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Latest News





O Gauge HIA Limestone Hoppers



Arriving Soon - Pre-Order At Your Preferred Dapol Stockist Today Decorated Samples Shown Foe Illustration Only

00 Gauge LSWR B4



DC & DCC Options Pre-order At Your Preferred Dapol Stockist **Arriving Soon**

N Gauge Collett Coaches



Pre-order At Your Preferred Dapol Stockist - Arriving Soon Previous Model Shown For Illustration Only

00 Gauge Class 22

4D-012-013 6352 BR Blue FYP H/C Boxes Now In Stock All Other Class 22 Models Arriving Very Soon



DC, DCC Fitted & DCC Sound Fitted Options Available Pre-order At Your Preferred Dapol Stockist

N Gauge 57xx Panniers



Pre-order At Your Preferred Dapol Stockist - Arriving Soon Previous Model Shown For Illustration Only

O Gauge TTA Wagons



Arriving Soon - Pre-Order At Your Preferred Dapol Stockist Today **Production Samples Shown For Illustration Only**



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MODEL RAIL

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 Overseas customers should call +44 1858 438884.

This month's



Steve Fay's 'Creechly' is an evocative 'O' gauge diorama based on the Somerset & Dorset Joint Railway. See page 70 for the full story. CHRIS NEVARD

Welcome

I can't quite believe that it's been 30 years since the last Brush Class 60 was accepted into traffic by British Rail. Maybe that's just my brain refusing to acknowledge the passing of time (and my advancing years), but it really doesn't seem like so long ago that I was hoping to see my first 'Tugs' on freight trains around the Warrington area.

Having been a little too young to fully understand what was happening with the Class 58 programme, the '60' was the first new traction type that I clearly recall moving from the planning stage to reality, with the drawn-out process being charted via my dad's regular purchase of Rail Enthusiast magazine (now RAIL).

BR's full-size wooden mock-up, previewing the external styling of the '60', made for a striking sight at depot open days in the late 1980s. My feelings at the time were that crafting such prototypes for a living would be a dream job. Indeed, I enquired about such work in a meeting with my school careers advisor, only to be told, in the usual condescending manner, that I shouldn't waste time thinking of such frivolous things. Instead, he decided that I was ideally suited to air traffic control or drug abuse counselling. Why he chose those two career paths, I still have no idea.

Anyway, I've enjoyed working on several 'OO' gauge Class 60 models over the past month, depicting some favourite 'spots' from years gone by. As Ben Jones states in his comprehensive overview of the class (page 40), the 100-strong fleet of powerful Type 5s perhaps never realised their true





The stylish lines of the Class 60 were previewed with this full size mock-up, on display at Ripple Lane depot, October 1987, complete with Railfreight General sub-sector logos. COLOUR RAIL

potential. Maybe they simply arrived at the wrong time? If British Rail had remained a nationalised industry, perhaps the Class 60 story would have been very different...? Happy modelling!

George Dent Editor

Meet the team behind the UK's best modelling magazine



Chris Leigh Active in the hobby for over 60 years - he can claim to be experienced.

01209 705459.



Chris Gadsby The smaller the detail, the more interested he is.



Model Rail essential information

Q: Looking for an old feature but can't remember which issue it was in?

A: Check out the online index, kindly provided by UK Model Shops, at www.ukmodelshops.co.uk/

Q: Want to order one of our exclusive models? A: Go to www.modelrailoffers.co.uk or call

Q: Want to order one of our bookazines?

A: Go to www.greatmagazines.co.uk or call 01858 438884

Q: Have a problem or query about our digital magazines?

A: Visit www.greatmagazines.co.uk/faq

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A: Call our Subscriptions Department on 01858 438884.

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- Full-size train sets
- **Dorset Delight**

Opening the box

The Big Picture This month's big picture comes from the Cardiff 4mm 'EM' Group's 'Pencader'.

The latest news in railway modelling, straight from the manufacturers.

News Real Our full-sized railways are ever evolving. Here are some of the latest developments.

Staff Show & Tell The Model Rail staff show you what they have been working on this month.

Inside Track Ben Ando discusses serendipity and Post-It notes in this month's Inside Track.

Inspiration

Layout: Marshend A repurposed baseboard got Doug Johnson on track with a new layout.

Masterclass: Last of its kind Ben Jones recounts the history of the BR Class 60, while George Dent customises a pair of Hornby models.

Masterplan: Testing times Ben Jones examines how a real world test track could inspire your next layout.

Layout: Creechly Steve Fay turned around this Southern region diorama in double-quick time.



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Regulars

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Looking for a previous article? Search the online index at: www.ukmodelshops.co.uk/modelrail





Workbench



Create a rocky river Peter Marriott models a fast-flowing river for a friend's layout.

Scratchbuild a loco: Pt3 Jim Smith completes the build of his Fowler 'Compound' 4-4-0.







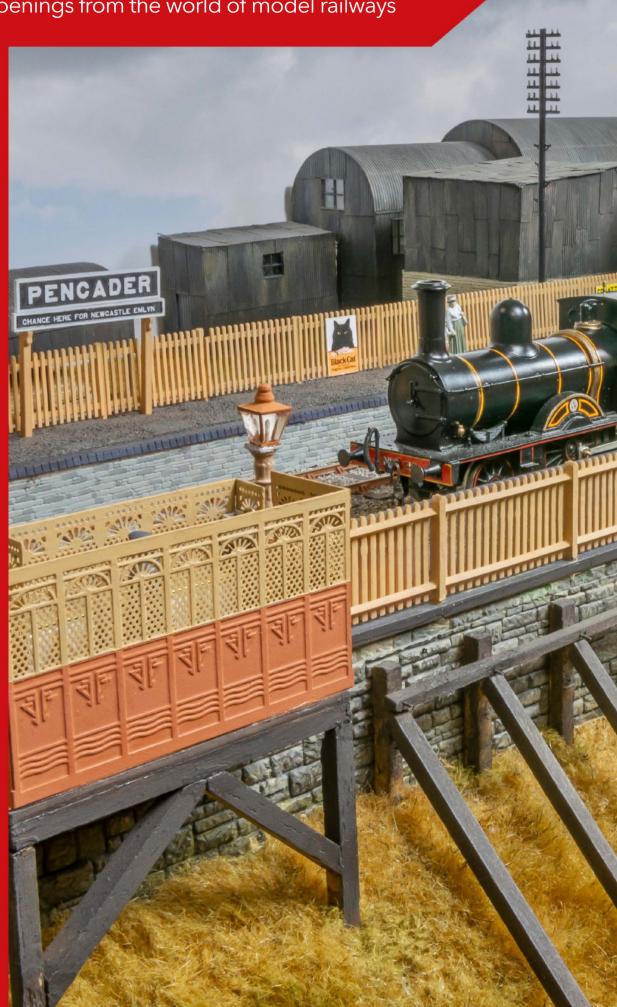


Opening the box

The latest happenings from the world of model railways

The Big Picture

For some reason we always tried to avoid them when we were at school, but in the world of model railways, group projects are great! Generally, combining the skills and expertise of more than one modeller results in a much better final layout, which is no different here with 'Pencader'. The members of the Cardiff 4mm 'EM' Group are very diplomatic when it comes to deciding what to construct, and you can read more about how they decided on 'Pencader' in an upcoming issue of Model Rail. Photography: CHRIS NEVARD





ACCURASCALE'S FIRST 'O' LOCO TO BE R&H 88DS

ollowing the success of its 'OO' locomotives, Accurascale has turned its attention to 'O' gauge, with the Ruston & Hornsby 88DS 0-4-0 first to enter development.

Having dipped its toe in 7mm scale in 2019 with the acclaimed 24.5t HUO hopper wagon, Accurascale had made no secret of its plans to expand its 'O' gauge portfolio and the R&H 88DS will offer a great reason for space-starved modellers to make a start in the 'senior' scale.

Following the 48DS diesel locomotives in the 1930s, Ruston & Hornsby soon developed a more powerful, 88hp chain-drive machine. The resultant 88DS featured a four-speed gearbox and boasted a surprising amount of tractive effort, able to shunt trains of up to 500tons on level track.

From 1938, examples were delivered to many industrial

customers across the UK and abroad, being found at steelworks, collieries, power stations, gas works, chemical works and many other facilities. The War Department/Ministry of Supply also obtained a fleet of 88DS, as did British Railways, for use within signal and engineers' works. Production continued until 1967 and a significant number have survived into preservation.

Accurascale will offer nine versions of the 88DS initially, with various detail differences to suit each prototype. British Railways and National Coal Board versions are included, along with industrial guises for concerns as diverse as Rowntree & Co., Bowaters Packaging and the West Midlands Joint Electricity Authority.

Powered by a five-pole, skew-wound motor with flywheel, the models will feature a PluX22



decoder socket, lighting, pre-fitted speakers and detailed cab interior. Models can be pre-ordered now and delivery is expected in early 2025. DCCready and DCC sound-fitted options are available.



What's planned?

- Ruston 262997 West Midlands Joint Electricity Authority No. 1, lined green
- Ruston 432477 British Railways NE Region Civil Engineer's Dept, No. 83, BR lined green
- ◆ Ruston 408493 British Railways Western Region, Reading S&T Dept, No. 20, BR blue with 'wasp' ends
- Ruston 338413 National Coal Board No. 63-000-352, East Cannock Colliery, NCB blue with 'wasp' ends
- ◆ Ruston 412427 Bowaters Packaging Ltd, pale green
- Ruston 245034 Babcock & Wilson Ltd, Renfrewshire, P4937, green with 'wasp' stripes
- Ruston 441934 Rowntree & Co. Ltd, York, No. 3, lined green
- Ruston 245033 Eastern Gas Board Tottenham, No. 12, Panhard Red
- ♦ Ruston 408496 NEI-Clark Chapman, lined blue with arrow logos

Price: £229.95 (DCC-ready), £319.99 (DCC sound)

Availability: Accuracsale stockists

Web: www.accurascale.co.uk

EXCLUSIVE 'J68' ADDED TO ACCURASCALE RANGE

A new edition of Accurascale's forthcoming LNER
'Buckjumper' has been announced, in the form of 'J68' No. 7027, which will only be available exclusively from the manufacturer's website.

The model fills a gap in the range of previously announced Class J67/68/69 0-6-0Ts, as it will be finished in the later style of LNER freight black livery, with shaded letters and



numerals. Prototype-specific details will be fitted, including parallel sided chimney and



unbalanced cast iron wheels. All versions of the 'Buckjumper' can be pre-ordered now.



Price: £139.99 (DCC-ready), £239.99 (DCC sound) **Web:** www.accurascale.co.uk

LADIES' DAY AT FFESTINIOG RAILWAY



Marking the 60th anniversary since the Ffestoiniog Railway purchased 'Mainline' Hunslets Linda and Blanche, Bachmann Narrow Gauge has announced models of both locomotives in its 'OO9' range.

Affectionately known as the 'Ladies'. Linda and Blanche were built for the Penrhyn Quarry Railway in 1893 and served until the railway closed in 1962. The following year both were purchased by the Ffestiniog Railway and soon the 0-4-0 tank engines were fitted with tenders to increase their fuel capacity. Front pony wheels were also later additions, becoming 2-4-OSTTs.

The new Bachmann models depict the 'Ladies' in their current condition, decorated in FR lined

As per Bachmann's previous 'Mainline' Hunslet releases, each model will be powered by a coreless motor with flywheel, and Next18 decoder socket, along with a pre-fitted speaker and firebox lighting. Both Linda and Blanche are available in DCC-ready and DCC sound-fitted format. Initially, the models will be available exclusively from the Ffestiniog Railway's shop, with all sales supporting the continued operation of the popular North





Porthmadog shop, or online at

Price: £229.95 (DCC-ready), £329.95 (DCC sound) Web: www.bachmann.co.uk

MINERVA ANNOUNCES SR 'USA' TANK



Minerva Model Railways has joined with Chrezo of Royan, France to announce a joint production of a S100/030TU/'USA' 0-6-0T in 7mm scale (1:43.5).

Designed to run on 32mm 'O' gauge track, the 'USA' tank will be built to the same general specification as Minerva's previous RTR locomotives, most notably the GWR '57XX', Kerr, Stuart Victory '0-6-0T' and the Peckett 0-4-0ST.

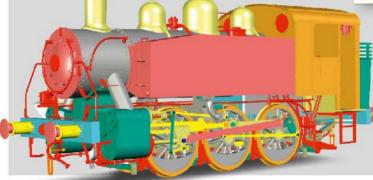
Minerva's 'USA' tanks will

reflect the various modifications made to the ex-War Department locomotives by the Southern Railway, while Chrezo will offer them with the original cabs and fittings as appropriate.

The models will feature a comprehensive level of detail, and will be powered by a high torque motor with flywheel, coupled to a 40:1 precision gearbox. Five livery options will be available. encompassing their SR and BR



COLOUR RAI



careers, along with preserved Keighley & Worth Valley Railway ochre scheme carried by preserved No. 72.

Advance orders taken by December 31 2023 will qualify for a £25 discount. Models will only be available in the UK direct

from Minerva Model Railways. via mail/web orders or from the Minerva stand at exhibitions.

When's it due? 2024

Price: £390 (DCC-ready), £445 (DCC-fitted), £525 (DCC sound) Tel: 02920 531246

Web: www.minervamodel railways.co.uk

BR/ELECTRO-MOTIVE DIESEL CLASS 66 LOCOMOTIVE

1:76.2 SCALE/00 GAUGE DUE IN STOCK Q1 2024

accurascale

Both DC silent (DCC ready) and DCC sound versions are available for all our locomotives.



DC/DCC READY £169.99 DCC SOUND £259.99



Scan the QR Code or visit www.accurascale.com to view the full range of Class 66 locomotives





All models shown are pre-production samples

and are subject to refinement and alteration



SHED HEAVEN!

Taking on the Hattons Originals Award Winning Class 66 'Sheds' gave us an excellent platform to build the ultimate Class 66 in 4mm/00. Our first run consists of six different liveries and numbers whilst updating the tooling in line with the rest of our range. These models will cover all the major and some of the more subtle variations of the class depicting their successful 25 year career.







All Class 66 models feature

- High level of detail
- Die-cast chassis
- Five-pole motor with twin flywheels
- DCC ready & DCC sound (ESU loksound v5) options
- Details specific to individual prototypes
- High fidelity metal and plastic parts
- Rotating axle boxes
- Helical gears for maximum performance

- Comprehensive lighting functions
- Enhancing the model with redesigned axle boxes for the smoothest running
- Easier decoder access with a lift off roof section upgrading the PCB to eliminate wiring
- Revised lighting to give access to day, night and yard mode under DCC
- Hall sensors added to DCC sound models
- Cab access step and handrails have been moved from body mount to chassis mount to allow for breakage free access to chassis
- Cab Front Handrails now have the option of 5 point or 7 point mounting with correct round profile handrail mounts
- And other typical Accurascale features.

www.accurascale.com

NEW EXCLUSIVES FROM KERNOW MRC



Price: £229.99 (DCC-ready)



Kernow Model Rail Centre announced an interesting quartet of new, exclusive models in 'OO' and 'O' gauge. All are available to pre-order now.

Web: kernowmodelrailcentre.com





Gauge: '00'

Model: Class 59 59002 Alan J. Day

Manufacturer: Dapol

Livery: Aggregate Industries, with 30 Years anniversary brandings

When's it due? Early 2024.

Price: £169.99 (DCC-ready), £199.99 (DCC-fitted), £299.99 (DCC sound

and smoke-fitted)



Gauge: '00'

Model: JNA-T Ealnos box open wagons, four different running

numbers available

Manufacturer: Revolution Trains

Livery: Mendip Rail

When's it due? Early 2024.

Price: £48.95 each (£52.95 tail lamp fitted)



Gauge: 'O'

Model: Class 08 08645 St Piran

Manufacturer: Dapol

Livery: Black/white Kernow flag

When's it due? 2024.

Price: £225.00 (DCC-ready), £399.99 (DCC sound-fitted)

HELJAN'S 'DELTICS' ARRIVING SOON

Heljan has been busy re-tooling its Class 55 'Deltic' in order to depict the famous Napier-powered Type 5s during the later years of their BR career, as well as covering those preserved examples that have operated on the main line since the 1980s.

Ten versions will be available in all, carrying a variety of prototype-specific detail fittings, including plated-over or glazed/'domino' headcode panels, cast or fabricated bogies, plated-over cab quarterlights and high-intensity headlamps.



BR blue abounds, including Finsbury Park's famous 'racehorses' with white window surrounds, along with a couple of 'retro' BR green options. A handful of un-numbered versions are also on offer.

All versions have been produced in strictly limited numbers and they're expected to sell fast. Heljan kindly gave us access to an advance production sample, which is reviewed in depth on page 80 of this issue.

CAR CARRIERS TO COME IN SINGLES



Heljan's Newton Chambers Car Transporters, which have been arriving with retailers recently, have proved hugely popular. In addition to the triple packs previously announced, they're also to be available in single packs, with limited availability. Nine individually numbered versions will be offered, six in blue/grev livery and three in maroon, priced at £79.95 each, and will be available from Heljan stockists.



→ ***

CAVALEX UPDATES

The people at Cavalex Models revealed several project updates recently, including news that the 'N' gauge PGA hopper wagons have now been manufactured and are currently being shipped to the UK. They're available to pre-order now from

Rails of Sheffield.

In 'OO', the PHA/JGA bogie aggregate hoppers have taken another step towards production, with further decorated samples arriving for assessment over summer. The highly anticipated 'OO' Class 56 is also moving forward, after a number of tweaks were made to how the various grilles will be installed during production, to

gain the best results. Fully decorated, working samples of the '56s'

were tested extensively on Pete Waterman's mammoth 'Making Tracks' layout at Chester Cathedral this summer.

Finally, the 'OO' O&K PHA/JYA Yeoman bogie box opens, being produced exclusively for Ultimate Model Railways, have reached the decorated sample stage, and are now moving towards production.

Web: www.cavalexmodels.com www.railsofsheffield.com www.ultimatemodelrailways.com



▲ BARDON







OO EM P4

NEW CLASSIC VEHICLES IN PRINT FROM N'TASTIC

N'Tastic Scale Models' latest 3D-printed releases feature various iterations of the classic 1965 Hillman Imp, including a van, plus a Leyland fire engine. Prices start at £7.45 each. **Web:** www.coppermineminiatures.co.uk



GWR KITS FROM BRASSMASTERS

Brassmasters has released an etched metal kit of the Churchward '3150' 2-6-2T, depicting locomotives in their post-1919 rebuilt form, with larger bunkers, smokeboxes and superheated boilers. The kit (ref. L30, £235) is rendered in brass and nickel silver, with whitemetal fittings, can be built to 'OO', 'EM' or 'P4' standards, and consists of chassis frames, cylinders, motion and superstructure. Wheels, gearbox and motor must be sourced separately.

Another GWR-themed metal kit provides a replacement chassis for Dapol's '43XX' 2-6-0 (ref. D251, £105). The compensated kit can be built to either 'EM' or 'P4' and allows the motor to be located in the locomotive or tender.

Parts and instructions can be viewed on Brassmasters' website. **Web:** www.brassmasters.co.uk





In Brief

CREW FOR '15XX' FROM OSBORN'S

FROM OSBORN'S
With perfect timing, as
Rapido's '15XX' O-6-OTs
arrive (see review
on page 86),
Osborn's Models
has released
a set of
3D-printed
figures, tailored
to fit perfectly
within the cab. Driver

figures, tailored to fit perfectly within the cab. Driver and fireman are striking authentic poses and the figures are available unpainted or fully finished. **Price:** £5.99 (unpainted), £9.99 (painted) **Availability:** Osborn's Models

Tel: 01237 423453 Web: www.osbornsmodels.com





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LMS

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LNWR/LMS/BR/Army/Preserved

Available to order NOW from RapidoTrains.co.uk or your local Rapido Trains UK stockist

RAPIDO TRAINS UK

MR'S EXCLUSIVE OO CLASS '31' DELAYED.

The Accurascale team recently visited the Chinese production line to oversee progress on its 'OO' Class 31. While assembly of the first batches had already begun, a few issues remained. In particular, the fit of the bodyside grilles and bufferbeams was deemed unsatisfactory, resulting in modifications to the tooling which have greatly improved matters.

Unfortunately, this means that the project has been delayed further, meaning that Accurascale's own production models are now due to arrive throughout the first half of 2024, with our exclusive edition of 31116 RAIL Celebrity now likely to arrive in Q3 2024.

Although we're obviously disappointed with the delay, a silver lining comes in the fact that Accurascale's engineers have had time to upgrade the lighting features that will be installed across the '31s', allowing each tail light to be switched on or off

individually (on DC and DCC), which was a distinct feature of the real '31s'

We'll bring you more updates on 31116 in the new year.



BUT MR CLASS 11s SIGNED OFF

Happier news came from Heljan, with the final hurdles overcome before our exclusive Class 11s are completed at the factory, with shipping due to take place soon.

We also received the two



remaining pre-production samples, namely BR black 12125 and 15106 in BR/Western Region green with GWR-style lettering. Last month, we erroneously listed the latter as being produced in pristine

> condition, but 15106 will. in fact, be a weathered version (a pristine sample was sent initially to allow us to assess the livery application in detail). Pre-orders for the

Class 11s have been healthy over the past month so, if there's a version you particularly want, it might be prudent to get your order in soon, as each of the 15 livery options are strictly limited to 300 pieces each. Full details of each version can be found at www.modelrailoffers.co.uk or call 01209 705459.

Prices: Pristine versions £169.00 (MR subscribers pay £152.10) Weathered versions £179.00 (MR subscriber price £161.10)



In Brief

STAR CLASS

A new TV series has begun on More 4, following Pete Waterman as he explores the wonderful world of model railways. In the four-part series, Little Trains & Big Names, Pete travels the country to link up with some of his famous friends who share his passion for all things miniature, including Jools Holland, Eddie Izzard, James May and Francis Rossi.

As well as marvelling at his friends' layouts, Pete is also on the lookout for new tips for his own projects, including his latest 'Making Tracks' venture at Chester Cathedral.

Including an exclusive peek at Jools Holland's amazing layout, which is over 12 years in the making, Pete also helps Status Quo's Rossi find inspiration for his very first layout, with each guest offering new perspectives on the joys of our wonderful hobby.

Pete Waterman helps Status Quo legend Francis Rossi find inspiration for his first model railway, in the new More 4 series, Little Trains & Big Names



SCALEFOUR SOCIETY JUBILEE LAYOUT CHALLENGE

The Scalefour Society has organised a number of successful layout building challenges in the past, with many of the entrant layouts subsequently becoming well-known on the exhibition circuit.

To celebrate the society's upcoming 50th anniversary in 2026, the society will be organising a further challenge to culminate with completed layouts to be shown at its Scaleforum exhibition in September of that year. The challenge will be for layouts built to 'P4' standards around a scenic footprint of not more than 18.83 square feet.

To stimulate interest in 'P4' modelling and to allow a wide range of possible participants, the challenge will be open to members of the society, nonmembers, and groups alike. Furthermore, there will be no restriction from the newly introduced British Finescale 'P4' trackwork or ready-to-run locomotives and rolling stock with drop-in replacement wheels. There are also no restrictions on era.

> location or nature of operation, although each lavout must include at least three turnouts. Prizes will be on offer,

awarded by a public vote, for the best first-time 'P4' layout and for the best overall layout.

Email: jubileechallenge@ scalefour.org

Web: www.scalefour.org/ jubileechallenge

STOP PRESS

Just before we closed for press, we received a bunch of new models from Hornby, Dapol, Lionheart Trains and Heljan. We'll be featuring in-depth reviews of each model in the next issue of Model Rail, along with Rapido's 'Titfield Thunderbolt' deluxe train pack.







- ➤ Cab light
- ➤ Cast Chassis
- ► Fine detail
- LokSound V5.0 with duel speakers
- Cold start sound function

Model Numbers. 40106, 40135 and 40145

Limited edition run of (250), D326: **The Great Train Robbery Class 40**.

Fictitious Liveries EWS and Regional Railways.

The British Rail Class 40 is a muchutilized British railway diesel-electric locomotive, that took over duties at the end of the steam era. A total of 200 were built by English Electric between 1958 and 1962. They were numbered D200-D399. For a time. they were the pride of the British Rail earl diesel fleet. Despite their initial success, by the time the last examples were entering service they were already being replaced on some toplink duties by more powerful locomotives. As they were slowly relegated from express passenger uses, the type found work on secondary passenger and freight services where they worked for many years. The final locomotives ended regular service in 1985.



DCC Ready £210
DCC Sound £310



www.krmodels.net

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All languages Brand new content One site



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STEAM-ERA FILLING STATION QUE QUE

Modelu has released an attractive GWR standard water crane. available for 'OO' and 'O' gauge initially, with 'N' and 'TT' versions also in development.

Supplied in kit form, the 3D-printed components require careful trimming from their support structures before painting and assembly.

The pack consists of a main column, onto which slots the distinctive cranked arm and filling hose, along with a separate hand-operated valve. The fine support wire is also 3D-printed.

A fire devil stove and tall chimney is also provided, along with a base plate that incorporates a drain and optional grid cover. Products: 2771-076 GWR Cranked standard arm Ground mount water crane Price: £22.50 ('OO'), £37.50 ('O') Availability: www.modelu3d.co.uk



Modeller's Bookshelf

Four new titles that will appeal to modellers and general enthusiasts alike.



