An introduction to 7mm railway modelling from the Gauge O Guild

WELCOME TO O GAUGE

Compiled by Charles Oldroyd

ABOUT THE GAUGE O GUILD

About the Guild

For over 65 years, the Gauge O Guild has been supporting all aspects of O gauge modelling including early tinplate, coarse scale, fine scale and more recently, scale seven. It has established standards for both modellers and manufacturers to follow and is now the largest single-scale model railway society in the world, with over 5,500 members worldwide.

The Guild's shop window is our website **www.gaugeoguild.com**. Some information there is freely available, but members get much more. This includes technical information, specialist traders' details, a searchable product list, a discussion forum and free to stream videos.

Publications

The Guild's flagship publication is the quarterly *Gazette* - a professional quality, full colour, 96 page magazine devoted entirely to modelling in 7mm scale. Posted with the *Gazette* is *Guild News*, containing news about the Guild itself. There are small ads, a diary column, reports from local and international groups and information relevant to the running of the Guild. Both current and back issues of the *Gazette* and *Guild News* can be viewed by members on the website.

In addition to these regular magazines the Guild also has a number of other publications available for purchase from the website. These include three volumes featuring small layouts – ideal inspiration for the space-starved modeller who still wants realistic appearance and operation.

Shows and Exhibitions

The Guild runs three major shows each year: a one-day Spring Convention in March (currently held in Kettering), a one-day Summer Show in June (currently held in Doncaster) and a two-day extravaganza, 'Guildex', held in September at Stafford Showground. Guildex is the biggest O gauge show in the world and if it's O gauge, you'll find it there.

Further, the Guild helps to run several other O gauge events around the country, the details of which can be found on the website and in our publications. No one should be too far from at least one O gauge show each year. We also support local and regional groups to meet regularly and to run smaller local events.

Welcome to the World of O Gauge

Busting the Myths

If you are thinking of coming into the world of 7mm/ft modelling this is a good place to start. O gauge models have real presence even when just standing in a siding and, when they begin to move, they have enough mass to simulate the real thing in a way that OO models never can. However, there are a number of myths that put smaller scale modellers off moving up to O gauge. Let's consider these.

1. You need to be a skilled modeller to work in O Gauge

Historically perhaps, but not any more. If you can lay flexitrack in OO you can do it in O gauge and, if you can't, then realistic sectional track including pointwork is now available. If you can build a plastic wagon kit in OO, you can do it just as easily in O gauge (there's an article in this booklet showing just how easy it is). And if you prefer to buy your rolling stock ready-to-run, there's an increasingly wide selection of locos, wagons and coaches available from major suppliers (see the Traders' Directory on page the back page).

2. O Gauge needs a lot of space

OK, if you want to model the ECML – obviously, or if you want to watch an express train chase its own tail round in circles, fair comment. However, if you're looking for realism, then less can actually be more. By focusing on a scene, rather than trying to model a complete railway, there is the opportunity to include a level of detail beyond that which is possible in the smaller scales. Take a look at the article in this booklet about figure painting, and look at the photos of 7mm figures in scenic cameo poses. Could you do this in 00? An enormous amount of space isn't necessary to create a realistic and operationally satisfying layout in O gauge. Field Mill Wharf on pages 14-15 is an excellent example of how this can be achieved. You might also want to take a look at Small Layouts Vol 3, available for purchase from the Guild website **www.gaugeoguild.com** for inspiration about what is possible in a modern home.

3. O Gauge is a rich person's hobby

Like for like, ready-to-run rolling stock will always be more expensive than the OO or N gauge equivalents, but in 7mm modelling you only need a couple of locos and a few wagons for a minimum space layout, With small O gauge locos in the same price bracket as mid-range OO offerings, the differential is less than many people imagine. Also, don't forget that kit-building and the second-hand market are good ways to save money. Suppliers of both can be found in abundance at the Guild's shows. Finally, for a given space, you'll need fewer vehicles than in a smaller scale. The overall cost of a layout can therefore be very similar. Finally, if you hanker after the control and realism of DCC sound equipped locos, the digital parts are no more expensive in O gauge than in any other scale.

Interested? Take a look at the Gauge O Guild website to see what is available to support you in 7mm scale. If you make the switch, you won't ever go back!

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O GAUGE - HOW MUCH SPACE?

Charles Oldroyd
Chair of Publications

IF YOU'RE READING THIS booklet, it probably means you're at least considering O gauge railway modelling. Perhaps you have already modelled in one of the smaller scales for some time, or perhaps it's something you've come to more recently. Without doubt, the number of people taking up O gauge is on the increase. There's a reason why major manufacturers such as Dapol and PECO, already well known for their 4mm RTR (ready to run) models, are now introducing 7mm models and sectional track into their catalogues. We've talked about the modelling benefits of O Gauge elsewhere – greater mass, opportunities to incorporate more detail and, let's face it, it's easier to see. However, how much space does it really need?

Traditionally, the great exponents of O gauge were wealthy individuals with enormous amounts of space who were prepared to devote both to their hobby. Of course, most of us don't fall into that category and our homes are far more modest, which is why OO became so popular in the 1950s with Hornby Dublo and, subsequently, N gauge (2mm scale) from various manufacturers. Each has its benefits, and what you can fit into a given space varies.

N Gauge is great if you want to see a big picture with trains moving through the landscape but accurate detail in the model is less achievable. Compare the cab and coupling in this N gauge Deltic to the O gauge equivalent opposite.

N gauge is ideal for those who want to see trains moving through a landscape. Whilst the accuracy of RTR rolling stock is constantly improving, the sheer limitations of what is possible whilst being robust enough to handle means that compromise is inevitable. It works to best effect if you stand back as if you were watching the real thing from a distance. Get close up and the shortcomings become obvious and standard N gauge automatic couplings are also a major detraction.

OO is the most popular scale for UK railway modellers but is a compromise of scale fidelity because, when introduced, electric motors were too large to fit into a half O gauge sized loco. Consequently, whilst the bodies of OO rolling stock are modelled to 4mm scale, the track still

In O gauge the model is dimensionally more correct and allows the modeller more scope for fine detail and realistic running,

reflects 3.5mm (HO or 'Half O') scale. OO is actually narrow gauge, hence the growth of EM with 18.2mm between the rails, rather than 16.5mm. However, RTR EM stock is not available and its exponents must build their own pointwork so it has a limited following. In its favour 4mm scale, whatever the gauge, allows for greater detail and accuracy than 'N' above the footplate at least. Trains of representational (if not realistic) length can also be run in a modest space with scenic features. Creating a realistic landscape however, still requires more space than most modellers have.

