**Don't miss: How to troubleshoot problem points** 

# No. 255 December 2018 £4.30 ODEL RANGE A LEIGHT RESTRICTION OF THE PROPERTY OF THE PROPERTY



- **◆ BACHMANN FGA FLATS**
- **◆ BACHMANN 64FT 'CARFLAT'**
- **◆ DAPOL BR 20T BRAKE VAN**
- **◆ DAPOL HAA HOPPER**
- **◆ HORNBY LNER 'TOAD E'**

IN-DEPTH - INDEPENDENT - UNBIASED

### Workbench TRICKS AND TIPS FROM OUR EXPERTS

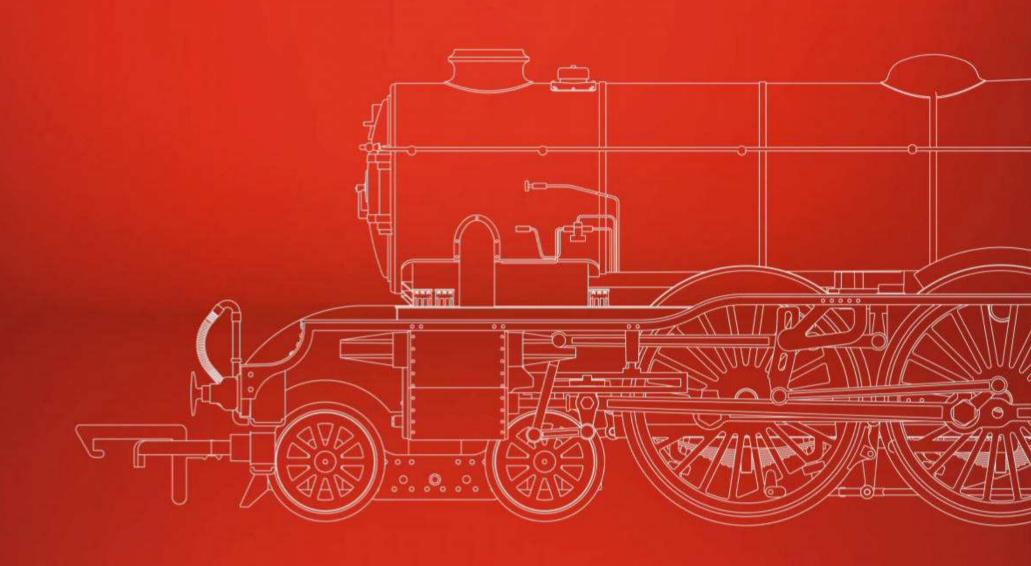
- Hardwire a decoder
- ✓ Solder like a pro
- ✓ Kit-bash RTR wagons
- Model a stream & ford
- Build a resin kit





## 2019 RANGE ANNOUNCEMENT

7<sup>TH</sup> JANUARY 2019



Visit www.hornby.com at 10am to see the official range launch







## Welcome



#### MODEL RAIL

#### brought to you by



## Richard Foster Railway modelling is on hold while decorating takes place. This does bring the 'railway room' closer to completion.



George Dent
The dip in temperatures
has made George's
workshop rather chilly.
Time to transfer to his

slightly warmer kitchen!



Chris Leigh Chris' modelling output has been prodigious recently. But will his visit to see L&B coaches kickstart another project?



Chris Gadsby
Chris isn't known as
'Mr Organised' for
nothing. He took a week
off in October to do his
Christmas shopping...



Chris Nevard

Our ace snapper is building a name for himself on the folk music circuit. Is there no end to his talents?



**Peter Marriott** 

Peter is our jet-setting scenic guru. Knows what products are available and how to get the very best from them.



**Dave Lowery** 

Professional modelmaker Dave works on top secret projects for train builders and model manufacturers.



Paul A. Lunn

Paul is full of ideas for innovative and exciting layout designs with almost endless possibilities.



Ben Ando

Ben is a seriously talented modeller and 'N' gauge expert. He's also started making his own RTR models.

**Get in touch:** E-mail the magazine at *modelrail@* bauermedia.co.uk or call 01733 468000



Hurrah! I'm pleased to announce that production of our 'J70s' in Rapido's factory in China has started. As soon as we have confirmed delivery dates, we'll let you know.

A visit to Dapol's Chirk headquarters during the summer gave me valuable

insight into the complexities of making a model (thanks to Neil for being such a gracious host!). It really hammered home the fact that making model trains is a time-consuming and labour-intensive process.

Each injection moulding machine can only produce one part at a time. Complex liveries may require just one part to go through the tampo printing process many times. Each freshly moulded wagon body requires lots of tiny adjustments before it can be assembled. Then it needs testing and packing. It's slow and monotonous work that requires great care and concentration.

Dapol's Welsh factory may be small, but the camaraderie and dedication of its team is clear to see. Seeing how much effort goes into a run of 100 seven-plank wagons puts a production run of 5,000 'J70s' into context. It really does take a long time to make just one model, and these teams need paying a good wage for the hard work they do, whether they're in China or Wales. This is where our money goes and it's always worth bearing that in mind.

**Richard Foster** Editor

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#### Life's better with Model Rail

Here's why: Starting as a supplement in RAIL magazine, Model Rail went 'standalone' in 1997. Every issue, we bring you easy-to-follow modelling projects that you can complete without breaking the bank, inspirational photographs of the best model railways and thorough, unbiased reviews so you can make the most informed choices when spending your money.

Don't forget our own range of models – see p112 and 114.

#### From the archives MR188, Nov. '13

It's an action-packed issue this month with designing layouts with operation in mind. Paul Lunn offers a couple of layout ideas that don't need the giant 'hand from the sky', as Ben takes a look at pick-up goods trains. Meanwhile, Peter tests a new budget static grass tool.

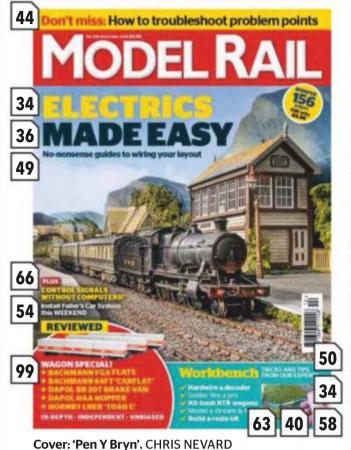
**Star review:** RealTrack Models Class 144 **Masterclass:** Pick-up goods trains



www.model-rail.co.uk

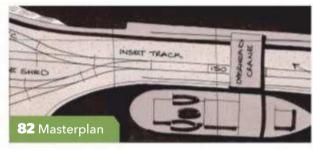
## Contents





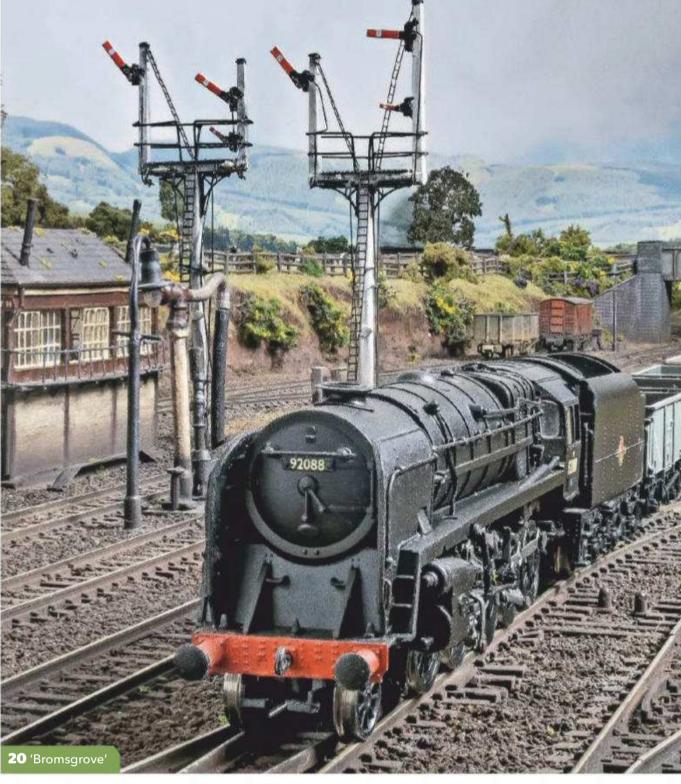
#### **Opening the box**

- The Big Picture. This month's big picture is Phil Coggan's 'Pen Y Bryn'
- Opening the box
  The latest news from the world of model railways.
- According to Chris...
  Chris Leigh guides us through the build process of last month's cover.
- Modelling Lives
  Former Bachmann PR man Dennis Lovett
  wonders if the hobby has become too serious.



#### **Features**

- Rising to the challenge
  Barry Morton has recreated the
  fearsome Lickey Incline with his layout in 'N'.
- An excavation sensation
  John Campbell models large-scale in
  a small space with this excavation layout.
- Channel hopping
  Paul A. Lunn explores the diversity
  of the Channel Islands.
- The more the merrier
  John Wilkes' imagination ran wild with
  his re-working of a forgotten tramway.





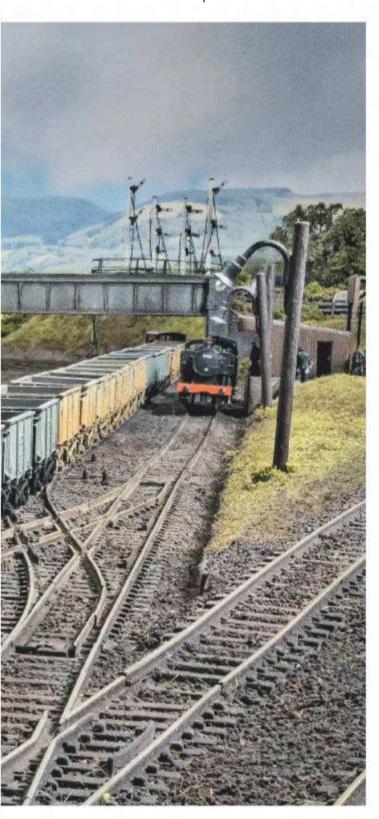
#### **SUBSCRIBE**

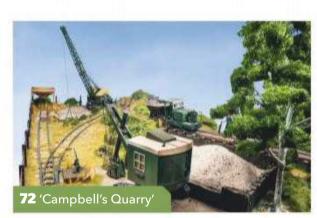
Save money with the latest reader offer

see p18

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Search the online index at: www.ukmodelshops.co.uk/modelrail







## Workbench

Solder a wire
George Dent goes back to basics to show you how to make a reliable joint.

Wire a layout
Chris Gadsby guides you through the principles of wiring your layout.

Make a ford
Chris Leigh's ford only occasionally has water in it...

Troubleshoot points
Plagued by pointwork short
circuits? Mick Bryan comes to the rescue.

Wire baseboard joints
How to make a durable, simple
connection between baseboards.

Convert a railcar to DCC Frustrated that Farish's GWR railcar isn't DCC-ready? See Chris Leigh's solution.

Add Faller's Car System
Dave Lowery steers you through
adding moving vehicles to your layout.

Model a road van
A goods van and brake van hybrid,
Chris Leigh takes a look at the real thing.

Add infrared detectors
Clive Heathcote and Ann Anderson
explain how infrared detectors work.

#### Regulars

Subscribe to Model Rail
Turn to page 18 for this month's special offer.

The Club Room
The Guest Chairman, your letters,
Show and Tell and Exhibition Diary.

Order your 'USAs'
Our two latest 'USAs' have arrived.
Turn to page 112 to choose yours.

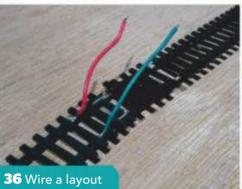
Model Rail exclusives
Turn to page 114 to order our
exclusive models and publications.

Next Issue
A sneak peek at what's in store in the next exciting issue of *Model Rail*.

Present your case
The place to voice your opinion on potential new models.

This month's miscellaneous musings from the *Model Rail* team.













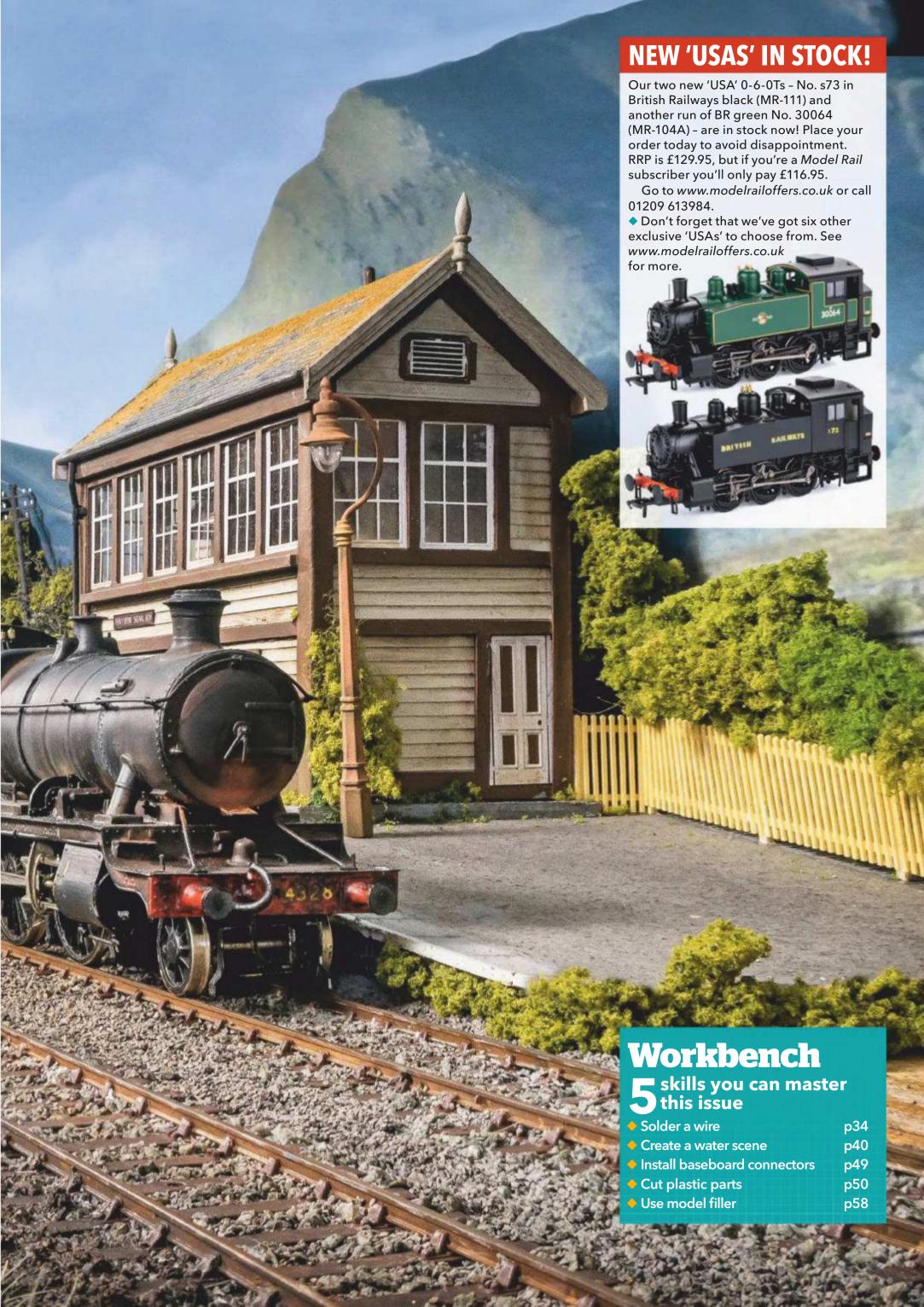
## Opening the box

The latest happenings from the world of model railways



'Pen y Bryn' is Phil Coggan's attempt to recreate the South Wales of his youth in 4mm:1ft scale. It may have starred in the June 2014 issue of *Model Rail*, but Phil has not stopped working on the layout. Chris Nevard has made another visit to 'Pen y Bryn' and we look forward to bringing you the results in the New Year. Photography: CHRIS NEVARD







## HIGH-SPEC IRISH Co-Co

rish Railway Models has unveiled its first ready-to-run locomotive, the Metropolitan-Vickers 'A' Co-Co. Metropolitan-Vickers' Manchester works built 60 of these locomotives, numbered A1-A60, for CIÉ in 1955-56. However, they suffered from reliability issues and so CIÉ rebuilt them with General Motors engines in the late 1960s. These issues also prompted CIÉ to only order new locomotives from GM.

The rebuilt 'A' Co-Cos, reclassified 'OO1 Class' in 1972, gave sterling service until replaced by the GM 201 Class in the early 1990s. OO3, the last in regular service, was withdrawn in April 1995. Classmate O39 hauled a final railtour in September that year. It is this locomotive, now

owned by the Irish Traction Group, that IRM has surveyed. Three other 'As' survive.

IRM's model boasts an extensive spec list, including five-pole motor with twin flywheels, a gearbox designed to achieve a scale top speed of 80mph, rotating axlebox hubs and full lighting, including inside the engine compartment. Detail differences between original and rebuilt locomotives will also be covered. The model has been designed for easy conversion to 21mm gauge (scale 5ft 3in).

Eight liveries are planned: lined green, plain green, black, black with yellow panel, black and orange, and versions of 'Supertrain' and IR livery. On top of this, there will be a limited edition of pioneer A1 in original silver livery,



which will come in a presentation box. Work has already reached the computer design stage and they're due to arrive in late 2019.

Price: From €189.95

Availability: Irish Railway Models

Web: www.irishrailwaymodels.com

#### **UNEXPECTED KADER MOVE WILL HOLD UP MODEL PRODUCTION**

Production of Bachmann and Graham Farish models has been affected by unforeseen changes to parent company Kader's facilities. Kader has opened a new model railway factory, which would have led to an

existing plant in Dongguan being redeveloped. However, Kader has been asked to vacate the Dongguan site sooner than previously expected and has had to accelerate the move of tools and equipment to its new factory.

A statement from Bachmann Europe said, "This will, regretfully, lead to a temporary reduction in production capacity while reorganisation of our production facilities takes place. Once the reorganisation is complete we

shall be in a stronger position, with increased production capacity. This will allow us to deliver those models that are still outstanding, along with many more that are currently in development."

### HELJAN TAKES ON GARRATTS

Heljan is to offer the LMS Garratt, originally commissioned by Hatton's, as part of its own range. It is to produce ten new Garratts, in a range of liveries and weathering finishes and with straight-sided and rotary bunkers. Strong demand has also led Heljan to offer another run of its Class 07 diesel shunters.

Nine new liveries/numbers are planned, including some private owner schemes, and delivery is expected in early 2019.

#### **NEW BATCH OF CLASS 07s**

#### What's planned?

- ◆ HJ2904: D2986, BR lined green
- ◆ HJ2905: D2988, BR lined green
- ♦ HJ2906: BR Eastleigh Works light green D2991
- ♦ HJ2907: D2998, BR blue
- ♦ HJ2908: 07002, BR blue
- ♦ HJ2909: 07006, Powell Duffryn blue/white
- ◆ HJ2915: 07009 BR blue (weathered)
- ◆ HJ2916: 07005 Langbaurgh, ICI grey/orange

Price? £139.95

When are they due? Early 2019

#### **NEW BATCH OF LMS GARRATTS**

#### What's planned?

- ♦ HJ266213: No. 4984, LMS black, fixed bunker
- ♦ HJ266214: No. 4984, LMS black, light weathering, fixed bunker
- ♦ HJ266215: No. 4982, LMS black
- ◆ HJ266216: No. 7973, LMS black
- HJ266217: No. 47979, BR black, LMS post-war lettering
- ◆ HJ266218: No. 47978, BR black, early emblem
- ♦ HJ266219: No. 47988, BR black, early emblem, light weathering
- ♦ HJ266220: No. 47993, BR black, early emblem, heavy weathering
- ♦ HJ266221: No. 47971, black
- HJ266222: No. 4986, LMS works grey

Price: From £249.00

#### **MR-203 WEATHER UPDATE**

Model Rail regrets to inform those who have ordered 'J70' No. 68225 in early BR black (MR-203) that the model will not be available with a weathered finish, as previously described. This is due to an unforeseen issue beyond our control.

We apologise for any inconvenience or disappointment this causes.



#### **BUFFERSTOP PRESS**



Accurascale is to model the modern bufferstops built by German company Rawie. There will be several versions: one with traditional buffer pads, a bufferstop with Scharfenberg coupling box attachment and a Scharfenberg bufferstop with lighting pole and working lights. They are designed for both Code 75 and 100 track.

The 'stops will come in twin

packs (a basic and a Scharfenberg), priced £5.95. The version with working lights retails at £6.95. Prototypical friction pads for the railheads will be provided too. All versions are due in late 2018.

Availability:

www.accurascale.co.uk





### BY POPULAR DEMAND...

Crowd-funding specialist
Revolution Trains has
proposed another production
run of two of its two most
popular 'N' gauge models the Greenbier TEA 100t tank
wagon and the Virgin
'Pendolino' EMU.

Spokesman Mike Hale said: "So far, Revolution Trains has been all about bringing new models to the marketplace. However, we have been inundated with requests for more of these wagons, so we have decided to give them another run. As ever, though, we will only produce models to match pre-orders, and we may need to limit the numbers we do of each variant."

Revolution has proposed the TEA in existing liveries but with new running numbers, as well as three liveries not previously offered (Petrochem Carless grey/white, VTG pale grey, VTG rebranded Freightliner green).

Revolution's 'Pendolino' will be produced in Virgin's new white livery with red ends, as well as other variations including black window bands and commemorative rainbow livery. Revolution also plans to offer original Virgin colours but with grey doors.

Prices have yet to be confirmed. Place your order at www.revolutiontrains.com





### **CEMENTED TOGETHER**



Accurascale has joined forces with RealTrack Models to offer the CFMF PCA bulk cement wagon in both 'OO' and 'N'. Leasing company STS ordered 50 of these wagons from French builder CFMF in 1978, and they were allocated to Rugby Cement and Blue Circle for cement flows throughout the country. A further 15 were built in 1985 by Fauvet-Girel for Rugby Cement. All were subsequently leased by Castle Cement.

Accurascale's 4mm version will be offered in STS dark grey, Rugby Cement and Castle Cement liveries (featuring multiple running numbers). They have been designed for easy conversion to both 'EM' and 'P4'. Prices for triple packs start at £69.95. Delivery is due in January 2019.

RealTrack's 'N' gauge version will be offered in the same liveries. Delivery is also expected in early 2019, but prices have still to be confirmed.

Availability: Accurascale (www.accurascale.co.uk), RealTrack Models (www. realtrackmodels.co.uk)





#### **TOY WONDERS**

Model railway historian Michael D. Foster has published the latest part of his in-depth look at smaller British model train manufacturers. British Toy Trains Book 4 delves into the world of Brimtoy, as well as taking a look at many smaller manufacturers, under the heading 'One Hit Wonders'. These range from Timpo Trains and Toby Railways to the London Underground (better known for its batteries) and A&J Van Riemsdijk, which made excellent 'OO' gauge clockwork Peckett six-coupled side and saddle tanks.

**Price:** £23.50 Availability: Marldon Cottage, Manor Road, Ullesthorpe, nr Lutterworth, Leics LE17 5BN **Tel:** 07979 241406 **E-mail:** 

trains produced by Eveready

mdfoster@hotmail.co.uk

#### **SOUND INVESTMENT**

Scenic Sounds Module is a joint venture between Gaugemaster and Train-Tech to bring a little extra life to layouts. These discreet little units can be powered by either analogue or digital controllers but can bring a range of sounds, from the hubbub of a busy inner city station to the tolling of church bells. There are five versions - Lineside (GM780), Station Steam (GM781), Station Modern (GM782), Urban (GM783), Rural (GM784) - and each contains a selection of suitable sounds. Price: £29.95 Availability: Gaugemaster Tel: 01903 884488

Web: www.gaugemaster.com

#### SIGNAGE OF THE TIMES

New from Sankey Scenics are packs of signs for British Railways steam sheds. They're available in 'N', 'OO' or 'O' for all six BR regions and depot names can even be customised. Price: £4.95 ('N'), £7.95 ('OO'); £11.95 ('O')

Availability: Sankey Scenics Tel: 07565 892209 Web: www.sankeyscenics.co.uk



#### **GET TO THE POINT RODDING**

DCCconcepts has introduced a new way to control your points - with working point rodding!

The 'OO' gauge system is designed to work prototypically and be easy to assemble -

as well as look good. It can be 'powered' using DCCconcepts' acclaimed Cobalt SS point motors. A starter set - dubbed Complete Working Pack - costs £99.95 and is complemented by a huge range

OO GAUGE

#### In brief

#### **COOL GLUE GUN**

A low-temperature glue gun is the latest addition to the Gaugemaster Tools range. The mains-powered GM655 comes with three glue sticks (RRP £12.95) and a further ten glue sticks are available for just £5.95 (GM656). **Availability:** Gaugemaster

Tel: 01903 884488 Web: www.gaugemaster.com

#### **CARD MODELLING**

Narrow Planet has produced a set of Christmas cards, depicting what it describes as festive railway scenes "with a nod to our own range". A pack of 12 (including envelopes) retails at £6.95. All proceeds will go to the Railway Children charity. **Availability:** 

www.narrowplanet.co.uk

#### **FAST FOREST**

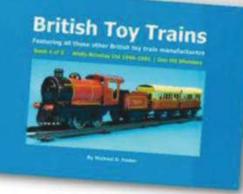
Need to expand a wood or copse in a hurry? Then Gaugemaster's new pack of 'OO' gauge deciduous and coniferous trees might come in handy. Product code: GM132 Price: £12.95 **Availability:** Gaugemaster Tel: 01903 884488 Web: www.gaugemaster.com





of additional components, from different crank arrangements to the rodding stools, additional rods and fixing pins.

You can view the whole range at www.dccconcepts.com or www.gaugemaster.com







#### Rolling stock releases

Locomotives and rolling stock arriving soon



#### **ENCORE FOR BULLEID DIESELS**

Kernow Model Rail Centre has commissioned a further run of its acclaimed Bulleid 1Co-Co1 diesels after the first batch sold out. Kernow will repeat 10201, 10202 and 10203 in BR black and 10203 in BR green, but will include an appropriate headboard ('Bournemouth Belle', 'Golden Arrow', 'Atlantic Coast Express' and 'Royal Scot' respectively) and a certificate of authenticity.

These models will be limited to 150 pieces.

Kernow will also offer two new livery/number combinations: 10201 in BR green with grey roof (K2705) and 10202 in the same scheme (K2706). All models retail at £179.99 (£309.99 sound-fitted).

**Availability: Kernow Model** Rail Centre Tel: 01209 714099 **Web**: www.kernow modelrailcentre.com



#### **BURSTING ONTO THE SCENE**

There's a new name in the world of photographic backscenes. Peter Osborne Backscenes offers photo-stitched rural scenes that can be printed on a paper of your choice to your own size.

In order to bring some variety to urban backscenes, POB can offer individual building façades (priced from 49p) that can be used on their own or blended together.

These are complemented by alley scenes and angled rooflines to bring relief and perspective to a backscene. Some building façades can even be downloaded for printing at home.

Availability: Peter Osborne Backscenes, 3 St Cuthbert's Place, Edenhall, Penrith, Cumbria CA11 8SP Web: www.peter osbornebackscenes.co.uk

### News Real what's happening on Britain's railways...

#### Swinging '60s'

Here's something that is likely to become a familiar sight on all modern image layouts: the first of GBRf's Class 60s has been outshopped in its house colours. The honour went to 60095, one of ten that GBRf bought from Colas Rail (the others were 60002, 60021, 60026, 60047, 60056, 60076, 60085, 60087 and 60096). It won't be long before you see this offered by Graham Farish, Hornby and Heljan!



RICHARD CLINNICK/RA

#### Class 319s MAN up

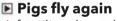
It's not just railway modellers who like to see what can be done with older items of rolling stock. Train operator Northern has commissioned Brush Traction to fit MAN diesel engines into old Class 319 EMUs to create the 'Flex' diesel electric multiple units. Reclassified Class 769, 769434, the first of eight new units, was due to start its testing programme at the Great Central railway in October.

#### Highland HSTs

The first of ScotRail's 26 HST sets entered service in October. The ex-GWR power cars now carry striking 'Inter7City' branding, whereas the Mk 3 coaches now sport powered sliding doors and controlled emission toilets - as well as a new Scottish 'saltire'-inspired interior.



PHILIP HAIGH/RAI



A familiar shape has returned to the former LSWR main line in the form of the Class 442 EMUs. It's hard to believe that it's been 11 years since the '442s' were withdrawn from this route, but South Western Railway is to resurrect 18 for London Waterloo-Portsmouth duties. The 'Plastic Pig' EMUs are available in 'OO' from Britannia Pacific (www.britanniapacific. co.uk) while 'N' gauge modellers need to look out for old TPM conversion kits (no longer available new).



#### Colour clash

It's funny how Britain's newest train is run by two operators with rather traditional names. Whereas GWR has tipped a nod to the livery of its 'Big Four' namesake on its Hitachi Class 800s, LNER, the newest operator of the East Coast Main Line, has gone with this red and white scheme, rather than Apple green... 800103 shows off its new look on September 24, but Class 800s won't enter regular service until 2019.



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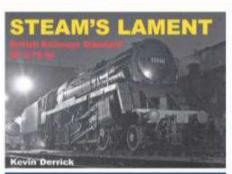
Steam's Lament British Railways Tanks £25.95

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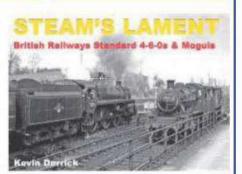
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Steam's Lament British Railways Class 9F 2-10-0s £25.95

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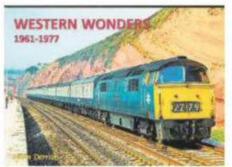
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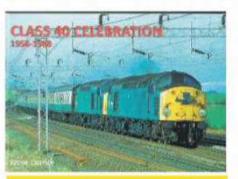
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2D-022-009/D/S - Class 68 Brutus 68019 Trans Pennine Express/DCC/DCC & Sound



2D-022-011/D/S - Class 68 68034 DRS Compass/DCC/DCC & Sound







BR Large Logo Blue/DCC/DCC & Sound

20-002-003/D/S - Class 50 50037 Original NSE Illustrious/DCC/DCC & Sound

These are 1st Decorated Samples Copyright Dapol Ltd.

4F-051-051 - 5 Plank - Devlins 12 4F-051-052 - 5 Plank - Devlins 12 Weathered 4F-072-013 - 7 Plank 9Ft W/B - Charles Wilson 15 4F-072-014 - 7 Plank 9Ft W/B - Charles Wilson 15 Weathered 4F-080-122 - 8 Plank - Embling & Son 17 4F-080-123 - 8 Plank - Embling & Son 17 Weathered 4L-001-005 - Junction Signal GWR Right hand with two arms shorter post to right 4L-001-006 - Junction Signal GWR Left hand with two arms shorter post to left 4L-001-007 - Bracket Signal GWR Right hand with one arm

2F-034-065 - 21T Hopper - G Weaver Bauxite 158

2F-034-066 - 21T Hopper - G Weaver Bauxite 158 Weathered

4L-001-008 - Bracket Signal GWR Left hand with one arm

2F-036-041 - Bulk Grain Hopper - BR Grey B885310

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Product Scale Key





N Gauge

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### According to Chris...

His grandchildren call him 'Granddad Trains' and he's been a dedicated railway modeller since the 1960s but, despite popular legend, **Chris Leigh** doesn't remember when dinosaurs roamed the Earth!

sn't it strange how the impromptu often works so much better than the planned? For last issue's cover, Richard asked me to reprise the December 1965 *Model Railway Constructor* cover, with the words: "really make it look wet and cold, the kind of weather that drives you indoors to a chair beside the fire." I've never minded a challenge!

The 'Westerns' were, by a large margin, my favourite diesels. My first sighting of one was in August 1962 when my brother and I were trainspotting at Iver. The previous week, Roger had been to Iver without me and reported seeing a strange new locomotive in 'beige undercoat'. Its number was D1000 and it was on the Down 'Cornish Riviera'.

The following week I was with him, and we saw D1006 *Western Stalwart*. It was maroon and it looked fantastic. How could any teenage spotter not be interested? A trip to Reading General followed to see one at close quarters.

I became particularly familiar with them standing at the platform end at Reading, as so many of the expresses stopped there. As we travelled further and my interest in stations took us to Wiltshire and Gloucestershire, I managed a few journeys with 'Westerns'.

Change, however, was swift in the 1960s. All too quickly the railway decided that it needed a new corporate image and the novelty of the 'Westerns' and, indeed, the whole Western Region diesel-hydraulic fleet was initially obliterated by a blanket coat of Rail blue, followed almost immediately by withdrawal.

Looking back, one of my favourite images of the hydraulic era is a 'Western' standing at the platform end at Reading. It isn't a particular 'Western' or a specific occasion. The two prototype photographs show it all too clearly. The first was taken in those early days, around 1962, and D1038 Western Sovereign is on a Down Swansea express. Six spotters sit along the platform edge. Despite how it appears, they are not in any danger – the track slewed away from the platform at that end.

In the second photograph the spotters have grown up. It's the twilight of the 'Westerns' and D1051 Western Ambassador has its number displayed in the headcode as it makes the Reading General stop with an Up express. The negative has gone missing and this cut-out print is all that I have left of that moment.

While I was building the diorama for this month's cover, I experimented with a side-on shot which, I think, captures well those moments with a 'Western' standing at the platform end (main picture, above). I failed to



use anything to block out the cluttered background, and one figure has a huge moulding mark on his back, but the light and the atmosphere are just right.

I cleaned up the figure and held up a background sheet, but somehow the corrected shot did not capture the atmosphere. Thinking back, neither of those prototype shots was planned. They were just quick snaps. Like the shot above, they are better for it.

Note: I should add that my collection of model 'Westerns' was based around the Lima model with its horrible front 'shelf' until the Heljan version came along. I reworked the cab roof of one Heljan model to correct the shape, but then the Dapol rendering of the Class 52 finally got things right. The model used in this

month's picture is D1030 Western Musketeer. It is a much-reworked Heljan model, with reshaped cab roof, etched grilles and cast details. I bought it second-hand from a large collection of WR diesels acquired by Trains4U in Peterborough, mainly because it saved me having to open it up and fit a crew. The previous owner did a great job of the detailing, so thank you – whoever you are.

Above: Some time in the mid-1960s, Saturday spotters line the platform edge as D1038 waits with a Down Swansea express. CHRIS LEIGH

Below: Fast-forward a decade or more and the 'Westerns' are on their way out, attracting adulation from fans at every stop. CHRIS LEIGH



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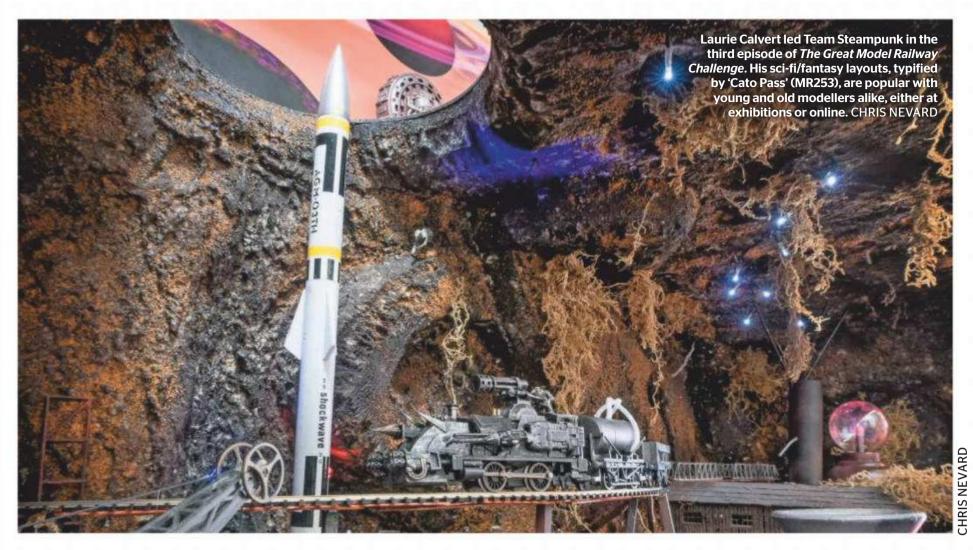


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## **Modelling Lives**

Tales from the world of professional model-makers. Bachmann PR Manager **Dennis Lovett** wonders if the hobby has become too serious for its own good.

odel Railroader, the stalwart of US model railway publications, carries this slogan on its cover: "Model Railroading is Fun!".

Is our hobby in danger of becoming too serious? The Channel 5 TV programme *The Great Model Railway Challenge* has been lambasted by some for showing the hobby in bad light.

I take the opposite view. Our hobby is on prime-time TV and reminds us all that it's about enjoying ourselves and socialising with like-minded people – having fun. If it succeeds, then model railway clubs across the nation will have an opportunity to gain additional members.

Many of those watching will have had train sets. Perhaps, like me, they are approaching retirement and looking to rekindle their interest. I have met many such people during the last 13 years working for Bachmann, all trying to get their heads around the fact that the hobby today is very different from the one they left as youngsters. Back then couplings, wheels and even track systems were different – you developed brand loyalty because nothing else worked with yours! Now we must explain NEM coupling pockets or DCC sockets.

I have attended countless exhibitions over the past 50-something years but a common sight has been people being very serious, almost to the detriment of their own enjoyment. An exhibition should be a showcase event for a local club or other organisation. If the timetable fails to work, we are not going to be dragged in front of a Transport Select Committee to explain its failings – this is not the real railway where they do have to take timetables very seriously!

Have you noticed that some beautifully

**66** The problem facing manufacturers is that anything they make that's less than serious draws ridicule. Keyboards go into overdrive and forums into meltdown **99** 

modelled layouts often fail to capture the attention of the visitors for very long? It may be that the railway in question only had four trains a day, but such historical accuracy is lost on the majority of onlookers.

Contrast that with a vintage train set, with Tri-ang or Hornby-Dublo trains whizzing around in all directions. They'll attract large crowds and any 'operational mishap' – a crash – will delight any children watching.

