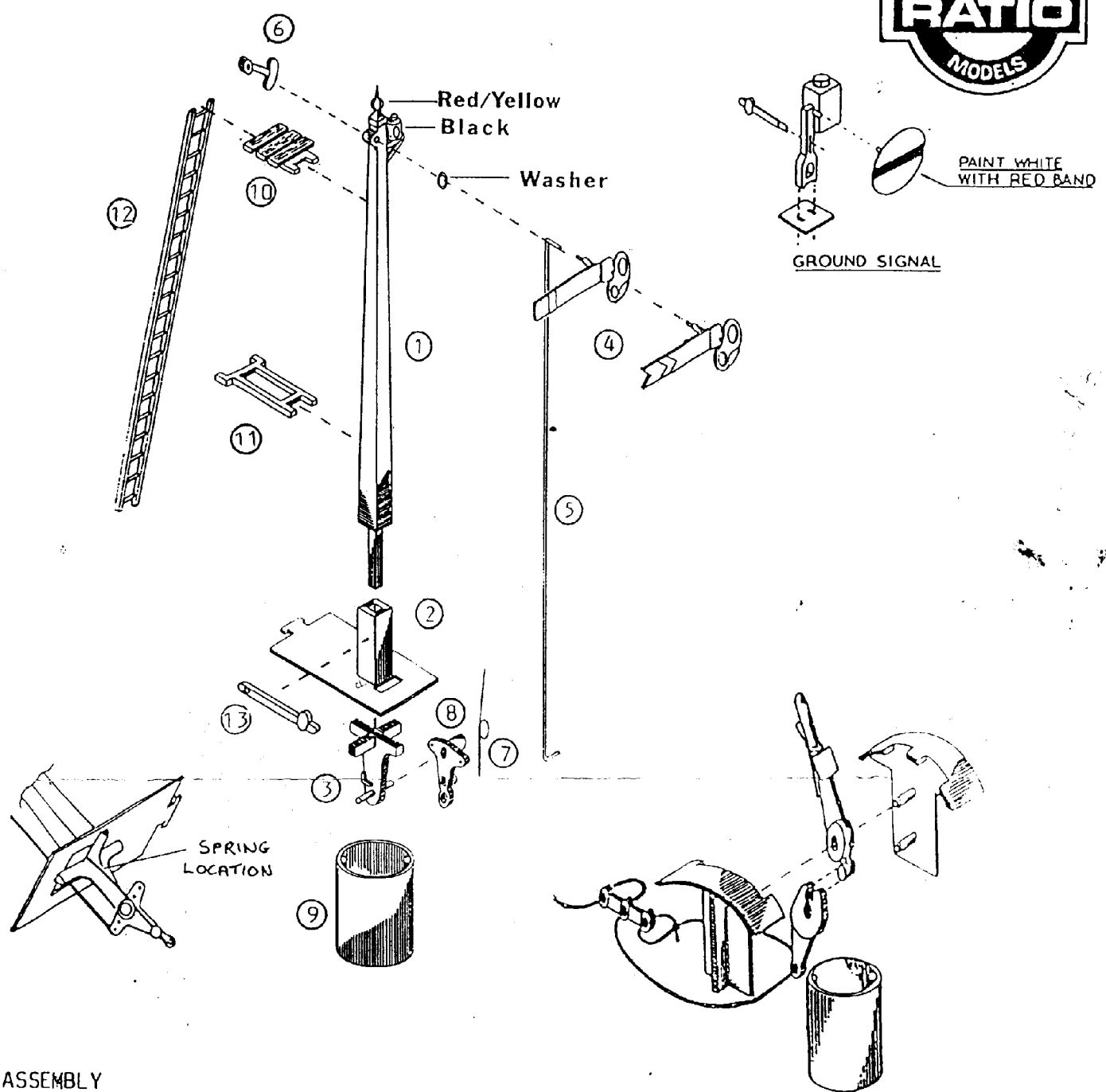


# G.W.R. signals 460/1



## ASSEMBLY

Remove approx 1/8th" from post location spigot. Glue post (1) into base (2). When dry, cement quadrant (3) under base. NOTE. This must be fitted the correct way around (see drawing) and stand at 90° to base.

Fit brass washer to arm pivot.

Pass end of wire (5) through hole in arm (4). Slide other end of wire through right hand hole in base, then locate arm pivot through eyelet in post.

Fit backshade (6) onto rear of arm pivot. Do not cement at this stage.

With arm in the on position, 90° to the post, adjust backshade to sit against the stop on the rear of the post.

Check arm for freedom of movement, this is best done by holding post in one hand and with thumb pressure slide wire up and down.