Which brings us to O gauge. Dimensionally more correct, it is possible to incorporate much greater detail into each individual piece of rolling stock. Three link or screw couplings can be used without difficulty, whilst automatic couplings if preferred are less obtrusive. It is rare to find O gauge layouts including more than a scale 20m of scenery on either side of the tracks, but that includes all the railway infrastructure needed for a modest layout. Also, the ability to incorporate fine detail, even down to the figures, serves to draw the eye in.

The point here is that, as in racing, there are horses for courses. If you want to model King's Cross to scale, you'll need a fair amount of space even in N gauge. Anything else would be unattainable for most of us. However, that doesn't mean that an O gauge layout can't be anything more than a 'shunting plank.' Far from it! Take a look at Field Mill Wharf on pages 14-15 to see what can be

OO is the most popular scale in the UK allowing for greater detail than N gauge but is still compromised by the need to navigate 'train set' curves.

achieved in just 8ft 6in x 2ft 6in using PECO setrack points.

Similarly, consider the two layouts opposite, both owned but not built by me. The first is Water Street Sidings, using a track plan based on one in the *Railway Modeller Book of Small Track Plans* by Cyril J. Freezer. It features a pre-group NE goods yard, but it could equally be set in BR days, steam or diesel.

The second, Redwood Lumber and coincidentally with an almost identical track plan, presents a 7mm Californian narrow gauge logging operation, using Bachmann RTR locos with DCC sound. Neither requires a lot of rolling

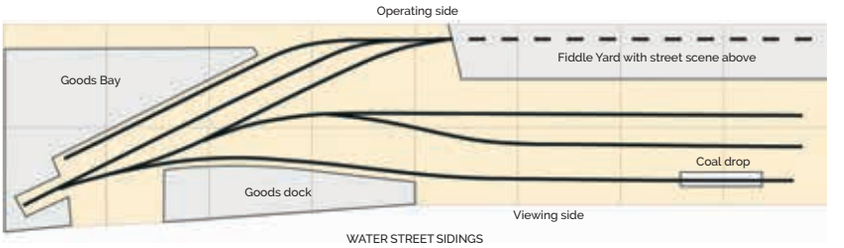
stock either; two locos and a selection of wagons work perfectly well.

But what about those who just want to watch the trains go round? Geoffrey Goddin's compact Kew is a traditional oval in 11ft 3in x 7ft 6in and also uses PECO

Redwood Lumber detail

setrack, including 1028mm radius curves. It's essentially a number of scenes linked by curves. The operator, sitting in the middle of the layout, can focus on one scene at once so if they just want to watch a train pass through it, they can do so without touching the controls. On the other hand, if they want to actively operate, the different scenes allow for plenty of interesting stock movements. Trains need to be kept short, but then many local or branch line trains were – just a couple of coaches and maybe a parcels van. So if you'd like to model O gauge but think you don't have enough space, it's worth thinking about what sort of modelling you enjoy and what you really want from your model railway. An O gauge layout needn't be enormous and it needn't cost a fortune to build or stock. And remember, the Gauge O Guild can supply all the information you need to be successful.

Further Inspiration: *Small Layouts Vol 2 and Vol 3*, available for purchase from the Gauge O Guild website online shop at **www.gaugeoguild.com**.

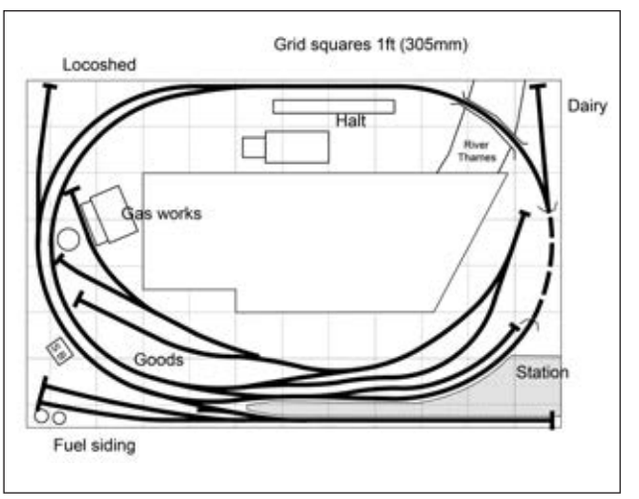


WATER STREET SIDINGS

Water Street Sidings. The layout was featured in the July 2021 issue of Railway Modeller.

Redwood Lumber

Geoffrey Goddin's Kew is a traditional oval in 11ft 3 in x 7ft 6in



Spraying Lifecolour Underframe Dirt on wheels and chasssi.

WEATHERING A READY TO RUN LOCO

Neil Armitage

Photos by the author

ELLIS CLARK TRAINS' IN-HOUSE painting professional provides a step by step guide to weathering ready to run O gauge rolling stock. Neil's hints and top tips are down to earth, cost effective options for the novice and experienced modeller alike to turn an 'out of the box' loco into a realistic model.

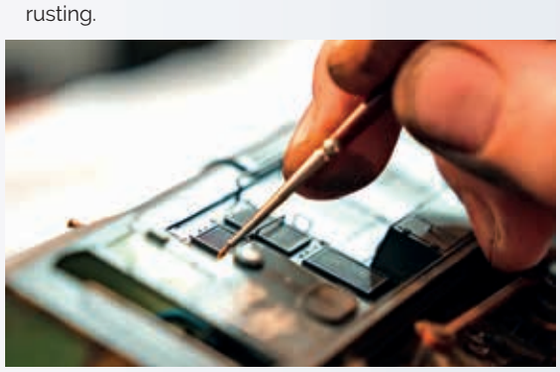
Equipment:

- Airbrush – Neil uses an Iwata Neo Compressor with air tank
- LifeColor water based Acrylic paints - various colours. Neil recommends purchasing the LifeColor Rail Weathering Set (22ml x 6) as this provides most of the suggested colours
- LifeColor Pigments - Damp Dust, Rust Oxidation State
- Paint brushes - 10mm flat, size 00 and size 2
- Painting Turntable
- Cotton wool buds, Maskol, cocktail sticks, methylated spirits and clear acrylic gloss varnish