The fourth instalment of this essential guide to the LMS '3F' in LMS and BR days, provides detailed service and allocation histories of each individual 'Jinty', from No. 47580-681 (not 47480-681 as stated on the cover). Build and livery details, renumbering dates and withdrawal information is also provided, along with boiler numbers carried by each locomotive during the study period (1924-67). A superb collection of images of almost every locomotive is provided too. Anyone looking to customise or alter a model 'Jinty' would benefit from investing in one or more volumes of this series. Book: The Joy of Jinties, Part 4,

by Ian Sixsmith (Strathwood) Price: £23.95

Availability:

www.strathwood.co.uk

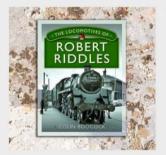


This hefty, landscape format album is crammed with top-notch images of 'King Arthurs', 'S15s' and 'Lord Nelsons', along with lessheralded L Class 4-6-4T rebuilds, the ungainly 'T14s' and 'H15s'. Examples of each class are presented in numerical order, captured during BR days, with various livery and detail variations on show. Other 4-6-0s also get a look in, including LMS, LNER and GWR types straying onto Southern territory, along with the BR 'Standard' types that eventually replaced many of the SR designs. Reproduction is first class.

Book: Steam's Lament, 4-6-0s on the Southern Region, by Kevin Derrick (Strathwood)

Price: £34.95 Availability:

www.strathwood.co.uk

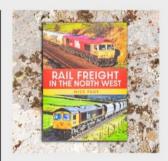


The first locomotives credited to Robert Riddles were the acclaimed WD 'Austerities', introduced during the Second World War. Post war, Riddles was tasked with overseeing design of standardised steam locomotives, and this book offers fascinating insights into how and why each of the 12 types was built. A chapter is devoted to each type, with analysis of the design and performance, along with plans, statistics, and plenty of black and white photographs. The book has plenty to interest modellers, helping to inform kit- and scratchbuilders in particular. **Book:** The Locomotives of

Robert Riddles by Colin Boocock (Pen & Śword)

Price: £30.00 Availability:

www.pen-and-sword.co.uk



I may be biased, but the North West of England offers so much to railway enthusiasts, with many breathtaking scenic locations and a diverse array of freight traffic. Mick Page presents a colourful selection of high-quality images, showcasing the freight scene from the past decade. Key flows include aggregates, cement, logs, biomass and oil, household waste, china clav slurry and infrastructure workings. There's also the odd coal working, as a reminder of days gone by. Modern wagon types can be seen in action, along with a variety of traction, including Classes 56/57/60/68/70.

Book: Rail Freight in the North West by Mick Page (Amberley) Price: £15.99

Availability:

www.amberley-books.com



ON THE WORKBENCH

What new items have appeared in **George's** workshop this month?

INNOVATIVE TRACK LAYING AIDS

These simple, but ingenious tools have addressed a number of difficulties that most of us experience when laying flexible track. The Track Pin Mate is designed for 'OO' gauge track and consists of an orange, L-shaped 3D-printed device that slots over the sleepers, instantly aligning itself. The small hole will be perfectly placed to guide a drill bit (up to 1.0mm diameter) as it cuts a pilot hole precisely in the middle of the sleeper (see pics 1-2).

The same hole in the tool then helps to hold a fine track pin vertically, with the aid of a small magnet, while it is pushed into the baseboard (pic 3). Simply remove the tool to finish driving the pin with the hammer. In use, the Track Pin Mate promotes greater accuracy and avoids wasting track pins, as they're much less likely to bend during hammering.

Also available is a Rail Joiner Mate, again rendered





in orange resin (pic 4).
Supplied in pairs, they're
a great help when fitting rail
joiners onto the ends of rails.
Compatible with Code 75, 83
and 100 joiners, the tools work
better than pliers and remove
the risk of cut fingers or bent
joiners.

Offering great value and ease of use, both tools help to speed up the track laying





process. Their bright orange finish keeps them visible on a crowded baseboard, too. Both are also available for 'N' gauge.

Products: 'OO' Track Pin Mate, 'OO' Rail Joiner Mate **Price:** £2.49 per pack

Availability:

West Hill Wagon Works

www.westhillwagonworks.co.uk



NEW STRUCTURE KITS FROM SMS

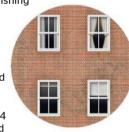


A comprehensive new 'OO' laser-cut kit from Scale Model Scenery can be built to represent a traditional coach house and stables, but it would look equally at home within an industrial or dockyard setting. Consisting of a sturdy, slot together fibreboard structure, printed paper overlays are provided featuring a weathered,

whitewashed render finish.
Plenty of intricate detail parts
are provided, including roof
trusses, pre-weathered roof tiles,
window frames, doors, gutters
and downpipes. There's even
a choice of doors to suit a rural
or industrial premises and
only minimal painting is required
to finish the kit.

For 'N' gauge, a versatile terraced house kit is offered, complete with rear yard and outhouse. A similar slot-together fibreboard structure is provided, with separate window frames and doors. Printed or textured overlay material must be sourced separately. The dwelling would look equally good combined with several similar kits or as a standalone structure.

To add the finishing touch to 'OO' or 'O' gauge buildings, Scale Model Scenery has produced sheets of printed curtains and blinds. The 'OO' pack provides 54 pairs of assorted



curtains and 15 blinds, each with lightly coloured pleated lining and a small strip of colour along the outer seams. This approach is more authentic than other existing curtain packs, which usually feature coloured fabric facing the window, rather than into the room, which is usually the case in reality.

Products: KX087-OO Coach House & Stables (£27.49), UW2002 Modular Terrace House kit (£7.99), AX186-OO Curtains & Blinds (£1.49)

Availability: Scale Model Scenery Web:

www.scalemodelscenery.co.uk



Unusual scenes captured by the lens of Chris Nevard

Every autumn and spring, when the clocks change, the little people have to adjust the position of the ancient standing stones to compensate for the loss or gain of an hour. They've been doing this since the introduction of Daylight Saving Time in 1916. However, during the Second World War, British Double Summer Time (BDST) was introduced. Owing to general confusion and lack of manpower, the locals decided not to move the stones at all during that time, reverting to their annual practice in the Spring of 1946.

EXHIBITION DIARY - OCTOBER-NOVEMBER 2023

October 28

SEAFORD, E SUSSEX. Newhaven & District MRC. Seaford Baptist Church Belgrave Road Seaford BN25 2TEE. Time: 1000-1700. Admission: Adults £6, Accompanied under-16s Free. Web: www.newhavendmrc.com

HIGHBRIDGE, SOMERSET.

Bristol & Somerset Group HRCA. The King Alfred School, Burnham Road, Highbridge, Somerset, TA9 3EE. Time: 1000-1600. Admission: Adults £4, Accompanied children Free. Tel: 07779 377046

Web: www.somersethrca.org.uk

EXETER. DEVON. South Devon Garden Railway Group Matford Centre, Matford Park Road, Marsh Barton Industrial Estate, Exeter, EX2 8FD. Time: 1030-1630. Admission: Adults £10. Accompanied under-14s Free. Tel: 01548 550077. Web: www.exetergardenrailwayshow. com Email: show.coordinator@ sdgrg.org.uk

BASILDON, ESSEX. Basildon MRC. The Wick Community Centre, Silva Island Way, SS12 9NR. Time: 1000-1700. Admission: Adults £8, Seniors £5, Children £5, Families £20. Email: derek@ basildon-mrc.org.uk

WOODFORD. Hazel Grove and District MRC, Woodford (War Memorial) Community Centre Chester Road, Woodford SK7 1PS. Time: 1000-1700. Admission: Adults £7, Accompanied children Free. Web: www.hadmrs.ora.uk

SELBY. Grandad's Train Shop. The Function Room, Selby Superbowl, Bawtry Road. Selby. YO8 8NA. Time: 1000-1600. Admission: Adults £1.50, Accompanied under-12s Free. Tel: 07754 401209. Web: www. grandadstrainshop.co.uk Email: show@selbymodelrailway.co.uk

NEWBURY. BERKS. Newbury MRC. St Bartholomew's School, Buckingham Road, Newbury, RG14. Time: 1000-1630. Admission: Adults £7, Children £3.50, Families £17.50. Tel: 07590 429643. Web: www. newburymrc.co.uk

October 28-29

ABERDEEN. Aberdeen Model Railway, Curl Aberdeen, Eday Walk, Aberdeen, AB15 6LN. Times Sat: 1000-1700, Sun 1000-1600. Admission: Adults £8. Children £4. Families £20. Facebook: www.facebook.com/ AberdeenModelRailwayClub

CHELTENHAM, GLOUCS.

Cheltenham Great Western Modellers Group. St Margarets Hall, Coniston Road, Hatherley, Cheltenham, GL51 3NU. Times: Sat 1000-1700, Sun 1000-1630. Admission: (Cash only) Adults f6. Children f2. Families f12. Tel: 01242 517788. Web: www.cheltmodrail.org.uk

GLASGOW. Cathcart MRC. Pollokshaws Burgh Hall 2025 Pollokshaws Road Glasgow G43. Time: 1000-1630. Admission: Adults £6.50. Children £3. Families (2+2) £15, Concessions £6.

October 28-30

BLACKROCK, CO DUBLIN. South Dublin MRC. Blackrock College, Blackrock, Co. Dublin. Time: 1100-1700 daily. Admission: Adults €10. Children/Seniors €8. Families €20. Tel: +353 86 812 6112. Web: www.sdmrc.ie Email: pauljdaly1@gmail.com

October 29

NORMANDY, GUILDFORD.

Guildford O Gauge Group. Normandy Village Hall, Glaziers Lane, Normandy, GU3 2DD. Time: 1000-1600 Admission: Adults £4

WOKINGHAM, BERKS. Bracknell Railway Society, Pinewood Hall, Pinewood Leisure Centre, Old Wokingham Road, Wokingham, RG40 3AO. Time: 1030-1630. Admission: Adults £5. Children £2.50, Families (2+3) £10. Web: www. bracknellrailwaysociety.co.uk November 4

WESTBURY, WILTS. West Wiltshire Gauge O Group. The Paragon Hall, High Street, Westbury, BA13 3HA. Time: 1000-1600. Admission: Adults £6, Children £2, Families £12, Guild Members £5. Tel: 07870 515807.

SHEFFIELD. Sheffield Model Railway Enthusiasts. Carterknowle Methodist Church Sunday Schoolrooms, Edgedale Road, Sheffield, S7 2BQ. Time: 1000-1630. Admission: Adults £3, Accompanied under-16s Free. Tel: 07768 513880.

November 4-5

SPALDING, LINCS. Spalding MRC. Springfields Events & Conference Centre, Camel Gate, Spalding, PE12 6ET, Times: Sat 1000-1700, Sun 1000-16.30. Admission: Adults £10, Accompanied under-16s Free. Web: www.spaldingmodelrailwayclub.org. uk Facebook: www.facebook.com/ spaldinamrc

GRAVESEND, KENT. Gravesend Railway Enthusiasts Society. Northfleet School for Girls, Hall Road, Northfleet, Kent, DA11 8AQ. Times: Sat 1000-1700, Sun 1000-1600. Admission: Adults £5, Accompanied children Free. Tel: 07821 254232. Web: www.gres.org.uk

ELGIN, MORAY, Flgin Model Railway Club. Elgin Town Hall, Elgin, Moray, IV30 1UL, Scotland. Times: Saturday 1000-1700, Sunday 1000-1600. **Admission:** Adults £8. Children £4, Under-5s Free, Families (2+2) £20. Email: enquiries@ elginmodelrailwayclub.co.uk

November 11

SOLIHULL, WEST MIDS. Solihull Model Railway Circle, St Marvs Church Hall, Hobs Meadow, Solihull, B92 8PN. Time: 1000-1630. Admission: Adults £4. Children £3. Families £10. Web: www.solihullmrc. org Facebook: www.facebook.com/ Solihullmrc.ora

November 11-12

CREWE, CHESHIRE. Alsager Railway Association. Legends Conference Centre, Bentley Motors Ltd. Sunnybank Road, Crewe, CW2 8WD. Times: Sat 1000-1700, Sun 1000-1630. Admission: Adults f9 Accompanied children Free Tel: 0774 7087050. Web: www. alsagerrailwayassociation.co.uk Email: jrfcox93@gmail.com

TOLWORTH, SURREY. Hampton Court MRS. Tolworth Recreation Centre, Fullers Way North, Tolworth, KT6 7LO. Times: Sat 1000-1730. Sun 1000-1630. Admission: Adults £9, Children £3, Families (2+2) £19. Tel: 07876 216400 Email: rudofskyjohn@gmail.com

BARNSLEY, Barnsley MRC, Venue Hoyland Leisure Centre, West Street, Hoyland Barnsley, S74 9HX. Times: Sat 1000-1700, Sun 1000-1630. Admission: Adults £7. Under-16s Free.

November 18

PORTSMOUTH, HANTS. South Hants MRC. Admiral Lord Nelson School, Dundas Lane, Portsmouth. Hampshire, PO3 5XT. Time: 1000-1630. Admission: Adults £7. Accompanied children Free, Web: www.shmrc.org.uk/exhibition

BARRY, VALE OF GLAMORGAN. Barry and Penarth MRC. Highlight

Park Community Centre, Stirling Road, Highlight Park, Barry CF62 8NX. Time: 1030-1630. Admission: Adults £4. Children £2. Under-5s Free. Tel: 07900 857719. Web: www.bpmrc. club Email: bmd6753@yahoo.co.uk

SLEAFORD, LINCS. Sleaford and District MRC. St George's Academy, Sleaford Rd, Ruskington, NG34 9BY. Time: 1000-1800. Admission: Adults £5, Accompanied under-16s Free. Tel: 07821 618718. Email: cem. sleafordmrc@yahoo.com

November 18-19

SCUNTHORPE, LINCS. Scunthorpe & District MRC. Sunshine Hall, Ashby High Street, Scunthorpe, DN16 2JU.

Times: Sat 1000-1600. Sun 0930-1600. Admission: Adults £2.50, Concessions £2, Families £7. Tel: 07762 548775.

BRIGHTON. Brighton MRC. Patcham Community Centre, Ladies Mile Road, Patcham. Brighton, BN1 8TA. Times: Sat 1000-1700. Sun 1000-1600. Admission: Adults £5, Seniors £4, Children £3, Families (2+2) £12.

GRANGEMOUTH,

STIRLINGSHIRE. Falkirk Model Railway Club, Grangemouth Athletic Stadium, Kersiebank Avenue, Grangemouth, FK3 OEE. Times: Sat 1000-1700, Sun 1000-1630. Admission: Adults £8, Child f4 Under-6s Free Families (2+2) £18. Web: www.falkirkmrc.com

HAYLE, CORNWALL, Havle Railway Modellers, Hayle Day Care Centre, Commercial Road, Hayle, TR27 4DE. Times: Sat 1000-1700, Sun 1000-1600 Admission: Adults £5 Accompanied under-14s Free.

November 25 RAINHILL, MERSEYSIDE. Rainhill MRC. Rainhill Village Hall, Weaver Avenue, Rainhill, L35 4LU, Time: 1000-1700. Admission: Adults £4. Children £5 (includes a visit to Santa). Tel: 01925 226266. Web: www.rainhillmrc.org.uk

November 25-26

BIRMINGHAM NEC. Warley National Model Railway Exhibition, Hall 5 NEC. Birmingham, B40 1NT. Time: Sat 0945-1800, Sun 0945-1700 (advance ticket holders entry at 0915 both days). Admission: Adults one-day £25 (£21 in advance), Adults two-day £46 (£38 in advance), Children oneday £1, Children two-days £2. Web: www.thewarleyshow.co.uk

November 26 **BROCKENHURST, HANTS.**

New Forest Model Railway Society Brockenhurst Village Hall, Highwood Road. Brockenhurst, SO42 7RY. Time: 1000-1630. **Admission:** Adults £6, Accompanied children Free. Web: http://nfmrs.org Email: nfmrs@yahoo.com

December 9-10

MANCHESTER. Manchester MRS. The Christmas Model Railway Show, The Sugden Sports Centre, Sidney Street, Manchester, M1 7HB. Times: Sat 1030-1730, Sun 1030-1630 (advance ticket holders entry at 0945 both days). Admission: Adults £14 (£11.50 in advance) Sat, £12 (£10 in advance) Sun. Children Free. Web: www.mmrs.co.uk

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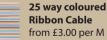


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 Worldwid 	e at cost • VAT free to non EC ts/Packs and Controllers/Handsets -		£196.20	DAGO	Ctraight Platform \$4.00	E84005	Class 58 Railfreight	OR76AR006 Adams SR£84.4
	Postage charged at cost**	R30167	Class 66 Fastline Freight	R460 R462	Straight Platform£4.00 Large Curve Platform	E0./	redstripe£157.20	OR76J27001 LNER J27£93.4
	RICES SUBJECT TO CHANGE WITHOUT NOTICE.	D00155	£87.30	TI T UZ	£4.00	E84006	Class 58 Railfreight Coal	H1303 1361 BR Early£122.4
١	ease allow 7 days for clearance when paying by cheque***	K30150	GBRf Class 66 Grey	R463	Small Curve Platform	F84007	sector£157.20 Class 58 Mainline£157.20	H1304 1361 BR Late£122.4
PRIC	SE QUOTE OUR SPECIAL ES WHEN YOU VISIT US	D00451	£87.30	D4C4	£4.00			
(CREDIT/DEBIT CARDS WELCOME.	K30151	GBRf Class 66 HS2 Green	R464 R510	Platform Ramp£3.00	LARGE	RANGE OF QUALITY SECO	IND HAND MODEL RAIL IN STOCK

.....£87.30 R510 Platform Shelter£14.85

News Real

Our full-size railways are constantly evolving, providing fresh inspiration for modelling projects. BEN JONES looks at a few of the latest developments that could soon be appearing on our layouts.

▶ CrossCountry is the latest train operator to retire its InterCity 125s, despite overcrowding issues on its core route and their popularity with passengers. On September 26, XC bade farewell to the trains with a charity special from Leeds to Swanage. Retro InterCity 'Swift' livery 43008 is the star of the show during a brief stop at Wareham. BEN JONES



▶ The Ffestiniog
Railway's new-build
'Double Fairlie' James
Spooner made its public
debut on October 6 and
was due to be officially
launched and named
two weeks later. The
0-4-4-0T basks in the
sunshine at Boston
Lodge Works after the
completion of painting
and lining on October 6.
FFESTINIOG RAILWAY



▼ The evolution of the trusty English Electric 350hp 0-6-0 shunter continues with Positive Traction's fully electric '08e' prototype, unveiled this month. Based on a design that can trace its origins back to 1932, the '08e' replaces the EE 350hp diesel engine with rechargeable batteries and modern electronics, but retains standard running gear, traction motors, cab and driving desk. **BEN JONES**



▲ Testing of Tyne & Wear Metro's new Class 555 EMUs is under way in north-east England. Before the Stadler-built trains can gain approval they need to undergo 90,000 individual tests and prove their compliance with 22,000 standards and clauses. The £362m project also involves 19,000 hours of training time, with the first five sets needing to complete 6,000 miles of fault-free running each. NEXUS



Staff Show & Tell

Another '69' hits the rails

Dave Lowery has completed another Class 69 conversion, but this time it was a little easier.

aving been commissioned by GB Railfreight to create 7mm scale models of the re-engineered Class 69 diesel locomotives, Dave Lowery initially made use of a Class 56 kit from PR Model Railway Products. Dave's comprehensive conversion work was chronicled in August 2021's *Model Rail* (MR289), along with a 'OO' conversion using a Hornby model as the donor.

However, the introduction of Heljan's impressive 'O' gauge Class 56 last year gave Dave a headstart on a few more Class 69 conversion projects he had lined up. Indeed, he recently gave the *Model Rail* team a sneak peek at the first finished model off the production line.

Once again, Dave made use of 3D-printed parts from Simon Brooking for the revised roof, cab and underframe components, along with decals from Precision Labels and paints from Rainbow Railways (see panel). With 69008 the subject of this model, we're wondering which of the 'special' BR-inspired GBRf liveries Dave will replicate on his next conversion?







TALES FROM THE TALYLLYN

Peter Marriott's narrow gauge travels took him to another of the Great Little Trains of Wales.

After many years of travelling on standard gauge railways, I finally got the chance to travel on another of the Great Little Trains of Wales over summer. This time I took a round trip on the Talyllyn Railway, which runs through southern Snowdonia, giving me the chance to enjoy the 14.5-mile round trip which has been running since 1865.

The trip took me from Tywyn on the mid-Wales coast, through Pendre, Rhydyronen, Brynglas, Dolgoch Falls and Abergynolwyn stations, to terminate at Nant Gwernol. Opened in 1865, the line was built to carry slate from quarries in the surrounding hills. The quarries closed in 1946 but, in 1951, the railway was taken over by the Talyllyn Railway Preservation Society, which was a world first.

To model a part of the line, I concluded that I would need lots of sheep, tall hedges, waterfalls, countless trees and a mixed bag of short and long-wheelbase carriages. Since my trip, I've been spending many hours planning a new narrow gauge layout project.

By the way, the tea rooms at





Abergynolwyn station are well worth visiting. The mountainside location adds to the flavour of the tea and cake! **Web:** www.talyllyn.co.uk



TURBOT-CHARGED

George Dent's BR engineers' wagon fleet has been expanding, with the addition of several 'Dutch' ballast carriers.

Having identified a significant gap in my 1980/90s British Rail rolling stock collection, I've been on a mission to start collecting more ballast wagons from that era.

A handful of Dapol 'Turbots' are the latest addition, in the popular 'Dutch' grey/yellow colour scheme.

Thankfully, Dapol has been releasing a decent selection of individual running numbers, so there has been no duplication yet. Although I'm a big fan of the Dapol 'Turbots', the pristine appearance doesn't reflect how I remember them so, this month, it was their turn in the weathering queue.

First step was to apply a mix of oil-based weathering washes, combining grey, brown and 'dark' shades to create successive layers of grime. Having brushed each layer of wash over one side at a time, cotton swabs remove most of the pigment, rubbing in downward strokes. A gentle streaking effect is created, which has been enhanced by brushing further layers of wash lightly over the surface with a soft, flat brush.

So far, so good. The bodyshell is already much improved, but there's still more to do, especially with the chassis, bogies and wagon interiors.



Weathering of a fleet of Dapol 'Turbots' has begun, with an initial treatment using a selection of enamel washes.



A minor issue arose with the TOPS panels, which have been damaged by the solvent in the enamel washes. A little touching up will be needed



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We usually operate by viewing & offering on collections in person, most often without the need for a list, however we are happy to make offers from lists.

I, Ellis, work on the basis of a friendly, professional & down-to-earth approach, purchasing all scales & eras, alongside Continental & American, with a specialised knowledge of 7mm finescale O gauge.

Please feel free to give us a call to discuss your needs.

And in case you were wondering...

Albert is the dog.







- 01756701451
 - Dave@ellisclarktrains
 - Ellis@ellisclarktrains









Inside track with Ben Ando

Ben Ando is the founder of Revolution Trains and a regular contributor to Model Rail.



Above: The Post-It note came about through serendipity. How often have we discovered something by accident while building our models? ALAMY

Below: John Ahern's 'Madder Valley Railway' possesses various eccentricities, but these add to the captivating nature of the layout. Rather than offering precision, it affords a look into the early days of scenic modelling. CHRIS NEVARD intsugi, or serendipity? The Japanese have ar

The Japanese have an ancient traditional art of using powdered gold or silver to repair broken ceramic pots or plates; they call it Kintsugi.

Instead of hiding the joins, the flashing metal catches the eye and draws attention to them.

In this way the mishap that led to the breakage becomes a celebration; the repairs do not diminish the piece but add to it by preserving its history and acting as a testament to the skill and care of the artisan who reassembled it.

In western culture we have a different but comparable idea: serendipity.

Serendipity is defined as 'making a discovery by happy accident.'

An example familiar to most will be the Post-It note, which came about when a scientist at 3M, attempting to develop a super-strong adhesive, was dismayed to find that his latest formulation created only a feeble bond.

After several years of trying, and failing, to find a problem for which he had the solution, inspiration came from a lab colleague.

The co-worker had started using the weak-gripping tabs to temporarily mark the pages in his hymn book because they remained in position but could be removed without marking the pages. A chance discovery that led to a global phenomenon.

I suspect most *Model Rail* readers will have experienced serendipity in their own modelling. I know I have.

Perhaps my favourite part of this hobby is scenic work; creating the world we see around us with miniature trees, rivers, cliff faces or houses. And many's the time a lucky accident has led to a better outcome.

From accidentally knocking a tiny amount of scatter into a drying resin river and noting it created an



Above: This Kintsugi bowl is a product of the Japanese craft of repairing broken pottery with gold. The practice symbolises healing, showing how something broken can become beautiful. Can the principles of Kintsugi also offer something to the modeller? ALAMY

excellent representation of the vegetation often found floating at the water's edge to dripping cyano glue onto a kit polybag and realizing it took far longer to cure and was thus far more convenient to use.

But can the principles of Kintsugi also offer something to the modeller?

Many of us have layouts – large or small – that have taken us many years to build.

And when we look at areas of the layout that were built in the early years of our modelling, we may see evidence that our skills were, once, not what they are now.