When correct, glue backshade in place. Allow to dry for at least ½ hour.

Fit spring (7) to crank (8). NOTE. Short end of spring locates in hole on crank.

Slide crank over wire end and slip assembly over pivot on (3). The long end of spring then locates against the front of quadrant cross.

Slide tube (9) over mechanism and test.

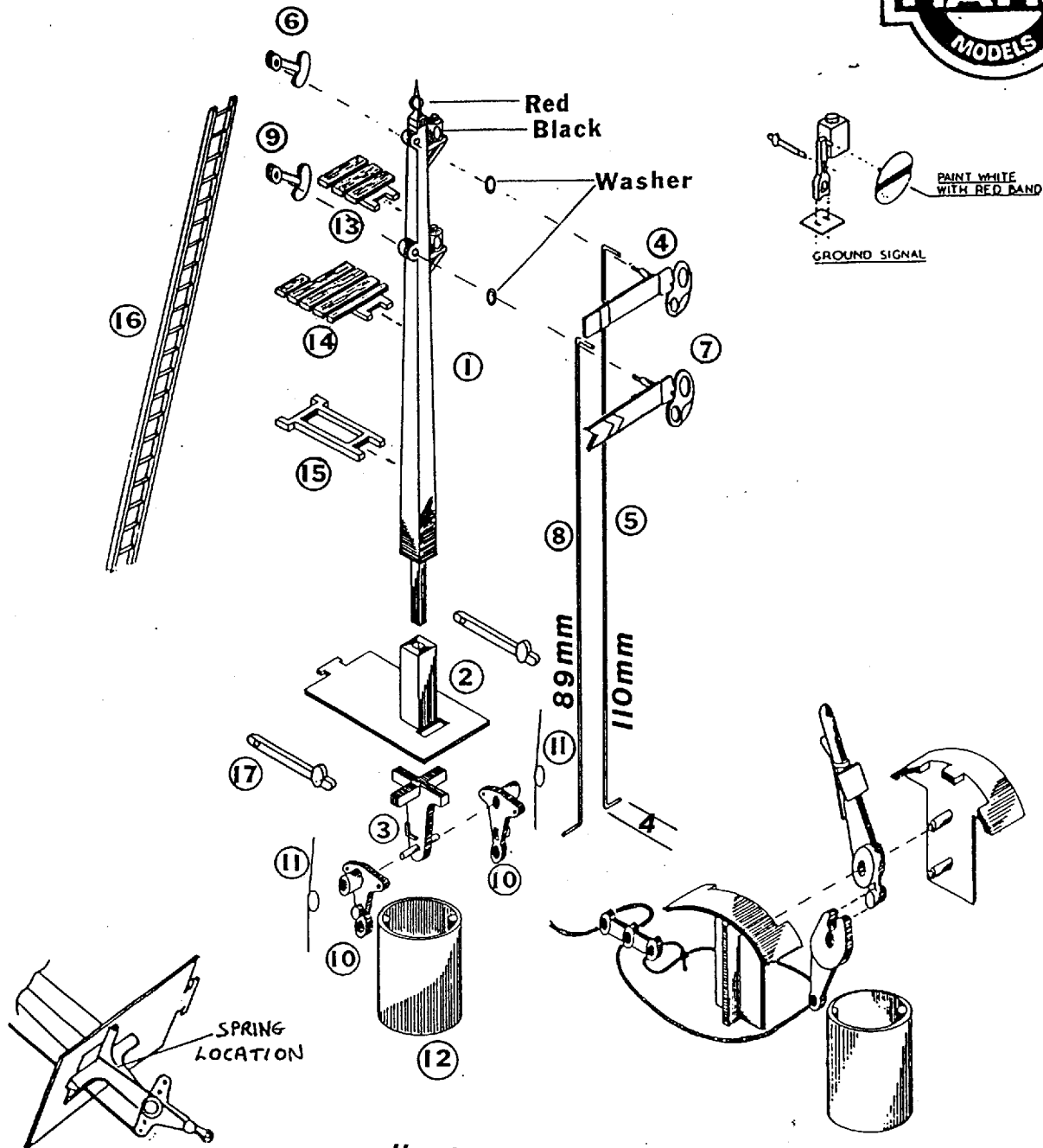
Glue platform (10) against the top location on post rear.

Secure ladder stay (11) to bottom location.

Cement ladder (12) between lugs on base and against ladder stay and platform.

Cement counter balance (13) to base (2).

# G.W.R. signal 462



## ASSEMBLY

**NOTE** all wire now has to be cut to lengths shown

Remove approximately 1/8" from post location spigot. Glue post (1) into base (2). When dry, cement quadrant (3) under base. **NOTE** This must be fitted the correct way around (see drawing) and stand at 90° to base.

