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S.R./B.R. BULLEID MAINLINE CORRIDOR COACHES

REVISED GENERAL INSTRUCTIONS FOR ALL TYPES

Parts required to complete: Four axles 3'7" plain disc wheels (Slater's ref. 7125)

Paint & suitable transfers.

References: 'An Illustrated History of Southern Coaches' (Mike King/O.P.C.)

This kit can be assembled with either the original Southern ventilators of the later, deeper, B.R. ones.

It can also be built with or without the solebar valances and is supplied with two alternative types of vacuum cylinders. Please check the details of your chosen prototype and decide which variants are required before commencing assembly. (Please note these alternative parts only apply to certain vehicles).

- 1: Prepare the sides and ends (1) & (2) by removing them from the fret and trimming off any remaining tabs. If the solebar valances are not required these should be carefully snapped off from the coach sides. Drill out the holes for the handrails, door handles etc. Use a suitable riveting tool to press out the door bumpers marked by the half-etched holes on the inside of the coach side. The sides are supplied with the tumblehomes rolled to shape. Check these with one end and make any necessary adjustments. Solder in the door droplights (3) and your chosen type of window ventilators (4). Add the door hinges (5), noting that some of these are extremely close to the end of the coach and will require trimming on the inside before fitting.
 - 2: Fold up the floor mounting brackets (6) and then fold the bow ends to the same angles. Solder the ends to the sides ensuring that the assembly is square, and noting that the ends fit inside the sides.
 - 3: Impress the rivet detail on the buffer beams (7) and fold to shape. Our coach kits are now being supplied with components for an etched brass floor. Please note that the underside of the floor is marked with the CRT logo and has a half-etched recess along either side. The remains of any tabs should be filed off and the solebar channels checked to see that the horizontal sections are at right angles to the vertical, adjusting in a vice, if necessary. The floor can either be assembled first and then cut to length to suit the coach body as described below, alternatively, the main floor section can be drilled, etc as per the instructions and then trimmed to length with the sole bars being added afterwards. The solebar channels should be soldered or glued into the half-etched recesses with the vertical section hard up against the main, full thickness, section of the floor.
- Align a buffer beam to one end of the floor noting that its top plate fits over the top of the floor. Use the holes in the top of the buffer beam section as a template to drill two holes through the floor, 8BA clearance, and countersink these on the underside. Solder 8BA nuts over the top of the corresponding holes in the end mounting bracket and assemble this end as per the drawing. Place the assembled unit inside the body and whilst ensuring this end is properly aligned,

measure the final length required for the floor, allowing for the second buffer beam unit that will fit at the other end. Cut the floor to length and assemble the second buffer beam unit. Fit the floor unit inside the coach body and solder the mounting brackets to the coach ends, ensuring that the floor is the correct height, so that when viewed from the side you can see the top of the solebar but not the edge of the floor.

- 4: Trim the roof section (9) to a roughly correct length, final trimming can be done later. We are now supplying our Bulleid coach kits with an extruded plastic roof section. It will be necessary to trim back the centre reinforcing strips on the inside of the roof to clear the coach ends. Also carefully reduce the roof thickness (by about half) where it sits on the coach ends, until the roof fits onto the ends and the top of the sides fit into the slots behind the cantrail. The flange at the roof edge also needs to be carefully removed at each end to clear the coach sides. The roof can now be glued into place using impact adhesive or superglue. Follow the manufacturer's instructions and work in a well ventilated area. Also put a good fillet of adhesive along the joints between the ends and the roof. Allow to dry thoroughly overnight before finally trimming the ends. Lightly rub over the roof with fine wet and dry paper before fitting any further parts to it.
- 5: Before proceeding further, it is recommended that you remove the floor unit from the body shell and work on them as separate units. The coach ends can be detailed next. There are basically three variations with the end handrails, refer to the drawing to see which are appropriate for the coach that you are building. Where the handrails go up to the roof, fit turned handrail knobs into the etched holes provided, leaving the actual rails off for now. The shorter rails on brake ends can be fitted directly to the coach end. On the brake end of kit RC/250 it is necessary to block off the upper handrail holes and drill new ones vertically in line with and 23mm above the lower ones. Add the long top steps (10) and the four short ones (11), noting that there are no short steps on the brake ends of the brake coaches. Add the cast alarm gear fittings to the appropriate end and make up the rodding from .7 dia. brass wire. Also add the lamp irons (14) and jumper leads (15).
- 6: Mark out the centreline on the roof, and from this the lines for the roof vents. Fit the vents (16) into place together with the water tanks and fillers (17). The water tanks are represented by brass rectangles that will need to be lightly rolled to the roof profile. Also add the guard's periscope, if appropriate. Drill out the holes for the longer end handrails and fit these into place, through the knobs already fitted. Add the lower rainstrips from .7 wire, followed by the destination board brackets, using the plain boards as a template. Fit the boards into place if you are going to use the etched boards supplied, alternatively these can be omitted, just using the brackets. Add the upper rainstrips.
- 7: To complete the sides add the small side destination boards/brackets as required. Thoroughly clean up the coach body which is now ready for painting.
- 8: To return to the floor, the steps (18) should be soldered onto the solebar overlays (19), also add the steam heating pipes from 1mm brass wire (refer to drawing). The overlays should be glued or soldered into the side channels of the floor.
- 9: The trussing and under frame fittings are constructed as a separate sub-assembly. Bend up the etches trussing (20) bending over the flanges to form the angle trussing, noting that all fold lines are on the inside. Bend up the top & bottom flanges of the side trusses (21) and solder into place, noting that the wider flange goes to the top, nearest the floor. Fold up the appropriate 'V' hangers.