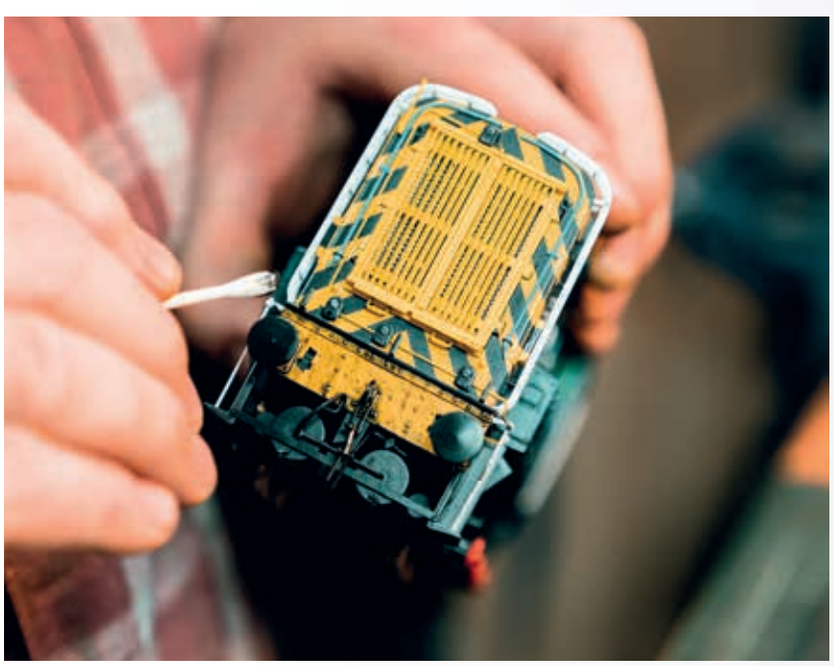
Method

- First stand your chosen model on the turntable. If weathering a locomotive with glazing, mask the windows off using Maskol. Masking tape can be used but you will need to cut it to size it takes much longer.
- The next step is the buffer beams and coupling rods, if painted. This is done by using slightly watered down black paint, and a size 2 paint brush all over the buffer beam. Once complete the paint is then removed using cotton wool buds, leaving residue around the bolt heads and crevasses etc. This creates an oily base coat before we start weathering. Top Tip - Remember to clean any areas maintenance crews would touch with their arms/backs.

- Using the size 00 paint brush, LifeColor Brown Rust is applied in very tiny amounts around the hinges, rivets and door edges etc. to show areas of blistering and rusting.



Using a cotton wool bud and some Methylated Spirits to clean off the handrails

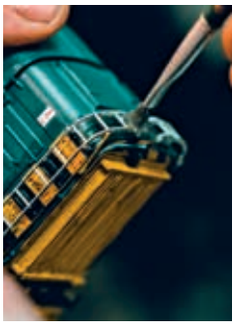


- Spray Lifecolor Underframe Dirt over the wheels and chassis area, remember at this step to apply power to the model to ensure an even coat. Once this is done, apply a very light coat of Uunderframe Dirt to the body, moving up the model.

- Now change the colour to LifeColor Roof Dirt. This is applied from the roof downwards and, once again, less is more! Top Tip - It's much easier to layer up than put too much paint on initially and have to remove it.
- Now apply Weathered Black, around diesel loco exhaust ports, grills and very lightly mist across the rooftop and slightly down onto the sides.
- Using a 10mm flat paintbrush and LifeColor Pigments Damp Dust, apply the pigment very sparingly onto the chassis and areas below the running plate. Very small amounts can also be added to the buffer beam. This does not need fixing with varnish as long as you are not picking the model up by the underframe.

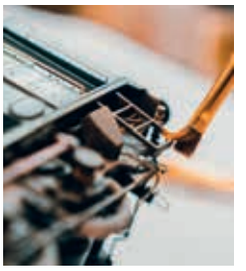
- Next, fill the airbrush with LifeColor Matt Black. This is to be used for the springs, axle boxes and buffer heads. A very light spray over the chassis area can also be applied at this stage. Lastly, if any further weathering is required on the roof, apply at this stage with the same colour.

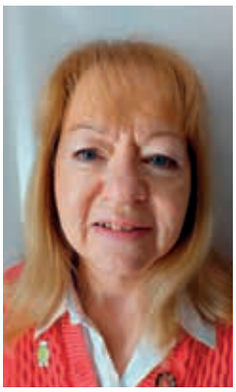
- Moving back to LifeColor Pigments, this time using the Rust Oxidation State and the size 00 paint brush, pick out the brake blocks and any rivet heads around the model.
- Using a cotton wool bud and some Methylated Spirits, clean off the handrails where loco crews would climb in and out or move along the loco sides.



- From here, using size 00 paint brush and water with a tiny (pin prick) drop of LifeColor Roof Dirt, water stains can be applied to the model if desired.
- Apply the clear acrylic gloss varnish with a suitably sized paint brush very sparingly in any areas that need to appear shiny, oily or wet.
- The very last jobs are to remove the Maskol using a cocktail stick and clean the wheels using cotton wool buds and Methylated Spirits. Then pop the model back on track and give it a test run!

Thanks to Ellis Clark Trains for providing the model and photographs used in this article.





Ruth Redgwick

Photos by the author

FIGURE PAINTING

RUTH HAS MANY YEARS' EXPERIENCE painting figures for O gauge layouts and has demonstrated her techniques at a number of Guild shows. Here, she shares some hints and tips on how she goes about achieving a realistic result.

I start by making sure that the figures are smooth and there are no casting burrs on them, filing them if necessary. Then I clean the figures with soap and water, rinse and dry very well. All this is vital before they are primed, as the paint will not adhere properly otherwise. Drilling a small hole somewhere suitable and inserting a short length of wire makes them much easier to hold, and I can stick them in a polystyrene block while they're drying. The wire can be super-glued in and then can either be used for placing the figure on the layout or removed.

Next, I spray with etch primer, preferably grey, whatever the figures are made of. Some people use black, but, given that I'm painting all sorts of figures in all sorts of colours, I feel it would be too dark to cover properly on some of them.

