MIXED TRAFFIC

226 January 2022

The 3mm Society Magazine

BR RESEARCH TRIBOMETER TEST TRAIN

Turn to “Trials and Tribulations” on page 4 to find how Dave Bates built Class 24 972o1 and its Laboratory, Auto Trailer and Test vehicles. *Dave Bates*

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Contents

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Cover

Geoff Helliwell describes the development of this near-RTR British Railways Class 08 Diesel Shunter, which has a Lincoln Locos 3D-printed body and his own outside-cranked mechanism, on page 14.

EDITORIAL

When I first had a TT railway in the early sixties and took my first tentative steps towards becoming a real modeller and not just a boy with a train set, the layouts I read about in the model magazines were largely Triang-based, with flexible track and some K's, GEM and Esanel white-metal kits. At this time pioneers such as Ken Garrett and Morris Thomson were working on truer track gauges, while people like Tony Birch, Jas Millham and others were building from scratch or converting inventively. How clearly I remember my surprise on seeing Morris's 14.2mm track and Jas's part-completed and very wonderful scratchbuilt B12/3 at the Society's Inaugural General Meeting at Keen House in 1965.

Then came the end of Triang TT and our Society's splendid struggle to keep 3mm scale viable with its own range of kits and components, augmenting and then outstripping the surviving GEM and Bec ranges. In the 1970s came etched kits, and 3mm became – like 2mm, EM and S4 – largely a do-it-yourself scale. In recent years still newer technologies such as laser-cutting and 3D printing have meant that to an extent some of the hard-earned craft skills honed soldering etchings or making a loco, wagon or building from scratch have become redundant (however some of us old hands may regret it). It can now be extremely pleasurable and far less time-consuming to add some detail to a Lincoln Locos 3D body, and many members owe a huge debt of gratitude to Lenny Seeney for his indefatigable work.

All of these interesting and very different takes on 3mm modelling are part of our long 3mm story, resulting in models which give pleasure to those who create them, and it's my pleasure to feature all of them in these pages. Don't hesitate to send me the story of yours.

A RECYCLED PMV

VICTOR HALL builds an LMS Parcels Van

Having exhausted my stock of unbuilt kits during lockdown, I looked for something to build. My solitary parcels van needed a companion and the distinctive LMS 42ft Parcels and Miscellaneous Van, with its flat bodysides, was an ideal candidate. Furthermore, I had a dimensioned drawing which I had reduced to 3mm scale.

The LMS built 164 of these vans between 1935 and 1937 and numbered them 37775-37939. A prominent feature was that the ends had full-height, double doors, and a drop-down, bottom flap to create a loading ramp. They lasted until the 1980s, often in departmental service.

The body was made from 20-thou Plastikard, cutting out the windows and scoring the door joints, as shown in the photograph opposite. Unusually, the body sides are identical, so that the left-hand door of each pair always includes the droplight. Originally, these vans had four sets of horizontal beading on the sides, but over the years much of this was removed. I decided to fit only the beading that ran above and below the windows, using 10-thou x 20-thou plastic strip.

I laminated the sides with a second layer of Plastikard, cutting the window openings in the second layer much larger to take the glazing, then clamped them between two pieces of wood to prevent warping as the solvent hardened. The ends were also made as laminations, trimming the tops to match the roof profile. The strapping was made from 10-thou x 20-thou Microstrip. Handles, handrails and the end-door locking mechanism were fashioned from 0.3mm wire.

Some time ago, I had broken up a rather poor, home-made coach and this provided the chassis and roof – both from the Society Ian Kirk GWR B-Set mouldings. Fortunately, the bogie pivots were the correct distance from the

headstocks so I only had to cut a piece out of the centre to reduce the overall length. I fashioned the truss rods from 1mm-square strip and glued them around the battery box and behind the solebar. Etched brake wheels were added and footsteps, from 1mm plastic angle, were positioned underneath the double doors. On the prototype, the buffer heads were flat at the top, to support the bottom end-door flap, so this feature was reproduced with a few strokes of a file. A set of compensated 9ft-wb bogie etchings and white-metal LMS sideframes completed the chassis.

At this stage I painted the components: weathered black for the underframe and ends and BR maroon for the sides. Clear plastic was used for the window glazing, scored to represent the security bars (vertical in the windows and horizontal in the door droplights). I had some spare droplight-frame etchings so fitted these to the door window apertures. Lettering was adapted from 3SMR Modelmaster coach transfers, and the sides given a coat of satin varnish. The body was assembled, using additional lateral "bulkheads" to add strength, and attached to the chassis.

The roof already had ventilators, which were more or less in the right place, so I removed sections from each end and glued it to the body. To complete the model, I fitted DG couplings and vacuum pipes made from dressmakers' pins and insulated sleeving.

Of course, I could have bought a kit (the old Esanel one) for this prototype, but I'm not a fan of heavy white-metal rolling stock – and anyway, there is something very satisfying about a home-made model.

Photographs by Victor Hall

TRIALS AND TRIBULATIONS

DAVE BATES builds the BR Research Tribometer Test Train

The BR Research Division based at the Railway Technical Centre in Derby has always been a place of interest, especially as its operational fleet included a wide range of unusual vehicles. Some were specially-commissioned builds, but most were conversions from redundant capital stock, and motive power was an eclectic mix of cast-offs, which in the early 1970s included a pair of Class 17 Claytons, a Class 23 Baby Deltic and a Class 28 Metrovick Co-Bo.

