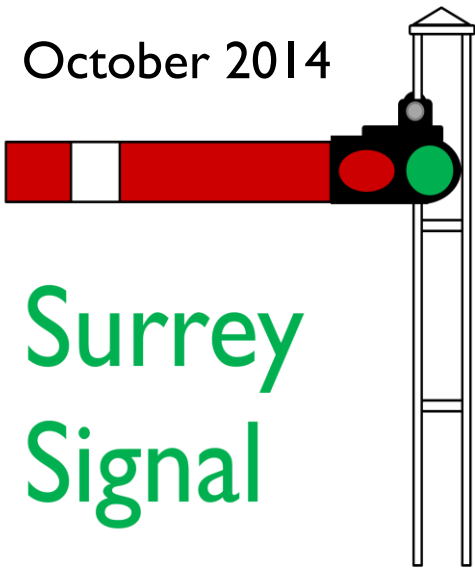


October 2014



# Surrey Signal

An occasional newsletter  
for the GIMRA Surrey Group



## Oval team triumphant (again)

Rapid progress on the Oval continues, driven by the impending G1MRA AGM where we shall show off our efforts to the wider membership.

On August 5<sup>th</sup> we brought all the boards back together at GMES. The quality of the workmanship was excellent, and Peter's 1:1 track plots had made the task pretty straightforward for most boards.



The next target was a full set up and trial run on the (reasonably level) grass near the GMES clubhouse - no need to pack under the trestles up as we had had to at the rally. The team convened early on 27<sup>th</sup> August without me since I couldn't get there until lunchtime. Much to my surprise, I got a text from Peter late morning to say that trains were running... By the time I got down there, the hard work was all finished.



An unexpected benefit of the 3D-printed track joiners is that the bevelled 'fishplate' can support a wheel as it goes between boards even if there is a bit of a gap in the rails. This has turned out to be important: the Oval is designed with a small gap between running boards to allow for alignment problems and on many boards the track had been cut flush with the board edge. The resulting gaps seem not to cause running problems, and provide a satisfying clickety-clack as the train goes by. Nevertheless, fettling continues.

Martin Hulse had been hard at work constructing the first turnouts. This is the crossover from the inner steaming bay to the inner running line.





The team got together again at GMES on 23<sup>rd</sup> September to fit some of the turnouts and check running quality.



By lunchtime, four turnouts and a passing loop were in place. Mike Bland ran his Mallard with teaks on the inner and Peter Jackman ran his Britannia with Southern's on the outer. They were simultaneously circulating at quite high speeds which soon exposed a few stretches of straight track near fishplate rail joints that needed extra screwed sleepers. Martin did the honours running around with a drill in one hand and a driver in the other. Roger Hayward brought his B4 and had a good run with a goods train.

In the afternoon there were some derailments through the crossover, perhaps because of a length of rail which needed more support. Martin has subsequently modified the rails accordingly.



Michael Wrottesley has recently completed one of the curved turnouts which we are using to ensure that the sidings at the front are as extensive as possible - reserving two lots 60-70cm of straight track for conventional turnouts would take out a lot of storage space. This will be fitted during setup at the AGM.

As you can see, Martin, Iuan, Michael and Mike have developed a 'human chain' approach to getting the oval back into the loft at Guildford. It certainly avoids those traffic jams on the stairs



## Arrangements for the AGM

The G1MRA AGM is on Saturday 25<sup>th</sup> October at Woking leisure centre: the Surrey Oval will be running. I have hired a van so as to avoid having to get multiple cars into the back of the leisure centre during the early morning setup frenzy. Here's the schedule.

