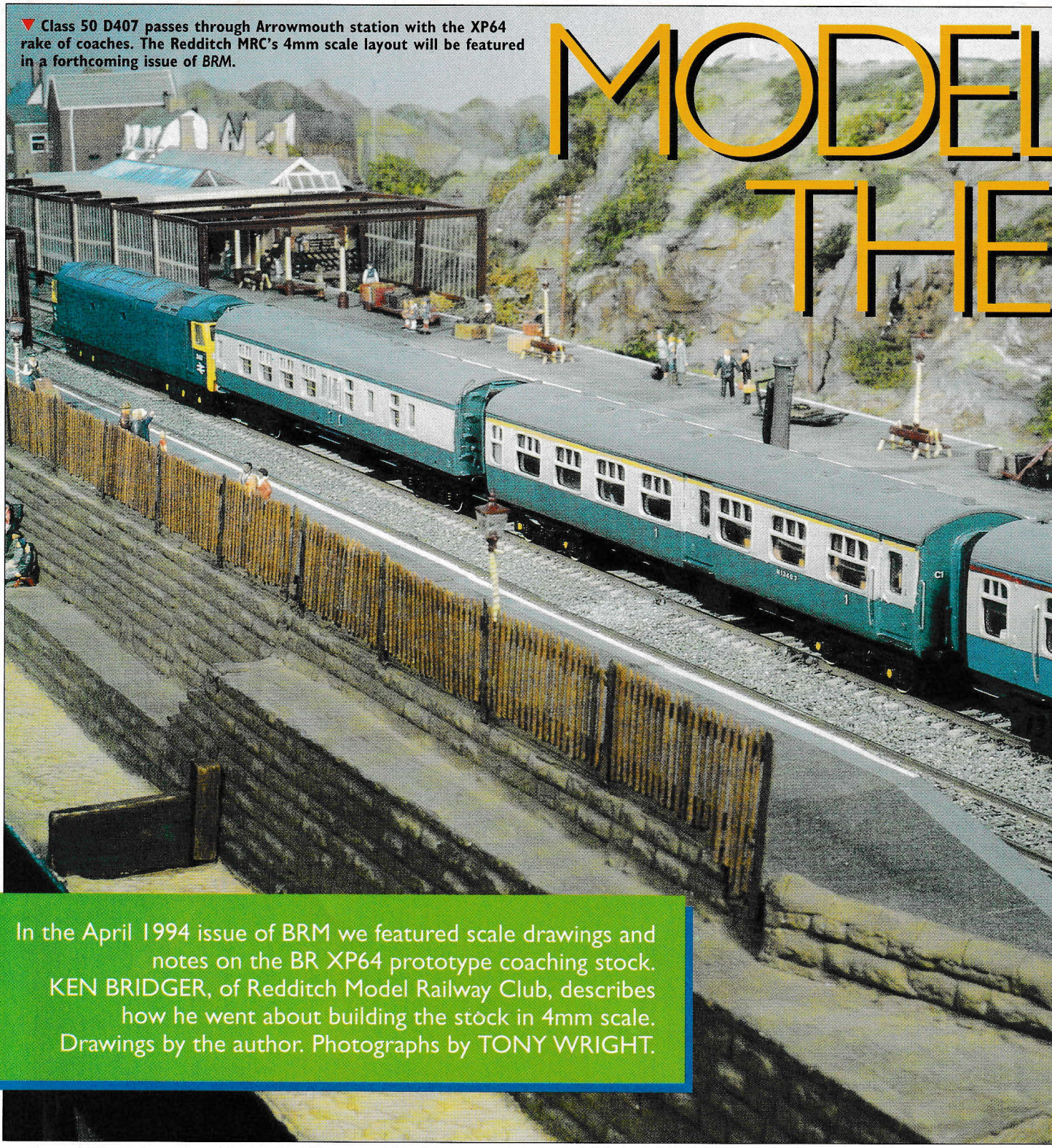
MODEL THE



▼ Class 50 D407 passes through Arrowmouth station with the XP64 rake of coaches. The Redditch MRC's 4mm scale layout will be featured in a forthcoming issue of *BRM*.