As you get older you become more nostalgic and, over the years, I have added to my collection with the things I always wanted – but couldn't afford – when I was younger. We had great fun launching helicopters, watching ducking giraffes, firing rockets or trying to race the train with our Tri-ang Minic Motorways cars.

The toy element has been removed from mainstream model railway manufacturing. Tri-ang Railways products were toys, rather than models.

The problem facing manufacturers is that anything they make that's less than serious draws ridicule. Keyboards go into overdrive and forums into meltdown.

I well remember the furore when Bachmann produced its Underground Ernie range. The track only had two rails, rather than four, as per the London Underground, and the trains did not represent real trains. 'Ernie' was an attempt to introduce trains to a new and younger audience on the back of

a television series. It failed not because of the quality of the models, or indeed the programmes themselves, but because only 26 episodes were made. By comparison, more than 500 episodes of *Thomas & Friends* have been broadcast.

Getting model railways onto mainstream television is a major

boost for the hobby. Last year, when the live steam locomotive that starred in Channel 4's *The Biggest Little Railway in the World* attended exhibitions afterwards, they all recorded substantial increases in numbers.

Hopefully, 2018's Warley will benefit from *The Great Model Railway Challenge*, as the winning team and its layout will star at the Bachmann stand.

In the meantime enjoy *The Great Model Railway Challenge* for what it is – a TV programme for the general public about something we care about.

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#### LAYOUT BROMSGROVE

usk is falling on your worn-out LMS 'Crab'. The long goods train has taken its toll on this old workhorse. Its axleboxes are worn, the cab shakes with every revolution and your fireman has the blower hard on as he battles with poor coal and blocked tubes. This night's work is already hard enough but you know that the worst is yet to come – the formidable Lickey Incline.

You clank to Bromsgrove and give two crows on the whistle. An answering whistle comes and, as you look back along your train, you see the glow of an approaching headlamp. You smile at the thought of 'Big Bertha', the old Lickey banker and now long gone. The '9F', which now has 'Big Bertha's' light, indicates that it's ready. Your fireman is as prepared as he can be

so you exchange whistles with the banker, put the reverser in full forward gear and, with a prayer to the railway gods, open the regulator. For the banker's crew, it's just another day in the office, and the next train needing their help won't be far away.

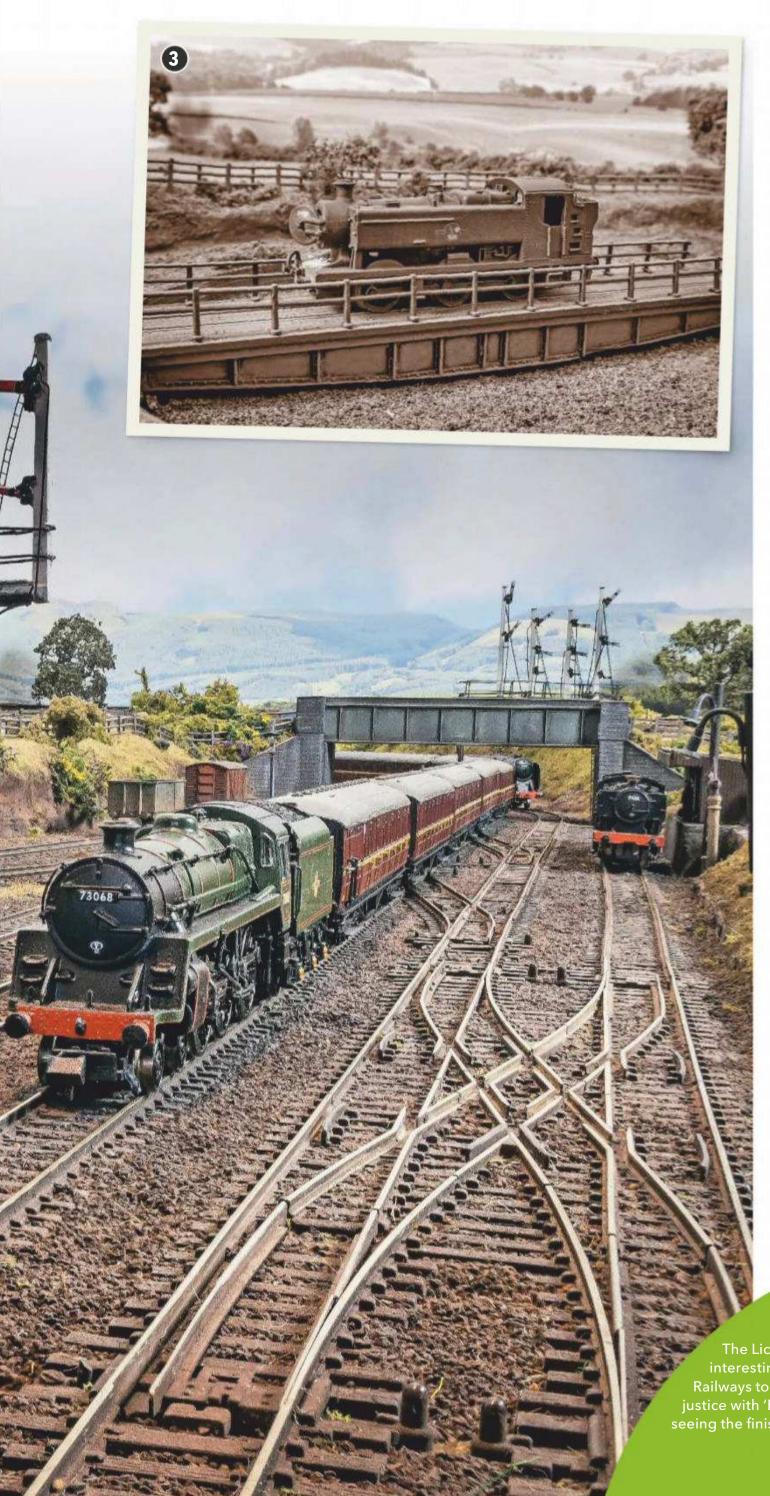
The Lickey Incline boasts the steepest gradient on Britain's main line. Today's multiple units make light work of the two miles of 1-in-37 between Bromsgrove at the foot and Blackwell at the summit. But DB Cargo still keeps a couple of Class 66s on hand to give freight trains a helping hand.

Bromsgrove South junction was a hive of activity in steam days, particularly in the early 1960s when '9Fs', 'Jinties' and WR '94XX' panniers were employed as bankers. It's this that has inspired Barry Morton

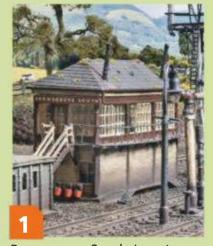
Right: The only '94XX' available in 'N' is the old Graham Farish version. This pre-dates DCC, so Barry had to hardwire decoders into his model.

Below: Barry commissioned the baseboards from Model Railway Solutions (www.modelrailwaysolutions. co.uk). They're made from 9mm ply covered with <sup>3</sup>/<sub>16</sub>in cork sheet.

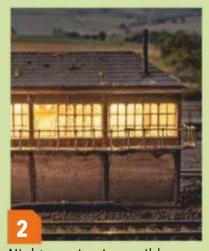




## 3 things we like



Bromsgrove South Junction signal box is two Ratio kits joined together.



Night running is possible, as Barry has installed lights in his buildings.



A webcam and train control software keeps tabs on where all the trains are and prevents collisions.

## What makes this layout great?

The Lickey Incline is one of the more interesting sections of the British network Railways to model, and Barry has done it justice with 'Bromsgrove'. We look forward to seeing the finished layout!



re-creation in 'N'. That and the fact that Bromsgrove is not far from his house.

His 12ft by 8ft layout encompasses Bromsgrove South Junction, Bromsgrove station and the incline but, even working in 'N', he had to compromise.

"I couldn't do it justice in 'OO'. Even in 'N', it would need to be 18ft long, and as I only had 12ft available I've had to make some sections shorter than they really are. I've maximised the space available by making the layout an 'L'-shape to keep the compromises as small as possible, and I'd like to think I've pulled it off!"

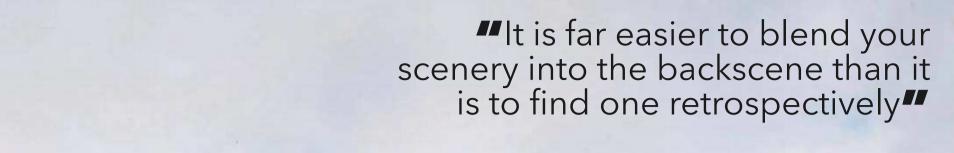
#### BANKING PRACTICE

Being local, Barry was able to get in contact with drivers and firemen who worked on the Lickey

Incline to hear about their experiences and memories. After gathering all that information, he obtained track diagrams from the National Railway Museum to ensure that his plan was as accurate as possible. There are four running lines at the junction (Up and Down, with a Fast and Slow for each) but only three lines at the station, as the Up Slow was used by freight trains awaiting banking.

"I didn't want to rely on pictures or memories, so I thought if I went and took a look at the actual track plan to work from then I could relax, knowing that I'd got it right," he says. "Getting the track laid down and operational was the priority, as the fun for me is in running trains and performing the operational moves around the incline."

Above: The coaling stage was designed using a CAD program and cut from 2mm MDF using a laser-cutter. It was then painted and weathered.





Proof of this is the fact that Barry started work in January 2014, but only the junction area has so far received its scenery. But even getting the ballast to look right is an important priority. Barry first sprays the track (Peco Code 55) with RailMatch Sleeper Grime. Then he applies Woodland Scenics Fine Dark Brown ballast, finishing it off with Phoenix Precision Track Colour, applied through an airbrush.

"As soon as the track was down I could begin to think about the backscene," Barry says. "The landscape has changed so much around Bromsgrove that I couldn't go and take pictures to make my own, so I opted for an ID Backscenes 'hills and dales' scene.

"All too often the backscene is added as an afterthought, but I've found that if you consider it

25



from the start you create a much more convincing layout. It's far easier to blend your scenery into the backscene than it is to find a backscene that matches your scenery."

Any layout based on a busy railway location such as Bromsgrove requires a lot of electrical gubbins in order to mimic its complex operations. 'Bromsgrove' required over 120 metres of wire and 45 DCCconcepts Cobalt point motors. These are controlled by six CML DAC20 Accessory Decoders. The whole layout has been separated into 40 block sections, covered by three Digitrax LocoNet occupancy detectors.

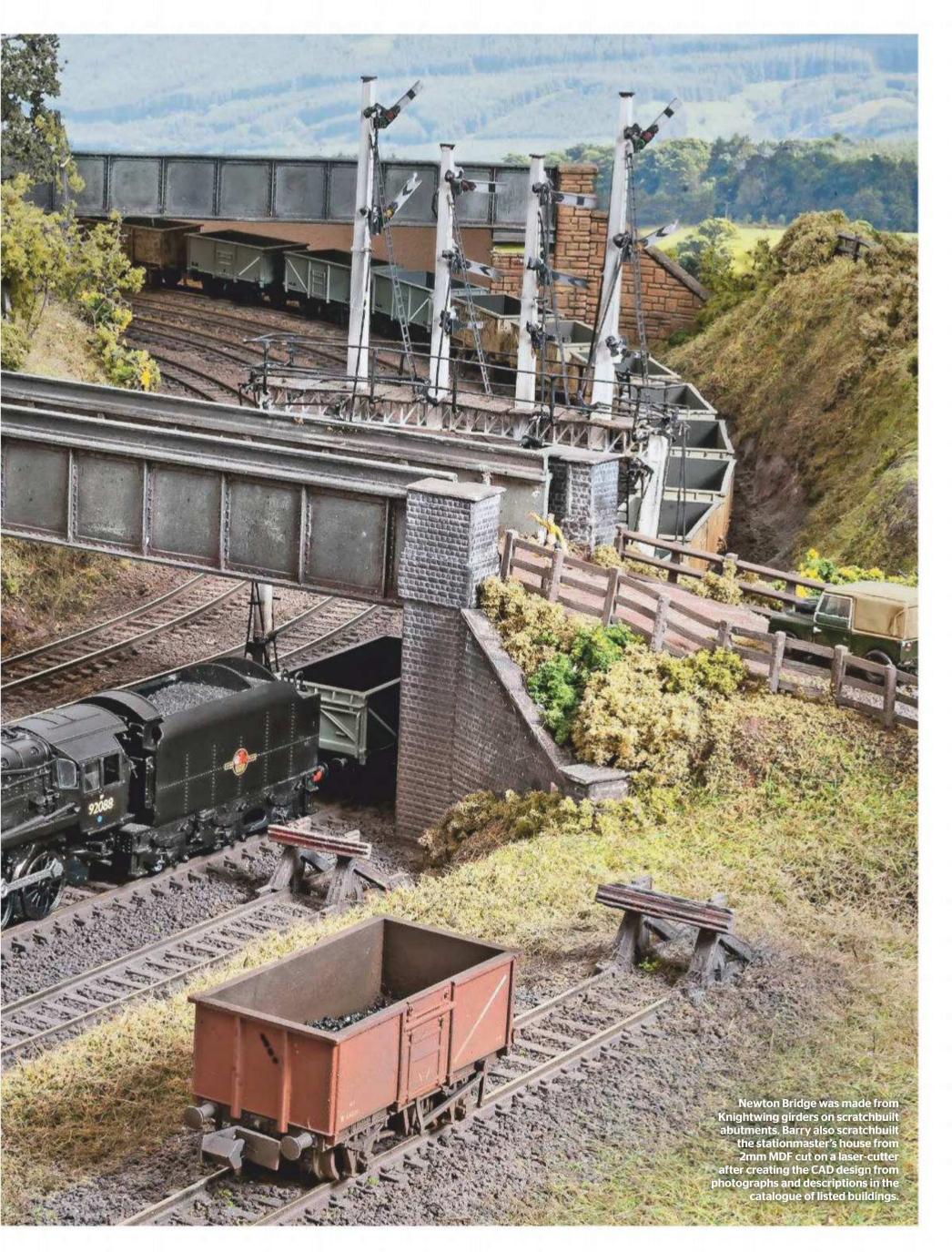
"Thanks to Railroad & Co. computer software, I can leave the layout in 'fully automatic' mode if I want trains to run while I'm working on the scenery," says Barry. "However, if I want to take control, I have hand-held Digitrax controllers that allow me to be more hands-on."

#### THE RIGHT SIGNALS

One of the striking features on 'Bromsgrove' is the signal gantry next to Newton bridge with its 11 signal arms. This was made by Barry's business partner Mark Seward, with whom he runs model accessories company MB Model Railway Products (www.mbmodelrailwayproducts.co.uk). All the signals are fully functional, operated by servo motors and, like the trains, can be controlled automatically should Barry desire.

Those signals control the trains that a transition-era trainspotter is likely to have seen on the Lickey. Happily, all the key steam locomotives – 'Jubilees', 'Black Fives', '4Fs', 'Royal Scots' and Standard '5MTs' are available ready-to-run in 'N'. Banking power in the form of '9Fs', 'Jinties' and '94XXs' is also available RTR,



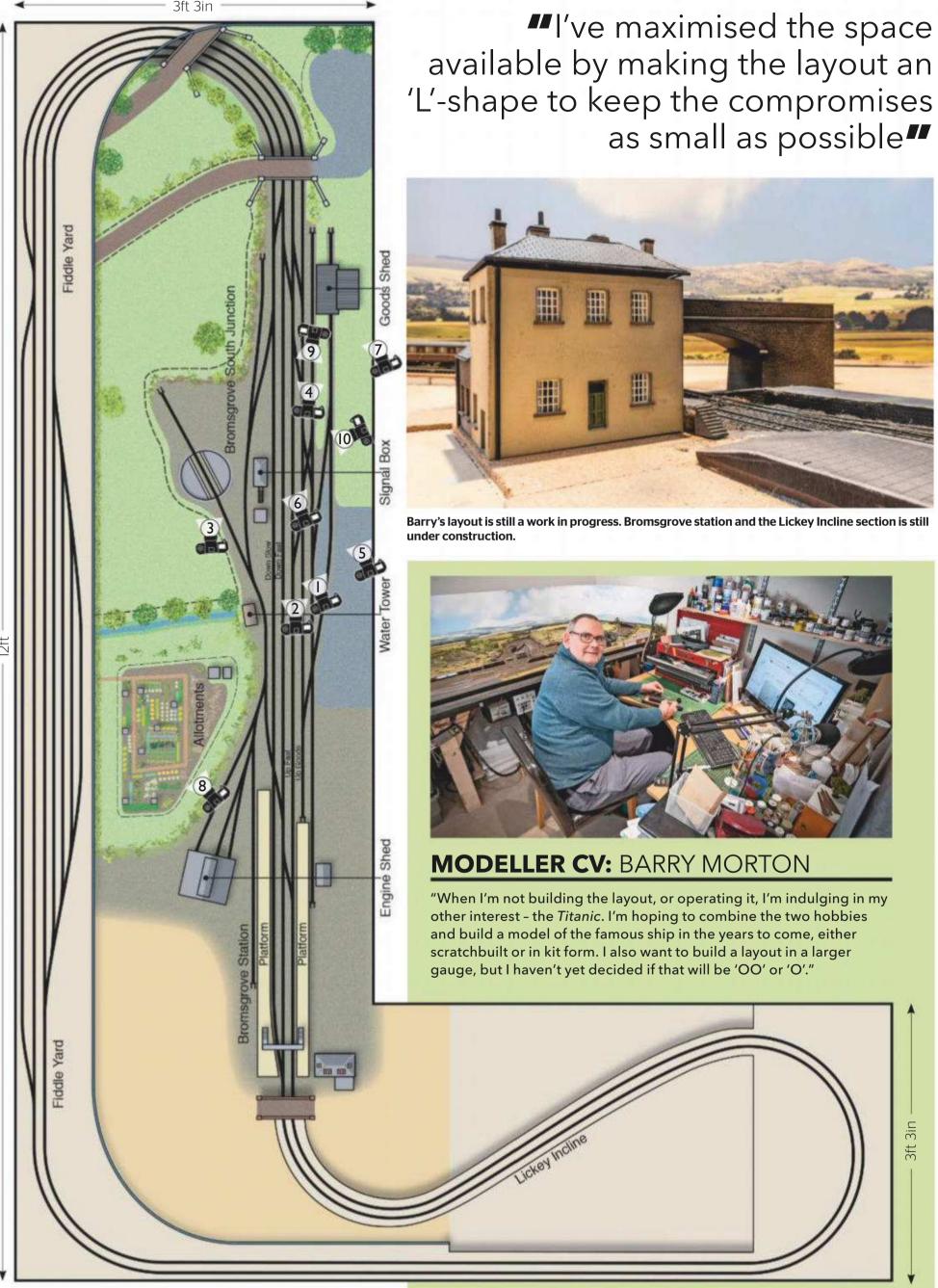


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#### LAYOUT BROMSGROVE











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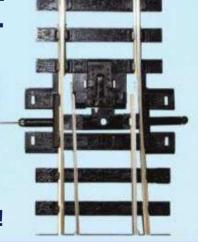
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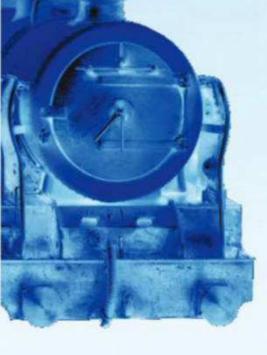


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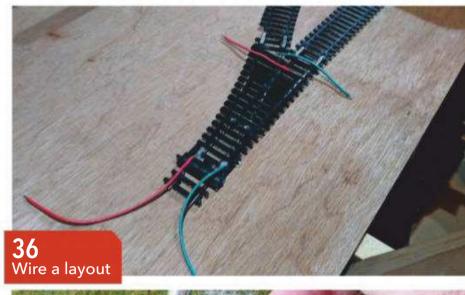
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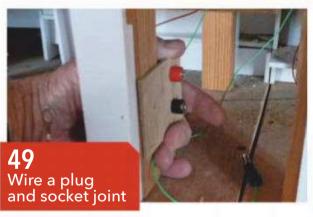




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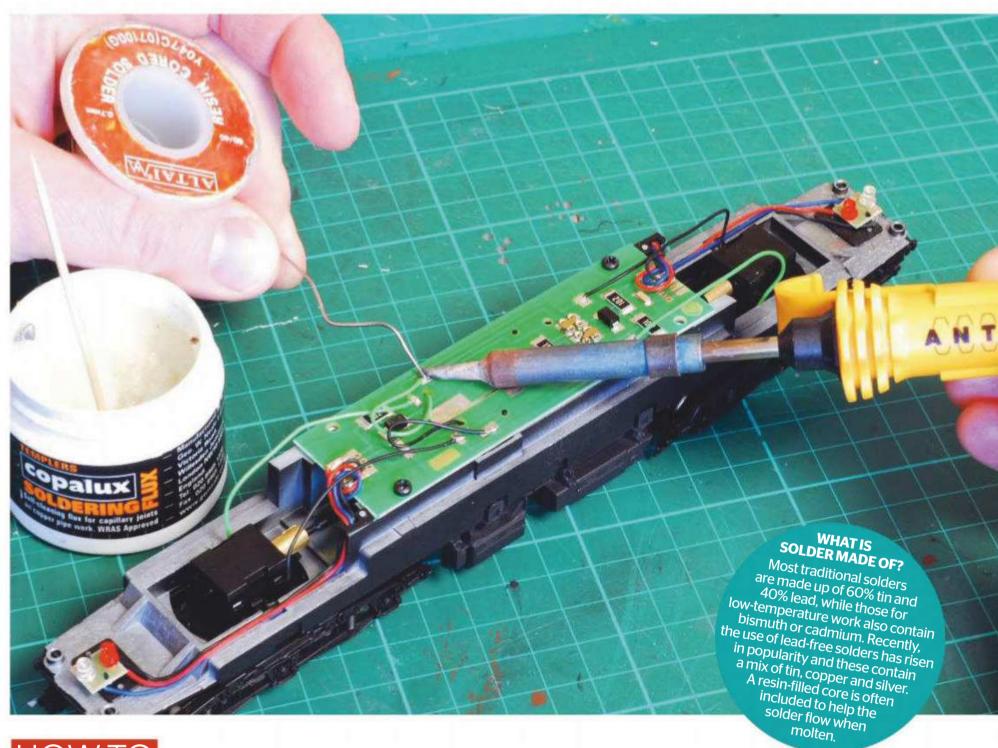


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## Workbench



## SOLDER A WIRE

Wiring layouts and accessories usually requires soldering, but it's nothing to be afraid of - George Dent goes back to basics to show you how to make a reliable electrical joint.

othing puts more modellers off than the prospect of soldering, be it wiring a layout or assembling a kit. Yes, it's a technique that requires a little practice and foreknowledge to get right, but it can soon be mastered and the possibilities that it offers are almost endless.

To dispel the myths, let's have a look at the very basics: preparing the surfaces and getting the solder to flow. Whether we're converting a locomotive to DCC or simply repairing a broken wire, soldering will produce an instant, enduring and fully conductive joint without the need for bulky screw connectors or reams of insulation tape.

Soldering irons are fairly inexpensive, although choosing the right one for your needs is important. For most hobby tasks, an



18-25 watt tool will suffice and brands such as Antex and Weller are recommended. Nimrod and Dremel also offer cordless irons that are powered by butane (as found in cigarette lighters), and these can be a great help when working on far-flung **DON'T GET FLUX EVERYWHERE!** corners of a layout.

The size of the iron's tip is also important, as a bulky wedge of metal will cause problems in a confined space. Some of the better iron manufacturers offer interchangeable tips.

You must also be sure to choose

the right solder as some melt only at specified temperatures. For general electrical work, a regular 60/40 resin-core solder will be suitable, preferably of around 0.7-1mm diameter.

Flux is an acidic solution that, when heated, penetrates the joint and takes the molten solder with it, creating a more

reliable joint. It also allows the

iron to be in contact with the subject for a shorter amount of time - something highly desirable where plastic and delicate components are never far away. Flux comes in powder, paste or liquid form; paste is the better option for electrical tasks as it's easier to

apply and clean up.

TOP TIP

Apply flux paste

accurately with a cocktail

stick and, after soldering,

wipe away any residue

with a damp cotton swab.

PHOTOGRAPHY: GEORGE DENT



Before soldering, clean both surfaces. A dab of a white spirit-soaked swab will remove dirt and grease, and a glass fibre scratch brush will clean metal contacts. Tape around mechanisms prevents ingress from debris or flux.



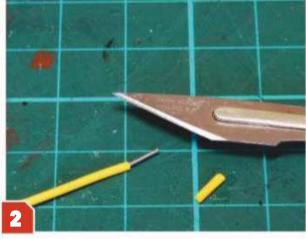
'Tin' the two parts prior to making the joint. Apply a touch of flux paste and heat the contact with the iron, then touch with the solder and let it melt over the surface. Repeat on the other surface. Don't apply too much solder!



Don't move either part - allow the solder to cool naturally for a few seconds. You'll be able to see the shiny liquid take on a dull grey appearance. Give the wire a very gentle tug to ensure the joint is secure. If not, repeat Step 4.



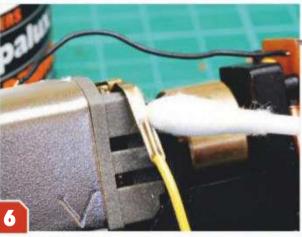
Poorly soldered joints such as this not only lead to compromised electrical conductivity, but they are also liable to mechanical failure over time. Residue from acidic fluxes can cause metal corrosion or damage to certain plastics.



Trim the flex of the wire back with a stripping tool or knife to reveal about 8mm of bare wire. For multi-strand cable, gently twist it into a more resilient mass. Ensure that the wire is long enough to avoid straining on the soldered joint.



With both surfaces 'tinned' and cooled, hold the two parts together (clamping if necessary) and apply a little more flux. Now introduce the iron tip and wait for the solder to re-melt and bridge the joint. Add a little more solder if necessary.



When soldering is complete, take a swab soaked in clean water (or white vinegar) and clean off all traces of the flux residue. Failure to do this will result in oxidisation and eventual breakdown of the bond.

#### What you will need

#### WHERE TO BUY

- Squires Model & Craft Tools is one of the largest suppliers of modelling tools and equipment. www.squires.com
- Axminster Power Tool Centre buy craft and hobby tools in store or online: www.axminster.co.uk

#### **TOOLS**

- Soldering iron
- Solder
- Flux
- Tweezers
- Scratch brush
- Cotton swabs

#### Top tool: Antex XS25 Iron

This 25-watt general-purpose soldering iron offers reliable performance and the ability to work on anything from locomotive circuit boards to track power feeds. An inner ceramic shaft allows very little current leakage, while a stainless steel outer sleeve provides strength. The tip reaches a maximum temperature of 420°C, and a wide choice of interchangeable tips is available in the Antex range. An integral hook on the handle allows the tool to be hung safely between tasks. www.squires.com

#### WARNING



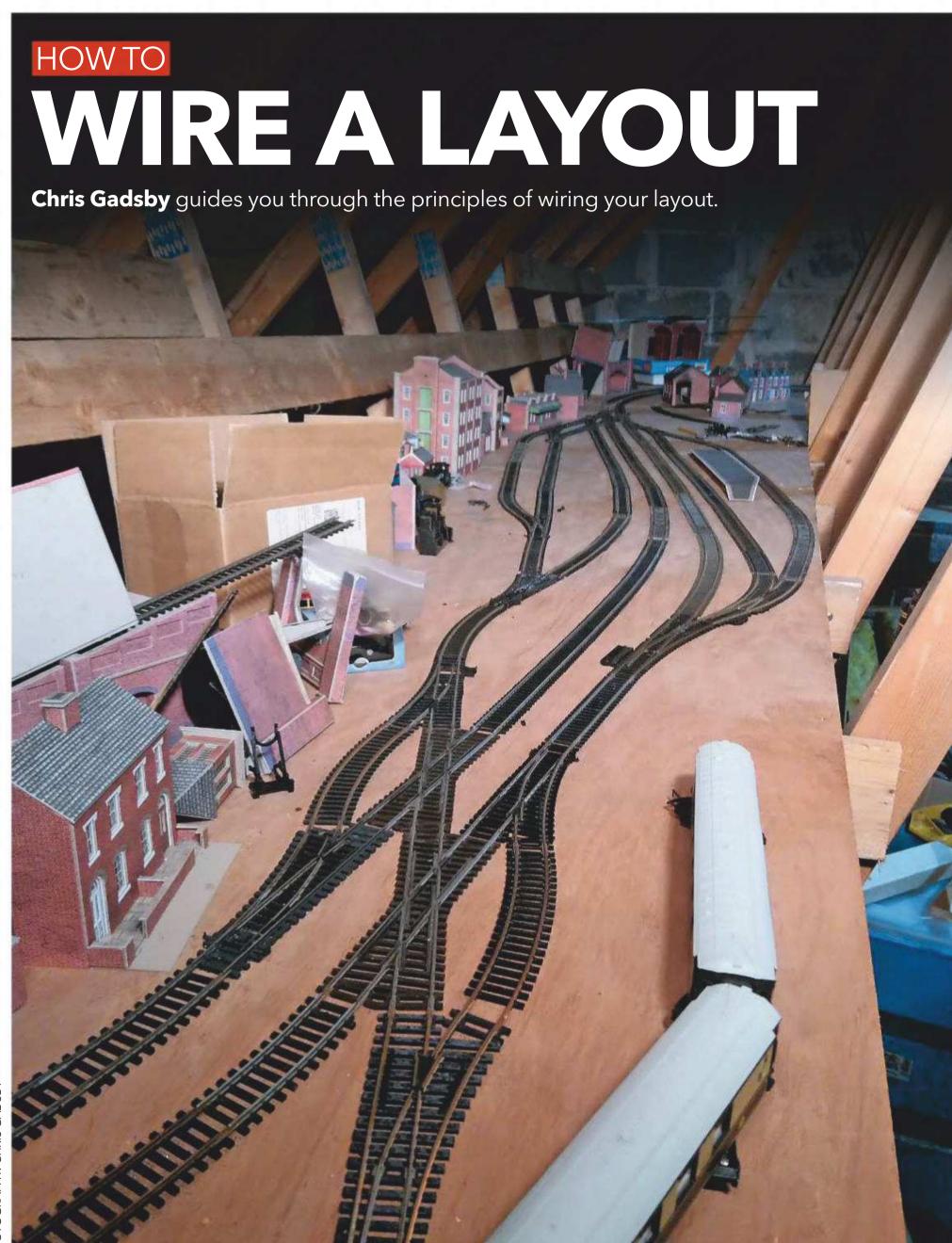
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Soldering can be hazardous as ir the reach around 400°C and molten fluxes and solders emit harmful fumes. Work in a well-ventilated space, away from children and pets, and keep the iron tip in a stand when not in use.



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## Workbench



PHOTOGRAPHY: CHRIS GADSBY

ayout wiring. It's probably the least sexy part of building a layout. It can also be a minefield of problems that can mean your layout never gets off the ground. This is one of the reasons that progress on my layout has stagnated over the last few months, and probably would have done so for a few more had it not been for the topic being raised in the *Model Rail* office - and me throwing my hat into the ring.

There is absolutely no reason to be scared of wiring your layout. It's the essential element that will make your trains move, and isn't that the whole reason you started on the journey to

build a model railway in the first place? Furthermore, it's a methodical process, so why are some of us so hesitant to begin?

One of the reasons some people shy away from wiring their layouts is because they don't understand the terminology. It's easy to get bogged down in the jargon surrounding electricity, which can make it hard to fathom, and if it's your first layout and you've not worked with electricity before it can put you off.

In the jargon buster (right) we've explained some of these terms to help you understand what's what when it comes to wiring.

### The basics

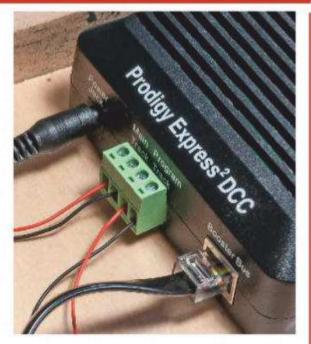
Let's start with the simplest oval of track. If you don't have any points on your layout then you will only need two wires. Take a look at your controller (or, in some cases, controller hub) and you will see some holes. The wording surrounding these holes may vary, but they all do the same thing – one will be a positive feed while the other is a negative feed; in other words 'out' and 'in', or '+' and '-'.

The electricity will flow out of one hole down the wire and into one rail, through any locomotive that is on there, back down the other rail, along the wire and return into the controller or controller hub, completing the loop (circuit).

If there are no locomotives on the layout the circuit is not complete and the electricity will not flow.

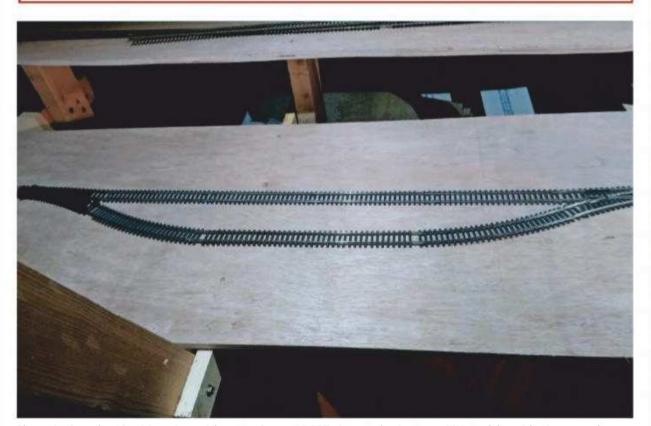
It's important to ensure that the positive and negative rails never touch each other. If this happens you'll get a short circuit, nothing will work and it has the potential to damage your expensive models.

The easiest way to avoid short circuits is to take your time and to colour-code your wires. Using a different colour for different feeds is the best way to avoid a mis-wiring, as well as being the easiest way to discover any faults.



Never wire your layout entirely with cables of the same colour - it will make faults practically impossible to find!

For large layouts, the most reliable way to do the wiring is to have two thicker 'bus wires' that run along the length of the layout with dropper wires feeding off them. If you use a lot of thin wires you may find that the resistance in the wire is too high and the current will drop below a sufficient level at some points of the layout.



Since the last time I soldered anything was for my GCSE electronics lessons, I'll be wiring this short section of track that is around the canal basin of my layout, to allow me to get some practice before tackling the complex Cardiff Central station on the opposite side.

### Jargon buster

### Voltage

Voltage is the 'pressure' at which the electricity is forced along the wires and through the track.

The plug sockets in your house are 240 volts, but your model railway can only run on 12 volts. Your controller or controller hub has something inside it called a transformer, and this converts the 240 volts down to 12 volts so it's safe to use.

The reason that the electricity comes into your house at such a high voltage is that it is more efficient to move across the country at higher voltages.

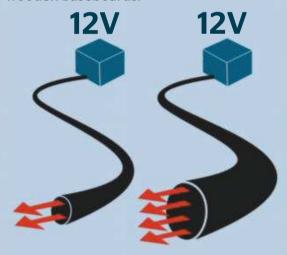
### **Current**

Current is the rate at which electricity flows along a wire. It's measured in amps.

The current changes depending on the diameter of the wire through which the electricity is flowing. For example, you might have the same voltage in two separate wires, but if one wire is thicker than the other then more electricity can flow through a set point in a set time frame, so the current will be much higher.

This is something to bear in mind when wiring your layout as you may need thicker wires to deliver the required current around the whole of the track.

Be aware that the thinner the wire is, the higher the level of resistance will be.
A higher level of resistance creates more heat, which is not a good thing around wooden baseboards.



Thicker wire will provide greater current than a thinner wire with the same voltage applied.

### **Analogue layouts**

On analogue layouts, the current on the track directly affects the locomotives because as the current increases so will the speed of your locomotives.

The dial on analogue controllers lets you change the voltage to allow more (or less) current through. Some analogue models have difficulty moving at reduced speeds as there isn't enough current to keep them moving.

### **Digital layouts**

Because the controller does not control electricity flow on digital layouts, you'll need to make sure that a sufficient current is constantly supplied to the track to move the locomotives.

### WIRING STANDARD TRACK

Wiring straight track is easy - in theory. Solder two wires to the underside of the track, connect them to the power supply and you will have power to your track.

In reality there are a couple of things to watch out for. Firstly, you are assuming that all of your connecting fishplates will work flawlessly for the duration of your layout's life. This will not happen. At some point the fishplates will lose their connectivity and it is much safer to install jumper wires across the joins of all of your pieces of track. This will add a significant amount of time to the wiring section of your layout, but it will all be worth it in the long run, and a few years down the line you won't have the headache of trying to take out a couple of pieces of track and change the fishplate.

Secondly, beware of gaps in the rails at the joins. If they are pushed right up against each other than you've got the rails themselves working to help with the conductivity. If there is a slight gap (which many modellers like as it gives the nice clickety-clack of the wheels over the rails as it moves along), then it is even more important to have a jumper wire so that the fishplate isn't the only conductor.

Always wire your track before you ballast it as once it's down it's much harder to correct any errors. When you have finished the wiring make sure that you test every single piece by running a locomotive over all the track to make sure it keeps moving. Ideally use a short wheelbase locomotive over the points as this will give you the best indication as to whether your trains will stall over them.

### What you will need

### **SHOPPING LIST**

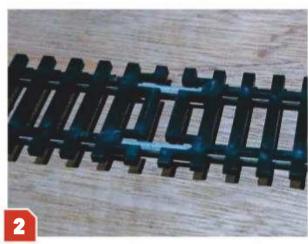
- Xuron rail cuttersAvailability: various outletsPrice: From £13-20
- Draper soldering iron
   Availability: www.drapertools.com
   Price: £44.96

### **TOOLS**

- Wire cutters
- Wire strippers
- Solder
- Soldering iron
- Thin wire
- Drill



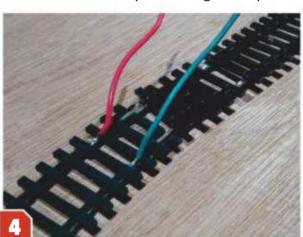
When wiring your track, it's a good idea to locate the middle of each piece onto which you'll solder some dropper wires. On this piece, the difference in sleepers is the giveaway.



