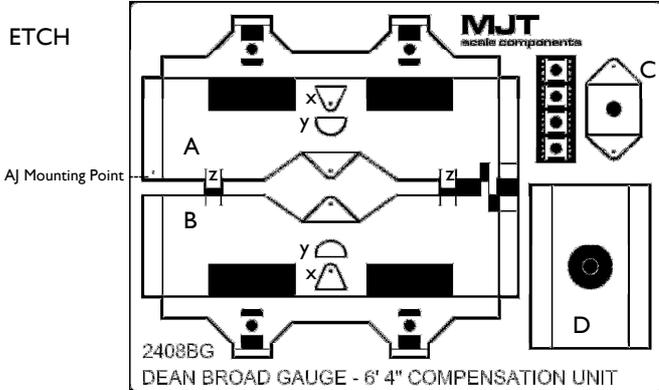


**2408BG - Broad (7') Gauge Torsion Bar CCU for Dean Bogie  
Assembly Instructions**

Please read the instructions and familiarise yourself with the parts and options before bending, gluing or soldering them. Check that the kit contains two brass etches with the main components, a length of torsion wire and two 7mm press studs. To complete the kit 4 wheelsets (of choice) and 8 brass axle bearings (MJT4009, MJT4010 or similar) are required. Note: some axle bearings may require packing with 2mm spacing washers – Peco 2mm fibre washers are ideal



Each etch carries a pair of side frames (A and B) which feature trunions (x) to mount the ends of the torsion wire and tabs (y) which provide two point support for one end of the vehicle. At the other end of the vehicle, the tabs are left 'flat'. Each etch also has a centre bolster (C) and mounting plate (D).

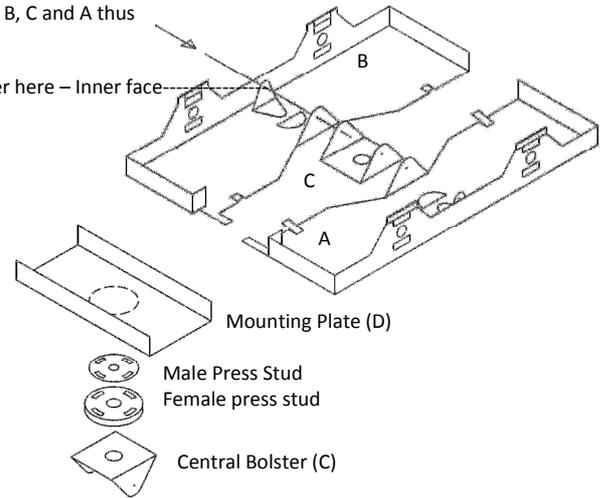
The torsion wire should be a 'snug' fit in various holes in parts A, B and C. If these need to be opened with a small broach or drill it is best done while the etch is still flat.

**ASSEMBLY**

1. Separate the components from one etch and clean any remaining tab marks. With the exception of the Alex Jackson mounting point marked on the component diagram open all the small holes in Parts A, B and C to 0.85mm (No 66 drill). The larger holes in the 'W' irons on parts A and B will receive the axle bearings and need to be opened to 2mm.
2. Fold both side frames with all half etched lines on the inside of the fold. The trunions (x) should fold down and the tabs (y) should fold up. On the second bogie the tabs should be left unfolded. Solder at the corners to make the assembly rigid.
3. There are a couple of tabs (z) on the side frames with no half etched fold lines. The longer ones should be bent down to an angle of about 25° while the shorter ones (on the opposite side frame) should be bent up by the same amount. These limit the amount of movement in the assembled unit.
4. Fold parts C and D with the half etched lines on the inside of the fold.
5. Take the male half of each press stud and solder it to the half etched circle on the mounting plate (D). The female half is soldered to the bolster (C). If necessary, open the central hole in the bolster to allow the press stud to seat correctly. NB – the 'pip' on the press stud sits in the hole.
6. Take a length of the torsion rod and thread it through the small holes in the side frame (A or B) as shown in the diagram. A small amount of the rod should protrude through the outer face of the trunion (x). Solder the torsion rod on the inner face – see diagram
7. Thread the central bolster (C) and the opposite side frame of the bogie (B or A) on to the torsion rod as shown in the diagram. Cut the torsion rod so that it protrudes a little way through the trunion (x) on the second side frame when the whole assembly (parts A, B and C) is pushed together. Do not solder at this stage.
8. Position the bearings and axles in the appropriate holes (Blu-tack will hold them temporarily) and check that the axles are held with a small amount of end float (a fibre washer may be necessary to achieve this). Hold the two side frames in place with a piece of masking tape. When satisfied with the alignment and amount of float solder the torsion rod to the trunion on the second side frame, again on the inner face. Remove the masking tape.
9. Repeat the procedure for the second etch but this time do not fold the tabs (y).

Torsion Bar threaded through parts B, C and A thus

Solder here – Inner face



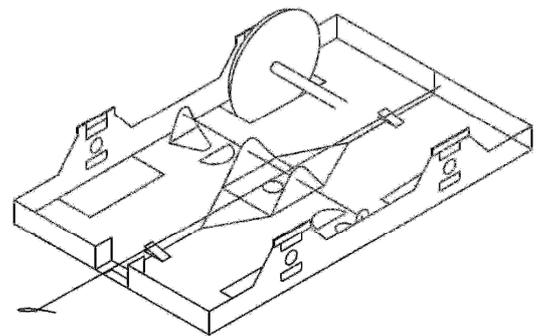
**FITTING THE UNITS**

Re-join the press studs to establish if, and how much, packing might be required between the vehicle floor and the mounting plates. Once this has been done separate the press studs and glue the mounting plate to the floor.

These CCUs have been designed specifically to make the Dean 6'4" wheelbase bogie. The 'W' Irons are incorporated into the CCU so that only the appropriate primary springs, axleboxes and secondary 'volute' springs need to be attached to the outside of the frames. Should the modeller prefer the bogies to be a little heavier, fine lead shot or some other ballast can be glued to the underside of the frames.

**FITTING ALEX JACKSON COUPLINGS**

Many modellers like to use Alex Jackson couplings. The CCU has been designed with the use of these couplings in mind. To assemble, proceed as above. To provide clearance for the coupling to move remove or fold back the small half etched square from the end of each side frame (parts A and B). At the opposite end there is a mounting hole provided for the shank of the coupling to be soldered to the CCU. The prepared coupling should be 'threaded' between the torsion rod and the face of the central bolster – see diagram.



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