- 10: If using the conventional vacuum cylinders (22) there should be fitted into place by the 'V' hangers. Add the operating arms (22A), linkage (22B) etc. Fit the smaller air tanks (23) adjacent to the vacuum cylinders and fit a battery box (24) each side, behind the central section of the side trusses. (Note from the appropriate drawing the different positions of the battery boxes, etc. on some catering vehicles).
- 11: If using the 30" Prestall vacuum cylinder the lugs on the side of this should be fitted into the holes on the central 'U' hanger (the two 'V' hangers not being used). Add the etched operating link (26) and the single large air tank (27) which goes to the left hand side. Place a battery box (24) either side behind the right hand section of the central trusses.
- 12: Fit the dynamo (25) into place, and then glue the completed under frame section centrally to the underside of the coach floor.
- 13: Assemble the coach bogies, referring to the separate instruction sheet.
- 14: Solder a 6BA nut into each bogie support and then fit these into place on the underside of the floor. These can either be bolted through the floor or glued into place. Use one of the bogies to check for clearance and add packing between the support and the floor, if necessary. (The ideal fixing is to use 8BA bolts (not supplied) with two washers on each bolt to provide adequate spacing. The centreline of the supports should be 58mm from the front of the buffer beam.
- 15: Remove each buffer beam, in turn, and add the detail. Firstly assemble the lost wax buffers (28) ensuring that the shanks slide freely in the buffer stocks. Assemble the shank and stock and then add the ring to the inner end of the shank, ensuring that the slot in the ring is horizontal. Solder the buffers into place. Assemble the screw link couplings (29) and fit into place at the same time spring the buffers with a short length of steel wire, soldered through one of the holes in the back of the coupling hook and locating in the slots at the back of the buffers. Add the vacuum and steam heating pipes (30/31) and also the two pairs of end steps (32/33). Re-assemble the buffer beam units, clean up the whole floor assembly and paint it.
- 16: Fit the each bogie into place, using a 6BA bolt, washer & spring. Ensure that the under frame unit runs freely.
- 17: Return to the body and complete any painting, lining and lettering, and protect all this with a light coat of suitable varnish. Add the glazing and where appropriate the corridor handrails (brass wire) and etched window guards (at the brake ends). Add remaining door handles and grab rails.
- 18: Assemble the interior, having painted the necessary parts first. Use the etched parts for the corridor partitions making up the remaining ones from styrene sheet, using the interior plan as a guide to the internal layout of the coach you are building. Also add the resin seats.
- 19: Bolt the floor back into the coach body, and finally fit the corridor connectors to the coach ends. The coach should now be complete and ready for use.

Livery notes:-

Southern Railway|:-

When built, these coaches first appeared in unlined S.R. Malachite Green, the roof being grey. Vehicles that originally had the side valances had green ends with the roof up to the lower rainstrip also being green. Later coaches, without the valances, had black ends, with the entire roof being grey.

British Railways:-

After Nationalisation they were initially turned out in lined carmine & cream (blood & custard), later reverting back to B.R. unlined green.

Most of these coaches ran in sets of two, three, five or seven vehicles with the set number appearing on either side of the corridor connectors on the brake ends. Mike King's book referred to at the beginning of these instructions contains a wealth of information with regard to coach and set numbering and also set formations.