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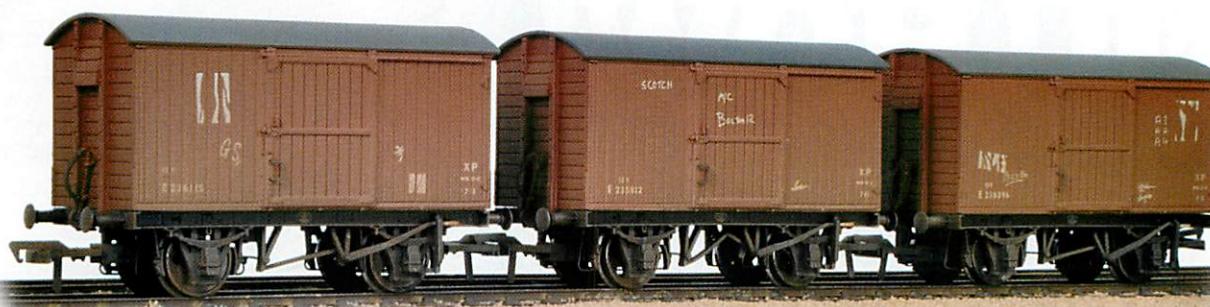
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Era 4 signifies locomotives suitable for period 1948 - 1956 British Railways Early Emblem

Era 5 signifies locomotives suitable for period 1957 - 1966 British Railways Late Crest

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WEATHERING A LOCOMOTIVE

FROM THE PUBLISHERS OF HORNBY MAGAZINE

FEBRUARY 2012

FREE THE BEGINNERS GUIDE



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LEARN THE ART OF WEATHERING

WELCOME to Hornby Magazine's special supplement on weathering. This popular subject takes pristine models and transfers them into a state more akin to how they would be in daily service. For this supplement we've gathered together a selection of useful features covering everything from essential tools to complete projects with the latter using a variety of techniques and products. We hope you enjoy learning more about weathering.

Mike Wild

Mike Wild, Editor, Hornby Magazine.

WEATHERING

Weathering is all around us, but why should we weather model
MIKE WILD shares his views on the subject and discusses its

STEP OUTSIDE your front door and I guarantee you'll find something that has been weathered. If you have a car on your drive, particularly at this time of year, if it hasn't been washed for a few days it will have accumulated streaks and stains from being on the road. This, in essence, is weathering.

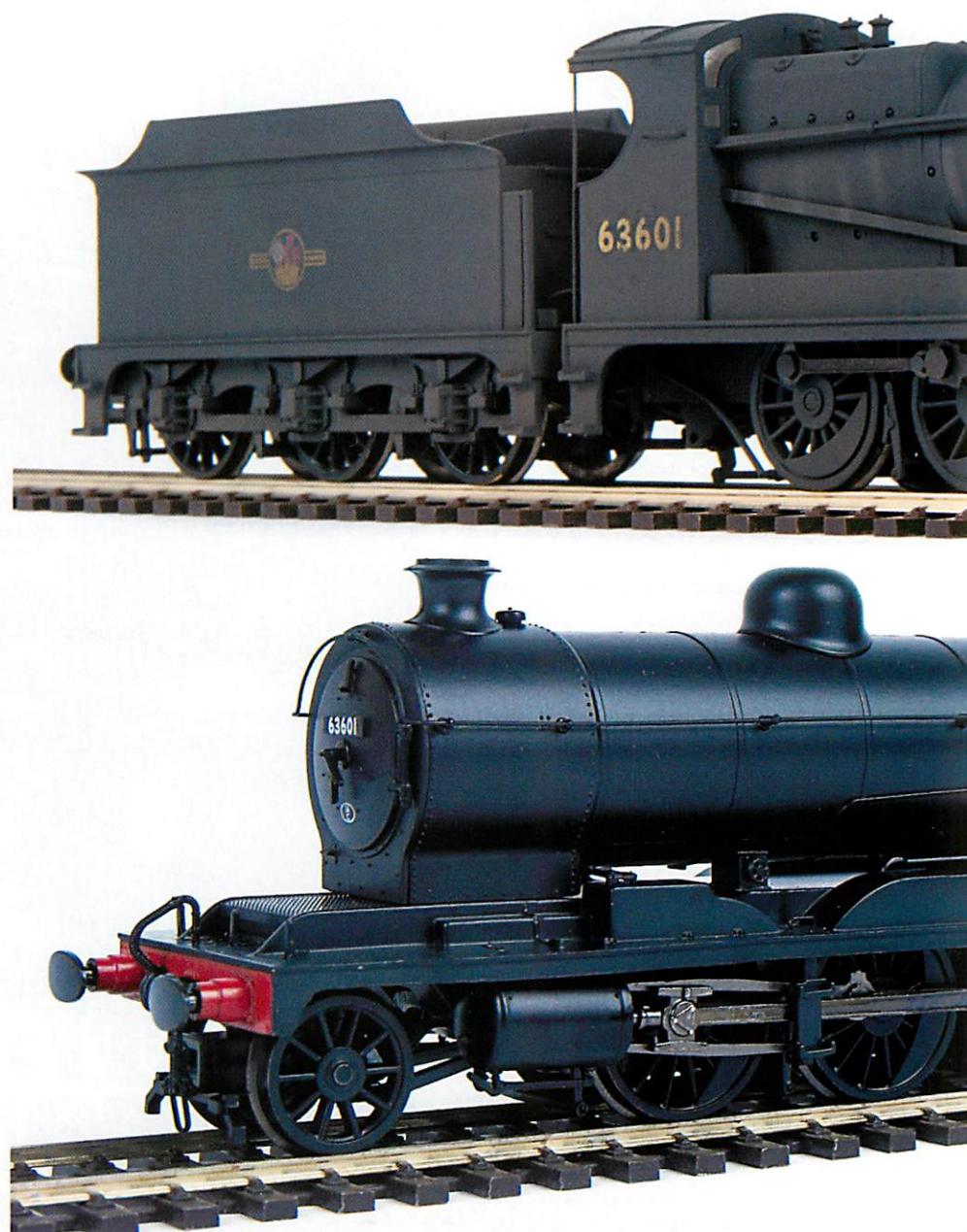
It exists on buildings, the ground, in our gardens and even in our homes. On the railways, and particularly during the steam age, weathering came in a variety of forms.

Sometimes it is easy to get carried away into a fantasy world where everything was clean and fresh, but even the newest of locomotives and coaches soon acquired a little weathering purely from the environment generated by steam sheds and at the head of trains.

In model form weathering is all about realism and adding value to our miniature scenes. For us here at *Hornby Magazine* we try to avoid box fresh models running on our exhibition layouts because they tend to look out of place when placed alongside any model that has been targeted with a little toning to reflect its place as a working locomotive.

However, weathering goes much further than just locomotives and rolling stock. To be a complete scene a model railway will need to be weathered throughout to make it look natural and in keeping with the real world. Observation is key to this, but you don't have to be at a railway to find inspiration. Take a walk down your street and look at how the buildings have weathered over the years. Bricks will have taken on different shades, the pavements will have marks on them while the road itself may be marked with oil, tyre marks or mud.