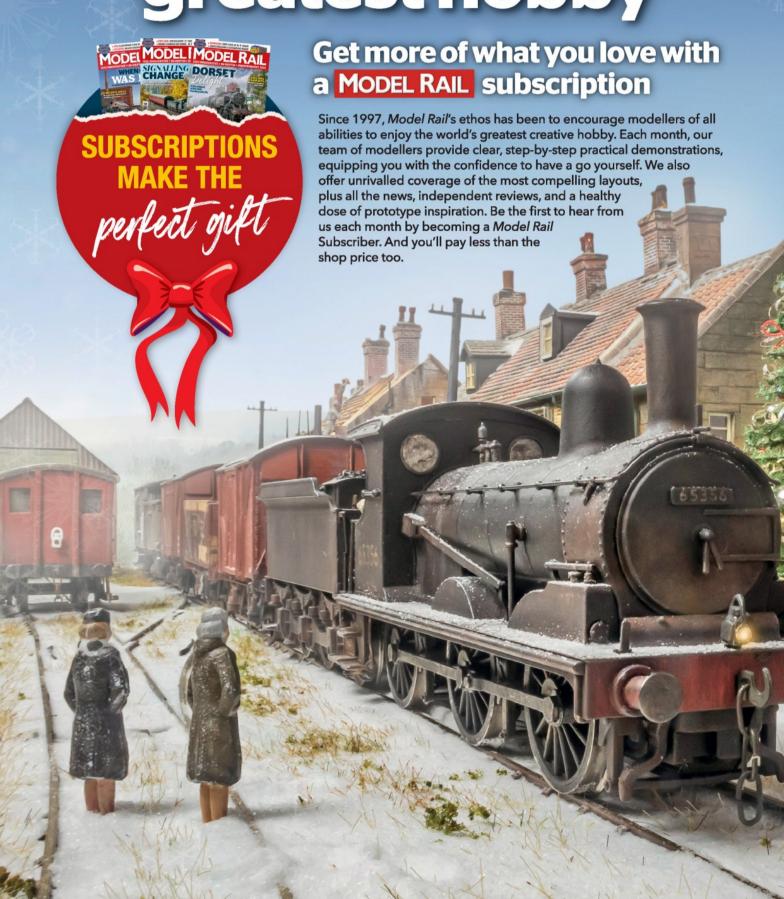
Perhaps some of the buildings are badly assembled, or the tunnel mouths painted clumsily. Maybe the rock faces look unrealistic, or the trees bear little resemblance to any variety, living or extinct!

I am not suggesting we paint joints of gold into our cracked cliff faces or use silver to hide the black line at the base of our buildings – not least because in the current climate I suspect there are few modellers with such a budget.

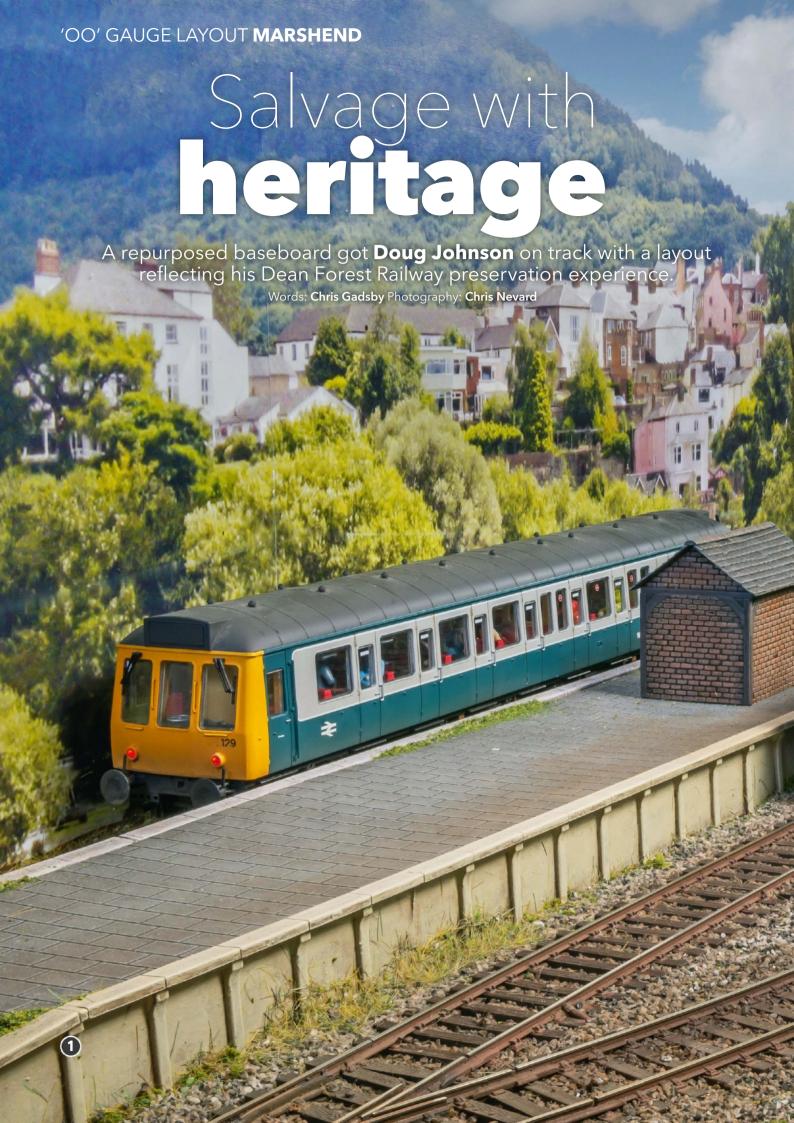
However, perhaps we can embrace the spirit of Kintsugi and learn to appreciate the flaws – they not only remind us where we have been, but can also show us how far we have come.







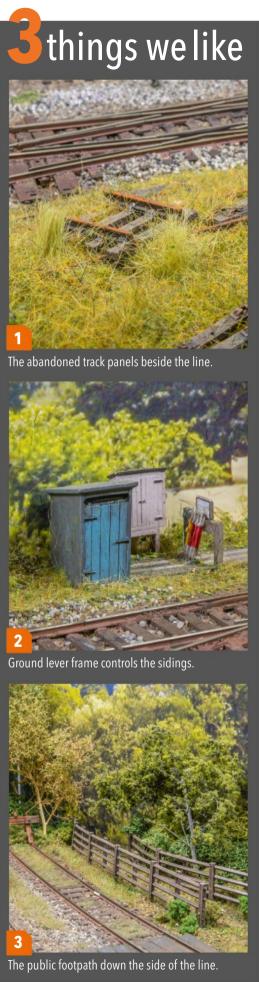












'OO' GAUGE LAYOUT MARSHEND



on the line for 'Marshend', the Marsh sidings and the terminus at Parkend.

"I've not been able to model the locations accurately because of the necessity for the lines to be almost straight on the baseboards, whereas in real life they are on quite a curve, but by straightening them out and combining the names I've ended up with a layout that gives me plenty of operation and control."

'Marshend' is controlled from an NCE Powercab linked to Doug's laptop running JMRI, and has been programmed in such a way that all he has to do is press one button for the route to be set for him, vastly reducing the risk of accidents. Two programmes have been set up, one for rear-sided operation and one for operation from the front, so that no matter if Doug is at home or an exhibition he's able to see the correct plan for his orientation.

"Most people spend their time continually upgrading the way their layout looks, but I spend a lot of mine thinking about how I can upgrade the control system! I have a spare Digikeijs system in the garage so I intend to turn that into a router and link it to my mobile phone to allow me to operate from that. It would combine the best of both words as I'd have a handheld controller to be able to walk around but I wouldn't have to remember locomotive numbers and functions, as everything would be written in words in front of me. No more activation of the wrong functions, so long as I can still read!"











There's a big clue as to what the majority of Doug's scenery consists of, considering that the layout is based on the Dean Forest Railway. His trees are a mixture of a number of different products, including Woodland Scenics and natural seafoam, with the addition of the

"If I look out of my window I see more shades of green than I can write down, so I tried to get as wide a range as possible into 'Marshend'. In the same vein as with locomotive colours, every company's interpretation of green is slightly different, so there must be 20 different products in the scenery to try to make it look as realistic as I could. I volunteer on the railway doing lineside work, so I see that brambles and bracken spread like wildfire as we are forever cutting it back, so including that was a must. One area I do like is at the front where I have tried to create an overgrown wild area with a hint of old railway sleepers and paraphernalia being taken over by the landscape. I was surprised when I started doing lineside work just how many sleepers and rail chairs >







there were in the undergrowth! Colin has done a great job making the Peco plastic sleepers look convincingly like wood and I like the fact that in that area the scenery is in front of the rails rather than behind. You can get a great view of the trains passing if you look through the bushes."

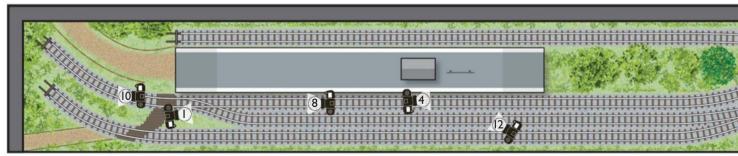
Used as a scenic break between the station and the sidings, as well as the entrance to the cassette fiddleyard, Doug's bridge has been scratchbuilt from balsa wood, brick paper and Peco bridge girders. Because he was unsure at the time exactly what sort of bridge it was going to be, it was never quite finished, so to make it exhibition-ready Doug hid the join at the far side with a tree.

"I've since decided that it will be an agricultural bridge for livestock so I can set about making it appropriate for that. Putting the bridge on the back burner allowed me to focus on other things, such as the weathering, before the first exhibition. Most of the weathering has been done by myself but Colin is very artistic so did his fair share with the paintbrush, weathering the platform, brickwork and the road while I did the stock. My favourite piece is the 'Hymek' as I tried to copy the techniques of 'Everard Junction', creating streaks of weathering with gravity. A lot of the wagons had a light spraying but I tried to vary them as much as possible. With so many 'Dogfish' wagons to do, it would have been too easy to



'OO' GAUGE LAYOUT MARSHEND





38



get into a pattern and then, getting to the end, only to discover they all look the same. I finished quite a few off with white powder and rust paint to try to make them look well used."

Since 'Marshend' doesn't have any era-defining markings, Doug can run anything he likes, including a Class 43 with sound and occasionally a 'Western'. Since the Dean Forest Railway is preserved he can even run it right up until the present day if he so desires, using models he already has, which is very economical for his wallet. With Colin able to bring his 1990s stock for use at 'Marshend' you never know what you might find there, so next time you see it, take a good look at the models. You might find you've jumped forwards or backwards 20 years!

FACTFILE: 'MARSH END'

Gauge and Scale: 4mm:1ft, 16.5mm gauge, 'OO'

How long did it take to build?

Two and a half years

Size: 10ft by 1ft

Track type? Code 75

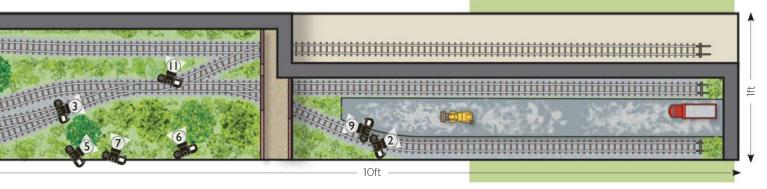
What is the control system? DCC Sound



MODELLER CV: DOUG JOHNSON

I volunteer on the Dean Forest Railway doing lineside work every Tuesday, and as an offshoot of that I'm

a secondman on the Class 08 and a goods guard, so I can run works trains. Apart from this, I've been doing brake van rides and driver experiences on some weekends.



Masterclass

Looking at railways in detail

Last of its kind

BR had high hopes for what would be its final diesel locomotive type but, as **Ben Jones** recounts, early design flaws, privatisation and the decline of heavy industry prevented these imposing freight machines from reaching their full potential.

The

was keen to

t's the mid-1980s. Despite the trauma of the still-recent Miners' Strike, coal is still 'king' for British Rail's Railfreight sector. Coal from pits and ports to power stations provides much of the sector's income and there's no sign of that changing for the foreseeable future. Other traditional heavy industries such as steel, petrochemicals and construction are in long-term decline but still provide the railway with ensure that British tens of millions of tonnes

of traffic every year. suppliers benefited But the picture is far as much as from rosy. Beyond the intensive merry-go-round possible (MGR) coal circuits, much of Railfreight's operation is inefficient and loss-making, and depends on a diverse fleet of ageing and unreliable locomotives, many of which date back to the early 1960s.

Even the younger members of the fleet, the Class 56s - backbone of the coal and bulk stone fleet - and the new Class 58s (entirely dedicated to coal traffic) struggle to meet reliability targets. It's also evident that neither type can cope with the heavier trains

that will be required to increase the efficiency of freight operations and revive the fortunes of the Railfreight sector.

Embarrassed by the astonishing haulage capabilities and reliability of Foster Yeoman's US-built Class 59s, introduced in 1986, BR sought - and received -

government approval to order 100 new heavy freight diesels to be delivered between 1989 and 1992. Government

A challenging specification demanded low running costs and 95% availability with the new machines intended to replace 240 existing locomotives of Classes 20, 31, 33, 37, 47 by cascading Class 56s and 58s from the heaviest trains.

Of the six companies invited to tender, four responded -Metro-Cammell, GEC, General Motors Electro-Motive Division (EMD) and Brush Electrical Machines (later Brush Traction) of Loughborough. While the performance of the Class 59s – and the potential for quick deliveries of similar locomotives - meant that there was some support for EMD, and GEC's bid was based around the use of EMD

Double-headed Class 60s are rare, so this may be a positioning move or test run, as DB Cargo's 60100 Midland Railway Butterley leads an unidentified classmate with a heavy steel coil working at Colwick. MARTYN WILLIAMS/ALAMY



traction equipment, built under licence in the UK, the Government was keen to ensure that British suppliers benefited as much as possible.

Resistance to foreign-built locomotives also came from the rail unions, which were concerned about the exclusion of British Rail Engineering Ltd (BREL - the company established to run ex-BR works) from the tendering process.

As a UK-based supplier with a long history of locomotive building, promising to meet the challenging technical specification and timescales required by BR, Brush emerged as the clear favourite and was awarded the £121.5 million contract in May 1988. It was given just 13 months to deliver the first complete locomotive.

CONSTRUCTION

Brush assembled the Class 60s at its Falcon Works in Loughborough, which had previously built Class 31s and much of the Class 47 fleet for BR. Electrical components such as traction motors and control gear were produced internally, as were the three-axle

Left: Almost-new 60032 William Booth and 60045 Josephine Butler both sport BR Trainload Coal sub-sector markings, at Springs Branch depot, Wigan, September 1991. COLOUR RAIL





With faded 'Big T' Transrail logos still in place, 60061 (formerly named Alexander Graham Bell) passes Peak Forest with an engineers' train in March 2009. GEORGE DENT

bogies, but many other parts were manufactured elsewhere before being delivered by road to Loughborough. Bodyshells were fabricated and painted by Procor at the former Charles Roberts wagon works in Horbury, near Wakefield, the Mirrlees MB275T eight-cylinder engines came from Stockport while Westinghouse in Chippenham supplied the air brake systems.

BR's exacting requirements and short development timescale presented Brush with a huge challenge and contributed to the troubled early years of the class. However, in the circumstances, Brush had achieved something of a miracle by designing and building an entirely new locomotive in a little over a year.

Having made its first moves a few days earlier, 60001 was officially handed over to BR at Falcon Works on June 30 1989 and named *Steadfast*. It would be another 63 weeks before the first three locomotives, 60017-019, were accepted into traffic by Railfreight at Thornaby depot – on September 11 1990.

After a short move to Toton Depot for inspection, 60001 went to the Railway Technical Centre (RTC) in Derby for exhaustive testing and analysis between July and October 1989, although testing continued until June 1990. Static trials at the RTC were followed from July 1989 by runs at the Mickleover test track, west of Derby, and the 13-mile Old Dalby test track near Melton Mowbray. By January 1990, 60001 had tackled loaded trains of up to 3,600 tonnes at Old Dalby.

Main line testing was equally extensive,

including runs with a heavy train of loaded stone hopper wagons over the Highland Main Line hauled by 60001 and 60002 *Capability Brown*. This allowed engineers to measure engine and braking performance on the network's longest climbs to – and descents from – the summits at Slochd (1,315ft) and Druimuachdar (1,484ft). Continuing a long tradition, the Midland Main Line south of Derby and the Settle-Carlisle Line were also used for trials and driver training – the latter featuring 60006 *Great Gable*.

In May 1990, towards the end of the test



Original BR Freight Sector Allocations

Coal: 60004/032/045-047/055-061/066-079/086-088/090-093 Construction: 60001/005/006/009-012/015-019/039-

043/048/080/082-085/094-100

Metals: 60008/020-024/029-031/034-038/044/049/050/052/081/093

Petroleum: 60002/003/007/010/013/014/024-028/033/051/053/054/062-065/078/079/082/089

Left: Wearing 'Three Beasties' vinyls, EWS 60013 Robert Boyle rests at Peak Forest in 2009. At this time, the name was carried on this side only. GEORGE DENT

period, 'super trains' of up to 3,700t were hauled between Mountsorrel Ouarry, near Leicester, and Cricklewood in north London.

Despite their obvious heavy haulage potential, more than 100 faults and modifications had to be addressed in the early years of the Class 60s. These ranged from software issues to rebuilding of the bogies to rectify suspension design faults. Some issues were identified during testing and incorporated into later locomotives during construction, but many others only arose once the fleet had entered traffic. Radiators were initially problematic and by 1992/93 the Mirrlees engines were suffering numerous major issues too, including cylinder head cracks, fractured cylinder liners, oil leaks, intercooler failures, fuel filter blockages, failed engine room extractor fans and high-pressure fuel pipe failures. A rolling programme of engine improvements lasted for around three years, since which the MB275T has proved itself to be a powerful and capable performer.

Externally, it was also discovered that drivers had problems with the original two-piece cabside sliding window design. This was changed to a three-section design, allowing better rearward visibility of ground staff and the train.

BR demanded that all locomotives complete 1,000 miles of fault-free running before they could be accepted for revenue-earning service. The first locomotive to achieve this was 60023 Arenig Fawr in September 1990. Owing to the problems outlined above, much of the fleet was more than a year late into traffic. However, many of the early locomotives used for testing and training (60001-016) suffered much longer delays as they had to return to Brush for modifications. For example, 60002 was not accepted until December 1992, three years and four months after its contractual delivery date. The final Class 60 to be accepted by BR was 60015 Bow Fell on March 24 1993, almost 39 months later than expected.

ALLOCATION

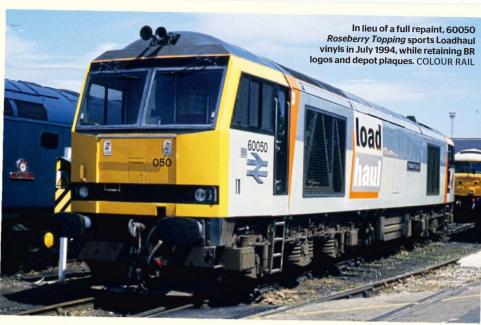
All 100 locomotives were delivered in Railfreight's Trainload Sector three-tone grey with sector decals applied according to their initial allocation. This remained the standard until 1994, when Railfreight was reorganised into three regional Trainload Freight (TLF) companies ready for privatisation.

All locomotives were named from new, with nameplates usually being fitted without ceremony prior to delivery. As a general rule (with exceptions!), locomotives intended for the Construction sector received the names of prominent mountains across England, Scotland and Wales, some of which were previously carried by Class 44s, and Petroleum sector machines were named after notable British inventors, innovators, reformers and scientists. Coal and Metals sector locomotives featured a mix of the two subjects.

Once they were accepted by BR, the '60s' were despatched to their home depots. Construction sector locomotives were based at Leicester and Toton for Midlands quarry traffic, Hither Green and Stewarts Lane in south London, Cardiff Canton and Immingham, replacing Class 31s, 33s and 47s.

The Metals sector allocation was based at Thornaby on Teesside, Cardiff Canton (for Port Talbot-Llanwern iron ore trains) and Immingham (for Scunthorpe iron ore trains). Cardiff and Immingham were also home to the Petroleum sector locomotives. The largest sub-sector allocation, for Coal traffic, was split between Toton, Cardiff Canton and Immingham.







Below: 60099 was one of several Class 60s to gain customer liveries under the auspices of EWS and DB Schenker, in this case the silver of Tata Steel, although it is seen hauling empty limestone hoppers from Northwich to Peak Forest.

When the fleet was divided between the three TLF organisations in 1994 Loadhaul (North East) received 31 locomotives, Mainline (South East) 52 and Transrail (West) 17 in total. Allocations were changed to reflect their new regional arrangement with Loadhaul's main depots at Thornaby and Immingham, Mainline at Toton, Hither Green and Eastleigh and Transrail at Cardiff and Motherwell.

Between 1994 and 1996, 60007/008/025/ 038/059 received Loadhaul's popular black/ orange livery and 60011/044/078 gained full Mainline aircraft blue/silver colour scheme. Transrail opted for a less radical image change, swapping sector logos for its 'Big T' logo but retaining the grey base livery (60005/015/029/ 032-037/045-047/055/056/058/061-063/065/ 066/080-082/084/085/089/092/093/096/097).

Loadhaul and Mainline adopted a similar interim solution for their grey locomotives with 60050/064/070 receiving large Loadhaul logos and 60001/006/009012/017-019/039-044/048/071-079/083/086-088/094/098-100 swapping sector logos for Mainline's 'rolling wheels' logo.

This situation was short-lived as all three TLF companies were reunited as English Welsh & Scottish Railway (EWS) after being purchased by Wisconsin Central in 1996. From that point, EWS red/gold became the new standard and allocations were reduced in importance as the fleet was deployed nationwide. However, Toton became increasingly central to the

Masterclass

Class 60s after 1996 – and remains so to the surviving machines.

Of the Class 60s repainted by EWS, 60004/010/012/017/019/020/024/026/027/040/041/047/049/050/098 received the original livery with EW&S branding, while 60001-003/005/008/009/016/018/021-023/025/029-031/035-039/042/043/045/048/051-053/058/062/065/069/071/075/080/083/085/087/089/093/094/096/097, 60100 and 60500 had the later EWS branding. Some EWS '60s' not due for a repaint carried an interim livery with large yellow vinyl stickers applied over the former BR sector or various TLF logos.

Somewhat surprisingly, EWS started the run-down of the class by withdrawing the first pair in 2004, after barely a decade of service. Over the next few years, locomotives were withdrawn as they came due for expensive major overhauls or required repairs.

EWS' American management was said to be unimpressed by their performance and between 2004 and 2007 between 50 and 75% of the fleet was out of action. At one point, just four remained in traffic and although some have since returned many have never worked again. Between 2011 and 2013 DB Schenker overhauled one-fifth of the fleet at Toton. Designated as 'Super 60s', the work was intended to extend their active lives until around 2025. First to benefit was 60007. followed by 60054/091/074/079/063/059/015/ 040/019/017/010/092/020/039/062/024/001/ 100/044/066 in that order. The work involved a complete engine overhaul and refurbishment of traction motors, bogies, control gear, cabs and electrical systems.

The 'Super 60s' were intended to haul DB's heaviest trains, including long-distance bulk oil and steel flows and iron ore trains from ports to steelworks weighing up to 3,000t to which the higher-geared Class 66s are not well suited.

In January 2011, 60011 was the first of the class to receive standard DB Schenker (now



DB Cargo) traffic red and grey after a repaint at Toton. All locomotives that went through the 'Super 60' programme were treated likewise. However, DBS and DBC have applied various forms of branding to the base livery of their locomotives, including the 'Switch on to Safety' message applied to 60007 The Spirit of Tom Kendall and, more recently, large DB logos without the Schenker suffix.

With Class 66s able to cope with most of the available traffic, EWS (subsequently DB Schenker and now DB Cargo UK) has been storing its Class 60s again as they fall due for major overhauls. With bulk freight traffic at a low ebb and the 60mph maximum speed of the '60s' making them unsuitable for inter-modal duties, just 13 remained in use with DBC in August 2023.

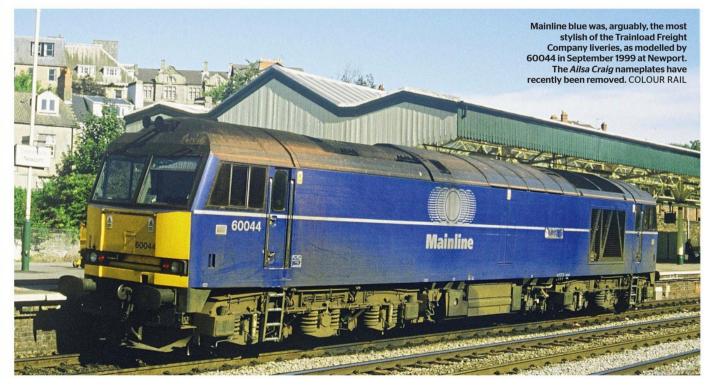
DISPOSAL AND DISPERSAL

Since 2010, DB Schenker/DB Cargo UK has offered stored Class 60s for sale in batches of up to 20 machines. Many have been sidelined

Above: 60046 William Wilberforce regained its original name following refurbishment, and was acquired by DC Rail in 2019. JOHN LAMBETH/ALAMY

for years after major failures and are in poor condition as a result of long-term outdoor storage in Toton Yard. Wabtec emerged as one potential saviour, agreeing a £10m deal for the acquisition of 20 locomotives for re-engineering, although the purchase was never completed.

Better news was the purchase of 10 stored Class 60s by Colas Railfreight in April 2014. This was the start of an interesting and colourful new phase for the class as 60002/021/026/047/056/076/085/087/095/096 were given the full 'Super 60' overhaul treatment at Toton. All were outshopped in Colas yellow/orange/black and used on a variety of freight traffic during a brief period of expansion for this operator. The 10 locomotives worked alongside Colas Class 56s and Class 70s hauling steel, timber and infrastructure trains.



