance for a platform edge.

Next the track is wired making sure wires will miss under baseboard braces and then sprayed with dirty track colours. The track is then removed from the template and offered up the track bed and holes drilled to take the feed wires. The next stages are illustrated on the photo sequence. The next day I vacuum again with a brush attachment.

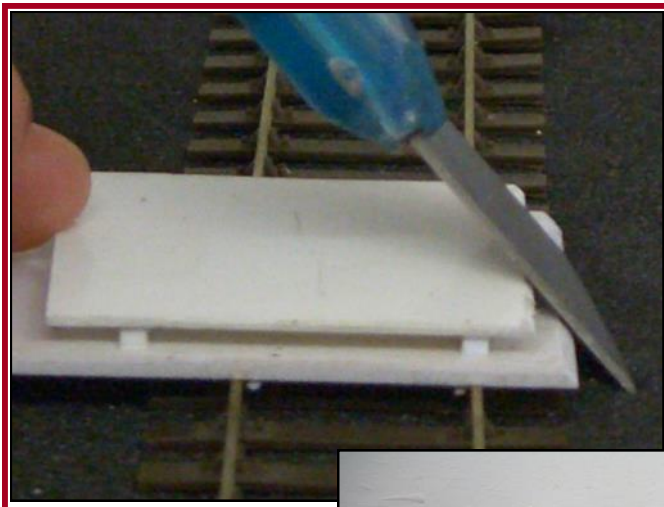
Preparation for each metre of track takes about 30 minutes. The laying takes about 5 minutes and no major time afterwards to ballast. A little work is required touching up odd missed patches but nothing compared to the 'time honoured way'. Once all track is down there will need to be some careful weathering with an airbrush to tone down the freshness.

Once laid, the tracks are connected to the bus with snap connectors and the electrical continuity tested for every one. I've now got approx 4m of quadruple track laid and turnouts are going down. These are Tortoise powered operated by a miniature lever frame – more next time.

I hope this summer to complete the fiddle yard boards and also make up the return boards connecting it all together. These present more of a challenge as they go outside the shed so need to be properly weatherproofed. None will contain pointwork so that makes it a bit easier.

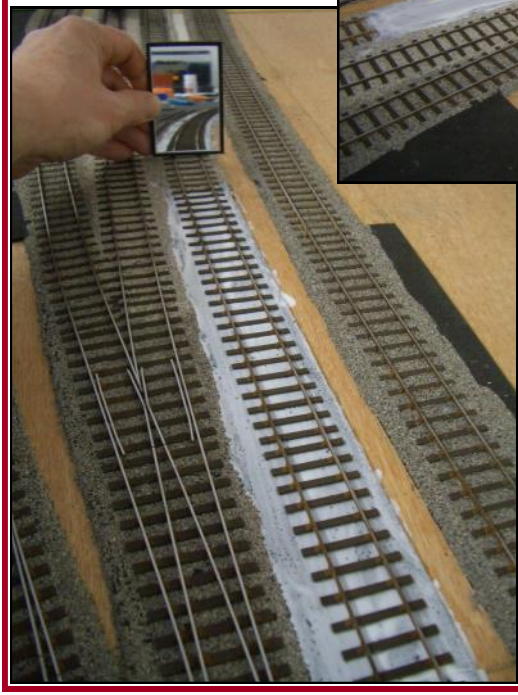
Left: Board lid with foam under showing wiring, prior to screwing down.

Right: Shows track templates and nearest track complete. Next track has one rail laid and second rail chaired up ready to go. Various tools used shown. Note gauges and mirror used to check smooth alignment



Left: Close up of ballast shoulder cutting jig.

Above: Wires fed into holes and track to one side. Glue layer applied – reasonably generously



Left: Track laid into position and alignment being checked with mirror. The mirror causes foreshortening, which makes checking alignment really easy. I use it when building the track and when laying to make sure there are no minor dog legs.

