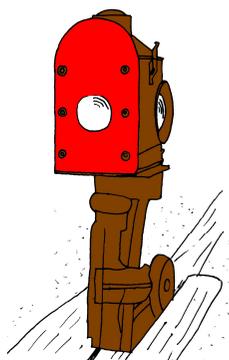


LNWR GROUND SIGNALS 1881 rotating pattern

(Two complete
kits)



Contents:

- 2 brass frets of parts
- 4 LMS disc faces
- 2 cast whitmetal lamps
- 2 cast whitmetal balance weights
- 2mm brass tubing
- 1.0mm operating wire
- 22swg axle wire

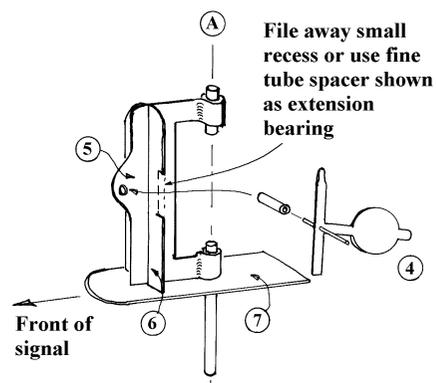
This type of signal was introduced by the LNWR in 1881, and used for renewals and new work until superseded around 1915 by the miniature arm signal. Examples were still found on BR in 1960, and probably even later. In LMS days, round disc faces were fitted to some signals to make them appear similar to the then new standard ground disc signal.

The signals are intended to operate.

Assembly Instructions

Burnish both sides of the fret before removing any parts. Discard part 3. It will be easier to tin the parts before removal.

Base:

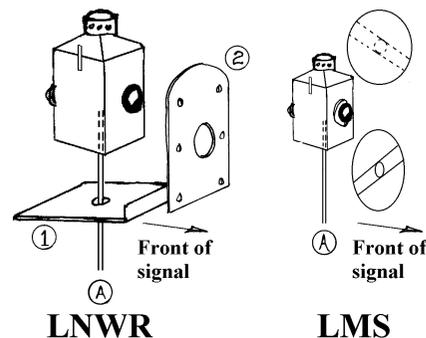


Clear the holes in parts 4 and 5 to suit the 22swg wire. Also clear the hole in part 7 to suit the 2mm brass tubing.

Join the cross-halved parts 5 and 6 as shown above. Form the two brackets by wrapping the lugs on (5) around the brass tube, then place the assembly on the baseplate (7). Project enough tubing through the baseplate to protect the operating wire as it passes through the layout baseboard. Solder the tube and base to the baseplate, and the tube to the brackets, ensuring that the tube is vertical. Remove the surplus tube from above the brackets, and also the portion between them (use a mini-drill and slitting disc to avoid damage).

Solder the axle through the balance lever (4), then solder the axle through the bearing hole in (5). It will be necessary to file a recess in (6) to clear the lever, or to use a small piece of brass tube to space the lever from the base. Finally, solder the balance weight to the etched disc. The balance lever is not meant to work!

Body and Lamp:



LNWR version: Cut off all three circular discs from body (1), then fold the remaining square at 90° to the base, with the half-etched line on the **outside** of the fold. Remove most of the square to leave a lip as shown in the diagram, then solder face (2) to it. Drill a 1.0mm hole in the lamp base, then solder in the brass operating wire. Cut the wire to length, remembering to allow sufficient length of wire to project below the baseboard. For a more accurate lamp, add a third lens to the right hand side (as seen with the larger lens facing you) from a large pinhead or other suitable object. Test fit the lamp assembly on the body: the smallest diameter lens goes to the rear. It may be necessary to space the lamp above the base so the front lens falls behind the hole in the front face. Once a good fit has been achieved, separate the two components.

LMS version: With the bolt holes at top and bottom, scribe two parallel lines on to the discs tangential to the centre hole: horizontal on one disc, and inclined downwards at 45° on the other. This will help later in painting on the red stripes. Drill a 1.0mm hole in the base of the lamp, solder the discs to the lamp (additional spacers may be needed to make both fit), and then solder in the brass operating wire, cutting to length as explained in the LNWR paragraph.

Painting:

You will probably find it easier to paint the two or three units made so far before final assembly. Wash in detergent water to remove all traces of flux, rinse under a running tap, then allow to dry thoroughly. Prime all units (car aerosol is ideal) then paint as follows:

Base: brown overall before 1923, black overall afterwards.

Lamp: brown or black overall as above (except the rear face, which is white) with a touch of red, green and silver on the front, side and rear lenses respectively.

LNWR body: brown or black overall as above except for red on the front face.

LMS discs: white fronts with red bars to the previously scribed lines. In the absence of photographic evidence, the backs of the discs are assumed to be black.

Final Assembly:

For the LNWR version, first dab a small amount of glue onto the base of the lamp and fix it into the body. Drill a 2mm hole through the baseboard in the correct location, ensuring that the signal will not foul any passing traffic. Pass the base tube through the hole and fix the base to the baseboard. Note that the LNWR installed its ground signals "boxed in" by planks so that ground level is approximately one third of the way up the balance weight. Finally, pass the operating wire through the tube, and solder a retaining collar onto the wire as it leaves the tube (place a paper washer between collar and tube to avoid straying solder!).

The operating wire can now be connected to your chosen means of operation.

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