In the April 1994 issue of BRM we featured scale drawings and notes on the BR XP64 prototype coaching stock. KEN BRIDGER, of Redditch Model Railway Club, describes how he went about building the stock in 4mm scale. Drawings by the author. Photographs by TONY WRIGHT.

This article is about the fascination I have for building something completely different. What started as a joke at the Club in 1986, finally came into fruition some eight years later with a model of the XP64 train.

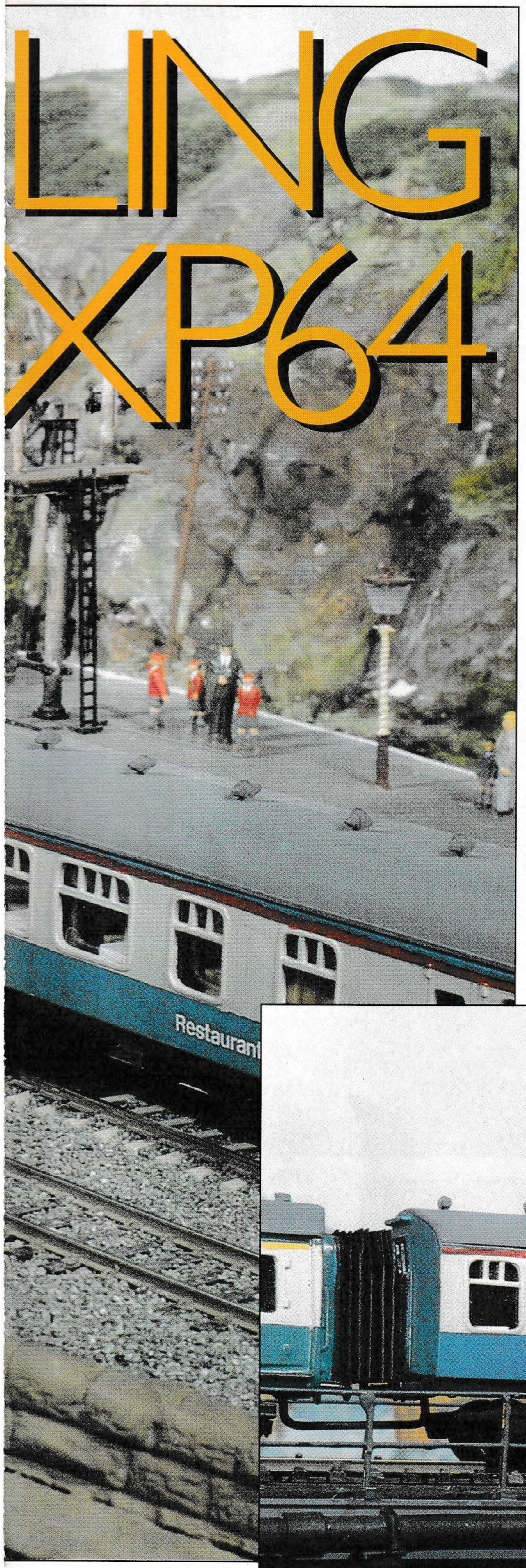
This article is aimed at modellers who have never attempted to build anything other than kits, with the hope that you will be encouraged to start scratch-building, which I feel gives greater satisfaction.