- Friday 24<sup>th</sup> 14.00 - loading at GMES
- Saturday 25<sup>th</sup> 8:30 - unload at Woking and setup
- Saturday 25<sup>th</sup> 17.00 - knock down and load
- Sunday 26<sup>th</sup> 10.00 - unload and store at GMES

Entry at 8:30 will be by pass only (and the admission fee is still payable...) Passes have been arranged for the following: Tony Alderman, Martin Hearne, Mike Hensor, Peter Jackman, Adrian Johnstone, Ken Lowes, Ian Russell, Elizabeth Scott and Michael Wrottesley. Mike Bland, Ieuan Lewis and George Swallow have passes for other jobs and intend to join us when they can.



In previous years I have noticed that the tracks don't get much use at the AGM. We now have two running loops, and it would be a shame to have the Oval lie idle on this important day, so please bring an engine to run. During the formal AGM, the track will be in use and fully marshalled by Peter and Adrian, so you can safely leave stock with us if you want to join the debate, or continue running if you would rather play trains.

## Chairman's running day

Graham Colover, the current G1MRA chair, invited local groups to send a representative to a running day at his track on 20<sup>th</sup> September. G1MRA 'royalty' were out in force, with the President Francis Dobson and four Vice-Presidents: Dick Moger, along with our very own Peter Howland, Michael Wrottesley and Martin Hulse. A few committee members were also there



including Geoff Uren and Peter Wood. Representation from groups was a little thin: apart from me we had Ron Pointer from East Anglia, John Lindars from the North West, Charles Simon from the Swiss Group and Nick Wilder from Cornwall. Graham and Jacqui's hospitality is very generous, as those who went on the Surrey running day will remember: we had an excellent lunch.

Dick brought the prototype ARM1G, but lost a filler cap... Cue the great and the good (and me) rooting around in the grass trying to find it.



I don't think it ever did appear, but a successful running repair was made. Ron Pointer ran a heavily modified Lionel 'Hogwarts Castle' engine which he has successfully reworked into a plausible GWR model. These locomotives occasionally come up on eBay at low prices, and are ready-to-go radio control straight out of the box.

Nick Wilder brought a terrific coal fired Bulleid Pacific, believed to have been built by John Barrett. The engine had been bought at auction, and featured some pretty ham-fisted repairs that had to be made good.



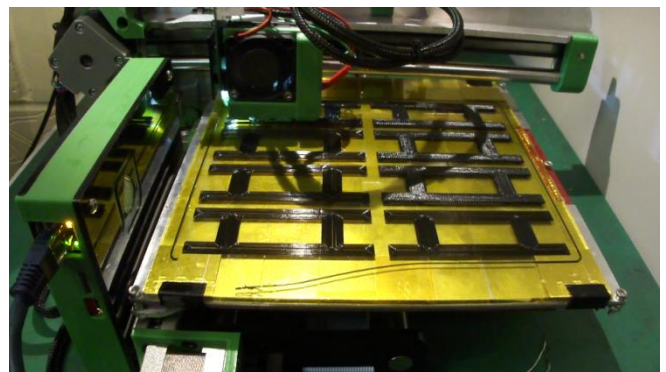
Nick experienced some odd behaviour whilst getting up steam: during the paraffin-soaked-charcoal phase,

the fire kept blowing out. After some head scratching, it turned out that the blower was on, and every time the boiler made some steam it extinguished the fire. Easily fixed, of course, and soon the engine was circulating the Colovers' immaculate garden, making all the right sounds and smells.



## Adventures in 3D

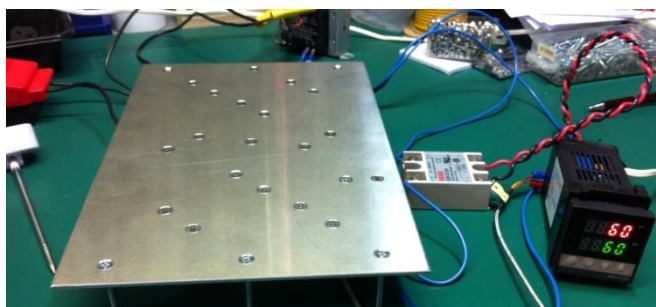
Peter Jackman has continued his exploration of 3D extruded-filament printing. The track joiners for the Oval have been made using James Parker's printer, which is an Ormerod supplied by Radio Spares. James has done quite a lot of modification to improve rigidity with metal parts and so on. Although the machine looks a bit flimsy compared to a traditional machine tool, the software features a sampling phase during which the computer measures rectilinear accuracy of the bed, and then applies compensation to the print head movements to ensure accuracy, even if the machine is not properly square. Remarkable. This is what it looks like in action.