One of its principal test trains, which ventured far and wide across the network from the mid 1970s to the mid 1990s, was the Tribology section's Tribometer Test Train. It was conceived to increase the understanding of the behaviour of friction at the wheel/rail interface, initially validating laboratory test results in the real world environment. A great deal of valuable scientific data was amassed, critical to systems designers looking to exploit advances in air braking to support ever higher speeds and reduced stopping distances. A major legacy of the work of this test train is the Wheel Slide Protection System Enhancement Rig (WSPER), a software/electro/mechanical brake system and WSP equipment modelling rig that still exists and has been utilised by most of the major WSP system suppliers. It is the Tribometer Test Train and the R&DD departmental Class 24, 97201 (24061), which famously powered the train from 1975 till 1987 which are the models featured in this article, but more of them later.

This test train consisted of three vehicles, Laboratory 11 RDB975046 and an Auto Trailer RDB975076, both converted from redundant Mk 1 half brakes, and the Tribometer Test Vehicle RDB999990, a conversion from a new-build COV-AB long-wheelbase van. RDB999990 was coupled between Lab 11 and the Auto Trailer and featured through gangways, and while unbraked from a conventional braking perspective, with a through brake pipe, it did have wheelset brakes which were controlled from Lab 11. The wheelsets were instrumented and controlled and monitored from Lab 11 and specially formulated fluid could be sprayed on to the rail head to lower the available adhesion artificially during braking. This vehicle could also be used to measure the naturally-occurring adhesion levels at the rail head and carried out extensive network surveys, especially during the leaf-fall season. The nerve centre was Lab 11, where the control and monitoring equipment was located, with a bank of chart recorders capturing data routed through racks of signal amplifiers, through which was fed the instrumentation feeds from RDB999990.

Happily, 97201 was saved and has been an operational loco on heritage lines. I believe it is currently at the North Yorkshire Moors Railway, back as D5061. Lab 11 and the Auto Trailer exist in preservation. Both have been moved about and I believe the Auto Trailer is being converted back to a BSK. The COV-AB, though, was scrapped.

RDB975046 Laboratory 11 (originally MkI BSK 34249)

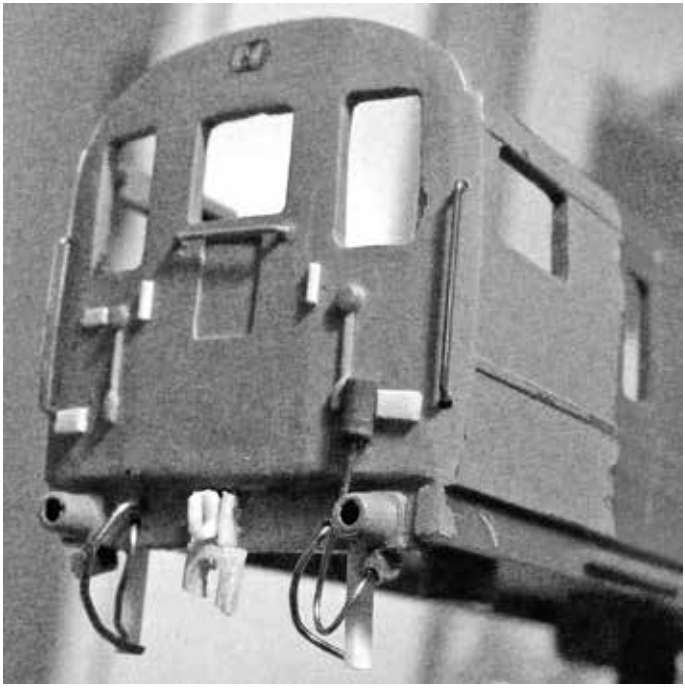
This was converted from a built but unpainted second-hand Kitmaster Brake Second from my bits box. The roof was prised off and the glazing popped out. Referring to photographs, the ends were kit-bashed to match the appropriate configuration. A representative interior was constructed from Plastikard sheet, with the compartments removed to create the open saloon which was where the racks of signal amplifiers and chart recorders were located. A representative diesel generator set was built from offcuts and housed in the van area. Externally, an air intake grill for this generator was required. Scaling from photos, a cut out was made and individual Microstrip louvres were bonded in place. It currently runs on BR1 bogies, which is correct for the mid 1970s, but was re-bogied with B4s, certainly by 1980, so ultimately I intend to have a set of B4 bogies to run it on. The same applies to the Auto Trailer.

RDB999990 Tribometer Test Vehicle

The COV-AB van body kit was kindly given to me by Phil Mason. The chassis was a Society item, as were the w-irons. I ended up using 10.5mm-diameter wheels as I needed to raise the vehicle to match up the van's red livery element with the two

Mk 1 coaches. This vehicle was also built with experimental "Taperlight" suspension units whose leaf springs were much longer than standard, and had a bracket around the top of each axlebox to support a pair of vertical dampers. I made a representation of the dampers and bracket from Plastruct and Plastikard but decided to leave the standard leaf springs in place. The gangway connections were scratchbuilt from Plastikard, scaled off photos, as far as was practical, and body-end details added, again with reference to photos. The roof was formed from 0.25mm Plastikard sheet. Couplings between this vehicle and the two Mk 1s are bespoke bar couplers which are less noticeable than Triang ones.

RDB975076 Auto Trailer (originally Mk 1 BSK 34500)



Another Kitmaster Brake Second, this one was an original unbuilt kit. I required an unbuilt kit because I had to cut out the appropriate cab windows on the body sides and body end at the van end, and there was a great deal of kit-bashing of the body ends as well as modelling the revised details, all a lot easier to do with flat kit parts. As with Lab 11, a rudimentary interior was constructed, including the cab, but I have been unable to find the interior configuration details for this vehicle to go any further with detailing the interior. As the test train is a self contained "unit", I decided against a Triang coupling at the outer end and modelled a fully-detailed buffer-beam area including a rudimentary drop-head buckeye coupler. The cab windscreens and side windows were flush glazed from 0.6mm-thick clear plastic sheet.

