

# Routemex

## O Gauge 4 Aspect Angled BACK ETCHED BRASS KIT Ref 006



**Makes One Signal - 12V DC**

**Contains small parts Unsuitable for children**

### Contents:

Etched Brass Fret  
Post  
Ladder  
Tube former (Plastic)  
Telephone Box (Plastic)  
4 LEDs pre-wired  
4 Resistors  
Diode

Please handle parts carefully.  
Everything you need is included in this kit apart from the solder, adhesive and paint.  
The coloured wire is the positive and the black wire is the negative.

Carefully cut all the pieces from the fret using a scalpel, snips etc. Clean up with a file if necessary.

1. If you are adding a Feather Out Signal then you will need to drill a small hole in the small end of Part 1 to allow the wires to go through.
2. Form the back box (Part 1) by folding along the etched lines and then folding the tabs inwards for the front plate to fasten on. (Fig 1). Fix the brass tube into the box (Part 1) ensuring the tube is square to the box. (Fig 2).
3. Attach Part 2 approximately 4mm below the bottom of the box. Ensure this is lined squarely. (Fig 3)
4. Decide on the height you would like the signal post to be and add the base (Part 3). Attach the post through the base plate ensuring the post is at a 90 degree angle. Any surplus length can be left through the base plate to allow the post to be sunk into the baseboard. (Fig 4).
5. If desired you can attach four triangles (Parts 6) to represent bracket supports on the base plate/tube. The same can be applied underneath Part 2 and the tube.

6. The ladder is designed to lie flat on top of Part 2 as in Fig 6. This can be achieved by removing one or two of the ladder rungs. Two rungs have been removed in Fig 5 to show the effect, and one rung has been removed in Fig 6.

Place the ladder rails flat on top of Part 2. The ladder can now be folded, either before or after it has been attached to Part 2, remembering to adjust the length of the ladder at the bottom to fit on the base plate. Fix in place.

7. Part 7 can be formed to make a safety guard rail and attached to the top of the ladder.

8. Form the light covers (Parts 4) to shape by folding around the white plastic tube included in the kit.

9. Attach the light covers to the front plate (Part 5). You may wish to paint the front plate and light covers at this point (before adding the lights).

10. Glue the lights into the front plate in the order required.

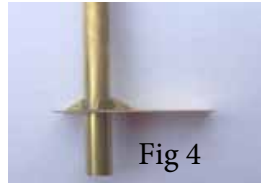
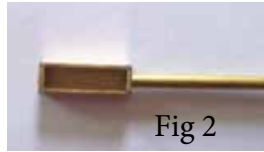
11. (If you are adding a feather out then this needs to be attached at this point to the top of the front plate, putting the wires from the feather out through the small hole that you made earlier in the top of the back box and then passing them down through the tube).

12. Feed the wires down through the brass tube, taking care not to strip the insulation.

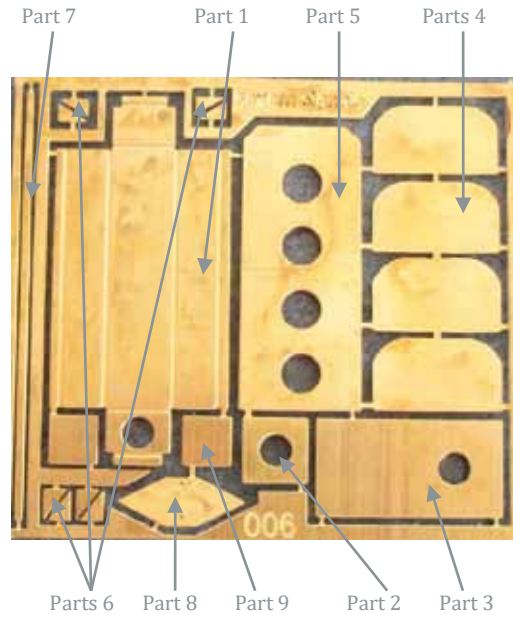
13. Attach the front plate to the back box.

14. **A resistor should be soldered in series to the positive (Red, Green Blue Yellow wire) of each LED before connecting to a 12V DC supply. You must use a resistor otherwise the lamp will fail immediately. The Diode should be soldered between the two yellow wires - on the switch is easiest**

15. Parts 8 and 9 are additional features that can be attached to the signal to represent Track Circuit Indicator and Signal Number Plate.



16. Attach the telephone box, if desired, about 35mm from the base



## **SAFETY**

**Operation is by 12V DC**

**DO NOT, under any circumstances connect LEDs without the specified resistor.**

**This kit uses resistors rated at 1 watt. Do not use a resistor with a lower power rating as it may overheat. Ensure ventilation around the resistors.**

**Please ensure you use the correct resistors for each kit otherwise the LED's will fail.**

**DO NOT, under any circumstances use batteries to test LEDs without a resistor – The application of batteries of even low voltage can cause the LED to explode and cause injury.**

**DO NOT Stare directly into an LED**

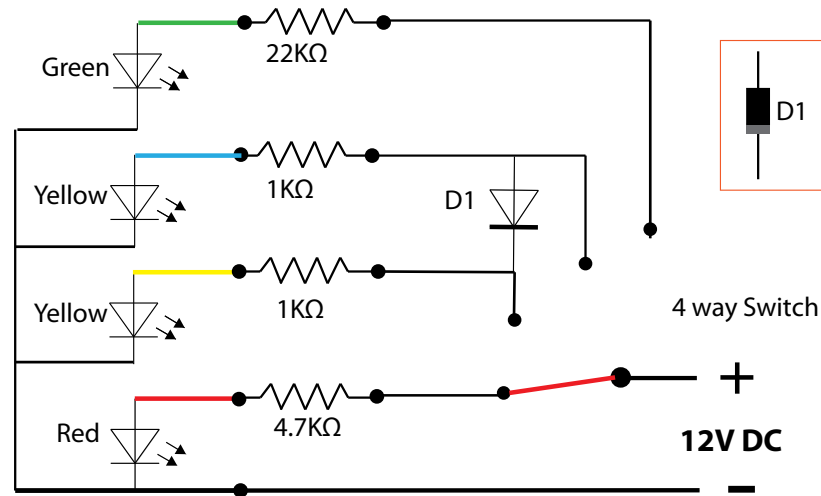
## Connecting the resistors to LEDs

The Black wires on the LED's should be soldered direct to the Negative 12V DC

The Coloured wires should be soldered to the resistors and then to the POSITIVE 12V DC supply via a 4 way switch. The diode must be fitted BEFORE the resistors - as shown

### DIGITAL CONTROL UNITS

There should be no difficulty using these units with Routemex signals but you should use the supplied resistors in addition. The resistors supplied have been chosen to achieve a correct level of illumination and crucially to balance the light output between colours. Digital units will usually only have the minimum resistor value to protect the LED from damage.



Wiring is common negative (Common Cathode)