We can't replicate every single aspect of weathering in one model – it would be too much for the eyes to absorb – but by looking around and taking note of how surfaces and materials around us react to aging and weathering we can find elements to include.



RAILWAY WEATHERING

Naturally the most common form of weathering discussed amongst modellers is that of locomotives and rolling stock. Different types weathered in different ways depending upon their use and while express locomotives were often well cared for some freight locomotives became heavily careworn as they went about their daily work.

To understand how locomotives weathered it is essential to look at photographs of the prototype in question and your planned

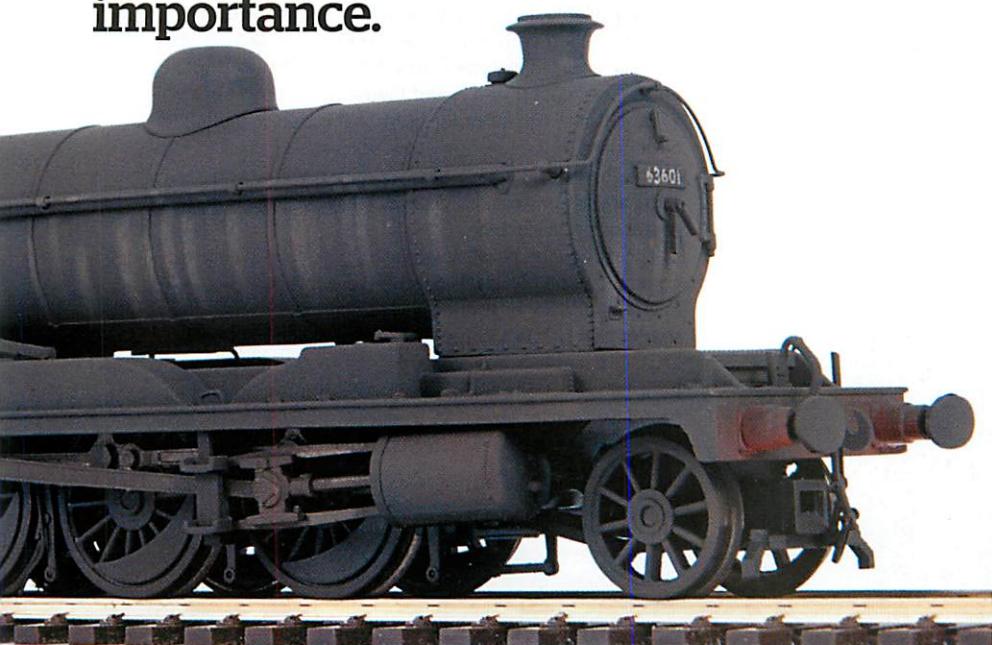
period of modelling. This goes as much for steam as diesel locomotives. It is amazing what details you will notice and from this point of view Tim Shackleton's new *Aspects of Modelling – Weathering Locomotives* (published by Ian Allan Publishing, HM54) is a very worthy companion to anyone weathering their own stock.

Ian Allan Publishing's series of colour albums is also a superb source of reference. For example while looking at weathering

a Thompson 'B1' for *Hornby Magazine's* Bolsover and Seven Lane Pit I stumbled upon a photograph of two 'B1s' at Stratford Works. On first glance one appeared to be in mint ex-works condition while the locomotive behind was covered in layers of dirt and grime. However, on closer inspection even the ex-works 'B1' had already acquired some streaks and stains over its fresh paintwork, proving that even the cleanest of locomotives can be enhanced.

WEATHER?

locomotives, rolling stock and scenery?
importance.



PERSONAL CHOICE

Like so many things in railway modelling weathering becomes a highly personal venture. Some love to keep their models in fresh, clean condition, whereas others prefer heavily weathered locomotives and some prefer a midway point between the two.

There is no question that weathering can enhance the appearance of a locomotive greatly and in the following pages we will be showing you some of the basic practices to get you started in the art of weathering.

FURTHER READING

- *Aspects of Modelling – Weathering Locomotives*, by Tim Shackleton, published by Ian Allan Publishing (ISBN 978-0-7110-3656-7)
- *Right Track 11 – Weathering Techniques* (DVD), with Tim Shackleton, produced by Activity Media
- *Airbrushing for Railway Modellers* by George Dent, published by Crowood Press (ISBN 978-1-84797-265-1)

Weathering styles

FREIGHT WAGONS

Goods wagons weathered in different ways depending upon their construction technique and purpose. This Bachmann 12ton box van has been weathered with Carrs weathering powders to give it an in service look without being over the top.



TRACK

Like all railway elements the track and its surrounding ballast weathered quickly with the effects of passing trains and natural elements. This is the trackwork on Hornby Magazine's Bolsover and Seven Lane Pit. The rail sides have been weathered by brush painting Railmatch sleeper grime onto the sides while the ballast and sleepers have been toned down with Geoscenics black concentrate (heavily diluted with water) and sprayed over the track with an airbrush.

DIESEL LOCOMOTIVES

Just like steam locomotives diesels weathered in different ways depending upon their use and build style. This Class 47 tended to weather from the roof down due to the arrangement of cantral grilles. This Bachmann model has been treated to a track dirt colour on the bogies, fuel tanks and lower bodyside (lightly in the case of the latter) with the main source of dirt being the roof which has caused streaks on the bodyside.



ROAD VEHICLES

Sometimes it is the simplest things which make the difference to a model's appearance. While it is perfectly plausible to weather a road vehicle with dirt and streaks sometimes a simple coat of matt varnish can make all the difference - harmonising a vehicle's appearance with the layout around it.



TOOLS AND

There are a vast array of materials and mediums available for weathering ranging from simple powders to airbrushes and compressors.

MIKE WILD profiles the products which complete his weathering toolset.



Weathering powders

There are a number of manufacturers producing weathering powders. These are perhaps the simplest form of weathering agent available as they are relatively inexpensive to buy and can be applied with a small paintbrush or make-up brush.

Manufacturers include Carrs (HM37), Tamiya (HM37), DCC Concepts (HM51) and Geoscenics (HM56) as well as others and this summer Humbrol is due to launch its own range of weathering powders – see Update in HM56 – although you can also create your own weathering powders using artist's pastels and charcoal by grinding down lengths of pastel using sandpaper.

A great advantage of weathering powders is that the colours can be blended together to create different effects. Each manufacturer mentioned above produces a range of shades and colours, often in packs of similar types. Carrs, DCC Concepts and Geoscenics come as powders which can be brushed on while the Tamiya weathering powders are oil based and better suited to smearing, making them ideal for small rust stains and oil streaks.

Airbrush

Many see an airbrush as an essential tool of weathering, but it isn't strictly necessary to achieve good results. Take a look at the feature by Tim Shackleton on the Hornby 'Trout' ballast hoppers in HM55 – an airbrush did not feature in the transformation of these wagons at all.

However, if you are keen on weathering your own models then you should certainly consider investing in an airbrush. The specification and price range of airbrushes is immense, but you don't necessarily need to start with a premium model. Iwata – one of the leading airbrush manufacturers – has endorsed a new range of budget airbrushes by Neo which offer great value for money with prices in the range of £50.

