

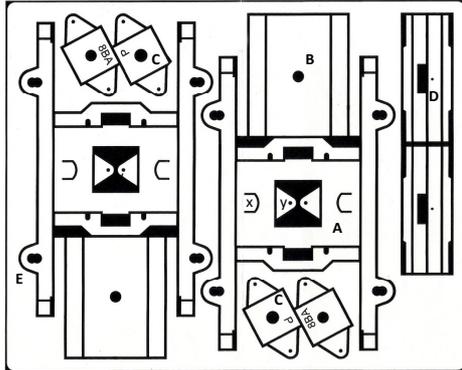
**25xx Rigid 'H Frame' Bogie - Assembly Instructions**

The unit is designed to be attached to the coach using either a press stud (supplied) or an 8BA screw (not supplied). Please read the instructions and part familiarise yourself with these and other options, and the component parts before any bending, gluing or soldering. Check that the kit contains a brass etch with the main components, a short length of wire and two 7mm press studs. To complete the bogies 4 wheelsets and 8 axle bearings (MJT4009, 4010 or similar) are needed. Note: some axle bearings may require packing with 2mm spacing washers – Peco 2mm fibre washers are ideal.

The 'H' frame is intended to be used with MJT Cosmetic Bogie Sides to produce an accurately aligned and reasonably weighty rigid bogie. Two alternative 'king pin' arrangements are provided for. If a press stud is used, the bogie is a direct replacement for one with an MJT Torsion Bar Compensation Unit. Otherwise, an 8BA (2.2 mm) screw and nuts can be used.

**Typical Etch**

- A – Main Frame
- B – Mounting Plate
- C – Rocker
- D – End Stretcher
- E – Hole for pin point bearing



Remove the components from the etch with a sharp knife and clean all the remaining tabs and sharp edges with a small file. All folds are 90° with the half etched line on the inside of the fold. Fold the frame 'A' and strengthen the corner joints of the centre stretcher with solder as shown in Figure 1.

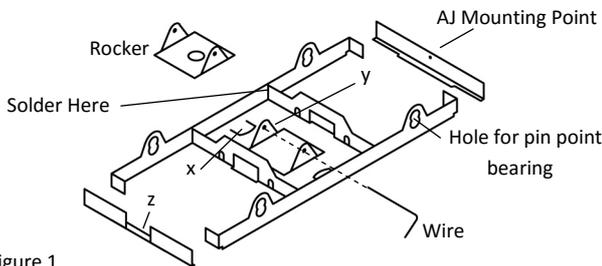


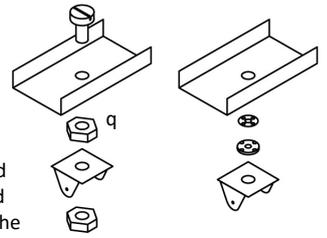
Figure 1

**Press Stud Fixing.** If using a press stud, provision must be made for the bogie to pitch. The two tabs 'y' are folded down so that the rocker 'C' can be mounted in the square hole in the centre of the bogie. Two different rockers are provided with different hole sizes, one (labelled P) for the press stud and the other (labelled 8BA) for the 8BA screw. The rocker is held in place by a short length of wire passed through the holes in it and in the tabs 'y' (Figure 1). The wire should be bent and soldered or glued to the frame away from the tab. Do NOT attempt to solder the wire to the tab itself as the rocker will become soldered to the frame, won't 'rock' and will be difficult to separate.

**Screw Fixing.** If using a screw and nut, the bogie will pitch naturally. Fold down the tabs 'y' and locate the rocker (labelled 8BA) in the square hole using the wire (as described above) to align it. The rocker can now, however, be attached directly to the tabs; the wire can eventually be removed to allow easy access for the screw or nut. Lay the bogie upside down on a flat surface to ensure that the rocker plate and bogie top plate are parallel. It is probably easiest to solder the wire in place and then cut away the middle section.

The Mounting Plate 'B' is folded to make a shallow channel. This is fixed to the underside of the floor of the coach (or other vehicle) to make a flat surface below the floor. While it is intended that the sides be folded at 90°, the ride height of the vehicle can be lowered by using a different angle. The plate carries the chosen king pin. The half etched circle will align the male half of a press stud while the hole in the middle will accept an 8BA screw. The female half of the press stud is attached to the top of the rocker 'C' using the slight protrusion on the back of the stud to align with the hole in the rocker. If using a screw, it is suggested that the screw be inserted downward through the hole in the

mounting plate and held in place with a nut. Soldering or gluing the screw in place might be considered as the screw head might be difficult to access when everything is in place. This will leave a length of thread sticking out beneath the mounting plate onto which the complete bogie can be attached and held captive with another nut. This nut should not be tightened against the bottom of the bogie - which needs to be free to pitch - and should be secured with a little Loctite or a 'dab' of paint.



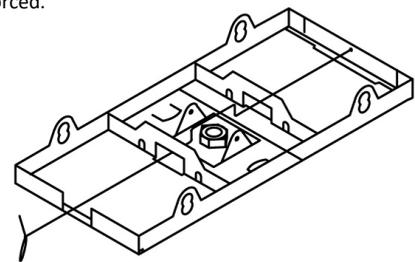
The tabs 'x' on the top of the centre stretcher can, optionally, be folded up to form a 4 point (all tabs folded up), 3 point (recommended - tabs folded up at one end only) or 2 point (no tabs folded up) support for the vehicle body in conjunction with the mounting plate (B). The tabs project 2mm above the top surface of the bogie which is the thickness of a press stud pair. With 3 point support the vehicle body will be born at one end by the tabs and the press stud, and at the other by the press stud alone leaving it level. Clearly, if using a screw and nut, the distance between the mounting plate and the rocker should also be 2mm. If necessary 8BA washers can be inserted above (or below) the nut 'q'.

The end stretchers 'D' are largely cosmetic - to improve the appearance of the bogie - and hence optional unless it is intended to use an Alex Jackson (AJ) coupling. If using an AJ, the stretcher with the small hole should be attached at the inner end of the bogie (figure 1). Whatever coupling arrangement is used, take care to ensure that the outer end stretcher - if used - does not foul the coupling. The rectangular 'cut out' 'z' is intended to 'clear' an AJ.

Holes 'E' are provided for pin point bearings (MJT4009 4010). Cosmetic bogie side frames can be fitted according to choice. MJT Scale Components supplies a large range but any side frame with the appropriate wheelbase can be used. The backs of the pin point bearings will assist with alignment. Waisted bearings (MJT4009) are recommended because, being tapered, these will allow for small variations in alignment; it may be necessary to open the hole with a small broach. Some variants (e.g. the 8'6" wheelbase) have two overlapping holes - a 'figure 8' - to allow for different ride heights. Take care to select the correct hole for the chosen cosmetic side before fixing the bearing. The cosmetic sides should have 2mm holes (drilled) in the backs of the axleboxes. Any other rearward projections should be cut off and the back filed flush. Additional weight can be added by gluing fine lead shot on the underside of the centre stretcher taking care not to foul the rocker.

**FURTHER NOTES – ALEX JACKSON COUPLINGS**

As well as the rectangular cut out in the (outer) end stretcher there are similar cut outs in the stiffening bulkheads through which the AJ coupling wire can be passed. If using a screw as a king pin it may be necessary to shape the coupling wire so as not to foul the screw, either passing beneath it or to one side. Bear in mind that this wire may be pulling a complete train and so any corners might have to be re-enforced.



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