

2mm Scale Association BR CCT

Historical Notes

The BR 4-wheel CCT vans (diagram 816, six lots) were constructed at Earlestown Works between 1960-61. Number range was 94101-94922. Their life was relatively short, as in 1983 BR took the decision to withdraw all 4-wheel parcels stock, and the last were withdrawn from revenue service in 1988. Some however remained as engineers stock. Applicable liveries were:

BR maroon 1961-65. Most, but not all were lined above and below the windows. No CCTs carried the SR Green livery, as they were not allocated to the Southern region until 1971. BR Rail Blue 1965-88. The final vans carried this livery with an express parcels stripe for the Red Bank parcels service.

Tartan Arrow. This company hired GUVs and CCTs for an Anglo-Scottish parcels service, The livery was a bold white and crimson with prominent lettering. The service ended in the early 1970s

Departmental Olive Green. Carried into the 1990s.

There were detail differences between individual vans in such items as axleguards and footboards, the latter often being removed in later years. This kit has been developed from measurements of a specific van at the Magnapp's farm railway museum in Essex.

Assembly instructions

Parts required

1 x 2-567	BR CCT etch and resin roof
4 x 2-041	Rolling stock axle bearing cups
2 x 2-004	7mm Coach wheels
4 x 2-160	Coach Buffers
1 x 2-454	BR dynamo
1 x 2-453	BR Voltage regulator
2 x 2-346	Turned brass vacuum cylinders
8 x 2-455	shell roof vents

Perspex or glass (microscope cover slides) for glazing
0.3mm brass or nickel silver rod
paints and transfers.
solder and tools

General

This kit is designed for adults. It should not be given to children under 16.

Certain parts of the etch are very delicate, and therefore care is needed when cutting both them and adjacent parts out. Spares are provided of certain small or delicate items.

Although I suppose it would in theory be possible to assemble the kit using superglue, for these instructions soldered construction is assumed.

Unless otherwise indicated, fold lines for 90 degree folds are on the inside of the fold, for 180 degree lines on the outside of the fold.

Parts on the etch are numbered. An enlarged picture of the etched fret is provided for clarification. Study this and the instructions carefully before beginning assembly.

Body

1. The most delicate part on the etch is the body end etch layer 3 (Part 3). Do not attempt to cut out this part, instead cut out the body end etch layer 2 (Part 2), and solder this part on the rear of 3. Take great care to ensure correct alignment of the two parts, as any error will be difficult or impossible to correct. Repeat for the other end parts. Cut out and solder in place the end door handles (part 6 - spares are provided). Now cut out the combined parts, and store them safely.
2. Cut out the main body (Part 1). **Before folding**, there are certain half etched indentations which are designed to be pressed out, using a drawing pin, or ideally a riveting tool. Two on each side of each pair of doors represent the door stops. If you don't feel confident about this operation, you can omit it.
3. The body now has to be folded up into a box shape. With a modelling knife or scawker score along the fold lines to help a sharp corner when folding. If you cut all the way through you have gone too far! Fold the long fold lines first, using bending bars or special tools such as a 'Hold and Fold'. Make sure you fold the whole side at once, otherwise you will not get an even result. Then fold up the ends, and check the corners meet nicely. Check that the resin roof fits correctly on the body, then place it aside and solder up the corners from the inside. Make sure the solder will not obstruct the fit of the roof.
4. Test fit the roof once again, and then file the ends so they are flush with the body ends. Now lay the roof aside again.
5. It's now time to fit the body end overlays from step 1. Ensure they are correctly positioned centrally (They are not as wide as the body) and the bottom edge sits flush with the body bottom edge - check on a flat surface. Solder in place by applying heat from the inside of the body, to avoid the etched overlays becoming detached. Now fold around the 'winged' hinges, having first tinned then, using a steel ruler or similar to get a sharp fold. Check they are absolutely level before soldering in place.
6. If not fitting handrails to the model, you can fill the handrail holes by applying solder to the holes from inside the body, resting the body on a flat surface. I use electrical multicore solder for this, and if your iron is hot, the solder will nicely fill the hole without protruding from the front of the body. Make sure the soldering on the rear is neat and will not obstruct the glazing retainer. If fitting handrails, don't do it now, as they are better fitted after painting.
7. Solder the large chalk boards (Part 4, both ends) and small chalk boards (Part 5, right hand ends only) into place on the body in the location recesses provided.
8. Fold down the V shaped protrusions out of the bottom of the body – these form the characteristic strengtheners welded to the solebar on the prototype. Use a small screwdriver, and check by eye that they are all vertical. They are quite robust, after doing this store the body safely.
9. If mounting body to underframe using bolts (size 10B recommended) then solder these in place inside the body over the holes provided at ends and in centre.
10. Fit the roof vents to the roof. Variations occurred, but the most common was shell vents, eight in total. A typical spacing is illustrated in the attached Figure 1.
11. Fold up the glazing retainer (part 7) and check fit inside body. Do NOT solder in place as it is designed to be removable.