Above left: Generous coating of ballast sprinkled on – in this case quite pale to represent newish ballast

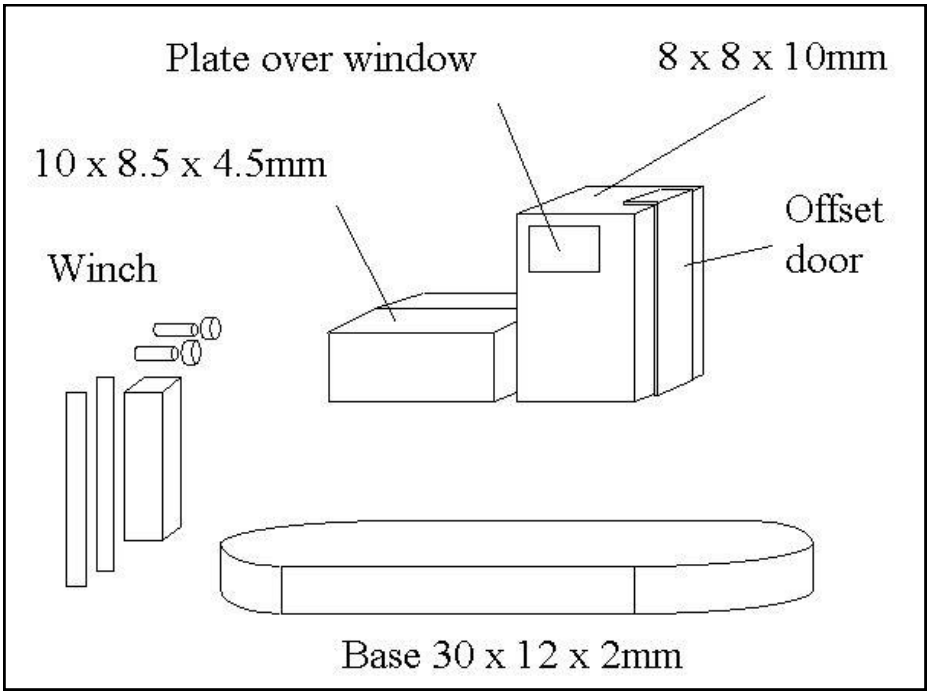
Above right: Loose ballast removed almost straight away with hand held vacuum cleaner and ballast recycled

Right: The freshly laid track.

Tim

Continued from page 12:

An example of a canal maintenance boat built from Evergreen strip.



Articles for Footplate

All the articles in Footplate have been written by members of the club and I would like to encourage more of you to write for the club magazine. We need articles on club projects, exhibition reports, reviews of models, modelling tips, in fact any railway or club related subject.

Articles can be submitted in any electronic form, text, RTF, Word doc etc or hand written with photos and diagrams as JPEGs/bitmaps or original artwork for scanning. Photography can be arranged if you do not have a camera. There should be the minimum of formatting as this is adjusted to fit when the article is incorporated into the magazine. Help is also available to produce the finished article so you could start by submitting just a few notes which can then be edited into the final polished form for publication.

DCC Friendly pointwork

What is DCC friendly pointwork and why does it matter? It's all to do with the fact that most off-the-shelf pointwork, both train-set track and aftermarket items such as Peco and Shinohara, are constructed with the open point blade at different polarity to its adjacent stock rail. This is for manufacturing convenience - making the two point blades along with their closure rails and the whole of the frog a single electrical component, switching the frog polarity via the point blade contact with the stock rail.

The problem then arises as wheels pass through the gap between the blade and stock rail, particularly metal wheels - should the back of the wheel touch the open blade. Worth of course noting that on the prototype, wheel backs are expected to get close to or touch the back of the blade, to help ensure that should the opposing wheel try to pick the point, the open blade acts like a checkrail and tries to prevent a derailment. On most train-set models, because of the electrical issues, this gap has been widened to avoid the shorting issue, and paradoxically, with the rise in the use of metal wheels, has tended to become wider still. While at the other end of the modelling spectrum, the closer-to-prototype brigade in all scales have been closing this gap up, towards the prototype measurement, and have tended to wire the point using what is now called the DCC-friendly approach.

