ULTIMA 2mm/N MODELS

2mm Scale Coach Kits & Accessories for Locomotives, Coaches, & Wagons

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UM/E 1212 GWR HAWKSWORTH 52' INSPECTION SALOON

(Diagram Q13)

IMPORTANT

Before starting this kit it is STRONGLY recommended that the instructions are read from START to FINISH. Please familiarise yourself with the parts of the kit and RELATE them to the drawings included. Please note that this kit provides a body with underframe fittings. Bogies, wheels, couplings, paint, solder, and adhesives are required to complete a finished model.

SOLDERS AND GLUES

These instructions refer to the use of liquid solders (liquid is preferred as it is easier to apply and produces less excess solder) Types recommended are CARR's 243 and 188 (high and medium temperatures). Use non-toxic contact adhesives such as Evostick 2 or Dunlop Powerfix for gluing:- e.g. roof into place and internal glazing. Make certain you wash the hands after handling the white metal components as there is a lead content in the castings.

CONTENTS

1-off Brass etch for sides, floor, ends, truss frames, solebars, footsteps, buffer beams, door droplights, bogie pivot boxes, V-hangers, external retractable step components, windscreen wipers (4), water tank covers with filler caps (2). 1-off plastic roof moulding. 14-off Shell vents. 1-off extractor fan. 3-off pins for stove flue and gongs. 1-off dynamo. 1-off battery box. 2-off vacuum cylinders. 1-off LPG box. 1-off gas tank. 4-off buffers. 2-off M4 screws and washers. Plus:- 200mm 0.33mm nickel silver wire. Clear and frosted glazing strips.

LIVERY DETAILS

The diagram sheet contains a list of the basic livery details. All underframe details were black as were the gongs at each end. The interior carpets were mottled blue/grey as was the patterned upholstery. Light oak furniture and veneered walls were fitted. Several photographs appear in Chris Leigh's article in the Model Railway Constructor for May 1986 which are particularly useful for Carmine and cream and B.R. W.R livery.

Introduction

The diagram sheet provides useful reference sources one of which is an article by Philip Rees a former W.R.Area Engineer. As a result of the article and contact with Philip Rees, whose coach was 80972 and now preserved at Tysley, this kit was born. Philip has kindly provided the following additional information to complement the operational details described in the April 1989 Railway Modeller article.

Mr Rees continues:

On the W.R. the coaches were used on average about once every 2/3 weeks on weekdays only though, occasionally for major works being carried out at weekends, the coach was

stabled nearby and used as a base for the Area Civil Engineer and his senior staff. For obvious reasons inspections were only done in daylight but on long trips, e.g. from Shrewsbury to Llandovery, a return in darkness was often necessary during the winter months.

When inspecting, the Area Engineer and his accompanying staff always wore high-visibility vests (as well, of course, as a stout pair of shoes for walking over the ballast) and on busy double track routes a lookout man was used to warn of trains on the adjoining line. When inspecting the track on which the inspection train was running it was normally kept to the rear and called forward as necessary.

The W.R. coaches were fitted with a gong at each end operated from inside the coach so that, when propelling, warning could be given to men working on the track. L.M.Region inspection coaches were fitted with a much louder air-operated horn and, after a 'near miss' one day when propelling between Wellington and Shrewsbury, I arranged for a horn to be fitted to the Shrewsbury coach.

It was usual for the Area Engineer to sit on the left side facing the end windows and, if the Chief Civil Engineer was present, he would sit on the right side as would the General Manager on the rare occasions when he joined an inspection. Sometimes things did not quite work out like this .... but that is another story! ***October 1994***

INSTRUCTIONS STAGE 1 BODY

1.1 Before removing the etched parts check to see that they are cleanly formed. Whilst every possible care is taken in designing the photo etching artwork and tool it is not always possible to guarantee 100% cleanly etched slots due to the complexity of the chemical etching process.

