

S128—GWR U25 4 Compartment Brake Composite—Guide

To be read in conjunction with the *Shire Scenes* Coach and Chassis Guide and the instructions for the Ratio kit. Please read all the instructions and familiarise yourself with the parts and options before bending, gluing or soldering anything. Slower curing 'gel' superglue (applied with a pin?) is recommended. Folding is made easier by lightly scoring along the opposite side from the half etched line with a pointed instrument.

History

This coach makes an interesting change from the general pattern of GWR 4 and 6 wheel vehicles insofar as the guards 'duckets' or 'projections' are at the extreme end of the coach and thus form part of the coach ends. In 1895 10 U25s were built to lot 739 and in 1896 5 more were built to lot 767. They worked on branch lines where the inclusion of a small amount of first class accommodation was useful. The U25 is very similar to the T49 (*Shire Scenes* S126) but with one compartment enlarged into the guard's section. A 'blister' had to be put in the end to accommodate the handbrake standard which was mounted at the end of the vehicle. V hangers and cranks below the buffer beam transferred the 'pull' to the braking system. The blister was removed when the coach entered departmental service and had a lever handbrake installed on the sole-bar. 2 vehicles were re-designated U24 when the guard's projections were removed and 3 were reclassified as 'all third' in 1937. This kit contains the blister and cranks and an alternative blanking piece for the coach end. A photograph of a U25 Brake Composite can be found in reference 5.

Specific Instructions for Coach Sides and Ends

These sides are intended for use with the Ratio 613 'long chassis' kits; SR613 from *Dart Castings*. Because one end of this vehicle is integral with both sides it is necessary to digress from the general instructions found in the Coach and Chassis Guide. The sides and ends are put together to form an open 'box' which is attached to the Ratio chassis floor. The key to getting this right is in folding the guard's 'look out projections (or duckets)' which wrap round the coach sides and lock them in place. These are on the 'B' end of the coach (with the cut-out for the blister).

Emboss the rivet detail on both buffer beams following the general instructions; while they are still flat. Curve the 'tuck-under' into both ends before folding any projections or tabs. Fold the outer wall of one of the duckets through 90°; there is a half etched guide line on the back / inside of the fold. Take great care to hold / support the projection itself and particularly the whole of the narrow window frame in a folding clamp of some kind to avoid distorting it. Repeat for the other side. Fold the 'inboard' side wall of the ductet through 90° using the half etched line as a guide and again supporting the whole of the frame of the small window in a clamp to avoid distortion. Next curve the top and bottom panels on the ductet to line up with the (slots in the) the coach sides.

Assemble the buffer beam detail and attachment flanges on both ends. Fold the buffer plates, bolt straps and coupling face plates (14, 15, 17) through 180° so that they lie flat on the front face of the buffer beam. These details may be removed if using buffers and / or couplings that come with their own plates. Fold the mounting brackets (16) back under

the beam through 90°. These can (optionally) be used to mount vacuum pipes or steam heat pipes. Fold the 'wings' (13 / 8) back through 180° to thicken the buffer beam itself taking care that the buffer mounting holes align; something round and tapered will help. Fold the tabs (8) through 90°. These attach (the body assembly) to the top face of the Ratio floor.

Curve the tuck under into the coach sides and add the detail. Attach the 'B' end to the sides using the projecting tabs on the duckets and the associated slots on the sides. Fold the attachment tabs (10) on the 'A' end through 90° using the half etched guide line on the inside of the fold and attach to the sides to complete the carcass. Take care to ensure that everything is 'square'.

If the under frame is to be detailed, this is best done at this stage as completed coach bodies do not respond well to being inverted and worked on. On the U25 the underfloor brake gear has to be attached. Fold the rigging as shown (inverted) in the picture and glue the assembly to the underside of the floor below the blister. A piece of 0.6mm wire (supplied) can be inserted through the etched holes as a crank axle and also to form the brake rodding (both shown).



Glue the carcass to the Ratio floor using the tabs on the back of the buffer beam; note—the floor was designed to mate with thicker plastic ends so there will be a gap at the ends. The flanges along the top and bottom of the coach sides (2) fold through about 180° to strengthen and thicken the sides and provide faces to mate with the Ratio parts. Short lengths of styrene strip attached along the top of the bottom flange might help alignment of the floor albeit leaving it a little (0.5mm) high (2+).

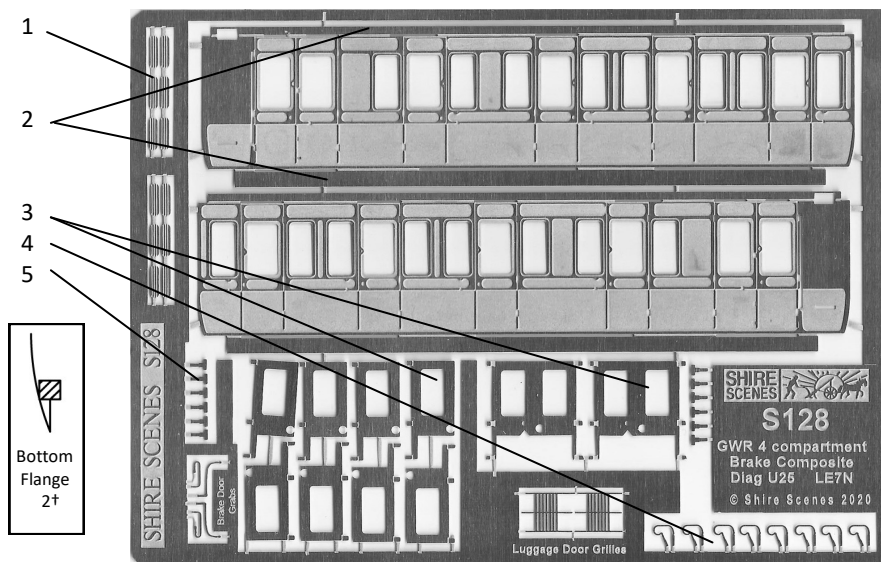
Weighting the vehicle evenly will assist the riding characteristics. Cast metal Passengers; PP1 from *Dart Castings*, would help with this.