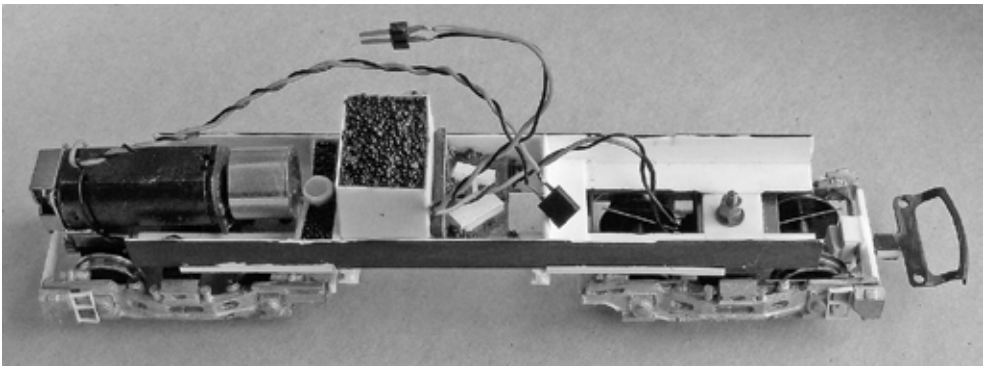
97201 (Class 24, formerly D5061 and 24061)

Probably the most well known of all the illustrious Tribometer Train motive power, 24061 was withdrawn from revenue traffic in 1975 and selected by BR Research as a more reliable replacement for the Co-Bo and Baby Deltic. It entered Departmental Stock as ADB968007 and remained in scruffy, battered BR blue until 1980 when it was repainted in the attractive red-on-blue BR Research livery, although it had been renumbered into the later departmental Class 97 series as 97201 when still in blue livery in 1979. It was also a favourite on the Open Day circuit during the 1980s and carried a temporary nameplate, *Experiment*, on those occasions.

The body is a Lenny Seeney high-fidelity resin moulding from a 3D print master and is very crisp. I added additional detailing following photographic evidence, as I had for my Class 25/1, described in *Mixed Traffic 223*. I also completely removed the as-built condition bodyside solebar side skirts and re-built to the later-in-life open-solebar configuration. Scratchbuilt underframe fuel and water tanks and battery boxes were made from Plastikard and packed with liquid lead. As this loco will only power the Tribometer Train, I decided only to fit a Triang tension lock coupling loop at one end. The other end has a fully-populated buffer beam with two main res air pipes, blue star control air pipes, blue star electrical control jumper, socket and dummy receptacle, vacuum brake pipe, steam pipe and finally a screw shackle. All these items were made from 0.3, 0.4 and 0.5mm nickel-silver wire and Microstrip or Plastikard offcuts. All the flush glazing was made from 0.6mm-thick transparent sheet.

The chassis was scratchbuilt from Plastruct L sections and incorporates a BullAnt power bogie and an etched-brass fold-up coach bogie (trailer) featuring

all-wheel electrical pick-ups. The cosmetic bogie side frames were sourced from the 3SMR Class 25/3 etched-brass and white-metal kit. An integral box filled with Liquid Lead helped improve traction from “non-existent” to “vaguely useful”. BullAnts in locomotives are not ideal for traction, so one of the reasons for modelling 97201 and not one of the traffic 24s surviving in the late 1970s was that it would not be much use on freight trains. Its lack of pulling power was a compelling reason to try modelling a BR Research test train.



Livery Notes

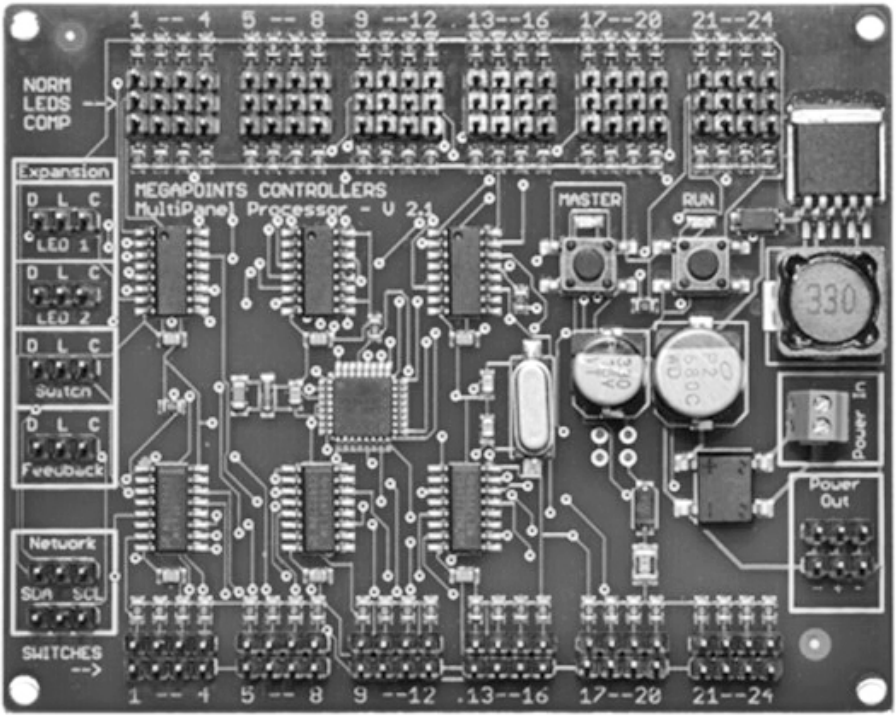
All of the vehicles have been finished in the BR Research red-on-blue livery. This dates 97201 from 1980 onwards. However, the two Mk 1s carried that livery from the mid 1970s and, to the best of my knowledge, the COV-AB from the late 1970s onwards. The COV-AB was finished in freight-stock bauxite from new, and ran in that condition for a few years, period photographs show. White livery lining and BR Research decals were 4mm scale items sourced from Railtec Transfers. The lining seems to be okay for 3mm scale, but the Tribometer Train decal pack being too large resulted in a number of compromises having to be made in the positioning on the Mk 1s – and I had to omit some of the information panels from the COV-AB.