Carefully remove the etched floor and sides section. Then, with care, gently form the tumblehome for each side with either bending bars (eg.Blacksmith Models) or with a wooden moulding (e.g. Peco skirting board and a small length (6 inches) of plastic coated steel tube. By exercising patience and by taking care and time the tumblehome can be formed most satisfactorily. Remove the 6 door droplights from the fret and solder them, from the inside, to each door position. With the aid of a strong 12" steel ruler fold the sides up to form a 'U' shaped box structure making sure that the 'box' is not twisted. Where adjustment is required do so on a flat glass surface.

1.2 Now turn to the bogie pivot boxes, cut them from the fret, and fold up the sides checking that each box fits correctly into the floor locating slots. When satisfied use solder or epoxy resin on the inside of the boxes to secure them. Now fill each pivot box with Milliput epoxy putty, locate their positions on the floor underside and then solder or Epoxy glue them into position. The Milliput must be allowed to harden for 48 hours.

1.3 Once hardened fully a 3.3mm diameter hole should be drilled through the Epoxy putty filled pivot boxes using the etched centre holes to guide the drill. Make certain that the drilled hole is true and square to the floor section. The pivot holes should be tapped with an M4 tap through the box to complete the preparation of the pivot hole. Due care and attention to this process will ensure an accurate and stable pivot point for the bogies. (The modeller could, for example, fit and drill 6/8BA holes.)

1.4 Now remove the ends from the fret and solder into place using, preferably, a high temperature liquid solder paste (This allows for the use of a low temperature solder when adding the buffer beams at a later stage.). The ends should locate flush with the ends of the two sides and a piece of blue tack is useful for hold them in place whilst soldering. Once again check for alignment and rectify any twisting.

1.5 Now remove the solebars, truss frames, and V-hangers from the fret. The solebars should be soldered into position at the tab location points inside the floor working from the middle and alternatively outwards along the tabs. Now locate the truss frames into position on the inside of each solebar and solder into place. (N.B. take care to relate the truss frame positions to the vacuum cylinder positions). Finally, fit the V-hangers into place.

1.6 Remove the buffer beams from the fret and solder into place. Then cut two pins and solder them into the ends to represent the gongs.

1.7 Now glue the buffers into place with epoxy adhesive making certain that they are aligned correctly as the adhesive sets. For a 'steel face' finish the buffer heads should be given a 'flash' coat of solder and buffed with wet and dry paper before they are fitted.

Now clean the etched assembly thoroughly but with great care so as not to damage the delicate parts.

INSTRUCTIONS STAGE 2 UNDERFRAME FITTINGS

2.1 Consult the underframe layout as shown on the diagram sheet and then fix the white metal castings into place with epoxy glue. Start with the battery boxes which are offset from the cross centre line. Then glue the vacuum cylinders into place noting their position in relation to the brake gear. When the glue has drill a 0.4mm hole into each to locate the nickel silver wire. Cut and fabricate the vacuum cylinder brake linkage from the nickel silver wire provided. Finally, glue the dynamo and the optional gas tank/ LPG into place.

INSTRUCTIONS STAGE 3 ROOF AND FITTINGS

3.1 Remove the plastic sprue from the roof mouldings and clean the moulding tabs using a knife and taking care each tab does not break away with the moulded cantrail. Allow for a 0.5mm overhang at each end and cut the plastic roof to the length required using a sharp fine X-Acto saw blade. Cut and file, with a fine swiss file, a knife edge to the underside of each end of the roof to allow a thin section of the roof to overhang by approximately 0.5mm. Once the fit is acceptable remove both pairs of rainstrips and destination board brackets with care using wet and dry paper.

3.2 Now, taking the scale roof template from the diagram sheet and fixing it in position on the plastic roof with sellotape tabs, mark the positions of the 14 shell vents, the extractor fan, and the tank cover with a sharp point. Remove the template carefully and drill 1mm holes for the vents and a 1.5mm hole for the extractor fan. The vents and fan should be glued into position from the inside of the roof. Remove the water tank covers from the fret and gently form them to the contour of the roof, then add and glue the filler caps, and finally secure the completed covers into position on the roof. Finally identify the correct position of the stove flue and glue the 'representative' pin into place. Do not secure the roof at this stage. ***The roof detail is the first thing seen when a vehicle is on a layout. Therefore, do not rush this stage. Time, patience, and care will be most rewarding.***

INSTRUCTIONS STAGE 4 INTERIOR

4.1 With the aid of scrap materials, and reference to the diagram notes and photographs, fabricate the interior walls and furniture to one's taste. The carpet was blue/grey and the furniture fabric a bold blue/grey moquette pattern. Do not fix into place at this stage.