For the topcoat and details, I use acrylic paints, not enamels. They dry more quickly, don't smell, give equally good coverage, and I can simply wash the brushes with water. Given that there is little drying time needed it means that I can paint two different colours next to each other without a problem. I also always use matt paints. If you look around, people and clothes are generally not glossy! There are, of course, the odd exceptions but these can be altered by varnish at the last stage.

The brushes I use are all quite fine. The largest is a 2-zero and the smallest a 10-zero. The only exception to this is when I'm painting larger animals and then I often use a small piece of sponge, which serves a dual purpose: it covers a large area more quickly and adds texture.

I've usually got a few figures "on the go" at one time so if I've got some flesh colours mixed I'll paint hands and faces first but, if not, I'll paint the largest areas first such as jackets, coats, uniforms and trousers.

The question that I'm probably asked most is how I get the different skin tones. Well, I never use ready-made "flesh colour", I always mix my own. This is basically white

with small amounts of bright red and mustard yellow added, depending on who I'm painting. Obviously, a Victorian lady will have much paler skin than a railway worker who spends a long time outside, and even then there are different tones. More red or yellow can be added to vary the tone and use it for lips, cheeks and shading.

For eyes I use the finest brush to paint an elongated dot rather than a round one – that gives too much of a stare or startled look - and I use blue, green or brown. Many of the figures also have eyebrows. It's fiddly, but it makes the faces come alive. On very good figures the eyebrows are often part of the moulding, and that makes a difference. The better the figures are to begin with, and the more obvious the details, the easier and more

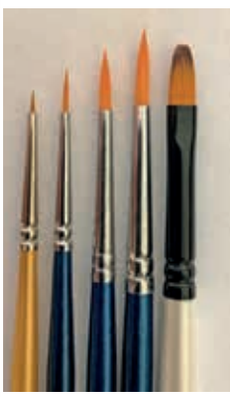
enjoyable to paint. Otherwise, it's a question of just painting them in. When it comes to painting the hair I use a basic colour but then go over it with a dilute wash in a slightly darker or lighter shade to give it some depth.

My knowledge of what colours would be used for clothes in different eras comes mainly from books or the internet. If you Google '1930s fashion' for example, you will discover endless pictures to provide inspiration.

Shading to pick out folds in clothing is one of the last things I do. I either use a "wash" in a slighter darker shade or paint fine lines where the creases and other shading should be. On dark blue railway uniforms I'll mix some black into the blue to do the shading, but for lighter colours such as yellow, I'll either find a slightly darker colour or mix in something else, perhaps a pale grey or brown. It really is trial and error sometimes!

The last stage is usually the varnishing. The figures are sprayed with a matt varnish, but then I do any bits that need it with gloss or satin varnish. The latter is used on bald heads and some hair, and gloss on shiny leather, buttons or belt buckles.

I don't claim to be an expert and that this is *the* way to paint figures, but this is how I usually do them. We are all always learning. The important thing is to have a go!



A selection of Vallejo acrylic paints, available from a wide variety of craft shops and a range of brushes ideal for figure painting.

RADIO CONTROL FOR O GAUGE

John Buck

Photos by the author

JOHN BUCK IS A MEMBER of Keighley Model Railway Club and models pre-group NER. His current layout, Hope Street, uses radio controlled locos exclusively. Here's how he does it.

Why use Radio Control?

Radio control (RC) has been used to control garden railways for some time and the benefits of not having to power long lengths of outdoor trackwork are obvious. Also, the use of larger locos with roomy tenders enables the use of relatively large battery packs and other RC components. With the availability of smaller components, better battery packs and more efficient motors, the benefits of radio control can be transferred to all but the smallest O gauge locos. By using a match truck, even the tiny NER K Class can be converted to RC.

Because power is direct from the battery to the motor there is no need for pickups or rail wiring, meaning there are no problems with short circuits, dirty wheels or pickups. In fact, there is no need to clean the track at all. You can just leave it to develop the patina of wear created by the wheels of your stock. With RC it is the loco that is controlled, not the track. This does mean that point operation is more important because if the point is not set correctly the train will derail 'just like the real thing'.

Getting Started

I use Deltang components which is a relatively cheap and easy way to start. I did spend some time on the internet researching RC for model railways to ensure that I had at least some idea of what I was doing before I started cutting up perfectly good locos. 'RC Trains' and the 'Dead Rail Society' are good places to start. The DRS is an American site so much of the kit recommended is not available in the UK but it gives links to useful YouTube videos. Once you get a clear idea in your mind about what is required, the actual fitting is relatively easy.

The kit of components, plus the transmitter I have used for all my conversions, a battery pack between 4.8v and 12v to fit in the loco, a self-resetting fuse, Rx60-22 receiver , SPDT switch, and a DC charging socket. Deltang make a larger receiver for larger locos and those with old style open frame motors.

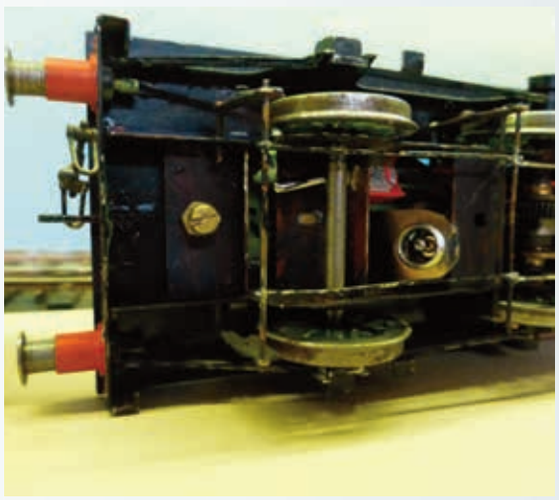
Converting existing engines does present some problems, especially with small engines because a certain amount of butchery is required. When building a new engine from scratch or kit it is easier to make provision for the RC components. The first engine I converted was a NER Class 84, a diminutive Victorian 2-4-0 saddle tank. My thinking was, "if it will fit in that it will fit in anything". That is the loco used for this article.

Before fitting anything it was necessary to buy a transmitter and battery charger. The transmitter is a Deltang Tx 22 which can be used to control up to 12 locos. The charger is suitable for the rechargeable NiMH batteries that I decided to use.