Turning the track upside-down you will see the larger area of rail – a suitable solder point for the wire. Not all sections will have this, so you may need to cut sleepers.



With a small tip on your soldering iron you should have no problems attaching the wire to the bottom of the rail. Tinning both the rail and the wire will make it easier.



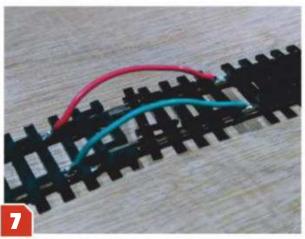
Use different coloured wires to distinguish between positive and ground. Strictly speaking, green should only be used for earth, but I used it here for clarity in the picture.



When tinning the wire and soldering it to the track be careful that you don't melt the insulation around the wires. Distorting it too much could lead to damage inside.



This is why frequent dropper wires and jumper wires are important on your layout. It is very easy to miss a dodgy fishplate that then disrupts your connection.



The jumper wires across the track join. Usually these go under the baseboard, but for the pictures it's demonstrated above. This eliminates the fishplate problem.



Another option that has been mentioned in the past is soldering the gap between the joints. I tried it and it didn't work very well, plus you risk damaging the rails when filing flat.



After every connection has been completed, test with a multimeter for continuity. It is much easier to detect problems as you go along, rather than do it all at the end.

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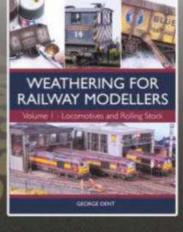
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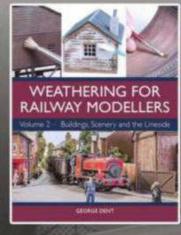
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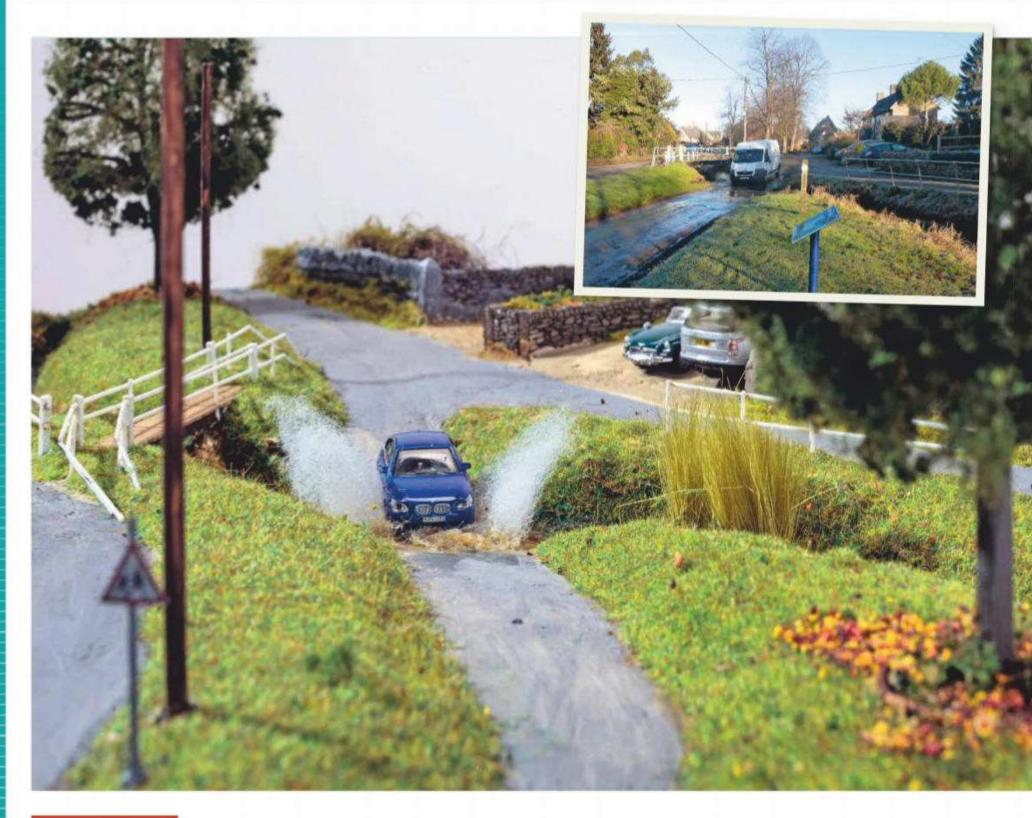




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HOW TO

# MAKE A FORD

No, **Chris Leigh** hasn't got a job at Dagenham - the ford that he's built only occasionally has water in it...

believe that, like a garden, every layout should have a water feature or two, and from the time I first saw them, Pendon's abandoned canal and ford were two of my favourites. It was a summer 2018 visit to Pendon that reinvigorated my interest in the ford. It has something of Constable's 'Hay Wain' painting about it, a horse and cart having apparently stopped mid-stream.

My village has a ford. The brook that flows down the middle of it, with a narrow road and cottages on each side, is controlled by a small weir upstream. During 2018's particularly dry summer, water was held back and the brook and the ford dried up to the point that a stranger could probably drive or even walk past it without realising it was there.





At other times, the brook 'babbles' in typical fashion. Kids wade up to their thighs, and unsuspecting motorists hit the water at a speed, which produces a great bow wave and occasionally drowns their cars' electrics! The brook has even, on occasions, broken its banks and flooded nearby properties.

Having completed my thatched cottages (MR251), I wanted to make a little diorama on which to display them. A ford, a Pendon-style cottage garden or two and a thatched cottage sounded idyllic.

### What you will need

### **SHOPPING LIST**

- PVA glue
- Woodland Scenics Foam Tack glue
- Woodland Scenics Foam Nails
- Velo-Set wood glue
- Tracing paper

### **TOOLS**

- Soft (4B) pencil
- Selection of paintbrushes
- Scalpel and fresh blades
- Self-healing cutting mat
- Old teaspoon
- Woodland Scenics Foam Knife



Here's a Google Earth view of the village ford. There's some heavy shadow, which is confusing, but the white railings of the footbridge show clearly in the centre, with the ford just to their right.



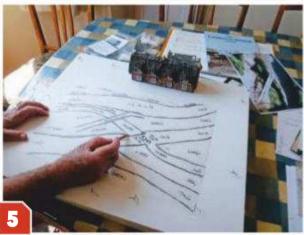
I took a Google Earth screengrab of the village and enlarged it to scale. The width of the road is 11ft, so 44mm in 4mm:1ft scale. I laid a print of the grab on the board and traced all the main details onto tracing paper.



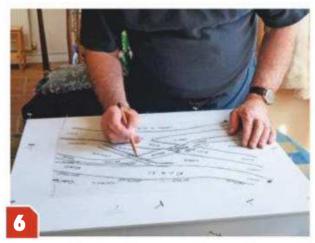
A sheet of 5mm thick foamboard was glued to the top of the Knauf insulation (available from B&Q) using Woodland Scenics Foam Tack adhesive and held in place with the same manufacturer's Foam Nails.



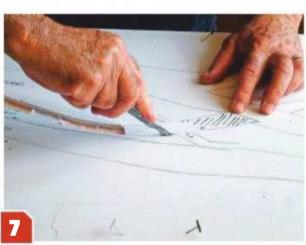
In order to set out the arrangement of roads on the board, I tried the tracing in place and realised that I would have enough space for the thatched cottages (MR251).



You may have done tracing as a child, and this is my method. Using a very soft (4B) pencil, I drew in all the main features on the back of the tracing paper - mainly the roads and the brook.



Turn the tracing paper the right way up and position it, using a Foam Nail to hold it in place. Re-draw all the lines for the main features and the pencil lead from the back of the sheet will transfer to the board.



With the main features now transferred onto the foamboard, the next job was to start cutting out the course of the brook as this will involve the deepest 'excavation' of the foam material.



This is a messy job, and best done outdoors. Having started cutting with a craft knife, I soon had to progress to the Woodland Scenics Foam Knife which has a much longer blade. Take great care - it's very sharp!



At this stage, I had the brook excavated to its full depth and the road leading down to the ford was almost ready. Carving the Knauf board does not make as much mess as expanded polystyrene.



You can use Polyfilla if you wish, but I used Woodland Scenics Lightweight Hydrocal, mixed to a creamy consistency. As the brook is narrow, I found applying it with my finger to be easiest way.



For the road surfaces, I used Woodland Scenics Smooth-It, which is part of that company's road-making system. I used a piece of an old credit card as a spreader.



For the areas which are to be grassed, I mixed Woodland Scenics Earth Colour pigments with the Hydrocal. This was spooned and brushed into place between the road and down the banks of the brook.

www.model-rail.co.uk



With the scenic areas around the ford taking shape, I had still not decided what I would do with the outer areas, so these were left to be dealt with later.



Before I could go much further, I needed the footbridge in place. I made the deck out of North Eastern scale lumber (www.northeasternscalelumber.com).



The posts for the bannister railings were 20mm lengths of 60thou plastic rod glued with PVA glue. The North Eastern lumber lets me create an accurate rendering of the deck.



The completed bridge, with railings in place. I left long sections of railing as these have to be bent and set into the scenery later. Styrene strip was assembled with Plastic Magic adhesive.



Concrete is used where the road passes through the ford, to reduce pollution. I used RailMatch acrylic concrete colour and patches of different greys for the cracks and repairs.



The position of the footbridge had to be re-marked onto the hardened plaster and two small areas of plaster had to be cut away to set the wooden beams into the ground.



Here is the bridge set in place. It is, without doubt, the most obvious identifying feature of this particular ford. I've shown it to several of the villagers and they recognise it immediately.



At this stage I could start to add the final scenic work. I used mainly 4mm and 2mm static grass, mixed together, and went for a slightly darker green than the real grass as I felt it looked better.



I was keen to have some reeds in the brook and used Woodland Scenics Natural Straw Field Grass placed in clumps into blobs of white PVA glue. When dry, I touched it up with a brush of green paint.



To create the water in the brook I used the same Ronseal acrylic varnish that I had used for the water on my Cornish harbour layout ('Polwyddelan', MR226). A small brush is needed to tease the 'water' into the right place.



It had to have a BMW hacking through the ford! The bow wave is aquarium filter wool stippled into place with the acrylic varnish, in the same way that I made the waves on 'Polwyddelan's' beach.



The walls, parking space and lawns closely follow the actual arrangement of the village. I used Javis stone walling. Various styles are available in model shops or direct from www.javis.co.uk

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GV2013 J	anus British Steel£92.45
DJM00J9	4-SPI NCB J94£99.75
OR76 DG0	01 GWR Dean Goods£88.95
OR76AR0	05 Adams East Kent £84.45
OR76AR0	06 Adams SR£84.45
9005	Metropolitan No 19£106.95
9006	Matropolitan No 6 William Popp

BACHMANN Diesel/Electric Locomotives

31-040 SWT Class 450 ......£271.95 31-041 SWT Class 450 wthd ...... £297.45

### HOW TO

# TROUBLESHOOT DIFFICULT POINTS

Plagued by pointwork short circuits? **Mick Bryan** comes to the rescue with this guide to troubleshooting infuriating frogs.

t's all very well designing a complex trackplan, full of double slips, crossings and three-way points. But once you start wiring things up and discover there's an annoying short circuit somewhere in the mess of wires, your blood can really start boiling. With metaphorical steam coming out of your ears, you keep berating yourself for not just building a little branch line terminus with one loop instead.

If you're in this situation, don't start ripping out those slips and three-ways just yet. The key to any point is the frog and how to get power to it. Once you understand that, you can apply the theory to any number of complicated pieces of pointwork.

■ Thanks to DCCconcepts and Kernow Model Rail Centre for their help with this feature.

### LIVE OR INSULATED?

The frog is the 'V'-shaped arrangement where the rails of the diverging routes split. This is why it's also known as the 'vee'.

There are two types of frog in model railway terms, insulated and live. Peco's brands Insulfrog and Electrofrog are often used to describe the two types.

Insulated frog points have a small plastic insert for the frog and there is no complicated wiring involved. All that's required are two track feeds, one to each of the outer rails.

The point blade will conduct power through the point with two wire links fitted underneath the frog to the exit rails at the heel end of the point. The beauty of insulated frog points is that they automatically route the power, electrically isolating the track that isn't selected. DCC users can get around this by simply adding power feeds to the tracks beyond the point.

The downside is that the insulated section across the frog can reduce the running quality in some locomotives and, at worst, cause short wheelbase locomotives to stall. They can interrupt the DCC signal for digital users.

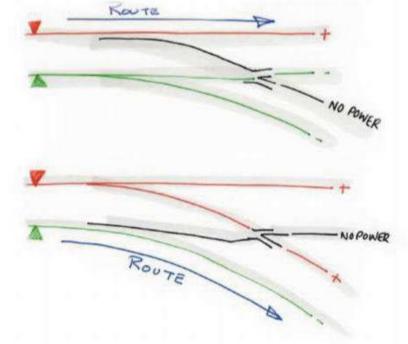
The alternative is the live frog point, where there is no insulted gap. The whole crossing 'vee' is metal, with no plastic insulated section. Running quality is much improved, but you must bear in mind that electrical power has to be provided to the frog, and insulating gaps must be added.

This has created a perception that there's a black art to wiring live frog points. But there isn't, and what follows should bust those myths.

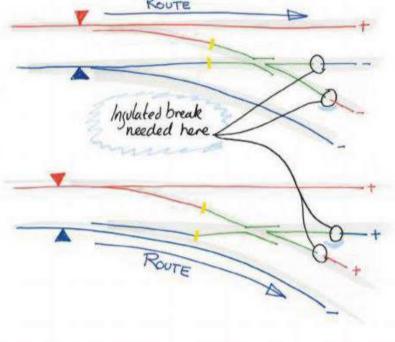




### INSULFROG



### **ELECTROFROG**





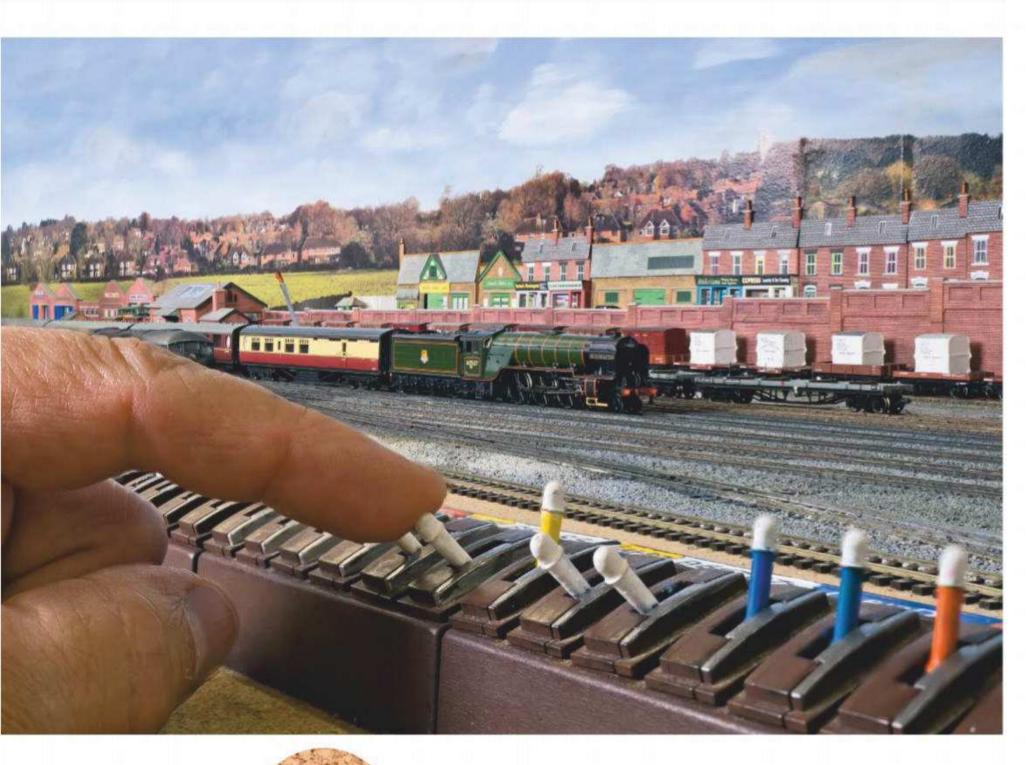
A multimeter is a very useful tool for fault-finding. There's no

need to buy an expensive one (or even one at all if you fancy making your own tester with a buzzer or bulb).

With the point in one position and switch installed, there should **be** a continuous circuit

between the matching stock rail and frog. This will show as zero ohms on your multimeter (or a buzzer or light with your home-made tester).

From the frog to the opposite stock
rail, there should be an open circuit on your
meter (no buzzer or light). If there is,
then there's a short somewhere.
If all is well, switch the point
and test from the other
stock rail.



### Isolating gaps

Extra insulated gaps are required but you need nothing more complicated than Peco's insulated rail joiners on the two tracks that form the inside of the 'vee'. All you need to do then is solder a power feed to the tracks immediately beyond the isolating gap.

Top tip: If in doubt, add an insulated gap! If you're not sure whether an arrangement could cause a short circuit, it's far easier to add a wire dropper to a dead section of rail than find a short and have to add a gap retrospectively.



### **SWITCHING**

'Polarity' is one of those jargon words that may confuse the electrically uninitiated. In its loosest sense, polarity means the direction in which the electricity flows.

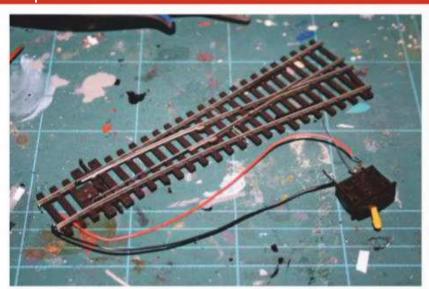
Your point blades may be pointing to one particular track, which would allow a train to take that route. But electricity doesn't care about which way the point blades are going. If the frog is live, electricity will flow across it and out down both diverging tracks. It doesn't take much imagination to think about the

chaos that this could cause. There needs to be a way to ensure that the power flows out only along the correct track.

You can rely on the point blade making contact with the stock rail to transfer power through the point. But if you've painted and ballasted the track then dirt can get in there, or the point's spring mechanism can fail. To ensure reliable operation and to get over the issue of polarity, you can add a physical switch to the point's polarity.

### Option 1: Manual points

For manually operated points, all that's required is a Single Pole Double Throw (SPDT) switch that switches the common terminal to either of the other terminals. The frog is wired to the common and the two rails to the left/right terminals. As you throw the point, flick the SPDT to power the frog with the correct polarity.



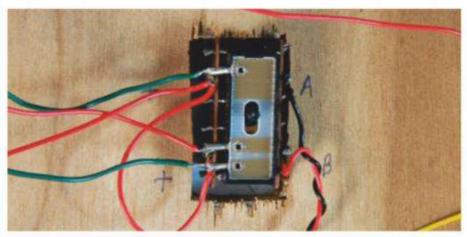
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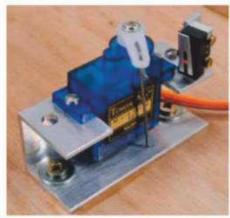
### Option 2: Built-in switch

Some point motors and solenoids come with a switch built in, such as Seep's PM1 and DCCconcepts' Cobalt-iP. Peco's trusty PL-10 can be mounted with the PL-13 (below) or PL-15 Twin micro-switches.

Servos are gaining popularity for point operation, but require a separately mounted switch, often incorporated into the servo mounting bracket. Peco's SmartSwitch system is designed to work with servos.

All of the above require some form of mechanical connection with the point blade or operating mechanism, be it externally mounted switches or internal switches, such as the DCCconcepts Cobalt and Tortoise range.







### Option 3: Electrical only

Some manufacturers offer 'electrical only' methods for switching the frog polarity. DCCconcepts makes the ADS decoder for solenoids, which has a built-in relay with SPDT contacts to switch the frog polarity in preference to a motor-mounted switch. This can be used for both DCC and analogue DC layouts. Or you could use Gaugemaster's GM500 with relay switching in parallel with the solenoid.

### Option 4: Frog juicers

DCC users can take advantage of 'frog juicers' that electronically detect a short circuit as rolling stock passes over and automatically alter the polarity to suit. There are versions with solid state switching

- such as the Tam
Valley Hex Juicer - or
the Gaugemaster
DCC80 Autofrog
that uses a relay to
switch the frog
polarity.

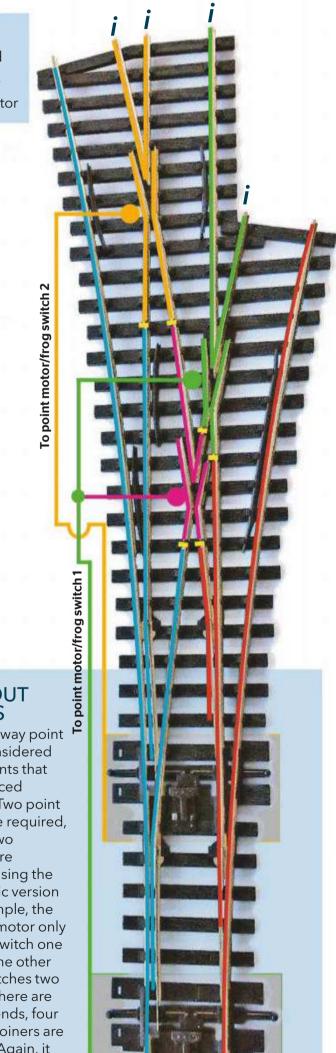
'Frog juicers' simplify the installation of a frog with no requirement for a mechanically operated switch but they aren't interlocked with the points. If you approach from the trailing end, the polarity may change even though the point is set for the

other route. Not only could this cause a derailment but there is also the potential long-term effect of small but regular shorts causing pitting of the wheel and rail surfaces.

### **MORE COMPLICATED POINTS**

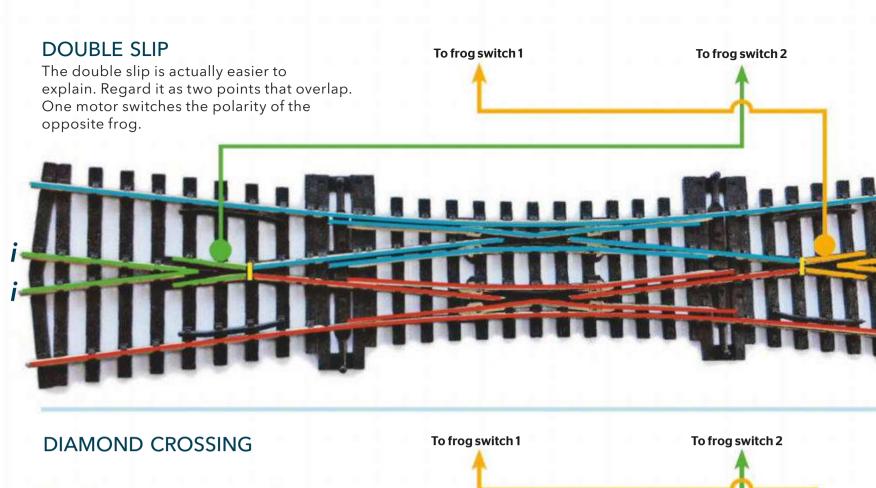
Now that we've covered ways of getting power to the frog while sorting its polarity – and where to add insulating rail joiners – we can apply this theory to more complicated points. We're studying four here: Peco's SL-E199 Electrofrog asymmetrical three-way point, an SL-E190 double slip, an SL-E194 Long Diamond Crossing and a scissors crossover made from short radius points and small diamond crossing.





### TURNOUT POINTS

The three-way point is best considered as two points that are interlaced together. Two point motors are required, but only two switches are needed. Using the asymmetric version as an example, the heel-end motor only needs to switch one frog and the other motor switches two frogs. As there are four frog ends, four insulated joiners are required. Again, it makes sense to connect one frog first and test as you go along.



The diamond crossing has no point blades but arguably requires the most complicated switching. There are two frogs, each of which is of the opposite polarity to the other, therefore a diamond

crossing requires two switches, but the principle is the same.

You can use Peco solenoids, fitted with PL-15 twin microswitches. Motors such as the Cobalt Analog iP and Tortoise also have two switches that can be utilised in situations such as these.

Diamond crossings are frequently used as part of a double junction. In this case, the frogs on the diamond crossing can be doubled up with the switches on one of the point motors. You will have to watch out that the points are correctly set and that the conflicting route of the two main lines crossing each other isn't selected.

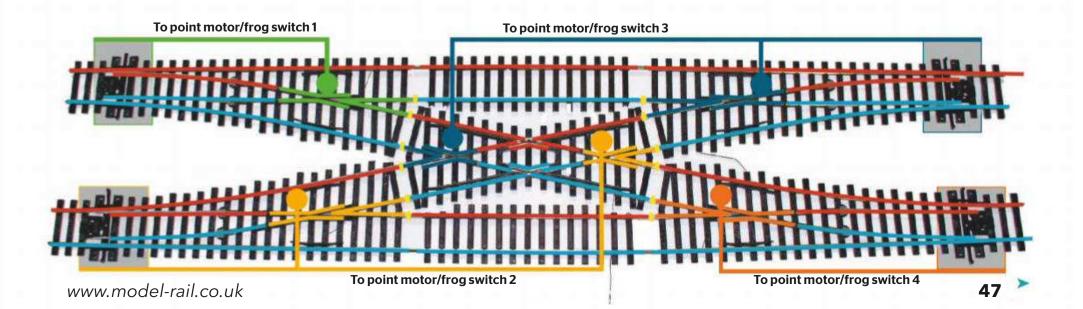
### **SCISSOR POINTS**

The scissor crossing is probably the most complicated piece of trackwork you can arrange. There are three 'valid' routes: both lines straight, one crossover set with the other two points set for straight and the other

crossover set, with the remaining two points set for straight ahead. The invalid route is both crossovers set to cross.

Six frogs require switching, but as long as the invalid route of both crossovers isn't selected, then switching a scissors crossover isn't too difficult.

Only the acute 'vees' need to be switched as the shallow 'vees' are connected to the respective blue and red feeds, provided that insulated gaps are added as shown in yellow in the diagram below. The point frogs rely on the blades for polarity switching. If you want to add switched frogs into the main line track, then cuts will have to be made into the rails, as shown.



### FRIENDLY FROGS

There's a common belief that you need to make points 'DCC friendly'. This is a bit of a misnomer, as a more correct description is to make a point 'electrically friendly', regardless of whether you use digital or analogue control.

What this refers to is the accidental contact that may be made between the back of the wheel flange and an open point blade, where the open point blade is of the opposite rail polarity.

If your wheelsets are properly adjusted, then this shouldn't be an issue. But if a wheelset does cause a short, this can be problematic.

The result will be a micro-short. A 12V analogue system has a relatively slow-acting overload circuit, and trains will often continue to run. A DCC system, however, has a faster short circuit protection system and a micro-short will cause the layout to shut down. Shorts on both types of track power will also cause pitting of the wheelbacks over time.

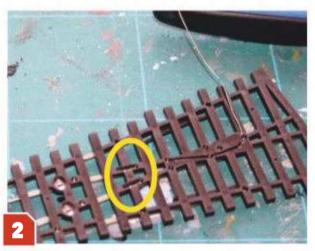
Making the point electrically friendly involves creating an insulating gap in the switch rail between the blade and crossing 'vee'. The switched part of the blade is connected to its adjacent stock rail, whereas the frog end is electrically connected to the frog.

Peco has made it easy to make its 'OO' gauge Electrofrog points 'electrically friendly'. Here's how to do it:





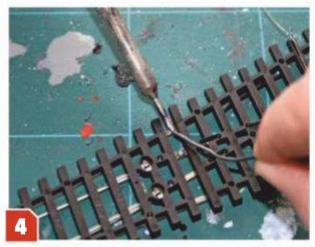
You'll see that there are insulating gaps in the closure rails of the Peco SL-E191 Electrofrog. If there are none in your point, you'll have to cut the rails here.



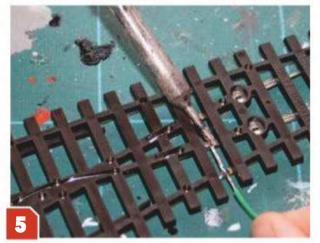
Turning the point over, you'll see the wires that cross the insulating gaps. Note also the gaps in the plastic webbing.



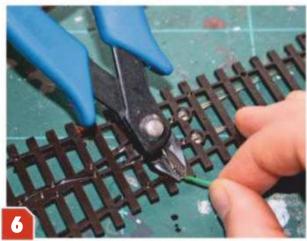
Strip off a decent length of insulation from some thin, multi-strand wire. Apply flux and then solder, allowing the solder to flow along the exposed strands.



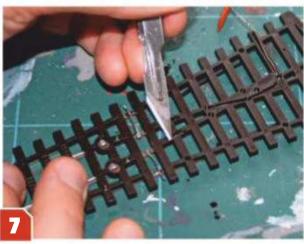
Apply flux to the underside of the rail where there are gaps in the webbing. Then apply small amounts of solder to each exposed bit of rail.



Cut the wire and, holding the insulated end, bridge the closure and stock rails on one side. Apply the soldering iron and sweat the joints together.



Repeat the process on the other closure and stock rails. When they've been soldered into place, cut back the excess wire.



With both closure and stock rails linked, you now have to break the wire across the insulating gap. Break the joint with the tip of a scalpol



Use the scalpel blade to lift the wire upwards and then cut it back with a pair of fine-nosed cutters.

### HOW TO

# WIRE A PLUG & SOCKET JOINT

Chris Leigh shows you how to solder plugs and sockets between baseboard sections for a durable, simple connection solution.

While getting my Cornish harbour layout, 'Polwyddelan', match-fit for the Wycrail exhibition in High Wycombe, practising taking it apart and reassembling it to make sure that everything works as it should and that I had all the necessary components, I was reminded of another unfinished task. The electrical wiring was all done above the baseboard, using self-adhesive copper tape. However, at the baseboard joint I had conducted wires down

out of sight under the baseboard, making the electrical connection by simply twisting two wires together. While this had been fine for home use, it wasn't durable enough to rely on for exhibition use, nor did it look tidy and professional, so it needed to be sorted out.

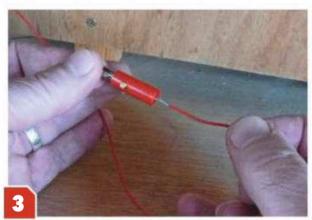
I had some suitable Expo plugs and sockets left over from my previous project, the Railway Children 'O' gauge layout, and this is how I put them to good use...



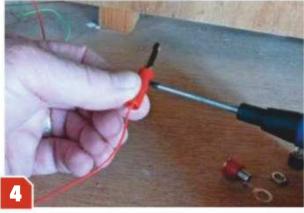
The plugs and sockets are from the Expo Drills and Tools range and they come in two separate packs. Make sure you buy the correct size plugs for the sockets.



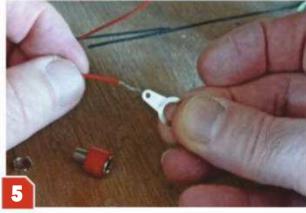
Here, the red socket is dismantled to show the components. The threaded section with the red collar is mounted in a hole in the panel, with the thin metal tag between it and the nut.



I chose red and black plugs and sockets to differentiate between the positive (red) and negative (green) wires. I exposed about a ¼in of wire from the ends of each wire.



One end of each wire was then inserted fully into each plastic plug sleeve and the screw tightened until it gripped the wire. Don't overtighten, but make sure the wire is held firmly.



Fixing the sockets in place is fiddly. First, the other bare end of the positive wire was passed through the small hole in the metal tag. The next job is to fix it securely in place.



A spot of flux, some ordinary electrical solder and a hot soldering iron were then applied for a moment and the wire securely soldered to the tag. Repeat for the negative (green) wire.



I needed a small panel on which to mount the sockets so I cut a square of 1/8 in plywood. When drilling thin ply, always back it with a piece of scrap wood to prevent it splitting.



Pass the threaded socket through the ply, add the tag and then the nut and tighten the nut. The finished unit can then be positioned where it is accessible. Ideally, it should be easy to get at.





**HOW TO** 

# CONVERTA RAILCARTO DCC

Left frustrated that the updated Graham Farish GWR diesel railcar isn't DCC-ready? Don't worry - **Chris Leigh** shows you how to make it digital.

he GWR's 'razor edge' diesel railcars were a common sight on the Staines West branch, so I really had to have one for my new 'N' gauge layout.

The problem was that the only available 'N' gauge model was the old Graham Farish model that lacked any form of provision for DCC. Still, no matter. In 2014, Bachmann unveiled plans to give the old 1985 model a new chassis, with a six-pin DCC socket and NEM pockets. I placed an order and waited.

It has proved to be a rather long wait but the railcar finally arrived in July 2018. Somewhere along the way, however, the spec for the new chassis has changed.

Yes, it has a different motor and the wiring is accessible, but there is no DCC socket. Instead, there's a small cut-out space for a decoder.



AVAILABILITY
Bachmann stockists





To be fair, it is much cheaper than the original quoted price but this is very much a 1980s model, not a 21st-century upgrade. I suspect that I will not be the only customer to have been disappointed after such a long wait for a supposedly improved model.

The revised model has only been offered in GWR chocolate/cream or BR green, but not the 1950s crimson/cream that I needed. The old Farish railcar had been offered in crimson/cream, so I wondered if I could put an old body onto the new chassis and get the DCC railcar that I needed, albeit one with no possibility of installing sound.

At a cost of around £170 for the two models,

it would make for an expensive, silent railcar, but with a bit of luck I could sell on the new body on the old chassis and recoup some of that cost. Here's how I got on.

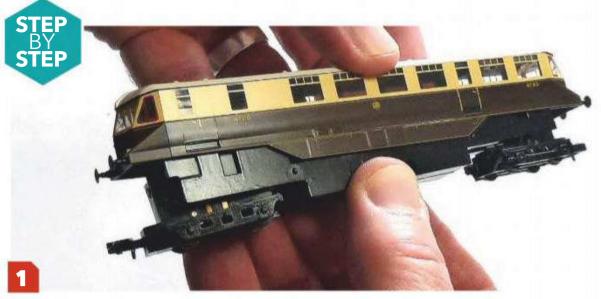
### What you will need

### **SHOPPING LIST**

 Gaugemaster DCC22 Classic eight-pin Micro Decoder, £26.95
 Availability: Gaugemaster
 Tel: 01903 884488
 Web: www.gaugemaster.com

PHOTOGRAPHY: CHRIS LEIGH

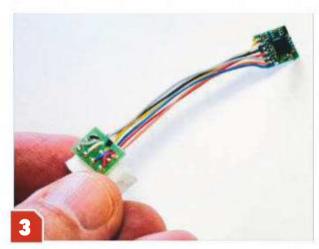
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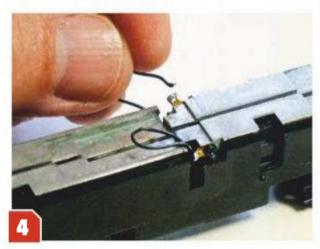
The new GWR railcar is easy to dismantle as the body is held in place by four little pips. Ease the lower edges of the sides apart and pull the body upwards until it lifts off.



The new railcar chassis is a split-frame type, with the motor sandwiched between. Very little of it is visible. Remove the small strip of black insulating tape to reveal the two black wires.



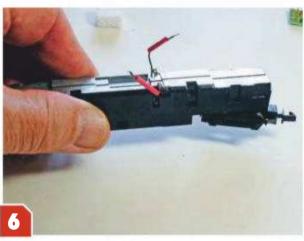
I used a Gaugemaster DCC22 Classic Micro Decoder. It comes with an eight-pin plug that will need to be cut off. I was unable to find a small decoder without a fitted plug.



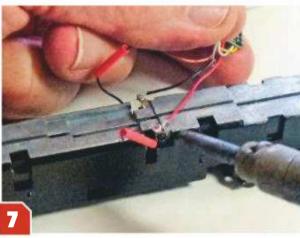
Now for the black wires on the chassis. The accessible end is attached to a brass tag, screwed to the chassis. Turn the tag upwards for ease of access and unsolder the wire. It remains attached to the motor.



Cut the plug off the decoder. I shortened the wires to about half the original length but could have cut off more. Now strip a small amount of insulation from the red, black, orange and grey wires.



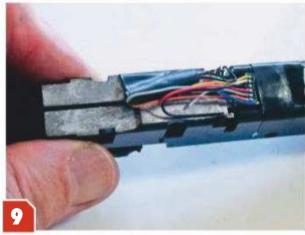
Cut the black wires between the pick-ups and the motor. Fit a small piece of heat-shrink tubing to both. The orange and grey wires on the decoder will be attached to these leads on the motor.



Ignore the two sleeved black wires. The current from the pick-ups goes to the red and black wires, which form the 'inputs' to the decoder. Solder the red to one brass tag and black to the other.



Think of grey and orange as shades of black and red. Slip a piece of heat-shrink sleeving over the grey and orange wires and solder them to the two remaining black wires which are attached to the motor.



Passing the soldering iron close to the heat-shrink tubing will cause it to contract. The wires can then be tidied and wrapped, if necessary, with a small piece of insulating tape to hold them in place.

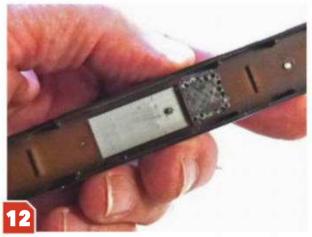


I found that I needed sufficient wire to make the soldering job easy, but this means that the neatened wiring still would not fit in the small cut-out in the top of the moulded body.

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I needed to cut an extra piece out of the internal 'ceiling' of the railcar body. I marked the area with a soft pencil, ensuring that I was marking the correct end as the body only fits one way round.