The machine is presently in Peter's workshop, and several of us were able to see it working at Peter's GTG. Having access to a semi-commercial machine got Peter thinking, and he has been working towards a conversion for his big Wabeco CNC mill. A key feature of good 3D printers is the use of a heated bed, which ensures that the parts sit down properly and avoids the warping that can occur if the hot filament is cooled too quickly on contact with the base.

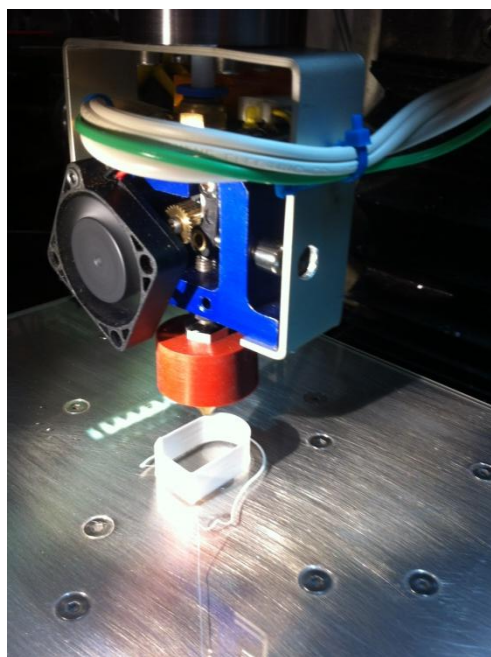


Peter has made his own heated bed using power resistors as heating elements under an aluminium plate. Thermal sensing is used to keep the bed at a steady temperature in use.



Extruded filament print heads comprise a heating chamber in which the filament is melted, a nozzle and a stepper motor that forces the filament through. They can be sourced directly from China for around £35-40 which makes constructing one from scratch rather pointless.

Peter's conversion is now working, and at the parameter tweaking stage. This is a photo of the first test run executing a calibration print. The head is mounted on a taper with a hollow drawbar, allowing the wiring to be kept away from the extruded plastic.



The quality of the produced items is really excellent. Peter had printed some 1:32 milk churns for Elizabeth's 'chocolate train' and although one can feel a grain if you run a finger nail across them, they look perfect.

## Gauge 1 at Guildford

The new Gauge 1 permanent track at Guildford is coming on rapidly. The framework for the baseboards has now been welded and painted : here is Roger

Hayward (the driving force behind the new track) inspecting the workmanship.



Post holes are now being drilled with an auger, and the layout should soon be out of the ground. A large order of Cliff Barker track will be collected at the AGM by Tony Rest. We hope to be able to have a Surrey meeting using the new track sometime in 2015.

Meantime, the 16mm/G1 team at Guildford would welcome new members and offers of help, both financial and practical. They meet every Monday evening at Guildford (except for Bank Holidays) and the existing 45mm circuit on the 16mm track will take many G1 locos.

## A tangled web

Now that we have track on the Oval, we must be much more careful when transporting and storing the boards. We're borrowing an idea from the NW Group who store the Withnell Junction boards track-to-track, with a sheet of hardboard between.

On September 17<sup>th</sup>, Peter and Adrian returned to B&Q Farnborough where all this started in January. We got hardboard sheets cut and then met up with Mike Hensor at GMES to do some finishing angle cuts.

The plan is to strap pairs of boards for storage together using two lengthwise webbing straps. Looking online, the cost of ready-made straps was uncomfortable, so I offered to make them. Here's 100m of webbing strap, awaiting fabrication.