The battery pack for the Class 84 is made up of four AAA batteries that fit comfortably in the boiler, giving an output of 4.8v. The Class 84 is fitted with an ABC motor gearbox and 4.8v is enough to power it at scale speed for a full operating session. A fuse of the self-switching type protects the receiver and motor. The receiver is a Deltang Rx60-22 which measures 11 x 22.5 mm. and fits easily into the small coal bunker. The picture shows the receiver pulled out of the bunker. The receiver will not work if completely enclosed in metal. However, you can see from the photo that a small gap is enough even when concealed under coal.

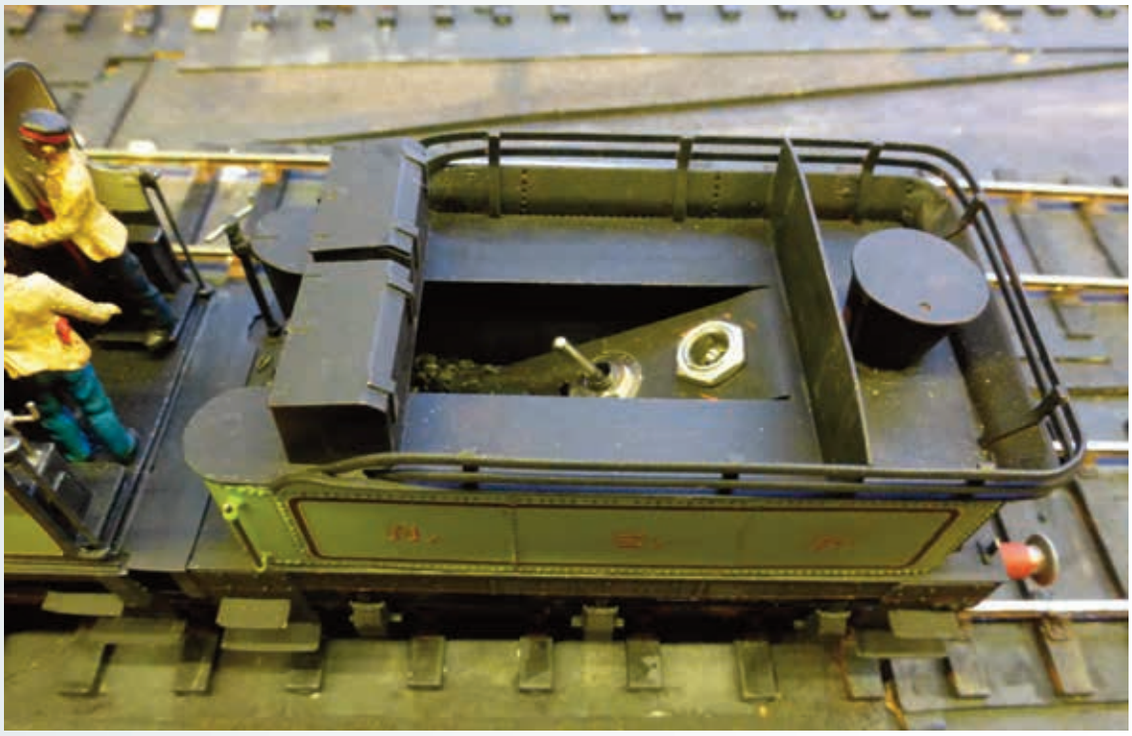
Installation

I had to cut a hole in the bottom of the bunker so that the wiring could pass under the cab to link up with the battery and motor. It is a bit of a tight fit but it all tucks in.



The switch and charge socket were awkward to fit if I was to keep them out of sight. I settled on fitting them between the frames. It's perhaps not ideal, but it works. The photo shows how it all fits somewhat cosily together.

So far, the largest loco I have fitted is a NER Class C (J21). All the components fitted easily in the tender and I was able to fit 8 AAA batteries giving 9.6 V. This was ample to pull a long goods train around Keighley Club's large Ravensbeck layout for two continuous hours. It would have lasted longer but I got bored with watching it going round and round. Equally, the batteries provide a full day's shunting on Hope Street on a single charge.

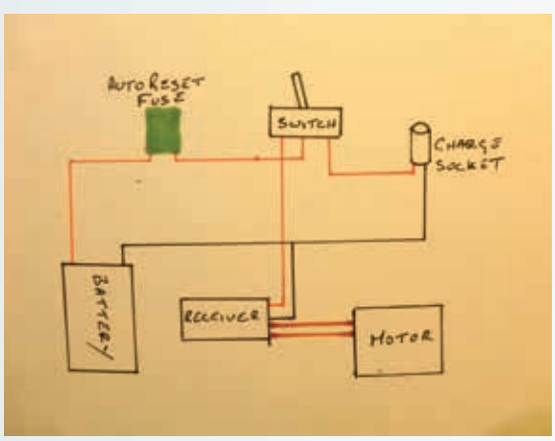


A small NER tender showing the charge socket and switch fitted in the coal space.

Circuit Diagram

I have not given a blow-by-blow account of the actual conversion because each one is slightly different. However, the wiring is simple once you have worked out where you can best fit the components. Also, I have not fitted sound to any of my locos, though this is available if you have the space and inclination.

The kit of components, plus the transmitter I have used for all my conversions, a battery pack between 4.8v and 12v to fit in the loco, a self-resetting fuse, Rx60-22 receiver, SPDT switch, and a DC charging socket. Deltang make a larger receiver for larger locos and those with old style open frame motors.



References

The following websites and businesses can supply equipment and /or information. I have no connection with any of them other than being a customer.