Class 60 Current Fleet Status

DB Cargo UK: Active: 60001/007/010/
015/017/024/040/044/059/062/066/
074/092 Stored: 60003005/011/012/014/018020/023/025/027/030-037/039/
041-043/045/048/049/051054/058/063/065/067-069/071073/077-079/082084/088/089/091/093/094/097, 60100, 60500 (ex-60016)
GB Railfreight: 60002/021/026/047/

GB Railfreight: 60002/021/026/047/056/076/085/087/095/096

DCRail: 60028/029/046/055 (active), 60008/009/013/022/038/057/060/061/064/070/075/080/090/098/099 (stored)

Preserved: 60050/081/086

Scrapped: 60006

In July 2018, GB Railfreight took over the lease of the Colas Class 60s from Beacon Rail. GBRf required locomotives with more power than its standard Class 66s to haul heavy biomass trains from ports in the north-east and north-west of England to former coal-fired power stations. GBRf continues to use the class on biomass work – 60002/021/085/087/095 are in the operator's standard blue/orange livery while 60026 Helvellyn is in Beacon Rail blue/black and 60047/056/076/096 retain unbranded Colas colours.

Four other ex-DB Cargo machines to receive the 'Super 60' treatment were 60028/029/046/055, acquired by DCRail in 2019. Of those, 60028 is unique in the striking blue/white/grey livery of parent group Cappagh, while the other three carry DCR grey and have regained their original names. They are employed on construction traffic, transporting stone and spoil from various sites across the country – often on short-term contracts. DCR also owns 60008/009/013/022 /038/057/060/061/064/070/075/080/090/098/099 although all stored pending overhaul or stripping for spares.

In 2019, DB Cargo UK offered long-stored 60006/050/060/081/086 for sale. Ron Hull of Rotherham bought 60006/086 and 60050 to Raxstar while 60060 and GWR green 60081 were sold to private buyers. While 60050/086 were subsequently resold to a private buyer and moved to the Wensleydale Railway, in January 2020 60006 gained the dubious honour of being the first of the class to be scrapped. As this article was being written 60081 was at Toton being repainted into GWR lined green ready for its new life as a static exhibit at The One:One Collection in the former Hornby factory in Margate.

SPECIALS

Since the late 1990s, the Class 60s have provided a large canvas for a range of colourful liveries celebrating partnerships with freight customers, charities and even the British Army. Among the first were 60006 *Scunthorpe Ironmaster* and 60033 *Tees Steel Express*, which were repainted in British Steel blue by EWS in 1997. After BS merged with a Dutch steelmaker to become Corus in 1999,



Above: Sporting typically faded lettering and numerals, EWS 60042 The Hundred of Hoo passes Doncaster with a steel working in July 2008. COLOUR RAIL

Right: Prior to a repaint in blue (see page 42), Colas 60026 passes Carnforth with a timber train. ANDREW BELL/ALAMY 60006/033 quickly gained the new corporate image of silver with red logos.

Two further steelrelated liveries worth noting are Tata Steel silver/blue 60099, unveiled in September 2009, and the eye-catching

'STEEL ON STEEL' flaming vinyls applied to 60062 in June 2022. The latter is based on a similar livery carried by a DB Cargo BR185 electric locomotive in Germany and highlights DBC's role in transporting metal products.

Probably the most popular repaint was undertaken on 60081 before the EWS/RAIL open weekend at Old Oak Common depot in August 2000. The locomotive was rechristened Isambard Kingdom Brunel and turned out in full Great Western Railway lined green with polished brass name and numberplates

In 2007/08, two '60s' received special colour schemes; 60074 gained an attractive powder blue livery promoting the Teenage Cancer Trust and was named *Teenage Spirit* at the National Railway Museum in York. It was repainted in standard DB red/grey in 2014. The NRM was also the venue for the unveiling of 60040 *The Territorial Army Centenary* in plain EWS maroon (not DB traffic red) with Army branding.

Finally, DB Cargo has celebrated commercial ties with two customers on two Class 60s – 60066 carries impressive silver/blue 'Powering Drax' vinyls applied in connection with biomass traffic to the giant Yorkshire power station and 60074 *Luke* is painted dark grey with 'Puma Energy' branding.

Over the 30 years since they were delivered, most of the Class 60s have had their original names removed or replaced,



many to mark commercial deals with freight customers or partnerships with charities. Only a few retain their original names, although GB Railfreight's 60021 Penyghent and 60026 Helvellyn have regained theirs in recent years, but with Class 44 style 'plates. In April 2000, 60016 Langdale Pikes was renumbered 60500 and named RAIL Magazine to mark the 500th issue of our sister magazine (which is now approaching its 1,000th issue!).

THE FUTURE

With diesel traction and heavy industry in decline, the long-term future of the Class 60s is once again uncertain. DB Cargo's fleet is largely back in storage, with just 13 active examples in early August 2023, and while GBRf and DCRail retain small fleets, the majority of locomotives look unlikely to find new work. The possibility of reengineering locomotives with modern traction packages and/or new power units has been examined but has not yet resulted in any new investment.

Despite their popularity with drivers and obvious heavy haulage qualities, the Class 60s look set to fade gradually off the scene over the next few years as decarbonisation plans favour cleaner, greener traction and the freight business moves further towards lighter, faster inter-modal traffic.

HOW TO

CUSTOMISE A CLASS 60

George Dent models a pair of EWS-era 'Tugs', each featuring unusual livery quirks that are simple to recreate with the help of decals and a lick of paint.



s mentioned on this month's Welcome page, I've fostered an interest in the Class 60s since the project's genesis in the late 1980s.

My affection for the powerful Type 5s grew in the 2000s, as many examples began to fall by the wayside, yet their distinctive sound and earth-shaking characteristics continued to provide a daily highlight during my time living beside the Hope Valley line. Indeed, my working days would often be geared around the Tunstead-Oakleigh limestone trains, which always guaranteed a '60'.

With a handful of Hornby Class 60s already in my collection, I didn't require much persuasion to add a few more, not least as EWS- and early DB-era '60s' offer a seemingly endless array of livery quirks. BR and Trainload Freight company schemes lingered and even those gaining the red/gold corporate colours could still throw up some anomalies, especially once they'd been in service for a few years.

DB Cargo's heavy overhaul programme



ushered in a more uniform appearance, although the size and location of DB (and previously DB Schenker) logos has differed between individual locomotives.

Sticking to the EWS theme, I eventually chose two prototypes to portray, one in red/ gold and the other in a mash-up of BR Railfreight, Transrail and EWS branding. The former was helped by a few spare packs of Precision Labels decals, replicating the faded/peeled appearance of lettering and numerals often seen on this livery during later years. The packs catered for 60031, which is already in my collection but, by inverting a few spare 6s, I could recreate 60039, which has been a bit of a favourite of mine. As well as the faded branding, '039' also sported red buffers and yellow snowploughs prior to its 'Super 60' refurbishment by DB.

Triple-grey 60082 offers a very different character, with the Railfreight sector emblems having given way to the Transrail 'Big T' logos, which in turn have been covered by EWS 'Three Beasties' vinyls, which were daubed on many '60s' and '92s' during the late 2000s, pending a full repaint in EWS house colours.

Following its refurbishment, 60039 now wears DB red/grey livery and was named *Dove Holes* in 2015. In contrast, 60082 has been in long-term store, still carrying the livery depicted here.

Suitable for any scale

In addition to Hornby's 'OO' offering - plus Cavalex Models' forthcoming model - Class 60s are also available in 'O' gauge (Heljan) and 'N' gauge (Graham Farish). Similar decals are also available in 'N' and 'O', so these projects can be simply adapted to suit your preferred scale.

Red buffershanks, yellow snowploughs and faded EWS lettering and numerals were a feature of the real 60039 prior to refurbishment.





It took me a while to decide on a new identity for this EWS '60'. A few faded logo/number packs for 60031 (Precision Labels) were found in my stash, and I soon realised I could replicate 60039 by inverting a few spare 6s!



First task was to remove the existing numerals and EW&S logos. T-Cut Original was shaken thoroughly and decanted into a glass jar. A cotton bud, dipped in the T-Cut, was rubbed gently over the printed numbers.



Repeated, gentle rubbing softens and removes the numbers. Move to a clean cotton bud, dipped in fresh T-Cut, at regular intervals, as the cotton becomes clogged. Maintaining gentle pressure avoids removing too much paint.



As soon as the numerals are gone, wipe the surface with dry cotton buds to absorb any remaining T-Cut and buff to a dry, shiny finish. The process is then repeated on the EW&S logos and small numerals on the cab fronts.



Cut carefully around each decal with scissors and soak one item at a time in bowl of clean water, until it can be eased away from the backing paper. Slide the icon into position with a fingertip or a blunted wooden cocktail stick.



Keep the transfer wet while fine-tuning its position, using a clean, soft-bristled brush. The brush can also help disperse water from below the decal, soaking up the excess with a cotton bud or piece of tissue paper.

What George used

SHOPPING LIST

- F4977/8 EWS 'Three Beasties' logos, F4940/1 & F4940/2 Transrail logos, F4320/41 Black TOPS numbers, F4214/2 Overhead warning symbols (modern), RailMatch enamel paints (402 Frame Dirt, 412 Weathered Black, 419 Matt Black) and thinners Availability: Fox Transfers Web: www.fox-transfers.co.uk
- Faded EWS logos and numbers Availability: Precision Labels Web: www.precisionlabels.com
- LifeColor acrylic paints, Ultra Mask film, airbrushes and equipment
 Availability: The Airbrush Company
 Web: www.airbrushes.com
- Micro Set decal solution, MIG enamel weathering washes
 Availability: Scale Model Shop Web: www.scalemodelshop.co.uk

TOOLS

- Scalpel and spare blades
- Tweezers
- Scissors
- Cotton buds
- Paintbrushes
- Airbrush and equipment (optional)



Buffing the surface with buds produces a glossy sheen - ideal for waterslide decals. However, set the model aside overnight before applying the transfers. Brushing Micro Set solution onto the surface before the decals aids adhesion.



Soak up the excess water without disturbing the alignment of the decal, but allow it to dry naturally. Having removed the last digit from the number strip, I used a 6 from a spare decal pack to create the 9 on the end.

Masterclass



The bodyshell was left for 24 hours to let the decals dry, before sealing with an overall coat of clear satin varnish. Meanwhile, the buffer shanks were painted red and the snowploughs yellow, replicating features of the real 60039.



My research for 60039 also threw up another interesting prototype in 60082, which carried a combination of three different liveries. Hornby's 2023 release of 60001 in BR Railfreight sector livery was sacrificed.





The same method of removing the numbers and logos was employed, with T-Cut and cotton buds. Care was needed, as the paint seemed thinner on this new Hornby model, compared to the EWS version from about 10 years ago.



The Fox Transfers EWS 'Three Beasties' vinyl logos require the supplied white backgrounds applying first, with the surface prepared with a coating of Micro Set solution before sliding the transfers into place.



Allow background decals to dry before adding the top layer. Keep the surface wet while aligning the upper layer. Two sizes of stickers are provided, as EWS used large and small versions, so check your prototype carefully.



The Transrail lettering was applied next, using Micro Set solution before and after the decals were slid into position. This helps the clear carrier film settle into the recessed engine room door panels.



The Fox TOPS number pack offers ready-made numbers, requiring just the final digits to be added. Overhead warnings symbols replaced the BR-era versions on the model. When dry, clear varnish was applied to seal the decals.



I should have done this earlier, but a scrap of masking film was marked out and cut to create stencils based on the size of the former BR logos, depot plaques and *Mam Tor* nameplates originally carried by 60082.



The masking film stencil was placed over the body and a general mid-grey shade of paint was sprayed lightly from an airbrush, repeating the process in each location. This mimicked the patch-painting commonly seen on grey '60s'.



An economy of Hornby's latest Class 60 releases is the unpainted internal cooling detail, so I masked the areas and sprayed a light coat of light grey primer. This will allow the detail to show through the etched radiator grilles.



the unpainted cab interiors, so I painted them myself, using prototype images as a guide. A variety of Modelu figures were painted and installed too.





I treated the exhaust silencer of 60082 with a rendition of corrosion, built up from stippled layers of rust-coloured acrylic paints.



Weathering of both '60s' began with a mix of Black and Brown enamel washes, brushed over the roof, working the pigment into the recesses before wiping away the excess - laterally - with cotton buds.



The washes were applied in the same fashion on the sides and ends, one area at a time, wiping most of the pigment away with vertical strokes. Visible streaks remained, which gave the body a lived-in appearance.









The Frame Dirt shade was misted along the bottom edges of the bodysides and ends, aiming for a subtle effect to complement the finish created by the earlier wash treatment.



Weathered Black was targeted around the edges of the roof panels, emitted in an ultra-fine mist at low pressure, as well as around the roof grilles. Less is more at this stage, as we want to retain the streaking effects.



The final weathering step was to concentrate a misting of matt black paint around the exhaust portal. A paint with a heavy pigment is preferred, to replicate the characteristic sooty deposits created by the Mirrlees engines.



Wiper trail masks were created before the airbrushing began, cut from masking film. They can be peeled away and re-used several times, which is perfect when weathering similar locomotives at the same time.

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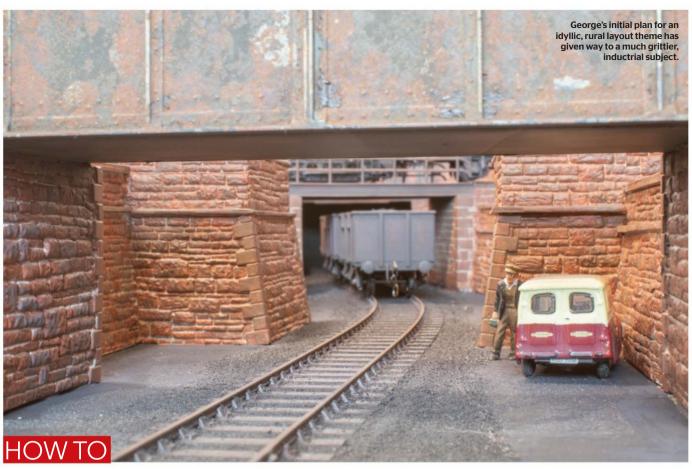
Jim Smith
Retired engineer
with a passion
for building
locomotives.

Project difficulty ratings

Easy: one screwdriver

/////

Very hard:
five screwdrivers.



CREATE A STONE RETAINING WALL

George Dent builds a bespoke retaining wall for his layout, using textured plastic sheet, foamboard and a little imagination...

s progress on my current 'OO' gauge layout project continues, a significant scenic feature was completed recently, in the form of a set of stone retaining walls.

The walls line a shallow cutting, in which a colliery line runs below a series of bridges. The restricted headroom and curved nature of the colliery line are designed to create an interesting visual addition to the overall scene. Having covered the construction of the bridges in previous issues (MR316/7), here we'll focus on how the sections of retaining wall were created.

Visual consistency would be key to getting the scene looking right, so the use of Wills textured plastic sheet was essential, as the same material features on the adjacent bridge piers, as well as the station platform and overbridge at the other end of this 4ft long baseboard. However, fixing sheets of coarse stone to the sides of the cutting wouldn't be enough - they would have to be raked at



a realistic angle to suggest that they really were supporting the earth behind them.

Additionally, a few structural features would also be required, such as a protruding horizontal plinth separating the main base of the wall from the partially decorative upper walls which, in turn would be capped with rows of coping stones.

Another consideration was how to treat the longer sections of wall, between the road bridge in the foreground and the railway bridge towards the background. Real structures would need a strengthening buttress or two, which led me to the idea of installing the remnants of another bridge, thus solving that issue, while also creating something more interesting. With remnants of abandoned track on the other side of the cutting, the foreground

siding now has a more compelling story to tell.

Most of the retaining wall sections were built in situ, but others had to be constructed on the workbench and installed later. In both cases, the Wills textured plastic sheets were 'beefed up' with layers of foamboard to provide a sturdier structure without adding excess weight to this portable baseboard. Furthermore, any large gaps behind the walls were filled mostly with scraps of packaging foam, with plaster adding the final contouring and sealing of gaps only. Again, this was to help keep the overall weight of the layout down as much as possible.

I'm pleased with how the serpentine nature of the low-level line helps to create a more engaging scene than that offered by a straight line. After all, the idea is to distract the viewer's eye from realising that the line simply leads into a dead end. The painting of the walls is not fully complete, as there is still much to do with the surrounding landscape, but it feels like I'm getting there.

TIVE OF DEATH

Work began by cutting 5mm thick foamboard into lengths, having settled upon a uniform height for the base section of the walls (below the protruding plinth). The lower edge of the foamboard was cut at a slight angle.



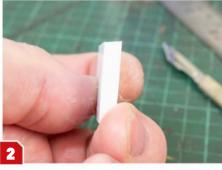
To provide greater strength, the longer sections of foamboard were laminated in double layers, creating a 10mm thick base. Again, the lower edges of each section were cut at a slight angle. The parts were glued and clamped together with a PVA-type adhesive.



The retaining walls needed to follow a shallow curve, which was formed in the foamboard with gentle finger pressure. Having cut the textured plastic stone wall overlays to size, these parts were also shaped with finger pressure.



The rows of paving slabs were cut into shorter sections to compensate for the curvature of the wall, then fixed in place with PVA. The foamboard backing offering an extended glueing surface and a consistent overhang was maintained on the outer surface.



Here's the angle cut into the lower edge of the foamboard. This will allow the wall to be angled backwards when fitted to the baseboard, although the exact angle will be set using a purpose-built template (see Step 4).



A simple template was created from a scrap of foamboard, featuring the required angle of the retaining walls in relation to the flat baseboard surface. The laminated sections of wall will now provide a much broader glueing area.



The Wills plastic stone sheet was then glued to the foamboard base with all-purpose contact adhesive, clamping the parts securely while the glue set overnight and wiping away any excess glue.



When the plinth sections had cured, the shallow upper wall sections were cut to size and installed. As these are bonded direct to the styrene paving slabs, a liquid poly cement could be employed without fear of melting the foamboard core.

What you will need

SHOPPING LIST

- Wills SSMP200 coarse stone, SSMP221 Victoria stone paving, SS76 quoins/corner stones
- Evergreen No. 165 (0.080in x 0.100in) styrene strip Availability: Peco stockists/model shops
- 5mm thick foamboard
 Availability: Arts and crafts stores

TOOLS

- Trimming knife and spare blades
- Scalpel and spare blades
- Steel rule
- Set square
- Spring clamps
- Cutting mat
- Files
- Paintbrushes
- Palette knife



The plinths separating the base and the upper section of each wall were created from sheets of Wills Victoria paving stone. Rows of paving stones were cut from the sheet with a trimming knife, making each cut over several passes.

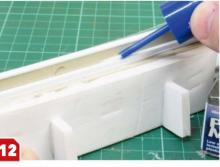


A row of coping stones was created from Evergreen 0.080in x 0.100in styrene strip from the Evergreen range. Choose a size that suits the proportions of your own wall. Again, this was bonded to the plastic wall with liquid ploy cement.

Workbench EXPERT MODELLERS SHOW YOU HOW



The angle guide template was employed to create supporting brackets for the rear of the wall, cut from 5mm thick foamboard. Once installed, these will help the wall sections to stand at the correct angle.



The support brackets have been fitted to the rear of the wall sections. As the upper sections of Wills stone wall sheet lack a support structure, I bonded square section styrene strip to the inside of the joint with the plinth slabs.



For those sections of wall created in situ, a similar process was followed, with twin laminated supports shaped to the correct curvature and fixed in place. The angle checker made sure the correct rake was achieved.



The Wills stone walling was overlaid onto the foamboard support structure, being clamped in place while the adhesive cured. The paving stone slabs were then added to form the plinth before the upper wall sections were added.



The piers of an abandoned overbridge were created from the same Wills coarse stone sheet. There was no need for a foamboard inner structure, with the three main sections of wall cut to the required size.



The angles of the piers were the same as those of the retaining wall, with the simple foamboard template again coming in handy. Wills cornerstones were added to the two outer joints.



The base of the bridge pier was fixed in place, then capped with a plinth formed from a row of paving slabs, followed by the upper wall sections. When the glue had set, any gaps were filled with acrylic putty, smoothed into the mortar courses with a damp swab.



An identical bridge pier was installed on the opposite side of the cutting, ensuring that both were aligned accurately. The upper stone walls will eventually be painted to suggest more recent masonry, added when the original girder bridge span was removed.



When the low-relief bridge in the background was finally installed, the two remaining sections of retaining wall were also fixed in place (double-checking the angle!). The gaps behind the walls were filled with scraps of polystyrene foam.







After cleaning away any dust and debris, the plastic walls were primed with Mr Surfacer 1000 (www.scalemodelshop.co.uk). The gloopy, fast-drying liquid was thinned slightly with cellulose thinners, working in a well-ventilated area.





Mr Surfacer primer dries within an hour or so, so painting could soon begin. After an all-over coat of a pale grey/stone shade, worked into the mortar courses, I began dry-brushing the surface with a red/brown shade.

lt took a few hours of building up a host of slightly different shades, all dry-brushed over the surface with a flat brush - to create the desired effect. The finish was left about 90% complete, pending the completion of scenic work.





CREATE A ROCKY RIVER SCENE

Peter Marriott models a fast-flowing river for a friend's layout, located over 100 miles away, leading to a few challenges.

hen David, a friend of mine who lives over 100 miles away, asked me to make a river for his 'N' gauge layout, I knew I had a challenge on my hands.

All water features take time to create and, while the work involved on any day might be less than 30 minutes - owing to the need for materials to dry thoroughly between each stage - it often takes me around 10 days to complete the average river or pond scene. That includes the time involved in preparing the base and adding the final touches, such as frothy waves.

In this instance, David assured me, the river would be just 30mm wide and 300mm long,



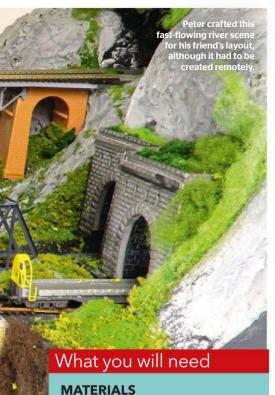
being located at the base of a steep valley and representing a fast-flowing water course, running over stones, rocks and pebbles. But apart from those measurements, how would I know the exact shape of the scene?

Helpfully, David sent me a card template of the valley floor area, which clearly detailed the shape and size of the river. Using this guide, I began assembling a suitable, portable scenic sub-base from laminated mounting board and a couple of layers of plaster cloth.

Plenty of rocks and stones would be required

and I had a few bags of Woodland Scenics Talus in stock, in fine, medium and coarse grades, which would give me plenty of textural variety. Talus is a lightweight material, which closely resembles real rock, and is available in various shades, including buff, brown and grey. I had the brown variety in stock, and I initially thought this would be perfect.

The Talus was sprinkled along both riverbanks and a little was positioned within the course of the river to represent debris. It's important to use the right adhesives when creating water effects, as some clear fluids can react against certain glues or paints. For example, PVA glue can cause some water fluids to turn cloudy, so I referred to the



- Woodland Scenics Scenic Cement, Scenic Glue, Realistic Water, White Water Highlights, Talus (coarse, medium & fine grades)
 Availability: Bachmann stockists Web: www.bachmann.co.uk
- Deluxe Materials Making Waves Availability: Model shops Web: www.deluxematerials.com

TOOLS

- Knife and spare blades
- Steel rule
- Cutting mat
- Paintbrushes

Woodland Scenics Complete Guide to Model Scenery to see what adhesive is recommended for use with its water products.

Armed with the necessary information, I secured the Talus to the baseboard with Woodland Scenics' own Scenic Cement, applied via a pipette. This was left for an hour or so before repeating the process. This ensured a thorough coating of the glue, allowing it to penetrate among the loose material and create a secure bond. The Scenic Cement is white and cloudy direct from the bottle, but dried clear.

Once the glue was dry, I realised that the colour of the Talus rocks was not as good a match with David's existing scenery as I initially thought (the perils of creating a scenic feature 100 miles away from the layout!). Rather than apply a further layer of the stones, and risk the water feature becoming deeper than planned, I tried painting the material in situ with a variety of acrylic paint shades.

Once logs and other debris were added, followed by other layers of rock when the river scene was added to the layout, the overall effect was very pleasing. Thankfully, David was also happy with the results!



This is the area of David's layout where the river will run, nestled within a steep valley. I suggested that he created a simple cardboard template of the area, marking out where he wanted the river to go. He then posted it to me.



The card template soon arrived and I made a duplicate shape from a piece of mounting cardboard which was slightly thicker than the original. I added two further pieces of card to raise the riverbanks slightly and add strength.



The card base was then covered with two layers of plaster cloth, dipped quickly into water and spread over the surface. After drying overnight, I refined the surface and filled gaps with a coat of Woodland Scenics Flex Paste.



When fully dry, the base was painted with an olive green acrylic paint to colour and seal the white plaster base. Although it was touch-dry after a couple of hours, I left the base to dry fully overnight.



The riverbanks needed to feature plenty of pebbles and rocks, so I dug out a trio of bags of Woodland Scenics Talus, featuring fine, medium and coarse grades. This lightweight material is ideal for model layouts.



a mixing bowl, leaning heavily on the fine and medium packs, with just a handful of the large, coarse grade stones.



The blended Talus was spread along bank of the river, arranged neatly with a broad, dry paintbrush. The larger stones were placed strategically, rather than simply bunching them together.



The stones were arranged on the other riverbank in a similar way, plus a few piles within the course of the river itself. Thin Scenic Cement was applied over the stones using a pipette, then a second coating an hour later.

Workbench EXPERT MODELLERS SHOW YOU HOW



Natural stone products invariably change colour after soaking with adhesive and, when dry, I realised that the shade wouldn't match the existing scenery on Dave's layout. So I painted the stones with a light grey acrylic paint, using a broad brush.



A few extra stones were added here and there, filling any gaps or adding texture to certain areas. These too had to be painted before fixing in position. I used Woodland Scenics Scenic Glue, which is thicker than Scenic Cement.