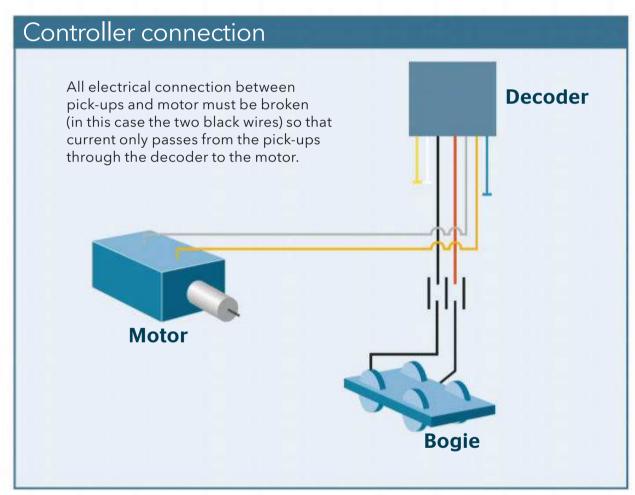
Then, taking great care not to drill through the roof, I drilled a series of small holes around the three sides of the section to be removed. I cannot overemphasise how important it is not to drill through into the roof.



By drilling lots of holes I was able to break away the unwanted piece of the 'ceiling', and once I had tidied the edges with a sharp craft knife I was able to refit the body over the decoder and wiring.



An unidentified GWR railcar at Staines West in the mid-1950s. CHRIS LEIGH COLLECTION

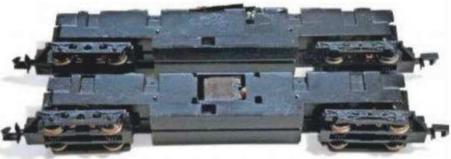


### Old vs new

The underside of new (top) and old bodies shows clearly the cut-out for the decoder wiring and my enlargement of it on the new body. No such opening appears on the old body, so I had to

start from scratch to create one. There isn't a lot of difference between the new (top) and old chassis, but it is now just possible to fit the new chassis with a DCC decoder, as seen here.







33-300W 20 Ton Toad Brake Van ZTO No. DW35377 BR Departmental Green. 33-300X 20 Ton Toad Brake Van No. 68642 GW Grey "Penzance"..... 33-300Y 20 Ton Toad Brake Van No. W68366 BR Grey "Gwinear Road"...

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39-677DC BR MK2F TSO Tourist Second Open Coach No. 6015 InterCity. DCC Fitted. 139-685 BR MK2F RFB Restaurant First Buffet Coach No. M1524 BR Blue & Grey. 150-685 BR MK2F RFB Restaurant First Buffet Coach No. M1524 BR Blue & Grey. 150-685 BR MK2F RFB Restaurant First Buffet Coach No. M1524 BR Blue & Grey. 150-685 BR MK2F RFB Restaurant First Buffet Coach No. 6015 InterCity.	46.99 R6851 ZUA Shark Ballast Plough Brake Van No. DB993902 EWS	£31.99 763RB001 Mk3a Restaurant Unclassified Buffet Coach No. M10025 BR Blue & Grey.£31.95
39-686 BR MK2F RFB Restaurant First Buffet Coach No. 1207 InterCity£	46.99 R6889 Christmas Wagon 2018	£15.99 76DG005XS Dean Goods Steam 2534 GWR Green w/snow plough. DCC Sound.£195.95
BACHMANN OO LOCOMOTIVES	BARGAINS - OO GAUGE  39-380A Mk2A BSO Brake Second Open No. E9418 BR Blue & Grey	<b>£24.99</b> R3422 Adams Radial 415 Class Steam Locomotive No. 3125 <b>£83.99</b>
31-426B Class 411 4-CEP EMU Set 7122 BR (SR) Green	89.99 39-501 BR Mk1 SLF 1st Class Sleeper Car E2054	£34.99 R3481 Class 67 Diesel Locomotive No. 67 025 EWS
32-085 Class 56XX Steam Locomotive No. 6639 BH Black E/E£	72.99 DAPOL OO DIESEL LOCOMOTIVES	RGAINS R4632A Mk3 Standard Open TS Coach No. 42033
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37-090 7 Plank Fixed End Wagon No. 127916 NE Gréy£ 37-356 13 Ton Steel Sand Tippler Wagon ZCO No. DB746085 BR£	12.00 OOJ94-004 J94 Austerity 0-6-0 Steam Locomoitve No. 8023 LNER Black	£99.99       R4689 LMS Non-Corridor 57ft Composite Coach No. M16574
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32-976ZDC DCC Fitted£194.95 32-976ZDS DCC Sound Fitted£27  BACHMANN OO VANS + WAGONS + COACHES	14.33 K0000 0 6 0 1061 No. 1060 DD Dlook E/E	£124.99 SB006Z YCV Turbot Bogie Ballast Wagon Civil Engineers Dutch Bulk Pack (x 4)£109.99
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# INSTALL FALLER'S CAR SYSTEM

**Dave Lowery** steers you through the process of adding moving vehicles to your layout.



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've admired Faller's Car System for many years now. I even included it on the layout I built for my book Build A Model Railway Layout. Nothing can match it as a way to add an extra dimension to your layout. Things have moved on since I last used Car System and you can now get working traffic lights, bus stops, lighting systems and even a moving house boat. You really should consider adding it to your layout.

The main UK importer of Car System is Gaugemaster. It kindly supplied us with what I call the 'White Van Man' starter set, thanks to its white Mercedes Benz Sprinter van (a Herpa model with the Car System chassis) as well as the working traffic lights set.

This is a really simple system: the vehicles are battery powered and follow a wire under the road surface, thanks to a small magnet. Gaugemaster offers excellent roadway sections that complement the Faller system.

They are laser-cut to accommodate the central steel guide wire. These can be arranged and designed into a suitable roadway formation.

However, there is an alternative to buying the pre-made road sections - the Car System Groove Cutter. You'll need to buy it separately, but it cuts a groove in the baseboard for the steel guide wire. This is better suited to modellers who have already built their layout and want to add Car System retrospectively. Gaugemaster's sections will work better if you're still building your layout.

The beauty of Car System is that it's really easy to use. I drew my roadway onto a piece of MDF board, including the edges of the pavements, and cut the groove using the cutter.

I had my white van moving after a couple of hours' work. If only I had the space for a much bigger system!

### What do you get?



Faller's 161504 Car System Starter Set includes the van, mains charger, two rolls of steel guide wire, a pack of water-based filler and some road surface grey paint. You also get a set of rub-down road markings, some crash barriers and a helpful little spatula tool for spreading the filler.

### Preparing the route

Before you rush into laying your steel wire and get cars moving around your layout, take a moment to plan the route for each vehicle and draw it on your road. With the route drawn, try and add a few obstacles such as a parked car to add extra interest and a more prototypical feel. When you're happy you can begin to lay the wire. I fitted the steel guide wire and fed it in around the route, adding a drop of cyanoacrylate here and there to hold it in place.

Once the wire is laid the filler is mixed to a creamy consistency (two parts filler to one

wire, sealing any gaps and leaving a smooth road surface. Once dry, it can be painted with the road surface grey paint and allowed to dry. When the paint is dry the pavements can be put in place and you'll be ready to let your traffic loose.



# FALLER T CAR SYSTEM

Gaugemaster kindly sent Model Rail this set, which includes the Mercedes Benz Sprinter van. It's set number 161504, and it costs £100.

### What we used

- Faller 161504 Car System Starter Set (includes Mercedes Benz Sprinter vehicle) Price: £100.00
- Faller 161669 Car System Groove Cutter Price: £125.00
- Faller 161654 Car System Traffic light control Price: £69.00
- Faller 161656 Car System 2 x LED traffic lights with stop sections

Price: £67.00 Availability: Gaugemaster

Web: www.gaugemaster.com



Mark out the road route in pencil. Use a straightedge to draw the straights and then add the curves to give you a return to the loop.



This is the Groove Cutter - a rotating slot cutter on a 12 volt driver electric drill. It cuts the correct groove for the steel wire to sit in. Run it along your pencil lines.



Begin to feed the guide wire into the groove, fixing it with spots of cyanoacrylate at intervals. Use the accelerator provided to make the glue go off quickly and speed up your work.



If you have any crossroads on your layout, keep the wire at right angles to stop the vehicle magnet steering the wrong way after an unnaturally sharp turn.



Included in the base kit is some water-based filler and a little spatula. This is mixed 2:1 with water to a creamy paste and then spread over the wire to fill in all the gaps.



Sometimes the groove cutter wanders off the line in the corners, particularly if you are leaning over your layout. Use the filler on unwanted grooves to give a smooth surface.



A key component in this system is the skate. This has a magnet on it and is linked to the steering of the vehicle, which follows the guide wire.

### The traffic lights kit

So you've got your basic road system working and want to add a little more realism. under the baseboard just before the traffic How about working traffic lights that not only work, but are obeyed by traffic? There's no smoke and mirrors, simply a small lead switch those components and has adjustable time mounted inside the car, van or lorry that is

switched by an electromagnet mounted lights. The magnets and traffic lights are connected to an electronics unit that controls delays on the lights sequence.



Above: This electromagnet, installed under the layout, triggers the switch on the vehicle seen on the vehicle chassis at the bottom of Step 8, above.





Above: The all-important electronic control box for the traffic lights. It controls the lights and the magnets, allowing you to adjust the timings and sequence of the lights themselves.

Left: In operation, waiting at the lights.



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HOW TO

# MODEL A ROAD VAN

The road van was a cross between a goods van and a brake van, and seems to have been largely confined to the south and west of England. Chris Leigh takes a close look at the real thing and builds the available kits.

y latent interest in bucolic branch lines and light railways was revived by a visit to Moreton-in-Marsh, and some research into the Stratford and Moreton Tramway. I began to look into local goods traffic over the Shipston-on-Stour branch, which was the surviving section of the tramway.

Moreton-in-Marsh had its own branded 'Toad' brake van, presumably allocated there for branch duty, and it was while looking at 'Toad' pictures in the massive GWR Goods Wagons book (Oxford Publishing Co.), that I was reminded of the two Diagram AA3 'road vans'. One of these was branded for use at Cirencester, for the Cirencester Town-Kemble branch, and the other was branded for the Kington branch in Herefordshire.

The GWR road van was simply a 'Toad' brake

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van crossed with a 'Mink A' wooden-bodied goods van. It was a dual-purpose wagon which not only provided the usual accommodation for the guard but also had a separate section for sundries traffic, loaded through the double side doors. If you recall the 'Toad' verandah loaded with fruit and veg baskets in *The Titfield Thunderbolt* it is not difficult to imagine the usefulness of such a vehicle on a rural branch line, and it is surprising only two were built by the GWR.

The London & South Western Railway, however, made very good use of road vans but I've had difficulty tracing them elsewhere. North Eastern Railway No. 44824 was built in 1893 to Diagram V1 and is preserved at

Beamish. This is a really unusual looking brake van, with a North American-style cupola, but it also has the large sliding door of a road van. Otherwise, it seems that if other pre-Grouping railways had road vans, they were long gone by BR days.

### GO SOUTH, YOUNG MAN

A little investigation reveals that the London & South Western Railway was a prolific builder and user of road vans. According to An Illustrated History of Southern Wagons Volume 1 (OPC): "Of 601 vehicles passed to the Southern Railway at the Grouping, no fewer than 444 were single-ended road vans..."

An etched brass kit was produced by Chivers



Finelines but it seems it's no longer available. These, and two larger LSWR road vans of 18 tons and 20 tons, are also the subject of resin kits by Smallbrook Studio.

The first of the ten-tonners were known as Adams vans, and were built between 1880 and 1885 with sliding doors, but none lasted in brake van use after the Grouping. The bulk of the road vans were built between 1887 and 1905 to Diagram 1541 with hinged doors, They were initially 10/11-tonners but later examples were rated at 15 tons. Some Diagram 1541 vans were rebuilt without the side doors, apparently due to complaints from guards that the doors caused draughts. Several were shipped to the Isle of Wight by the Southern Railway and one of them, in original form (S56046), survives in preservation. At least two of the Isle of Wight vans were rebuilt by A.B. MacLeod with sanding gear for use on ballast trains.

On the mainland, the Bluebell Railway has S54663, and the Somerset & Dorset Railway Trust at Washford has S54885. Contractors built 12 almost identical vehicles for the Midland & South Western Junction Railway and these passed into GWR stock at the Grouping.

The 18-ton vehicles were outside-framed and particularly handsome. They lasted into BR days and though one was initially the subject of a preservation bid, its condition was deemed to be too poor and it was passed over. The 20-ton vehicle, given SR diagram numbers 1545 and

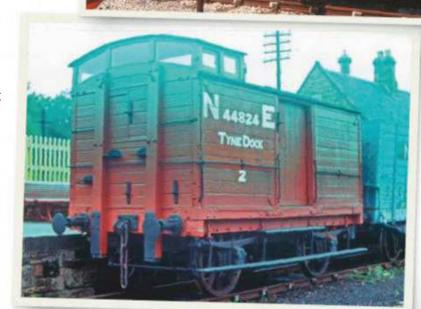
Right: Diagram 1541 10-tonner No. S54885, carrying MoD No. 12424, stands at Cranmore, on the East Somerset Railway, on April 19 1976. PAUL BARTLETT

Below: North Eastern Railway 10-ton 'birdcage' brake road van No. 44824, built at York in 1893, stands in preservation at Beamish Open Air Museum, on August 24 1977. PAUL BARTLETT

1549, was slightly shorter, and inside-framed.

I find these vehicles fascinating as they have something of a 'light railway' atmosphere about them. Put one of these behind an old woodenpanelled coach and you've got a charismatic light railway train.

A vehicle in a similar vein which I find equally appealing was the goods, guard and drovers' brake van built by the LSWR in the early 20th century for service



on the Callington branch from Bere Alston. That branch had been built by the Plymouth, Devonport & South Western Junction Railway, part of Colonel H.F. Stephens' light railway empire, having been, in part, converted from a narrow gauge mineral railway. Accordingly, the drover's van is often stated to have been a PDSWJR vehicle, but in fact its origins are purely LSWR.

This characterful six-wheeler had accommodation for the guard, a sundries section reached through side doors and accommodation for six or eight drovers. It was intended for use on cattle trains but apparently it was also used by quarry workmen, and ended its days on the Seaton branch, from where it was withdrawn in the late 1950s.

A rummage in the back of my cupboards revealed that some 20-plus years ago, my interest in this particular vehicle had peaked

with the purchase of a kit from Falcon Brass. It is part-built and it doesn't take much investigation to see why I gave up on it. I felt that the chassis needed a substantial redesign, while the one-layer body etch lacked the relief that is evident in photographs of the real thing.

I have added some extra panelling with .015 by .030 styrene strip. This is definitely an improvement but it's merely a better sow's ear, not a silk purse. The kit is still listed on the Falcon Brass website, which is shown as under new ownership, but not a single item on the list is currently available to purchase.

As so often happens with modellers, I found myself worrying about what colour it should be. The prototype lasted until 1959 so it is possible that it had at least one BR repaint. It counted as a wagon, so that would have meant a repaint from SR dark brown to BR bauxite.

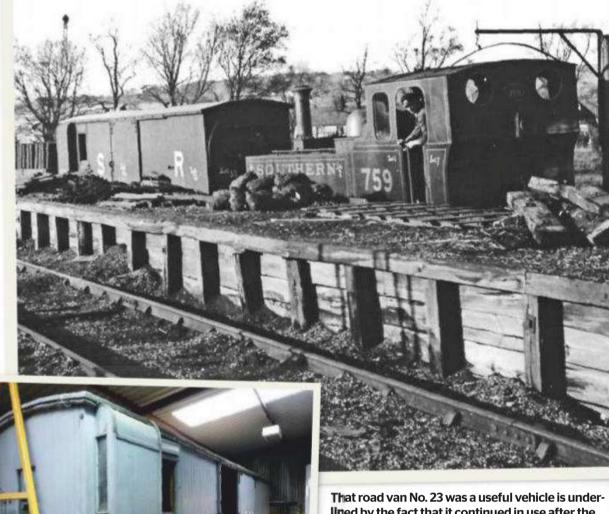
### ... AND NARROW GAUGE, TOO!

Recently I was sent on a mission to photograph Lynton & Barnstaple Railway van No. 23, which was about to be dismantled for major restoration to make it fit for service on the revived L&B, more than 100 years after it was built.

No. 23 was unique on the L&B in being the only timber-framed vehicle. This is, presumably, why it survived the post-closure destruction in 1935, as it would have had no metal scrap value.

The other two L&B goods brakes were also road vans but with a considerably reduced payload. A model of No. 23 in 'OO9' is being developed by Peco.

Modelling-wise, I already had a head-start with both GWR and LSWR road van models. Back in October 2016, when I built a bullion van kit by the fascinatingly named Frogmore Confederacy, the guys at Dart Castings who market FC kits sent me a 'thank-you' in the form of a GWR AA3 road van kit. This is an all-brass kit intended for solder assembly, and I recently got stuck in and actually built it. I'm not a skilled solderer so the result is OK, but no better than that.



That road van No. 23 was a useful vehicle is underlined by the fact that it continued in use after the Lynton & Barnstaple had closed in 1935. Here it is at the Pilton exchange siding with 2-6-2T No. 759 *Yeo*, both wearing lot numbers ready for the forthcoming auction, having been used for the recovery of equipment and materials. F.E. BOX/CJL COLLECTION

Having been renovated by the L&BR Bristol Group in the 1990s, following its recovery from a field, No. 23 is now to undergo complete reconstruction for a return to service. CHRIS LEIGH

### GWR ROAD VAN (OXFORD CONVERSION)

However, I had also been looking into building a road van by 'cross-kitting' the recent Hornby 'Toad' with suitable doors from a plastic wagon kit. It turned out to be a non-starter because Hornby's 'Toad' is a 1920s 20-tonner and the basis of the road van was a turn-of-the-century 16-ton 'Toad'. The answer came soon afterwards with the arrival of Oxford Rail's 16-ton Diagram AA3 'Toad' – exactly the right wagon for the job.

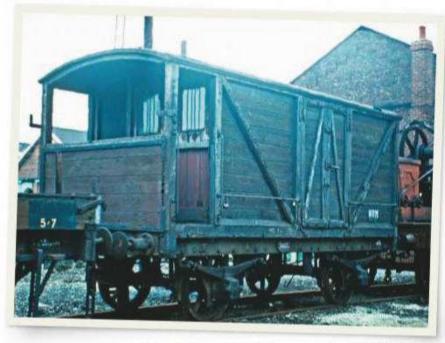
What's more, this is a very straightforward conversion for a novice who wants to have a go at kit-bashing.

I considered cutting the Oxford body and inserting doors made from styrene sheet, but I soon decided that the moulded sides would also look better with moulded doors.

A quick check of plastic kits for GWR vans revealed that a Parkside 'Mink A' would yield a pair of doors with the distinctive inverted 'V' ribs. Parkside wagon kits are now made by Peco and are easy to obtain. A little over £10 was quite a lot to pay just for

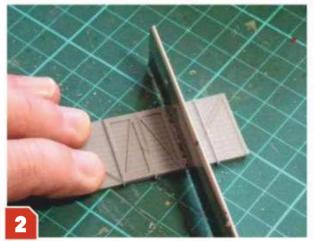
Right: Former LSWR road van S56055, rebuilt for the Isle of Wight in 1933, awaits attention at the NRM on April 8 1977. It has since been repainted in LSWR livery. PAUL BARTLETT a set of doors, and for some reason the immortal quote from *The Italian Job*: "You're only supposed to blow the... doors off" kept running through my mind as I cut the kit sides apart! The Parkside chassis will doubtless be useful for some other job in the future.

The body conversion is described in the step-by-step section, but for the time being the chassis remains in its original form. The road vans were fitted with vacuum brakes, so the chassis will need modification when I have obtained the necessary vacuum cylinder and fittings. Interestingly, I did notice that the Oxford chassis has a number of unused mounting points, which suggests that the tools allow for a vacuum-fitted version in due course.



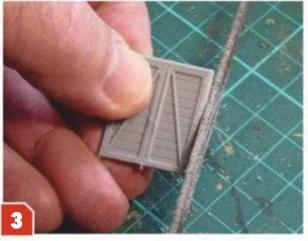


Part-built Frogmore Confederacy brass road van, Oxford 'Toad' and donor Oxford 'Toad'. The buffers at the verandah end pull out to allow the body to be removed.

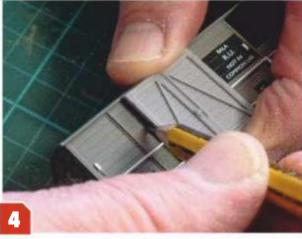


I began by cutting the doors from the Parkside 'Mink A' sides using a razor saw. Cut tight against the raised edges of the door moulding.





Save the offcut sides, as we'll use part of these later. Smooth the edges of the doors with a file and ensure that they are straight.



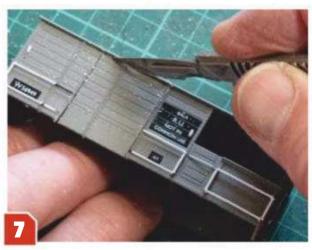
Place the door moulding against the right rib on the side of the Oxford van and draw or scribe a cutting line down the other side of the doors.



You now have two cutting lines on the side of the Oxford van. Use a sharp craft knife to cut the plastic handrails where they cross those lines, and remove the section of handrail.



The plastic sides of the Oxford model are easy to cut with a sharp razor saw - take care not to cut too far or you'll damage the edge of the roof.



Using a sharp craft knife I then scored immediately below the roof edge. Three or four strokes is enough. The unwanted side section can then be gently broken away.



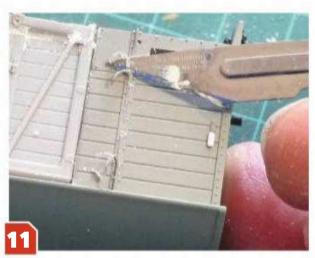
All three sides of the opening were then cleaned up with a file, and I checked and re-checked the fit of the doors as I did this. It is possible to get a tight fit with no need for filler.



The height of the Parkside doors needed to be reduced by one plank width. I cut away a plank at the bottom of the door and then refitted the bottom edge frame, filling where necessary.



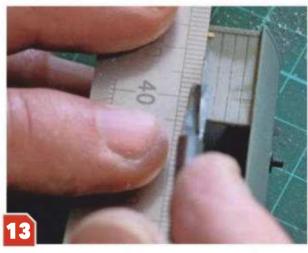
Here's how well the modified door fitted, with only some filler along the bottom plank of the door. Plastic Magic liquid adhesive was then applied to the inside.



The next job was to remove the vertical angle iron from the side of the van. I began by trimming off most of it with a sharp scalpel blade.



A rub over with some fine-grade abrasive paper will remove any last traces of the upright angle iron, but try to avoid taking off the rivet heads on the lower plated panels.



Using a small steel rule and the back of the pointed scalpel blade I then scribed the missing sections of the plank lines where the angle iron had been.



A tiny amount of filler was needed at the foot of the doors to blend the cut area of the diagonal ribs into the corner. The process was repeated on the second side of the van.



The ends of the Oxford model should be plated like the sides, but a tooling compromise has left them planked. I used Deluxe Materials Perfect Plastic Putty to fill the grooves.



Both ends need the same filler treatment, and once it had dried I shaved off the surplus with a sharp knife blade until the plank surfaces were clean and flush.



The middle window should be a planked hatch. I opened it out to make a rectangular hole by cutting away the top part of the frame and filing it back.

On the GWR road van, I used RailMatch BR wagon bauxite, applied with an airbrush, and finished the job



A piece of the 'Mink A' van side was cut out and the edges filed back until it fitted tightly in the middle window opening. It was then secured with Plastic Magic, applied from inside.





### SMALLBROOK STUDIOS LSWR 18-TON ROAD VAN



The resin castings may have a very thin layer of flash in the openings. It's easy to trim it away with a craft knife, but take care not to slice into the detail.



The chassis and step-boards are a one-piece resin casting. The flash trims out with a knife blade as before, but a little more care is needed around the axleboxes and springs.



There are holes to be drilled for the buffers and for various handrails. I used a minidrill with a good sharp drill bit and on a low speed setting, as the resin is quite soft.



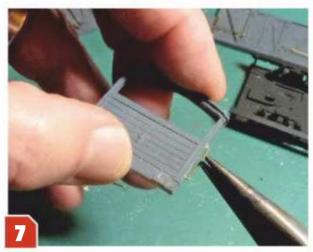
Alternatively, you can use a drill in a small pin-chuck, which is ideal for the handrail holes. Blind holes are provided on the mouldings as a guide to position.



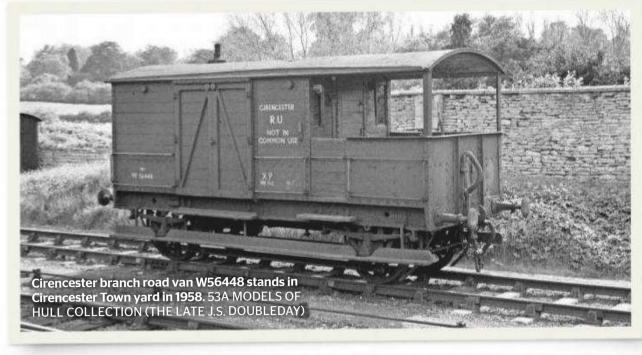
I sprayed the main body mouldings with aerosol grey primer and finished the chassis with Humbrol matt black, after a gentle sanding to remove the sheen from the back of the mouldings.



The floor and bulkhead unit needed a little straightening. To re-form it, I placed it in hot water and used finger pressure. The ends need drilling above and below the windows to take the window bars.



Both ends need to be drilled at the edges to take the handrails, using a .5mm drill. Brass wire is supplied in the kit, but use it sparingly or you will need to supplement it.

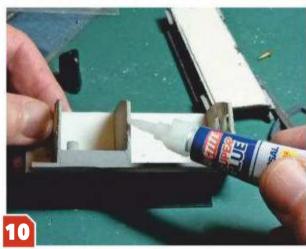




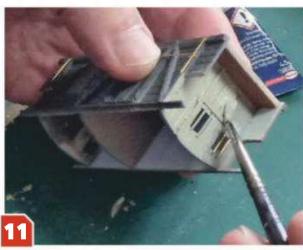
In all, there are 14 handrails to be bent, cut and fitted to the sides and ends. I fixed them in place with Deluxe Materials Glue 'n' Glaze.



A piece of 1mm thick styrene sheet is supplied as a spacer to go under the floor while you're attaching the sides and ends. It is not to be attached to the model and is simply an assembly aid.



Cyanoacrylate (Loctite's trade name is 'Super Glue') is recommended for assembly. I applied it along the edges of the floor and bulkheads before placing the unit on the spacer, aligning and adding the sides.



Before adding the verandah ends, the inside surfaces of the ends and sides and the face of the bulkhead need to be painted, as they will be inaccessible.



While the paint was drying, I turned my attention to finishing the chassis by adding the NEM pockets and tension-lock couplings supplied, and fitting the spoked metal wheelsets.



The body was then returned to the black styrene spacer and the verandah ends were attached with cyanoacrylate. The whole structure was held firmly for a moment until the glue had cured.



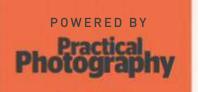
The final job, before fitting the roof, is to glaze the little end windows. I used 5thou glazing material, fixed in place with Glue 'n' Glaze.



Styrene sheet is supplied for the roof but I've never had much success with bending styrene sheet, so I replaced it with 5thou brass sheet. Note how it fits between the ends and sides.



The chassis and floor need to be drilled (the countersunk hole position is marked) and the body is secured with a single brass wood screw. Paint and decals will complete the job.





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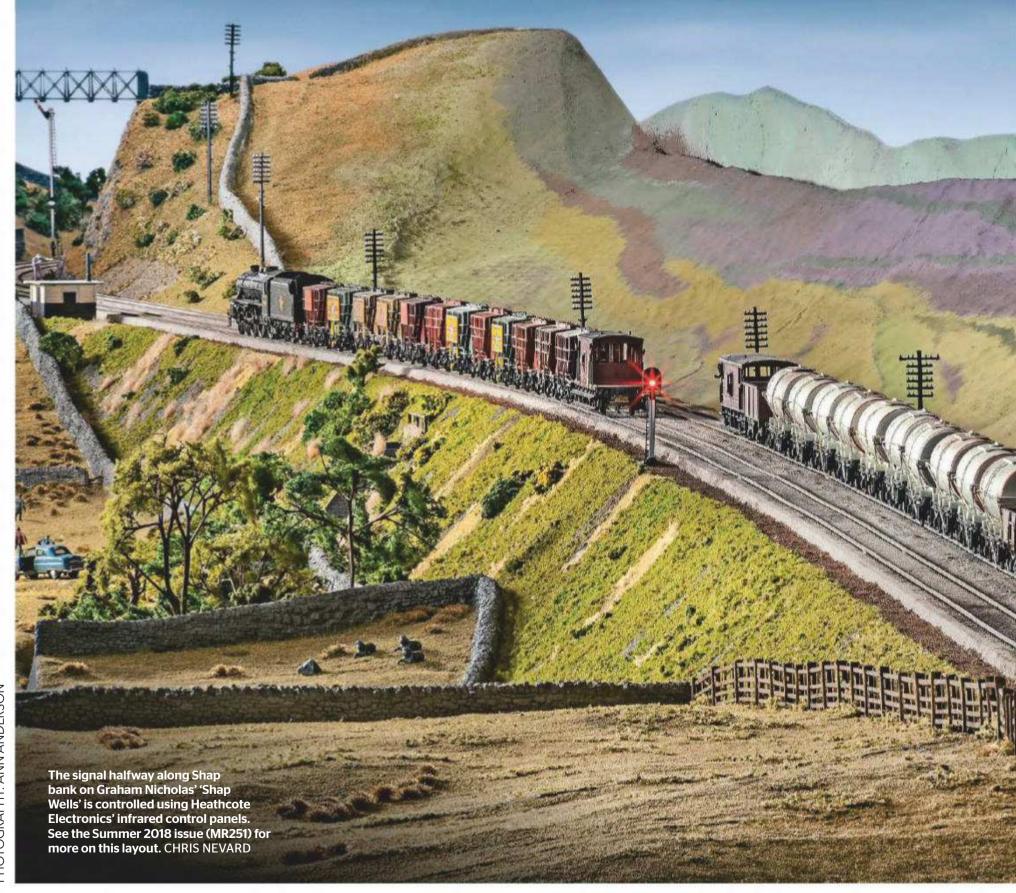
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HOW TO

# ADD INFRARED DETECTORS

**Clive Heathcote** and **Ann Anderson** explain how infrared detectors work, and how you can use them to add realism to the signalling on your layout.



PHOTOGRAPHY: ANN ANDERSON

66



Above: Julian Birley has made good use of Heathcote Electronics' infrared control panels on his Dinorwic quarry layout (featured in the next issue). This shows how inconspicuous the infrared sensors can be. CHRIS NEVARD

s there anything more impressive on a layout than watching a train pass a signal and for that signal to turn red? What's even more impressive is then watching that red signal turn back to green.

You probably think that to do this involves computer control and lots of complicated electronic wizardry. But that's not true. In fact, it can be achieved quite simply using Heathcote Electronics' infrared control boards.

### WHAT IS INFRARED?

You may have seen how white light, when shone through a prism, splits into the seven colours of the rainbow (red, orange, yellow, green, blue, indigo and violet). Beneath the red is a colour humans cannot see. This is infrared, which can be seen by snakes, frogs... and mobile phones.

Heathcote's control board emits and senses infrared. Mounted between the sleepers, it sends an upward beam of infrared. When a train passes over the beam, the rolling stock reflects it back to the control board's sensor.

Modellers have traditionally used things like reed switches, magnets, light-dependent resistors and current sensors for this type of train control, but infrared has key advantages:

### What you will need

### **SHOPPING LIST**

MAS Sequencer, £17.50; RDASC-4, £16.95 Availability: Heathcote Electronics, 1 Haydock Close, Cheadle, Staffordshire ST10 1UE Tel: 01538 756800 Web: www. heathcote-electronics.co.uk

### **TOOLS**

- 9mm drill bit
- Smaller drill bit
- Drill
- Screwdriver
- Soldering iron, solder and flux
- Hot air gun (optional)







- It works in the light or dark.
- Any item of rolling stock is detected.
- ◆ You don't need to modify your trains in any way.
- It works with both analogue and DCC control systems.

Infrared detection can be put to many different uses on a model railway, from locating trains in hidden sidings to automatically operating points. Heathcote Electronics' first infrared detection board was named the IRDOT-1 (Infra Red Detection of Trains). The IRDOT-1 was designed for train location for hidden sidings or for automatically controlling trains (such as on back-and-forth 'shuttle' sequences.

Since then, Heathcote Electronics has released a number of infrared detecting boards for various uses. To make your signals work automatically, you'll need the MAS Sequencer and the IRDASC series of boards.

And the most complicated thing about them is their names!

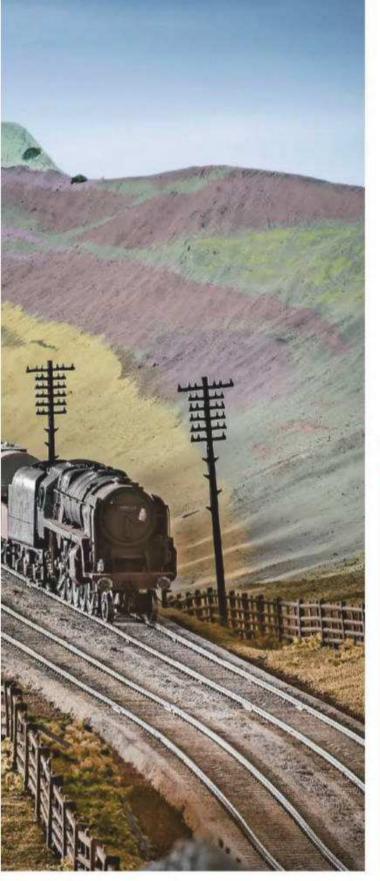
### Colour light signalling

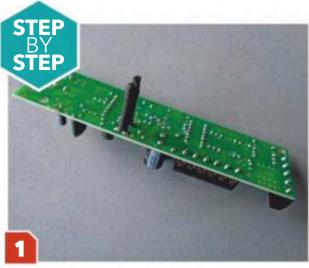
Heathcote Electronics makes the MAS Sequencer and IRDASC-4 to control two, three or four-aspect colour light signals solely by the movement of trains. The starting point is the MAS (Multi Aspect Signal) Sequencer. It is positioned after the signal so that when the front of the train reaches it, the signal automatically changes to red. This replicates how things work on real railways, where the signal also changes to red as the train reaches a track circuit past the signal.

When the entire train has gone past, the MAS Sequencer's timing routine begins. If your signal has four aspects, the red remains lit for a third of the timing sequence, after which the yellow lights, then the double-yellow and finally the signal returns to green. The timing method used by the MAS Sequencer allows a two, three or four-aspect signal to be controlled by one detector. Connecting power to the MAS Sequencer is also very straightforward.

The IRDASC-4 is similar to a MAS Sequencer as it uses infrared detection to change its signal to red. The difference is that rather than using time, the IRDASC-4 sets its signal according to the setting of the next signal up the line. For example, after it has detected a train and set its signal to red it will stay at red until the next IRDASC-4 or MAS Sequencer up the line has both set its signal to red and had the train cross its detector. At this point it will change to yellow.

The MAS sequencer controls the last signal on the line and an IRDASC-4 controls each preceding signal. A single wire links each board from the S (send) terminal back to the R (receive) terminal. The wire between these terminals sends the signal aspect information along the line of signals.





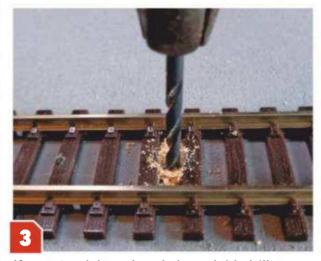
The 'heart' of the system: the MAS Sequencer. The infrared emitter and sensor are 22mm high and are designed to sit between your sleepers.



The MAS Sequencer EW ('Extended Wire') is for thick baseboards (or where there are obstructions) and features the emitter and detector at the end of a pair of 18in wires.

### IRDASC-4 box

An IRDASC-4 is similar to a MAS Sequencer as it uses infrared detection to change its signal to red. The difference is that rather than working by timing, the IRDASC-4 sets its signal according to the setting of the next signal up the line. For example, after it has detected a train and set its signal to red it will stay at red until the next IRDASC-4 or MAS Sequencer up the line has both set its signal to red and when the train has crossed its detector. At this point it will change to yellow.



If your track has already been laid, drill a pilot hole between the sleepers. Use a small bit that can fit between them without touching them.



You'll need a 9mm bit to mount the Sequencer. Gauge how much you'll need to drill to clear the baseboard surface without breaking through to the track.



Mark the baseboard thickness on the 9mm bit with tape. A mechanical stop would be even better. Drill from the underside of the baseboard.

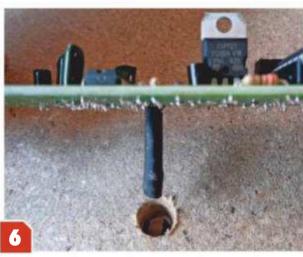
### What about semaphores?

Semaphore signals are normally set at danger and only change to clear when an approaching train is to pass them. Interestingly, colour light signals are normally at clear unless a train has just passed, or the next signal up the line is at danger.

The simplest way to replicate semaphore operation is to have a detector before the signal which will change the signal to clear and also start a timer which, on timing out, will change the signal back to danger. A more sophisticated method is to have a detector before the signal to change the signal to clear and a second detector after the signal to return it to danger. The IRDASC-1, 2, 3 and DSS work in this way. In fact, the return to danger detector is also used as the 'set to clear' detector for the next signal along the line.

Dapol's signals feature a mechanism that moves the signal arm, operated by a toggle switch which changes the signal between clear and danger. Heathcote Electronics' Semaphore Sequencer can control Dapol signals, and is positioned before the signal. When the train reaches the Semaphore Sequencer, it closes a contact for one second and starts its timer. At the end of the timing interval the contact closes for one second, and the signal returns to danger.

Heathcote Electronics' boards come with control servos, including the Bouncing Semaphore Controller, which gives the signal arm its characteristic bounce.



Insert the emitter and detector into the hole. It should be a loose fit. Use two wood screws to secure the board.



Packing - in the form of thick card - is usually required to make the tops of the emitter and detector level with the underside of the sleepers.