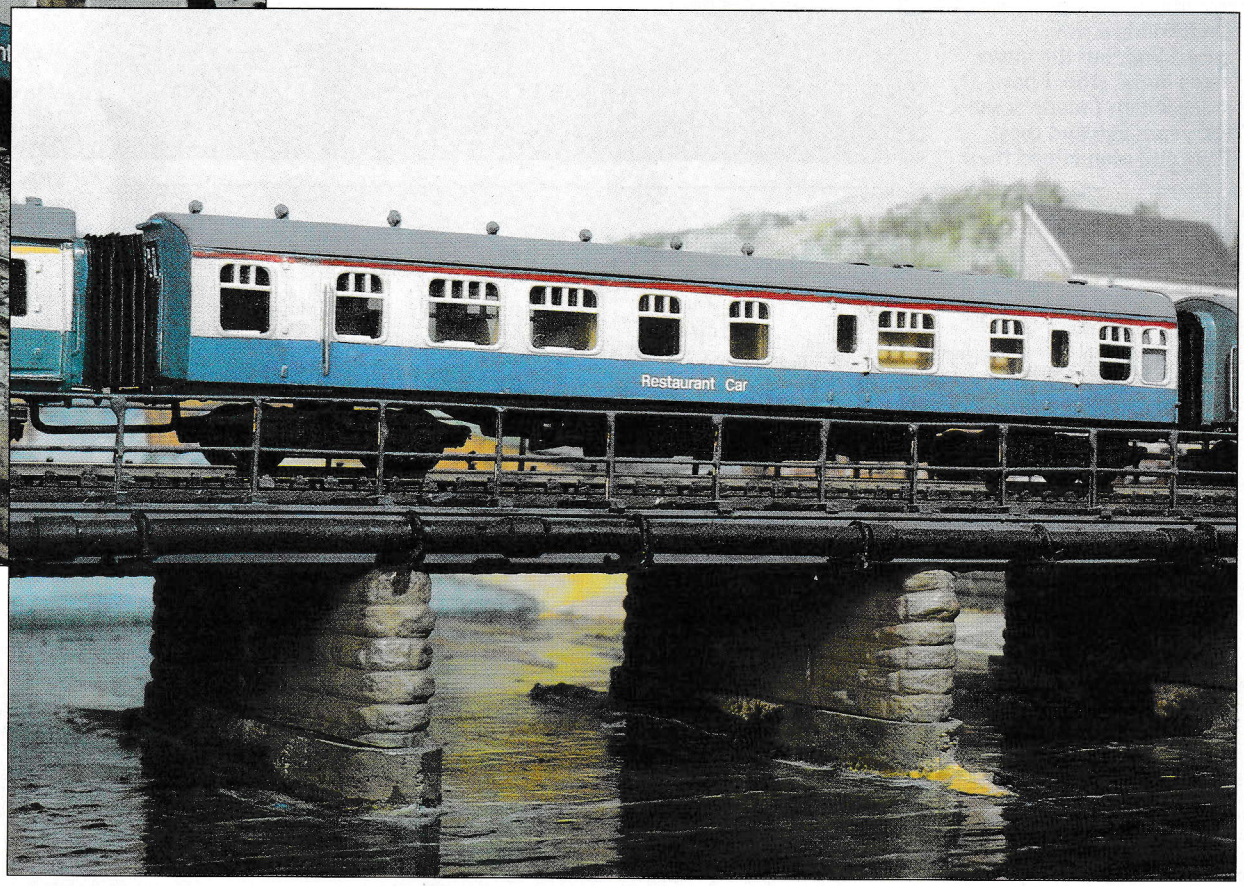
Following Nationalisation in 1948, the desire for suitable 'standard' coaching stock led to the design and introduction of the Mk.1 coaches, which entered service in the early '50s. The early vehicles were improved by redesigning the interiors and bogies towards the end of the 1950s-early '60s. By 1964, the Mk.1 coaches were already becoming dated for the modernisation programme that was taking place with the increased use of diesel and electric traction. As the name implies, it was in 1964 that a new concept in coach design took to the rails, that of the XP64 coaching stock.

Researching the prototype

For those of you who are not familiar with the word prototype, it is the original from which the model is reproduced in a chosen

LING XP64





Restaurant car, M1991, from the XP64 rake.

scale, in this case 4mm to the foot scale, to run on OO gauge track.

Several articles have been written on the XP64 train, including one published in the 1964 August 'Railway Modeller', and more recently – to mark the 30th anniversary of the concept – in *British Railway Modelling* Vol. 2 No.1. These articles give a good insight to the train itself, together with some excellent drawings and photographs. To actually get a feel for these coaches at first hand a trip to the Dean Forest or North York Moors railways is a must, as examples of XP64 stock are to be found on these preserved lines. One thing that will become evident when first setting eyes on these coaches is the absence of the original concertina doors, these were replaced later on in their working lives with conventional doors, owing to problems with all the moving parts.

I believe that the coaches on the Dean Forest Railway have been painted in chocolate and cream – is nothing sacred?

The model

All the coaches are semi-scratch-built, except for the two second class brake ends, which are Mainline and a Bachmann first open. The train runs on the Club's Arrowmouth layout, which has only been exhibited a few times to date. There will be opportunities to see the XP64 models and the layout in 1995, including the Club's own exhibition in May, and at the Warley 'National' exhibition at the NEC, Birmingham, in October.