Diluted Slate Grey acrylic paint was also applied with a foam brush to add a little more colour contrast on some of the rocks and pebbles adjacent to the river.



I used some very fine twigs and laid them on the riverbanks to represent fallen branches, placed partially in the river. They were glued in position using Scenic Cement, again applied with a pipette to penetrate the loose material.



After another overnight break, the base of the river was painted with Woodland Scenics Blue Water Undercoat, working carefully around the stones on the riverbanks and within the stream.

Clear or cloudy?

Woodland Scenics Realistic Water, like most water effect fluids, is formulated to dry crystal clear. However, if you want to colour it, Water Tints are available, also by Woodland Scenics. Seven different shades are on offer, which can be inert-mixed for endless variations.

Simply add the desired amount to the Realistic Water to create a subtle tinting or an opaque finish. By mixing Water Tints and White Water Highlights, even more variation is possible. Trial runs are recommended, mixing the Water Tints with tap water to simulate how the final results will appear. Add just a few drops of the Water Tints at a time - it's surprising how much of an effect a small quantity of pigment can have on the clear fluid.





When that too had dried, I brushed a blend of grey and brown acrylic paints on certain parts of the riverbed to create greater tonal variety. I tried to keep brush strokes in the direction of the river, so any streaks would look consistent.



After a single layer of the Realistic Water, applied just a few millimetres deep, it was left to dry overnight. The next day, the fluid had cured hard and crystal clear, with a lovely glossy sheen.



I trickled Woodland Scenics' Realistic Water onto the riverbed, dragging the fluid to the sides with a wooden stick. It's one of the simplest water fluids to use because there's no mixing involved - simply it pour it on!



To add greater texture to the river's surface, suggesting movement, I added ripples using Deluxe Materials Making Waves, applied with a flat paintbrush. This gloopy gel can be shaped into peaks and waves.





The Making Waves gel created a much more authentic appearance to the river. It can be applied in stages to create larger wave effects, which is useful around boulders and against the riverbanks.



The Making Waves gel dries clear, so I added the finishing touches with Woodland Scenics White Water Highlights, which was brushed over the tips of the waves. Similar effects can be achieved simply with a matt white acrylic paint.

Peter's top tips

The most important steps to making a great water feature are:

- Ensure that the base is fully sealed before pouring the water fluid on. If you use Woodland Scenics Earth Colors Liquid Pigments to paint the riverbed, seal the area with Scenic Cement and allow it to dry thoroughly before applying the water.
- Allow nothing in the base of the sealed water feature, such as wet PVA adhesive that will react with the water fluid to create a cloudy effect.
- Get the pour right be patient and don't rush the process.



I turned my attention to the installation of the sub-base into the layout. Gaps were inevitable along the sides of the valley floor, so I mixed up more of the Talus in a pot, adding some grey acrylic paint and stirring everything around.



After fixing the sub-base into position, the coloured Talus rocks (now dry) were sprinkled along the edges of the valley to disguise any gaps. The Scenic Cement was once again applied via a pipette to keep the stones in place.



As the adhesive was drying, a little light grey paint was brushed over the freshly applied Talus stones, adding extra tonal variety and helping them to blend with the neighbouring scenery.

HOW TO

SCRATCHBUILD A LOCOMOTIVE IN'

With assembly of the Fowler 'Compound' 4-4-0 locomotive completed last month, **Jim Smith** turns his attention to the tender.

his final instalment details how the Fowler tender was fabricated from brass sheet, using similar techniques to those outlined in the previous two parts (see MR317 and MR318).

Once again, the process of building a working locomotive from simple raw materials may seem daunting but, when split into simplified stages, it's not beyond modellers with an average level of practical competence. Accuracy is important, ensuring that the chassis frames are square and that the wheels and axles are correctly aligned.

Employing printed scale drawings, obtained from the Gauge O Guild, and with the help of books and reference images, makes it easier to get the parts cut and



shaped to the correct dimensions, but there's also a fair bit of trial and error involved, too.

Finally, not everything need be crafted from scratch, as there are plenty of metal castings and detail components available off the shelf from the likes of Slater's and Laurie Griffin Miniatures.

I hope this three-part series has revealed that scratchbuilding locomotives in 'O' gauge need not be the preserve of expert model engineers. Why not try it for yourself - the sense of reward when the project is complete is hard to beat!

ere's oo. If the off t

What you will need

SHOPPING LIST

- 0.5mm brass sheet, ¼in brass hexagonal rod, various brass strip, angle and wire
- Nuts and bolts Availability: Model/hardware stores
- Wheels, axles and bearings, buffers, cast metal axleboxes, springs, brake columns, tank vents, vacuum hoses and other detail fittings Availability: Slater's Plastikard & LG Miniatures Web: www. slatersplastikard.com and www.lgminiatures.co.uk

TOOLS

- Scriber
- Fret saw or powered band saw
- Needle files
- Tweezers and pliers
- Set square
- Steel rule
- Drill and bits
- Tap and die set
- Soldering iron and equipment
- Calipers and dividers
- Clamps

TENDER FRAMES

As described in the two previous instalments, scale drawings were obtained from the Gauge O Guild (www.gaugeoguild. com) and photocopied onto a sheet of A4 self-adhesive label paper. The drawings were duplicated to allow me to cut out two identical body sides and internal and external chassis frames.

After cutting out the basic outlines from the self-adhesive paper, they were fixed onto a sheet of 0.5mm thick brass. Here, you can see that I retain the plastic film on the brass, sticking the plans on top. This provides protection to the brass while it's being cut and shaped, reducing the amount of remedial work required later.

Using the printed plans as a guide, the sides and chassis frames were cut out with an electric band saw I obtained from a Lidl supermarket. Alternatively, a hand fret saw will do the job. The parts were cut slightly oversize and trimmed to their final dimensions with files. For the openings in the outer frames, guide holes allowed a fret saw blade to be inserted, which removes the bulk of the waste, before files achieve the final profile.

The duplicated plans allowed the inner frames to be cut (lower), with the axle centres marked carefully and drilled to accept brass bearings. Note the holes drilled for the frame spacers.





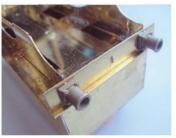


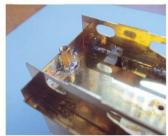
The tender's running plate/floor was cut to size, including apertures to provide clearance for the wheels. Mounting holes were drilled to align with those in the frame spacers and nuts soldered to the floor, allowing the two elements to be bolted together.

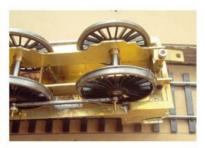


TENDER DETAILS

Headstocks were cut for the inner and outer ends, the latter being drilled for a drawhook and a pair of proprietary brass buffershanks soldered in place. A drawbar and spigot were created to link the locomotive and tender, being threaded to accept a bolt.



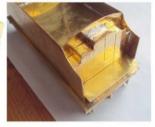






A raised footplate was created at the front end of the tender, from more sheet brass, before the bunker doors and locker panel were fabricated from flat bulkhead and shaped strips of brass. The outer face was scribed with the door seams.







Cast metal axleboxes and spring assemblies were obtained from Slater's and glued to the outer frames. Handrails were formed from wire and mounted into holes drilled into the body, adding handrail knobs at the front end.

A simple way of creating curved footsteps consistently is to drill holes into the sheet brass using a bit that

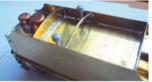
matches the curve's radius A stepped drill bit is ideal for this task. After the hole has been drilled photocopies from the scale drawings were cut and placed around the hole, then the footstep bases could be cut accurately. Steps can be added with brass strip or angle.









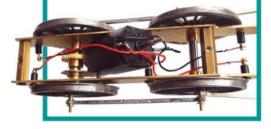


ADDING POWER

The Mashima electric motor transmits power to the rear driving axle, via a worm and single



reduction gear. I decided to fit Slater's Plastikard plunger pickups, with one working against the inside faces of the rear driving wheels, plus two pickups working onto each of the leading driving wheels. Some people like to fit them to the tender wheels too, but that would mean fitting cables linking locomotive and tender, which I prefer to avoid.





could be primed and painted.



Factfile: Fowler's LMS 'Compound' 4-4-0

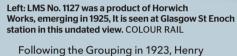
Compound steam engines operate by expanding steam in two or more stages. In railway applications, locomotives were fitted with high and low-pressure cylinders, the former taking the steam in the first instance and then exhausting it into the latter in order to make maximum use of the energy.

Samuel Johnson oversaw the building of the first three-cylinder 'Compound' locomotives on the Midland Railway in 1902, each featuring a single high-pressure cylinder inside the frames, plus two external low-pressure cylinders. Five 'Compound' 4-4-0s emerged initially before Johnson's successor, Richard Deeley, developed the principle and built a further 40 locomotives.

Designed for passenger work, the Midland Railway's 1000 Class proved a success, especially when rebuilt with superheating.

Right: LMS 'Compound' No. 40927 departs Dore & Totley with a short local train bound for the Hope Valley line in the late 1950s. What was formerly LMS No. 927 was built at Vulcan Foundry in 1927. COLOUR RAIL





Following the Grouping in 1923, Henry Fowler continued production of 'Compound' 4-4-0s, which were almost identical to the MR versions, although the driving wheels were reduced in size from 7ft to 6ft 9in. The LMS eventually built 195 examples, over several batches, between 1924-32 at its Derby and Horwich works, as well as contracting out construction to the North British Locomotive Company and Vulcan Foundry.

Given the power classification of 4P under British Railways ownership, withdrawals of the LMS versions began in 1952, with just a handful surviving into the 1960s. The last example was removed from stock in 1961 and all were scrapped. Johnson's first 'Compound', MR No. 1000, was saved for posterity, however, being part of the National Collection.



Below: One of the final batch of LMS 'Compounds', built at Derby in 1932, No. 40935 simmers away at Sheffield Midland in September 1959.



Above: One of the low-pressure outside cylinders is prominent in this view of nearly new LMS No. 1139, which was built by the North British Locomotive Company in 1925. COLOUR RAIL



Masterplan Anything goes

Track plans to get you thinking in three dimensions



magine a place where you can run full-size trains around a giant circuit at speeds of up to 125mph, 24 hours a day, 365 days a year. Build in a range of curved and inclined tracks, switchbacks and crossings and even multiple track gauges, plus facilities to test, maintain and validate everything from urban trams to high-speed supertrains and you have the perfect inspiration for a layout that really breaks the mould.

Many years ago, Model Rail was the first magazine to build a 'Total Test Facility' to put new models through their paces as part of the review process. The 'TTF' was an invaluable resource for the magazine, allowing us to identify the strengths and weaknesses of models and share our

findings with readers. On a much larger scale, global transport giants such as Siemens Mobility and Alstom use a similar process to test and approve new trains for main line service using specialist test centres scattered across Europe.

Within the next few years, the UK will join that exclusive club with its own purpose-built test centre, now being developed on a brownfield site at Onllwyn, near Swansea. When it is completed in 2025, the £200 million Global Centre for Rail Excellence (GCRE) will give the UK rail industry a place to test everything from trains to safety and control systems, track and civil engineering, IT systems and much more.

GCRE will join well-known sites such as Velim in the Czech Republic, and Siemens'

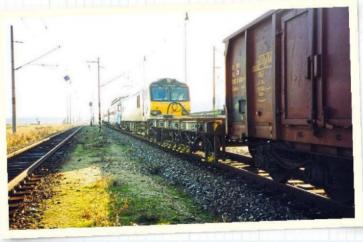
Among the first British vehicles to visit VUZ Velim were 92001/002 in 1994. Typical of the unusual formations often seen in test trains, the '92' is sandwiched between VUZ test cars and Czech freight wagons. R. SHINGLER/ WIKIMEDIA COMMONS Wegberg-Wildenrath test centre in western Germany as the focus of testing on all kinds of new rail vehicles and equipment.

LOVE YOUR LOOP

From a model railway point of view, the circular design of these test tracks lends itself perfectly to the traditional 'roundy roundy' style of layout. While we usually try and find ways to disguise the unprototypical nature of circular layouts where trains are always on view, a layout based around a test centre makes a virtue of it. It's also an opportunity to exercise your creativity by building in various curve radii, super-elevated curves, short, sharp inclines, complex switch and crossing arrangements and civil engineering features of your choice.

The existing test centres in mainland Europe were deliberately built on wide expanses of flat land (Wegberg-Wildenrath occupies part of the site of the former RAF Wildenrath, a Cold War fighter base), which can be easily replicated on a flat baseboard. However, by necessity, GCRE is taking a different approach. Working with the topography of the former colliery site, its test tracks will uniquely include high embankments, deep cuttings and replaceable bridges (see trackplan), which will be used to test new engineering techniques and monitoring equipment.

In terms of scenery and buildings, test centres are often relatively featureless greenfield sites with a scattering of simple



Arguably Europe's best-known train testing centre is VUZ Velim in the Czech Republic. In May 2018, CAF-built EMU 331001 rushes past the main buildings during validation tests prior to entering service with Northern. Stabled in the background are new trains for Italy and the Netherlands. NORTHERN TRAINS



buildings. Train testing requires a few essentials for the teams of engineers and technicians involved; an office and amenity building, laboratory buildings, a maintenance 'tin shed' or two to inspect the trains between trips, access roads, concrete hard standing/vehicle parking and a control centre, which can resemble an air traffic control tower.

Overhead Line Equipment (OLE) at centres such as Velim and Wildenrath can be energised at any of the four main European voltages (1.5kV and 3kV DC, 15kV and 25kV AC), allowing virtually any train to use them. In the early 2000s, Siemens also installed Southern Region 750V DC third-rail at Wildenrath, allowing it to test new Class 450 'Desiro' EMUs for South West Trains.

As the trackplans here show, the test tracks themselves are usually accompanied by a raft of outdoor stabling sidings and service tracks. Track can take a variety of forms, from conventional sleepers and ballast to concrete slab track. And don't forget to include the all-important link to the main line network, which is the perfect opportunity to add a line running to an off-scene fiddleyard.

WELCOME TO WALES

GCRE was set up by the Welsh Government in 2021 and will occupy a 700 hectare site at the former Nant Helen opencast colliery and Onllwyn Washery north of Swansea.

LINESIDE FEATURES

Suitable buildings are relatively easy to obtain from a wide range of sources, or you could build your own from scratch using plastic sheet from the likes of Evergreen and Slaters.

Suitable modern industrial and office buildings are produced by Peco, Walthers, Kibri and Faller for 'OO'/'HO', while Peco also offers kits of railway office buildings in 'OO'/'N'.

Other useful additions at the lineside could include Faller's electricity transformer station (item code 130958) and modern concrete road bridges, available in 'HO' and 'N'. Walthers also produces an excellent long-span concrete railway bridge suitable for 'OO'/'HO' (item code 933-4592).

Other essentials include concrete sleeper track and pointwork produced by Peco and Tillig and overhead line equipment (OLE) can be sourced from Peco, Sommerfeldt or Viessmann. Concrete slab track is not currently available off-the-shelf but would be an interesting modelling challenge.

Ancillary buildings and lineside accessories such as electrical cabins,



Faller electrical transformer station for 'OO/HO' gauge/scale. FALLER

relay cupboards are widely available in 'N' and 'OO'/'HO' from the likes of Bachmann Scenecraft, Knightwing and Peco. One feature you probably don't need to worry about is signalling - train movements within test centres are usually controlled by radio communication between the central tower and train crews. Increasingly, in-cab European Train Control System (ETCS) equipment is also being tested on new trains and the track-mounted balises and lineside markers would be an insightful addition to any contemporary modern test facility.

Whatever location or timeframe you choose for your test centre layout, the key attraction is the opportunity to break free from the clichéd conventions of locomotive depots or branch line termini and create something unusual that is still firmly rooted in the real world of today's railway.



Masterplan Anything goes

It will feature a purpose-built dynamic test facility available to the international rail industry, including two electrified test tracks; a 6.9km (4 miles 505yd) loop with a maximum speed of 177km/h (110mph) for passenger trains and a 4.5km (2 mile 1,400yd) freight and infrastructure testing loop with tighter curves designed for a top speed of 64km/h (40mph).

A twin platform station is also planned, plus infrastructure, signalling and rolling stock testing and research and development facilities.

Hitachi Rail Europe, Network Rail and Transport for Wales have already committed to the project, which is expected to attract companies finding it difficult to guarantee access to the heavily used facilities at Velim and Wildenrath, which are often fully booked years in advance.

The works will include an upgrade of the Neath and Brecon freight line, connecting the centre to the main line network in Swansea. Centres such as GCRE sidestep the problem of gaining access to the main line railway. Undertaking this intensive work away from public spaces alleviates any safety concerns and the remote location reduces the risk of noise pollution from 24-hour running. Unlike some other facilities, the GCRE will place equal emphasis on testing of trains and infrastructure – rather than just running in new rolling stock. This could include endurance testing of components under heavy freight loads, something undertaken at the Pueblo test facility in Colorado, USA (see trackplan) but not currently possible in Europe.

FROM PHANTOMS TO '700S'

Siemens' Wildenrath facility – official name Prüfcentre Wegberg-Wildenrath or PCW – opened in 1997. Using part of the former RAF Wildenrath, which was home to British military jets until its closure in 1992, it is now one of Europe's busiest and most important train testing centres.

Over the last 25 years it has hosted a bewildering array of new trains, from Deutsche Bahn ICEs and Eurostar e320 high-speed units to heavy freight locomotives, trams and metro trains. Siemens' entry into the UK rolling stock market since the early 2000s has seen the facility play an important role in the commissioning of many new British trains, including the Class 350/360/444/450 'Desiro' EMUs, ScotRail Class 385s, Thameslink Class 700s and Great Northern Class 717s. Although owned and operated by Siemens Mobility, the facility is available to other train builders, and visitors have included the Class 777s now being delivered to Merseyrail by Swiss firm Stadler.

As part of the Class 444/450 testing programme, South West Trains '4-VEP' 3810 was sent by road to Wildenrath in 2002 to provide a comparison with the new trains when working on 750V DC third-rail. It returned to the UK in early 2003, but was briefly a very unusual stablemate for the



Test oval T1

The 6,082-metre oval 1 is equipped with the ATB-EG, ETCS Levels 1 and 2, and PZB train protection systems and permits testing at speeds of up to 160kph.

Test oval T2

With a curve radius of 300 metres, test oval 2 is suitable for maximum speeds of up to 100kph on standard gauge and metre gauge track. The 2,485 metre oval is also used for trams.

Test oval T3

This straight and level track is especially suited for braking distance measurements. Over a distance of 1,500 metres, standard-gauge and metre-gauge vehicles reach speeds of up to 80kph.

Test oval T4

Geodetic reference route.

Test oval T5

The shortest test track is 410-metre gradient track for standard gauge and metre gauge vehicles. The gradients are 40% and 70%.

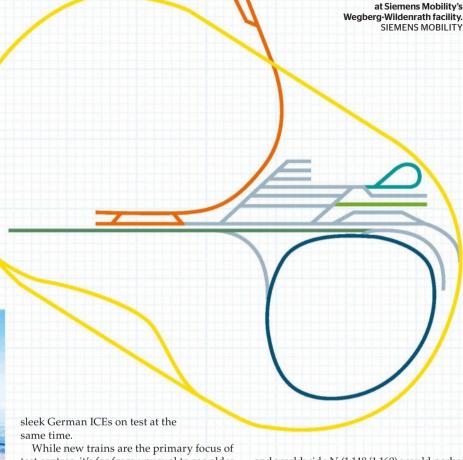
A 3D rendering of the planned GCRE test facility in South Wales, showing how it will be adapted to the topography of the former colliery site using major civil engineering features such as deep cuttings and embankments. GCRE

While new trains are the primary focus of test centres, it's far from unusual to see older vehicles too – and that's part of the beauty of these sites as an inspiration for a layout. We often talk of 'Rule 1' – it's your train set and you can run whatever you like, but in this case you really can let your imagination and interests run riot.

While the scale discrepancies between 'OO' and 'HO' (1:76 versus 1:87) or British

and worldwide N (1:148/1:160) would perhaps be too great a leap for many, the common international scale of 1:120 scale 'TT' and its universal coupling system makes it ideal if you want to run trains from different countries on the same layout. And, as the range of British outline 'TT' hopefully grows, the opportunities for mixing them with their international cousins will increase.

Plan of the track layout







Masterplan Anything goes



CZECH PIONEER

Probably the best-known test centre in mainland Europe, VUZ Velim in the Czech Republic is celebrating its 50th anniversary in 2023. Built to support the huge Czechoslovakian rail industry, which was a major supplier to Soviet Bloc countries

Left: An essential for any test facility are covered buildings for the inspection and maintenance of visiting trains. In May 2018, a Siemens-built Class 717 shows off its folding emergency steps at Wegberg-Wildenrath in Germany. SIEMENS MOBILITY

Below: A Voith 'Maxima' diesel engine is seen working a heavy test train on the Velim test track in November 2007. These were the most powerful single-engined diesel-hydraulic locomotives in the world, boasting an output of nearly 5,000hp. STEFAN PUCHNER/ALAMY

between the end of the Second World War and the early-1990s, its value was quickly recognised by train builders in western Europe after the fall of the 'Iron Curtain'.

Featuring a 13.276km (8 mile) main test ring with a maximum speed of 200km/h (125mph) – 230km/h for tilting trains – and a 4km (2 mile 800yd) small test ring, it offers an independent facility for the testing and commissioning of trains from all over Europe.

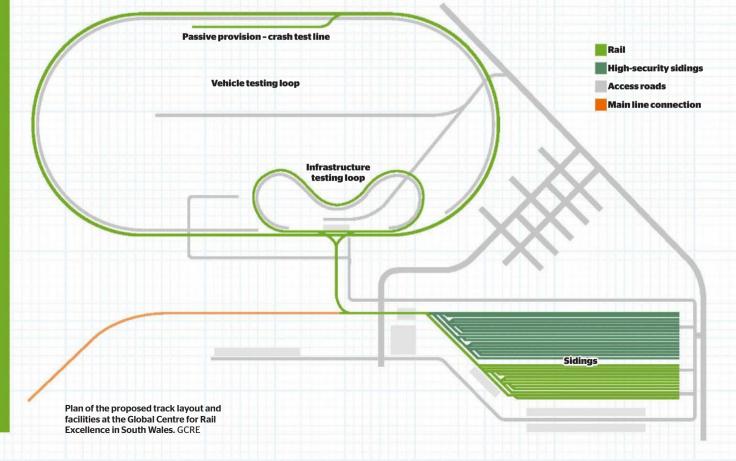
The first British visitors were two Eurotunnel Class 9/0 Bo-Bo-Bo shuttle locomotives (9003/04), which undertook 50,000km of endurance testing in August/September 1993. Also related to the opening of the Channel Tunnel, 92001 *Victor Hugo* and 92002 *H.G. Wells* were extensively tested at Velim in 1994 before the class could enter service.

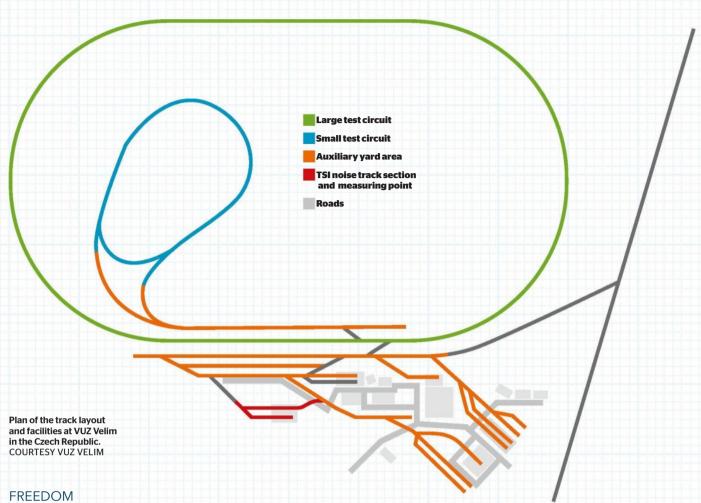
In recent years, the major increase in trains built in mainland Europe for British operators has brought a wide variety of types to the Czech Republic for validation and endurance testing.

DRS Class 68s and 88s have both visited the facility, along with a Greater Anglia Class 745 'FLIRT' EMU and Class 755 bi-mode unit, Class 195 DMU and Class 331 EMU built in Spain by CAF for Northern. Also from CAF, a Class 397 EMU and Mk 5 'Nova 3' locomotive-hauled coaches for TransPennine Express (TPE). The latter were hauled by a Siemens Vectron electric locomotive for part of their tests – a consist that would raise eyebrows on any layout!

More recently, a new Stadler Class 555 EMU for Tyne & Wear Metro visited Velim in early-2023 for dynamic testing before delivery to the UK.







While ultra-modern British trains are relatively scarce in ready-to-run 'N' and 'OO', the freedom and flexibility of modelling a test track means that you can run (almost) whatever you like. In 'OO', Hornby's Class 80X Intercity Express Trains (IETs) and forthcoming Class 755 'FLIRT' could happily run alongside Accurascale TPE Mk5s and a Dapol Class 68, but look back a generation and you can combine Accurascale Class 92s (or Revolution Trains Class 92s in 'N') with a Bachmann/Graham

Farish Class 450 and even a Hornby '4-VEP' in Network SouthEast livery.

As more RTR models of new trains appear, you can add them to your fleet to maintain a contemporary look or stick to a specific period. But don't forget that many older vehicles visit test centres too, especially former revenue-earning locomotives hauling stock moves and passenger coaches converted into dedicated test vehicles.

Rolling stock transfers often involve barrier/adaptor vehicles, such as the former

UK loading gauge IWB ferry vans and IGA flat wagons now used by German operator Railadventure and produced by Heljan in 'OO' gauge over the last couple of years.