INSTRUCTIONS STAGE FIVE EXTERIOR DETAILS

5.1 **UM/P 321** is a detailing accessory **(not available in this kit)** from the Ultima range of components for GWR grab handles. These should be obtained and solder fitted at this stage if required. The water tank pipework can be fabricated from the 0.33mm nickel silver wire but should not be fitted until after painting and final assembly.

5.2 With reference to the diagram sheet the central retractable steps can now be built using the etched components and the nickel silver wire. These steps were a feature of these vehicles but it is wise to check clearances (e.g. platforms) when fitting.
Components for the end steps are provided in the etch but, when fitted, they overhang the bogies and can cause running interference. It is recommended that they are only fitted if building a static model. In B.R. days, such as the example at Tysley, many vehicles had these steps removed.

INSTRUCTIONS STAGE 6 PAINTING AND GLAZING

6.1 Ensure that the model is thoroughly cleaned and remove the bogies, interior details, and roof before painting. Now remove the 4 windscreen wipers from the fret and fit them as shown in the diagrams and photographs. Take care for the fittings are extremely delicate which is reason itself for not fitting them until this stage.

Best results are obtained by spraying the whole unit, minus the roof, with a red-oxide matt paint and then giving time for the paint to dry and harden thoroughly. Once dry the selected livery colour should be sprayed on and also allowed to dry thoroughly. Then turn to the roof and paint it as required.

6.2 Now cut and secure the glazing strip making sure that no glue creeps on to visible areas. The frosted glazing is fitted to the toilet window and lower portion of the kitchen window.

6.3 Use transfers and lining from the Woodhead range to complete.

INSTRUCTIONS STAGE 7 FINAL ASSEMBLY

7.1 Re-fit the interior details with glue having first ensured that the interior is free from dust and debris. Now fit roof to the body with a contact adhesive such as Evostick 2. Then fit the painted water tank filler pipework in place and finally fit the Graham Farish bogies.

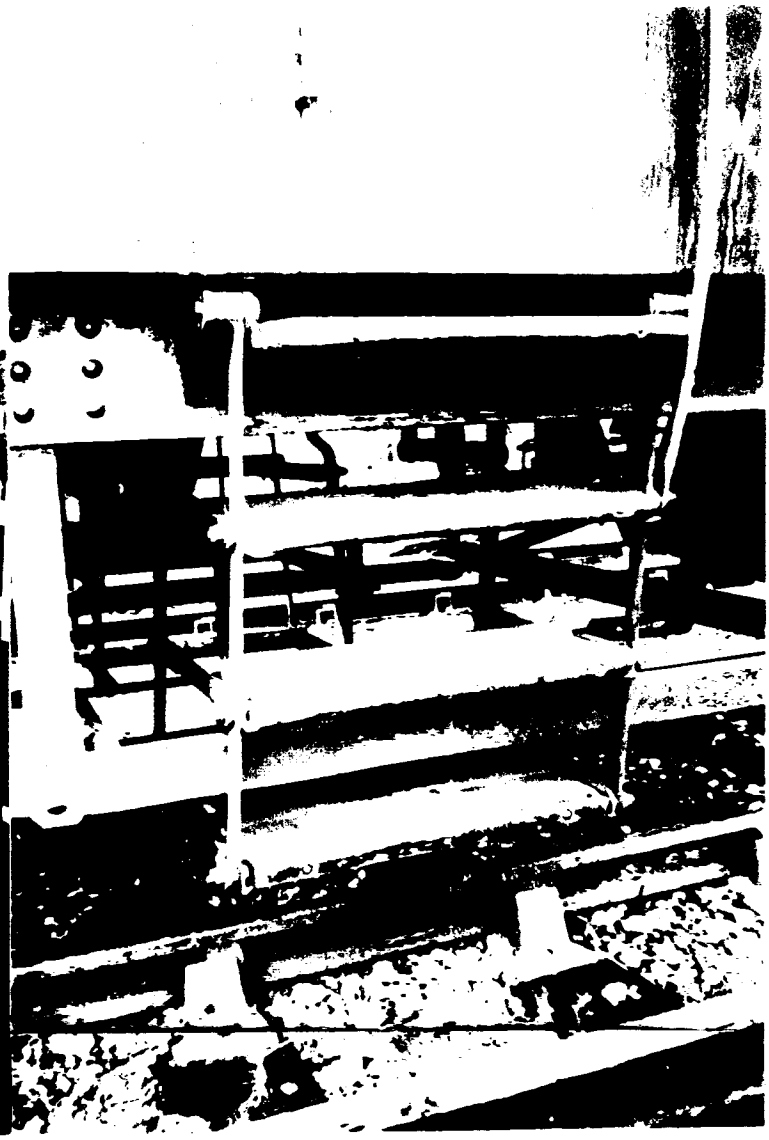
You should now be ready to place your completed model on the track. It is hoped that you have enjoyed constructing the kit and that the vehicle provides you with years of good service.