Preparation of the Lima coach body

The conversion itself involves replacing the sides of any Mk.1 Lima coach with ones constructed from plastic card. The first job is to remove the old sides from the Lima coach. To do this, first remove the roof, interior and bogies. Now with a saw, cut through the sides close to the ends vertically down to the solebar. With a craft knife and rule run a cut along the bottom a few times (refer to Fig. 1), and then with a little press it should break off. To ensure that the sides fit flush, 0.040" of the strip still remaining around the edge of the coach will need to be removed with a file, you may find it better to remove the complete strip along the bottom, owing to the sides extending over the solebars.

Sides for XP64 coaches

Black 0.040" plastic card is used to construct the sides and 0.010" white plastic card for the window blanks. You can use white plastic card for the sides, as I have done, if the black is difficult to obtain. It just makes it easier when filing out the window apertures when the white blanks are set against a black background. The blanks give the raised beading around the edge of the windows.

Start by marking out the sides as shown in the drawings. As the sides are a mirror image of each other, only one side of each coach is shown (refer to Fig. 2). You will find it easier and quicker to mark them out all in one go, that is all the second class

sides and all the first class. Now cut the sides out so you have 255mm x 29mm strip pieces.

Next, the window blanks can be cut from the 0.010" plastic. For the main windows the measurements are 20mm x 14mm and for the toilet 10mm x 14mm. There are 14 for each of the first class, 16 for each second class and two toilet blanks for each of the coaches. The corners of the blanks are rounded off slightly and then glued onto the sides with liquid poly so that the edges are central with the lines drawn on the sides. These are left to dry overnight and the door lines can then be scribed with a knife.

We have come to the point where patience is the key issue – the hours of filing and the adding of the window vents. Get through this and you are home and dry. So, first drill a hole in the blanks and then start the tedious job of filing up to the corners with a round needle file leaving just over 0.5mm of the blank, cut the surplus off before filing with a flat file up to the straight edges, also leaving the same thickness of the blank. You can then finish off the filing which will leave you with a 0.5mm beading all the way around the window aperture.

The tumblehome or curve on the side is achieved by gently bending the side between each window. It is surprising, but the curve stays in the side. I have sides which I made some ten years ago and they have still maintained their shape. The vents at the top of the windows are made from 0.040" x 0.040" plastic strip, which can be bought ready-cut in packs or you can make it yourself from plastic card. The strip is cut to the required lengths and glued into place, a fiddly job but practice makes perfect.

Sides for the restaurant car

RUB: - These sides, although the same length, are slightly narrower because they do not cover the solebars. The measurements for these sides are 255mm x 26mm.

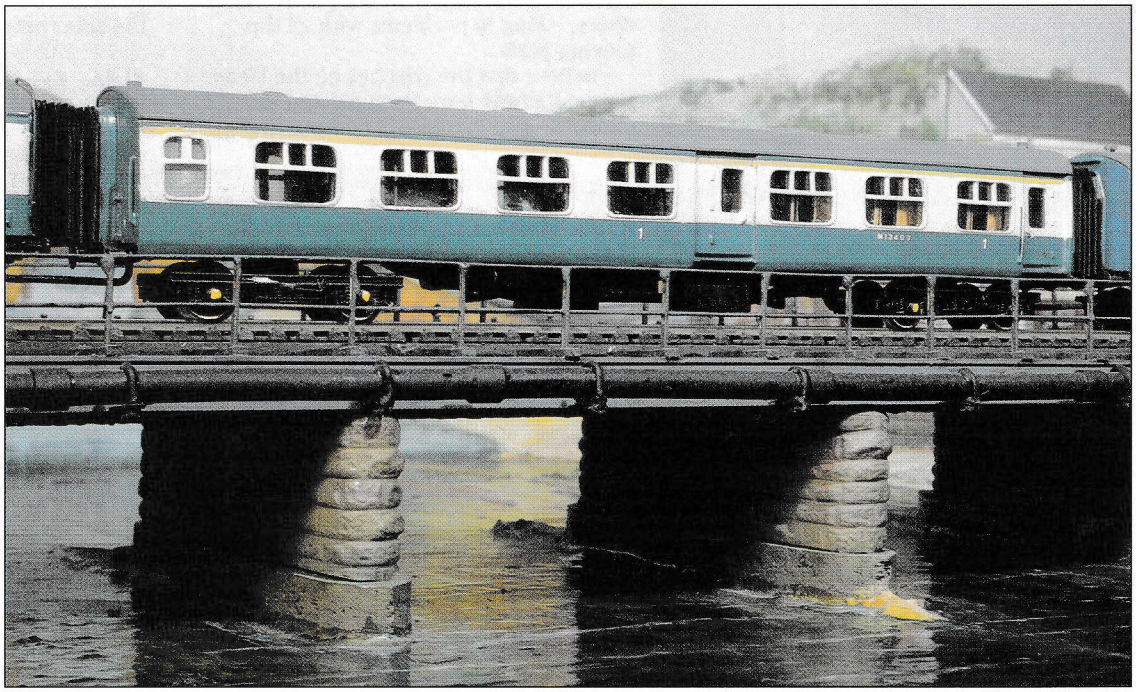
There are four sizes of blanks for this coach, one of 10mm x 14mm for the toilet, 11 of 12mm x 14mm, five of 18mm x 14mm and two of 10mm x 12mm. The procedure for making these sides is exactly the same as with the XP64s.