Underframe

1. Fold up the main underframe unit (part 8), solebar supports first then bufferbeam supports. Check that the four locating lugs fit into the slots provided in the body. Solder axle bearing cups into place
2. If you will be using DG or similar couplings fold up the mounting box at each end of the underframe.
3. Solder on the two solebar overlays (part 9) by aligning over the axle bearing cups. Check with the body that these slide between the triangular strengthening pieces.
4. Fold up the four axleguard/spring etchings (part 10) into a Z shape and solder the three layers together. Now solder in place, again by aligning over the axle bearing cups, ensuring they are square.
5. Decide if you will be fitting footboards to your model – these were often removed in later years. Cut out the four upper footboards (parts 11,12,13,14). There are three different types, and where they are to be located is labelled on the underframe. Fold the profiled section over 180 degrees and solder to the lower section – or simply cut it off if you don't wish to include it. Fold down the locating lugs. In turn, solder each footboard in place, making sure it is accurately located.
6. Similarly fold up the two lower footboards (part 15) and solder in place. For strengthening reasons, no fold lines are included on this part, but it is simply folded 90 degrees directly at the rear of the footboard, making sure you have the profiled surface facing upwards.
7. Fold up the two V hangers from the underframe.
8. Fold up the 2'6" and 3' Battery Boxes (parts 16 and 17). Each is formed by two U sections, one inserted and soldered inside the other. When this has been done, locate the battery boxes in the indicated places on the underframe and solder in place.
9. Fold the voltage regulator carrier (part 18) into a U shape. You may wish to strengthen the folds with solder. Carefully fold the square sections at the end into a Z shape to form the end box, and file off the tags. Solder the completed assembly into its indicated place on the underframe.
10. Fold the brake blocks into a U (part 19), and fold up the locating tag. Fold the brake stretchers (part 20) into a channel shape, and locate in place between the brake blocks, and supported by the locating tag. Solder the completed assemblies in place on the underframe.
11. Locate the two vacuum cylinders in place in the holes provided in the underframe, and solder in place. Thread 0.3mm brass wire through the three sets of V hangers, the brake rod and two vacuum cylinder levers (parts 21, 22 and 23). Leave rod protruding from the two outer V hangers for the brake levers. See Figure 2 for details of the brake rod.
12. Fold up the two brake levers (parts 24 and 25), noting that they are not identical. A template is provided on the etch for the horizontal shape, then the ratchet section is folded. The brake levers are attached to the underframe at the V Hanger, in the slot in the solebar, and at the bottom of the axleguard.
13. Cut out the bufferbeams (part 26). If desired, solder on the etched overlays for buffer and coupling mounting plates (parts 27 and 28, spares are provided). These are probably best done whilst still attached to the etch. Fold the end wings of the bufferbeam around, and solder the bufferbeam to the underframe ends, ensuring by use of a flat surface the top surface is flush with that of the underframe. Test fit to body to ensure a snug fit.

Painting and assembly

To my opinion, the model is best painted in components prior to assembly. The body is painted and lettered to your livery choice, the roof dark grey, the glazing retainer white (or off-white if you prefer) and the underframe black. After everything has thoroughly hardened, assemble the body to the underframe by gluing or bolts. Insert the glazing retainer, this should then be capable of holding the glazing in place (Perspex or glass microscope slides to your choice). The large window glazing should be cut precisely to shape (7.5mm by 5.5mm) to fit within the etched recess and give a flush-glazed appearance. Bend handrails from wire, paint white and fit using superglue. Glue the roof in place. Fit the wheels, and couplings. All done!

References

1. Model Railway Journal No 10, page 246, Wild Swan Publications
2. British Railways Mark 1 Coaches, p189-192, Keith Parkin, Pendragon/HMRS
3. British Railways Coaching Stock in Colour p44, Robert Hendry, Midland Publishing
4. British Railway Non-Passenger Coaching Stock, pp50-52, Goeff Gamble, Cheona Publications
5. BR General Parcels Rolling Stock pp12-13, David Larkin, Blandford Barton