And if your horizons reach beyond the English Channel, the opportunities are virtually endless for combining modern 'HO' scale models from different countries and diverse manufacturers such as Roco and Piko, which offer a wide range of modern European trains.







'O' GAUGE LAYOUT CREECHLY







card shells with Slaters embossed brickwork and stonework. The windows are laser cut from York Model Making and the structures are finished off with 3D-printed chimneys from Modelu to dress it up. You need the relief and the detail on the 'O' gauge models because you can't get away with flat surfaces in the same way that you can with the smaller scales. That being said, if you do want to add extra details such as a mortar wash in 'OO' or 'N' gauge, it is much more difficult than doing it in 'O' with the sheet embossed!"

Even though so many buildings have been constructed this way through Steve and Martin's layout building careers, it doesn't mean that everything always goes swimmingly. Martin had three attempts at the signal box before he was satisfied with the outcome, and two attempts at the goods shed before deeming it good enough to go on the layout. In such a small space, making something that looks convincing is a challenge even for experienced modellers.









'O' GAUGE LAYOUT CREECHLY



'O' GAUGE LAYOUT CREECHLY



"At 2ft wide, 'Creechly' is about the size of a typical domestic door and in that space you can only fit a locomotive and two or three coaches on the rails. I think that is why we always gravitate towards these railways with very small, rural stations that just happened to have summer specials that would occasionally go past. I've fallen foul of trying to get too much into a small space in the past. With 'Creechly' it's only covering just shy of 80m, so less than a football pitch. Yes, there would be details in that space, but not a huge amount."

For many of us who put our hearts and souls, plus

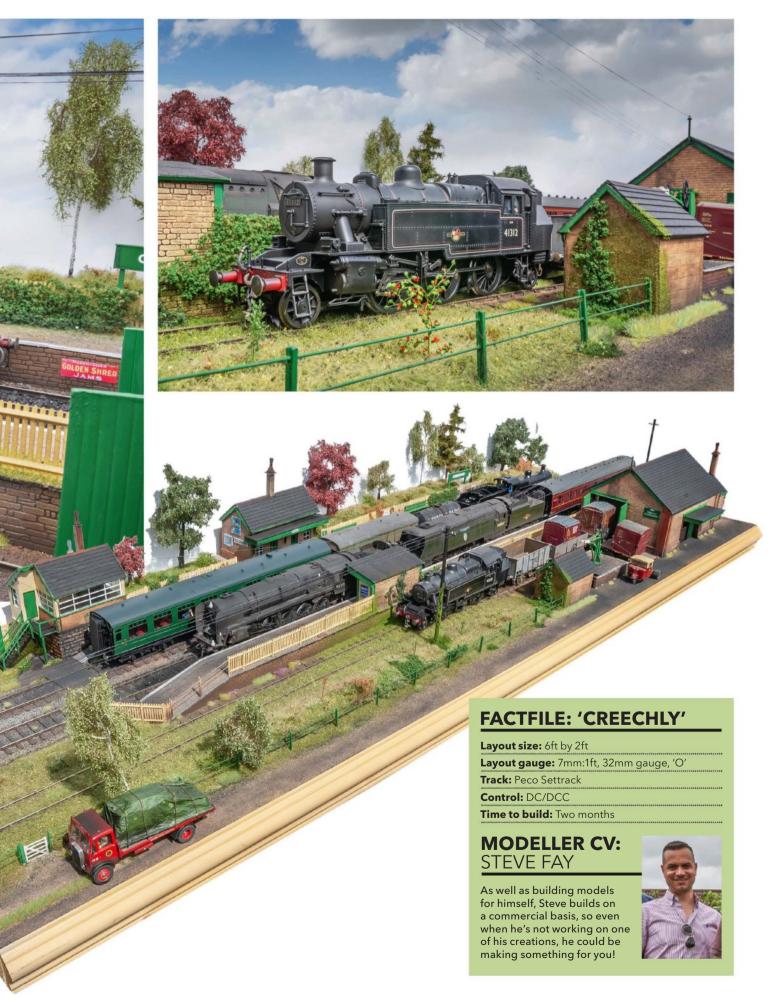


some blood, sweat and tears, into our layouts over many years, the thought of then selling them is unfathomable. We develop a sort of emotional attachment to them. One of the reasons that Steve's commissions are so successful is that he can move past the attachment to a layout and gets his enjoyment from another area of the hobby.

"I get the majority of my enjoyment from seeing the look on my customer's faces when they get their product and, because my favourite part of model railways is the building rather than the operating, once a layout is done I'm happy to see it go to a loving home. Don't get me wrong, I have a couple of personal layouts that I would find too difficult to let go but you are always fighting for space, so I need to keep selling projects to make space for the next one! It has never become a chore for me as I like being able to disappear into my miniature world when I come back from work and look to see if the glue is dry so I can make a bit more progress on whichever model I'm working on at the time. I'm already booked up for the rest of the year so there's a lot to keep me busy!"

With so many high-quality layouts leaving Steve's workshop it's no surprise that 'Creechly' has already found a new home, at the Mid-Hants Railway. If you'd like to see 'Creechly' in person, it will be on display at the heritage line on certain days. Don't miss your opportunity to see it!





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How we test

At Model Rail, we pride ourselves on the quality, thoroughness and unbiased nature of our reviews. We assess models on their looks, performance, features and value for money. We also run them on our own test tracks, which feature various gradients and numerous challenging track configurations.





Heljan Class 55 'Deltic' (later version)

◆ GAUGE 'O' ◆ MODEL Heljan 5531 BR Class 55 'Deltic' 55019 Royal Highland Fusilier, BR blue (preserved)

◆ PRICE £729.00 ◆ AVAILABILITY Heljan stockists Web www.heljan.co.uk

t will soon be 42 years since British Rail withdrew the last 'Deltics', with the final Class 55s taken out of service in January 1982.

Accordingly, the surviving examples have now operated twice as long in preservation and Heljan's latest batch of 'O' gauge 'Deltics' finally cater for fans of the Napier-powered diesels in their later years.

Despite releasing a 7mm scale 'Deltic' back in 2011, the Heljan

tooling offered limited choice, with the four-character headcodes and several other features suiting the 1960s and early 1970s era.

As visitors to recent exhibitions will attest, there's now a burgeoning market for 'O' gauge diesels representing the late 1970s and 1980s period of British Rail and Heljan has duly answered the call from enthusiasts to portray these mighty Type 5s in their post-1976 guises.

Overhauls and modifications changed the appearance of the 'Deltics' during this time, with headcode panels plated over, air horns repositioned to the bonnets, cabside quarterlight windows covered and the addition of Electric Train Heating (ETH) jumper cables and sockets.

The new tooling also includes provision for high-intensity headlights, as carried on main line registered preserved 'Deltics'.

Several versions are available





The inside of the 'Deltic' reveals a thoroughly revised electrical system, with plug 'n' play DCC conversion now possible >>

in this production batch, due to arrive with retailers as this issue hits the shelves. BR blue prevails on all but two models, including 55002 *King's Own Yorkshire Light Infantry* in retro-style BR two-tone green with full yellow ends, as it appeared during its latter days in BR service and early preservation career.

As per Heljan's usual approach, there's a choice of un-numbered and fully finished versions, with and without white cab surrounds. There's also 55022/D9000 Royal Scots Grey, complete with silver fuel tanks, radiator grilles and other adornments, as it appeared on countless farewell railtours prior to withdrawal of the class.

Our sample depicts 55019
Royal Highland Fusilier in
post-BR condition. Having spent
most of the 1980s working on the
North Yorkshire Moors Railway,
55019 was re-registered for main
line work during the early 2000s.
Since then, it has remained
operational (though no longer

main line registered) and is in the care of the Deltic Preservation Society.

A MODERN 'DELTIC'

This is an impressive model, partly in terms of its sheer presence, but also in regard to its looks and performance. The revised tooling allows for the correct detail combinations to be observed, with the bonnetmounted horns, reduced number of windscreen wipers, plated-over quarterlights and the presence of ETH gear and high-intensity headlamps.

The former headcode panels feature twin marker lights, complete with rubber grommets picked out in black paint. The orange cant rail stripe and post-privatisation overhead line warning stickers date 55019 to its stint of main line operations during the 2000s.

The overall character of the prototype has been captured well and the level of detail on the

bodyshell and chassis is fantastic. Fine wire handrails are fitted throughout, and the distinctive cab door handles are separately fitted parts, providing extra relief.

The cant rail grilles are plastic and resilient to handling, yet their see-through nature provides a welcome sense of depth. The roof grilles are etched metal, revealing red fans below, which are operated by a pair of separate electric motors.

Like the original Heljan Class 55s, the bogie frames are superb, with suspension and brake gear rendered accurately. The safety chains add extra





Period-specific details, such as plated-over headcode panels and cab quarterlights, high-intensity headlights, ETH jumper cables and repositioned horns.



Roof fans operated by a pair of separate electric motors.



Upgraded electronics, including plug 'n' play DCC interface.

finesse and are mounted to the chassis rather than the body, so there's no issue when removing the shell to gain access to the interior.





English Electric built a striking diesel prototype, named Deltic, in 1955, equipped with a pair of lightweight Napier powerplants, of a design originally created for Navy gunboats. The engines featured a triangular, opposed cylinder arrangement, hence the 'Deltic' name, which was derived from the Greek letter Delta. Detailed trials of the Preston-built prototype were undertaken on British Railways' West Coast route and, although the London Midland Region eventually deemed the prototype unsuitable, staff on the Eastern Region had other ideas.

Unimpressed by the new Type 4 1-Co-Co-1s (Later Class 40), the Eastern Region requested its own trials with Deltic, which ultimately led to an order for 22 production series locomotives being ordered by BR in 1959. Built at Vulcan Foundry, Newtonle-Willows, the production 'Deltics' entered service in 1961-62 and, with the improved Napier power units capable of generating 1,650hp each, the twin-engine locomotives transformed express train travel on the East Coast Mainline, offering sustained 100mph running.

Although not without their technical problems, the 'Deltics' proved successful and became extremely popular with enthusiasts, as their supreme performance and characteristic drone marked them out from the diesel crowd. The arrival of BR's High Speed Train (HST) in the late 1970s spelled the end for the 'Deltics', which had become Class 55 under the TOPS system. The Napier engines required regular, expensive servicing and, despite 'Deltics' finding new work on secondary ECML and trans-Pennine services, the entire class had been withdrawn by January 1982.

Six examples have been preserved -55002/9/15/16/19/22 - all of which have run on the main line.

3: The 'Deltics' drew crowds of enthusiasts wherever they went. 55021 Argyll & Sutherland Highlander runs light through York, heading for the depot, in September 1979. COLOUR RAIL





1: The later years of the 'Deltics' saw BR staff adorn the Type 5s with embellishments such as white cab surrounds, red bufferbeams and silver buffers. 55003 Meld rests at King's Cross stabling point, April 1979. COLOUR RAIL

2: Suitably bulled-up and leaking steam from the train heating system, 55009 Alycidon heads south through Dent with the 'Deltic Cumbrian' railtour in November 1981. COLOUR RAIL



Other items to complement this model.

Mk 1 STOCK

Mk 1 stock was regularly hauled by the 'Deltics', especially during their early years and in preservation. Lionheart's Mk 1s are highly regarded and a new production batch is due soon.

Price: £222.44 each **Availability:** Dapol stockists www.dapol.co.uk



Mk 2 STOCK

Heljan's forthcoming range of Mk 2/Mk 2a coaching stock will make an ideal load for a BR blue 'Deltic. They're expected to arrive

early next year. **Price:** £299.00 each Availability: Heljan stockists www.heljan.co.uk



TRAIN CREW

Filling the cab with a driver and secondman will add the finishing touch.

Price: From £7.50 each **Availability:** Modelu



Talking of which, the inside of the 'Deltic' reveals a thoroughly revised electrical system, with plug 'n' play DCC conversion now possible, using an ESU LokSound V5 XL decoder. Space is provided within the fuel tanks for a pair of 66mm by 29mm speakers, while mounting lugs are provided atop the chassis for a pair of ESU smoke generators.

For analogue users, a bank of microswitches inside one of the bonnets allows the head and tail light functions to be

adjusted, along with the cab interior lighting.

The cabs feature a good amount of detail on the control consoles, but the curved bulkheads - which provide clearance for the motors and flywheels - are visible through the side windows, especially when illuminated.

The level of finish is excellent, with clean separation between the blue and yellow elements, while the printed logos, numbers, data panels and nameplates are

all first class. Even the cant rail stripe is applied neatly, especially over the radiator grilles, which is no mean feat.

On the rails, the 'Deltic' thrums along beautifully, the twin flywheel-fitted motors providing plenty of power and poise. Although I didn't have time to source and fit a DCC sound decoder and a pair of speakers, I can imagine how the sound of a pair of Napier 'Deltic' engines would add an extra dimension to this model.

The arrival of this re-tooled Class 55 is very welcome and the first batch of models is likely to prove popular with 'O' gauge modellers. (GD)

SUMMARY

PROS

- Looks and overall level of detail.
- Much requested late BR era tooling.
 - First-rate finish.
- Enhanced technical specification.
- Superb performance.

CONS

Not a lot.

FINAL VERDICT

Fantastic.

HELJAN BR CLASS 55 'DELTIC'

Manufacturer: Heljan Ref. No. 5531 **Unit No.** 55019 Scale/gauge: 1:43.5 scale, 'O' gauge Body: Plastic with metal parts

Chassis: Metal with plastic parts Weight: 2.4kg

Min. curve radius: 1,524mm (5ft) Wheel back-to-back: 29mm

DIMENSIONS 1:43.5 SCALE MODEL PROTOTYPE Length 69ft 6in 487.3mm 487mm Height 12ft 11in 90.4mm 91mm Width 8ft 91/2in 61.5mm 61.5mm Wheel diameter 25mm 3ft 7in 25mm Bogie wheelbase 13ft 6in 95mm 95mm

How to dismantle: Body unscrews from chassis. Where to oil: Gears, bearings and axles - see instructions.

ELECTRICS

Electrical system: 12V DC two-rail Motor type: 2 x five-pole motors Lights: Directional head/tail lights, interior lights

DCC-ready: Yes, ESU LokSound V5 XL#58515

Drive system: Each motor drives all three axles per bogie via gears. Flywheel(s): Two Traction Tyres: No









Hornby 'Tyne Dock' BR Class 9F 2-10-0

◆ GAUGE 'OO' ◆ MODEL Hornby R30133 BR Class 9F No. 92097, BR black, Tyne Dock version ◆ PRICE £252.99 ◆ AVAILABILITY Hornby stockists Web www.hornby.com

n the early 1950s, the Tyne Improvement Commission, British Railways and the Consett Iron Company launched a joint project to improve the flow of iron ore from Tyne Dock to the steel works at Consett. Automated loading and unloading facilities were installed and a fleet of new, high-capacity hopper wagons built with air-operated discharge doors.

Initially, these new wagons were hauled by a dedicated fleet of 'O1' 2-8-Os and 'Q7' 0-8-Os, each equipped with air pumps to operate the wagon's doors. As BR's Standard Class 9F 2-10-Os came on stream, ten examples (Nos. 92060-66 and Nos. 92097-99) were modified from new, with twin Westinghouse air pumps, reservoir tanks and piping.

The '9Fs' replaced the ex-LNER traction in 1956 and their superior tractive effort allowed each train to be increased to nine wagons. That said, loaded trains still required banking assistance from a second '9F' on the fearsome inclines towards Consett.

All of the 'Tyne Dock' Class 9Fs were coupled to BR 1B pattern tenders and the final steamhauled ore trains from Tyne Dock ran in late 1966, with the 10 '9F's withdrawn at the same time.

Having released an all-new '9F' last year (see MR306), Hornby made it clear that a 'Tyne Dock' version would soon follow. The first such model comes in the form of Crewe-built No. 92097, in plain black with the later style BR emblems on the tender.

The majority of the locomotive is identical to last year's release, so this review will concentrate on the specific modifications, the most prominent of which is the addition of twin Westinghouse pumps on the right-hand footplate.

More precisely, the air pumps are set into a gap in the footplate, as per the real thing, with a short step mounted in between to maintain access along the side of the boiler. The step features an authentic tread pattern and each pump is linked with long pipe runs leading from the smokebox

and the extra array of 'plumbing' in front of the cab.

On the opposite side of the locomotive, a pair of cylindrical air tanks sits below the running plate and, again, they feature moulded plastic valves and pipework. In contrast to the '9F' I reviewed last year, No. 92097 also sports a full set of AWS equipment, with an air tank and battery box below the cab, with associated conduit and pipework running along the edge of the running plate, which is nicely done.

Correctly, No. 92097 sports a single chimney (as did all 10 'Tyne Dock' '9Fs') and the smokebox door hinges and door handle boss are picked out in silver - is this based on an image of the real thing towards its latter days? No shedcode plate is installed, but the Crewe builder's plates are neatly printed, with the correct year of 1956 legible. Overhead warning flashes are present, on the boiler and smoke deflectors.

A bag of details provides





a dummy screw coupling, vacuum pipe, cylinder drains and front footsteps, plus a footplate crew. Surprisingly, the bufferbeam-mounted air hoses are not provided - two of which were fitted to each end of the 'Tyne Dock' 2-10-0s.

The BR 1B tender offers a convincing replica of the real thing, with the Timken roller bearing axleboxes picked out in yellow and the intermediate bulkhead within the bunker rendered complete with strengthening brackets.

Overall, build quality is high, but there are a few niggles here and there. Most notably, the characteristic injector pipework has been fitted sloppily and the cab front spectacle glazing suffers from smeared glue. There's also an area of solvent damage to the paintwork just in front of the cab.

Hornby's 2023 '9F' tooling features a 21pin DCC socket within the tender, with ample space for a speaker beside it. The locomotive and tender come



pre-connected, but the coupler bar can be adjusted for a closer union, if desired.

The minor points regarding build quality aside, this is an impressive model. Having already offered a Franco-Crosti '9F' in the past - albeit using the older tooling - it's great to see another variation on Riddles' 2-10-0 from Hornby. Coincidentally, Hornby's model has arrived at the same time as Bachmann's 'Tyne Dock' Class 9F, developed as part of its upgrade to the existing tooling.

Who'd have thought we'd be spoiled for choice for models of a small, unique fleet of locomotives which enjoyed criminally short working lives? With KR Models recently offering RTR Consett ore hoppers (and Dave Bradwell's kit still available), these famous freight trains can now be modelled with ease. (GD)

3 things we like



Westinghouse pumps on the right-hand side, with associated pipework.



Air tanks on the left-hand side, again with correct pipework.



AWS air tank, battery box and conduit below the footplate.

SUMMARY



PROS

- Looks and quality finish.
- Impressive level of detail.
 - Super-smooth
 - performance.

 Welcome '9F' variant.

CONS

A few QC issues with our sample.



Impressive.



Rapido Trains UK BR'

◆ GAUGE 'OO' ◆ MODEL Rapido Trains UK 904001 BR '15XX' Pannier tank, No. 1506 unlined black ◆ PRICE £149.95

AVAILABILITY Rapido Trains UK stockists Web www.rapidotrains.co.uk

aving worked with Bachmann to produce the SR 'USA' 0-6-0T with its short wheelbase 'dock shunter' chassis and bulky boiler/tanks arrangement, the Model Rail team gave some thought to what other locomotives might be produced with a variant of the same basic chassis geometry. Not surprisingly, the Hawksworth GWR/BR '15XX' came up in conversation, as this was another short wheelbase 0-6-0 with a substantial boiler/tank 'body' to house the mechanism, decoder and speakers for a sound version.

In the event, nothing came of it, but it was no surprise when the '15XX' O-6-OPT was announced as an early project by the newly created Rapido Trains UK. In the meantime we've had an industrial 0-6-0ST from Rapido and the diminutive L&MR Lion 0-4-0 but the Hawksworth-designed. Swindon-built '15XX' O-6-OPT is the first mainstream 'OO' BR locomotive we've had the privilege of reviewing, and it is also the largest Rapido locomotive to date.

small box but with the usual 'clam-shell' packaging surrounded by a foam 'cushion'. Included in the box is an owner's manual booklet and a small bag of customer-fit parts. Fitting most of them will depend on whether or not you plan to retain the tension-lock couplers.

Once the clamshell is opened and the model taken out, two things become immediately apparent - it is both heavy and cold to the touch. This is because the construction of the model is substantially die-cast metal. Indeed, it's a 'grown-up' version of the system used on the '16XX' with a mainly cast metal boiler/ tanks/cab unit. On the '15XX'

however, the entire bunker is also part of the metal casting. The fire-iron hooks, lamp irons and handrails are all separate fittings, glued into the castings.

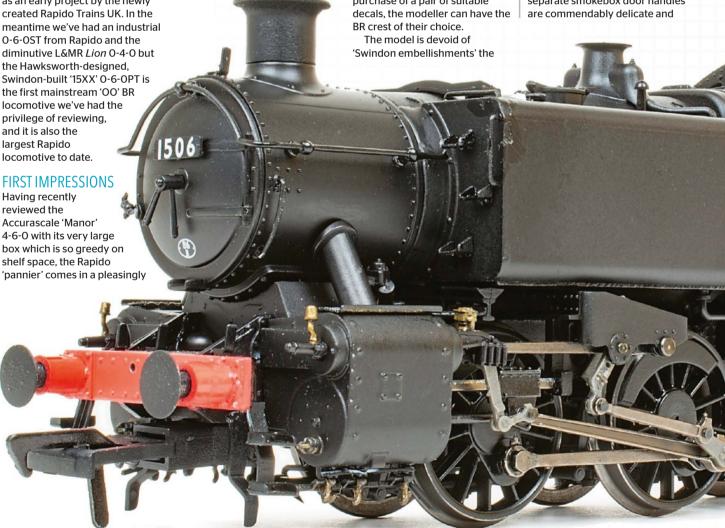
Overall, the 'face' of the locomotive is convincing and the appearance of brutish power is certainly evident. These locomotives appeared to me always to be 'leaning forwards' like a figure hauling a weight over his shoulder, and the model has captured that look. The sample supplied for review is finished in unlined matt black as No 1506 with an 86B (Newport Pill) shedcode. It is devoid of BR emblems which is actually quite handy, as both early and late crest models are sold out at Rapido's warehouse, and with the purchase of a pair of suitable decals, the modeller can have the BR crest of their choice.

chimney cap and safety valve bonnet being finished in the same matt black as the rest. The only relief is provided by the dirty 'brass' whistles and the matt red bufferbeams.

A CLOSER LOOK

Despite its big and brutish appearance there are some nice little features to admire on the '15XX'. The separately fitted top-feed pipes and the 'strap' across the front of the tank tops add interest to an otherwise detail-less area. There are separately fitted tank fillers and 'mushroom' vents, too. The whistles and whistle shield are a little work of art.

On the smokebox front, the BR numberplate looks correct, the separate smokebox door handles



15XX' 0-6-0T



the tiny steam-lance cock on the smokebox rim is the icing on the cake. The weight of the metal parts and delicacy of the plastic details does mean that the latter are vulnerable to careless handling, but no parts had come adrift in the packaging.

The customer-fit details include a couple of shovels which can be

glued to the hooks on the bunker rear, as well as the spare lamp irons which were fitted above the cylinders on some examples. It would have been nice to have a pair of etched numberplates but these are, perhaps, the only detail opportunity Rapido has missed and, to be fair, Chinese-produced etchings are not



a torch, the dials can be seen to be printed, the regulator handle is separate and painted red and when running there's an illuminated firebox. This can be controlled by a DCC decoder if fitted. The cab front and rear are glazed, the rear windows having the customary bars to prevent breakage when being coaled.

Despite the initial impression of plainness accentuated by the lack of rivets (Hawksworth preferred welding) there is some exquisite detail. Check out the cylinder drain pipework, the delicate front step units and the chequer-plate over the cylinders, for instance.

CHASSIS AND RUNNING

There is something very fascinating about the movement of model Walschaerts valve gear, and on this model it is particularly good. The rods and motion are commendably fine but quite durable blackened metal parts and the coupling rod is jointed to take maximum effect from the sprung centre axle. This allows the model to take second radius curves in its stride but also contributes to the almost mesmerising effect of the valve gear when running.

The model has an iron-core motor (not coreless) but despite this the instructions still recommend not using a feedback controller. Rapido has long been one of those manufacturers that wants us to upgrade our controllers to modern standards to match the advances in their models, and rightly so. I had seen some online comments about the

3 things we like



The 'face' looks correct.



Valve gear movement.



Detailed cab interior.

performance of this model 'waggling' motion and erratic
running - but our sample
exhibited no such problems,
running smoothly and slowly
right from the start. If yours
exhibits problems, Rapido asks
that you follow the company's
warranty procedure and return it.

I ran the model on test, running light at first and looking for signs of 'waggling' or jerkiness. There were none. It needs to be remembered that crews tended to 'open up' steam locomotives and perform most shunting movements with a bit of vigour. The 'super-creep' crawl that is possible with a diesel simply was not how steam locomotives worked. The '15XX' performed faultlessly throughout the speed range and I am still mesmerised by that Walschaerts movement.

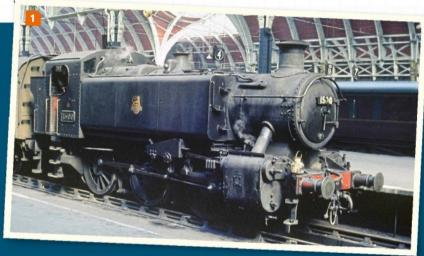
Rapido Trains UK BR '15XX' 0-6-0T



Factfile: Hawksworth '15XX' 0-6-0PT

F.W. Hawksworth's contribution to the ranks of GWR pannier tanks included two classes at opposite extremes. On the one hand his '16XX' class (modelled in 'OO' for *Model Rail* Exclusives by Rapido Trains Inc.) of small lightweight 0-6-0PTs were a modernised version of the ancient and traditional Swindon '2021' class. On the other, his '15XX' class comprised just 10 locomotives whose upper parts were similar to his '94XX' class but which had outside cylinders and Walschearts valve gear, quite unlike any previous Swindon 0-6-0.