Fit brass washers to arm pivots.

Pass end wire (5) through hole in arm (4) slide other end of wire through right hand hole in base. Then locate pivot arm through eyelet in post.

Fit backshade (6) onto rear of arm pivot. Do not cement at this stage. With arm in the position 90° to post, adjust backshade to sit against the stop on rear of post.

Check for freedom of movement, this is best done by holding post in one hand and with thumb pressure, slide wire up and down.

When correct, glue backshade in place. (Allow to dry for at least 1/2 hour).

Repeat process with distant arm (7) wire(8) and backshade (9).

Fit springs (11) to cranks (10). **NOTE** Short end of springs locate in hole in crank. Slide cranks over wire ends and slip assembly over pivots on (3).

The long ends of springs locate against the front of quadrant cross.

Slide tube (12) over mechanism and test.

Glue platforms (13) and (14) against locations followed by ladder stay (15).

Cement ladder (16) between lugs on base and against ladder stay and platforms.

Glue counter balances (17) to base (2).



# Instructions for Kit No. 469 G.W.R. Junction or Brackets Signals

The Ratio scale signals are miniature replicas of those introduced by the G.W.R. from 1892, and were still in use over 80 years later. The Junction Signal is positioned where lines diverge or to control the entrance to a Passing Loop; there would also usually be a Junction Distant Signal some distance to the rear of the actual Junction. A Bracket Signal is used where an obstruction, such as a Bridge or Station Canopy, prevents the use of the normal standard straight-post signal. Occasionally, it will be found on the right hand side of the track(s), particularly if the track(s) curve left.

There is a choice of "Home" or "Distant" arms in kit, from which a number of variations can be built. (FIG 1a). Carefully check parts with "exploded" drawing (FIG 1). Use a liquid glue such as Gloy or Mekpak. Remove parts from sprues using either a razor saw or sharp knife. Decide which version is required and proceed as follows:—

- 1 Cement upper post(s) to main post. 1 & 2 to 3.
- 2 Cement lattice sides to main post keeping top edges flush. 4 & 5 to 3.
- 3 Using pin as location, cement plastic distance piece to main post. 6 & 7 to 3. Check position of 7.
- 4 Cut platform 8 to fit between posts, as shown dotted, and cement into position, making sure that rib "A" is up against lattice side "B". (FIG 1).
- 5 Locate and cement base plate 9 to post 3.
- 6 Locate and cement part 10 to underside of base plate 9.
- 7 Place two pre-formed wires through oblong hole in base-plate and assemble parts 11 and 12 onto spigots on part 10. Fit springs as shown in FIG 2 and lodge top end in front of cross member as shown.
- 8 Fit metal bell cranks over ends of pre-formed wires and push pins through cranks into and through holes in plastic spacers, 6 & 7. NOT forgetting small brass washers between crank and moulding.

- 9 Fit required arms over pre-formed wire ends, through bearing on post, again putting a small washer between, and carefully cement back shade, 13, into correct position. Make sure arm pivots freely. Signal arms should now move freely by operating levers 11 & 12.
- 10 If all is well cut ends of pins leaving about 1/16" projecting. Pinch this end with pliers to retain in position. FIG 3.
- 11 Slide plastic tube, 14, up and over lower assembly, thus keeping unit together.
- 12 Cut ladder to length and cement into required position.
- 13 Fit support piece 15.
- 14 Locate and cement lamps into position, making sure they clear arms. Locate and cement small fillets under lamp brackets.