AN ELECTRONIC CONTROL SYSTEM

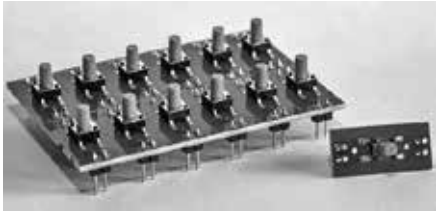
MIKE BROWN describes MegaPoints Controllers' equipment

There are various electronic systems available to control model railway equipment that requires movement, such as points (turnouts or switches), signals, uncouplers and crossing gates. The system that I have installed is by MegaPoints Controllers. This system will control, with the dedicated board, servos, stall motors, solenoids and relays and all connections are by plug and socket so there is no soldering involved at all.

The heart of the system is the Multipanel Control Board which is the "brain" controlling the dedicated boards.



The row of connectors along the bottom of the board is where the switch harnesses are plugged in. The switches are supplied as a "biscuit" of 12 switches which you snap off to use.



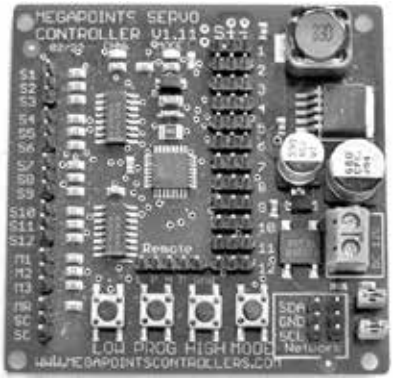
"Biscuit" and individual switch

The connections along the top of the board are for LEDs that indicate what is happening when the switches are operated.

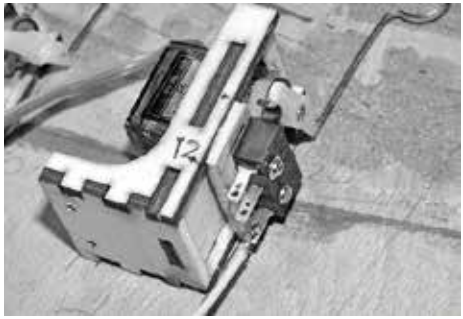
Red and Green LEDs with their harnesses which plug into the top sockets of the Multi Panel control board

There are specific boards to enable servos, solenoids, stall motors or relays to operate. They are connected to the main panel by just one 3-core servo lead.

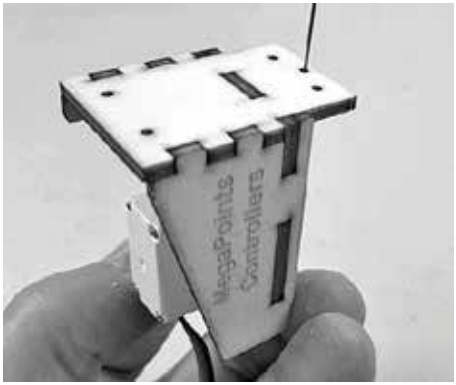
This lead connects the Multipanel Control Board to the Servo Control Panel which is shown at the top of the next column. The servos are plugged into the sockets just to the right of centre. The link to the multi panel is in the lower right corner and is marked SDA, GND, SCL. This is the network socket.



Below is a surface servo mount on top of the baseboard with servo and a microswitch attached to switch point frog polarity.



Servos can also be mounted below the baseboard as shown below.



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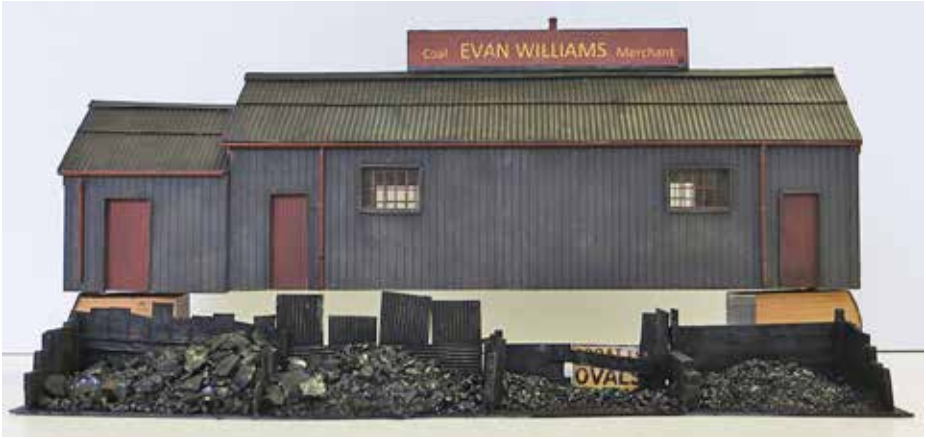
BUILDINGS FOR PORTHDINLLAEN