Body

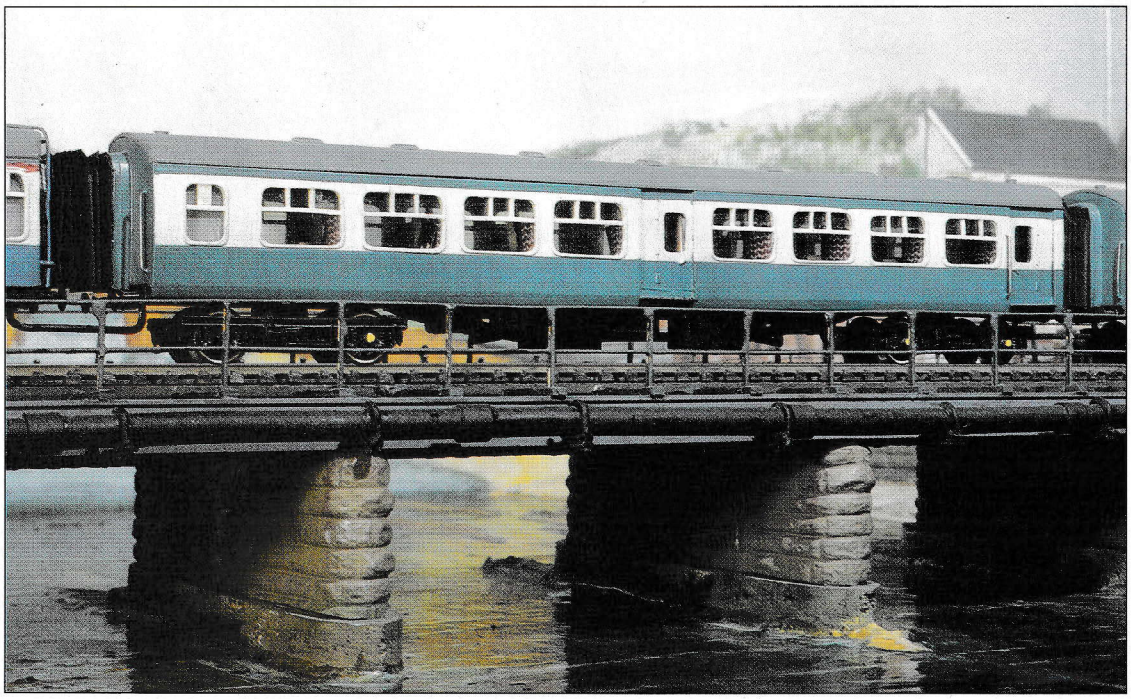
I hope that you are still with me! If so, clip the roof on to the side-less body. Now glue the new sides on so that the top edges mate up to the roof – but don't glue them to the roof! – so, be sparing with the glue close to the top, and leave overnight to dry.

File at an angle the bottom of the coach sides which extend over the solebars as shown in the drawings. Finish it off with fine wet and dry paper to remove the file marks.

If you are going to model the early variant of the coach with the concertina



▲ XP64 first class compartmental coach, M13407.