To make the most of an airbrush you will need a compressor. Cans of compressed air are available but these are quite expensive and don't last long. In the short term they may be an acceptable means of testing and honing your skills, but in the long term a compressor is essential for operating an airbrush with consistency. This is a sizeable investment, but one which is highly rewarding in the results and one which, over time, becomes an economical purchase.



MATERIALS

Cleaning mediums

No matter what type of painting you tackle – except for aerosol spraying – some form of cleaning fluid will be needed for either paintbrushes or an airbrush. The simplest and cheapest is white spirit or thinners. It is best to avoid cellulose thinners unless you know what you are doing as it is a harmful chemical which needs to be handled with care.

For airbrush cleaning white spirit or a specialist airbrush cleaner is essential and it is worth stripping an airbrush after each session for thorough cleaning to ensure that all of its parts are free from paint build up – particularly in the nozzle.

The Airbrush Company offers a range of specialist cleaning fluids for airbrushes, but our pick of the bunch are Premi air Liquid Reamer and Media airbrush cleaner, both of which have provided excellent service to our equipment.



Aerosols

Although not ideal for weathering in some cases aerosol spray paints can be used to good effect for basic applications. There are also specialist spray dyes solely for the purpose of weathering such as those produced by Model Mates.

Conventional aerosol sprays aren't the best for subtle weathering effects, but using methods such as bounce spraying – where the nozzle is pointed at an offcut of wood or card to direct a fine mist of paint onto a model – can achieve good results.

The weathering dyes produced by Model Mates are versatile and with a wide range of colours to choose from they can be used for rolling stock, road vehicles and buildings as well as general layout weathering.



Paints

Paint is an essential part of weathering. Some prefer to work with enamel paints because they are more malleable during and after drying, allowing more work to be carried out. However, acrylic paints – which conventionally take between 10 and 15 minutes to dry – can be a real boon too.

When it comes to sources there are many options available including Humbrol and Railmatch (enamel and acrylic paints), Phoenix Precision paints (enamel only), Lifecolor (acrylic only) and many others. Our toolbox features a range of colours from Humbrol, Railmatch and Lifecolor, but for weathering only a limited palette is used.

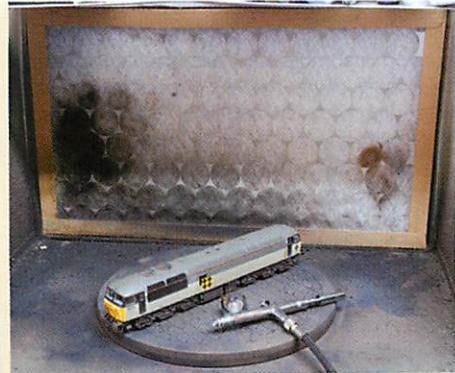
For example the first choice colours for locomotive weathering in the *Hornby Magazine* office are Lifecolor weathered black, frame dirt, smoke (from the Tenscrom range) and oil. However, there are a couple of other colours which get used from time to time including Lifecolor gun metal grey, oil and brake dust.

When it comes to application then an airbrush is exceptionally useful for weathering, but attractive and detailed effects can be built up with brush painting too.



Spray booth and extractor

If you are planning to work with an airbrush or spray paints it is important to consider the safety aspects involved. A well ventilated area is essential and I know of many modellers who only paint their models outdoors. However, this isn't always practical with the British climate. An essential component for spray work is a spray booth with an extractor which allow you to work indoors (with care) without allowing fumes to fill the room in which you work.



A wide range of equipment is available to fulfil this role from portable spray booths to static setups and in a range of price brackets. A turntable is a useful tool too as it allows a model to be rotated without handling for spraying on all four sides.

Paintbrushes

Good paintbrushes are just as valuable worn out as new when it comes to weathering. If you are using powders there is no point in picking up a brand new brush as this will have much more life in use for methods such as dry brushing.

It is useful to have a range of sizes available to suit all manner of jobs such as fine detail work and large areas of coverage such as streaking on boiler barrels and tender sides.



Weathering a STEAM LO

PICKING UP a brand new locomotive and weathering it can be a daunting prospect. It is a skill which takes time to hone and many modellers have widely differing approaches to the subject.

This feature tackles a Hornby BR '4MT' 4-6-0 75072 in BR lined black. This Southern Region locomotive is presented pristine by Hornby, but as we'll show, it is a prime candidate for weathering.

First though, a little advice. I wouldn't recommend to anyone tackling their first weathering project to pick up a brand new high value model to begin with. Weathering is a personal subject for many and it is better to ease your way in trying out techniques and ideas with cheaper models or even damaged kits from your scrapbox first. Take a look around second hand stalls at exhibitions, pick up the body for a steam or diesel locomotive and use this as a test bed. That type of project makes an ideal place for experimentation and practice to take place.

However, what we outline here is how to go about creating an authentic look for a heavily worked steam locomotive. Our source of inspiration is *Southern Steam Finale* by Barry J Eagles which was published in 2002.

This book is a plentiful source of full colour reference images and while there were no images of this particular locomotive there were plenty of photographs of the Southern's 'Standard Four' fleet in their final years of service. Using these images as a guide we've been able to apply similar colouring and staining to this model.

The majority of the weathering carried out on this model has been achieved using an airbrush and acrylic paints. However, here at *Hornby Magazine* we've used weathering powders for complete weathering jobs before with excellent results so there are plenty of choices which lie ahead.

The step by step guide explains how we went about transforming 75072 from a factory fresh pristine model into a replica of a Southern Region '4MT' in the late 1950s during the final years of steam.

TOOLS

- Iwata Eclipse gravity fed airbrush
- Iwata Smart Jet Plus compressor
- Paint brushes – sizes 4/0 and 0
- Tamiya weathering brush, 8mm wide

The object of this exercise is to take a pristine Hornby BR '4MT' 4-6-0 and turn it into a heavily workstained locomotive representative of the final years of steam on BR's Southern Region.



A close up of the injector pipework which while dirty still has elements of clean metal showing.

