

Jig-built 30ft signal ladder kit

Flat side stiles
Round rungs
In-built jig assembly

With arched-over top for the
LNWR

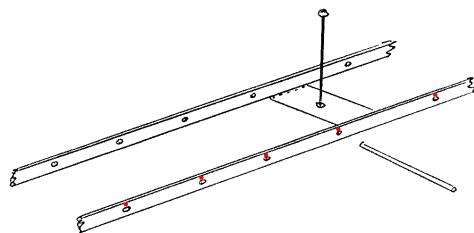
The ladder has been drawn to the standard LNWR dimensions of stiles 12" apart, rungs 9" apart.

ASSEMBLY INSTRUCTIONS:

The stiles were drawn to the minimum width possible whilst still retaining etchability. This does make the ladder rather delicate, especially before the rungs have been soldered in. To avoid mistakes, build the ladder to its full length, and cut it to size at the fitting stage. The jig incorporated in the ladder fret helps to keep the ladder aligned whilst the rungs are being soldered in place.

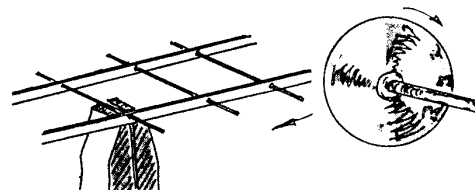
Before removing the ladder and jig from the fret, clear the rung holes with a no.79 drill. The holes are deliberately etched undersize to prevent failure in production and to give a fine fit to the supplied nickel silver wire.

Burnish both sides of the stiles. If modelling an LNWR straight post signal, cut straight across the fret at **Cut 1**. If modelling an LNWR bracket signal, cut straight across the fret at **Cut 2**. Other companies' signals will probably require both arched ends to be removed – see across for examples. Carefully remove the rest of the fret frame to leave the ladder stiles in their jig. Fold up the stiles with the half-etched lines on the inside. You will find that the stiles bow out; this is normal – you haven't damaged anything! You may now wish to pin the jig to a balsa block, although I found it just as easy to hold the jig in the hand.



The first rungs to be soldered in should be those adjacent to the pads where the stiles are half-etched onto the jig. Insert a length of wire through two stile holes, brush on some liquid flux, and apply the smallest amount of solder straight from the iron. Always approach from the edge of the stile furthest

from the jig (aim for the red dots on the drawing) to minimise the possibility of soldering the two together; some solder mask will help here. Once soldered in place, cut off the excess wire, and move to the next pair of holes. Don't cut the rungs to length before soldering in place – a long length of wire is much easier to work with. Once the rungs near the pads are soldered in, work alternately from the two ends towards the centre, and from the centre towards the ends. Gently push in the stiles as you proceed.



Once all rungs are in place, tidy up the rung ends using a minidrill and slitting disc. Hold the rungs in pliers as shown to avoid damage. The vibration from the drill is most useful, as it will shake apart any poorly soldered joints! Finally, cut the jig free using a piercing saw or a craft knife on a firm hardwood surface. The slitting disc may be used, but take great care not to damage any rungs.

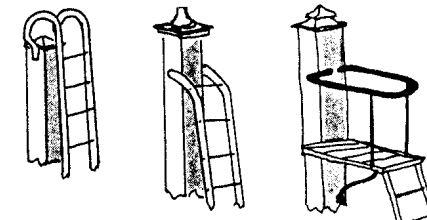
Suitable platforms are available in the MSE range. If a platform is required, establish the handrail stanchion positions from prototype photographs, as they do vary a great deal. Drill the landing perimeter at the chosen intervals with a no.79 drill, and insert scale 3' to 4' lengths of 0.3mm wire into 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 similar wire fixed around, one stanchion at a time. Finally, trim off all excess wire.

If present, solder the platform to the signal post. Cut the ladder to length, then solder it to the post or platform, and the signal

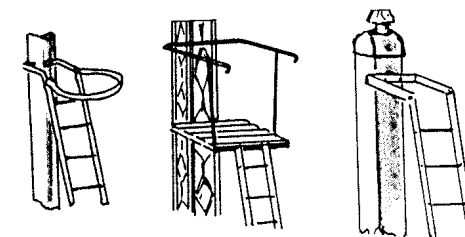
baseplate. Note that the arched end has been etched slightly overlong to allow for building inaccuracies.

Use the strips from the jig centre to make bracing struts. Check their height and number with photographs. The ladder end joints should be on the outside of the stiles, and never exactly level with a rung.

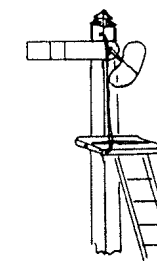
Platform/ladder configurations:



LNWR GNR GER



GWR LSWR MR



LB&SCR

Note that the LNWR, LB&SCR and also the NER usually had the ladder at the front of the post.

PAINTING

After priming, paint the ladder black, white, bauxite or grey according to the prototype specification. Black and grey ladders often had the bottom 4' painted white.