Yes, I know that they're yellow: I like bright colours.

Harder to lose.



Webbing and buckles bought in bulk are rather cheap; the catch is that the buckles have to be attached by looping the webbing through and sewing the loose end back onto the strap. Fortunately a suitable machine tool was available. Note lights borrowed from lathe to enable me to see well enough to thread the needle.



## Peter Jackman's September GTG

Last month, we all converged on Peter's for his annual GTG. Alan England was able to join us: I brought my recently converted RC dock tank which Alan was able to run from his vantage point down on the patio. Tony Alderman ran his Bulleid which had been giving problems: it was a little frisky on Peter's tight bends.



Richard also ran a Bulleid: I think this is Richard's one not Tony's, but can't be sure.



We much appreciated Peter and Lesley's hospitality; many cakes were consumed. We had a very good turnout with lots of chat and exchange of expertise. I

managed to snap Martin apparently doing his Tommy Cooper impersonation whilst discussing performance with Tony (not like this, like that...)



## Gifts for the Oval

I took a trip to visit Stephen Hutchinson (recently of this parish, now residing in Sussex and ongoing Sutton MEC member). He had some Stroudley coaches that I was intending to buy; I also got a very nice LBSC brake van. After we'd done the transaction he gave me a box intended as a present for the Oval team.

It contained this very nice signal box and separate water crane which I think will fit well into the yard. It will have its first outing at the AGM. This is very generous of Stephen; he'll be at the AGM and hopefully running an engine so we'll have an opportunity to thank him.



Meanwhile, Mike Bland had been talking to Tenmille about our need for low-slung point levers that won't be squashed when we pack the boards away. They have very kindly given us a good discount on the levers, which is very much appreciated.

## Martin Hulse halfway round bend

Last year we sadly waved goodbye to Martin's glorious track at Lyncroft with a 'last train' event before track lifting.



Apart from full get-togethers, Martin often made the track available to those of us who need a quiet place to test out new engines and learn their eccentricities: my Chingford Express had its first run there and Elizabeth honed the performance of her J38 with Martin's advice.



Since moving to Great Bookham, there have been occasional intimations of a new track. A few weeks ago Martin gleefully told me that he was now halfway round the bend... I dropped by and took some photos. He is using a construction method suggested by Dick Moger, who is also building a new track. Martin makes a hole in the ground using a digging bar, then bashes in a length of scaffold pole. He then drops in a scaffolding base upside down. These have a screw for height adjustment, and can be had for about £5 each.



He is using a mixture of deck board and scaffold board to create a single track complete oval, and indeed he really is already halfway round the first bend:



## Adrian not yet round bend

Martin's avowed intent is to beat me to a complete loop which probably won't be hard since my track has been under construction for several years already...

However, the steamup bay is now down.



This is the first works' train. You may recognise Tony Hall-Patch's Diamond Jubilee commemorative wagon complete with his membership number that I now run.



The 1:32 scale navies were naturally rather fed up that I only gave them full size pliers to work with. They have downed tools in protest, so don't expect a grand opening any time soon.

## Peter Howland's October GTG

### A swansong



Peter Howland's track at Woking has hosted national and local get-togethers since the 1960's. Soon it will be decommissioned, and the October 2014 Surrey group visit was our last scheduled public run.

It was a little wet, but we had great fun, and excellent cakes, as we always do.





I believe Peter joined G1MRA in 1960 (see NL&J 46) and gets the first of 692 personal mentions in the NL&J in February 1961 where his 'Newbury' engine is commended. He has been a Vice-President of the association for twenty years.

To mark the occasion, we took a group photograph. I have rather incompetently dropped Martin in, even though in reality he was behind the lens.



## Working poppet valves in G1

Michael brought an historic Gauge 1 model with him to Peter's GTG: the engine's previous owner was Tony Hall-Patch who had run it at Peter Howland's, so it seemed a fitting tribute.