STEP BY STEP WEATHERING A HORNBY BR '4MT' 4-6-0

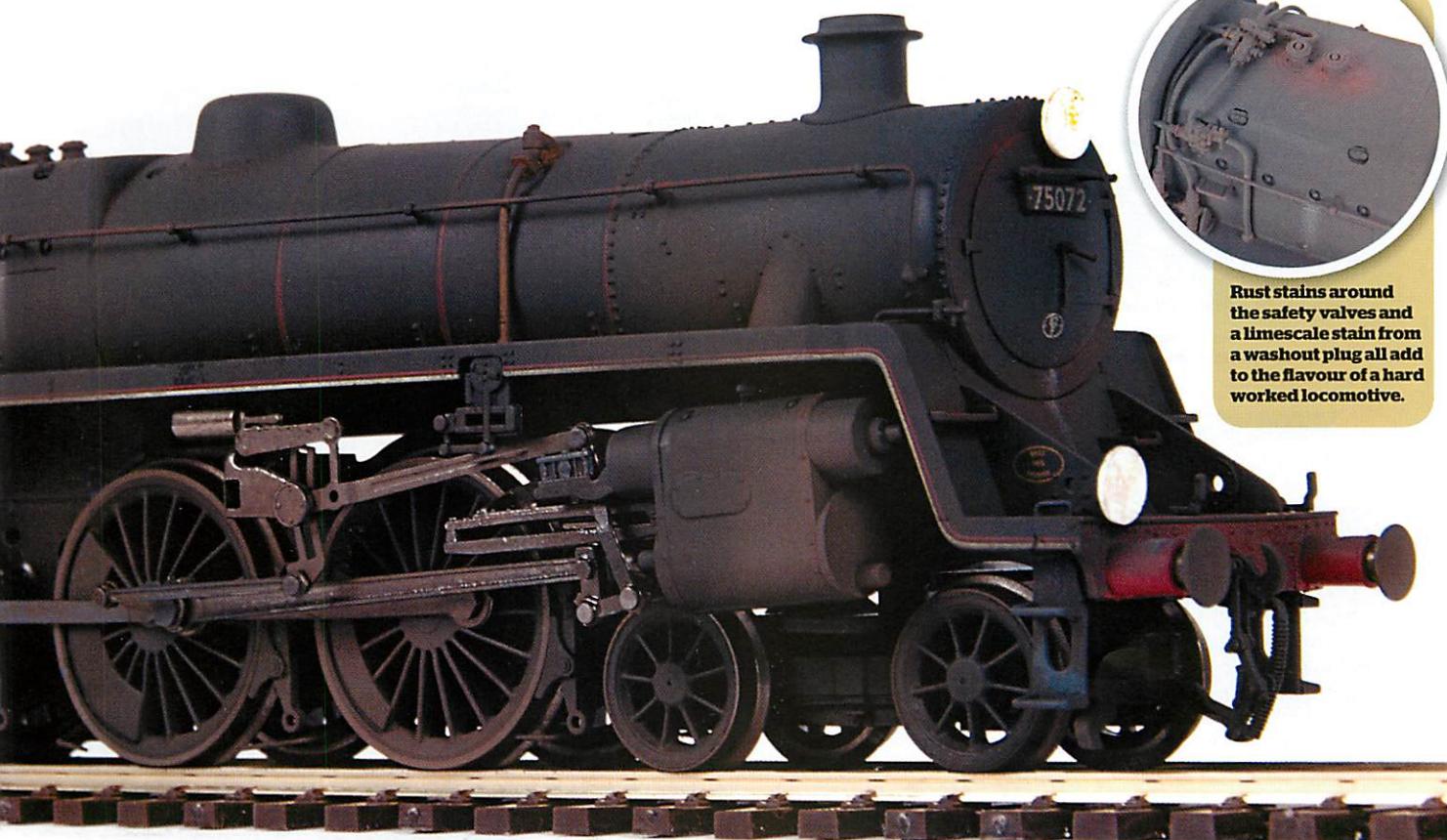


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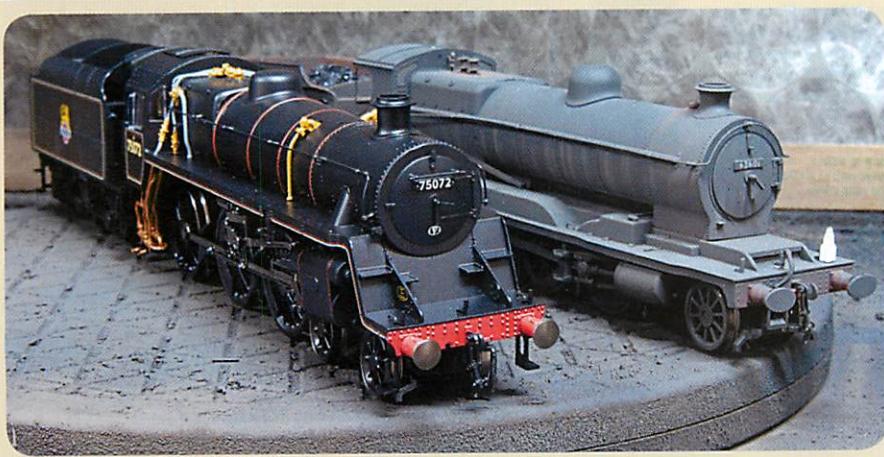
The starting point for this project is Hornby's latest version of its BR '4MT' 4-6-0 as 75072 in BR lined black with early crests on the tender (HMS3).

Steam locomotives weathered in different ways depending upon their role and duties. **MIKE WILD** tackles a Hornby BR '4MT' 4-6-0 to recreate a Southern Region locomotive in the early 1960s.

COMOTIVE



Rust stains around the safety valves and a limescale stain from a washout plug all add to the flavour of a hard worked locomotive.



2

Standing the '4MT' next to a previous project shows the difference between a factory and weathered finish. The '04' on the right is more heavily weathered than the '4MT' will be.

WHAT WE USED

- Lifecolor frame dirt acrylic paint
- Lifecolor weathered black acrylic paint
- Lifecolor Tensocrom oil acrylic paint
- Lifecolor gun metal grey and reflecting agent
- DCC Concepts pale limestone weathering powder
- DCC Concepts track rust weathering powder
- DCC Concepts ultramarine black weathering powder
- Lifecolor paints are available from the Airbrush Company – www.airbrushes.com
- DCC Concepts weathering powders are available from model shops nationwide and are distributed in the UK by Gaugemaster

STEP BY STEP WEATHERING A HORNBY BR '4MT' 4-6-0



3

There are two main colours which I use for locomotive weathering – Lifecolor frame dirt and weathered black. The first application uses pure frame dirt thinned with acrylic thinners to a 50:50 ratio.

4

Work starts around the front of the footplating and wheels, blowing over the areas with a coat of frame dirt. The front of the cylinder block is covered with frame dirt too. I also tilt the locomotive back to make sure the tops of the wheels and the frames behind are weathered.



7



The next layer of paint uses the remnants of frame dirt mixed with weathered black to create a warm grey colour. This is then sprayed over the top of the locomotive, working down towards the chassis building up the effect in thin layers.

8



The tender has been weathered in a similar manner, but here some areas of the lining have weathered more heavily than others – something which happened in real life. The tender crest has been deliberately left with only a light dusting of the weathered black/frame dirt mix over the top of it. This completes the basic weathering leaving the door open for more detailed work.

11



Using limited quantities of Lifecolor's metallic paint is the way forward, but the gun metal grey mixed with the metallic pigment can create some attractive effects where crew's boots would gradually rub the paint away from the edges of steps and the like.

12



The front steps and the handrail above have been treated to a very light application of the Lifecolor gun metal grey.

13

The handrails at the cab have also been lightly brushed over the gun metal grey together with the edge of the footplate. As a final step at this point the '4MT' received another light misting of weathered black/frame dirt to tone down the rust and metal colouring.



