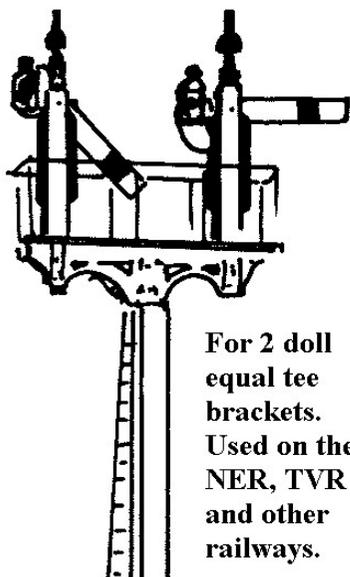


McKENZIE & HOLLAND SIGNAL BRACKETS



**For 2 doll
equal tee
brackets.
Used on the
NER, TVR
and other
railways.**

Note: this kit contains bracket components only. For a complete signal, you will need: a base post (S017); two dolls (S033); signal arms and balance levers (S03/4 lower quadrant; S012/1 or S012/2 upper quadrant); finials (SC03); lamps (SC08 lower quadrant or SC025 upper quadrant); landing (S08/5W) and a ladder (S7/09, S09/3, S09/4 or S09/5). Two slotted post profiles (S07/1) will also be required for an NER prototype. Although meant as a junction signal (dolls 6'6" apart),

it can be modified for use on two parallel roads (dolls at least 10' apart) Obtain good photographs before starting work. Remember that many changes took place during the lifetime of signal brackets, from their earliest installation by the signal contractor, when the signal would have been in the original lower quadrant condition, to later modification when Board of Trade changes were needed, through the Grouping and Nationalisation, all of which would have seen the renewal of components with more up-to-date items, including upper quadrant fittings in the later days.

Burnish both sides of the fret, then tin all parts before removing. If constructing a parallel roads signal, prepare two trimmers from scrap brass 79mm long, 7mm deep, and at least 0.030" thick, rounding off the bottom corners.

Prepare a length of base post S017 by removing the top bearing and if reducing height, ensuring that you have a minimum of 13'6" clearance remaining between rail head and the underside of the proposed cantilever bracket, at any point where it will foul a running line. Cut to length two S033 dolls, remembering that the bottom of the doll should be level with the bottom of the etched bracket (junction signal) or the bottom of the trimmers (parallel roads signal). Complete the dolls by adding the slotted post profiles (if required) and the arms and lamps. Finials should be left until last to avoid breakage.

If modelling a junction signal, take one bracket and solder it to the base post top. It is a good idea to line and pin everything up on a balsa block so the job remains square in all directions. Solder the second bracket to the opposite side of the post. Finally, add the landing; the rear should overhang the rear bracket slightly, with the larger overhang being at the front.

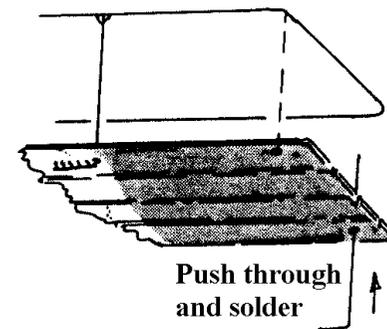
If modelling a parallel roads signal, solder the trimmers to either side of the base post

top, then add the two brackets immediately below this, and finally the landing, positioned as above.

Carefully make two holes in the landing to accommodate the dolls. For a junction signal, these will be in line with the brackets; for a parallel roads signal, symmetrically arranged about the base post and at least 10' apart. Solder in the dolls, using scrap etch to pack the gap between the dolls and the brackets/trimmers.

All working motion should now be undertaken to a satisfactory stage, before the addition of handrails, so as not to impede access. Small cranks tend to lose their efficiency due to poor bearings, so it is wise to provide small tubular bearings soldered unobtrusively into the bracket frame, and then to put the cranks onto short lengths of nickel silver wire as axles, with a washer soldered on the rear end to give a good movement. The wire linkages will perform that much better.

Establish the handrail stanchion positions from your prototype photographs, as they do vary a great deal. Drill the landing perimeter at the chosen intervals with a no.76 (0.50mm) drill, and insert scale 3' to 4' lengths of wire (no more than 0.45mm diameter) into each hole, from below, with a short "L" turned on the bottom of each one. A quick solder joint on each one will fix them in place, then they can be aligned by eye, and a handrail of soft iron wire fixed around, one stanchion at a time. Leave a hoop at the front where the ladder will be attached. Finally, trim off all excess wire.



(Planks actually run at 90deg to those shown)

Solder the chosen ladder to the front of the landing, adding two bracing stays from thin brass strip midway up the base post.

Nearly all bracket signals had bracing wires and posts, so don't forget to add these once the signal is installed on the layout.

PAINTING

Clean the signal by immersing in warm detergent water, rinse under a running tap, then allow to dry overnight. Spray overall with primer. Refer to photographs to ascertain which parts are likely to be black and which white. Generally, wood was white (with the bottom 4' of the base post black) and all ironwork black, but there are many exceptions, so beware! NER signals usually had the signal box operating lever numbers inscribed in black on the front of the base post.

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