Cambrian and Great Western signal boxes and coal merchant's and goods yard buildings made by Mike Corp for his new layout, set on the Lleyn Peninsula. *Mike Corp*



STEDHAM MILL

There's a lot of telling detail in the level crossing and goods yard scenes on the latest layout from the South Downs & Solent Group. *Paul Hopkins*

IN SOUTHWELL CENTRAL COAL YARD

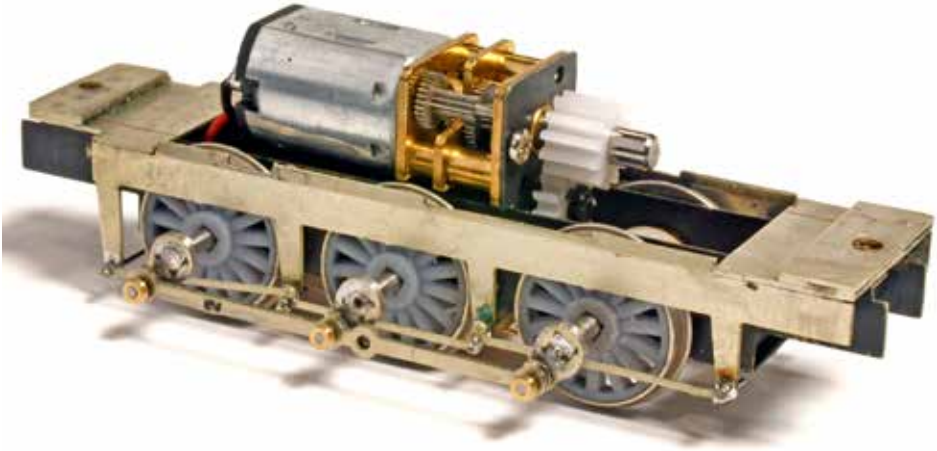
In years gone by railway yards had a variety of equipment and down-at-heel buildings which it's a pleasure to improvise quite simply from a range of materials and oddments. *John Sutton*

Model evolution: (left to right) the Triang T95, a modified Triang body on a Worsley Works chassis built by the late Peter Bossom, a complete Worsley kit built by Geoff Helliwell and the near-RTR version created by Lenny Seeney of Lincoln Locos (the 3D printed body) and Geoff Helliwell (the mechanism).

THE BR 08 DIESEL SHUNTER
TRIANG RTR TO HELLIWELL/SEENEY N-RTR

The complete, ready-to-operate chassis features an N20 motor, SQ driving wheels and specially-created etched outside cranks.

Geoff Helliwell



3mm CLASS 08 SHUNTERS

GEOFF HELLIWELL tells their story

When Triang realised that their TT models were selling well, they looked for ways to expand the range. Putting a different body on the Jinty chassis made sense, but presumably they decided that they needed a modern loco and not just another tank engine. The result of course was the T95 BR Diesel Shunter (later Class 08), which was a wonderful piece of patternmaking, but with some huge compromises. The body had to fit over the standard Triang motor, so is much too wide over the bonnet. It is nevertheless beautifully and accurately detailed. The other glaring error is the lack of outside frames and an incorrect wheelbase, which is far too long. Whilst it is easy to see why Triang (who were after all just marketing a toy train) did it this way, in very different scale modelling terms sixty years later the result is something of an abomination.

Until fairly recently, there have not been many attempts to put things right, but the late Stewart Hine did grasp the nettle back in 1980 by building an accurate chassis and doing a cut-and-shut conversion of the body. Re-reading his article in *Mixed Traffic 59*, I was surprised to learn that at the time he had floated the idea of a scale chassis kit and had nil response from members! Consequently, in those days the only way to imagine that Triang's offering actually looked like an 08 was to look through beer goggles at a distance of a hundred yards!

It was to be many years before Allen Doherty took up the idea of a chassis kit to use with the Triang version, and a very fine job he did too. The late Peter Bossom built one, presumably using Stewart's article as guidance. I photographed the result on Hoath Hill when we did a photo-shoot some ten years ago. Knowing that Allen had also done a complete kit, I wrongly assumed that I was looking at a fully kit-built model. Once enlightened, I decided to buy a chassis kit of my own. Many of Allen's products are "scratch-aids", but the 08 chassis is very well thought out with some very cleverly-designed multi-layer etches for the springs and axleboxes. I can't remember why, but I then decided to buy the body kit to go with it. Though not really for beginners, it too is one of the best designed kits I have built. I found that the ends of the frames were too long but then realised that they had been designed to fit the Triang body (whether I had got the wrong chassis kit and there is a different one to fit the etched body, I don't know).

Though not an easy kit to build, it isn't complicated, but the multitude of hatches, panels and toolboxes make it an exercise in soldering skill. It is a kit which produces a very high quality model, but may be beyond the scope of those yet to achieve the necessary skills. I used my resistance soldering iron, but I take my hat off to Chris Heeps who has built one using a conventional iron (as others have, presumably). One thing that made it a lot easier for me was the discovery that 145º "detailing" solder was far better for etched kits than standard 60-40 electrical solder. It flows so much more smoothly and doesn't form blobs.

Finding a way to supply affordable locos for those who don't have the skills to build them has prompted a lot of discussion over recent years, and from that came the concept of "nearly ready-to-run" (N-RTR). It occurred to me that the 08 would be the ideal loco for such a project, but since there are high quality RTR models of 08s in other scales, no one had designed one for 3D printing. I looked long and hard at the Shapeways website, but all I could find was a set of springs and axleboxes. Lenny Seeney brought out his Class 03, so I fixed on that as an N-RTR project (see *Mixed Traffic 225*) – and then, only a few months later, he produced an 08 as well. Since by now I had a proven design for a mechanism, this was a loco I had to do as N-RTR.