The wires are fixed in place with screw terminals. The blue wire is negative and the pink wire is positive. It will work off the 16V AC terminals on your controller.

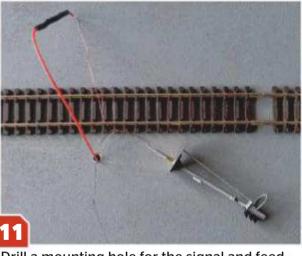


The wires on this CR Signals three-aspect signal need extending. Twist the wires together to prevent them from moving and then solder together.

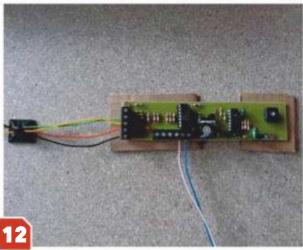




Heat shrink tube prevents exposed soldered joints from touching. The best tool to use is a hot air gun, but you can use a soldering iron as long as you 'spread' the heat around.



Drill a mounting hole for the signal and feed the wires through, one at a time. When you're happy with the signal's position, fix it with a drop of PVA.



The colour-coded signal wires connect to the MAS Sequencer. The black wire is common. Use self-adhesive cable tie mounts for neatness (https://uk.rs-online.com).



The train has reached the MAS Sequencer, causing the signal to change to red. As the train moves on, the signal will display yellow and then green.

### **FACING JUNCTIONS**

For facing junctions, you can use the MAS Sequencer RI and IRDASC-4RI. The 'RI' stands for Route Indicator (feather) which these boards control. For trailing junctions, the terminal labelled 'OI' on the boards changes the signal to red. This terminal can be connected to contacts operated by the point so that if the point is set to derail the train, the signal will be set to red.

### **RESISTORS AND BRIGHTNESS**

LEDs - light emitting diodes - need a resistor to prevent them from being destroyed by excessive current. They're used in colour signals and manufacturers fit resistors to the end of the wires. However, the MAS Sequencer also has resistors fitted to limit the current. You may wish to increase the brightness of the signal by removing the signal resistors and just using the ones built into the MAS Sequencer.

### WHAT ABOUT 'N'?

You can use either the MAS Sequencer and IRDASC-4 with 'N' and 'Z' gauges but installation will be slightly different. You can't fit the infrared boards between the tracks because the sleepers will interfere with the infrared beam. Instead, mount the emitter and detector outside of the track but close to the sleepers.

# HARDER &



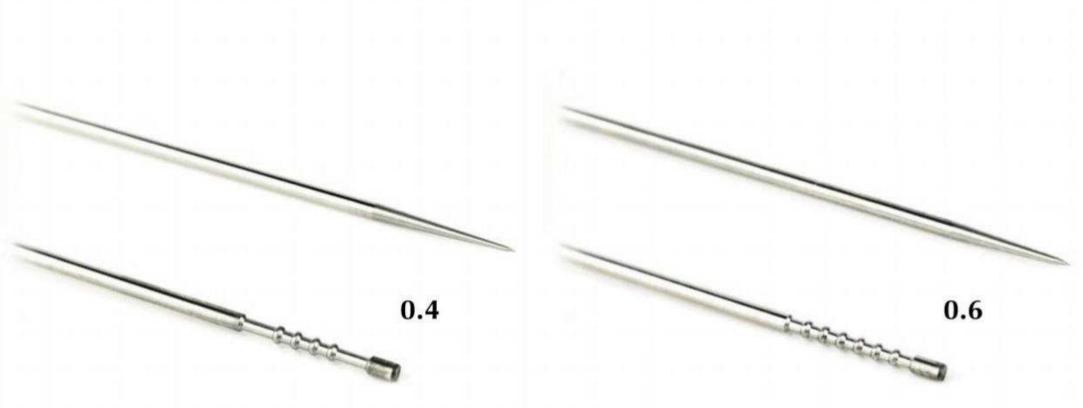
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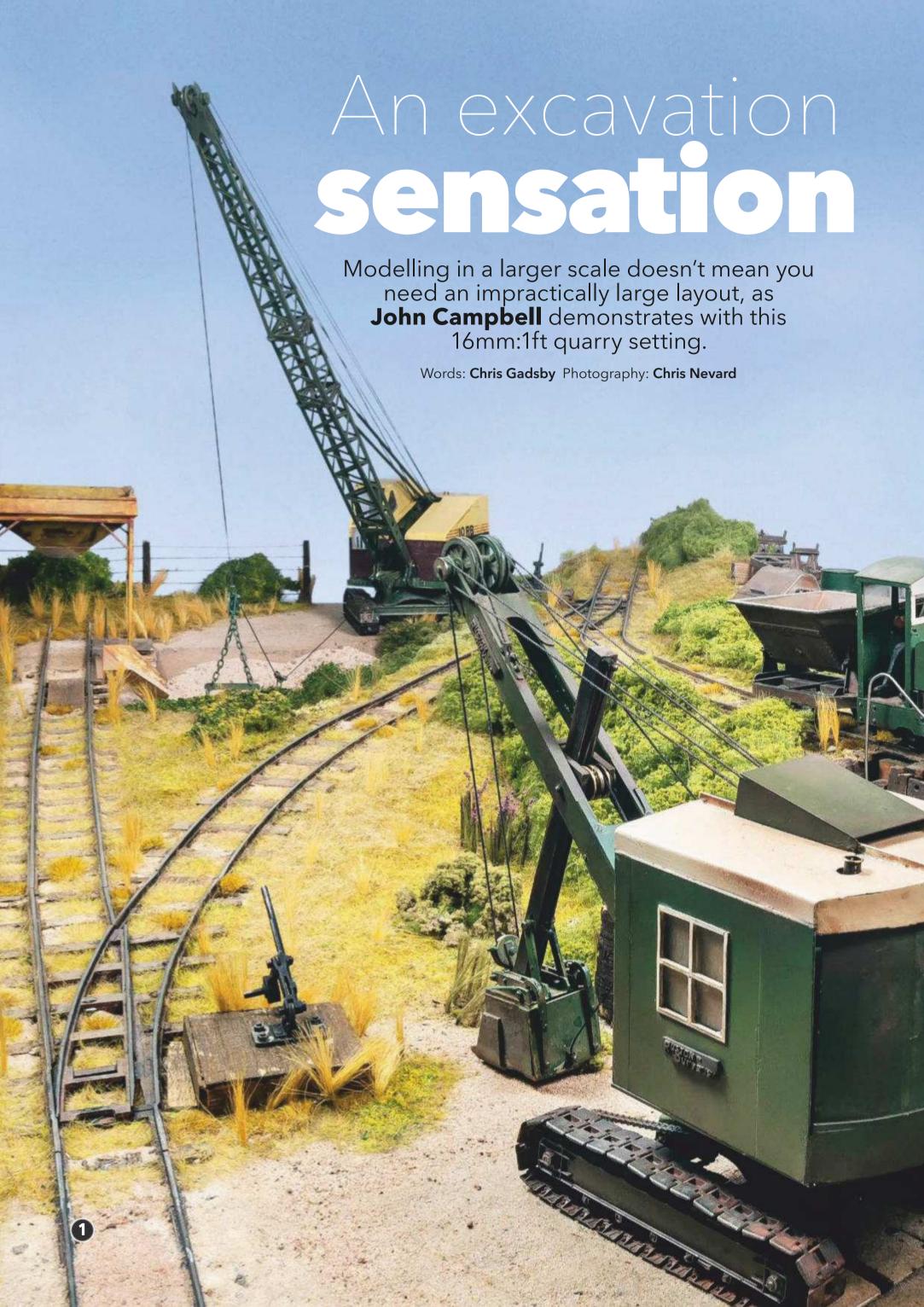




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# John has always been interested in

John has always been interested in excavators. As a child he liked to spend hours watching them.

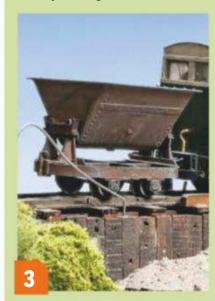
# 3 things we like



Austin Metro choke cables are used to tip the hopper.



The model engineering that ensures the excavators collect exactly the right amount.



The hopper automatically rights itself after emptying its load.

## What makes this layout great?

Less is more. 'Campbell's Quarry' is a perfect example of how you don't need to cram your layout full of track and busy scenes to have an effective working model.







John hasn't set his layout in any particular era. Nor has he set it in any particular location, electing to operate it as a freelance model. If he's pushed though, he'd settle for the early 1960s.

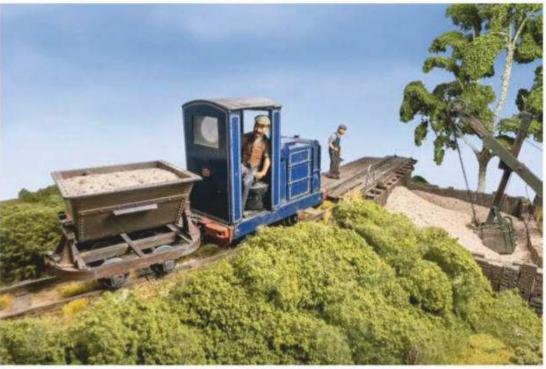
"My only 'line in the sand' is that the layout is based after 1954, as that's when the design of the dragline excavator I operate was introduced, but I have no rigid 'set between 1954 and 1958' mentality, as some modellers prefer."

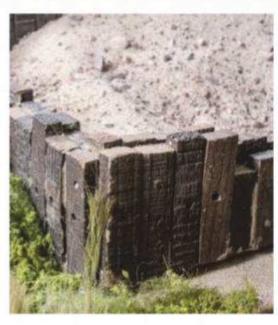
John runs two locomotives on 'Campbell's Quarry' but only one is present at any one time. His blue locomotive is a model of a Ruston & Hornsby locomotive and is a heavily modified IP Engineering kit. The green locomotive is scratchbuilt from brass using a few IP Engineering castings, and is based on a Motor Rail Simplex.

#### WIRELESS CONTROL

"Both locomotives are four-wheel drive, as a two-wheel drive locomotive wouldn't be able to get up the sharp slope in the centre of the quarry. They are both radio-controlled and battery-operated, using AAA batteries, which last for about three and a half to four hours each. I have spares recharging at exhibitions so that they can be swapped over quickly. This eliminates the need for wiring underneath the baseboard. Accessing the underside of the baseboard would be quite difficult, as 'Campbell's Quarry' sits on top of 18mm MDF board. The two points are operated by camera shutter release cables. Previously, I used servo motors, but these would burn out when sand got inside them and blocked up the mechanism."

One of the things that makes 'Campbell's Quarry' so eye-catching at shows is the scenery. This is John's first attempt at putting scenery on a layout and he says he's learnt everything from reading *Model Rail* articles over the past three years. He's clearly been







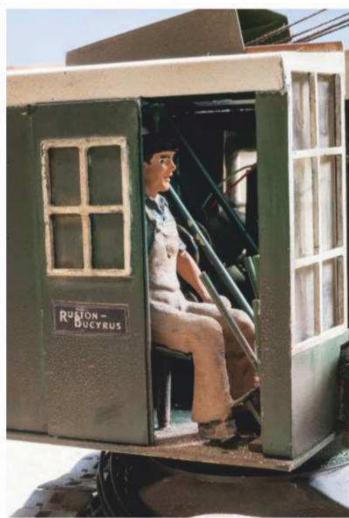
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#### THINGS YOU MAY HAVE MISSED

















influenced by Peter Marriott's articles – even on his 16mm:1ft layout there's a lot of static grass!

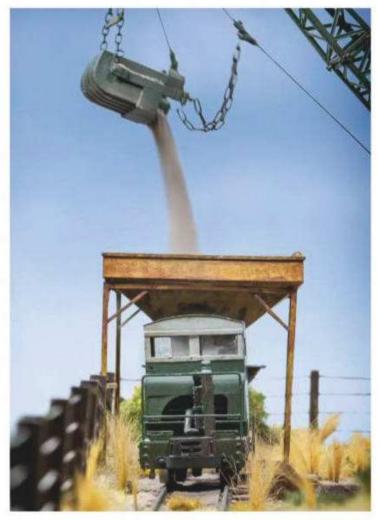
"Alongside the grass are the bushes and shrubs, which are made from poly fibre covered with a mixture of Woodland Scenics and WW Scenics scatter material. The lone tree is a plastic one I bought from a trader at Warley a couple of years ago, and the wooden posts that make up the sand pit and the fence around one side of the layout are made from old bits of timber. Steel wire was fed through holes in the fence posts to complete the barrier around the bottom level of 'Campbell's Quarry'."

John encountered a few problems during the construction. As the face shovel of the excavator was scratchbuilt, he also had to make the mechanism himself, and getting the cables to work took a bit of effort.

"No matter what I tried I couldn't get the ropes to work properly which, in turn, meant the shovel wouldn't work as I wanted it to. It took a lot of work, a few choice words and a couple of failed attempts before I got it fully functioning."

#### SOUND IDEA

A hidden MP3 player brings 'Campbell's Quarry' to life with sound, but it's the two excavators that really make it stand out. Although they don't move around



#### LAYOUT CAMPBELL'S QUARRY

the layout they can be manually operated, and can collect sand from anywhere within the two excavation sites.

"The maroon and cream dragline excavator loads sand into the hopper, which is transported through the points and into the top right corner. There it is emptied into the sand reserve. The empty hopper is transported back through both points to the other side of the green Simplex face shovel, where it is reloaded, moved along the lower side of the quarry and emptied into that reserve for the cycle to start again."

Three operators are needed for an exhibition to keep everything moving, and John is grateful to his two friends Joe Pearson and Nyall Rudge, who operate alongside him.

"I've won three best-in-show awards this year and I know that without my friends' help in providing engaging operation during the exhibitions this wouldn't be the case, so I'd like to thank them for that."

Take a step back for a moment and think about what John has managed to accomplish here. He has proved that even in a large scale, such as 16mm:1ft, you don't need to have a huge layout to create an award-winning model – 'Campbell's Quarry' is roughly the size of a single bed. Let your creativity flow, get building those big layouts in small spaces and

send the pictures to us! Ma



#### **MODELLER CV: JOHN CAMPBELL**

When John isn't working on 'Campbell's Quarry' or taking it to exhibitions he builds live steam locomotives for garden railway enthusiasts, and usually has about six or seven under construction at any one time.







DISCOVER MORE, DO MORE

John's next outing on the exhibition circuit is a visit to the National Festival of Railway Modelling, to be held in Peterborough on December 8/9. See https://bit.ly/2RR9SMC

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### Masterplan Islands

Layout ideas to get you thinking in three dimensions



**Paul A. Lunn** explores the Channel Islands' diversity, and offers two track plans for modelling railways on Jersey and Alderney.



f you thought that the furthest south old London Underground tube trains got was the Isle of Wight you'd be wrong. Several old Tube Stock cars are actually in use – albeit as hauled coaching stock – fewer than ten miles from the Normandy coast.

The Channel Islands are almost as different from each other as they are from mainland Britain. The three biggest – Jersey, Guernsey and Alderney – all had railways. Jersey, the largest of all, had two. The 3ft 6in gauge Jersey Railway ran west from the capital, St Helier, to the rocky coastline of Corbiere Point. The standard gauge Jersey Eastern Railway followed the eastern coastline from St Helier up to the delightful town of Gorey.

Guernsey, the second largest, had a standard

gauge tramway, rather than a railway, for the three miles from St Peter Port to St Sampson's. Initially worked by steam locomotives and trailers, it was converted to electric power in 1891.

Alderney's four-mile standard gauge line linked Mannez Quarry with a new breakwater and opened in 1847. It's the only Channel Island railway still operational (those of Jersey and Guernsey closed in the 1930s) but only carries passengers from its headquarters at Mannez Quarry to the town of Braye.

I find the strange and rather wonderful railways of the Channel Islands particularly fascinating. There are some very modellable subjects here, offering those who like the challenge of making something different the chance to create something really different!

Vulcan Drewry 0-4-0DM Elizabeth and its train of two 1959 London Underground cars at Mannez Quarry. The site is dominated by the Second World War German observation tower. Behind the photographer is the railway's workshop, home to Ruston Hornsby 4wDM Molly 2, which arrived on the island in kit form. ALLARD SCHAGER/ALAMY



#### **Alderney Assortment**

Alderney's railway owes its origins to Arthur Wellesley, the 1st Duke of Wellington. His concerns about France's expansion of the port of Cherbourg resulted in two large harbours being built in the Channel Islands. One was on Jersey and the other on Alderney, near Braye. Work on the Alderney harbour started in 1847, and a railway was laid to the nearby quarry to bring stone to the coast.

Newly crowned French Emperor Napoleon III presented a further threat, and 12 forts were built around the island, including Fort Grosnez, at the base of the breakwater. Railway tracks run round the base of the Victorian fort.

The Admiralty operated the line until the start of the First World War. The Mannez Quarrying Company used it during the inter-war years, up to the Nazi invasion in 1940. The Germans re-laid the railway to metre gauge, to bring it in line with railways that they'd built on Jersey and Guernsey.

Standard gauge metals were laid again during the late 1940s/early 1950s and the railway became part of the Royal Navy Works Department. It passed through various hands until the late 1970s when the States of Alderney suggested that a Sundays-only tourist service should be introduced when the quarry wasn't operating. Two years later the line was leased, with the first tourist train running in 1980.



#### TRACK SHOPPING LIST

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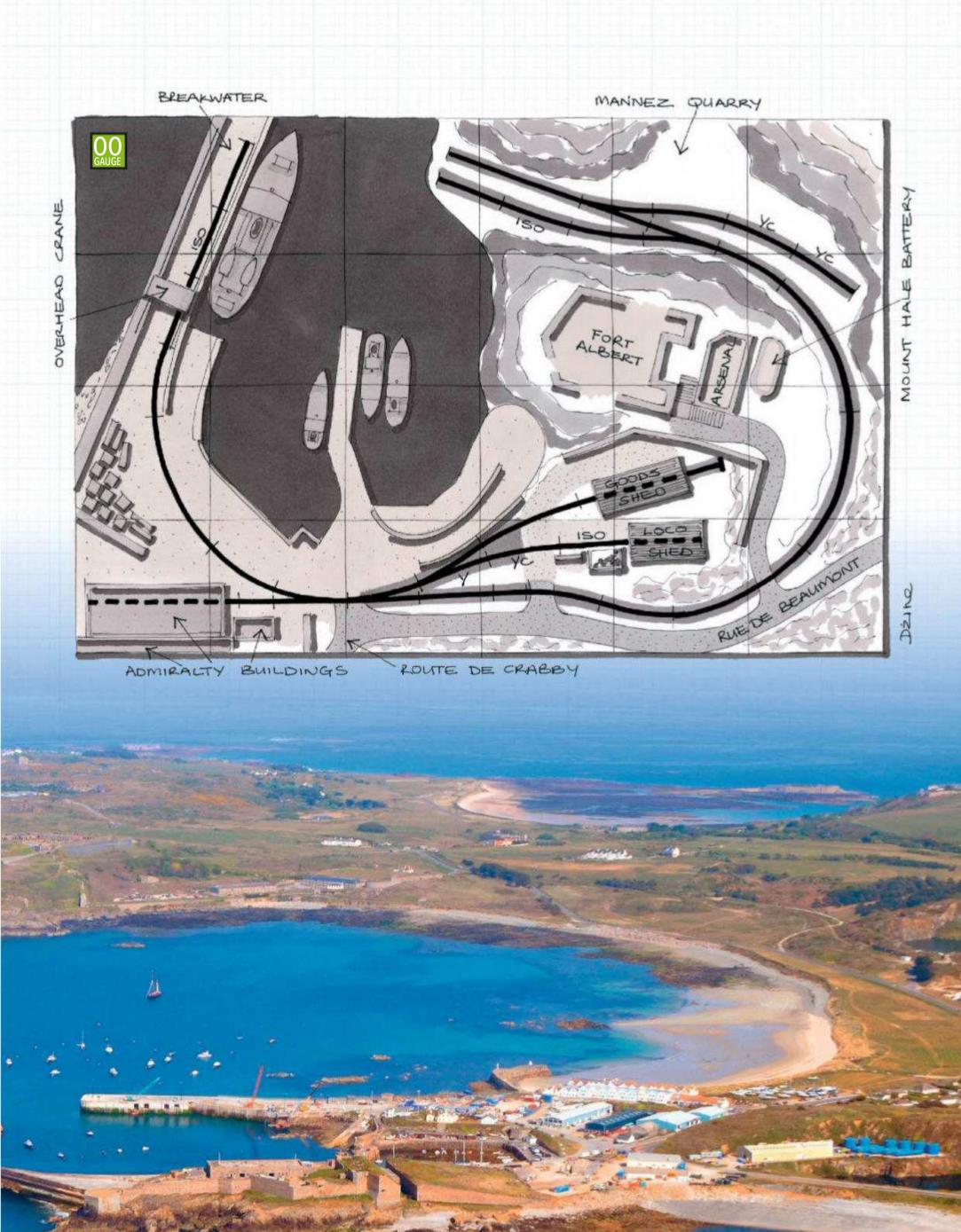
Total cost: £140.15\*

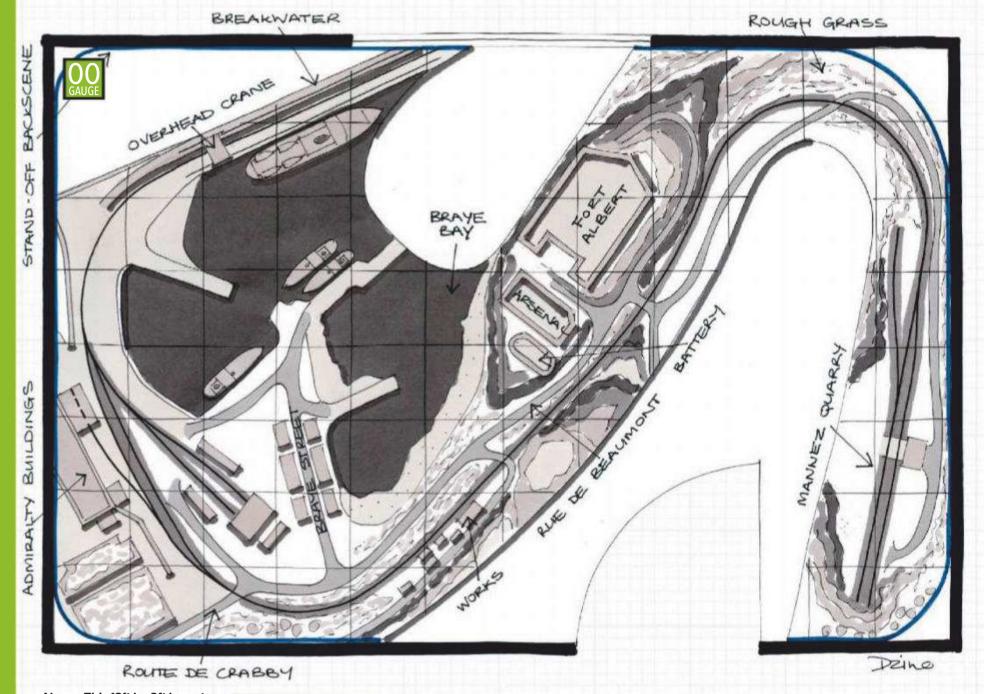
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Above: West Breakwater, at 4,900ft (planned length 6,600ft) had twin-level gantries, one set of wheels on the quayside and the other on top of the rear wall, for loading stockpiled stone.

Right: This 6ft by 4ft plan brings together several key scenes; breakwater, harbour, fort and quarry in a relatively small space, made possible by the use of Peco Setrack components. You could expand it, increasing the scenic run, by repositioning the quarry on an additional 'L'-shaped baseboard.

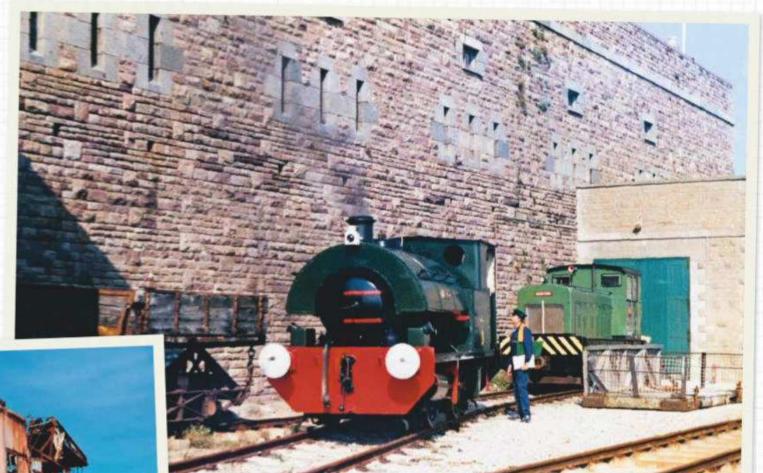






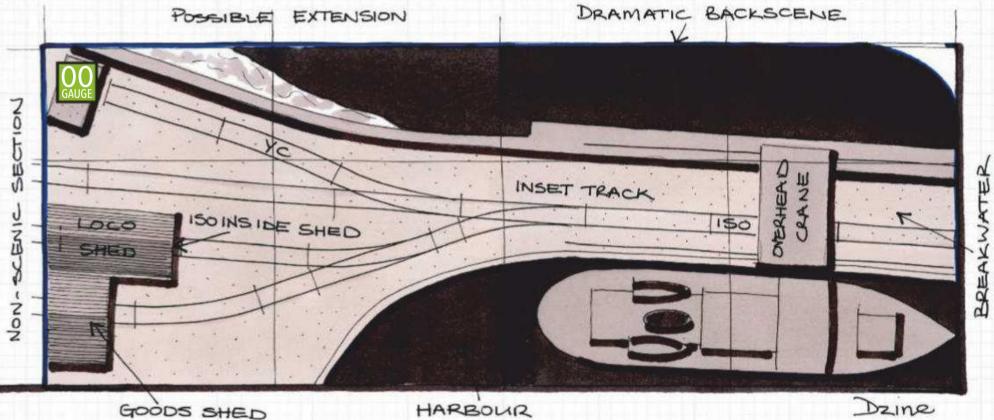
Above: This 12ft by 8ft layout includes several dramatic scenes; view beyond breakwater, fort, harbour and quarry. It closely follows the prototype orientation, though it's greatly compressed and reduced to fit into a reasonable space.

Below: Sentinel 4wVBT Molly, as modelled by Model Rail (see page 114), was built for use at Tidworth barracks and moved to the island in 1947. Rebuilt as a brake van, its rusted remains share siding space at Mannez Quarry with a Cowans and Sheldon self-propelled steam crane and some USbuilt 5t side-tipping wagons. BEATA MOORE/ALAMY



Above: Bagnall O-4-OST *J.T. Daly* (now at Jersey's Pallott Museum) brought steam back to Alderney in 1982. Previous steam locomotives included O-4-O tender locomotives of 1847 vintage, Henry Hughes O-4-OST *Waverley* of 1889, Aveling & Porter O-6-OTG *Gillingham* and Hunslet O-6-OST No. 2310/80 No. 1 *Alderney*. The latter was withdrawn in 1923. The Germans reportedly took two locomotives – Peckett O-4-OST No. 686/98 No. 2 (Hornby's Peckett could be used) and Manning Wardle No. 1894/16 *Nitro* – to France for scrapping. STEAM RAILWAY COLLECTION





#### TRACK SHOPPING LIST

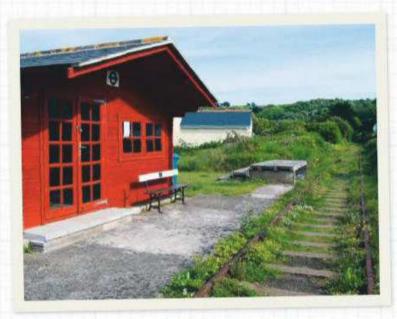
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- ♦ Peco ST-225 2nd radius curve x1 @ £2.45
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- ◆ Peco ST-240 R/hand point x2 @ £11.95
- ◆ Peco ST-241 L/hand point x1 @ £11.95

Total cost: £62.95\*

\*prices from www.gaugemaster.com

Above: The breakwater lends itself to a micro layout, so that's what I've created in a 4ft 6in by 1ft 6in space. It utilises viewblocking devices to mask the exit onto the non-scenic section (which requires a cassette fiddleyard).

Right: Braye Road, the Alderney Railway's other terminus. Trains from Mannez are propelled so the lack of run-round facilities isn't a problem. The tracks continue from where the photographer was standing all the way to the tip of the breakwater - but these are no longer used. CGWP.CO.UK/ALAMY



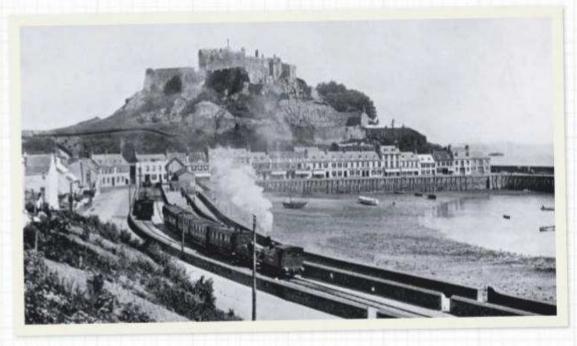
87

#### **Jersey Eastern Starter**

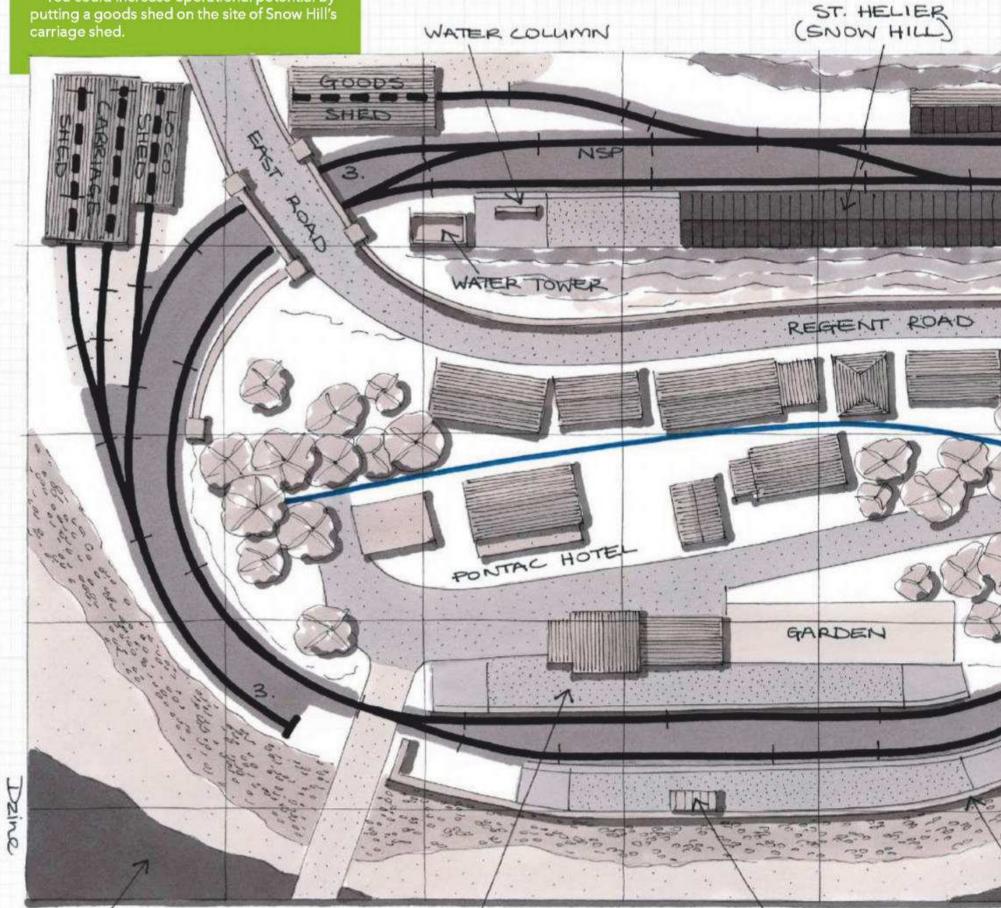
This layout makes use of a 6ft by 4ft baseboard and sectional 'OO' gauge track.

model the terminus station alone. The central double-sided backscene 'raw' edge is masked by trees.

You could increase operational potential by putting a goods shed on the site of Snow Hill's



Everything you need to know about the relationship between railway and town at Gorey. With such a basic track plan there should be enough space to model part of Mont Orgueil (Gorey) castle. An unidentified Kitson O-4-2T gets away from Gorey with a train to St Heller in the early 1920s. PHOTOMATIC/RAIL ARCHIVE STEPHENSON



PONTAC STATION

WAITING SHELTER

Model Rail 255 December 2018

SEA



# MONT GOREY

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- ♦ Peco ST-225 2nd Radius Curve x4 @ £ 2.45
- Peco ST-226 2nd Radius Double Curve x5 @ £3.10
- ◆ Peco ST-231 3rd Radius Double Curve x2 @ **£**3.35
- Peco ST-240 Right-hand point x7 @ £11.95
- Peco ST-241 Left-hand point x2 @ £11.95
- Peco ST-244 Right-hand curved point x1 @ £18.95
- ♦ Peco SL-100 Flexible track\*\* x1 @ £2.80

Total cost: £205.30

\*prices from www.gaugemaster.com

\*\*NSP on track plan. Cut to size.

Below: The JER's main fleet comprised four O-4-2Ts built by Kitson: Caesarea, Calvados, Mont Orgueil and Carteret. It dld receive Sharp Stewart 2-4-OTs North Western and General Don from the Jersey Railway (which switched from 4ft 8½ in to 3ft 6in gauge), which could be modelled using Roxey Mouldings 2-4-OT Tenderden kit or the Golden Arrow Products kit of Isle of Wight 2-4-OT Ryde. Carteret poses outside St Helier Snow Hill in 1924.

A.W. CROUGHTON/RAIL ARCHIVE STEPHENSON

Above: Pontac station provided a useful passing place on the Jersey Eastern Railway. It comprised two 225ft platforms and a single-storey stone booking office, while the stationmaster lived in a two-storey house. Pontac was a popular destination. Situated on St Clement's Bay, Pontac Gardens was nearby and visitors would no doubt make use of the Pontac Hotel. So close was the railway to the bay that the station's level crossing actually gave access to a slipway. PAUL A. LUNN COLLECTION



Above: One of the Jersey Eastern Railway's Kitson O-4-2Ts hurries along the sea shore near Pontac bay, circa 1914. RAIL ARCHIVE STEPHENSON

#### RECOMMENDED READING

The Jersey Eastern Railway by P. Paye (Oakwood Press) The Alderney Breakwater by M. Swift (Industrial Railway Record No. 52)



WALL





#### LAYOUT COLEFORD

uirky US locomotives, bright pink wagons and an exploded gunpowder van. Not the sort of thing you'd expect to see in a quiet Gloucestershire town, but this is exactly what John Wilkes has featured on 'Coleford', and he's let his creativity flow.

"Contrary to the usual reasons for building a layout, I never had any interest in the area. I just happened to drive past it regularly and thought, 'I'll model that.' I worked in Gloucester for six months and passed Coleford often. After a small amount of research, the decision to build a declining 1960s-era narrow gauge layout based on the old tramway that ran from Coleford to Monmouth was formed. I'd been quite comfortable sitting in my armchair for many years, imagining layouts that I fancied modelling, but figured that if I didn't start building a layout soon I never would."

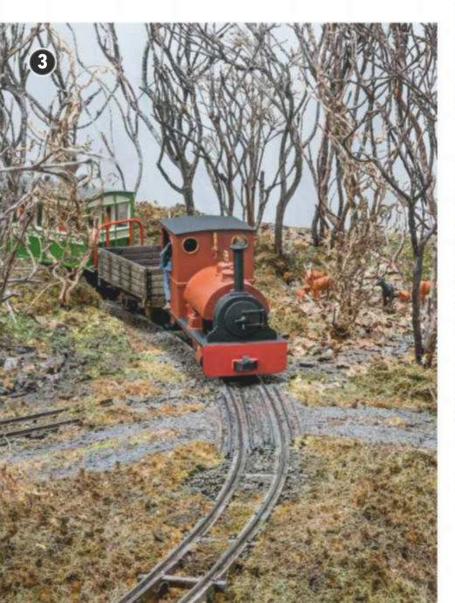
'Coleford' was originally half the size it is now, as in 2010 John had only built the industrial section. It was a good start but things quickly became very frustrating.

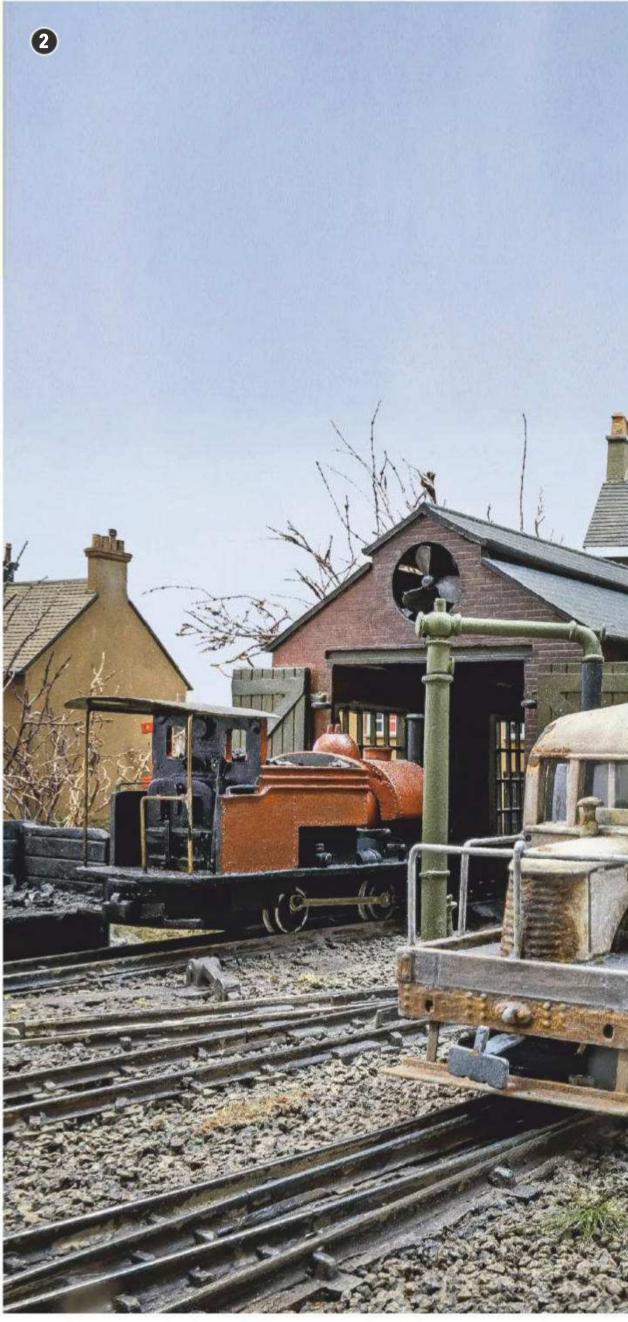
"I was just getting annoyed by the fact there wasn't any sort of 'run'. Locomotives would come straight out of the fiddleyard into the industrial section. I made the decision to add the scenic section to the right of the industrial portion, and to flip the fiddleyard by 180° so that it enters the layout from the opposite side. The new cassette fiddleyard receives a lot of interest at shows – so much so that I had to remove one section of the backscene to let people see what I was doing."