ULTIMA (2MM/N) MODELS RESERVES THE RIGHT TO CHANGE THE SPECIFICATION OF ANY KIT WITHOUT PRIOR NOTICE.

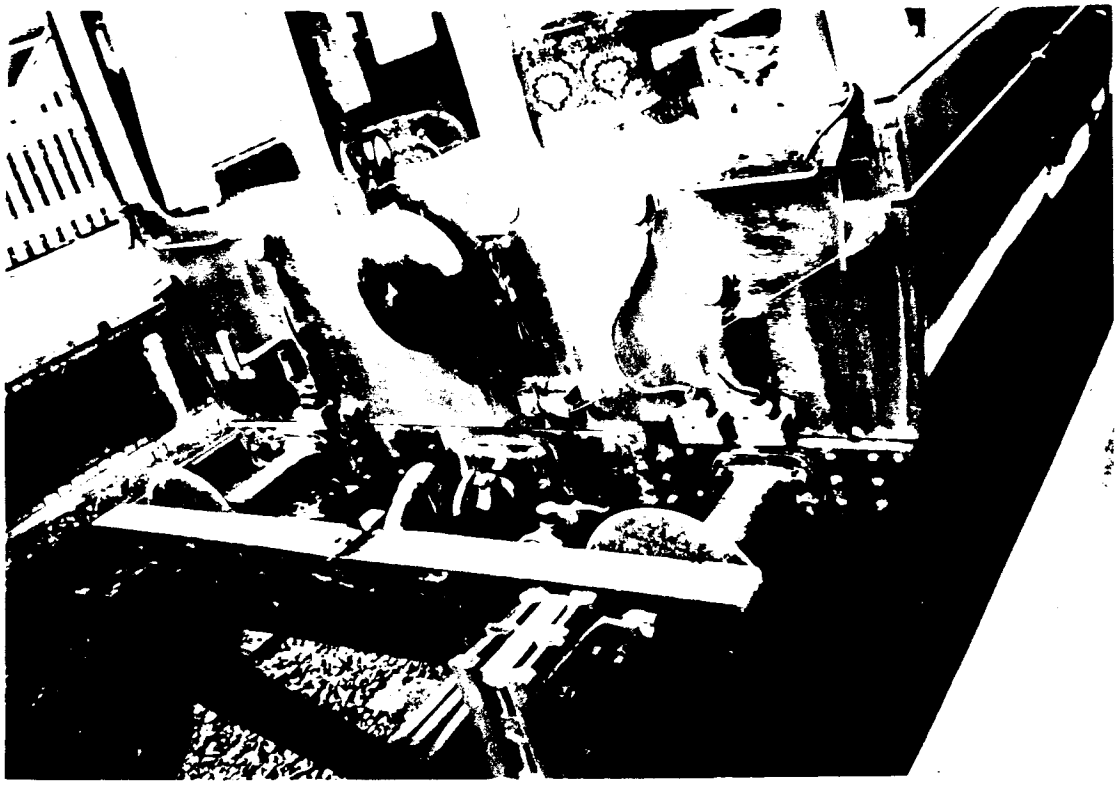
1 CORRIDOR SIDE VIEW OF SALOON. N.B POSITION OF TWIN LINING IN GWR LIVERY & GRAB RAILS BY SALOON DOOR.