◀ XP64 open second class coach.

doors you will need a razor saw to cut out the door apertures. Care must be taken at this point because pieces of the sides are only attached at the bottom. The doors are cut from the 0.040" plastic, these are cut slightly wider than the aperture being 19mm x 27mm. The door lines can be scribed in the plastic before gluing the doors to the back of the sides. You will find that there is a small gap between the side and the door because of the tumblehome. This can be filled in with thin pieces of plastic.

When the glue has dried, the tops of the doors can be filed level with the top of the sides. The roof can now be fitted on and the windows filed out in the doors. The roof gives stability to the sides while filing. The corridor connectors are similar to Mk.2s with the main corridor face cut from 0.040" plastic and the wrap around piece made from 0.010".

Roof

On this the glazing has to be removed, except for a 2mm strip which is left attached to the roof, which stops the sides from moving inwards. Clean up the edges with a file and remove two sections from the strip on each side, so that the doors you have glued at the back of the sides will recess back under the roof. Remove all the vents on the roof with a file and smooth down with fine wet and dry paper.

Running gear.

The bogies fitted to the XP64 stock were B4s, the restaurant cars and the brake ends were fitted with Commonwealths. I used the standard Lima B4 bogies and wheels much to the disgust of many people. I am a firm believer in keeping the train on the track, especially on an exhibition layout which tends to settle and move during an exhibition weekend. Using finescale wheels can lead to hands appearing over the backscene and re-railing rolling stock, but it is up to the individual. Commonwealth bogies for the other coaches can be obtained – for example, the Bachmann ones – through the model trade.

Finishing

The guttering is a strip of thin plastic card 20mm x 10mm, which is glued along the edge of the roof. Roof vents are 4mm x 4mm pieces of 0.040" plastic with the edges tapered off at an angle. The hand rails are made from thin wire, door handle and hinges from odd pieces of plastic. Brass buffers were used to replace the Lima ones.

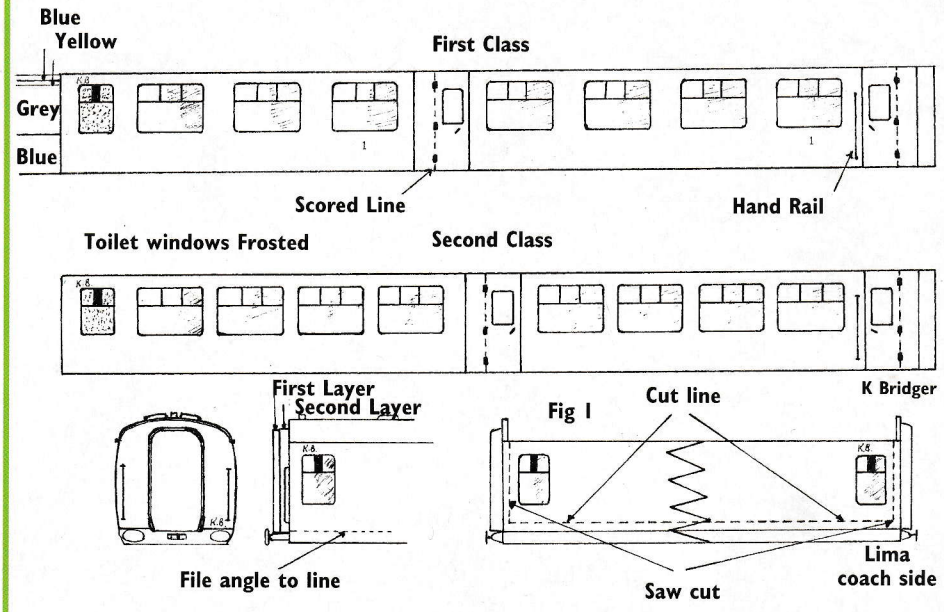
This stage is where you bring your model to life by painting it in the required livery of blue and grey with brown underframe and bogies. I have had trouble here trying to find the actual shade of experiment pale blue livery that was used to paint these vehicles, but I have been advised that it was more of a 'greeny' blue than a 'true' blue. So, a repaint was undertaken. As can be seen from the photographs, the restaurant car is still in the old colour. I know that when the train moved over to the Western Region they were repainted in the 'Rail Blue' livery. When new, the grey, or – as they called it then – ivory (which was an off-white colour), went straight to the ends, but when repainted in the 'Rail Blue' and grey, the corners were rounded off which became the standard for all stock painted in that livery.