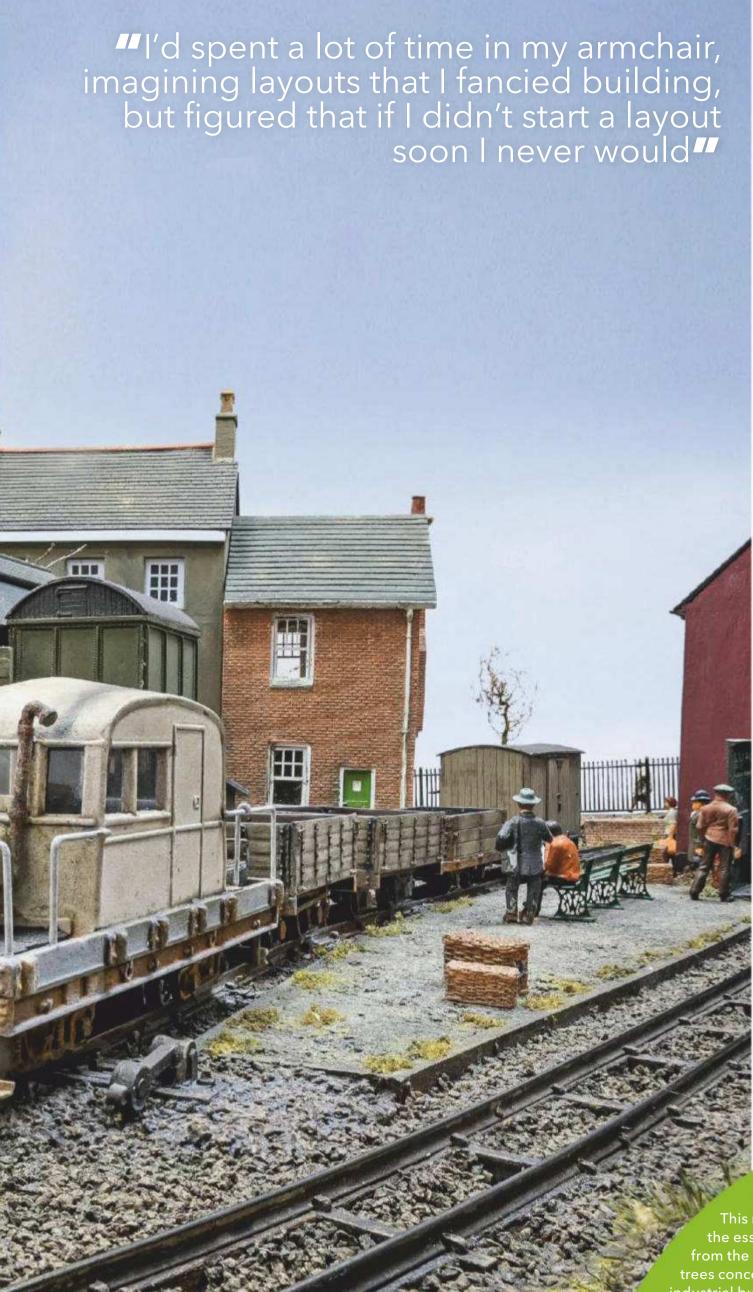
#### TRICKY TRACK

Considering it was his first layout, John didn't make life easy for himself, electing to use two different types of Peco track and then modifying them. One type is 'N' gauge with the majority of the centre sleepers cut away – to represent track on longitudinal sleepers – while the other is 'OO9' track with all of the centre sections removed – to represent rail on stone chairs.

"It took a while to lay the track, but once the first rail was in place it was easy to keep the second line in the right place using a track gauge. On 'Coleford' the extension is Code 55, but the building section is Code 80. I kept the wiring simple, using analogue



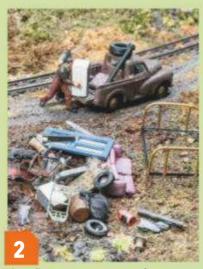




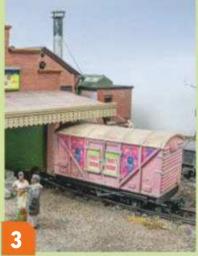
# 3 things we like



At exhibitions the layout sits on two trestles that John bought for £20.



This fly-tipping scene forms part of John's layout quiz.



Patel's Fashions' bright pink livery is eye-catching from any distance!

## What makes this layout great?

This narrow gauge layout captures the essence of a railway that's hidden from the view of passers-by, where the trees conceal the heart of a bustling industrial business.







control, so there are only four feeds altogether and I use dead frog points. This, as it turned out, wasn't the best of ideas, especially as the points were bought cheaply second-hand and they really aren't the best. They need regular maintenance to keep things running smoothly, especially with some of the short wheelbases you get on '009' models."

You may not hear the phrase 'I never had any interest in the area' in railway modelling circles, but one phrase that you certainly will hear is 'less is more'. It's safe to say John doesn't abide by this philosophy.

"For me more is more and less is just... less. It's really a question of balance. I wanted to give 'Coleford'

something a little bit different and, more crucially, make it interesting to operate. Industrial narrow gauge railways were often crammed into small spaces and that's why I've put all the strange trackwork in. I like unusual trackwork."

The difference to the majority of layouts isn't just with the track. John has also tried to make 'Coleford' stand out at exhibitions by depicting the layout in the cold winter months when the railway is neglected, as a contrast to the more typical bright blue skies on a glorious summer day. His search for appropriate vegetation and barren trees led him down the aisles of his local supermarket.

#### POPLAR CHOICE

"The trees are a huge part of the layout and I had to make them look right. At first I considered using grape stalks, but these were too coarse. I went back to the supermarket, and on the way there I spotted a Japanese Cherry tree. I tried these but they still weren't right. The answer finally came when I was on a walking holiday in Madeira and spotted some exotic heather. It was perfect as it was quite straight, but it had some small curves and I thought it would make pretty realistic poplar trees. When I was back in the UK I gathered some dead mountain heather on walks, and have used that. Ivy roots were also perfect as they had just the right amount of 'wiggle'. The moral of the story is if you want ideas for your model railway, go for a walk!

"Collecting enough leaves to cover the layout was very time-consuming. They are silver birch catkin seed separators. Gathering a load of them at once proved to be the answer, but separating them from the seeds can

#### LAYOUT COLEFORD

take ages. My advice for anyone looking to use the same technique would be to collect them while they're young and they haven't had time to grow fully, as this will reduce the amount you have to discard."

#### **GUNPOWDER PLOT**

An increasingly common feature of exhibition layouts is giving the models back stories, and John's story is quite explosive.

"You'll notice that one of the sidings has a gunpowder van next to a puddle. Continuing with my 'more is more' policy, I added that siding to fill the gap, but I didn't want to connect it to the running line. I tell people there used to be two gunpowder vans there, but one hot summer day one caught fire and exploded, destroying the track and leaving a puddle in the crater. This being the Coleford Railway, it never got fixed. I installed a fake three-way point to further add to the illusion that it was once part of the setup."

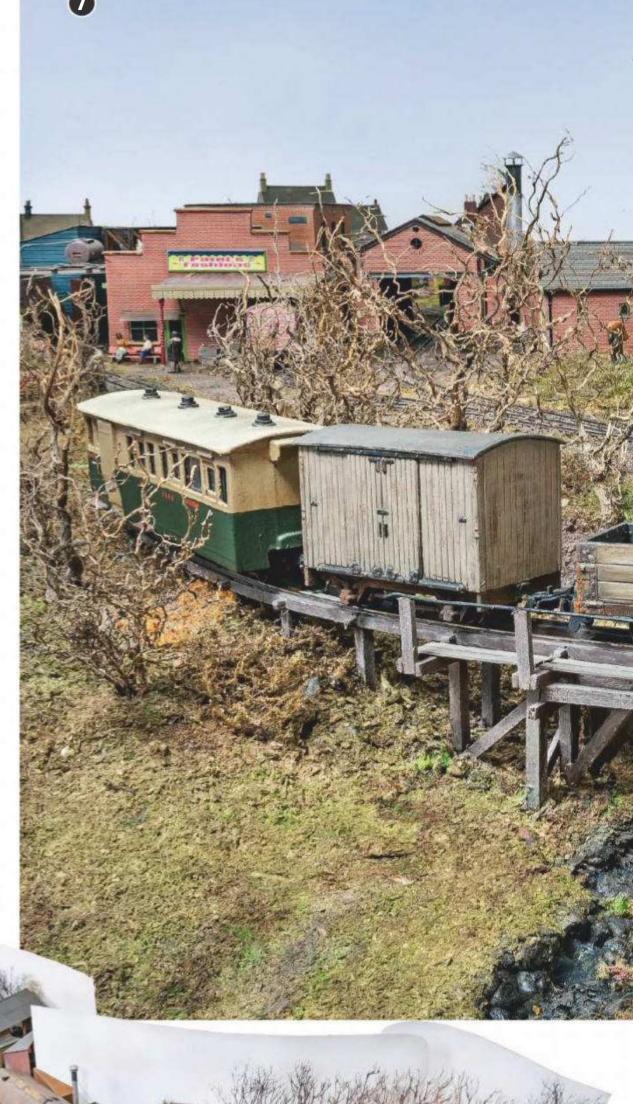
John has used several unusual locomotives on 'Coleford', including one with a caravan and one with a sofa on the front of it!

"The sofa locomotive was based on a picture of a US prototype that I found on the internet. It was used as an inspection locomotive on the New York Railway. The caravan locomotive is also a US creation and this was a self-build 'critter' that was largely unsuccessful. It needed replacement parts after every journey, and it only lasted for a year before being rebuilt!"

The most interesting locomotive of all is the battery-powered 'Plymouth'. This has a fuel tank underneath the chassis that powers the generator at the front of the locomotive. The electricity is stored in the batteries until the throttled electricity is delivered to the traction motors.

"I do have some 'sensible' locomotives on the layout, principally the Peckett, which was built for me by Paul Windle, to whom I am very grateful."

There are so many great layouts on the scene at the moment and it is refreshing when something that breaks away from the norm comes to our attention. John's layout is just that. From the quirky locomotives to the different season and track arrangement, to what would be considered 'typical', 'Coleford' stands out from the crowd. We look forward to seeing it at its next outing!

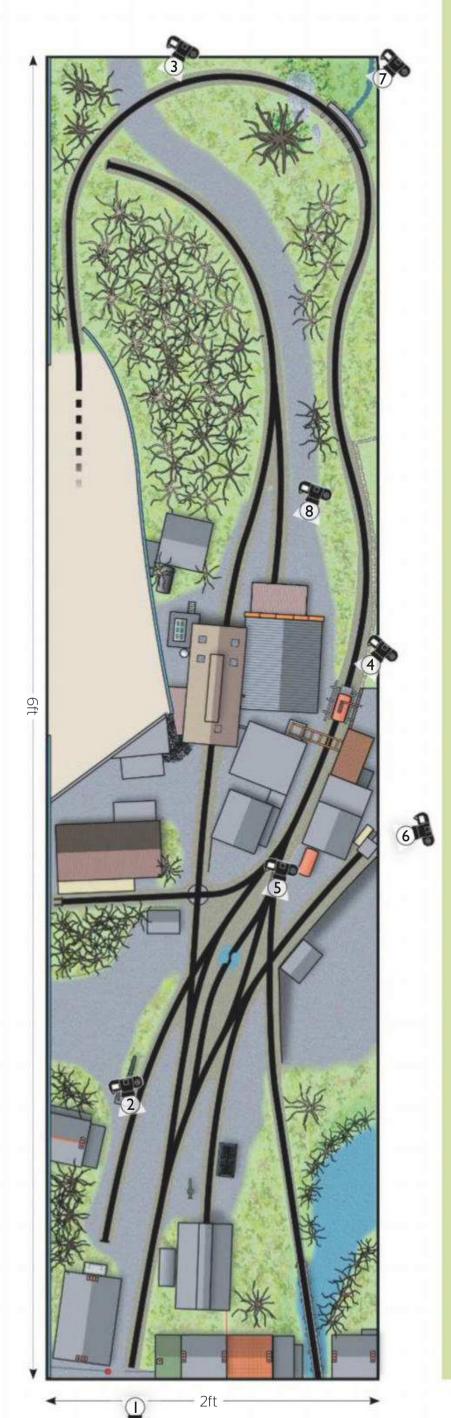


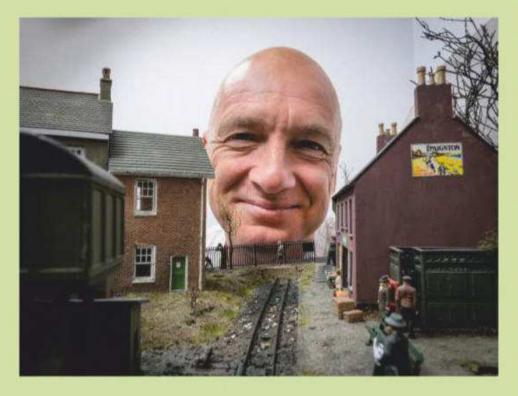
I kept the wiring simple, using analogue control, so there were only three or four feeds altogether ■





#### LAYOUT COLEFORD

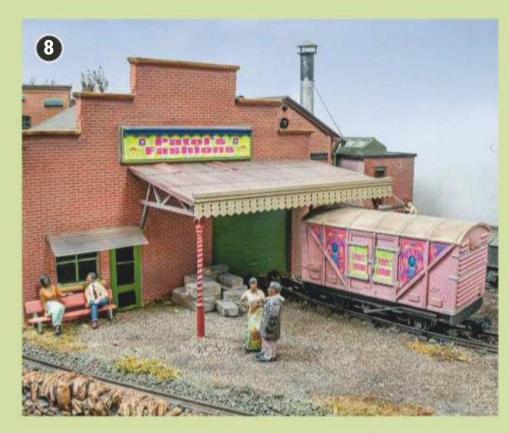




#### **MODELLER CV:** JOHN WILKES

When he's not working on his layout, John does a lot of singing. He was also a member of one of the teams in Heat 1 of Channel 5's The Great Model Railway Challenge.







**WAGON SPECIAL** 

# REVIEWS

In-depth and unbiased reviews of the latest products



Dapol's first 'modern image' wagon in 'O' gives the firm a chance to silence some of its critics.



#### Hornby 'Toad E' 101 brake van

Another brake van has arrived in the Model Rail office and Richard Foster has put it to the test.



#### **Bachmann FFA/FGA** 102 Freightliner flats

George Dent discovers if the much-anticipated Freightliner flats live up to expectations.



#### **Dapol BR** 104 20t brake van

Dapol's 'O' gauge 20t brake van comes in at just under £80, but is it worth the money?





#### **Bachmann** 64ft Carflat

What can you say about a model that is little more than an underframe mounted on a set of bogies?





#### **Our reviewers**

#### **George Dent**

A modern image expert, who also tests tools and modelling products.

#### **Richard Foster**

His forte is steam locomotives, regardless of region or era.

#### **Our ratings**

We assess models on the following criteria and rate each of them out of ten: that way, you know precisely how good a model is.

LOOKS	9/10
PERFORMANCE	9/10
FEATURES	8/10
DECORATION	9/10
VALUE FOR MONEY	6/10
TOTAL	82%

#### How we test

At Model Rail, we pride ourselves on the quality, thoroughness and unbiased nature of our reviews. To do this, we judge models against prototype images and historical texts. We also run them on our test track, which features 1-in-30 and 1-in-60 gradients in both 'N' and 'OO', not to mention numerous challenging track configurations.





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# Dapol HAA coal hopper

◆ GAUGE 'O' ◆ MODEL Dapol 7S-048-006 BR HAA 32t coal hopper 359180, early livery ◆ PRICE £54.95 ◆ AVAILABILITY Dapol stockists or www.dapol.co.uk

apol has received quite a bit of criticism for its 'O' gauge rolling stock. Some criticism is justified, thanks to one or two compromises too many on the odd model. But Dapol can well and truly turn the tables on the critics with its first modern image wagon, the HAA coal hopper.

Your first impression when you lift the HAA is one of weight. This is a heavy beast (401g) thanks to its heavy die-cast underframe.

The HAA's distinctive shape is superbly captured and the model compares well to drawings published in David Monk-Steel's Merry-Go-Round on the Rails (HMRS, 2011). The hopper body - a blend of angles and odd curves - looks just right and features some very neat rivet detail. It's supported by the belly band and end frames that give the wagons their character. Our sample's belly band suffered from some misaligned parts but it didn't detract from the overall impressive appearance.

The heavy die-cast underframe is fitted with plastic running gear, handbrake and chute door gear. The metal wheels are free-running (one wheel on each side has a representation of the brake disc), there are sprung coupling hooks with three-link couplings and sprung buffers. The only issue with the underframe is that there isn't enough relief immediately behind the headstock,

Our review sample depicts 359180, which was built at Shildon in 1976 to Diagram 1/156 (Lot 3887). Wagons seldom receive the attention they deserve and so, consequently, published material is somewhat thin on the ground, especially when compared to locomotives that hauled them.

Our subject for review is 359180 and there are no pictures of it either in David Monk-Steel's book nor on Paul Bartlett's website (https://paulbartlett.zenfolio.com). We can only assume that the detail combination is correct for 359180.

Dapol must be commended for spotting key variations. The line of horizontal rivets that spoils the smooth finish indicates that this HAA has received a replacement body. Originally, HAAs sported four stiffening ribs, but these took a pounding from coal loaders and were replaced with new bodies with steel sections.

#### **CHUTE HOOPS**

HAAs were designed to discharge through their chute doors automatically (inspiration came from the London Underground's tripcock signalling system) but there were manual door opening systems. There were two types of gear shield. The original style was more rounded, but replacement shields were more angular. B359180 sports the later style.

Not all the manual door handles had a shield. Those without had an obvious hoop behind (sometimes it was more angular than rounded) and it's one of the very few niggles that the hoop is missing.

Galvanised steel is never going to be the easiest material to replicate in plastic, but Dapol's grey finish is actually pretty effective. HAAs were rarely clean, so this model really would benefit from some weathering, particularly the distinctive stripes left by loading/unloading equipment.

Our sample was finished in early livery with bauxite framing. This was replaced with the more familiar flame red colour.

The printing and lettering is first

class, but it's definitely worth focusing your attention on the wagon's worksplate. This is moulded onto the solebar but it's so crisp that it looks like a separately fitted component.

The finishing touch is a separately fitted plastic, non-working battery lamp, which just plugs into a hole in the headstock.

The HAA feels like a real step forward in terms of quality and detail. It's good value too - you get change from £55 - and suggests that further modern image wagons will match this standard.

Come on Dapol, now you need to make a Class 58 to match! (RF)

#### **REVIEW VERDICT**

PROS. Shape, attention to detail, weighty chassis, worksplate. CONS. Nothing much of note.

LOOKS 9
BUILD QUALITY 9
FEATURES 9
DECORATION 9
VALUE FOR MONEY 9.5

91%

66 The hopper body – a blend of angles and odd curves – looks just right and features some very neat rivet detail >>>





◆ GAUGE 'OO' ◆ MODEL Hornby R6834 LNER 'Toad E' No. E175712, BR unfitted grey ◆ PRICE £21.99 ◆ AVAILABILITY Hornby stockists or www.hornby.com

ot another new 'OO' gauge 'Toad' brake van, surely? Yes, only this isn't a GWR wagon but an LNER one. Confused?

Railway companies communicated between stations using electric telegraph, and implemented code words for wagons to shorten the messages.

The GWR devised some wonderful codes for its wagons. 'Toad', for brake van, sits neatly alongside the likes of 'Crocodile', 'Bloater', 'Macaw' or 'Mink'. The LNER took a more sensible approach, combining words to form a code. Hence 'Boplate' for bogie plate or 'Covan' for a covered goods van. If anyone could shed any light on why the LNER decided that 'Toad' was a good word for a brake van, we'd be interested to find out.

The 'Toad B' was the LNER's first standard brake van. The Dia. 64 'Toad E' was introduced in 1930. Other than a steel ducket rather than a planked one, the 'E' was virtually identical to the 'B'.

We received 'Toad E'
No. E175712 in BR unfitted grey
livery. The real thing was one of
a batch of 162 delivered in 1934,
with the work split between
Shildon and Darlington works.

First impressions are good. Hornby has captured the boxy nature of the prototype and there looks to be a lot of very fine detail. The model measures up well to diagrams and photographs in Peter Tatlow's *LNER Wagons: Volume 4B: Standard and Other Designs* (Wild Swan Books, 2015).

The underframe catches the eye, with the neatly printed (and fully legible) worksplate standing out from fine rivets on the solebar. The footsteps are commendably thin and the fine metals wheels and turned (though unsprung) metal bufferheads combine to give the model a feel of real quality.

Closer inspection reveals a frustrating mix of good and bad. The seams around the duckets are too deep, while the upper framework isn't defined enough and the distinctive panel above the ducket blends into the rest of the body. The plank definition is very good all round, except that they've been missed from the inside of the ends, leaving flat plastic.

Flip the 'Toad E' over and you'll see the impressive underframe detail. Hornby has even managed to include the buffer springs in the moulding! The NEM pockets are screwed in place but have a decent amount of 'flex' and it should be noted that they have thin tails to represent the brake gear.

Glazing is excellent all round



■ Hornby's 'Toad B' arrived in the office as this issue closed for press. See next issue for a full review.

and you can see the brake handle and benches inside. The distinctive LNER 'torpedo' vents are well moulded, as is the fixed side lamp. It's a shame, therefore, that the security bars are too thick.

Photographs of specific 'Toad Es' are scarce, but suggest that the side handrail arrangement is incorrect. The rail should be straight throughout, without curving inwards where it's fixed to the body. Ex-works photographs show 'Toad Es' without the extra handrail to the right of the ducket, so, presumably, No. E175712 gained this at a later date.

Yes, there are some compromises but this model is rather cute. It's well finished, runs well and is attractively priced. Most of all, it brings some much-needed variety to the ranks of BR brake vans. *(RF)* 

#### **REVIEW VERDICT**

PROS. Overall shape, some wonderful detail, finish.CONS. Minor shape issues.

· · · · · · · · · · · · · · · · · · ·	
LOOKS	8
<b>BUILD QUALITY</b>	9
FEATURES	8
DECORATION	9
<b>VALUE FOR MONEY</b>	9

86%

www.model-rail.co.uk



◆ GAUGE '00' ◆ MODEL Bachmann 38-625 FGA Freightliner wagons (twin-pack); 38-626 FFA (single pack) ◆ PRICE £99.95 (twin-pack); £49.95 (single pack)

AVAILABILITY Bachmann stockists, www.bachmann.co.uk

ne positive and lasting legacy of Beeching's modernisation plan for British Rail was the Freightliner concept. Employing a fleet of air-braked flat wagons, standardised domestic and maritime containers could be moved between ports and inland terminals with ease. Manual handling and transhipment of loose goods would be a thing of the past, as intermodal containers could be lifted from train to ship or lorry, with the minimum of fuss.

'OO' modellers have been well served in terms of post-privatisation intermodal wagons from Hornby, Dapol and Bachmann, a few of which just about overlap with the final days of BR. And yet, the classic FFA/FGA wagons, launched in the mid-1960s, have been overlooked thus far, save for Hornby's ancient version that lingers in the budget RailRoad range.

More discerning modellers have, therefore, been faced with super-detailing those old Hornby wagons or building etched metal kits, such as Colin Craig's impressive offering. Happily, the situation has now changed, with Bachmann's much-anticipated release of the FFA/FGA Freightliner flats, complete with an attractive array of containers. Offered in twin-packs (FGA) and single wagons (FFA), it's possible to

assemble authentic five or four-car sets using 'outer' and 'inner' wagons (see Factfile).

#### TICKING THE BOXES

Straight from the box,
Bachmann's wagons are
impressive, the open skeletal
nature of the superstructure
being faithfully rendered. Air
brake equipment and a modicum
of plumbing is provided, along
with cross-shafts for the
handbrake gear, all being visible
from above when running free of
containers. In fact, it's almost
a shame to hide the excellent
detail by loading the wagons!

The character of the bogies has been faithfully captured, with plenty of relief to the side frames. The disc wheels are also

impressive, featuring brake discs and calipers within the frames. All vital dimensions appear to have been scaled down correctly, with the 'outer' FGA wagons being prototypically longer than the 'inner' FFAs and sporting a lovely set of sprung buffers (of the correct diameter) at one end of each vehicle.

The low-profile wagon body is rendered predominantly from die-cast metal, with the lower trussing and bogies moulded in tough plastic. Therefore, the vehicles possess adequate mass for reliable running, with an individual car fully loaded with Bachmann's containers weighing in at 114g (47g unladen). Indeed, this three-wagon set ran impeccably on plain track, across



points, and successfully negotiated second-radius curves when loaded and empty.

Pivoting auto-close-coupling units are provided across all vehicles, with NEM coupling pockets accepting tension locks or other compatible couplers at the 'outer' ends of the FGAs. For the 'inner' facing ends, Bachmann has provided short, fixed coupling bars, along with a convincing rendition of sagging air pipes.

Each wagon is supplied with a bag of extra details, including a sprue of plastic 'twist lock' fasteners, which are pushed into holes in the wagon frames from below, to fix the containers in position. However, the fit of the containers is not wholly secure, so beware of picking up a loaded wagon solely by the boxes. Two lengths of fasteners are provided, catering for raised or lowered positions, depending on the sizes and number of containers that you choose to run on each vehicle.

curves when loaded

and empty >>

Also provided is a set of etched metal splasher covers, designed to fix within the open framing above the

bogies. On the real thing, these plates were designed to prevent dirt splashing up from the wheels, although these were often removed in service to ease maintenance. Dummy screw couplings and brake hoses (with attendant brackets) are also provided for installation, as required.

The simple BR livery of Rail blue (sides and ends) and black (everything else) has been applied to a high standard, with an array of legible printed legends. The containers have also been rendered to a very high standard. The striking grey and red Freightliner livery is suitable for layouts set from 1966 through to the late 1970s, and the plastic containers feature plenty of detail relief on the sides and ends, including separate door latching poles and handles.

Alternatively, Bachmann is offering a similar trio of wagons loaded with a set of corrugated containers, more suited to the 1980-1990s era, branded with a variety of shipping company logos. Furthermore, extra variety – and a broadening of eras – can be obtained by adding containers from the C-Rail Intermodal range.

#### WELCOME ARRIVAL

Bachmann's FFA/FGA wagons successfully fill a gaping hole in RTR air-braked freight stock for BR and early privatisation-era modellers. With these early-style containers, modellers can recreate the 1966-1980 period, perhaps with Class 47, 'Western' or AC electric traction for longer rakes, while Type 2 or Type 3 diesel locomotives would be suitable for shorter, 'feeder' services.

Even by today's standards, these wagons seem a little pricey at first glance: you're looking at almost £250 just to assemble a prototypical five-car set. That said, with the attention to detail and high-quality finish plus the importance of the prototype - they make for a worthy investment. (GD)

# 3things we like



Realistic skeletal framing with brake apparatus and plumbing.



Brake discs and calipers.



Early BR-era containers really look the part.

#### **REVIEW VERDICT**

PROS. Finely rendered detail, performance, vital prototype.
CONS. A little pricey.

LOOKS	10
BUILD QUALITY	9.5
FEATURES	9.5
DECORATION	9.5
<b>VALUE FOR MONEY</b>	8
03%	

#### **Factfile: FGA/FFA**

As part of BR's drive towards modernisation, a small batch of prototype container wagons was built at Shildon Works in 1964. Coupled in four-car sets, each vehicle was capable of handling a pair of BR-designed 20ft containers. The design was duly adapted to create longer vehicles with a greater payload (a total loading area of 60ft per car) and sets were coupled, semi-permanently, into five-car sets, with buffers and conventional draw gear at the outer ends only.

Coded as FGA (outer) and FFA (inner) under the TOPS

system, assembly continued until 1976 with several thousand examples eventually entering service. As well as compatibility with BR's own design of 'boxes', the wagons were adapted to cater for the international standard (ISO) shipping containers that came on stream in the 1970s, of varying lengths.

A number of FGA/FFA vehicles lasted in service into the early 2000s, employed by Freightliner and EWS (with a few receiving privatisation liveries), although many of the five-car sets had been reduced to four-car units in later BR days.

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#### **Reviews**



## Dapol BR 20t brake van

◆ GAUGE 'O' ◆ MODEL Dapol 7S-200-006 BR 20t brake van B952978, bauxite ◆ PRICE £79.95 ◆ AVAILABILITY Dapol stockists or www.dapol.co.uk

ou can talk about BR
Standard steam
locomotives. You can
talk about Mk 1
coaches. But if there's one
classic that epitomises the BR
steam era, it's this - the
standard 20t brake van.

Given the numbers built and the surge of new ready-to-run 'O' gauge models, it was only a matter of time before someone offered an RTR 7mm:1ft scale BR 20t brake van. Well, thanks to Dapol, that's what we have here.

They might all look the same but, as with all aspects of railway history, appearances can be deceiving. There were three different Diagrams, with key differences, and 23 Lots with subtle variations between them. Eric Gent's *British Railways Brakevans & Ballast Ploughs* (HMRS, 1999) is heartily recommended for anyone who wants to know more about these fascinating vehicles.

Received for review is B952978. This was built at Darlington in 1955 to Diagram 1/504, Lot 2741. It was delivered to the London Midland Region in BR's bauxite livery.

Dapol appears to have done its homework well. B952978 features the handrail arrangements of a Dia. 1/504 and the wider body (2,642mm rather than 2,641mm!). The model has spindle buffers and plain

axleboxes, as per the prototype. It also sports doors with four small window panels, rather than two larger ones.

Detailed photographs of specific ex-works brake vans are few and far between, so it's a job to know exactly how B952978 left Darlington Works. Comparisons with similar vehicles suggest that the model is a good representation of a typical Dia. 1/504 'van and it should please the majority of 'O' gauge modellers. The accompanying photograph shows B952978 in 1978, by which time it had acquired a larger plated panel above the ducket, a strengthening piece across the bottom of the ends and what

appear to be upright plates on the far corners. Most noticeably, it's gained a third handrail above the duckets.

The model is largely of plastic construction but tips the scales at a credible 210g. Handrails are fine plastic, but the lamp irons are etched brass, adding a touch of finesse. It's a job to tell what the securing bars are made of, but they are posable, so you can leave them hanging down or have them across the doorways.

Planking and rivet detail is excellent throughout and the correct pattern 'torpedo' roof vents look good too. The glazing is acceptable but does have a slight prismatic effect. It's difficult to tell by looking

66 Handrails are fine plastic, but the lamp irons are etched brass for a touch of finesse >>

through the windows but there doesn't appear to be an interior. The body comes away from the chassis in one piece, so the only way to access the insides is to break the glue and prise off the roof.

Despite being a good representation of a Dia. 1/504 brake van, there are one or two minor shape issues. The holes in the 'W' irons should be lower and more prominent, the top edge of the bufferbeam should curve

backwards to form a channel shape, the lamp irons on the vertical stanchions are angled but should have a gentle curve to the

outer edge and the handrails over the concrete end weights should curve upwards where they meet the body, so that they can be fixed to the wood. They are trivial issues and don't detract too much from the good work elsewhere.

#### **CONCRETE ISSUE**

The biggest issue concerns the finish, but there's nothing

wrong with the paint or printing. The BR bauxite is well applied (except to the edges of the lamp irons) and the printing is exemplary, with even the smallest lettering legible to the naked eye.

The problem is that there's no way to represent concrete accurately in plastic. The grey end weights look, well, plasticky, and lack texture. You can't do much about it, but it is noticeable. Luckily, brake vans were rarely clean, so a good session with weathering powders and paints would not only tone down the plasticky grey but really enhance the fine detail elsewhere.

B952978 performed well on the *Model Rail* test track. The metal-tyred plastic wheels turned freely in the axleboxes, with two of those connected by a pivoting beam that provides a degree of compensation.

For a shade under £80, Dapol's brake van is a cracking little model and a must for any 'O' gauge layout depicting anything from the 1950s until the 1980s. (*RF*)

# 3 things we like



The security bars are fine wire and posable.



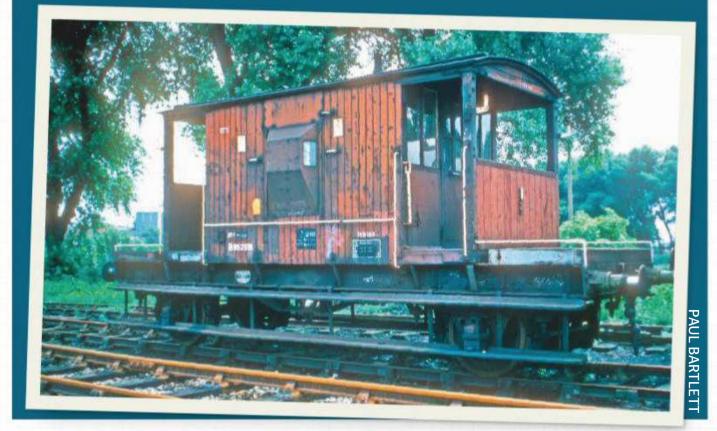
Planking and rivet detail is excellent throughout.



Torsion bar between axles offers a degree of compensation.

#### Factfile: BR 20t brake van

BR built 4,638 20t brake vans between 1950 and 1962 (including six for London Transport) and, at the height of production, Darlington Works was able to build up to 20 a week. Its record was 44 in a week. Production switched to Ashford from 1961, but the most the Southern Region works could produce in a week was 13.



#### **REVIEW VERDICT**

PROS. Useful prototype, shape, price. CONS. Some shape issues, plasticky concrete.

The second secon		
LOOKS	8.5	
<b>BUILD QUALITY</b>	9	
FEATURES	9	
DECORATION	8.5	
<b>VALUE FOR MONEY</b>	9.5	

89%

www.model-rail.co.uk

## Bachmann 64ft Carflat

◆ GAUGE 'OO' ◆ MODEL Bachmann Branchline 38-901 64ft FVV Carflat B745054, BR blue ◆ PRICE £36.95 ◆ AVAILABILITY Bachmann stockists

eviewing models can be an unenviable task. After all, what can one really say about something that is, at the end of the day, little more than an underframe on a set of bogies?

Actually, quite a lot.

The N Gauge Society commissioned Bachmann to produce 1:148 scale Carflats (reviewed in MR246) created on redundant Mk 1 coach underframes, so it made sense for them to be offered in the Branchline 'OO' gauge range too. It also makes sense when your 'OO' gauge Mk 1 coach range is arguably the best and most extensive in the business.

If you think there's been some duplication with the Oxford Rail range, don't let the minimalist nature of the 'Carflat' deceive you. Oxford's 2017 model depicted a type built on 60ft ex-LMS underframes, whereas Bachmann's new model features those built on ex-Mk 1 vehicles. Our review sample, B745054, was 'built' at

St Rollox works in 1968 to Diagram 1/088 (lot 3679) using former Western Region Mk 1 W25145.

We compared the new Carflat to a Bachmann Mk 1 - in this case Brake Corridor Composite M21026 (39-226C) - and it's

clear that far more work has gone into the new

model than simply making the coach frame to fit a new body.

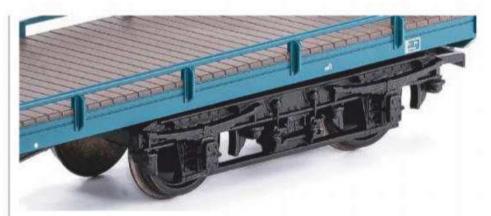
#### **NEW GEAR**

The truss rods look familiar, but all of the brake gear is new, mainly because

the brake gear on the real thing was modified to include a handbrake. The vacuum reservoirs look finer than those on the coach.

The bogies are carried over.
They're to Bachmann's usual
fine standard, but are dated
by the fact that the brake
blocks are not aligned with the
wheel treads.

Unlike a Mk 1 coach, you get



a decent assortment of accessories with the Carflat. There are yellow chocks (on sprues), Motorail side boards, vacuum pipes and dummy buckeye couplers (NEM pockets are mounted on sprung cams). There are also air brake cylinders, which can be fitted to make your Carflat air-braked if required.

The body compares well to photographs on Paul Bartlett's website (https://paulbartlett.zenfolio.com).
Bachmann has actually done

a good job of simulating BR's blue, and the printing is exemplary. Even the smallest text on the worksplate is legible, albeit under a magnifier.

The FVV weighs in at 93g, which aids performance. Our sample performed faultlessly on our test track, with four Bachmann bogie coaches behind it. It handled tight pointwork and crossings with aplomb.

Another excellent addition to the ranks of 'OO' gauge ready-to-run wagons. (RF)



When the coach frame to fit a new body 30 cm
It's clear that far more work has gone into the new model than simply making the coach frame to fit a new body 30 cm

REVIEW VERDICT

PROS. Good looks, fine detail, extra accessories. CONS. Nothing.