2 OPPOSITE SIDE VIEW (COMPARTMENTS) N.B END STEPS REMOVED - DATE UNKNOWN. ALSO N.B THE PIPEWORK ALONGSIDE THE SOLEBAR.

3 END VIEW SHOWING BELL & BRACKET DETAILS. (N.B AIR HORNS WERE FITTED BY B.R - DATE UNKNOWN)



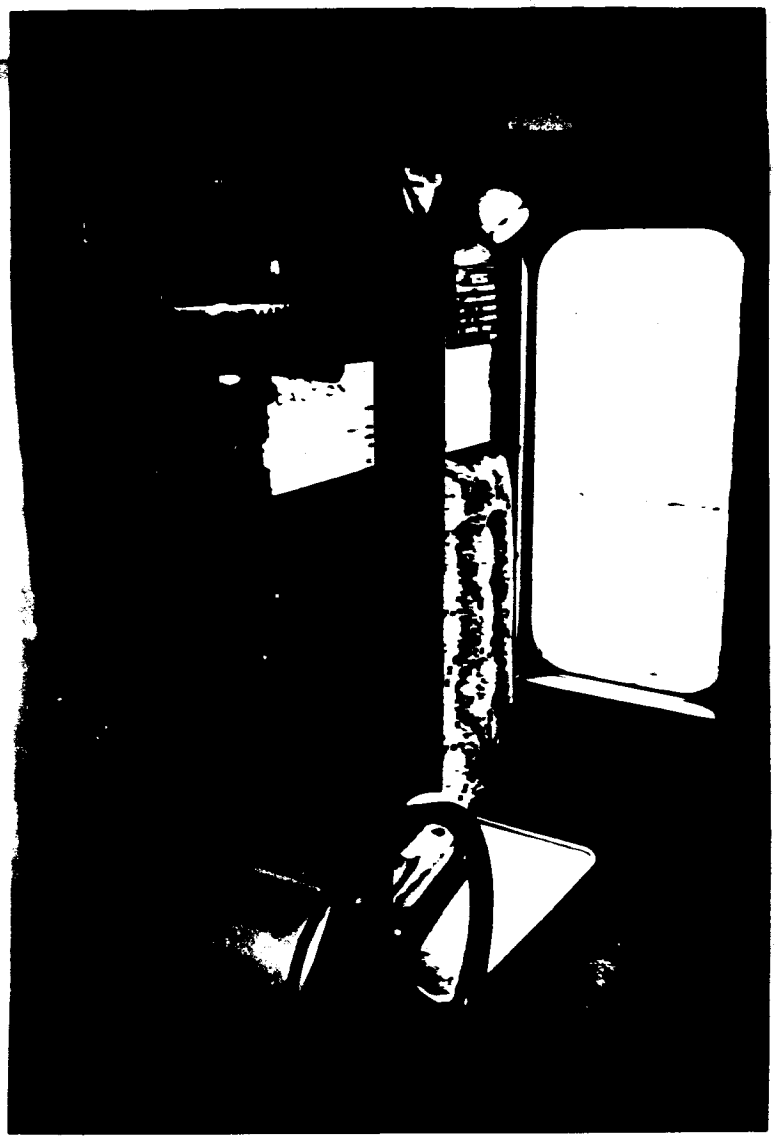
4 CLOSE UP VIEW SHOWING THE CENTRAL SET OF STEPS IN THE RETRACTED POSITION (SWITCH-OPERATING GEAR IN GUARDS COMP'T)



5

CLOSE UP OF END SHOWING DETAIL AROUND BUFFERS.