17

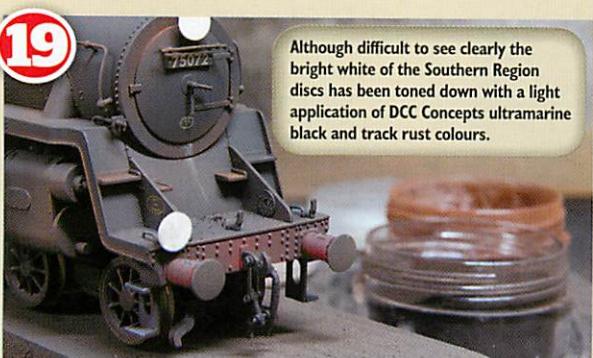
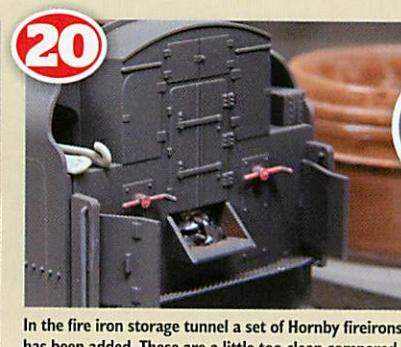
A few small finishing jobs included a white stain from the bottom of the smokebox door. This was copied from a photograph of 75076 on the Southern Region in 1966 and achieved using a fine brush and a tiny amount of DCC Concepts limestone weathering powder.



18

Although limescale staining was rare on Southern locomotives, we did find a few examples of the BR '4MT' showing these signs. This is applied in the same way as the stain from the smokebox using a fine brush and limestone weathering powder.

20



Although difficult to see clearly the bright white of the Southern Region discs has been toned down with a light application of DCC Concepts ultramarine black and track rust colours.

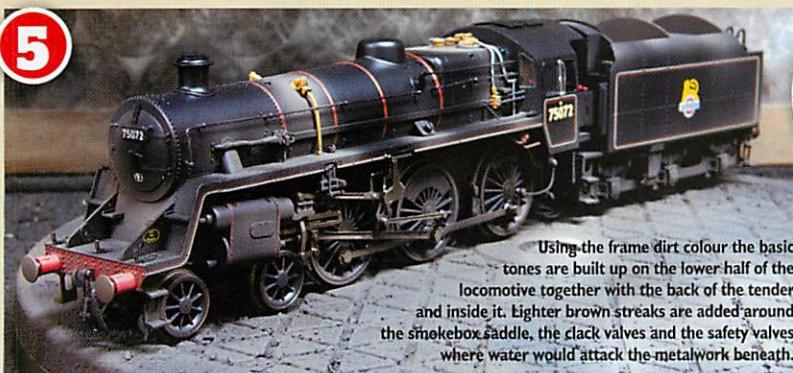
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In the fire iron storage tunnel a set of Hornby fireirons has been added. These are a little too clean compared with the rest of the locomotive.

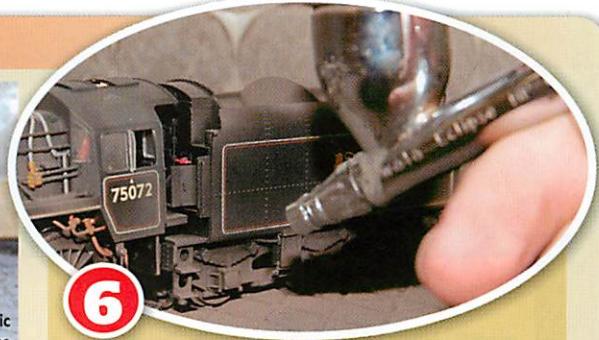
To add a little subtle toning to the fireirons DCC Concepts ultramarine black powder was brushed over their ends. A little track rust was also added around the hinges on the lock doors, around the fall plate and the coal chute.

5



Using the frame dirt colour the basic tones are built up on the lower half of the locomotive together with the back of the tender and inside it. Lighter brown streaks are added around the smokebox saddle, the slack valves and the safety valves where water would attack the metalwork beneath.

6



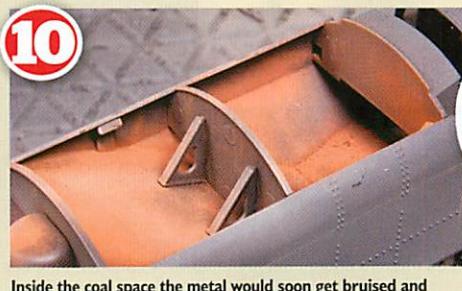
When pointing my airbrush towards a model I start by spraying onto the turntable when working from the ground up or from above working down so that a clean even spray emerges when the paint hits the model.

9



The next step with this model is to begin adding further rusting to the smokebox, around the safety valves and the front footplate steps where the combination of heat, water and use means that paint would wear away. To do this we used DCC Concepts track rust colour sparingly.

10



Inside the coal space the metal would soon get bruised and bumped by coal, which when wet is acidic leading to heavy rusting in this area on hard worked locomotives. To represent this more of DCC Concepts track rust colour was brushed into the coal space prior to a crushed coal load being added.



To add a little more texture to the underframe of the tender Lifecolor oil acrylic paint was lightly brushed over the axlebox covers with a soft size 0 brush.

14



To move the locomotive on a few details needed to be added. We started by adding a real coal load to the tender using a mixture of different grades of coal from Geoscenics.

15



Next a crew was added to the footplate using the Masterpiece driver and fireman for the Hornby BR '4MT' 4-6-0. These are fixed in place with super glue.

16



At the front a Southern Region headcode was added to the lamp brackets using spare Hornby white discs from a 'West Country' model.



22

The model is now complete. The only job which remains to be done at this point is to thoroughly clean the wheels prior to it entering service. This is done using a Peco wheel cleaning brush connected to a spare controller.

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your hard work and carefully detailed models, blending them into a "believable" scene. The very fine pigments have a slightly greasy nature that allows them to be rubbed into a textured finish to produce a permanent stain. They should be brushed or rubbed onto the model with fingertip, cotton wool or felt pads, then worked into the detail. Alternately, they may be smeared with a pad of blotting paper or fingers and mixed together to get varying hues. Water streaking can be achieved with a paintbrush and water plus a little detergent or alcohol. Rather than a pure white, DCCconcepts have also chosen to include in one set a finely ground limestone which serves well to provide both lime-scale and concrete dust effects... and our green does a wonderful job in many places - from the green tinge of wet stone walling to the copper tint of verdigris on roof and plumbing fittings. If you prefer, a matt varnish may be used to provide a base on gloss-finished surfaces to which powders may not readily adhere... Remember too that retaining the correct texture will properly emphasise weathering, so please avoid any form of overspray / sealer and DO add some gloss coat to better represent wet and oily areas. After application, no further protection is needed. In our experience, careful handling of a weathered item seems to improve it rather than spoil the finish.