Micron Radio Control: *Suppliers of Deltang Transmitters and Receivers.*

Strikalite: *Supply a range of battery packs and will make them up to fit.*

RC Trains: *A useful source of information and components. Has a link to a good blog.*

Acc+Ess protocab: *Are pioneering RC for 4mm. May be of use for small locos, though more expensive.*

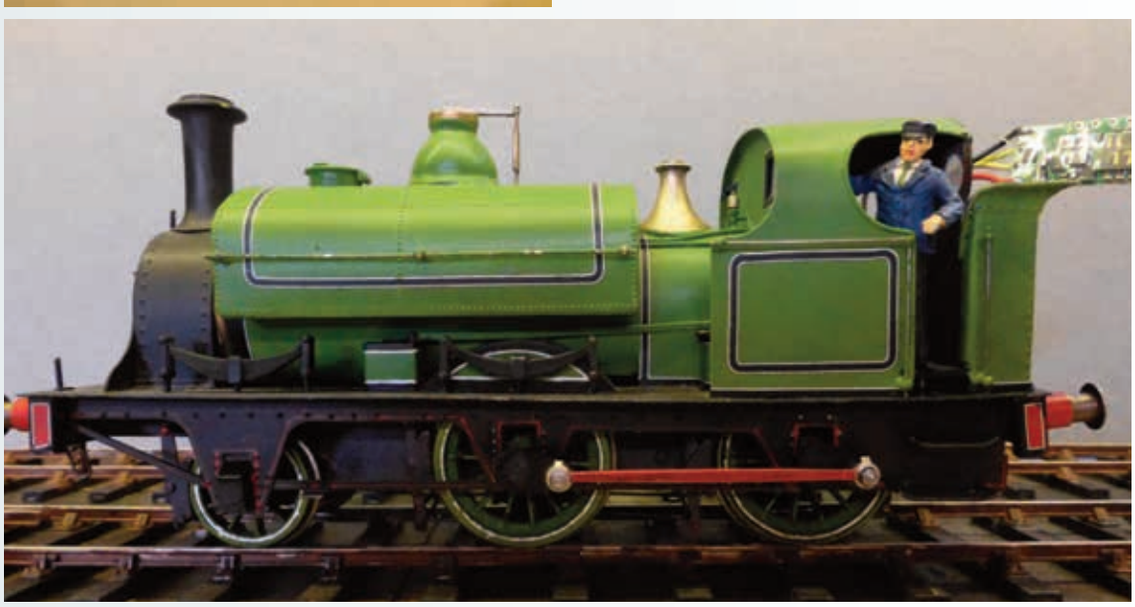
Deltang: *Useful if you can understand the technical stuff.*

Brian Jones: *Mainly aimed at garden rail, but worth a look if you have larger locos and want sound.*

Fosworks: *Again mainly aimed at garden rail but worth a look for larger locos and sound.*

Dead Rail Society: *Useful general information.*

A web search will reveal more websites than I've listed here and YouTube is also worth a look.



NER Class 84 tank

Peter Scarborough

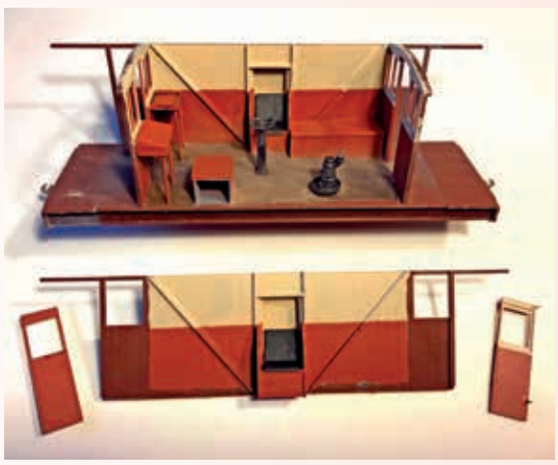
Photos by the author

BUILDING A BRAKE VAN KIT

PETER SCARBOROUGH is a long-time member of the Keighley 7mm Group and was part of the team who created the multi award-winning 'Runswick Bay' which has appeared on television and been exhibited internationally. An advantage of modelling in O Gauge is the level of detail that can be incorporated. Here, Peter has included an interior and a detailed figure.

Introduction

The model is built from a Slater's plastic kit for an LMS/BR 20 ton Goods Brake Van. The kit allows the modeller to build a number of different versions – I chose a BR built version to Diagram 1/505, one of a vacuum piped batch built at Derby in 1949. It is worth researching your chosen model before starting, especially through photographs, as although modern plastic kits can be quite comprehensive some items are not included. It is also vital to READ THE INSTRUCTIONS and trial fit parts together before final assembly. Plastic kits can be built using common craft tools. A decent knife is recommended – I use a scalpel with a 10A blade, and if you are planning to build a few plastic items, a sprue cutter can be very useful. I use a liquid polystyrene cement applied with a fine brush and generally attach metal parts with superglue, the latter applied with a cocktail stick or fine wire. I also use UHU,



particularly when fixing a roof where there is an interior but be warned that it has a tendency to string so should be used with care. Your finished model should be level, and square so a flat surface such as glass and small set squares are recommended.

The following sources were used for reference:

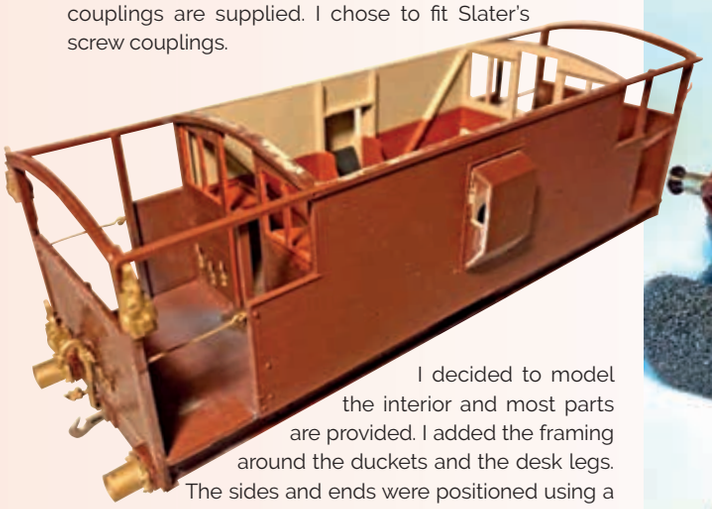
British Railways Wagons-The first half million by Don Rowland.

An Illustrated History of LMS Wagons by R. J. Essery.

Paul Bartlett's website – paulbartlett.zenfolio.com – a really useful source of rolling stock photos.

Signal box with the described additions. The yellow and grey plastic parts are the original kit

The kit as supplied is a mixture of plastic, etched brass, cast brass parts, brass wire and plastic strip, with steel wheels and brass bearings. The axle assembly is rigid but Slater's do supply compensation units. I chose to model it rigid – providing care is taken to achieve a level and square underframe, I have had no problems with long wheelbase rolling stock. The vacuum pipes supplied are particular to the prototype but ordinary three link couplings are supplied. I chose to fit Slater's screw couplings.