9 INTERIOR VIEW OF MAIN SALOON END FACING TOWARDS CORRIDOR (N.B THE CURTAINS FITTED TO ALL SALOON WINDOWS).



10 GUARDS COMPARTMENT SHOWING BRAKE GEAR & CONTROL APPURATUS FOR LOWERING & RETRACTING THE CENTRAL STEPS. N.B GUARD SEAT IS MID BLUE BASE WITH MOQUETTE MATERIAL BACKREST.

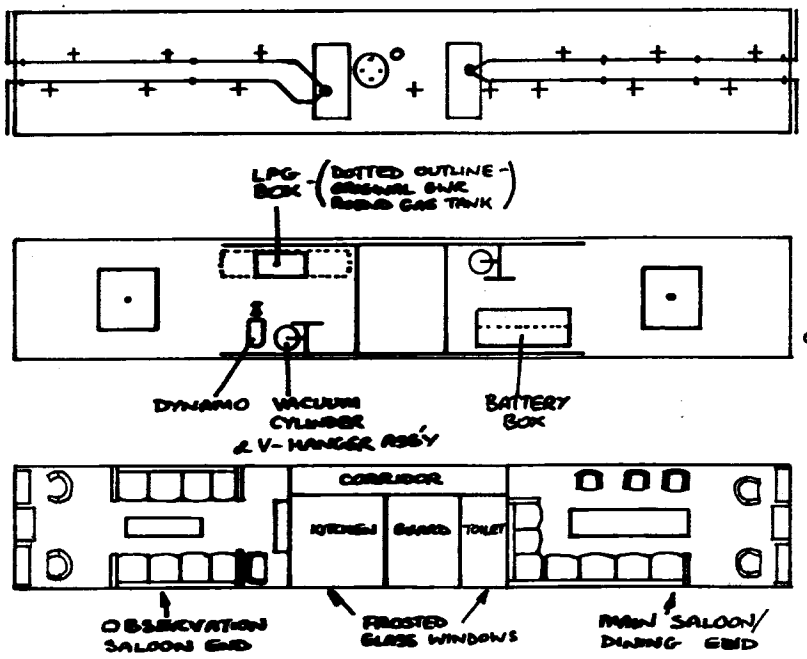
6 INTERIOR VIEW OF MAIN SALOON.

7 & 8 INTERIOR VIEW OF OBSERVATION SALOON. (N.B DESK AGAINST PARTITION WALL) CEILINGS ARE WHITE & PANELLING LIGHT & MEDIUM OAK.

THE UPHOLSTERY MATERIAL IS A BLUE - LARGE MOQUETTE PATTERN.

ULTIMA MODELS 2mm/ft

GWR DQ13 52' INSPECTION SALOON UM/E 1212



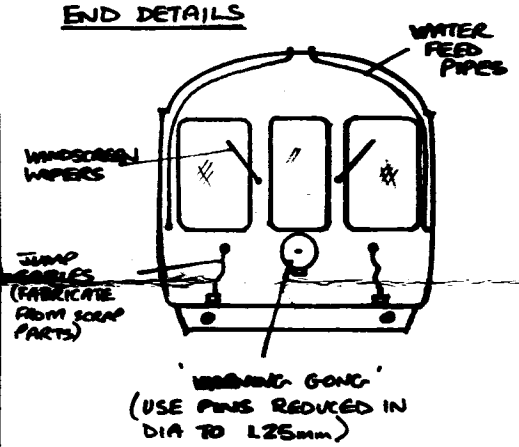
+ SHELL VENTS 14
EXTRACTOR FAN 1
o STOVE FLUE 1 (USE PIN)
WATER TANK COVERS (2 PIECES EACH) 2
(200mm - 0.33mm N.S WIRE)

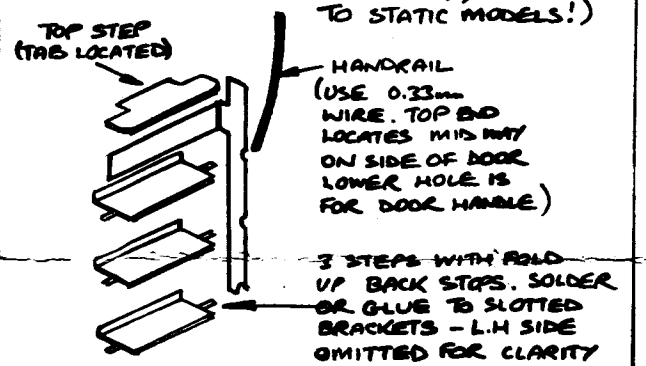
DYNAMO 1
BATTERY BOX 1
VACUUM CYLINDERS 2
L.P.G BOX/ GAS TANK. 1 EACH

CLEAR & FROSTED GLAZING STRIPS.