What was needed was a method of making self-quartering outside cranks that didn't add too much extra width. This ruled out plastic. I bought a set of Markits extended axles, which might be fine for 12mm narrow-gauge in 4mm scale but are far too long for my liking to use in 3mm locos, and, in any case, wheels and axles from Markits would add far too much to the cost. I then hit on the idea of using a multi-layer etched crank. Originally supposed to be four layers (two for the crank and two for the rear boss), I found there was only room for two. The square in the middle has tiny recesses in each corner that I describe as a bit like Mickey Mouse ears. These are used to locate a punch made by centre drilling the end of SQ series extended axles to give four points at the corners. I tin the parts, assemble them on the punch and then apply heat to sweat them together. Once the crankpin is fitted, they can be pressed on to the end of the axle and again soldered on. The axlebox cut-outs in the outside frames are only 2mm wide, while the square end of the axles is nearer 3mm across the corners, so they had to be turned down, leaving just enough of the square to mount the wheels and the cranks.

With all the technical issues dealt with in principle, I designed artwork for a test etch, which went together okay but needed a few alterations. Nevertheless, it assured me that what I had in mind worked and could be built in quantity. I therefore asked for expressions of interest from members and within a few days had customers for twenty locos. I closed the order book at this point as this was my self-imposed limit. As it happened I didn't receive many further enquiries. Having just done a batch of Hymeks (which were supposed to be a quick win!) I then spent the autumn assembling the 08 mechanisms while Lenny and his printers had a well earned break.

The upper photograph opposite shows the four stages in the 3mm Class 08 story, from well-loved Triang toy to three different high-quality models. In the real world, no other class of locomotive has lasted so long in service and been in such widespread use on British railways as the 08 has, and I hope that will be reflected in model form much more in the future.

With so many variations in livery and fittings, there is a place for one on just about any post-war layout, to add character to the scruffy corners of goods yards.

TO INSPIRE US

The work of long-time members

It's good to remember the work of members no longer with us. Ynysybwl Signal Box is a characteristic handbuilt model by the late Peter Gentle, whose exhibition layouts Mullion and Minsterley gave so much pleasure to so many and whose advice and encouragement were so freely given.

The late Don Hanson, a West Country stalwart, was another very accomplished modeller. These Great Western vans were built from early etched kits.

THE LOFT LAYOUT'S LOCOS

CHRIS NEW describes some vintage models

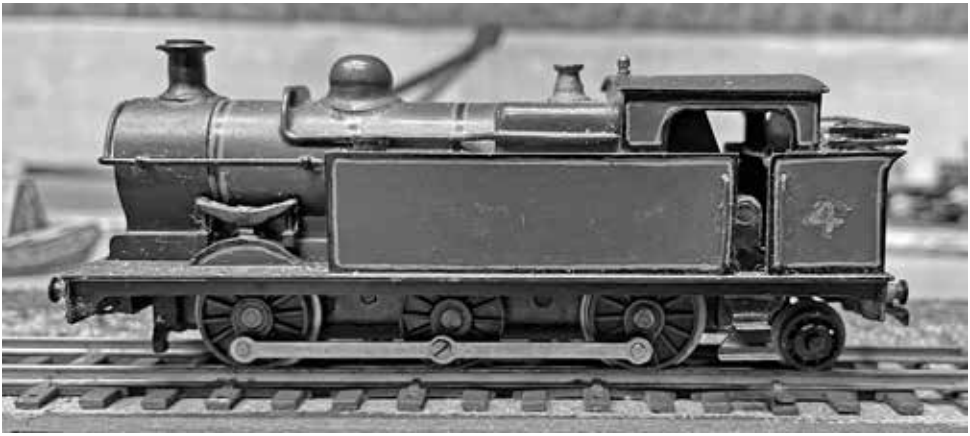
My layout, first described in *Mixed Traffic 219* (April 2020), was inherited from my grandfather. I don't remember much about him (apparently he didn't like children) so I know very little of the history of the collection. He operated five Triang Diesel Multiple Units and fourteen locomotives, no two the same, numbered between 1 and 20, with a few of the sequence missing. Two of the missing locomotives are Numbers 5 and 10, so it was therefore particularly interesting to find that another Society member has a pannier tank body Number 5 and a 4-4-2 County Tank with identical livery bearing the number 10. It would be interesting if any of the others missing could be traced.

All the railway's locomotives are painted in a house livery of green with black-and-orange lining and a running number in the style of the original Thomas the Tank engine stories, and I thought it might be of interest to readers to illustrate some of them. Unfortunately it has not been possible to find their original source, but we know they were all acquired around 1970 in the Twickenham area and all run on Triang driving wheels, either in scratchbuilt brass chassis or Triang ones, and we believe they were originally sold by Eames of Reading, who undertook commissions and had a range of ready-to-run locomotives in the 1960s, based on Triang mechanisms or bespoke chassis with Triang motors and wheels. Other members of the South Downs & Solent Group have examples of a number of GWR and SR locomotives, all with the same construction style.

Most of my Grandfather's locomotives are based on GWR types: No 1, for instance, is an open-cab saddle tank, No 2 a 48XX 0-4-2T and Nos 6 and 19 56XX 0-6-2Ts. No 12, though, is inspired by North Eastern Pacific Tanks.