## The club room

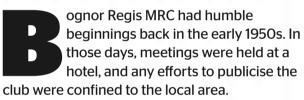
Be a part of the *Model Rail* community – get involved today. **E-mail**: theclubroom@bauermedia.co.uk



#### The guest chairman

Club Chairman Adrian Taylor relates the history of Bognor Regis Model Railway Club.

Society: Bognor Regis Model Railway Club Established: Circa 1950 Location: Aldingbourne, Bognor Regis, West Sussex Chairman: Adrian Taylor

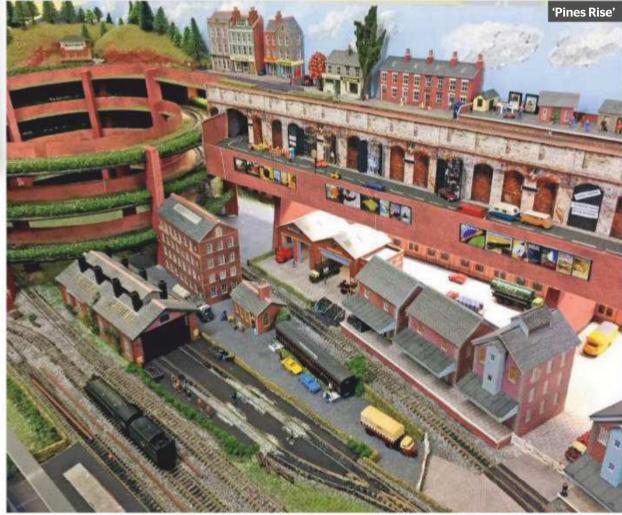


However, this didn't attract many members and there were lengthy periods of inactivity. However, a resurgence in the mid-1970s laid down the foundations for the club as it exists today. Over the years, finding suitable venues for club meetings has been difficult. However, with the support of the Barnham Signal Box Trust, the club's HQ is now the restored Barnham signal box.

We are quite diverse in terms of members and interests, and they model in almost every scale, from 'G' scale through to 'OO', 'TT' and 'N' gauges, right down to 'T' gauge. Layouts encompass standard and narrow gauge.

Membership has grown steadily over the years, helped by a decision, taken eight years ago, to attract younger members. We ran a 16-week modelling course, and now junior modellers represent about a fifth of our membership.





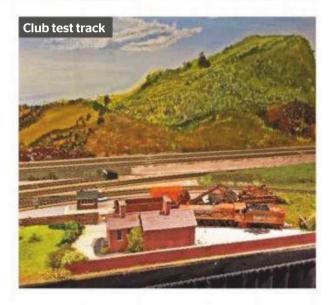
To keep the juniors engaged, we always have a project on the go for them to work on. Past projects have included an exhibition layout and various dioramas. A recent highlight was building a layout for Network Rail. We were commissioned to build a portable layout for a NR safety officer to take to schools to educate children on railway safety.

Our teenage members are now club experts in their own right, and they have various specialisations, from DCC to 3D-printing, or military modelling. For some the interest inevitably wanes, but we are always welcoming young new members who want to advance their skills, and whether their interest is steam, diesel or Thomas!

The club is lucky to have a number of very skilled layout builders with a wide range of knowledge, and they can be regularly seen on the exhibition circuit. There are others who bring their own non-modelling skills and abilities. This might be carpentry, electrics, electronics, catering, or anything else which can benefit the club as a whole.

We have members of all age groups, up to and including those you might refer to as 'senior citizens-plus'. We have female members, overseas members and members with learning difficulties. Most importantly, we all share a common desire both to learn and to teach. Even our most seasoned modellers acknowledge that there is always more to learn, and any member can offer ideas which might prompt us to look at doing things in a different way, or see things from perspectives which might never have occurred to us.

Everyone is welcome and encouraged to get



involved - whether it's with layout design and building, working on individual models, operating layouts, assisting with the maintenance of our model buildings and, of course, helping to transport, set up and operate our layouts at exhibitions.

We support local charities and have a successful family-orientated exhibition every January to raise club funds, but which also serves to promote the club.

Our club nights are Tuesdays, Thursdays, and Saturday mornings, and anyone is welcome to drop in to one of our sessions. Contact our club secretary for further information.

Address: Hon. Secretary, 11 Belle Meade Close, Woodgate, Chichester, West Sussex PO20 3YD Email: secretary@brmrc.co.uk

**Web:** www.brmrc.co.uk

Full: £48 (per annum), £24 (Under-18s)

### **Show & Tell**

The place to share your projects with the Model Rail community.



RTR models, but as a long-standing 'bodger', I am enclosing pictures of the latest creation to emerge from my broom cupboard (literally).

No. 2404 City of Ripon, was a rebuild by Gresley of one of the small class of Raven NER 'Pacifics', with an extended 'A1' boiler and cab and modified footplate.

The footplate and saddle are 3D-printed (which was horrendously expensive), the Southern Region 'WC'/'BB' frames were modified to the correct 7ft 6in wheelbase. and the front end is from a Comet LMS Compound, which made the cylinders, bogie and connecting rods the right length.

The body is from a Finecast 'A1'/'A3',

boiler. The tender is also Finecast.

The rear frames under the cab are made out of styrene sheet, and because of the sheer length of the locomotive (it was also a problem with the real ones), I have used flangeless wheels fixed just above track level. Currently I'm waiting for the nameplates to come from Modelmaster.

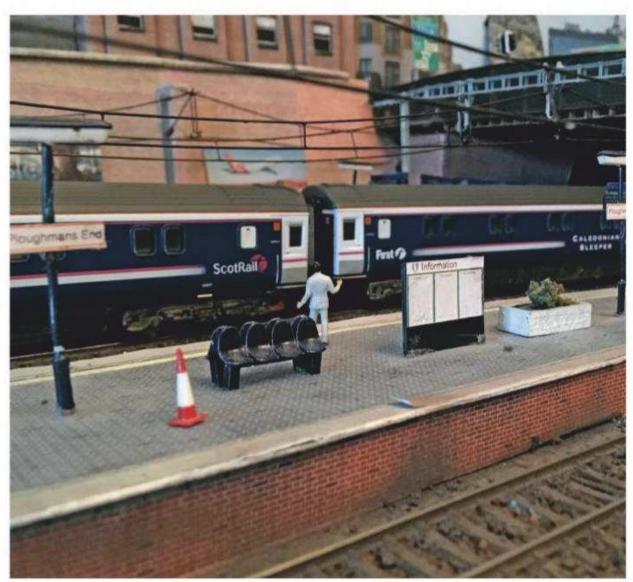
#### Sleeping under the wires

Phil Cox

I really enjoyed the article on the Caledonian Sleeper in MR253, and look forward to the follow-up. I have made the journey on the Lowland between Euston and Glasgow many times and always look forward to the trip with excitement. I'm also looking forward to the introduction of Mk 5 stock in October.

I can't hope to match Dave Lowery's skills, but I thought I'd share some pictures of the 'Sleeper' I run on my layout. The Class 90 and Mk 3s are Hornby, and the Mk 2s are old Lima coaches with Amsies Models overlays. The stock is based in the first ScotRail era, but a GBRf Class 92 makes the odd appearance.





#### **Boot camp**

Kevin Russell

This is my new compact 'OO' gauge layout, entitled 'Military Boots'.

It is based on a fictitious branch of the Longmoor Military Railway, and is built in a shoebox - hence the title.

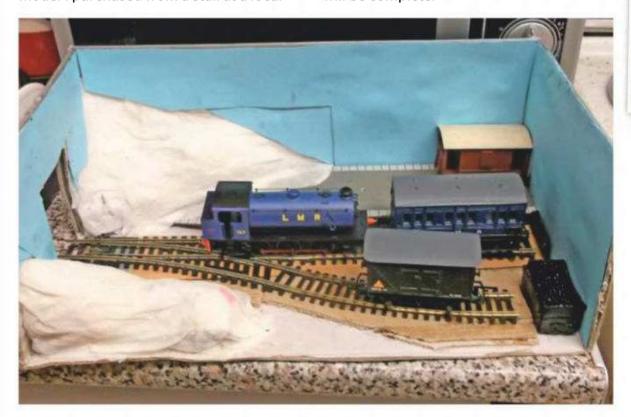
Much of the track is second-hand Peco - the point is by Bachmann (also second-hand), while the curve in the siding is new Peco track.

The point is worked by a home-made linkage made out of two paperclips.

All that's left for me to do are the scenery and buildings.

The four-wheel coach is a second-hand model I purchased from a stall at a local

model railway exhibition that had been repainted as an LMR coach. The War Department van – another repaint, and with a new roof – was also bought at the same time. The platform has been fitted with a brake van body purchased from the same model railway exhibition (but a different stall). I scratchbuilt two bufferstops to be installed in the siding and platform road and glued a backscene made from blue card, in much the same way as on my other shoebox layout – 'Folkesgate'. I just need to do the scenics and ballast, and the layout will be complete.



# Letters

#### Keep a tissue handy

Alastair Armitstead

In MR252, George Dent talks about the potential and actual damage from items being in contact with bubble wrap. A few years ago, I was working in a museum, and I acquired a museum-grade perspex display case that had become surplus to requirements. I wrapped the removable lid in bubble film for safety. About three

years later I unwrapped the lid to discover little dimple marks, where it had been in contact with the bubbles. The lid was a total write-off as no amount of polishing or other trickery would remove the marks.

So, from personal experience, if you are using bubble wrap, follow George's advice and use acid-free tissue as a barrier medium.

#### **Emergency request**

Ken Houghton

I have spent several months trawling the internet trying to find 'N' gauge figures of fire fighters and police officers, including driving officers (pre-white cap but not seated) circa 1950/60s. I have tried all the usual sources, such as P&D Marsh, Langley Models and so on. The only police officers with the right uniform I managed to find were whitemetal foot patrol figures from

Fleetline on eBay. Surely, I can't be the only 'N' gauge modeller in Britain who is trying to populate their layout with figures from this era?

I'm also trying to obtain an AEC Regent III Merryweather fire engine of the period. I'm tearing my hair out trying to find such models in 'N' can any modellers point me in the right direction?

#### Present your case

Your opinions on the Swindon DMUs, proposed by Mel Harwood and Stuart Moore in MR253.

www.facebook.com/modelrail



G. PARRY COLLECTION/COLOUR RAII

I loved these units. I saw them every day passing by the end of our garden, and on my way to school. My dad worked on them to and from Lincoln and Derby. I would buy at least two in blue and grey.

**Paul Andrews** 

I think the best-seller would be the Class 120 - I'd like someone to make them all, but my funds won't let me spend that much! Plus, with today's technology, just releasing a chassis with a good motor would be an alternative.

**Michael Grange** 

Being a first-generation DMU fan, I would definitely buy at least one of each type. The cost of a four or five-car set would be in the hundreds, so I hope they only do one at a time!

**Andy Thompson** 

I'd rather see some trans-Pennine DMUs. **John Yates** 

These units have been overlooked for a very long time, and have only been available either as kits or assembled kits. I'm all for detail but detail comes at a price, so affordability would be a key factor for me. **Michael Doyle** 

As a small club in Australia, we would love to see these DMUs produced - they'd be perfect for a country layout we're planning. Cannon Hill Community Model Railway Club

Very interesting proposal. I always thought that Swindon units were ignored by manufacturers. Whether that's because manufacturers don't think it would sell I'm not sure. There's a lot of support for the idea on *Model Rail*'s Facebook comments section though!

**Oliver Rowley** 

I'd definitely get my wallet out for that. **Derek Meller** 

www.model-rail.co.uk

#### **Caption that pic!**

You've been busy on social media coming up with barmy suggestions to caption the photograph (below) that featured in last month's issue. The reader that made us chuckle the most was **Simon France,** so congratulations! This month we want you to caption the picture on the right from John Wilkes' layout 'Coleford' (see page 90). Keep an eye on our social media pages for more pictures to caption - but remember, it's just for fun!

#### Last month's responses

"Right then! Which one of you stole my last digestive!?"

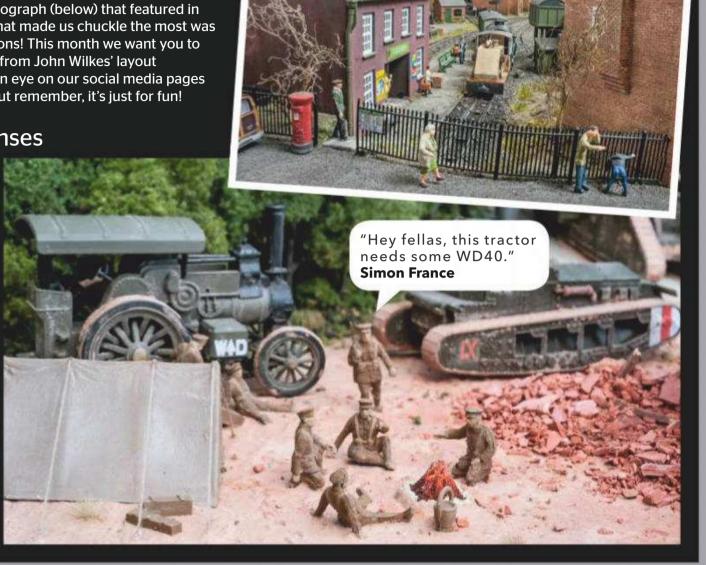
Mark Horner

"Ain't them spuds ready yet?" **Dave Hand** 

"What do you mean, where are the sausages? You were in charge of the catering!"

Richard Walton

"Well mateys, it's the 11th of November and we can finally go home. One day I hope to be sitting down with my grandkids and playing with their model trains. Lest we forget." Stuart Fairbairn

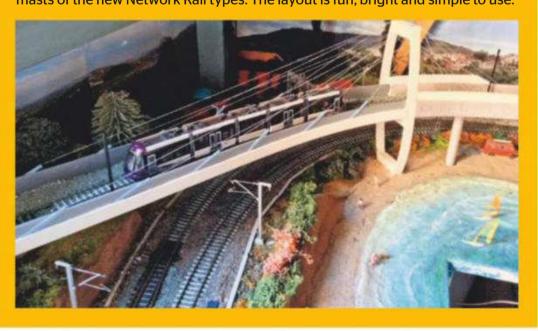


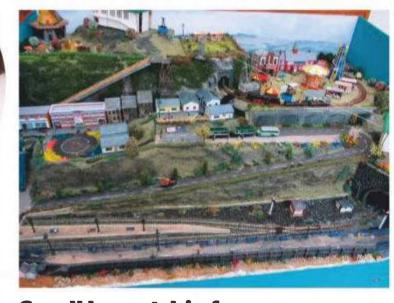
#### The coast with the most

#### David Boon

This is 'Luciton St James', which began life in 2014 as a 8ft by 4ft board on which my children could run their Thomas trains, and I could run models from old layouts. I haven't done any modelling since 2007, but I was spurred on by my son's interest, so I came out of retirement and started to build this layout. Then my daughter suggested we should have a seaside branch line. The layout became 'Sandy Cove', then, in 2017, we decided to make a bigger continuous run.

Over the past year we have supplanted a LRT route onto the layout because my son likes trams. The layout is now geared up for 25kV AC traction and uses masts by Electrotren, black cotton thread for the wires and a few gantries and masts of the new Network Rail types. The layout is fun, bright and simple to use.





#### Small layout, big fun

#### Brian Willcocks

This is a 3ft by 2ft mini-layout which I built over six months for The 2017 Needham Market layout competition. The brief was to build a layout within that space, and to include as much movement as possible.

About this time, in *Model Rail*, Paul Lunn produced an article on holiday camp layouts, and the idea took shape. I wanted to try DCC, and perhaps British outline with sound. Bachmann had just introduced their DMU, and the whole concept was starting to crystallise. As an associate member of a local club, I entered the competition.

I wanted to try as many new scenic products and ways of doing things as I could. I used Shaper Sheet from Woodland Scenics for the contours, which was a great success. I tried modelling various water effects (with less success!) and I added many accessories and bits from my 'useful parts' box. It was great fun.

# **Exhibition**

What's on in your neck of the woods this month

#### **NOVEMBER 24**

RAINHILL, MERSEYSIDE. Rainhill MRC MRS. Rainhill Village Hall, Weaver Ave, Rainhill L35 4LU. Time: 1000-1700. Admission: Adult £3.50, Child £4. Tel: 01925 226266. Web: www.rainhillmrc.org.uk

#### **NOVEMBER 24-25**

**SCUNTHORPE, LINCS.** Scunthorpe & District MRC MRE. Sunshine Hall, Ashby High St, Scunthorpe DN16 2ND. Time: Sat 1000-1700, Sun 0930-1600. **Admission:** Adult £2.50, Concession £2, Family £7.50. Tel: 01724 860149. **E-mail:** *sdmrc63@virginmedia.com* 

#### **NOVEMBER 24-25**

Model RAIL See us at Stand D24 **BIRMINGHAM.** Warley National MRE. NEC, Birmingham B40 1NT. Time: Sat 0945-1800, Sun 0945-1700. Tel: 08457 484950. Web: www.thewarleyshow.co.uk

#### **NOVEMBER 25**

**BROCKENHURST, HANTS.** New Forest MRS Open Day. Brockenhurst Village Hall, Highwood Rd, Brockenhurst SO42 7RY. Time: 1000-1630. Admission: Adult £3.50, Child £2.50, Family £10. Web: www.nfmrs.org

DECEMBER 1 **ARLESEY, BEDS.** Letchworth MRS MRE. Etonbury Academy, Stotfold Rd, Arlesey SG15 6XS. Time: 1000-1630. Admission: Adult £5, Concession £4. Web: www.letchworthmrs.org.uk DECEMBER 2

BEXLEYHEATH, KENT. Selkent MRG MRE. Bexleyheath Academy, Graham Road Entrance, Bexleyheath, Kent DA6 7EG. **Time:** 1000-1600. Admission: Advance/Door: Adult £4.95/6, Senior/Child £3.95/5, Family £12/15. **Tel:** 0208 694 1888. Web: www.modelrailwayexhibition.com

#### **DECEMBER 2-4**

**GAINSBOROUGH, LINCS. Gains**borough MRS Open Days. Florence Terrace, Gainsborough DN211BE, Time: Sat/Sun 1330-1730, Mon 1030-1730. Admission: Adult £4, Senior £3, Family £10. Tel: 01427 610475. Web: www. gainsboroughmodelrailway.co.uk

#### **DECEMBER 8**

#### HEXHAM, NORTHUMBERLAND.

**EM Gauge Society Modelling** Workshop and AGM. Tynedale Farmer Function Suite, Tyne Green, Hexham NE46 3SG. Time: 1030-1630, AGM 1400. **Admission:** Adult £5. E-mail: publicity@emgs.org **Web:** www.emgs.org

**HEYWOOD, LANCS.** Heywood MRG Open Day. Club Rooms, Unit 4, Park Works, River St, Heywood OL10 4AB. Time: 1000-1600. Web: www.hmrg.co.uk

#### DECEMBER 8-9

**HIGHBRIDGE, SOMERSET.** Burnham & District MRC MRE Christmas Show.

King Alfred School, Burnham Road, Highbridge TA9 3EE. Time: 1000-1600. **Admission:** £5. **Tel:** 01934 645386. DECEMBER 15

YIEWSLEY, LONDON. Hillingdon Railway Modellers Test Track Open Day. Yiewsley Baptist Church Hall, 74 Colham Ave, Yiewsley, Hillingdon UB7 8HF. Time: 1000-1600. Admission: £4. Tel: 0208 368 4090. Web: www. hillingdonrailwaymodellers.co.uk

### DECEMBER 29

**CONWY, NORTH WALES.** North Wales N Gauge Area Group, St Michaels Church, Rosemary Lane, Conwy LL232 8HY. Time: 1000-1600. Admission: Adult £2. Tel: 0770 33990. E-mail: athoath@ntlworld.com

#### WEST CAMEL, SOMERSET.

West Camel MRS MRE. Davis Hall, West Camel, nr Yeovil BA22 7QX. Time: 1000-1530. Admission: Adult £4, Child £1. **E-mail:** charliebishop@ hotmail.co.uk

#### DECEMBER 29-30

**GAINSBOROUGH, LINCS.** See December 2-4.

DECEMBER 30 **KEIGHLEY.** Keighley MRC Christmas Open Day. The Clubrooms, Knowle Mills, South Street, Keighley BD21 1SY. Time: 1000-1630. Admission: Adult £3.50, Child £2.50. Web: www.keighley-mrc.org.uk

#### **JANUARY 5, 2019**

COX GREEN, BERKS. Maidenhead MRC MRS. Cox Green Community Centre, 51 Highfield Lane, Cox Green SL6 3AX. Time: 1000-1630. Admission: Adult £5.00, Child £3.00, Family £13 Web: www.mmdmrc.org.uk

#### **JANUARY 5-6**

**EDINGTON, SOMERSET.** Somerset & Dorset Railway Trust Ltd. The Edington Village Hall, Lippets Way, Edington TA7 9HA. Time: 1000-1700, Sat 1000-1630. Admission: Adult £5, Senior £4.50. Web: www.sdrt.org.uk

FROME, SOMERSET. Wessex Association of Model Railway Clubs MRE. The Cheese & Grain, Market Yard, Frome BA11 1BE. Time: 1000-1630, Sat 1000-1630, Sun 1000-1600. Admission: Adult £6. KIDLINGTON, OXON. Scout Rail MRE. Exeter Hall, Oxford Road, Kidlington OX5 1AB. Time: 1000-1630 both days. Admission: Adult £4, Child £2,

Concession £3, Family £10. Web: www. scoutrail.org.uk **TEWIN, HERTS.** Bassett Lowke Society Vintage Train Show. Memorial Hall, Lower Green, Tewin AL6 OJX. Time: 1000-1700. Admission: Adult £3,

#### **JANUARY 12**

Child £1. Tel: 01462 454537.

BIRMINGHAM. Christchurch Quinton MRE. Church Hall, Christchurch the Quinton, Hagley Road West, Birmingham B32 1AJ. Time: 1000-1700. Admission: Adult £3, Child £1. Tel: 07737 928977. E-mail: cwm46@hotmail.com HEYWOOD, LANCS. See December 8.

#### **JANUARY 12-13**

**BOGNOR REGIS, SUSSEX.** Bognor Regis MRC. Felpham Community College, Felpham Way PO22 8EL. Time: Sat 1000-1700, Sun 1000-1630. Admission: Adult £5, Child £3.

PRATTS BOTTOM, KENT. Orpington and District MRS MRE. Pratts Bottom Village Hall, Norsted Lane, Pratts

Bottom BR6 7PO. Time: 1000-1700. Admission: Adult £4, Child £1.50. **E-mail:** exhibition@odmrs.uk Web: www.odmrs.uk

#### ........... **JANUARY 13**

**WESTON-SUPER-MARE, SOMERSET.** Keith Price's Charity MTS. The Campus, Highlands Lane, Locking Castle BS24 7DX. Time: 1000-1630. Admission: Adult £7, Senior £6.50, Child £2, Family £16. Web: www. westonsupermaretrainshow.com

#### JANUARY 18-20

WOOD GREEN, LONDON. London Model Engineering Exhibition. Great Hall, Alexandra Palace, Alexandra Palace Way, Wood Green N22 7AY. **Time:** Fri-Sat 1000-1700, Sun 1000-1630. Admission: Online/ Door: Adult £11.50/£12.50, Senior £10.50/£11.50, Child £3.50/£4.50. Web: www.londonmodelengineering.co.uk

#### **JANUARY 19-20**

**CANTERBURY.** City of Canterbury MRS MRE. St Anselms School, Old Dover Road, Canterbury, Kent CT1 3EN. Time: Sat 1000-1700, Sun 1000-1600. Tel: 07443 658102. Web: www.ccmrs.co.uk JANUARY 20

**GUILDFORD.** Astolat Model Railway Circle Exhibition, Surrey Sports Park, University of Surrey, Richard Meyjes Road, Guildford GU2 7AD. Time: 1000-1700. Admission: Adult £6, Child £3, Family £12, Tel: 01483 722098. Web: www.astolatmrc.co.uk

## JANUARY 26-27

**EASTLEIGH, HANTS.** Southampton MRS MRE. Barton Peveril College, Chestnut Avenue SO50 5ZA. Time: Sat 1000-1700, Sun 1000-1630. Admission: Adult £7, Child £3, Family £17. Tel: 01489 799809. Web: www. southamptonmodelrailwaysociety. wordpress.com

ERITH, KENT. Erith MRS Longfield MRE. Longfield Academy, Main Road, Longfield DA3 7PH. Time: Sat 1000-1700, Sun 1000-1600. Admission: Adult £9. Web: www. ukmodelshops.co.uk

KENDAL, CUMBRIA. Kendal MRC MRE. Kendal Leisure Centre, 2 Burton Rd, Kendal LA9 7HX. Time: Sat 1000-1700, Sun 1000-1630. Admission: Adult £6, Concession £5, Child £3, Family £16. Web: www.kendalmrc.org

PONTEFRACT, YORKS. Normanton & Pontefract MRS MRE. New College, Park Lane, Pontefract WF8 4OR. Time: Sat 1000-1700, Sun 1000-1630. Admission: Adult £5. Web: www.nprms.co.uk

## FEBRUARY 9

**HEYWOOD, LANCS.** See December 8. SOLIHULL, W. MIDS. G Scale Society, West Midlands Group MRE. St Mary's Church Hall, Hobs Moat, Solihull B92 8PN. **Time:** 1000-1600. **Admission:** Adult £3, Child £1. Tel: 01299 403548.

#### \* FEBRUARY 16-17

**MILTON KEYNES.** MKMRS MRE. Stantonbury Leisure Centre, Milton Keynes. Time: Sat 1000-1700, Sun 1000-1630. Admission: Adult £7, Child £1. Web: www.mkmrs.org.uk

#### FEBRUARY 17

**BOSTON, LINCS.** Hubberts Bridge MRE. Hubberts Bridge Community Centre, Langrick Road, Boston PE20 3SG. Time: 1000-1600. Admission: Adult £3.

#### **FEBRUARY 23**

**DEREHAM, NORFOLK.** Dereham MRE, Dereham Memorial Hall, 62A Norwich Street, Dereham NR19 1AD. Time: 1000-1600. Admission: Adult £5.

PRINCES RISBOROUGH, BUCKS. Risborough & District MRC MRE. Community Centre, Wades Park, Stratton Road, Princes Risborough HP27 9AX. Time: 1000-1700. **Admission:** Adult £4, Child £2. **Tel:** 01296 415107. **Web:** www.rdmrc.org.uk

#### FEBRUARY 23-24

**MELROSEGATE, YORK.** EBOR Group of Railway Modellers, York Against Cancer MRS. Heworth Memorial Hall, Melrosegate YO31 ORL. Time: Sat 1000-1700, Sun 1000-1630. Admission: Adult £3, Child £1. E-mail: saltyseadog2984u@hotmail.com FEBRUARY 24

TROWELL, NOTTS. Ilkeston MRC MRE. Trowell Parish Hall, Stapleford Rd, Trowell NG9 3QA. Time: 1000-1630. **Admission:** Adult £4. **Tel:** 07930 909571. MARCH 2-3

**LEAMINGTON SPA, WARKS.** Leamington & Warwick MRS MRE. Warwickshire College, Warwick New Road, Royal Leamington Spa CV32 5JE. Time: Sat 1000-1700, Sun 1000-1600. **Admission:** Adult £8, Child £2, Family £18. E-mail: exhibition@lwmrs.co.uk

## MARCH 9

**NEWTON AYCLIFFE, CO. DURHAM.** Rotary Club of Newton Aycliffe. Youth Centre, Burn Lane, Newton Aycliffe DL5 4HT. Time: 1000-1700. Admission: Adult £5, Concession £4, Family £10, Child 50p. Tel: 07870 210269. MARCH 16 Web: www.newtonayclifferotary.org.uk

TADWORTH, SURREY. Tadworth MRE. The Good Shepherd Church Hall, Station Approach Road, Tadworth KT20 5AH. **Time:** 1000-1700. **Admission:** Adult £6, Concession £5, Child £3. Tel: 0775 8458827. **Web:** www.ndmrc.info

#### ...... **MARCH 16-17**

**LEAMINGTON SPA. WARKS. Midlands** Garden Rail Show. The Warwickshire Event Centre, The Fosse, Fosse Way, nr Leamington Spa CV31 1XN. Time: 1000-1600. Admission: Online/Door: Adult £8/£9, Senior £7/£8, Child £3/£4. Web: www.midlandsgardenrailshow.co.uk

#### PROMOTE YOUR EVENT HERE

Model Rail is happy to accept details of club exhibitions for inclusion on this page free of charge on the understanding that details may be edited down to suit available space and that *Model Rail* and its staff are not held responsible for any errors, howsoever caused. Send your exhibition details to: Model Rail Exhibition Diary, Media House, Lynchwood, Peterborough Business Park, Peterborough PE2 6EA or e-mail jane.skinner@bauermedia.co.uk Entries for the January 2019 issue should reach us by November 30 2018.

Model Rail's new

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number, but with an 's' prefix to denote 'Southern

> Region'. Bulleid 'sunshine' green and yellow lettering was applied only to the tank sides, and spelt out 'British Railways' rather than simply 'Southern'. The colour

scheme was replaced by its new number, 30073, and BR's 'cycling lion' emblem in 1951.

No. 30073 would become one of the most popular 'USAs'. It was the first of the class to be altered in March 1948 when it was fitted with a modified bunker and regulator "to the requirement of the Docks and Marine Department". It remained at Southampton until June 1963, when it was transferred to Eastleigh before being withdrawn in January 1967 and sold to Cashmore's of Newport. It was also the most popular locomotive of the fleet to take part in special workings, participating in eight between 1960-66.

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Built at the Vulcan Ironworks in 1943 as USA Transportation Corps No. 1959, it was in service with SR in June 1947 where it became No. 64. It spent much of its life in and around Southampton docks.

At nationalisation, it became
No. 30064 but remained
on the south coast, apart
from a brief spell at
the Meldon Quarry
in Okehampton
to the West of

needed to cover for repairs to No. 30062. Although No. 30064 remained there idle for the duration, the quarry closed soon after and it was returned to Eastleigh. Despite being noted as dilapidated, and withdrawn in October 1962, it was repainted in green in February 1964, together with No. 30073, and it became a popular choice for railtours in the late 1960s.

It was withdrawn on the last day of Southern Region steam, on July 9 1967. It is now part of the collection at the



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MR-205 No. 68223, British Railways lettering, full skirts

MR-206 No. 7128, LNER wartime livery, full skirts

MR-207 No. 8223, LNER post-war livery, full skirts

**MR-208** No. 7126, LNER lined livery, no skirts

MR-209 No. 7137, LNER unlined livery, full skirts

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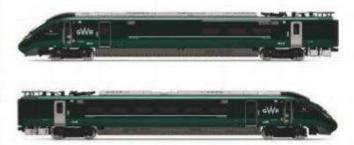
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Class H1 & H2 Atlantic 4-4-2	hattons.co.uk/h2atlantic	from £161.46	Mar 2013							
Mk2F Aircon Coaches	hattons.co.uk/mk2f	from £46.71	Mar 2013							
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Class 117 DMU	hattons.co.uk/c117	£254.96	Sep 2015							

dapol	Link	Price	Date announced	CAD done	In Tooling	Seen 1st EP	Decorated samples	In production	On Board Ship	Released
N Gauge Class 142	hattons.co.uk/c142	from £115.18	Jan 2011							
YCV Turbot Ballast wagon	hattons.co.uk/tur	£21.21	Apr 2014							
Bogie Bolster 'E' wagon	hattons.co.uk/bolstere	£25.45	Sep 2018							
Class 59	hattons.co.uk/dapol59	from £124.43	Oct 2015							
GWR 'Large Prairie' 2-6-2T	hattons.co.uk/dapolprairie	from £115.56	Dec 2017							

Hattons	Link	Price	Date announced	CAD done	In Tooling	Seen 1st EP	Decorated samples	In production	On Board Ship	Released
Beilhack ZZA Snowplough	hattons.co.uk/beilhack	£43	Oct 2016							
Rail Head Treatment Train (RHTT)	hattons.co.uk/RHTT	from £118	Nov 2017			11111				
FEA Intermodal Wagons	hattons.co.uk/FEA	from £32	Nov 2017							
O Gauge Class A3/A4	hattons.co.uk/recordbreakers	£750	Aug 2016							
Class 66	hattons.co.uk/66	from £150	May 2018							

HELJAN	Link	Price	Date announced	CAD done	In Tooling	Seen 1st EP	Decorated samples	In production	On Board Ship	Released
Class 47xx 'Night Owl' 2-8-0	hattons.co.uk/47xx	£154	Nov 2014				П			
O Gauge Class 50 (Refurbished)	hattons.co.uk/hel50	£560	Apr 2017							
O Gauge Class 37/4	hattons.co.uk/hel374	£560	Nov 2017							
Class 25/3	hattons.co.uk/253	£129 (EST)	Jul 2018							
GWR AEC Railcar	hattons.co.uk/gwraec	£115 (EST)	Sep 2018							

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Class 87	hattons.co.uk/hornby87	from £144	Nov 2016							
SR 'Lord Nelson' 4-6-0	hattons.co.uk/lordnelson	from £136	Jan 2018							
NBR Class J36 0-6-0	hattons.co.uk/J36	from £112	Jan 2018		lu ma					

	Link	Price	Date announced	CAD done	In Tooling	Seen 1st EP	Decorated samples	In production	On Board Ship	Released
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GER/LNER Class N7 0-6-2T	hattons.co.uk/oxN7	from £87	Jan 2017							
BL 18" Howitzer Railgun	hattons.co.uk/railgun	from £42.50	Jan 2018							

Shows the stage the project is at based on the information available to us. CAD: Computer Aided Design. 1st EP: First Engineering Prototype. TBC: Price is yet To Be Confirmed (EST): Price is estimated.

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2502 Class 05 Hunslet shunter D2581 in BR green wasp



2930 Class 07 shunter 07001 in Harry Needle Railroad Company - Exclusive to Hattons Model Railways (Hel) (RRP £139)... ...£95



2903 Class 07 shunter 07010 in BR blue wasp



32-115B Class 08 Shunter 08818 in BR Blue Wasp Stripes .....£99 (weathered) (Bac) (RRP £134.95) .....BARGAIN



.BARGAIN.....£90



1604 Class 16 North British Type 1 D8409 in BR green grey roof - Gloss finish - Ltd Ed of 750 (Hel) (RRP £134.95)BARGAIN. . £69 - Gloss finish - Ltd Ed of 750 (HeI) (HHI) 134.39,000 (1993) 32-789 Class 37/0 37099 "Merl Evans 1947-2016" Colas Rail Freight £135.96





32-482 Class 40 97407 'Aureol' in BR blue -



wasp stripes (HeI) (RRP £129.95) ....BARGAIN....£59 R3491 Class 42 Warship D805 "Benbow" in BR green -



. £127.46



32-650DS Class 44 D3 'Skiddaw' in BR green small yellow 



32-818 Class 47/0 47245 in West Coast Railway Company maroon (Bac) (RRP £159.95) . . . . . . . . BARGÁIN . . . £124



31-660A Class 47/4 47444 "University of Nottingham" in BR large logo blue (Bac) (RRP £159.95)BARGAIN . . . £124
R3658 Class 50 50033 "Glorious" in revised Network SouthEast (Hor) . . . £136



R3653 Class 50 50040 "Leviathan" in BR large logo



5311 Class 53 D0280 "Falcon" in BR two tone green - Ltd 



5313 Class 53 D0280 "Falcon" in original lime green and brown - Ltd Ed (Hel) (RRP £125) . . . . . . BARGAIN . . . . £72





Gra = Graham Farish, Hel = Heljan, Hor = Hornby, Jav = Javis, Len = Lenz, Oxf = Oxford Diecast, Pec = Peco, Poc = Pocketbond, Vi = Vi Trains, Woo = Woodland

#### www.hattons.co.uk/new

#### for all new releases





OO71-002HAT Class 71 E5015 in BR Southern Region light green full Golden Arrow headboards, arrows and flags pre-fitted - Exclusive to Hatton's (DJ) (RRP £139.95)BARGAIN . £99



7704 Class 77 EM2 Woodhead electric 27001 "Ariadne" in BR green - Ltd Ed for Olivias Trains (Hel) (RRP £165)BARGAIN .£99



7703 Class 77 EM2 Woodhead electric 27002 "Aurora" in BR black - Ltd Ed for Olivias Trains (Hel) (RRP £165)BARGAIN. .£99



7702 Class 77 EM2 Woodhead electric 27004 "Juno" in BR electric blue - Ltd Ed for Olivias Trains (Hel) (RRP £165)BARGAIN..... £99



7705 Class 77 EM2 Woodhead electric E27003 "Diana" in BR green half yellow panels - Ltd Ed for Olivias 



7706 Class 77 EM2 Woodhead electric E27006 "Pandora" in BR electric blue - Ltd Ed for Olivias Trains (Hel)



31-677 Class 85 (AL5) Bo-Bo Electric E3056 in BR Blue single pantograph. (Bac) (RRP £139.95)BARGAIN . . . . £72



R3582 Class 87 87010 "King Arthur" in Intercity Swallow (Hor). ....£144



R3580 Class 87 87035 'Robert Burns' in BR Blue (Hor) . £144 8920 Class 128 parcels DMU 55991 in BR blue yellow ends



9002 Metropolitan Bo-Bo electric 1 in London Transport wartime grey (Hel) (RRP £139.95) . . . . . BARGAIN. . . . . £64



9009 Metropolitan Bo-Bo electric 12 "Sarah Siddons in London Transport/Metropolitan (1990s preserved condition) (Hel) (RRP £139.95) ......BARGAIN.....£64



9008 Metropolitan Bo-Bo electric 12 "Sarah Siddons" in 



9005 Metropolitan Bo-Bo electric 19 in Metropolitan (Hel) 

**DMUs** 



4D-009-HAT01 Class 121 single car DMU 'Bubblecar 120 in 'GWR 150' chocolate and cream - Hatton's limited edition (Dap) (RRP £129.95)......BARGAIN....£105



4D-009-HAT02 Class 121 single car DMU 'Bubblecar 121032 in Arriva Trains Wales - Hatton's limited edition (Dap) (RRP £129.95).....BARGAIN



4D-009-HAT07 Class 121 single car DMU 'Bubblecar' 55022 in original Network South East - Hatton's limited edition (Dap) (RRP £129.95).....BARGAIN....£105



4D-009-HAT03 Class 121 single car DMU 'Bubblecar 960011 in Railtrack blue and green - Hatton's limited edition (Dap) (RRP £129.95)......BARGAIN...£105

R1176 Class 373 'Eurostar' Train Set (Hor) (RRP £169.99)BARGAIN ...£125

R1214 East Coast Express Train Set (Hor) NEW .....£157.50



4D-009-001 Class 121 single car DMU 'Bubblecar' W55020 in BR green speed whiskers (Dap) (RRP £145)BARGAIN. £109 4D-009-002 Class 121 single car DMU 'Bubblecar' W55028 in BR green small yellow panels (Dap) (RRP £145)......BARGAIN ...£109



4D-009-003 Class 121 single car DMU 'Bubblecar' W55029 in BR blue & grey (Dap) (RRP £145) ...BARGAIN....£109



'Parcels Service" branding (Hel) (RRP £119.95)BARGAIN£50



32-939DS Class 150 150236 in Arriva Trains Wales passenger figures and DCC sound (Bac) (RRP £349.95)BARGAIN....£269



32-937 Class 150/2 2 car DMU 150202 in Regional Railways Centro blue stripe . (Bac) (RRP £164.95). BARGAIN. . . . . £92



30-425 Class 251 Midland Pullman train pack in Pullman



31-236A Class 205 'Thumper' 1121 in BR green small yellow panel - weathered (Bac) ..........£203.96 Scot crimson lake - pack of three - Railroad Range (Hor) £64 **EMUs** 



Pullman umber and cream small yellow panels (Hor) £160



R3341 Class 2-HAL 2 Car EMU 2677 in BR blue (Hor) 



31-427B Class 411 4-CEP 7106 in BR Blue & Grey (Bac) veathered (Bac) (RRP £369.95)



R4871 Pack of three centre coaches for 5-BEL Brighton Belle in Pullman umber and cream (Hor) (RRP £179.99)BARGAIN..£132





B800 Non-motorised OO Track Cleaner motorised cleaning heads & vacuum in blue (Dap)....£64
PTC-004 Non-motorised OO Track Cleaner wet and dry cleaning neads (Pro) NEW £64.56

Train sets - analogue



R1210 Santa's Express - Christmas starter train set (Hor) £47



R9285 Thomas the Tank Engine - Passenger and Goods Train Set (Hor) (RRP £109.99) . . . . . . . BARGAIN . . . . £80





R1172 e-Link Majestic train set A1 Pacific Peppercorn Class in Experimental blue & BR Class 47 (Hor) (RRP £299.99).