When using DC, a brief brush of the back of a metal-wheeled flange against an open point blade of the opposite potential usually goes unnoticed, because these systems can't shut down fast enough. But with the extreme sensitivity of DCC systems, and also the amount of power they command, such a contact must and will be spotted and will cause a shutdown. So the need for DCC friendly points to avoid this problem. Like the closer to scale option, they are arranged with the blades at the same potential, or phase, as the adjacent stock rail.

Each of the four rails leading to the frog are gapped usually quite close to the frog. The frog is powered from the switchmotor's auxiliary contacts, or from some other polarity-switching device. Then each closure rail and blade are bonded to the adjacent stock rail, and the rails behind the point also powered by short jumpers to the nearest convenient powered rail or bus wire terminal. By the way, while we mention rail gaps: I recommend that instead of cutting rail gaps with a cut-off

wheel in a mini-drill, do it instead with a piercing saw before the track is actually laid. Then press a sliver of 10-thou plastic (black, preferably) into the gap and secure with superglue, trimming when hard. This gives a much smaller gap, and with the benefit that the plastic stops it closing up and generating shorts as the layout heats up in an overheated exhibition hall. You can further disguise it with add-on fishplates if need be.

When I started to lay the track on my HOn3 layout back in 2000, I used Shinohara points out of the box. The gap between the blades and closure rails is almost big enough to prevent shorts, but I do get the occasional one with one or two locos. This, and the fact that the appearance of this gap and the general geometry of the points now bothers me, means that all future switches on my layout will be either hand-laid or significantly modified, using the DCC friendly principles. All the switches on Camp 93 were built this way, too. And of course the trackwork manufacturers have jumped, too: Peco's new US-prototype Code 83 range, which while not DCC-friendly out of the packet, come ready to modify; a process fully documented and which takes about 5 minutes to do.

You'll notice that I've talked about gapping the rails behind the frog as well as in front. You'll always need to do this if the diverging tracks lead to the trailing end of other points, and you will have done this for DC wiring. For sidings, normally DC wiring would have the siding powered from the frog without gaps. Then both rails are at the same polarity when the point is against them, and nothing runs in that siding. But DCC custom and practice is always to gap behind every point, and power the diverging rails behind the point, even if it leads to a siding, so that the track is all powered. Then any loco left on that siding is free and able to move, or just to sit there with its lights and sound system active. You could wire the sidings on a DCC layout as you would for DC, but as soon as you have one loco with sound, or a brakevan with internal lights, then you'll realise why DCC layouts are wired differently.

Mick

I have often wondered why some people modify points and now I know! It also raises the question about checking back to back wheel measurements on your rolling stock as this could be the cause of shorts as well as derailing.

Paul

GAUGING OPINION -Railroads are Rocket Science

Does the statement, "We've always done it that way," ring any bells? Well consider that the US, standard railroad gauge (distance between the rails) is 4ft 8½in. That's an exceedingly odd number. Why was that gauge used? Because that's the way they built them in England, and English expatriates built the US Railroads.

Why did the English build them like that? Because the first rail lines were built by the same people who built the pre-railroad tramways, and that's the gauge they used.

Why did "they" use that gauge, then? Because the people who built the tramways used the same jigs and tools that they used for building wagons, which used that wheel-spacing.

OK, but why did the wagons have that particular odd wheel-spacing? Well, if they tried to use any other spacing, the wagon wheels would break on some of the old, long-distance roads in England, because that's the spacing of the wheel ruts.

So who built those old rutted roads? Imperial Rome built the first long-distance roads in Europe (and England) for their legions. The roads have been used ever since.

And the ruts in the roads? Roman war chariots formed the initial ruts which everyone else had to match for fear of destroying their wagon wheels. Since the chariots were made for Imperial Rome they were all alike in the matter of wheel-spacing. Thus, the United States standard railroad gauge of 4ft 8½in is derived from the original specifications for an Imperial Roman war chariot, and bureaucracies live for ever. So the next time you are handed a specification and wonder what horse's ass came up with it, you may be exactly right, because the Imperial Roman army chariots were made just wide enough to accommodate the back ends of two war-horses.