0-6-0ST No 1

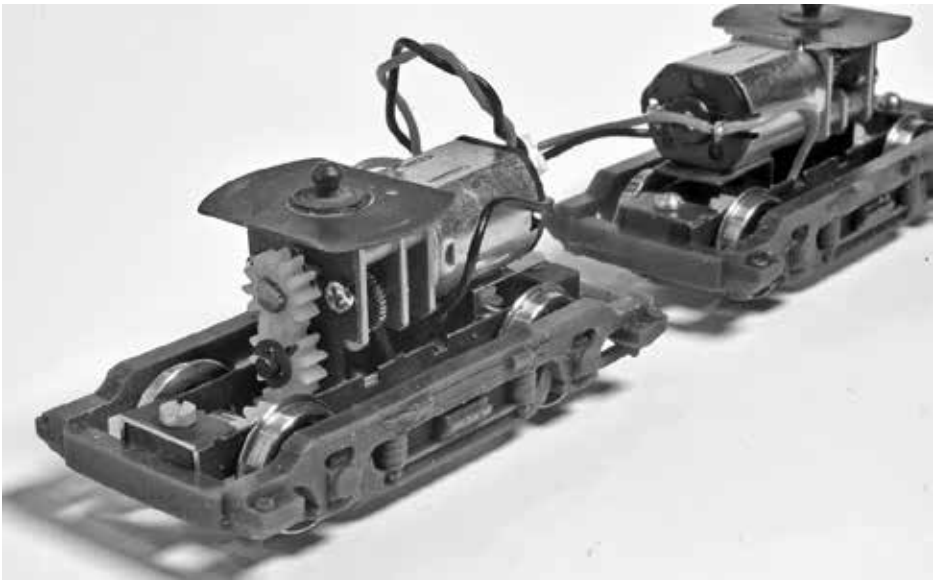
0-4-2T No 2



0-6-2T No 4 is based on the Rhymney Railway type the GWR acquired at the Grouping

Nos 14 and 18 are Prairie Tanks, the first a Triang one. Nos 7 and 8 are slightly adapted Triang Jinties and No 14 a diesel shunter. Perhaps the most unusual member of the stud is No 20, based on the SECR Class H 0-4-4T.

WHAT'S NEW



Geoff Helliwell has sent these photographs of the limited-run N-RTR Hymek project, a joint venture with Lincoln Locos. "Lenny Seeney's body print is every bit as good as the Class 03," he writes, "and he has done a fantastic job producing one-piece side frames for the power bogies." It would be good to hear what members who have bought one of these enterprising models think of it

FREE 3D-PRINT SOFTWARE
Jonathan Duffett

Software for high-fidelity wagon kits designed by Jonathan Duffett for 3D printing comes as a free download from *www.thingiverse.com* (enter ironmink in the search box at the top).

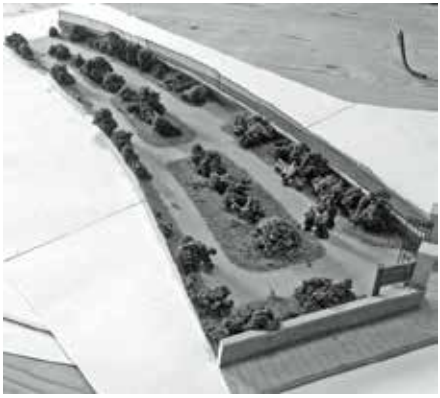
Once you've installed the software, you can print as many wagons as you like in whatever scale you like. For the highest levels of detail a resin printer is recommended. Types already available in a growing range include various iron ore hoppers, coil carriers, a diesel brake tender, assorted Palbricks and the amazing Conflat LD whose construction in etchings or Plastikard would be the stuff of nightmares. Jonathan Duffett is "looking at unusual and less-modelled types for projects as they're unlikely to be produced by any commercial enterprise."

For further information contact
jonnyduffett@icloud.com

4mm-scale Conflat LD by Tim Shackleton

BLASTPIPE

Following your October Editorial challenge about "telling detail", here is a selection of things that might be of interest. The first are GWR stables, made from card. I haven't seen many of these modelled. Next is a back yard with a mangle (and I really need to add a tin bath, hanging on wall). My "Invisible Park" fits behind viaducts on my layout. Typical of small public parks in urban areas, it is not visible from normal viewing angles, but a necessary part of the visual texture of the layout. Besides it was fun to model.



The last picture (next page) shows a group of assorted horse-drawn wagons, vans and handcarts. This is easy modelling in

Plastikard. These are simple background models, typical of the Edwardian period.

It is always a pleasure to get *Mixed Traffic* and I thought the latest was an exceptionally good edition.

Howard Love
Brittany

In response to your October Editorial I believe that how much detail to include on a model (generally locos in my case) depends very much on your personal benchmark. For many, that seems to be "looks good at normal viewing distance". However, after spending pretty much my entire working life as an industrial photographer, my benchmark is quite different. For me the model has to look good in a pin-sharp photograph. This results in not just the level of detail required being higher, but the quality of the finish as well. I nevertheless have great admiration for those who are able to get models looking good with a more impressionistic approach – though I have in the past been accused by one very skilled impressionist practitioner of being "cruel" to his models when photographing them.

To go into more detail about, er, detail. When considering whether to include something, I first have to decide whether I can actually make (or otherwise acquire) the relevant part. If it can't really be left off, quite often I will happily be impressionistic, boiler backheads being a good example. Whether or not to include rivet detail needs a similarly pragmatic approach. How visible were they on the prototype? Can they be made near enough to scale? On tender sides, rivets can be quite visible but, on the other hand, not along the bottom edge of a GW tender. Rivets on cab sides tend to stand out as being over scale, so maybe leave them off. Smokebox wrappers and buffers beams look so much better with rivet detail.