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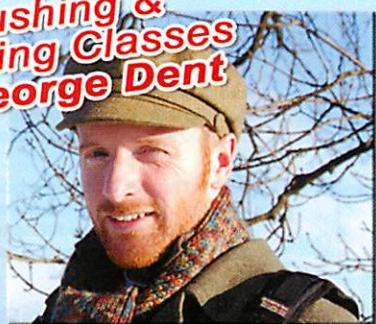
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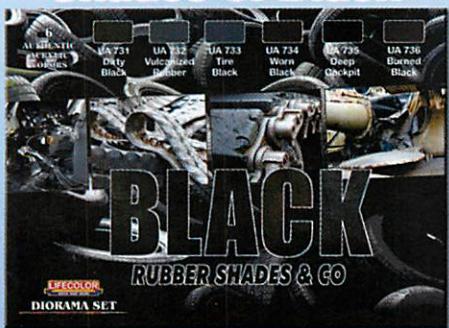
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Wagon weathering

Goods wagons weathered in many different ways and one of the most effective ways of creating a weathered wagon is to use powders. **MIKE WILD** tackles a wooden bodied box van and a steel bodied mineral wagon using two different techniques.



Above: There are many ways in which wagons can be weathered and these three box vans use different methods consisting of (from left to right) airbrush, weathering powders and a wash of thinned matt black enamel paint.

Below: This BR 12ton plywood sided box van has been weathered using only a wash of thinned matt black enamel paint. This is brushed onto the model heavily then wiped away with kitchen paper to leave it in panel lines and over raised detail.

Right: This Eastern Region 12ton box van has been weathered entirely with DCC Concepts weathering powders as illustrated in the step by step guide on this spread.



Right: An airbrush can also be used to weather goods vehicles to good effect. This 12ton ex-GWR Shocvan has been weathered entirely with Lifecolor frame dirt and weathered black colours to enhance its appearance.



Weathering with powders



STEP BY STEP WEATHERING A WOODEN BODIED BOX VAN

1 Wagons are a good source of practice of weathering techniques. For this guide we'll be concentrating on just one of these wagons – a BR Eastern Region 12ton box van from the Bachmann range. DCC Concepts weathering powders are being used throughout on this model.



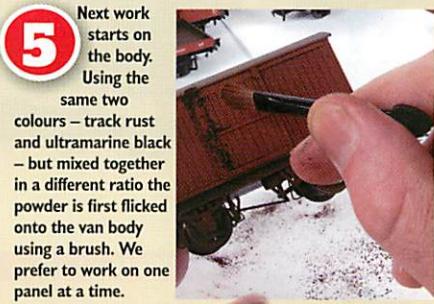
The first step is to spray the van with matt varnish. We use Railmatch matt varnish as it provides a good key for the weathering powders to adhere to.



Starting with the chassis, a mixture of track rust and ultramarine black are blended together to provide the effect of dirt spraying over the frames whilst the wagon is in motion.



At this point the rust colouring is a little too stark, but this can soon be toned down with an application of black powder to soften the effect.



5 Next work starts on the body. Using the same two colours – track rust and ultramarine black – but mixed together in a different ratio the powder is first flicked onto the van body using a brush. We prefer to work on one panel at a time.



6 The powder can then be worked into the panel lines, building the effect up gradually.



7 If you feel you've gone too far with powder weathering, do not fear! Using a felt pad it is possible to rub powder weathering back to reveal detail such as vehicle numbers and tare weights. These areas were often kept clean even on the dirtiest of wagons.





Above: Steel bodied mineral wagons are slightly more difficult to weather as these vehicles accumulated patches of rust through abrasions and bruising in service. These three vehicles are weathered with different types of weathering powder.

Right: This mineral wagon has been lightly weathered and rust stained on the outside using Geoscenics weathering powders. The original first weathering on this wagon (as with the others shown here) was to paint the inside with Railmatch dark rust, tone it down with black weathering powder and finally a wash of thinned matt black enamel on the outside which was wiped away.



Left: Using Carr's weathering powders this mineral wagon has a more decayed finish and the step by step guide on this spread explains how we achieved this effect.

Below: Of the three vehicles shown in the main image this is the most severely weathered. With heavy rust stains blended in with coal dust it looks the part of a heavily used wagon. It has been treated using DCC Concepts weathering powders.

WHAT WE USED

- DCC Concepts track rust weathering powder
- DCC Concepts ultramarine black weathering powder
- Railmatch matt varnish aerosol
- Railmatch matt varnish (tin)
- Carrs weathering powders – rust shades
- Carrs weathering powders – black shades
- 8mm make up brush
- Double ended felt pad
- Worn size 0 paint brush





STEP BY STEP WEATHERING A STEEL BODIED MINERAL WAGON



The effects of weathering on steel minerals can be replicated in a number of ways, however, for this model we are going to use Carr's weathering powders and Railmatch matt varnish. This model has already received interior weathering using Railmatch dark rust paint overlaid (once dry) with black weathering powder while the outside has been weathered with a thinned wash of matt black enamel.



The first two stages are optional, but create a little more distress on the straight factory body of the Bachmann mineral wagons before the weathering begins. First, the paint on this model was scratched using the blunt end of a paint brush.



To add further signs of distress and the effects of loading the top edges of the wagon body were beaten with a file as well as having cuts filed into them at random. Again, this is entirely optional.



Next using a worn paint brush matt varnish is stippled onto the body at random.



Using one of the rust shades from Carr's rust weathering powders, an 8mm make up brush is used to flick the powder onto the side of the wagon on top of the spots of matt varnish.



Ensure the wagon gains a strong covering of powder so that it is, in effect, over weathered. The powder will only stick to the wagon where the matt varnish is applied.



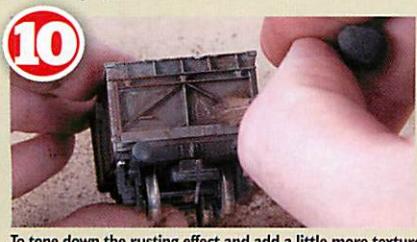
Next tip the wagon over and tap it so that the loose powder falls back onto your workspace. We work on a scrap of cardboard so that excess powder can be reused for future projects.



Your wagon should now look like this with heavy spots of rust colouring on the body.



While the varnish is still tacky we then scrape it back with a blunt paint brush to soften its effect. Repeat Steps 5-9 for all four sides to your desired effect.



To tone down the rusting effect and add a little more texture to the wagon it receives a brisk going over with Carr's black weathering powder using a soft, small make up brush.



At this point the weathering is almost complete, except for the chassis which remains looking a little too clean.



To enhance the chassis a light dusting of rust and black weathering powders mixed together to create a dirty brown colour improves the look of the chassis no end.

WEATHERING

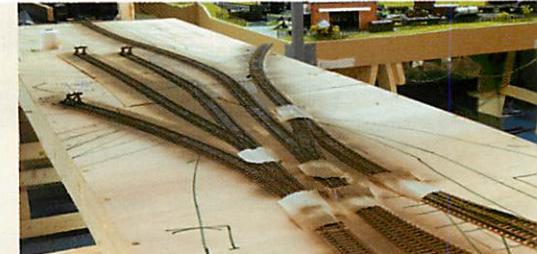
Just like the locomotives and rolling stock, railway infrastructure weathered greatly through natural elements and the passing of trains. **MIKE WILD** offers his tips for toning down fresh track and ballast.

WEATHERED locomotives and rolling stock will look out of place if the world which surrounds them is clean and fresh - but with a few simple techniques it is perfectly possible to blend a model railway's track and infrastructure for a more realistic finish.