R1126 Mixed Freight DCC digital train set Class 08 0-6-0 BR diesel electric loco, steam loco & 4 wagons (Hor) (RRP £264.99) . . .



R1125 Somerset Belle train set Class 3F 0-6-0 S&DJR 0-6-0 steam loco & 3 wagons - DCC control (Hor) (RRP £210.99) BARĞAIN £ Coaches

R4873 LMS Stanier Period III coaches in LMS Coronation



39-650 Mk2F "Aircon" FO first open in BR blue and grey (Bac) £4 39-650DC Mk2F "Aircon" FO first open in BR blue and grey - DCC fi £46.71



39-686 Mk2F "Aircon" RFB restaurant first buffet in Intercity (Bac) NEW



39-685 Mk2F "Aircon" RFB restautant first buffet in BR blue and grey - as preserved (Bac) NEW



39-677 Mk2F "Aircon" TSO tourist second open in 



R4852 Mk3 TGS trailer guard second 44063 in Intercity Swallow (Hor) NEW £31.50 R4781D Mk3 TSO trailer second open 42129 in GWR green (Hor) NEW £31.50



R4781C Mk3 TSO trailer second open 42200 in GWR green (Hor) NEW. £31.50
R4781B Mk3 TSO trailer second open 42250 in GWR green (Hor) NEW £31.50
R4781E Mk3 TSO trailer second open 42581 in GWR green (Hor) NEW £31.50
OR763RB001B Mk3a RUB restaurant buffet M10005 BR blue and



OR763RB001 Mk3a RUB restaurant unclassified buffet 39-001 Pair of Mk1 coaches in Works Test Train' BR blue & grey-weathered (Bac) (RRP £89.95)



Wagons



R6838A 20 ton coke hopper in BR grey (Hor) NEW



. .£15



R6834 LNER 20 ton 'Toad E' brake van E175712 in BR grey (Hor) NEW....£19.80



## 

All prices correct when going to press. Errors excepted.



three engineers wagons - 'Rudd', 'Clam' and 'Tope' in departmental grey and yellow (Hor) NEW... £49.50



R6887 PTA 102 ton bogie wagon PR26552 in Yeoman Aggregates grey - Railroad Range (Hor) .......£15 R6787 RailRoad BP Petrol Tanker (Hor) (RRP £9.99)BARGAIN ... £4 R6896 ZCV 'Tope wagon DB970299 departmental grey and yellow (Hor) NEW .... £17.50 R6851 ZUA 'Shark' ballast brake van D993902 in EWS maroon (Hor) NEW £21

#### Analogue controllers



R8012 HM2000 High output power & speed controller, mains supply. (Hor) . . . . . . . . . . . . £87

#### **Digital controllers**



R8214 DCC Elite unit digital controller (Hor) . . . . . £210 **Point motors** 

#### DCR-FWT 0.3mm phospor bronze wire and 250mm teflon tube - for

rodding system - pack of six (DCC) NEW

DCR-RDP Working point rodding add-on pack additional rodding and linkages (DCC) NEW

£2

#### Model railway spares

**SL-10** Metal rail joiners/fishplates (for code 100 rails inc Hornby, Peco & Peco Streamline). For OO, HO & O gauge - Pack of 24 (Pec). . . . . £2.20 Man-made scenic structure - railway-



89121 27.4 metre (90ft) Motorised turntable - ready for installation. For HO/OO scales. DCC ready (Hel) ....£210 Signals

4L-002-001 Signal - Motorised, LMS home (OOSIGN3) (Dap) . 4L-001-001 Signal - Motorised, Square post GWR home lower quadrant

#### **Buildings - general**



. £80.71 **Bridges, Tunnels & Walls** 44-292 Brick-built single tunnel portal (Bac) NEW . . . . . £25.46

#### Track - Code 100 Setrack

# R8072 Left Hand Standard Point (Hor) . . . . . . £9.50

R8073 Right Hand Standard Point (Hor).... ST-245 Setrack curved double radius left handed point insulfrog (Pec) . . £14.50 ST-241 Setrack No.2 radius left handed point insulfrog (Pec) . . . ST-240 Setrack No.2 radius right handed point insulfrog (Pec) . . ST-204 Setrack Quad Straight (670mm) (Pec) . . . . . ST-204 Box of 24 (Pec) . 

#### **Track - Code 100 Streamline**



SL-100 Pack of 25 1 yard (91.5cm) length of Code 100 

# 76LRL003 Land Rover 1/2 Ton Lightweight RAF - Red Arrows (Oxf) NEW ... £5 76LRFCS002 Land Rover FC Signals Nato Green (Oxf) NEW ... £8.50 76LRL004 Land Rover Lightweight Berlin Scheme (Oxf) NEW ... £5 76LRL004 Land Rover Lightweight Berlin Scheme (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB Hard Back Civil Defence (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB Hard Back Civil Defence (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB Hard Back Civil Defence (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB Hard Back Civil Defence (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB Hard Back Civil Defence (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB Hard Back Civil Defence (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB Hard Back Civil Defence (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB Hard Back Civil Defence (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB Hard Back Civil Defence (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB Hard Back Civil Defence (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB Hard Back Civil Defence (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB Hard Back Civil Defence (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB Hard Back Civil Defence (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB Hard Back Civil Defence (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB Hard Back Civil Defence (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB Hard Back Civil Defence (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB Hard Back Civil Defence (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB Hard Back Civil Defence (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB Hard Back Civil Defence (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB Hard Back Civil Defence (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB Hard Back Civil Defence (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB Hard Back Civil Defence (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB Hard Back Civil Defence (Oxf) NEW ... £5 76LR2S005 Land Rover Series II SWB

SL-E92 Left hand small point - electrofrog (Pec) ... £9.50 SL-92 Left hand small point - insulfrog (Pec).



#### **Track - Code 75 Finescale**



SL-100F Pack of 25 1 yard (91.5cm) length of Nickel Silver Finescale flexible track (Pec) . . . . . . . . £72 

SL-E196 Finescale left hand medium point

SL-E192 Finescale left hand small point -

electrofrog (Pec).....£10.50

SL-E195 Finescale right hand medium point electrofrog (Pec). £11.50
SL-E191 Finescale right hand small point - electrofrog (Pec) . . . £10.50
SL-U1189 Left hand large radius bullhead rail point - unifrog (Pec) . . . £26
SL-U1188 Right hand large radius bullhead rail point - unifrog (Pec) . . £26

# Buses NEW

UK6506 ADL Enviro400 MMC - "First Bristol" (Nor) NEW £48 £33 Bournemouth, Limited Stop" (Cor) NEW

OM40821A Bristol Lodekka "Wilts and Dorset" - Route 38A "Salisbury, £14



76DR005 Duple Roadmaster Ribble (Oxf) NEW.... £14.50 76IR6004 Irizar i6 Galleon Travel (Oxf) NEW £20



76SB002 Saro Bus - Maidstone and District (Oxf) NEW£16 CC42418 The Beatles - Magical Mystery Tour Bus (Cor) NEW . £21
OM46515A Wright Eclipse Gemini 2, Brighton & Hove, Brighton Pride,
Route 21, Brighton (Cor) NEW
OM46515B Wright Eclipse Gemini 2, Brighton & Hove, Brighton Pride,
Route 29, Tunbridge Wells (Cor) NEW

Cars 



76ETYP014 Jaguar E Type Silver Blue (Oxf) NEW ... 76TP006 Triumph 2500 British Racing Green (Oxf) NEW . £4.50 76CFE007 Vauxhall Friary Estate Dusk Rose/Lilac Haze (Oxf) NEW £4.50 76VWY007 Vauxhall Wyvern Metallichrome Blue (Oxf) NEW . £4.50

**Public Service vehicles** 

76MA006 Mercedes Ambulance East Midlands Ambulance Service (Oxf)

**Commercial vehicles** 

Military ground vehicles



76WOT001 Ford WOT1 Crash Tender Mickey Mouse Scampton) (Oxf) NEW . £12.50
PGLRL003 Land Rover 1/2 Ton Lightweight RAF - Red Arrows (Oxf) NEW . £5

#### N Gauge

**Steam locos** 



372-312 Class 21C1 Merchant Navy 4-6-2 35028 'Clan Line' in BR green late crest (Gra) (RRP £169.95)BARGAIN . . . £114 2S-008-008 Class A4 4-6-2 4468 "Mallard" LNER garter blue £128.83

.....£144.46

#### **Diesel locos**



371-468A Class 37/0 97304 "John Tiley" in Network Rail yellow (Gra).....£110.46

# **HSTs**

2D-019-006 Class 43 HST 4-car book set in East Coast silver (Dap) NEW......£160.89



2D-019-008 Class 43 HST 4-car book set in GNER blue (Dap) . . . . .



2D-019-009 Class 43 HST 4-car book set in GWR Green (Dap) NEW . . . .

# **DMUs**

371-629 GWR Railcar 20 in GWR chocolate & cream shirt button emblem (Gra) (RRP £94.95) . . . . BARGAIN . . . . £75 Coaches

2P-005-820 Mk3 TFO first open 41120 in East Coast silver (Dap) NEW . .£21.39



2P-005-321 Mk3 TFO first open 41146 in GWR green (Dap NEW. £21.39
2P-005-821 Mk3 TFO first open 41150 in East Coast silver (Dap) NEW . £21.39

2P-005-831 Mk3 TSO second open 42091 East Coast silver (Dap) NEW £21.39 The section of NEW

2P-005-832 Mk3 TSO second open 42146 in East Coast silver (Dap) NEW. £21.39 2P-005-833 Mk3 TSO second open 42150 East Coast silver (Dap) NEW £21.39 £21.39 2P-005-830 Mk3 TSO second open 42215 East Coast silver (Cap) NEW £21.39 2P-005-335 Mk3 TSO second open 42299 in GWR green (Dap) NEW . £21.39 2P-005-338 Mk3 TSO second open 42300 in GWR green (Dap) NEW . . £21.39
2P-005-336 Mk3 TSO second open 42300 in GWR green (Dap) NEW . . £21.39
2P-005-336 Mk3 TSO second open 42301 in GWR green (Dap) NEW . . £21.39
2P-005-333 Mk3 TSO second open 42351 in GWR green (Dap) NEW . . £21.39

**Wagons** 

£4.50 2F-034-070 21 ton mineral hopper E289588 BR grey - weathered (Dap) £10.50

#### Model railway spares

SL-310 Rail Joiners/Fishplates for N & OO9 gauge (24 per pack) (Pec) £2 **Buildings - railways** 



42-088 Sheffield Park Booking Office (Gra) NEW 42-089 Sheffield Park Station Canopy (Gra) NEW. £29.71
42-091 Sheffield Park Storeroom (Gra) NEW. £29.71
42-090 Sheffield Park Waiting Room Toilet (Gra) NEW. £46.71 **Buildings - general** 42-0056 Dutch Barn (Gra) NEW. Track - Code 80 Setrack ST-11 Double straight track (Pec) . ST-6 Setrack left hand point insulfrog (Pec).

ST-5 Setrack right hand point insulfrog (Pec) . . . . £8.50

**Track - Code 80 Streamline** 

SL-300 Pack of 25 1 yard (91.5cm) length of Wooden-Sleeper Nickel Silver Flexible track (Pec) ......£64

SL-E396 Left hand medium point electrofrog (Pec) . £9.50

SL-E395 Right hand medium point electrofrog (Pec) £9.50 Track - Code 55 Finescale



-300F Pack of 30 1 yard (91.5cm) length of Finescale Nickel Silver flexible Wooden Sleeper track (Pec) . . . £84



SL-E389F Finescale left hand large point electrofrog (Pec). SL-U396F Finescale left hand medium point unifrog (Pec). SL-E392F Finescale left hand small point electrofrog (Pec). SL-U395F Finescale right hand medium point unifrog (Pec)

SL-E391F Finescale right hand small point electrofrog (Pec).....

Military ground vehicles NCHT002 Churchill Tank 1st Canadian Army Brg. Dieppe 1942 (Oxf) NEW . £6

#### **OO9 Narrow Gauge Steam locos**



391-028 Baldwin Class 10-12-D 4-6-0T "Hummy" in Ashover Railway black - weathered (Bac) (RRP £154.95)BARGAIN . .£121



391-026 Baldwin Class 10-12-D 4-6-0T 590 in Welsh Highland Railway black (Bac) . . . . . . £123.21 Track - Code 80 Setrack



ST-400 Setrack narrow gauge starter track pack - first radius (Pec)......

#### O Gauge (1:43 Scale)

Steam locos

6125 Class 41xx 'Large Prairie' 2-6-2T 4144 BR black early emblem (Hel) 



7S-007-001 Class 57xx 0-6-0PT pannier 5717 in BR Black early emblem (Dap) . . . . . . . . . . . . £199.75



7S-007-004 Class 57xx 0-6-0PT pannier L94 in London 42-0053 Servicing Point (Gra) NEW ......£28.86 Transport maroon (Dap) (RRP £242.50)BARGAIN...£173





6100 Class 61xx 'Large Prairie' 2-6-2T 6110 in GWR green 6123 Class 61xx 'Large Prairie' 2-6-2T in BR lined green late crest unnumbered (Hel) NEW . . . . . 6122 Class 61xx 'Large Prairie' 2-6-2T in BR unlined green late creat unnumbered (Hel) NEW . £59



7S-007-003 Class 8750 0-6-0PT pannier 9659 in GWR 
 green (Dap) (RRP £235)
 BARGAIN
 £175

 75-010-008 Class A1X Terrier 0-6-0 5 "Portishead" in GWR Green (Dap) (RRP £225)
 BARGAIN
 £157



2006 Class 20 in BR blue full yellow ends, 1980s style warning flashes and headcode discs - Exclusive to 



2011 Class 20 in BR green full yellow ends and 4-character headcodes (Hel) (RRP £599)BARGAIN. . .£340





2007 Class 20 in BR Railfreight grey full yellow ends, 1980s style warning flashes and headcode discs - Exclusive to Hatton's (HeI) (RRP £599) BARGAIN...



2558 Class 25/3 in BR blue - unnumbered (HeI) NEW £446.25 2559 Class 25/3 in BR blue - weathered and unnumbered (Hel) NEW . £446.25 2557 Class 25/3 in BR blue pre-TOPs - unnumbered (Hel) NEW . £446.25







5286 Class 52 D1061 "Western Envoy" in BR maroon .....BARGAIN



1005 4-wheel Class B tank in Mobil Charrington red (Hel) 



 Hatton's (Hat)
 £6.50

 HAT-PM-01 Pack of 6 (Hat)
 £35

**Switches and levers** 

PL-13 Accessory Switch for fitting to turnout motor PL10 (Pec) . . . . . £3 Tools DCM-RRA8 Rolling Road - 8 Axle - For OO, N, HO, TT, OO9, EM and P4

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Noch produce a wide range of scenic items to build rugged terrain on your layout. All of these items are suitable for OO Scale British Layouts.



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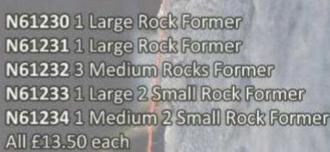


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Just pour the Casting Compound into the former, allow to set, then the rocks can be fixed to your layout



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Hill Farm, Beck Hole, Goathland, Whitby, North Yorkshire, YD22 513

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NOCH products are distributed in the UK by: GAUGEMASTER Controls Ltd., Ford Road, Arundel, West Sussex, BN18 0BN, United Kingdom Tel - 01903 884488 Fax - 01903 884377 email - sales@gaugemaster.com



# **GAUGEMASTER** Spotlight SEEP Point Motors



#### SEEP GMC-PM10 Classic Solenoid Point Motor



- Reversible fitting direct to point, or under baseboard.
- Positive throw action with less bounce.
- Low voltage, energy efficient operation (16-24v AC or DC).
- Complete with mounting screws and extension pin.
- In-built terminal block, no soldering.
- OO, N and O Scale compatible.
- Precision-built with high tolerance levels.
- Value Packs of 5 available.
- Digital version available, that can be powered by either DC or DCC power sources.



The in-built terminal block means that installing the PM10 is a breeze, with no soldering required. The motor can be fitted either directly to the point, or under the baseboard.

The GMC-PM10 Classic Solenoid Point Motor has been created to work with all leading brands of track in the United Kingdom. Designed with easy installation in mind, it has a built-in reversible mounting plate (with adjustment slots and holes), robust plated metalwork frame and fibreglass circuit boards for longer life.

The PM10s magnetic colls are high-efficiency for reliable operation, needing less current than other brands. The PM10 also has easy to use solder-free screw terminals. We have included mounting screws and a throw-bar extension for each motor for easy, simple installation. We even supply a handy screwdriver with the Value Pack, for use with the solderless terminals.

The Digital version (GMC-PM10D) comes complete with an accessory decoder and harness, with the same features and flexibility as the Classic version. It has built-in connections for manual switch operation, as well as LEDs for your mimic panel for position indicators. All terminals are screw connections.



#### SEEP GMC-PM20 Surface Mounted Point Motor



- 'Plug and Play' installation with reversable 3-Way
- Fits parallel to point work tie-bar linkage drops over tie-
- Strong metal body shell construction.
- Complete with mounting screws and pre-terminated
- Low voltage, energy efficient operation (16-24v AC or DC).
- OO, N and O Scale compatible.
- Value Packs of 5 available.
- Digital version available, that can be powered by either DC or DCC power sources.

Designed with easy installation in mind, the GMC-PM20 Surface Mounted Point Motor is placed parallel to your point-work and operates equally well orientated either way. PM20 works well with all popular modelling scales, and with the leading brands of track in the UK.

The magnetic coils are high-efficiency for reliable operation, needing much less current than most other brands. The GMC-PM20 also has a plug-in harness that is very easy to use. Mounting screws are included.

GMC-PM20 has built-in connections for manual switch operation, as well as LEDs for your mimic panel for position indicators. All terminals are screw connections.

Installation is simplified with three pin plug socket on the end of the point motor.

Simply plug in the pre-terminated harness and connect the wires to your power source.





GMC-PM50 Connection Boxes (3)

Ever find you've cut your run of wire too short or run out before you get to the switch? These connectors will help. They even come with screws to fix them on.



GM09RB Red/Black Twinned Wire

10m (14 x 0.15mm)

10m of Red/Black twinned wire. Ideal for model railway use and when trying to keep wiring tidy.





GMC-PM51 Point Motor Wire (Red/Green/Black) 10m Tripled

This is a useful 10m reel of tripled wire; with red, green, and black wires together Fasier tidier wiring for point motors.



for Point Motor Fitting

Great for drilling holes in your baseboard if you are fitting your motors directly to the track.

GM612 45mm Hole Saw & Arbor GMC-PM52 Point Motor Accessory Pack Contains 5 spare extension pins and collars, 20 attachement screws, screwdriver, and 5 ballast stickers.

> This is a useful pack for anyone using our GMC-M10/PM10D Point Motors

It contains extra extension pins and collars, screws, and a screwdriver which fits the terminal block on the PM-10, as well as ballast stickers to cover the hole in the baseboard.

#### PRICES

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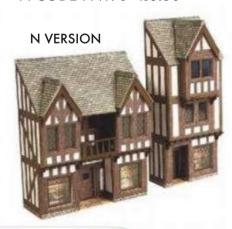
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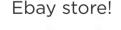
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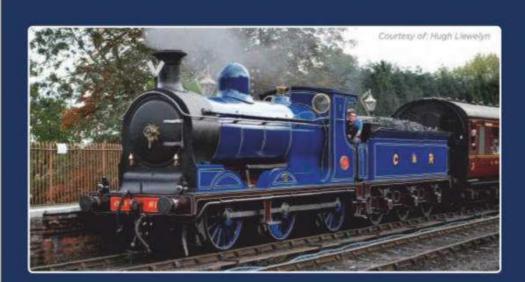
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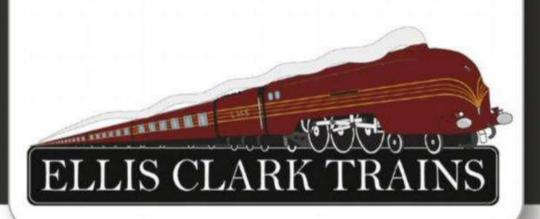




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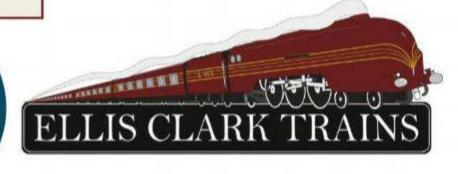
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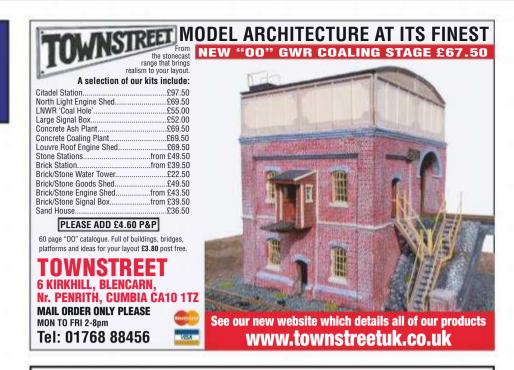




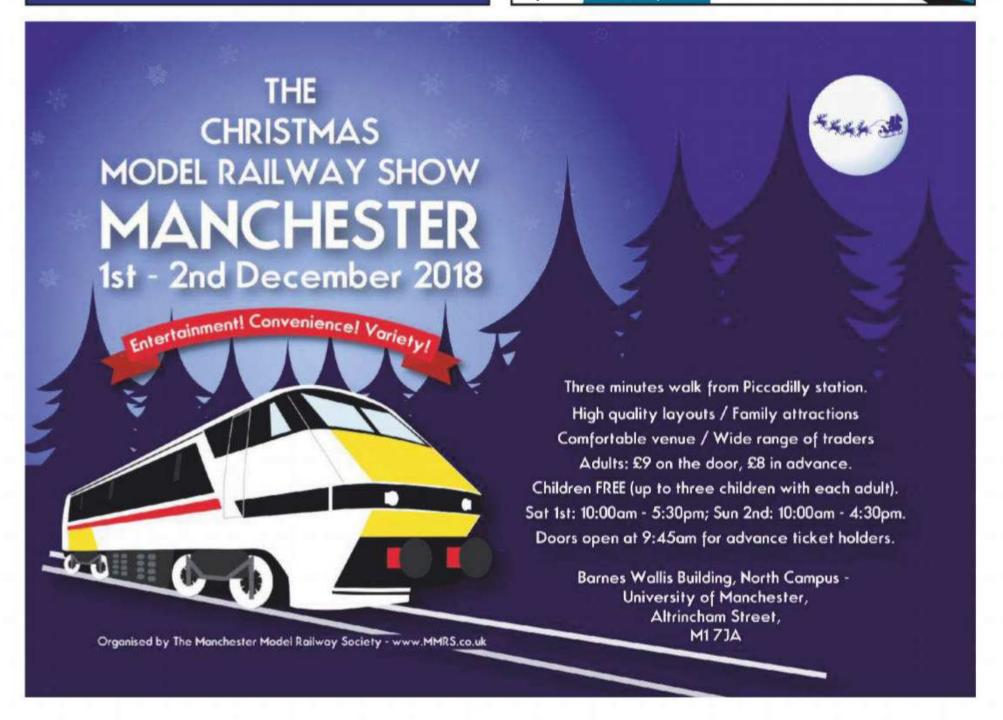


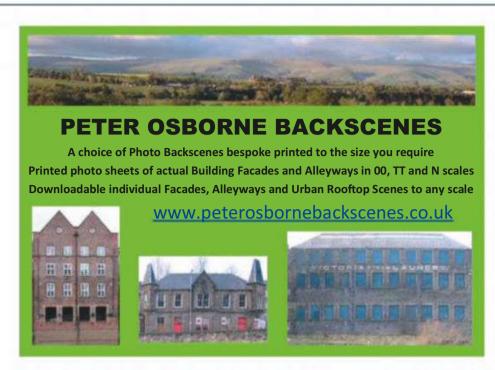


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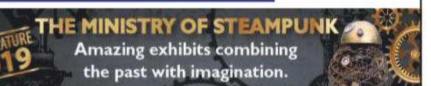
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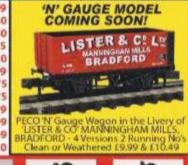


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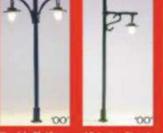
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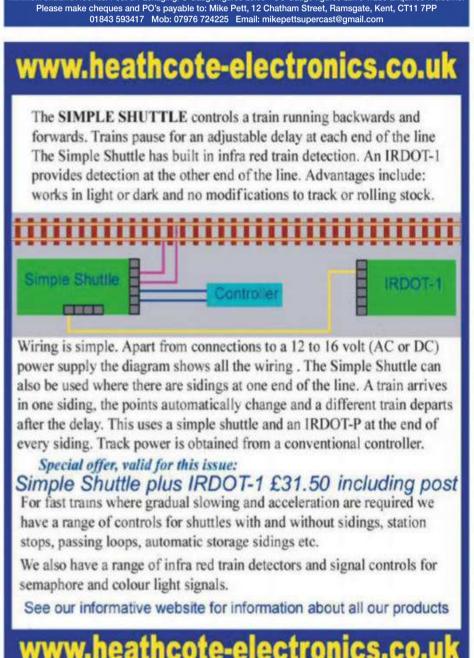
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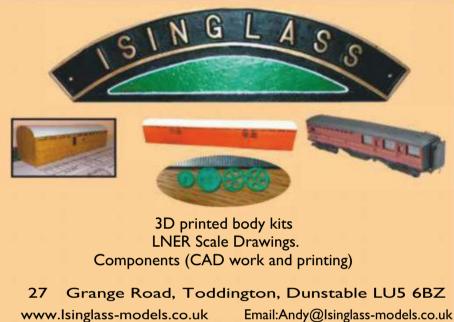
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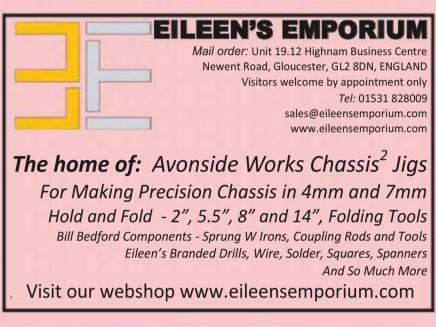


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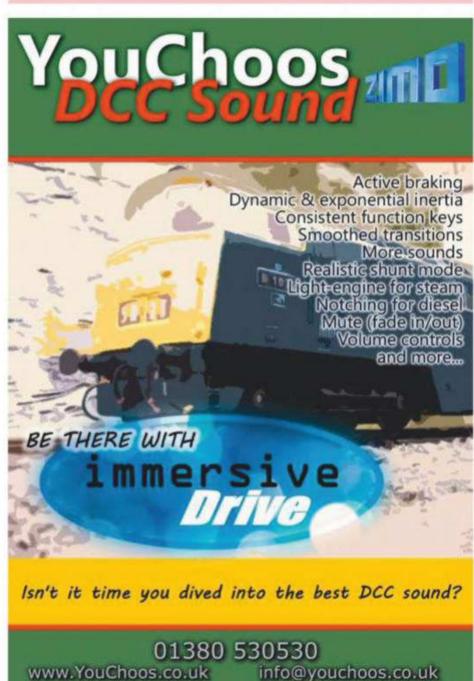
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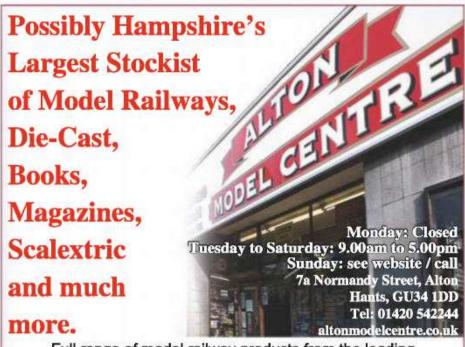
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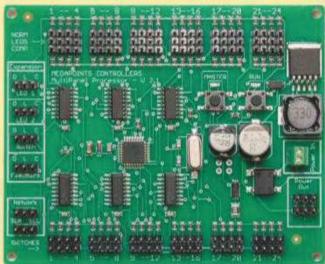
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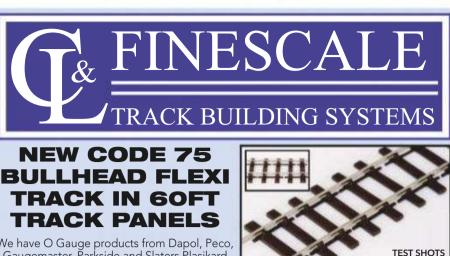
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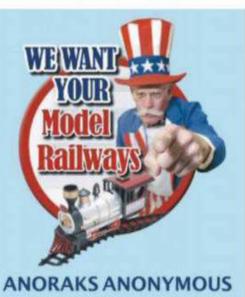
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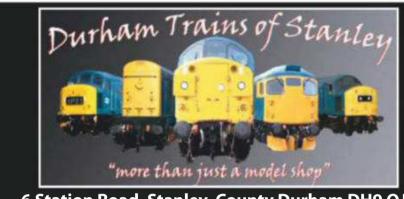
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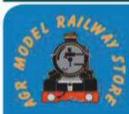
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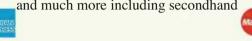
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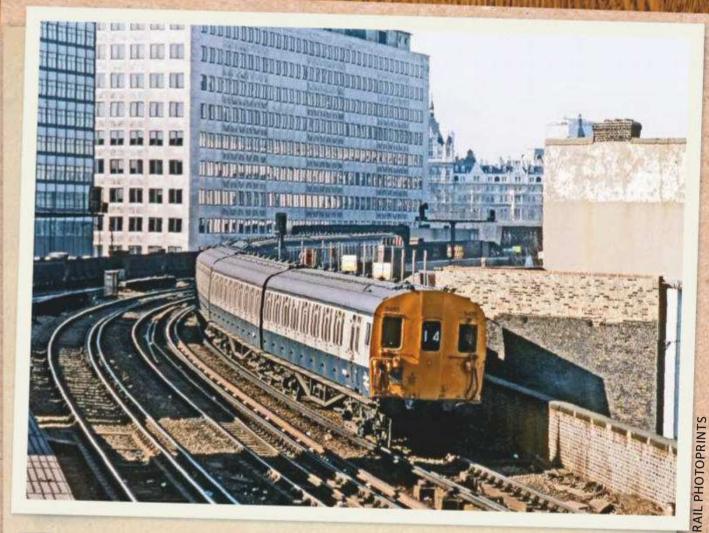
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# Present your case

If there's anything that you think needs to be offered ready-to-run, here's the place to voice your opinion...

Locomotive: Class 415 '4-EPB' EMU

Gauge: '00'

**Proposed by:** Kevin S. Russell, Bradford

#### What is it?

As the founder of the Model Railway Wishlist Facebook Group (www.facebook.com/ groups/ModelRailwayWishlist), I've found that multiple units are a very popular subject. The BR '4-EPB' EMU is one that I - and others - would love to see. It's one that would, arguably, present a very minor challenge to Bachmann.

This EMU, later Class 415, was introduced in 1951, and was an updated version of the '4-SUB' EMU. They came in two versions: the 'Bulleid Design' (5001-5260) was based on Bulleid coaches, whereas the later 'BR

Design' (5301-5370), the subject of this piece, was introduced in 1960 and based on the 57ft Mk 1.

They were introduced for inner suburban services into Surrey and Kent - services that continued to operate until replaced by Class 455s in 1988 and 'Networker' EMUs in 1995.

#### What would make it viable?

Bachmann already makes the 'BR Design' Class 416 '2-EPB' EMU, and its Class 414 '2-HAP' EMU is on its way. It would be a comparatively simple matter to tool the intermediate Trailer Second (TS)/Trailer Second Open (TSO) coaches.

This would also allow Bachmann to update its Mk 1 non-gangwayed coaches, and possibly expedite the introduction of new toolings for the Open Second with Lavatory (SLO) and Composite with Lavatory (CL).

#### Can I see a real one?

No 'BR Design' '4-EPB' survives, but a Bulleid '4-EPB' does: three cars of unit 5176 are based at the Northampton Ironstone Museum, with one of its TSs in store at the former Hornby factory in Margate.

**Have your say** 

Do you agree with Kevin's argument? Go to www.facebook.com/modelrail or www. twitter.com/modelrailuk and post your verdict.

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# Backscene

Musings we couldn't fit into the issue elsewhere, but which seemed very important at the time...



#### **George Dent,** Deputy Editor

I may have finally cracked the issue of the small pond on my 'Lisburn Lane' layout, after about six different attempts. The first version was OK, using Deluxe Materials' Solid Water poured over a bed of sand and small stone chippings. However, the water was too clean for what would be a stagnant, reedy pond set amid farm fields.

Over the past year, I've tried to apply further, coloured layers over the existing 'water', using a variety of products, with some truly awful results. Indeed, the pond's contents began to resemble toxic industrial effluent!

However, the latest attempt seems to have worked, with a layer of AK Interactive's acrylic Puddles fluid spread over the surface, followed by another thin coating of Deluxe Materials' clear Solid Water. The cured pond now looks almost opaque, but at least it sports a more natural colouring.

Furthermore, I've planted more reeds and grasses around the perimeter, thus vastly reducing the amount of 'water' visible, which has also helped.







My 'Staines West' branch line layout offered the prospect of

a Western Region branch terminus in 'N' gauge without the need to use that horrible 'N' gauge device known as the 'Rapido' coupler.

I only knew Staines West from 1962, by which time railcars and DMUs reigned supreme. Freight services had ended in 1955.

If I modelled the station as I remembered it from 1962, with the goods yard derelict and overgrown, I could provide all the trains with which I was familiar - '54XX' 0-6-0PTs on autotrains, GWR railcars, and - after 1958 - Gloucester RC&W railcars (Class 122) and from 1960 Pressed Steel railcars (Class 121). Only the coupling between pannier and autocoach would require a Rapido, for the outer ends of both could have cosmetic screw couplings:

**'54XX' 0-6-0PT and Autocoach:** Farish '64XX' and Hawksworth autotrailer (ignoring the small discrepancy in wheel diameter between the '64XX' and '54XX' 0-6-0PTs.

GWR railcar Nos. W20-32: Graham Farish Class 121 and 122 railcars: Dapol

Ideally, I could do with a Class 117 three-car unit for the rush-hour through-trains to Paddington, but that will have to wait.

Modelling hours this month: At least 36. Note to self: The garden needs attention...



#### Richard Foster, Editor

My first thought when I took Oxford Rail's 'Dean Goods' with snowplough out of the box for last issue's review was that it might enable me to fulfil a modelling idea I've had for over 20 years - recreating the Soviet

armoured train from the James Bond film GoldenEye.

Filming took place in 1995, at a time when I was a volunteer (although I didn't see any filming take place). Lurking under that ridiculous nose and side skirts was Class 20 20188, which was accompanied by a security guard. One day, it was resting over the pit at Wansford so a friend and I asked the guard if we could look underneath it. He agreed, so we took a peek. The front headcode panel, hidden from view, read '007'.

This cemented *GoldenEye* as my favourite Bond film (it's a cracking story with a great cast). I've always wanted to model Sean Bean's armoured train. Could the old Tri-ang Battlespace helicopter launcher be incorporated, too?

Whether I'll get round to it is another matter - watch this space!



Above: 20188 passes through Ferry Meadows station during the filming of GoldenEye. Doesn't that nose look familiar? PETERBOROUGH IMAGES ARCHIVE

Below: The armoured train from GoldenEye... or a 'Dean Goods' with a snowplough?

Modelling hours this month: Not many.
Note to self: So many narrow gauge
railways to model, so little time...



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