There has been some suggestion that he took his lead from the American 'S100' 0-6-0Ts which came to the UK during the Second World War, in terms of the short wheelbase, but the timeline of both classes tends to refute this. Quite why the short wheelbase 'dock shunter' chassis was produced is unclear as none of the class seems to have been used for dock shunting. The majority of them were allocated to Old Oak Common (81A) where they were mainly used for the demanding task of working empty stock in



and out of Paddington, when 12 and even 14 coach trains were the norm. I certainly recall seeing them engaged in this work whenever I visited Paddington and my surviving Abc shows that I had copped four: Nos. 1500/3/6/7.

A small number of '15XXs' headed further afield, working out of Didcot, Severn Tunnel Junction, Newport and Cardiff Canton sheds, mostly on freight traffic, plus the odd passenger turn. 1: Class doyen No. 1500 busies itself shunting empty coaching stock at Paddington, in April 1963. COLOUR RAIL

2: Old Oak Common shed is host to '15XX' No. 1503 in June 1963. COLOUR RAIL

3: Plain black No. 1506 rests at Ebbw Junction, South Wales, in February 1961. COLOUR RAIL





Perhaps its because my other Western and Southern locomotives don't have outside Walschaerts.

The '15XX' proved to be remarkably smooth and quiet in operation and, thanks to its weight, adhesion is no problem. I loaded it to a maximum of 13

bogie vehicles - Hornby, Bachmann, Lima, and Accurascale. and the '15XX' was unfazed. It would pull them competently at realistic speed or romp round the layout with them. Incidentally, I note that the DCC-equipped version has a 'train-set' mode for those who desire a faster,

less authentic speed range.

Finally, for a bit of fun I doubleheaded the 13-coach test train with two Hawksworth panniers, the '15XX' and a Model Rail '16XX'. The two proved to be very well matched and ran together flawlessly despite being a very unlikely combination. (CJL)

System

Other items to complement

MIXED FREIGHT STOCK

There's an endless choice of 'Big Four' and BR-era covered vans and open wagons available from Accurascale, Bachmann, Dapol, Hornby and Rapido.



BR Mk 1 STOCK

Maroon, crimson and cream or chocolate and cream Mk 1 stock for ECS workings. Hornby and Bachmann can provide.

Price: From £42.49 each Availability: Bachmann and Hornby stockists



GWR HAWKSWORTH STOCK

The '15XX's also hauled Hawksworth passenger stock, with Hornby's models being ideal.

Price: from £44.00 each Availability: Hornby stockists



PROS

- Great attention to detail.
- Weighty, well-designed construction.
- Smooth performance.
- Fictitious GWR livery offered.

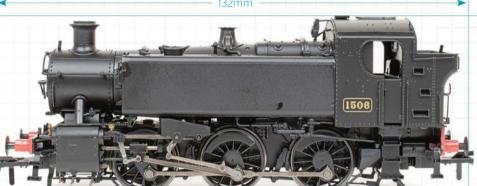
CONS

 Some minor quality control issues.



Hefty and powerful - great!









FACTFILE: RAPIDO TRAINS UK BR '15XX' 0-6-0T

OVERVIEW

Manufacturer: Rapido Trains UK Ref. No. 904001 **Unit No. 1506** Scale/gauge: 1:76 scale, '00' gauge **Body:** Metal with plastic parts Chassis: Metal with plastic parts

Weight: 313g (11oz) Min. curve radius: 438mm (second radius) Wheel back to backs: 14.5mm DIMENSIONS PROTOTYPE 1:76 SCALE MODEL 33ft 132mm Length 132mm 12ft 61/2in 50mm 50mm Height Width 8ft 7in 34mm 34mm 18mm 18mm Wheel diameter 4ft 71/2in 25mm x 26mm Coupled wheelbase 6ft 4in x 6ft 6in 25mm x 26mm

How to dismantle: Four screws - under body and tank fillers. Where to oil: Axles, bearings, gears - see instructions.

ELECTRICS

Electrical system: 12V DC two-rail Motor type: Iron-core Lights? Firebox DCC-ready? Yes, Next18 socket

MECHANISM

Drive system: Worm and gear drive to rear axle Flywheel(s): Yes Traction Tyres: No



Accurascale Class 37/6

◆ GAUGE 'OO' ◆ MODEL Accurascale Class 37/6 37605 DRS blue ◆ PRICE £169.99 (DCC-ready), £259.99 (DCC sound)

◆ **AVAILABILITY** Accurascale stockists **Web** *www.accurascale.co.uk*

he third batch of
Accurascale's Class 37s
arrived in September
and we were lucky
enough to receive a sound-fitted
sample of 37605, resplendent in
the original Direct Rail Services
blue livery.

The Class 37/6 fleet was created in the mid-1990s, when a dozen locomotives were converted for European Passenger Services (EPS), with the intention of hauling Nightstar services between London and the South West/South Wales, as well as moving Class 373 Eurostar sets with the aid of barrier vehicles.

The 12 chosen locomotives were taken from the Class 37/5 sub-class (confusingly, some of the refurbished Class 37/5s - designed for freight work - also carried numbers in the 376XX series!) and modified at Doncaster Works in 1994. Along

with the previous modifications, including extra fuel tanks and replacement alternators, the new '37/6s' were fitted with ex-Class 50 bogies, re-geared for 90mph running. Electric Train Supply equipment was also installed, with external control switch panels added to each side of the nose. Vacuum brake gear was removed and extra jumper cables were fitted to the front of each nose.

Originally turned out in triple-grey livery, with Channel Tunnel roundels, their EPS career proved to be short-lived, with the Nightstar project cancelled in 1997. However, examples were soon snapped up by Direct Rail Services, with six initially purchased that same year and more added as EPS gradually disposed of the remaining fleet. DRS soon put the '37/6s' through its own refurbishment

programme, leading to the nose ends being equipped with new light clusters and multiple working sockets, along with headlamps mounted above the cab windscreens. The cab interiors were modified too.

As per Accurascale's previous offerings, our sample of 37605 features details specific to this individual prototype. Firstly, the riveted roof panels reveal that this was one of the earlier





Cab consoles are the icing on the cake, complementing the interior lighting

Class 37s to emerge in the 1960s, built originally as splitheadcode D6736. The horn grilles and plated over communication door panels are further evidence of the locomotive's heritage.

The welded long-range fuel tank and ETS switch panels, received during the EPS refurbishment programme, are also accurately portrayed. The distinctive, working light clusters really look the part and the partially recessed multiple working sockets on each nose are extremely well rendered. Attention to detail even extends to the revised cab interior layout with vestibule screens installed and revised control consoles, all picked out accurately in appropriate paint shades.

The illuminated dials on the cab consoles are the icing on the cake, complementing the interior lighting (which can be switched via DCC or using the bank of micro switches located on the main circuit board). Access to the main PCB and DCC socket is simple, as the roof panel can be lifted away, being retained with the aid of miniature magnets.

Having reviewed two previous

Accurascale '37s' this year (see MR314/316), there's little point repeating the superlatives regarding the overall package. However, further distinct features of the real 37605 are worth pointing out, including the rendition of the cast Class 50 bogie frames, which make a striking contrast with the regular, fabricated units found below the majority of '37s'. The heavy duty chequer plate tread panels below each cab door are also impressive.

Application of the DRS livery is first class, with accurate shades and neatly printed logos and smaller instruction panels along the lower bodysides. This is my personal favourite DRS scheme and was carried by 37605 from 1998 until 2012, when the 'Compass' style scheme was applied, offering a fairly long operating window in this condition.

There's
plenty of suitable rolling stock for
DRS locomotives these days,
including Accurascale's various
PFA wagons and nuclear
containers, plus Bachmann's FNA
flask carrier. The '37/6s' also
hauled inter-modal and
engineers' wagons too, of which
there is plenty of choice from
Bachmann, Hornby and Dapol.

This is yet another superb Class 37 from Accurascale, depicting a popular prototype that enjoyed a distinguished career. It runs beautifully and this sound-fitted version offers ultra-realistic tones and endless play value. Sadly, the real 37605 has been reduced to a parts donor for several preserved classmates, but at least it lives on in this beautiful model. (GD)

3 things we like



Nose end detail is spot on, especially the modern lamp units, complete with catches.



2

Overall level of underframe detail is superb, including speedometer drive and sanding gear.



Electric Train Supply switch panels printed beside the emergency fire panels.

SUMMARY

PROS

- Overall looks and fidelity.
- Superb level of detail.
 - Super-smooth performance.
 - Great sound.
 - Top-notch finish.

CONS

Nothing.

FINAL VERDICT

Fantastic.



EFE Rail 'J94' 0-6-0ST

◆ GAUGE 'N' ◆ MODEL EFE Rail E85504 J94 Austerity 0-6-0ST NCB green Amazon ◆ PRICE £124.95 ◆ AVAILABILITY Bachmann stockists Web www.bachmann.co.uk



t may not have the glamour of a 'Pacific', but the humble War Department 'Austerity' 0-6-OST must surely rank as one of the most important steam locomotive designs in UK history. Built in large numbers by a variety of manufacturers, over a 20-year period, examples continued in frontline industrial use into the 1980s and a staggering number survived into preservation.

Offered in 'N' gauge by Graham Farish since the mid-1980s, a 2mm scale model with greater fidelity and modern features has been long overdue. Enter the new EFE Rail 'Austerity', which has been produced in association

with Kernow Model Rail Centre.

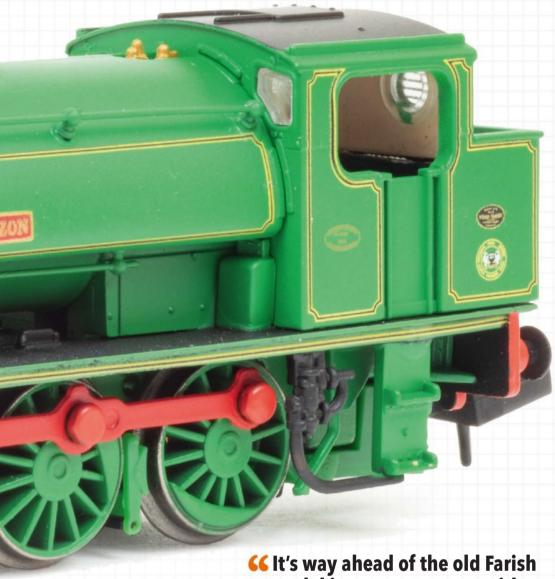
Six versions are now available, including a pair of BR 'J94s' (as purchased from the War Department by the LNER), plus a colourful quartet of industrial liveries denoting ownership by the National Coal Board, Manchester Ship Canal Company and the Wemyss Private Railway.

Our sample, kindly supplied by Bachmann, depicts *Amazon*, in a fetching green livery with fine yellow lining. This locomotive was built at Vulcan Foundry and operated by the National Coal Board at Harrington, Cumbria into the 1970s.

Dimensionally spot on, this diminutive model captures the

prototype's character perfectly. It's way ahead of the old Farish model in many respects, with a high level of finesse throughout. There's plenty of surface relief in the form of beading around the cab, smokebox door detail, rivet heads and fine wire handrails.

The stumpy chimney and dome both have a convincing profile and there's daylight visible between the boiler and footplate, thanks to the gearbox running down to the centre axle via the firebox space, driven by a tiny coreless motor within the boiler. Separately fitted reverser lever, handrails and pipework below the saddle tanks add to the overall appearance.



66 It's way ahead of the old Farish model in many respects, with a high level of finesse throughout >>

There's a welcome array of backhead detail visible within the cab, although much of the space below the window level is taken up by the 6pin DCC decoder socket. Access to the interior is easy, by removing two screws and lifting the cab away. A screw hidden within the chimney allows the saddle tank to be removed too, revealing the mechanism. There doesn't appear to be room for a speaker of any sort.

The rear face of the cab features etched metal spectacle plate overlays, with safety bars and a representation of coal within the bunker. The latter is set below the rim of the bunker, allowing fine real coal chips to be added easily, for a more authentic appearance.

Below the footplate, each axle runs within metal bearings and the fine spoked wheels are very attractive, while the brake and sanding gear, footsteps and injectors are an impressive combination. The coupling rods are slightly over-scale, but inevitably so in this scale. Standard couplers slot into the lower chassis keeper plate which, on our sample, featured a slight droop at the rear end. In terms of finish, the green livery has been applied to a high standard, especially the ultra-fine yellow and black lining. The printed Vulcan Foundry builder's plates and NCB roundels are welcome touches, but the 3 things we like



Easy access to DCC socket within cab.



Backhead details picked out with paints, enhance the cab interior.



Etched rear cab spectacle covers.



SUMMARY

PROS • Looks

- Impressive level of detail.
 - Good quality finish.
 - Runs smoothly.
 - Essential prototype.

CONS

 Drooping rear coupling on our sample.



Excellent.

EFE Rail 'J94' 0-6-0ST - in detail



Factfile: WD 'Austerity' 0-6-0T

Almost 500 'Austerity' 0-6-0STs were built between 1943-64, designed initially for War Department service in the UK and abroad following the liberation of Europe and North Africa. The locomotives were designed with an emphasis on simple maintenance and efficient performance, hence the 'Austerity' nickname.

Manufacture of the locomotives was undertaken at many English works, including Hunslet, Andrew Barclay, W.G. Bagnall, Hudswell Clarke, Robert Stephenson & Hawthorns and Vulcan Foundry.

When the Second World War was over, the LNER purchased 75 'Austerities' from the War Department,

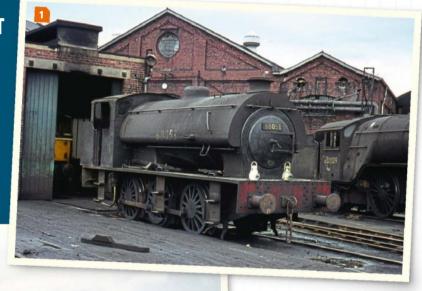
bestowing the 'J94' classification which was perpetuated by British Railways. The War Department retained a large number, while nearly 40 were sold for use in the Netherlands and several to French customers.

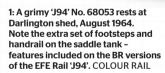
The design was perpetuated in the post-war years, with various modifications, owing to orders from industrial customers, especially the National Coal Board. Indeed, the NCB retained working 'Austerities'

into the 1980s at collieries and coal processing plants. British Railway's fleet of 'J94s' continued in service until 1967, with examples famously employed on the tortuous Cromford & High Peak Railway in Derbyshire. A huge number of 'Austerities' have survived into preservation, providing heritage railways with an ideal source of economical traction. Most came from industry, but two ex-LNER 'J94s' also made it into preservation.

3: This rear shot of No. 68074 shows an extended coal bunker.

One of the new EFE Rail 'J94s' includes this feature. COLOUR RAIL





2: Equipped with large oval buffers to cope with the tight curves, 'J94' No. 68013 stands at Middleton Top on the Cromford & High Peak Railway, July 1959. COLOUR RAIL



Amazon names are a little fuzzy.

A small bag of extra detail parts is supplied, consisting of dummy screw link couplings plus vacuum and steam pipes.

Under test, the 'Austerity' ran very well following the prescribed running-in period. The coreless motor is fairly quiet and responsive and there was plenty of haulage power available for a locomotive of this size. It had no problems shunting a rake of 18 mineral wagons around (that's as many as I own!) and each axle runs within metal bearings for extra-smooth performance.

This is a great little model,

offering a significant uplift over a previous iteration, in terms of looks, fidelity and performance. The tooling allows for a few detail differences, including extra footsteps and handrails on the BR 'J94s', plus an extended bunker. Maybe we can hope for a Giesl ejector version, too, in future?

For now, though, we can enjoy a colourful addition to any industrial scene. Having researched images of the real *Amazon*, however, this model is far too clean, so a weathering job may well be in order! *(GD)*

System **builder**

Other items to complement this model...

STEEL-BODIED MINERAL WAGONS

A National Coal Board locomotive needs an endless supply of mineral wagons. The Farish range includes various options, including NCB-branded stock.

Price: £21.95 each Availability:

Bachmann stockists www.bachmann.co.uk



TIMBER-BODIED MINERAL WAGONS

Traditional five and sevenplank open wagons remained in use on colliery lines well into the 1960s. Both Bachmann and Dapol offer useful models.

Price: From £9.95 each Availability: Bachmann & Dapol stockists www.bachmann.co.uk www.dapol.co.uk



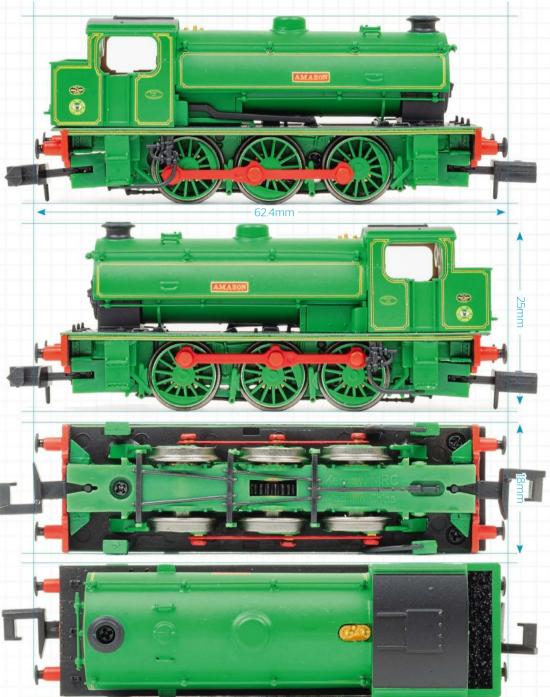
NCB BRAKE VAN

The Farish LMS 20T brake van, in weathered NCB blue livery, would be a fun addition.

Price: £32.95 each Availability:

Bachmann stockists www.bachmann.co.uk





FACTFILE: EFE RAIL 'J94' 0-6-0ST

OVERVIEW

Manufacturer: EFE Rail Ref. Nos. E85504 Unit Nos. N/A

Scale/gauge: 1:148 scale, 'N' gauge Body: Plastic with metal parts Chassis: Metal with plastic parts

Weight: 28g

Min. curve radius: First radius Wheel back to backs: 7.3mm

DIMENSIONS	PROTOTYPE	1:148 SCALE	MODEL
Length	30ft 4in	62.5mm	62.4mm
Height	12ft 41/4in	25.4mm	25mm
Width	8ft 21/2in	17mm	18mm
Wheel diameter	4ft 3in	8.8mm	9mm
Wheelbase	11ft 0in	22.7mm	22.5mm

SERVICING

How to dismantle: Body unscrews from chassis. **Where to oil:** Gears, crankpins – see instructions.

ELECTRICS

Electrical system: 12V DC two-rail Motor type: Coreless Lights? No

DCC-ready? 6pin micro decoder socket

MECHANISM

Drive system: Drive to centre axle Flywheel(s): No Traction Tyres: No

EFE Rail LSWR 10t van

◆ GAUGE '00' ◆ MODEL EFE Rail E87054 LSWR 10t Covered Van, SR Brown ◆ PRICE £32.95 ◆ AVAILABILITY Bachmann stockists Web www.bachmann.co.uk

n 'O' gauge version of the London & South Western Railway's 10t covered van was released last year, produced by Kernow Model Rail Centre. A 4mm scale version has now arrived, albeit under the EFE Rail banner, with six models to choose from, depicting examples in the employ of LSWR, Southern Railway and British Railways, along with a Somerset & Dorset Joint Railway version.

Capturing the distinctive



appearance of the prototype well, with the planked sides and external 'X' braces providing an interesting contrast to later, steel-framed van designs. There's plenty of crisp surface relief, while the side doors also boast separately fitted horizontal handrails, rendered in resilient plastic. Smaller, wire handrails are also installed on the bottom rail of each side and solebar.

The un-sprung buffers feature fine metal heads and the dummy drawhooks add a nice touch to the headstocks. The solebars, 'W' irons, axleboxes, springs and brake gear are also impressive, with a cross shaft linking the two hand brake levers, with an intermediate 'V' hanger support.

NEM coupler mounts are fixed to the underside, with pivoting pockets housing a set of slimline tension locks, which operated well under test. Indeed, the split-spoked wheels and axles turn freely and, with an internal weight adding a healthy amount of mass, the wagon runs extremely well.

The basic post-1936 SR brown livery is applied to a high standard, with neatly



printed lettering, numerals and builder's plates.

Wagons with a pre-Grouping heritage have proven popular with manufacturers and customers recently, and a little extra variety for steam-era freight trains is always welcome. Although the design of the prototype can be traced back to the late 1800s, hundreds of examples continued in use during the 'Big Four' era. Many also lingered on the nationalised railway, lending them well to layouts set in the south of England across a broad time scale. (GD)

SUMMARY

PROS

- Looks the part.Build quality and finish.
- Useful prototype.Runs sweetly.

CONS

Nothing.



Splendid.





EFE Rail PBA china clay hopper

◆ GAUGE 'N' ◆ MODEL E87530 PBA Tiger Wagon, ECC International white, weathered ◆ PRICE £49.95 ◆ AVAILABILITY Bachmann stockists Web www.bachmann.co.uk

vailable in ready-torun 'N' gauge for the first time, the striking Tiger Rail PBA china clay hopper has been added to the EFE Rail range. Designed and developed with the staff at Kernow Model Rail Centre, who produced a 'OO' version under its own brand a few years ago, the wagons represent a type introduced to the UK in the early 1980s.

A regular sight on BR Speedlink workings, the hoppers operated long-distance china clay workings from Cornwall to the Potteries of Staffordshire, as well as the paper mills of Scotland. They were also employed on export traffic via the Channel Tunnel.

Eight versions are now available, split across the original striking white livery and the later blue scheme, applied after the wagons passed to Tiphook Rail.

sample depicts one of the latter, with the white livery visible below a generic misting of dark grey paint.

Like the earlier 'OO' version. this is an impressive model, with the highly detailed end platforms being the most eye-catching feature. The various air brake tanks, piping and valves give the wagons a 'busy' appearance, with a walkway provided at one end, complete with handrails, which are rendered in a flexible but resilient plastic.

The overall profile of the hopper body looks spot on, and the hatch opening gear is nicely rendered. The bottom discharge chutes are also captured faithfully, as are the bogies, which feature impressive frame and brake detail. Standard couplers are mounted into pockets fixed to each bogie and our sample ran faultlessly under test, coupled to a wide range of fixed axle and bogie stock.

Livery application is to a high standard, with all markings crisply printed and legible. The weathering lets it down slightly, as the dark grey shade of 'dirt' is a little too generic and lacks the brownish hue commonly seen on most rolling stock. There's no tell-tale whiteish streaking from the china clay either. On the plus side is the dirty grease patches on the bufferheads, which is an impressive touch.

A very welcome addition to the EFE 'N' gauge range, and one that will appeal to modellers of the post-1980 BR and privatisation eras. (GD)

SUMMARY

PROS

- Looks and fidelity.
- Plenty of fine detail.
- Livery application.Runs smoothly.

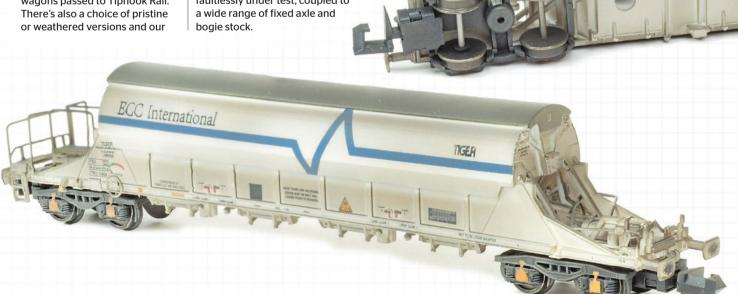
CONS

Basic weathering.



FINAL VERDICT

Excellent.





Dapol GWR Toplight Coaches

◆ GAUGE 'OO' ◆ MODEL Dapol 4P-020-001/011/021 GWR Toplight Third Brake/All Third/Composite, lined crimson ◆ PRICE £64.80 each

AVAILABILITY Dapol stockists Web www.dapol.co.uk

Ithough ordered in 1915, the first batch of **GWR Toplight coaches** was not built until 1920 and featured a steel body rather than the typical wood panelling of previous designs. Marshalled into close-coupled sets of six vehicles, comprising a mix of Third class, Composite and Third Brake coaches, they were intended primarily for commuter traffic into London.

By the days of British Railways, however, they had moved much further afield, before withdrawal came in the late 1950s. A few examples survived in workmen's trains in South Wales, carrying miners in the Rhondda Valley two of which are now preserved at Didcot Railway Centre.

First announced last year, to

great excitement among GWR fans, Dapol's models were due to arrive with retailers within weeks of this issue hitting the shelves. Three vehicle types are being produced, an all Third, Third Brake and a Composite, all equipped

with 6pin DCC decoder sockets and internal lighting circuits. The Third Brake also comes pre-fitted with a working tail lamp.

advance production samples for our perusal, and they're certainly impressive. At 165g apiece, they're certainly not flimsy, thanks to the heavy die-cast metal chassis, and the addition of brass pinpoint bearings ensures that each axle turns freely with no perceptible drag. Indeed, power collection for the lighting is taken from the bearings, so there's no friction from wiper pick-ups.