Livery

Generally, GWR coaches carried the fully lined Brown & Cream livery until 1908 when all-over 'brown/crimson lake' was introduced. This lasted until 1922 when the lined livery was re-introduced. Those that lasted into the 1930s would have carried the 'simplified' brown and cream GWR livery. During WW1 a simplified brown livery may have been used. Surviving U25 vehicles probably finished their career in all-over brown when in workman's or departmental use.

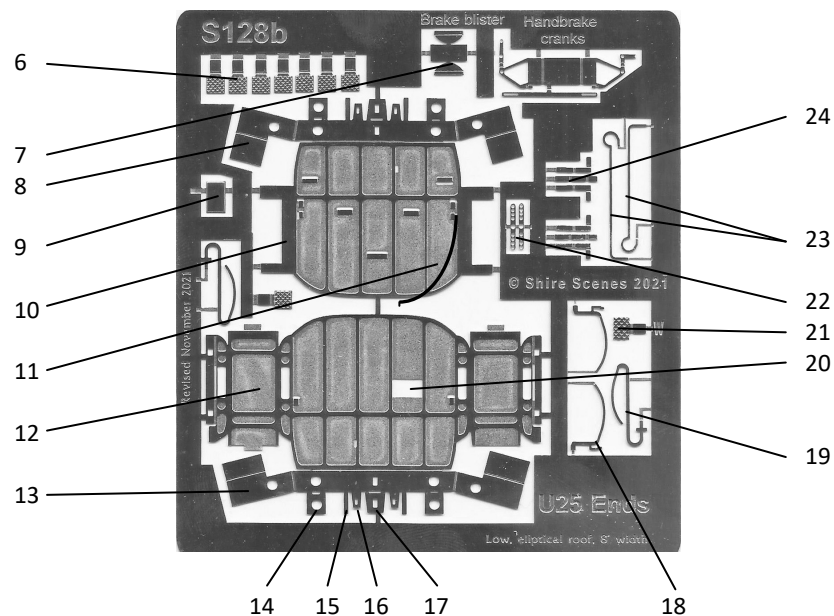
Roof

The Ratio roof can be used without cutting and shutting. Remove the plastic moulded gas lamp tops from the roof with a craft knife and sand smooth. Drill five holes to accept *MJT* Gas Lamp Tops (MJT 2945). Locate four of these holes to align with the centres of the passenger doors and the fifth a little (2mm) behind (outboard of) the division between the luggage doors.



1. Door ventilators. Mount in panels above (all) door windows*.
2. Top and bottom flanges
3. Droplights and hinges. Hinges fold forward and fit through slots in the coach side (and help locate the droplight). The recess on the back (inside) is to facilitate glazing.
4. Commode handles. The handle sits to the left of the mounting holes.*
5. 'T' handles. For door locks.*

*- If modifying a Ratio coach these features can be seen on the discarded side.



6. End steps ('A' end).
7. Blister.
8. Tabs to attach ends to ratio Floor.
9. Blister blanking plate.
10. Side to end attachment tabs.
11. Position of 'A' end handrails (23) - one only shown.
12. Guard's duckets or Projections.
13. Wings—fold back through 180° on to back of buffer beam..
14. Buffer back plates.
15. Strap.
16. Mounting bracket for vacuum pipe and steam heating pipe.
17. Coupler back plate.
18. Steam heat pipe.
19. Vacuum pipe.
20. Hole for blister.
21. Top (wide) step ('A' end).
22. Under floor brake rigging adjuster.
23. 'A' end handrails. The end of the 'shepherd's crook' attaches to the roof.
24. Lamp irons. The mounting tab must be twisted through 90°; the iron stands vertical..

Diagram - Lot/Date	Type	Numbers pre and post 1907	Notes
U25 739/1895	4 Comp't Brake Composite	Pre 1838—1847 Post 7838—7847	Shire Scenes Ref. S126 6489, 7846 and 7847 re-classified all third in 1937 and may have survived till 1940s. Rest scrapped 1932 to 1935 Guard's projection removed.
U25 767/1896	4 Comp't Composite	Pre 485—489 Post 6485—6489	
U24	4 Comp't Composite.	Post 6488—6489	

References

1. *Great Western Way*, Lewis et al, HMRS 2009. ISBN 978-0-902835-27-6,
2. *Great Western Coaches from 1890*, M Harris, David & Charles 1985 ISBN 0-7153-8050-8.
3. *A Pictorial Record of Great Western Coaches* by J.H Russell, Oxford Publishing Company, ISBN 902888 03 X. pp48
4. *Great Western Coaches Appendix Volume 2.* by J.H Russell, Oxford Publishing Company, ISBN 0-86093-154-4
5. www.penrhos.me.uk/indez.shtml (GWR Dean Era Coaches)

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