There seems to be some confusion on the location of the yellow line denoting first class. The line was connected to the grey along the length of the coach with a narrow blue line above as indicated in the drawings. The lining on the RUB was located in the same place except it was red, and yellow on the first class coaches.

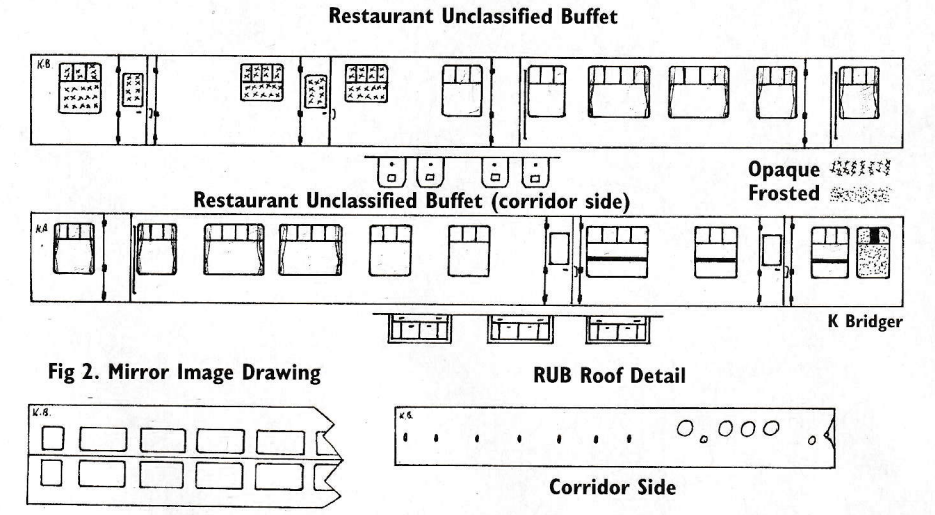
For the glazing 0.01" clear plastic card was used, cut so that it is below the strip that is left on the roof. To get the frosted look on the toilet window, fine wet and dry paper is gently rubbed in a circular direction behind the window area.

Numbering the coaches comes next, I find this is one of the most tedious jobs as you see from the photographs, where only the

DRAWINGS FOR XP64 CORRIDOR AND OPEN COACHING STOCK



DRAWINGS FOR RESTAURANT CARS



▼ XP64 compartmental second class coach.

FK (first corridor) coach has had this treatment to date. The numeral '1' denoting first class was originally below the windows as in the drawing, but later moved to the doors.

A note of warning, I found that the roof tends to rise in the middle, so to cure this I have put a screw up through the middle into a block of plastic glued to the underside of the roof.

Interior

The metal weight can be glued to the bottom of the coach with Bostik or something similar.

For the interiors I used some old Peco interior card kits that I acquired from my local model shop for 22p each. They come pre-coloured and can be assembled with ease, which is a plus for the job that comes next. If you are familiar with the XP64 stock, you will know that the corridor seconds and firsts have split corridors (see diagrams in *BRM* Vol. 2 No. 1). This means that the corridor runs down one half of the coach and swops over to the other side where the centre doors are positioned.

The train formation

When the train was first introduced a Class 47 diesel-electric D1733, repainted in the experimental pale blue livery, was used to haul the demonstration train. By 1966 it had moved over to the Western Region on the Bristol run, where the train was hauled by a pair of Class 37s re-geared for 100mph running, plus the addition of a Western Region lounge first.

The running formation of the train when first introduced into passenger service was as follows.

NORTH END										SOUTH END
BSK	SK	SK	SO	SO	SO	RUB	FO	FK	FK	BSK
35411,	25508,	25509,	4727,	4728,	4729,	1991,	3150,	13407,	13408,	35424
(13409 Spare)										

Conclusion

The aim of our Club is to produce authentic train formations that actually ran and not just to take rolling stock out of the box and run it. How many times have you seen a train of four or more corridor composites and a couple of brake ends? We are always striving to produce something different and to give the general public what they want to see at exhibitions, so watch this space for the future developments. ■