The engine is LNWR Cloughton 4-6-0 'Patience' No 5970 as rebuilt by the LMS with a larger boiler and Caprotti poppet valve gear. It is believed to have been built in about 1937 by a Huddersfield mill engineer. Its first known owner was Cyril Munton, a G1MRA member in the fifties. The engine has two cylinders but with poppet valves which are sprung shut, with two valves for each valve chest, one for the inlet and one for the exhaust. The final drive to the driving wheels is achieved by sprocket chain. The engine is reversed through a slip cam. It has a locomotive type boiler but is at present meths fired.



The model was exhibited at the 2004 Fosse display of historic engines, from which the text above was extracted.

NL&J 133 contains a letter from Tony with technical details.

## Royal Holloway in 2015



This rather striking building is the Victorian Boiler House at Royal Holloway, built around 1880.

Steam for heating was conveyed via pipes in a tunnel to the main building.

The current heating plant only occupies a small part of the space. The rest has recently been lightly renovated, and we have been offered it as our venue for the 2015 Science Fair, which will be on Saturday 7<sup>th</sup> March. As well as the Oval, we're hoping to have a display of 3D printing, a CNC mill and possibly some material on mechanical computers. There is direct vehicle access, and there are no stairs to climb.

## Endnote: Ribbleshead viaduct



Above: October 18<sup>th</sup> 2014: LMS Jubilee 5699 *Galatea* crosses Ribbleshead Viaduct working extremely hard to get 11 coaches and a trailing class 47 up the long drag. Below: later the same day heading south into Appleby to take water.



## Frontpiece - images from Sutton

Above: Stephen Hutchinson's exquisite SECR C-class from the Paul Forsyth design; below: Adrian's J69 (a Curly Lawrence Chingford Express) emerges from under the footbridge.



# SURREY G1MRA GROUP

2014 fixture list



**Surrey group meets second Tuesday afternoons**  
Please refer to your membership list for venues

Tue 14 Jan	Sutton MEC	13.00	
Tue 11 Feb	Ken Lowes	13.00	
Sat 15 Feb	Bacon Butty Bash, Durrington		
Sun 23 Feb	Surrey Oval dry run day		All day
Sat 1 Mar	Royal Holloway Science Festival		All day; setup Friday
Tue 18 Mar	Mike Bland	13.00	Note third Tuesday
Tue 8 Apr	Michael Wrottesley	13.00	
Sat 10 May	ALSRM show with Anglia Roads, Reading		
Tue 13 May	Peter Howland	14.00	
Sun 1 Jun	Graham Colover	14.00	
Sun 8 Jun	Royal Holloway Garden Party		Setup from 9.30; public 13.00-17.30
Tue 10 Jun	Ken Lowes	13.00	
Sat 14 Jun	G1MRA spring meeting, Shepshed near Loughborough		
Sat 28 Jun	Stonehenge Summer Solstice Sausage Sizzle, Andover		
Sat 5 Jul - Sun 6 Jul	GMES rally Guildford		Setup Friday; public all weekend
Tue 8 Jul	Mike Bland	14.00	
Sat 19 Jul	Bekonscot		
Tue 12 Aug	Bob Boorman	13.00	
Tue 9 Sep	Peter Jackman	13.00	
Tue 14 Oct	Peter Howland	14.00	
Sat 25 Oct	G1MRA AGM Woking		Setup from 8.30
Tue 11 Nov	Sutton MEC	13.00	
Tue 9 Dec	Bob Boorman	13.00	
Fri 12 Dec - Sun 14 Dec	Model Engineer Exhibition Esher; setup Thursday from 9.30		

Alan England            01932 400282    [alan.England@ntlworld.com](mailto:alan.England@ntlworld.com)  
Adrian Johnstone      01784 443425    [a.johnstone@rhul.ac.uk](mailto:a.johnstone@rhul.ac.uk)