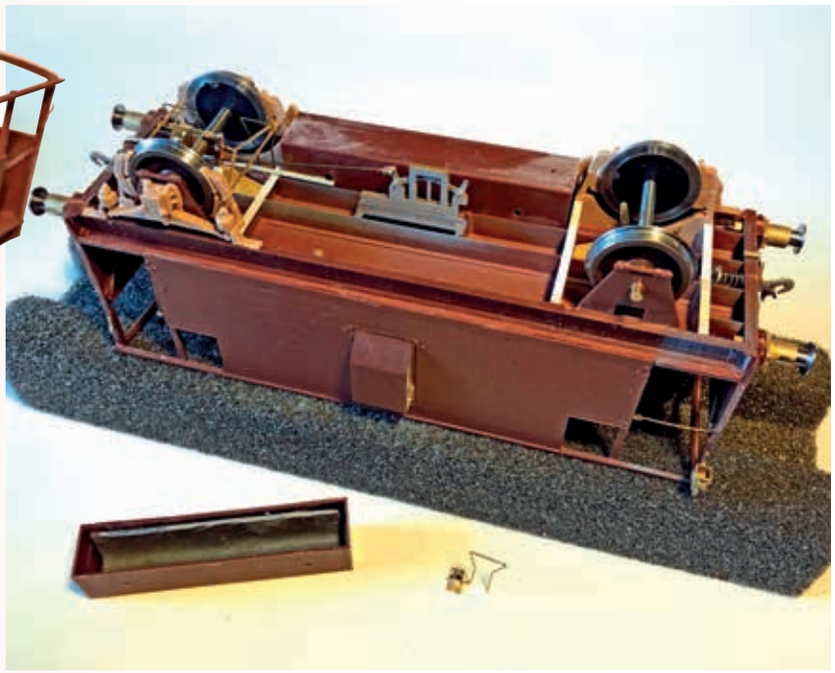


I decided to model the interior and most parts are provided. I added the framing around the duckets and the desk legs. The sides and ends were positioned using a square edged aluminium block to ensure would fit. Internally BR brake vans were painted the main body colour below 3ft 6in and stone above and it is easier to paint and weather the interior before the second side is fixed. I wanted open doors and added brass wire 'hinges' to fit later. I find it easier to fit coupling hooks before fixing the headstock. The actual couplings are fitted later but make sure items such as vacuum pipes do not get in the way.

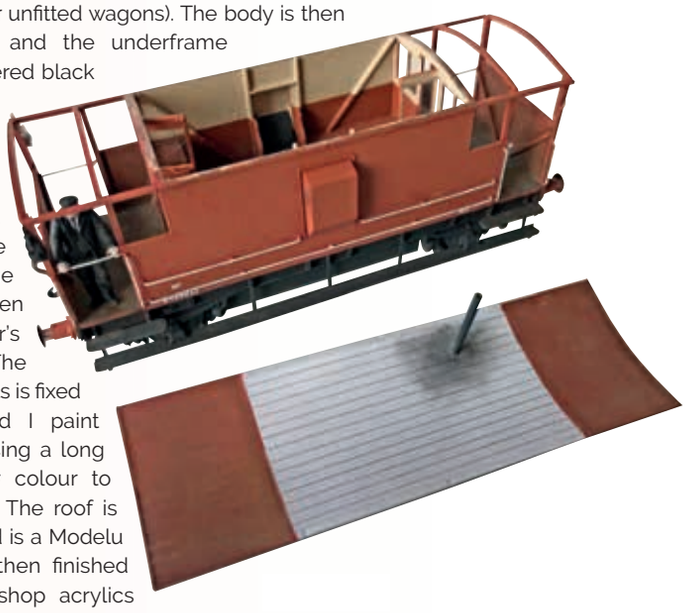
I find it easier to drill and fit the veranda safety bars before fitting the outer ends. I fit the cast brass parts and then apply superglue on a cocktail stick, quickly mopping up the excess with tissue and when dry removing any residue with a small fibreglass brush. I soldered the tail lamps to the brackets before fixing as I felt this would be more durable than using glue..

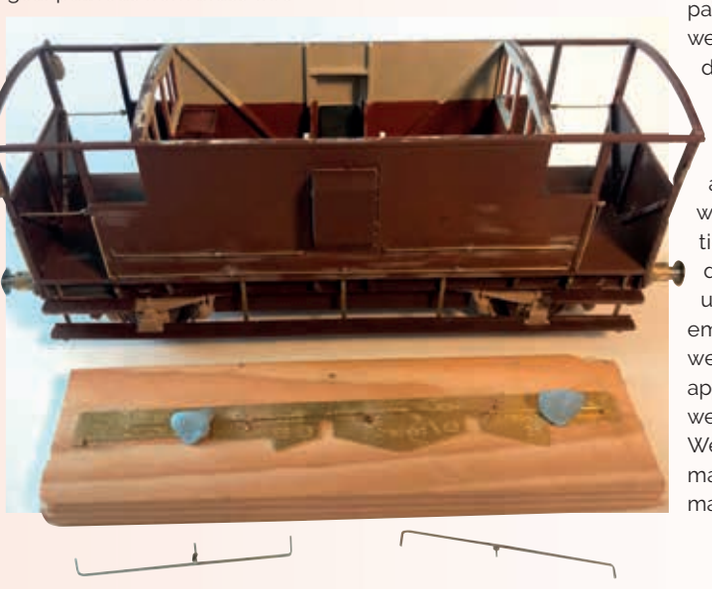
Some form of support with a bit of give is beneficial – I use a PECO 00/H0 loco cradle. When fitting the wheelsets, I fix three solid ensuring the liquid cement has hardened and then just tack the fourth until I am sure that all is level using a flat piece of glass. I pack out the wheel bearings from the axle guards with two fibre washers to ensure that the wheelsets are square to each other. Some form of weighting is necessary. I use lead sheet and the ballast pockets between the wheels are an ideal location. Ventilation holes are recommended if gluing anything that results in a sealed space. I added strapping to the brake gear pull rods from brass wire

A jig is provided to assemble the horizontal handrails and brackets. I found it easier to glue the brass etch to a piece of wood to drill out the holes, holding the brass wire in place with blu tack or similar. I soldered the wire to the brackets, fitted the assembly and applied superglue in-situ as before. The interior is then masked with tape prior to painting.



