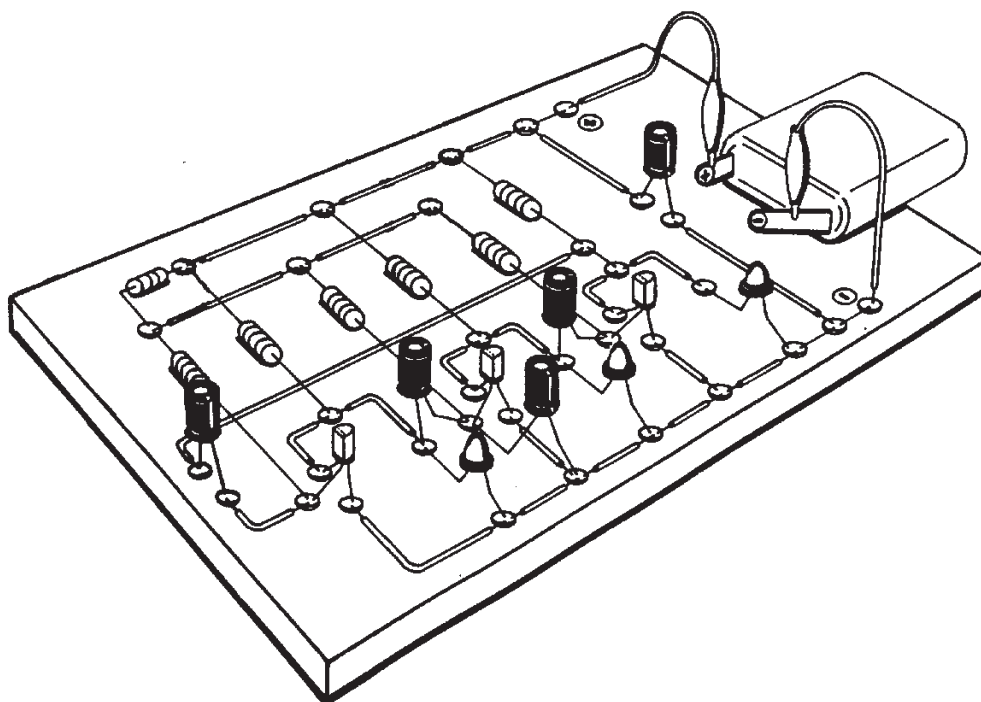


110.110 LED TRAFFIC LIGHTS



Please Note

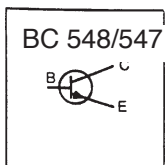
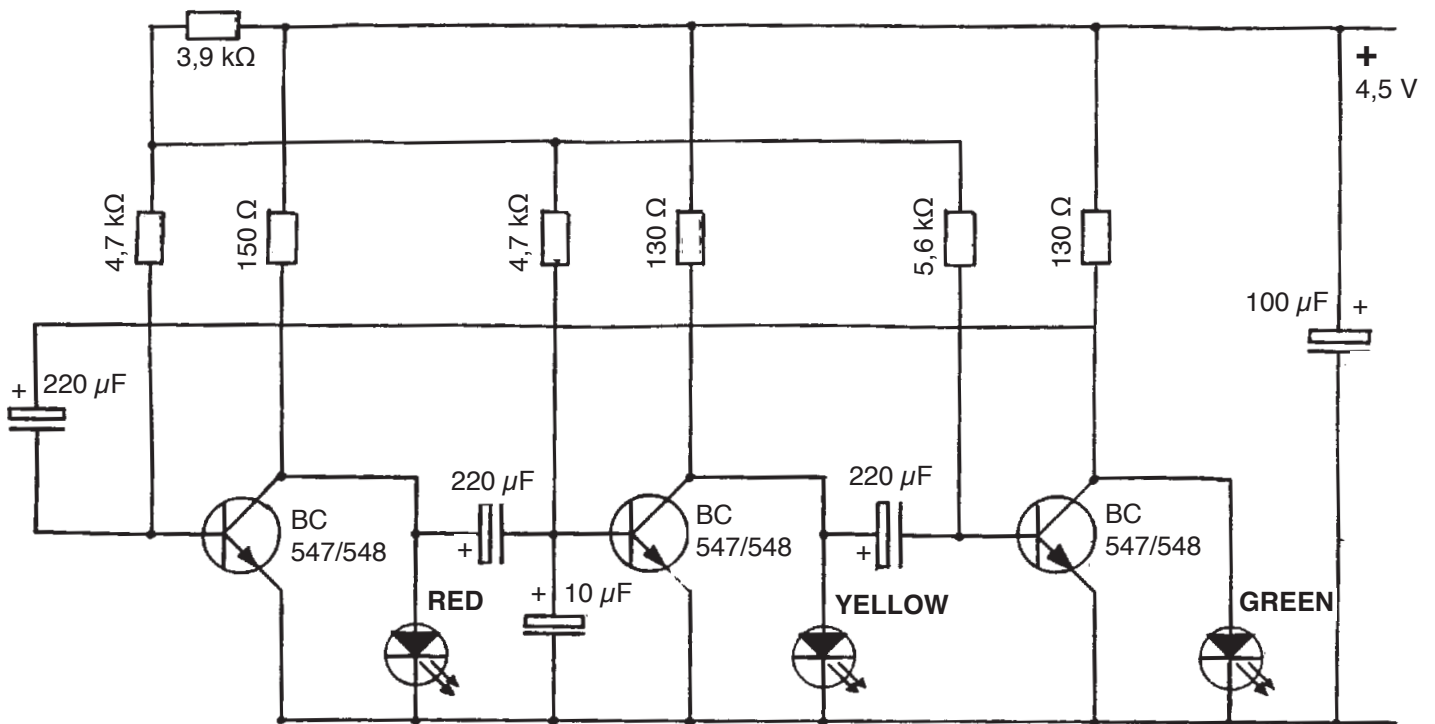
The OPITEC range of projects is not intended as play toys for young children. They are teaching aids for young people learning the skills of Craft, Design and Technology. These projects should only be undertaken and tested with the guidance of a fully qualified adult. The finished projects are not suitable to give to children under 3 years old. Some parts can be swallowed. Danger of suffocation!

General Notes

To construct this circuit we recommend using the following methods.

1. Mounting the components on plaster board (N° 873017) using drawing pin heads to solder the components on. (the pins are easily inserted by hand)
2. Mounting the components on strip type circuit board. N° 873017
3. Mounting on copper coated circuit board. N° 241207 / 241171

Schaltbild



Transistor NPN

Layout of leads E, B, and C:



E = Emitter
B = Base
C = Collector

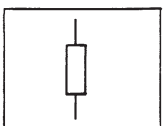
Transistors are easily damaged if connected incorrectly.



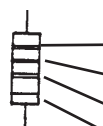
Wire

Wire with joint (Connection)

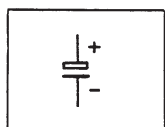
Crossed wires (no connection) Wires must be insulated at the crossing point



Determination of resistors



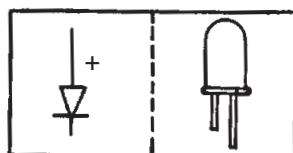
150 Ω	130 Ω	3,9 kΩ	4,7 kΩ	5,6 kΩ
brown	brown	orange	yellow	green
green	orange	white	violet	blue
brown	brown	red	red	red
silver/gold	silver/gold	silver/gold	silver/gold	silver/gold



ELKO



Both types are possible.
Marked as 10 µF, 100 µF, 220 µF.
Look for **plus** or **minus**



LED

MINUS = short lead

PLUS = long lead