There are many methods and options available, but what we will show here are the methods that we have used on *Hornby Magazine*'s layouts to recreate the effects of nature and passing trains on the railway itself.

New track will always have shiny rails and this is important for electrical continuity. However, take a look at the side of a rail anywhere in the country and you'll see the signs of weathering - rusting (in some cases), dirt and grime all collect on the sides of the rails as these go untouched by passing trains. The railheads (the top surface of the rail) will always remain well polished on used railways.

The simplest way forward is to paint the sides of the rails. Our first colour choice for this is Railmatch sleeper grime. Some choose a rust colour for rail sides, but this can often look too bright on its own. The sleeper grime colour is a dull, dirty brown. To apply this we use two methods depending upon the point of construction that the rail sides are weathered.



Track weathering starts with painting the rail sides. To do this we use Railmatch sleeper grime aerosol spray cans. The point blades have been masked to stop paint getting between the blades and these areas will need touching up afterwards with brush painting.

The quickest way is to use an aerosol spray can to coat the trackbed and track with sleeper grime paint prior to ballasting. However, you will need to mask point blades to ensure that paint doesn't flow between these components stopping electrical contact. This type of blanket coverage is quick, but more cleaning is required afterwards. A thorough going over with a track rubber is essential to clean the railheads.

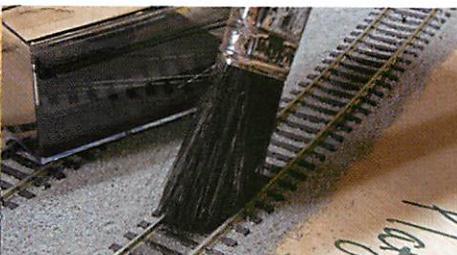
If you have already ballasted your track then all is not lost as a paintbrush can be used to simply colour the rail sides only with sleeper grime paint. This is much more time consuming, but requires less cleaning afterwards. Even if you spray paint track dirt then the points will need touching up with a brush after the masking tape has been removed.



LONG TRACK



If you have already ballasted your track then an alternative method is to paint the rail sides by hand. This is more time consuming, but the result is worth the effort. These are the colliery sidings on Bolsover and Seven Lane Pit during painting of the rail sides using Railmatch sleeper grime.



Using Geoscenics black concentrate diluted with 75% water to create a very thin black colouring makes a good starting point for weathering ballast with a brush. Work from the centre of the track outwards, building up the effect gradually.



The latest stage of weathering on Bolsover and Seven Lane Pit is to use an airbrush to weather the railway with diluted Geoscenics black concentrate. This offers a more refined appearance to the weathering and we also added a spray of dark brown poster paint.

so spraying may not save as much time as you might expect, particularly on small layouts.

Like rails, the ballast which surrounds the track weathers. The main effect is the passing of trains which leave stains from oil and dirt between the rails and either side. The effect is most profound at stations where locomotives stand and you will often find heavier oil stains where locomotives have stood for a period.

There are several ways to replicate this. Weathering powders are a good way forward, but our preferred option is to use Geoscenics black concentrate in a number of ways.

Firstly the PVA/water mix used to secure loose ballast to a model is tinted with Geoscenics black concentrate to tone the ballast down at the first stage. Secondly, we use

at least three different complementary colours of ballast – usually fine and medium grades – to provide realistic tonal variety.

To really add to the ballast colouring after it has been laid and the glue has dried we apply a highly diluted wash of black concentrate – normally around 75% water and 25% black – using either a paintbrush or an airbrush working from the centre of the track outwards.

This is a process which is best done in stages and even 12 months after we finished Bolsover and Seven Lane Pit we are still adding to the process of weathering the track using both methods. The end result of this though is track which looks like it has been used and blends into its surroundings.

It is also worth remembering that not all track

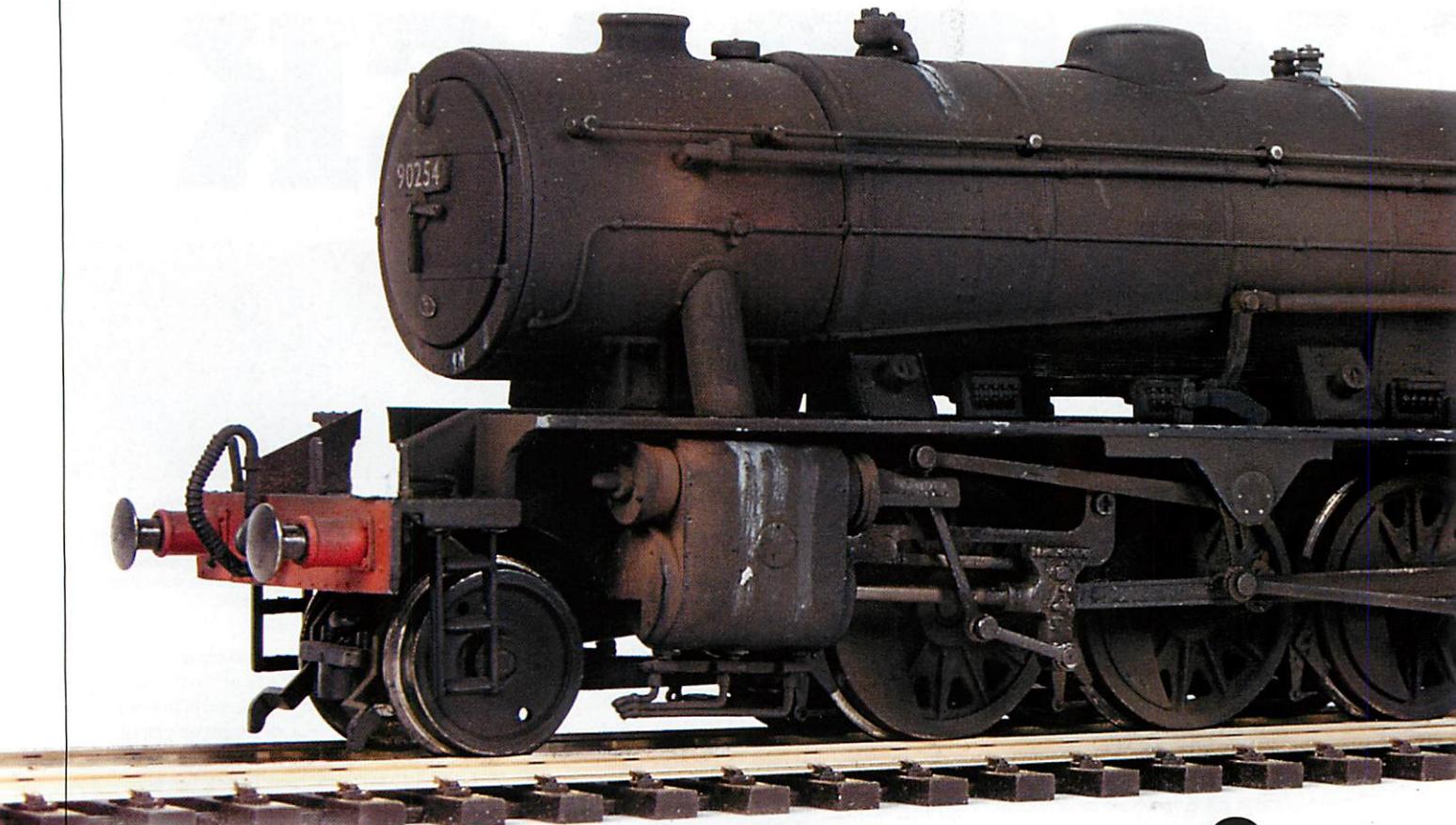
weathered in the same way and observation is essential in understanding how the track on your layout would have weathered in the real world. For example, *Hornby Magazine*'s latest layout St Stephens Road has fairly clean ballast (it could do with a little weathering, but only light) to represent its place as a branch line in Cornwall.