Furthermore, the level of

bogie and underframe detail is excellent, with brake rigging from the bogies connected to the underframe by means of

flexible plastic links. The vacuum cylinders (complete with ribbed feed pipes - not something you see on many coach models), cross shafts and 'V' hangers are well rendered, as are the battery boxes and dynamos.

The bogie frames feature plenty of rivet head and suspension detail, while the plastic footboards have a refined appearance, despite feeling pretty indestructible. Indeed, it's possible to handle these coaches without the fear of dislodging small detail fittings with every touch.

Looking at the bodies, the moulded detail is crisply rendered, with the distinctive curled grab handles being consistently shaped from fine wire. Coupled with the separate door handles, the overall appearance is fabulous, enhanced further by the frosted 'glass' in the toplights and etched parcel cage in the guard's compartment.

The ends are equipped with







waist-height jumper cables and emergency brake gear, while the outer end of the Third Brake coach features handrails, steps, GWR pattern lamp brackets and the working tail lamp. Extended buffers are also provided at the Brake end, while the shorter units are fitted elsewhere.

Dimensionally, everything appears correct in terms of scale and I think Dapol has also captured the profile of these coaches well, not least in the slightly squat appearance compared to other stock – a legacy of the need for the real coaches to traverse parts of the Metropolitan Railway's underground system.

The roofs are a clip-fit, allowing easy removal with the aid of a fingernail, revealing the beautiful interior detailing. Seats are painted in appropriate colours to suit First and Third class, the former also boasting arm rests. Etched brass fretwork represents the overhead luggage nets.

The lighting unit is fixed to the underside of the roof, with a two-prong plug fixed to a central bulkhead. Care is needed to ensure that the plug slots into the matching socket on the circuit board when re-fitting the roof,

A detail bag provides vacuum and steam pipes, plus a selection of couplings, including tension locks for the outer end, plus bar couplers to link coaches together. Each coupler slots into the NEM pockets, which feature sprung, kinematic movement, to provide realistic close coupling between cars. On test, the three-coach rake ran sweetly when hauled and propelled. with the lighting units emitting a convincing, warm glow. The tail lamp illumination was also impressive, with just the right amount of luminance (coaches were tested on analogue control only).

but it's a simple enough task.

In terms of finish, the lined crimson livery has been applied to a high standard across all three coaches. I'm no expert on GWR

PROS

- Looks and quality finish.Impressive level of detail.
 - Build quality.
 - Super-smooth
 - performance.

 Lighting works well.

CONS

Nothing.

FINAL VERDICT

Superb.

coach colours, but the shade looks convincing to me. The lining is exquisite, as are the printed GWR emblems and lettering. There's even printed detail on the solebars, detailing the coach's weight and other specifications.

Other livery options consist of GWR chocolate/cream and BR crimson, both of which include revised roofs, with fewer ventilators, as per the real thing.

Dapol has done a great job with these coaches, which are bound to prove popular. I'm definitely tempted to invest in two or three to replicate a Welsh miner's train for my colliery layout. (GD)

3things we like



Interior detail features etched overhead luggage nets and painted seats.



Door furniture is excellent. Guard's compartment also features etched parcel cages and moulded shelving.



Outer end of Brake car features extra detail, including working tail lamp.



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Specification list

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Motor: Five-pole

DCC socket: Next18

Features: NEM coupler pockets, factory-fitted speaker, sprung buffers, firebox glow, 'Busby' spark arrestor chimney.

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- ♦ MR-301F: No. 1658
- ◆ MR-301G: No. 1668
- ◆ MR-302A: No. 1646

BR BLACK, EARLY EMBLEM (WEATHERED)

- ◆ MR-302B: No. 1649
- ◆ MR-303: No. 1604

BR BLACK, LATE EMBLEM (PRISTINE)

- ◆ MR-304A: No. 1636
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BR BLACK, LATE EMBLEM (WEATHERED)

- ◆ MR-305A: No. 1627
- ◆ MR-305B: No. 1628

GWR GREEN

◆ MR-306: GWR green No. 1638

- ♦ MR-307A: BR black early emblem pristine, No. 1616
- ♦ MR-307B: BR black early emblem pristine, No. 1629
- ◆ MR-308: BR black early emblem weathered, No. 1661

NCB GREEN

- ◆ MR-309A: NCB green, No. 1600
- ◆ MR-309B: NCB green, No. 1607

PRESERVED GREEN

- ◆ MR-310A: Green early BR emblem, No. 1638
- ◆ MR-310B: Green 'Dart Valley' lettering, No. 1638





Ruston 'PWM' 0-6-0DE

Switchable

CHOOSE FROM EIGHT VERSIONS



Specification list

OUT

NOW

Made by: Heljan

Motor: Coreless

DCC socket: Next18

Features: Cab interior

lights, NEM coupler pockets.



MR-403 PWM653

BR light green

MR-405A PWM 97651 **BR** yellow



MR-405B PWM 97652 BR yellow





MR-402 PWM651 BR green, 'wasp' ends



MR-400A PWM651 BR green



for slow-speed running

MR-400B PWM652 BR green



NEM coupler

pockets

MR-401 PWM654 BR green, 'wasp' ends

LNER Sentinels - the new batch



MR-018 LNER Class Y3 Sentinel, No. 8172, **LNER black with Gill Sans** lettering/numerals

MR-021 LNER Class Y1 Sentinel, No. 45, LNER black with shaded lettering/numerals

MR-019 BR Class Y1 Sentinel, No. 68144, BR black, early crest MR-020 BR Class Y3 Sentinel, No. 68162, BR black, early crest

Specifications

Made by: Dapol

Motor: Five-pole 'Super-Creep'

DCC socket: Eight-pin

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Motor: Coreless

DCC socket: Six-pin

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doors, etched worksplates.

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MR-203 No. 68225. BR early emblem, no skirts



MR-204 No. 68226, British Railways lettering, no 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-210 No. 7139. **LNER** lined livery

'USA' 0-6-0Ts

Made by: Bachmann/Kader

Motor: Three-pole

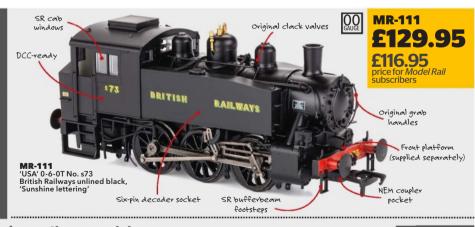
DCC socket: Six-pin

Features: NEM coupler

pockets, two types of cab, different smokeboxes, different

footsteps, separately fitted

hinged platform.



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MR-101 No. 1968, USATC black



MR-107 No. 36, National Coal Board black



MR-110 No. DS237 Maunsell. BR Departmental green



MR-108 No. 72, Keighley & Worth Valley Railway ochre



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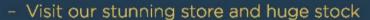
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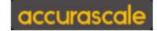


















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00 Gauge Steam Locos



GER 'Buckiumper' 0-6-0T Due: Q2 2024 Price: from £139.99 Digital: 18-pin



wthorn Leslie 0-4-0ST Due: 04 2023 Price: q4 2023 Price: from £107.41 Digital: 18-pin

Class 43xx Mogul 2-6-0 Due: Q4 2023 - Q1 2024 Price: from £154.18 Digital: 18-pin







Andrew Barclay 0-4-0ST Due: Q2 2024 Price: £85 SECR P Class 0-6-0T Due: 02 2024 Price: £85



NER Class Y7 0-4-0T Due: TBC 2024 Price: from £123.20 Digital: 18-pin

Metropolitan F Class 0-4-4T Due: Farly 2024 Drice: from £153

I RSCR F1 0-6-0T Due: TBC 2024 Price: from £140.21 Digital: 18-pin



Digital: 18-pin



HR 'Jones Goods' 4-6-0 Due: TBC 2024 Price: from £186.96 Digital: 21-pin

USATC S160 2-8-0

00 Gauge Diesel & Electrics



Due: 04 2023 Price: from £169.99 Digital: 21-pin



Price: from £169.99 Digital: 21-pin Class 66 Due: Q1 2024 Price: from £169.99 Digital: 21-pin



Class 59 (New Batch) MRI Due: Q1 2024 Price: from £152.96 Digital: 21-pin

Class 68 (New Batch) Price: from £153 Digital: 21-pin





Due: Q1 2024 Price: from £177.65 Digital: 21-pin Class 47 Due: Nov 2023



Price: from £212.46 Digital: 21-pin Class 57 (Updated Model) Due: Dec 2023 Price: from £160.65

Class 86/2 Due: Q1 2024 Price: from £216.71 Digital: 21-pin

OO Gauge Multiple Units



Due: Oct 2023 Price: from £169.15 Digital: 21-pin



GWR AEC Parcels Railca Due: Sep/ Oct 2023 Price: from £198.90

Clace 104 DMII Due: Q2 2024 Price: from £330.65 Digital: 21-pin



Class 423 4-VFP FMU

Clace 755 ELIDT RIMIT

OO Gauge Coaches & Wagons



gscole BR Mk1 Suburbans Due: Q4 2023 Price: £64.95 Digital: N/A



BR Mk2B & Mk2Cs Due: Q4 2023 & Q1 2024 Price: £59.95 Digital: N/A





16t Steel Mineral Hoppers Due: Q3 2024 Price: £74.95 (3 pack) Digital: N/A



14 ton Air Ministry Tanks Due: Q4 2023 Price: £32.13 each Digital: N/A



JHA P&D Hoppers Due: Q2 2024 Price: from £46.75 Digital: 6-pin (Taillamps)

GWR Toplight City Coaches for it me want

Due: Q4 2023 Price: £55.08 each Digital: 6-pin GWR Churchwa Due: Q1 2024 Price: from £68
Digital: 21-pin





ZZA Beilhack Snowploughs Due: Q2 2024 Price: £70 (2-pack) Digital: N/A

50t Warwell Wagons Due: Q2 2024 Price: £25 Digital: N/A

Genesis 4 & 6 Wheel Coaches Due: 04 2023 - 2024 Price: from £33 each Digital: 18-pin



Wisbech & Upwell Tramcar Due: 04 202 Price: £63.71 Digital: N/A

GWR B-Set Coaches Due: Q4 2023 Price: £144.45 (2pk) Digital: N/A

RCH 1907 Plank Wagons Due: TBC 2024 Price: £28.50 each Digital: N/A

GWR 5-Plank Wagons Price: £28.01 each Digital: N/A

GWR Mink A Vans Due: 01 2024 Price: £28.01 each Digital: N/A

25t Lowmac Well Wagon

N Gauge Steam Locos





LMS Class 2MT 2-6-2T Due: Q2 2024 Price: from £93.50 Digital: PCB Swap required



GWR 63xx Mogul 2-6-0 Price: from £156.06



LNFR Class B17 4-6-0 Due: Q4 2023 Price: from £128.52 Digital: 6-pin



SR Light Pacific 4-6-2 Due: Q4 2024 Price: from £189.98



Price: from £153 Digital: 18-pin LNFR Class A4 4-6-2 Due: Q4 2024 Price: from £153 Digital: 6-pin



N Gauge Diesel & Electrics



Class 33 Due: Q4 2023 Price: from £133.11 Digital: 18-pin Class 43 HST (Updated)





Class 66 (New Tool) Due: Q2 2024 Price: from £146.88 Digital: 18-pin



Class 86 Due: Q4 2023 Price: from £110.16 Digital: 18-pin



Class 87 Due: Q3 2024 Price: from £131.75 Digital: 18-pin



Class 44, 45 & 46 'Peak' Due: TBC Price: TBC Digital: 18-pin

N Gauge Multiple Units



s 142 Pacer Due: Q2 2024 Price: from £37.70 Digital: 18-pin



Class 156 Super Sprinter Due: Q4 2023 Price: from £146.88 Digital: 18-pin Class 221 Super Voyager Due: 01 2024

N Gauge Coaches & Wagons



Price: £84.95 Digital: N/A



SECR Freight Packs Due: TBC 2024 Price: £84.96 (4pk) Digital: N/A



SECR 10t Covered Vans Due: TBC 2024 Price: £59.46 (3pk) Digital: N/A

O Gauge Steam Locos



Due: Q4 2023 **Price:** from £229.50 Digital: 21-pin



GWR Class 55xx 2-6-2T Due: TBC 2024 Price: from £435.48 Digital: 21-pin

O Gauge Diesel & Electrics





Class 08/ 09 Shunters Due: Q4 2023 Price: from £213.78 Digital: 21-pin



Price: from £308.30 Digital: 21-pin



Ruston 48DS Shunter Due: Q3 2024 Price: £169.15 Digital: 18-pin



Due: 01 2024



Price: from £568.65 Digital: ESU XL Class 45 Peak



Due: Q1 2024 Price: from £568.65 Digital: ESU XL Class 55 Deltic Due: Dec 2023 Price: from £619.65 Digital: ESU XL

O Gauge Multiple <u>Units</u>



Class 117 DMII Due: Q4 2023 Price: from £594.15 Digital: ESU L

Clace 153 DMII Due: Q2 2024 Price: from £339.15 Digital: 21-pin

O Gauge Coaches & Wagons



Due: Q4 2023 **Price:** £78.03 each Digital: N/A 14t Slope Sided Open Due: Q4 2023

Price: £51 each



Digital: N/A 24t Iron Ore Hopper Price: £59.50 each Digital: N/A

GWR Toad Brake Van





LMS Inspection Saloon Due: Apr 2024 Price: TBC Digital: 21-pin BR Mk2/ Mk2A Coaches



SR CCT/ PMV Vans Due: TBC 2024 Price: from £211.65 Digital: N/A 35t Class B Tanks

Due: Nov 2023 Price: from £105.40 Digital: N/A



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OO Gauge (1:76 Scale)



R30129 Class 7P6F 'Battle of Britain' 4-6-2 34072 "257 Squadron" in SR malachite green British Railways lettering (Hor) NEW £239.84



R3997 Class 8P 'Princess Coronation' 4-6-2 46245 "City of London" in BR maroon (Hor) £217.79



R30135 Class 8P "Turbomotive' 4-6-2 46202 in BR black early emblem (Hor) NEW ... £239.84 R30012 Ruston 48DS 4wDM shunter 1 "Qwag" in GCR green flat wagon (Hor) NEW ... £982



R3983 Class P2 2-8-2 2007 "Prince of Wales" in LNER



R30125 Class W1 'Hush Hush' 4-6-4 60700 in LNER garter blue British Railways lettering (Hor) NEW £229,04



R30232 Liverpool and Manchester Centenary (1930) Pack With 0-4-2 "Lion" and Three Coaches (Hor). . . . £215.99 Diesel locos



4D-012-013 Class 22 D6352 in BR blue headcode



4D-005-001 Class 59/1 59103 "Village of Mells" in





4D-005-002 Class 59/2 59206 "John F Yeoman" in DB Schenker (Dap) (RRP £173.20).....BARGAIN. £12 AIN. £129.95



1082 NBL diesel prototype 10800 in BR black black bogies - final condition (Hel) £ . £216.71



1083 NBL diesel prototype 10800 in BR green late £216.71





R30219 Pair of Class 43 HST Power Cars 43049 "Neville



R30229 Class 370 APT 7 car pack 370003 & 370004 in Intercity APT black window surrounds (Hor). . . . £528.29



R30105 Class 370 APT Non-Driving Motor coach **Bi-Modal Multiple Units**



.....£452.24 green Pride markings (Hor)..... Coaches



R40190 Mk4 DVT Driving Van Trailer in Transport for 2D-U19-U13 Class 43 ⊓31 BOOK Set III DR DIUE & Wales - 82229 (Hor) (RRP £84.99) BARGAIN . . . £55 coaches (Dap) £21



R60224 KFA Container flat in Touax blue 40' Turkon container & 20' Bell container (Hor) NEW £44.99









9625 NVV Car Transporter Vans in BR blue & grey Motorail branding & grey roof - weathered - pack of 3 -E96288E, E96289E & E96293E (Hel) NEW £220



£194.65





9623 TCV Car Transporter Vans in BR blue & inansporter vans in BR blue & grey ling - pack of 3 - E96290E, E96297E & NEW £194.65

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2D-019-013 Class 43 HST Book Set in BR blue &



2D-019-014 Class 43 HST Book Set in Intercity Swallow 43120, 43039 & two Mk 3 coaches (Dap) £211.14 Coaches





2P-005-224 Mk3 FO First Open in Intercity Swallow £30.25





2P-005-236 Mk3 TSO Trailer Second Open in Intercity Swallow - 42058 (Dap) . \$30.25 2P-005-237 Mk3 TSO Trailer Second Open Intercity Swallow - 42058 (Dap)£30.25



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2F-060-019 Grampus engineers open wagon in Civil Engineers
'Dutch' grey and yellow - DB991673 (Dap) NEW....£16.48 O Gauge (1:43 Scale)



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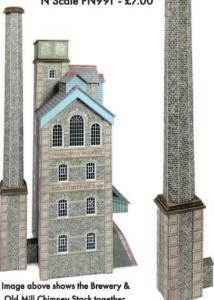


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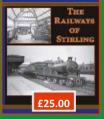




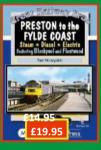










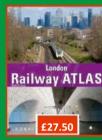


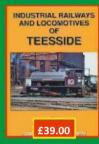


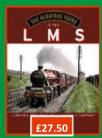




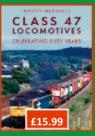




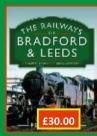




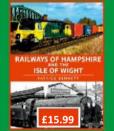








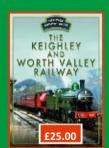


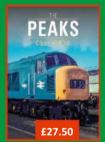


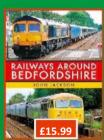














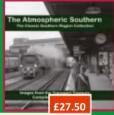




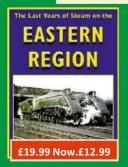




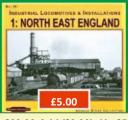




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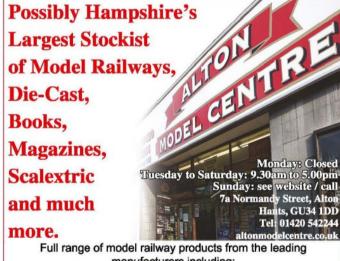








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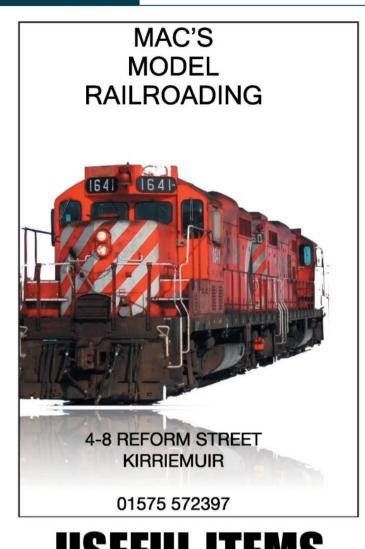
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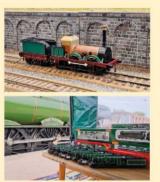
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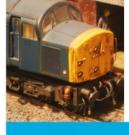


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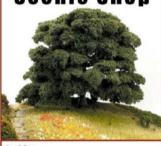
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Present your case

If there's a prototype that you think needs to be offered ready-to-run, here's the place to voice your opinion...

Locomotive: 'Binliner' waste containers

Gauge: '00' and 'N'

Proposed by: Ian Callander

What is it?

Across a fair portion of the UK network, 'Binliner' trains can be seen at work on a daily basis, carrying compacted household waste from urban centres to disposal points. A usual train may consist of about 16 wagons, with three 20ft containers loaded on each vehicle. There are a number of different container designs in use, but these mainly boil down to three basic types. For as long as I've been modelling modern image subjects (about 20 years now), I've yet to see any of the major manufacturers offer a 'Binliner' container off-the-shelf, despite the presence of an almost bewildering variety of other ISO sea containers, 'Reefers' and 'Tanktainers' on the market.

What would make it viable?

The simple fact is that, on a 'Binliner' train, ALL the containers are usually of the same type, while on a 'normal' inter-modal working, there will usually be a variety of different liveries and sizes of container. Therefore, anyone wishing to populate their inter-modal flatbed wagons with 'Binliner' containers would need to buy a fairly large number of identical containers in order to populate even a relatively small rake of wagons (unlike the sea containers, where modellers usually tend to buy just one or two of each type of container). Therefore, a range of 'Binliner' containers would be more profitable to manufacture by simple economy of scale.

There'd be no need to manufacture a wide variety of sizes and liveries - no more than three container types, in a handful of liveries, would suffice. Also, Bachmann, Hornby, Farish, Dapol, Revolution and C-Rail Intermodal, between them, already manufacture a huge variety of inter-modal wagons, in both 'OO' and 'N', so no new wagon variant would need to be designed and manufactured to carry these containers, as the most-frequently used types of wagon already exist as ready-to-run models (the KFA flat wagons being possibly the most commonly used for this purpose).

Resin-cast and 3D-printed containers have been available from various sources, the latter via the Shapeways portal. Indeed, all three of the main refuse container types can be found on Shapeways, supplied unpainted, but these retail at \$13-\$14 per container, plus shipping (with discounts for bulk orders) which, when you add in the cost of painting and decals, makes them an expensive option, especially when populating a full rake.

Can I see a real one?

Yes, they're an everyday sight in many parts of the UK.

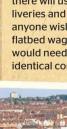


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RAIL PHOTOPRINTS



Chris Leigh reflects on 70 years of technological change in mainstream 4mm:1ft scale railway modelling.

EDITORIAL ASSISTANT

ve just completed 20 sessions of radiotherapy for prostate cancer, one every weekday. I have a long-standing fear of hospitals dating from two weeks' incarceration at the age of five in 1952. Hospitals then were scary places for a small child, alone, but the one thing I remember clearly is a chest X-ray machine.

Seventy years on, lying on the table of a Varian Truebeam linear accelerator. looking at the blue sky, fluffy clouds and apple blossom projected on the ceiling, I found myself gazing in wonder at the technology that has delivered my treatment. I had seen the ravages wrought by radiotherapy on my mother in 1976 and I was about to describe my treatment as 'a walk in the park.'

It set me thinking about the technological advances I've seen in many walks of life over my 76 years, not least in the hobby that has dominated most of that time. The thought coincided with the realisation that, as this September rolls on into October, it is 60 years since I started

work in the model railway magazine editorial profession. Sorry if it offends the newcomers in modern online reviewing, but I was trained by professional

journalists, started at the bottom and learned my craft. I think I had probably worked for a year before anything that I wrote actually appeared in print without being totally rewritten by the editor.

The job advert (pictured, above) would hardly pass muster with today's recruitment professionals, and the fact that I spotted it at all suggests that I read the magazine in fine detail. The 'technology' of job recruitment has also moved on in the past 60 years! I attended an interview at Craven House, Hampton Court, right opposite the palace on the corner of the A308 (it is now luxury apartments). The highlight of the interview, apart from meeting lan Allan in person, was seeing a pair of Bushey Park stags locking antlers right outside the window.

Back in 1963, we had Tri-ang and Hornby, and we had started to see whitemetal locomotive body kits, capable of glue assembly, designed to fit their ready-to-run chassis. At that same

Rediscovered artwork for an etched brass kit to build a NS (Netherlands railways) 'Wadloper' DMU. The idea was dropped after DJH produced a kit not sold in England. **CHRIS LEIGH**

time, N & K C Keyser (as K's) produced complete kits with a fairly crude chassis arrangement built up from brass frames and spacers. It would be the 1970s before we started to see chemically engraved ('etched') brass kits, following the ground-breaking George Allan footbridge.

Getting K's kits to run well was a skill that had to be learned the hard way. They used a three-pole motor with the mounting screw threaded into one of the pole pieces. Screw it in too far and it clamped the commutator and prevented it turning; not far enough. and the motor fell off! The process of improvement, in due course, meant the three-pole motor became a five-pole. All the K's motors had a shaft extension at both ends, one for the brass worm, of course, and the other for a flywheel. The latter would become a desirable feature of all new mechanisms.

Nowadays we have endless debate over the merits (or otherwise) of the

> new breed of coreless motors which enable a very small motor to pack considerable power. Thanks to these motors, we have ready-to-run motor trolleys and

underground trains in 'OO' and some incredibly powerful small mechanisms.

Controller technology has also moved on to keep pace with these new developments in motors, and the old 'bomb-proof' Hornby-Dublo controllers and H&M Duettes from 50 years ago are no longer fit for purpose to drive modern mechanisms. A tiny coreless

motor can't cope with the massive spike of current that was necessary to start an old K's motor or a Tri-ang XO3. We seem, however, to be far less inclined to spend money on new controllers than on the new locomotives that need them. Everyone is happy to update their TV but not so much the fridge or

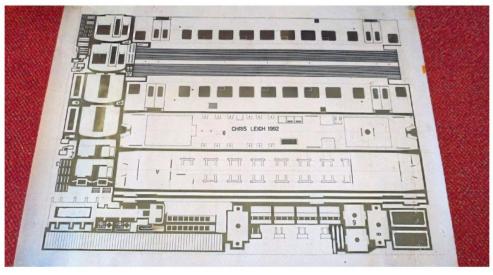
washing machine. While clearing out things to sell at my October 14 garage sale, I stumbled across a rolled-up drawing (pictured, below). That, too, showed how technology has moved on. We now use CAD to produce the tooling for a kit. Prior to that we'd have drawn it using a computer draughting program. Back in 1992, I drew my artwork for etching, with a pen, on a special, dimensionally stable draughting film. A lot of time and effort went into that for a kit that never progressed any further.

The chassis of a K's 14XX' 0-4-2T fitted with the earlier three-pole motor and no flywheel. CHRIS LEIGH

State-of-the-art radiotherapy. Daily treatments on Peterborough Hospital's 'LINAC 2' set me thinking about technological advances in model railways PETERBOROÚGH CITY HOSPITAL







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