Now the twist to the story. When you see a Space Shuttle sitting on its launch pad, there are two big booster rockets attached to the sides of the main fuel tank. These are solid rocket boosters, or SRBs. The SRBs are made by Thiokol at their factory at Utah. The engineers who designed the SRBs would have preferred to make them a bit fatter, but the SRBs had to be shipped by train from the factory to the launch site. The railroad line from the factory happens to run through a tunnel in the mountains. The SRBs had to fit through that tunnel. The tunnel is slightly wider than the railroad track and the railroad track, as you now know, is about as wide as two horses' behinds.

So, a major Space Shuttle design feature of what is arguably the world's most advanced transportation system was determined over two thousand years ago by the width of a horse's ass... and you thought that being a horse's ass wasn't important!

Product review - Microdots

Gluing can be messy but here is an idea that is clean and simple. I was looking for a way of attaching people to carriage seats to fill up the empty coaches. It only needs a few people next to the windows to give the right impression. Superglue would work but getting it the right place can be a problem if it is the thin runny sort. Epoxy adhesives will work but can be messy due to stringing.

These glue dots seem an excellent idea and the dots are a very thin adhesive layer. They are easy to use, peel back the protective film, attach the person's bottom to the glue dots and then place on the seat . Standing figures work as well, one dot per foot. The figures do move a bit so the bond may not be as strong as a normal adhesive but it does give us another option. For larger items you just use more dots. They can be used to attach a wide range of materials so may have applications for adding signs to buildings or other scenic details.

The range consists of glue dots and lines in different sizes which are either permanent, repositionable (but will become permanent) and low tack.

There is a website at www.gluedotsuk.co.uk for more details.

Club workshops.

The rocks workshop with Richard Turner has been completed. Take a look at Camp 93 next time you see it to see how the finished rocks are blended into the landscape.

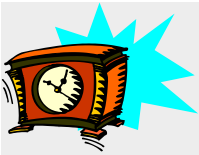
Modelling trees, hedges, grass and other green stuff by Paul. You can have a go at making trees from plastic trunks or natural material. April 27th.

Buildings and structures from plastic sheet by Pete Miller. Your chance to learn the professionals techniques: May 4 and 11th.

Water effects will be on June 8 and 15th.

Useful internet addresses:

www.abingdonbranch.co.uk	Information about the GWR Abingdon branch & model
www.cheshire.gov.uk/crewerailgateway	Crewe Rail Gateway project
www.class442.co.uk	class 442s
www.pendragonpublishing.co.uk/	Pendragon Publishing - publishers of "Backtrack" now have a website
www.therailwaycentre.com/	An excellent site for news of recent developments, including the latest on the withdrawal of the SWT "Wessex Electrics"
www.cdadson.freeserve.co.uk/HaylingIsland/	A dimensionally correct layout in P4 accurately depicting the terminus of a former Branch Line closed in 1963.



Club Diary

April	21-22nd	Saffron Street, Derby Exhibition
	27th	Workshop: trees, hedges and grass
May	4th	Workshop: Buildings from plastic sheet
	11th	Workshop: Buildings from plastic sheet
	25th	Railex Set Up
	26-27th	Railex 2007 Exhibition, Stoke Mandeville Stadium
June	8th	Workshop: Water
	15th	Workshop: Water
July	14th	CMRA Totally Interactive Modellers Event

Anything to sell?

Shed too full? Loft untidy? Too many un-used railway bits?

Then let the club second-hand sales team convert it to cash for you.

Sales tables will be available at Risex and Railex , 10% commission to the club.

Test track Evenings

April	6th
	20th
May	11th
June	1st
	22nd
July	13th

Additional evenings if space is available.

Have you logged on?

rdmrc.nildram.co.uk

There's all you need to know about the club and the website is frequently updated with details of future exhibitions and other events, the full club diary and photos of previous events.

There is also a good list of links but if you have any more or have any photos of our events you wish to share do contact Anthony our webmaster and will add them to the website.


STORE3