When it comes to brake gear on a loco, my view is that the axle spacing has quite a big influence. It is less important to fit brake gear on locos with closely-spaced axles. When axles are widely spaced an empty gap shouts out that something is missing. An alternative view is that few would omit brakes on a wagon so why leave them off a loco?

Finish is also important. I don't get on at all well with painting large areas with a brush. I just don't get the smooth look I am after. I also weather everything to a greater or lesser degree and finish with a semi-matt varnish. Real railway locos and stock lost the shine very quickly, but even when straight out of the paint shop the way they reflected light was quite different from the way a model reflects light. On the real thing shine says "newly-painted", but on a model it says "model".

Geoff Helliwell
Hartley Wintney

I exhibited my new layout Stedham Mill at Bexhill, with Les Andrews and John Wakeman helping. During the show we arranged a small celebration of the work of the late Peter Bossom, and had some of the models he had made on display and running on the layout. It was well received. Many knew Peter and everyone we spoke to made complimentary comments about him.

We exhibited Portsea at The Great Electric Train show in October. The operators on the two days were co-builder John Wakeman, Caroline Cleaveley, Vic Freemantle, Phill Hutchings, Simon Mitchell, Robert Shrives, Peter Stratford,

Kevin West and myself: so a big thank you to all of the team for making it a most enjoyable event. It was one of the largest model railway exhibitions to be held since Covid regulations were relaxed. Visitor numbers seemed quite good and the exhibition was busy on both days.

Paul Hopkins
Emsworth, Hampshire

ELECTRONIC CONTROL

From page 10

The servo mounts shown on page 10 are supplied as a flat pack of 12 units which you have to assemble. The servos are available separately.

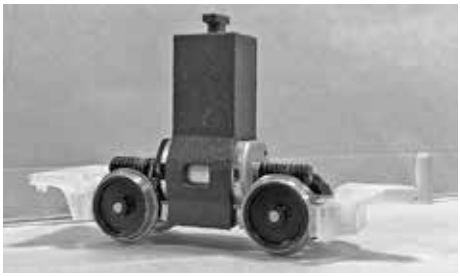
To assist in setting up the servo movement, a remote set-up panel and lead is available. This saves working on the panel when it is mounted under the baseboard.

The only problem I have encountered was that testing a loco about 30 years old on the layout caused about six servos to overdrive and bend their control wires because its unsuppressed motor caused interference.

If you would like to find out more, manuals and installation videos are available to download from MegaPoints Controllers' website:
https://megapointscontrollers.co.uk/shop/?v=79cba1185463

TAIL LAMP

NPO AT WORK



New Products Officer Graham Shirley has been busy on a variety of projects, including a possible replacement for the Triang DMU motor bogie. The photograph shows an early prototype involving 3D printing.

NEXT ISSUE

- Tools for undoing things
- Battling with a tank
- British Finescale 14.2 point kits

THE COMMITTEE

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THREE MILLIMETRE SOCIETY PRODUCTS

SQ LOCOMOTIVE WHEELS NOW AVAILABLE FROM THE SHOP

Intermediate profile with square axle hole. Two wheels and crankpins with 12mm-gauge axles. 13.5 and 14.2mm axles available on request. All at **£7.50 per axle**.

SQ12 – 12mm diameter
SQ13.5 – 13.5mm diameter
SQ14 – 14mm diameter
SQ15 – 15mm diameter
SQB15 – 15mm dia Bulleid (BFB)
SQ15.75 – 15.75mm diameter
SQ16.5 – 16.5mm diameter
SQ17 – 17mm diameter
SQ18 – 18mm diameter
SQB18 – 18mm diameter Bulleid (BFB)
SQ19.5 – 19.5mm diameter
SQWB13.5 – 13.5mm diameter generic LNWR Webb H-spoke with crankpin in line

NEW WAGON KIT NOW AVAILABLE FROM THE SHOP

AM001 **GWR Open C** wagon kit - **£10.00** + P&P

The kit contains a brass etch for the chassis, white-metal buffers and resin body. A plastic sprue is included for the axlebox/spring assembly. Wheels, bearings, paint and transfers are required to complete the kit

POSTAGE: Owing to the recent increase in Royal Mail postal charges and the weight of certain items such as castings, **postage and packing will be charged at cost with immediate effect.**

Please remember to include your name, membership number and address with your order and allow 28 days for delivery.

Please note that **The Shop will be closed during January and February 2022** for the annual stocktake. Apologies for any inconvenience caused.

Society Products are available by post from
Peter Bailey, [redacted]

BRANCH PASSENGER

LMS Tilbury Tank 41975 ready to leave Uppingham, Martin Olley's fine exhibition layout depicting the LNWR branch terminus in Rutland. *British Railway Modelling*

Martin and Lenny Seeney are marketing complete RTR Wickham and AC Cars Railbuses at £95 each. These are pre-production samples, photographed at the October Committee meeting. *John Sutton*

MORE FROM LINCOLN LOCOS

This has turned into a good edition for those who like BR Diesel Shunters. Mike Corp has built 13115 in 14.2 for Heybridge Wharf. It has a Worsley Works etched chassis and Society fine-scale driving wheels. *Mike Corp*

Steve Spells fitted handrails and added some Archer H0 rivets to 3821's 3D-printed loco body. The chassis and tender came from a model built by the late Peter Gentle, whose boiler had exploded owing to reacted lead. The motor is in the tender, with "American" wiring to pick up from opposite sides of the engine and tender. *Steve Spells*