BRASS BUFFERS 4
M4 SCREWS & WASHERS.

END DETAILS





CENTRAL STEP DETAILS

LIVERIES

GWR 1944 CHOC & CREAM.
BR 1949 CARMINE & CREAM.
BR 1957 BROWN & CREAM. (YELLOW ENDS)
BR 1968 BLUE & GREY (YELLOW ENDS)
BR 1980's AT LEAST ONE SEEN IN EXECUTIVE LIVERY.

DETAILS 6 BUILT IN 1948 TO DIAGRAM Nº Q13. RUNNING NRS 80943, 69, 70, 72 74 & 76. OF THESE 4 ARE KNOWN TO BE PRESERVED AND IN REGULAR USE TODAY.

1 80972 BASED AT TYSLEY - BIRMINGHAM RAILWAY MUSEUM.
2 80969 " " " SEVERN VALLEY RAILWAY — KIDDERMINSTER.
3 80974 " " " NORTH YORKSHIRE MOORS RAILWAY.
4 80943 " " " FOREST OF DEAN RAILWAY — LYDNEY.

USEFUL REFERENCE ARTICLES 1 GREAT WESTERN COACHES APPENDIX II BY J.H RUSSELL (O.P.C) PAGES 262/3. 2 4mm KIT CONSTRUCTION ARTICLE BY C LEIGH IN M.R.C MAY 1986 PAGES 262/3 & 4.
3 ENGINEERS INSPECTION COACHES by P REES (USER OF 80972) R.M APRIL 1989 PAGES 163/4 (PROVIDES OPERATIONAL DETAILS)

SUMMARY— ASSEMBLY PROCEDURE (N.B ALL PHOTOS TAKEN OF 80972 AT TYSLEY) FORM TUMBLEHOME (CURVATURE TO LOWER HALF OF EACH SIDE) WITH THE AID OF BENDING BARS FROM COVE MODELS (BLACKSMITH) OR FORM WITH THE AID OF WOODEN BLOCKS & PLASTIC COATED STEEL TUBE. FOLD SIDES UP TO FORM U-SHAPED SECTION. SOLDER BOGIE PIVOT BOXES IN PLACE - DRILL & TAP M4 (N.B INSIDE OF BOX FILLED WITH MILLIPUT PRIOR TO SOLDERING). SOLDER ENDS IN PLACE, CHECK ASSEMBLY FOR SQUARNESS, FIT & SOLDER SOLEBARS & BUFFER BEAMS. THEN SOLDER BUFFERS IN PLACE & CHECK FOR POSITION. SHORTEN PLASTIC ROOF MOULDING BY REMOVING EQUAL AMOUNTS FROM EACH END TO 105mm IN LENGTH. REMOVE ALL SURFACE MOULDED DETAILS WITH WET & DRY PAPER. FILE UNDERSIDE OF EACH END OF THE ROOF TO PRODUCE A KNIFE EDGE PROFILE THAT ALLOWS THE ROOF TO JUST PROJECT OVER THE ENDS. FIT ROOF DETAILS. CONSTRUCT INTERIOR TO SUIT TASTE (USE SCRAP PARTS -PLASTICARD FOR PARTITIONING. FIT EXT'L & U/FRAME DETAILS.
PAINT BODY SHELL, INTERIOR & ROOF INDIVIDUALLY. ASSEMBLE & FIT G.F BOGIES (NOT PROVIDED) (N.B IF FITTING CENTRAL HANDRAIL CHECK LAYOUT- PLATFORMS FOR CLEARANCE).