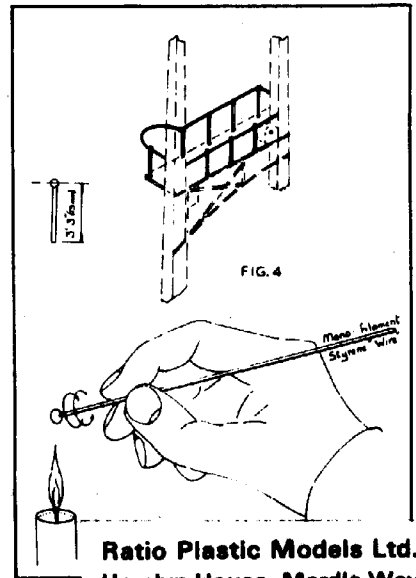
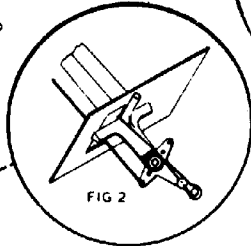
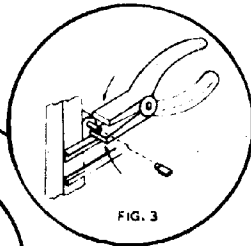
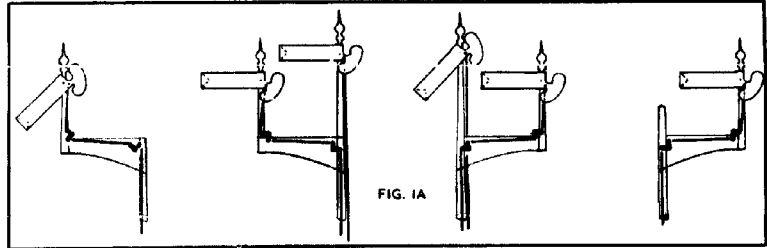
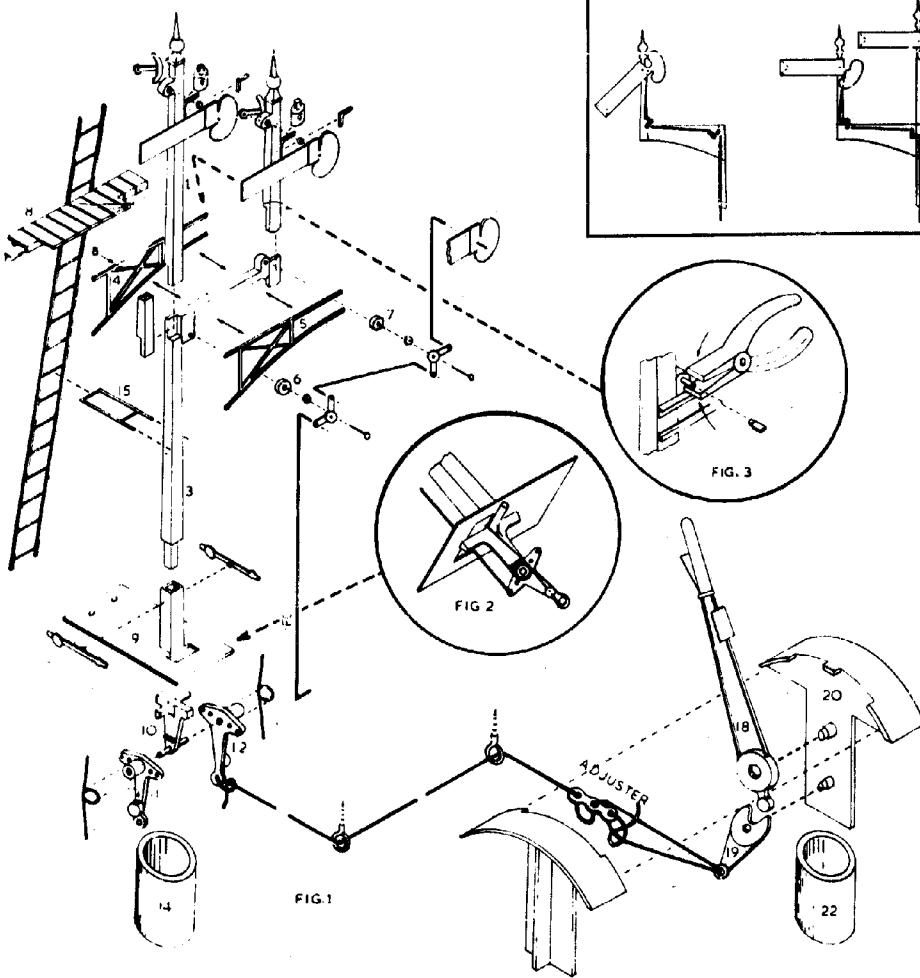
If handrails are required these can be made using the "monofilament" which is supplied in kit. Use a No. 76 drill to put holes in platform to take the upright posts. These are made as follows: Rotate length of rod NEAR not IN a flame. This will produce a "globule" on the end. FIG 4. Cut to required length and cement around platform, lump on top. Cement hand rail around as shown. Fit "dummy" levers, 16.

## OPERATING LEVERS

- 1 FIG 1 is more or less self explanatory. Place levers 18 & 19 over spigots on part 20.
- 3 Locate side 21 over extended spigots on side 20.
- 3 Retain assembly together with tube 22 pushed on from underneath. Check movement.

## MOUNTING SIGNALS

Mount signals onto baseboard by first locating position. Both lever and signal require a 1/2" hole drilled right through base board. Place units into respective holes and link with cord (supplied) as shown in FIG 1, fitting a screw eye at each change of direction and not forgetting the adjuster.



Ratio Plastic Models Ltd.  
Hamlyn House, Mardle Way  
Buckfastleigh, Devon.  
TQ11 0NS  
Telephone (0364) 42764