The main body is sprayed with Halfords Red Plastic Primer (I use grey for unfitted wagons). The body is then masked with tape and the underframe sprayed with weathered black from a spray can. The main body colour is then brush painted in enamel using a large flat brush followed by the detail areas. The plastic glazing is then fixed using jeweller's glazing cement. The glazing to the duckets is fixed to the outside and I paint around the edge using a long thin brush in body colour to simulate the frame. The roof is now fixed. The guard is a Modelu figure primed and then finished using cheap craft shop acrylics paints, blending the paint when still wet (See Ruth Redgwick's article on page 8 for details on how to paint figures).





Weathering is carried out with reference to photographs of the prototype. I use a variety of enamels, dilute enamel washes and powders. I generally apply the paint or wash and then remove most of it with a tissue or cotton bud, always wiping downwards. I let this dry and then repeat until the desired effect is achieved. I also employ dry brushing. I try not to hurry the weathering process and like to sit back and appraise each stage. The go-to reference on weathering is *The Art of Weathering* by Martyn Welch (ISBN 1 874103 11 9) and there are many fine examples on his website – martynwelch.com

FIELD MILL WHARF

PETER IS A PROFESSIONAL layout builder and the proprietor of Kirtley Model Buildings. Here, he demonstrates how he built an O gauge layout with plenty of operating interest in just 8ft 6in x 2ft 6in

Peter Smith

Photos by the author

When I was asked whether it was possible to build an O Gauge layout in a space of just 8ft 6in by 2ft 6in I must admit I had to stop and think. I sketched out some ideas and talked them over with my customer and we settled on the plan reproduced here. It was quickly apparent that passenger trains were not really an option. It was much better to go for a freight yard of some sort with small locos and lots of shunting potential. Field Mill Wharf has been the result.

The track is just loosely laid to make sure it all fits before being fixed down. I have begun to build up the town on the backscene using pictures from my own backscene packs, mostly taken at the Black Country Museum. The wharf side was deliberately made so it was not simply straight, which makes it look more interesting.

The advent over the last few years of high quality RTR models has changed the whole idea of modelling in 7mm scale. My customer had been happily working in N gauge but wanted a change; without items such as the Dapol 08 he would not have contemplated O Gauge as he didn't want to get involved in kit building. Now, though, it's easy and getting better all the time.

Field Mill Wharf is set in the early 1960s in an industrial part of England but beyond that is not fixed geographically. The time period is really only defined by the road vehicles, the figures and the phone box. Take those off and it could be operated in any period from 1870 to 1970 with very few changes.

I was originally going to build the points myself using copper clad sleepers, but almost on a whim I decided to use the PECO SetTrack points. It was a good move because, for an application such as this, they are perfect. They come ready wired for DCC and despite the sharp radius, they look really good and everything we have used runs through them without any problems. Using them made the project easily achievable and we never looked back.

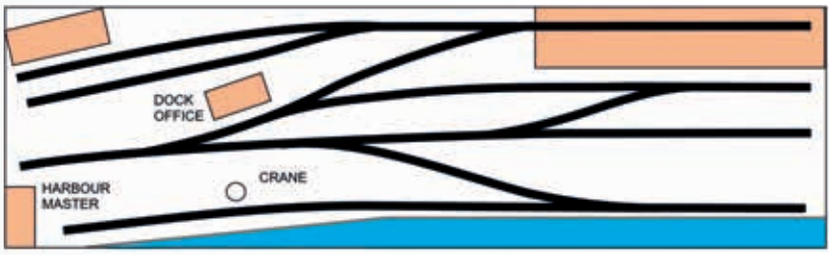
I made two baseboards with integral backscenes out of plywood with three sets of wooden supports, building-in the side of the wharf and the lower level of the water. The backscenes were painted using sky blue emulsion and then the clouds were added using grey and white spray cans. This is easy to do and means there will be no issues with paper or vinyl backscenes peeling or bubbling which usually happens after it is too late to remove them.

With the baseboards complete and standing up in my workshop, I was able to lay the track. I do not use underlay, putting the track directly on the ply surface. With the points ready-wired, track laying didn't take long and I was soon able to connect my DCC system with crocodile clips and have a play, using a Dapol Terrier as the test loco. I laid track across baseboard joints and then cut the rails later, gluing down strips of copper clad with Evostick and soldering the rails to it first. It makes it easier when much of the track will be covered with granite setts, as here,

The finished layout in place. The picture shows almost the whole thing, emphasising how small it is. The wooden beading along the top of the backscene finishes things off neatly, as does the black curtain which is simply attached with Velcro.

The righthand end of the layout showing the finished wharf side; the water is simply several coats of gloss Polyurethane varnish.

The removable warehouse; the track inside holds a loco and four or five wagons and also acts as the headshunt for two sidings. Behind the 05 is a wooden gate on the backscene, the idea being that the line carries on through that to connect with the BR network.



The Lenz controller only needs one socket as the cable is long enough to allow you to reach any part of the layout. The various buildings were constructed to fit the odd shapes that were left over when the track was in place and also to avoid being square to the backscene. The shed behind the tank wagons disguises the corner very nicely.

because it doesn't matter what it looks like underneath. The track was spray-painted with Railmatch Sleeper Grime. The parts that would be seen were dry brushed in various shades, rust colours for the rails and shades of grey for the sleepers. A railway backwater such as this would have been pretty neglected by the early 1960s so light colours were needed to reflect this.

Since delivering and installing the layout I have been there a couple of times to operate it and have to say that for play value it has exceeded expectations. To have a fully self-contained layout in such a small space, which keeps the interest for extended periods, has shown that "I haven't got room for O Gauge" no longer applies, if it ever did. You just have to build something appropriate for the space you have and be content with that. Modern RTR locos run so well that pottering about at slow speeds with a few wagons is a real pleasure and a great way to relax and unwind.

At the moment the layout has three locos, a Dapol 08 in green with wasp stripes as the loco that brings in the wagons from the BR network, a Heljan 05 in dark red, lettered for the dock company, and a very weathered Minerva Peckett, also lettered for the dock company. That's all the layout can cope with at any one time although I'm sure more will appear in due course. The wagons are nearly all Dapol and of course everything has been weathered.

The two diesels at the end of the layout. There is room for ten or so wagons before things begin to get too crowded.

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