On the other hand, Bolsover and Seven Lane Pit which features intensive main line operations and colliery track has much more heavily weathered track.

The choice is yours.



An airbrush weathered Bachmann 'Warship' approaches St Stephens Road. The track on this layout has only had minimal weathering using Railmatch sleeper grime spray paint to disguise the original clean sides of the rails. The ballast will also need toning down in the future.



Weathering

If you don't fancy taking on your own weathering projects there are a number

WHEN it comes to weathering we don't all have the skills or desire to tackle projects ourselves, but like so many things in life – such as maintaining a car – there are services available where skilled people will do the job for you.

From the factory

Hornby, Bachmann, Heljan and Dapol now all produce factory weathered versions of their models and this is an area where Bachmann and Dapol are making big strides. Factory weathering used to consist of a simple blow

over with a single colour and to some extent this process is still in evidence. However, the best factory weathered models are those which achieve a greater blend of tones and colours.

Bachmann has been working on this during 2011 with, for example, its BR blue weathered diesel locomotives also feature faded paint colours and its steam locomotives a more detailed approach to the paint finish.

Dapol on the other hand has worked with Mercig Studios – a specialist in weathering 'N' gauge models – to create the basis for its factory weathering processes. Better still we are now also seeing factory weathered carriages and wagons, offering the chance

for a more realistic out of the box finish to a complete train.

Custom finishes

Custom weathering services are available nationwide including specialist companies, individuals and shops. Some are well known names which advertise in *Hornby Magazine* while others tackle weathering amongst other commissioned modelling work.

Four of the better known weathering specialists are TMC, Grimy Times, Dirty Boy and LocoLines of Essex. However, a quick search on the internet will bring up a whole host of other options too.

Each of the four companies above produces



The Model Centre produces a wide range of weathered locomotives both from stock and to order. This Hornby model of 34043 Combe Martin features a 'Pines Express' headboard chosen by the customer.



Hornby has produced a wide selection of factory weathered steam locomotives. The latest to be released is this 'heavily weathered' Stanier '8F' in BR black as 48706.



Produced by Grimy Times this custom weathered Bachmann 'WD' 2-8-0 features a heavily weathered finish, a locomotive crew, real coal in the tender and DCC sound.

g services

of specialists who will do it for you. **MIKE WILD** looks at the options.

ready weathered models using ready-to-run 'OO' and 'N' gauge products while also tackling individual commissions for renaming/numbering alongside. These models have an impressive degree of realism about their finish which sets them apart from pristine models.

The price and turnaround time for a commissioned weathered locomotive varies between companies and their workload and the model in question. For example, Grimy Times offers a decoder fitting service for DCC too (including digital sound) while also holding a large stock of hand weathered models which customers can buy at exhibitions.

These weathering services will also offer

CUSTOM WEATHERING SERVICES

Business name	Website	Telephone
Grimy Times	www.grimytimes.co.uk	01925 727436
The Model Centre	www.themodelcentre.co.uk	01947 896040
Dirty Boy (Lord and Butler)	www.dirtyboyweathering.co.uk	029 2066 7225
LocoLines of Essex	www.keytesmodelrailways.co.uk	01268 729499
The Art of Making Dirty	www.the-art-of-making-dirty.co.uk	See website
RBW Model Trains	www.rbwlocowweathering.com	0115 939 5836
Mercig Studios	www.mercigstudios.com	See website

additional components for a price, such as real coal, renumbering, lamps and crews while all also offer the ability to weather coaches and wagons on behalf of customers too.

● For more information about the weathering services see the contacts panel with this feature.



Bachmann has stepped up a gear with its factory weathering offering a more detailed finish to its models. This is the recent release of the Maunsell 'N' 2-6-0 in BR black as 31869.



Weathered wagon triple packs have become popular a limited edition runs. This trio of 24ton iron ore hoppers has been produced exclusively for Modelzone by Bachmann with a lightly weathered appearance.

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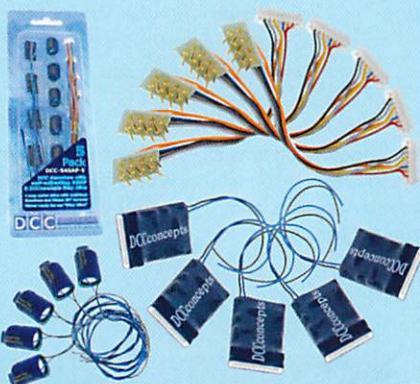
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Information on the complete range of DCCconcepts Decoders, including an easy to understand 16p "Plain English" Instruction guide can be found on the web at WWW.DCCCONCEPTS.COM

My 5 pack of TS4 decoders was delivered in 2 days. I immediately fitted 2 of them, 1 to a Proto SW8 and the other to a Proto GP20. Both these locos are over 10 yrs old and therefore well run in. I also added the DCCconcepts Stay-Alive.

They were stress-tested at a recent 3 day show. The GP20 ran in 3-hour stints for 3 days with a full train while the SW8 shunted constantly.

Both performed flawlessly with never a stutter or jerk. The smooth running was exceptional at any speed and slow running is as good as any I have experienced in 16 yrs of operating with DCC.

The TS4's are right up there with the very best.

By the way, I use all Peco insulated frog points and the TS4's with DCCconcepts Stay-Alive caps powered the locos through them with never any hesitation or stopping even at slow shunt speed. My future non sound decoder requirements will certainly be filled by DCCconcepts decoders.

Ian - South Australia

I've now installed four DCCconcepts S4SA decoders and they work really well in all my Locomotives.

Among the loco's I've installed them in (complete with stay alive) are 2 big heavy Japanese brass locomotives.

I tested both on the rolling road with power supplied to only one roller as I think that is a real test of a decoder - in a loco with minimal pickup.

The locomotives ran very well. Better than they had before installation.

I must admit - at first I was a unsure about installing the small S4SA decoders into such big heavy locomotives but both have worked a treat. Other loco's, including Piko & Roco, run really well with these decoders.

Peter - London

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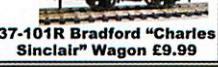
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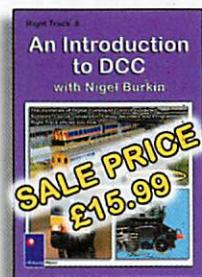
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