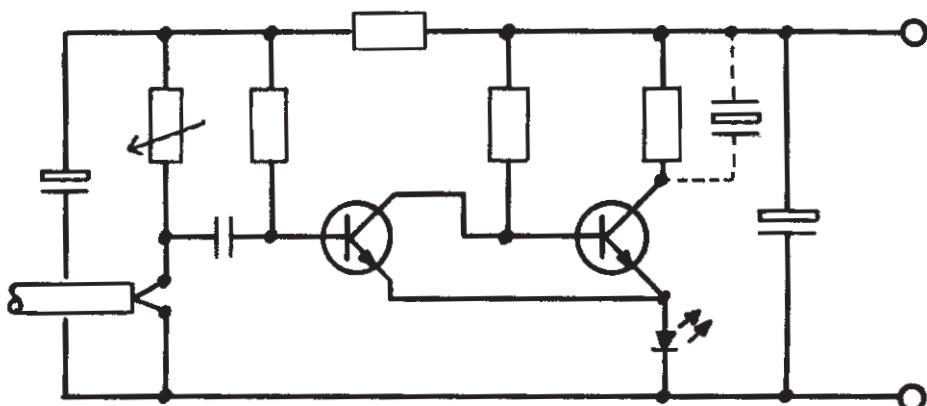


1 1 0 , 1 3 2

M o v e m e n t D e t e c t o r *“ C E R B E R U S ” A L A R M*



Function:

This is a sensitive circuit which will detect movement and can be used to guard doors and rooms etc. The circuit works using a light detector which must be opposite a white wall or light source. The advantage is that it does not matter how strong this light source is. The sensitivity can be adjusted by using the 1 MOhm potentiometer. Any difference in the light falling on the sensor alters the current in the circuit and transfers this change via the tantalum capacitor $2.2\ \mu\text{F}$ to the transistors which act as a Schmitt Trigger. This can either activate a light emitting diode or a Piezo buzzer.

This circuit can be made in the following ways

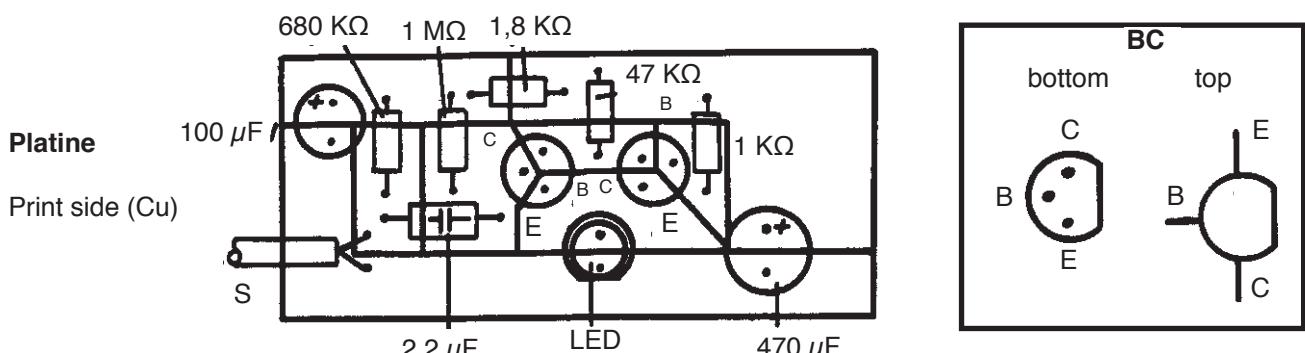
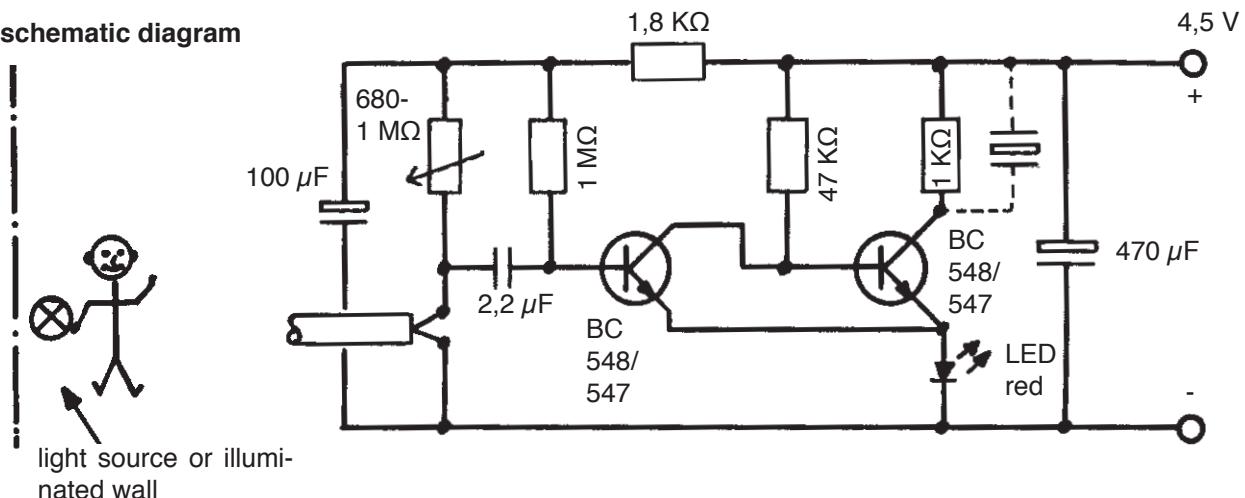
1. Mounted on plywood
2. Mounted on strip board
3. A P.C.B. designed on photo sensitive board.

Please Note

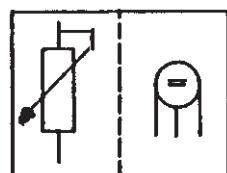
Please Note

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!

schematic diagram

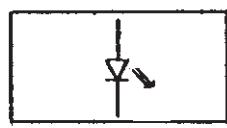


Explanation



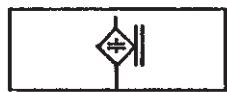
Trimmpot

The 1 MΩ Trimmer controls the sensitivity of the circuit



Minus
Plus

watch the polarity



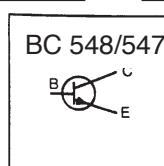
Piezo-Summer

Red cable denotes plus



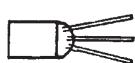
Sensor

Sensor is sensitive place in provide tube



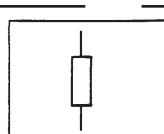
Transistor NPN

determination of E, B und C:



E = Emitter
B = Base
C = Collector

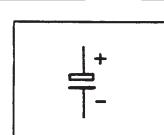
Transistors must be connected correctly, otherwise they will be damaged



Resistors

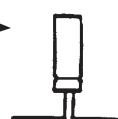
determination of resistors

	1 kΩ	1,8 kΩ	47 kΩ	1 MΩ
brown	brown	brown	yellow	brown
black	grey	grey	violet	black
red	red	red	orange	green
silver/gold	silver/gold	silver/gold	silver/gold	silver/gold



ELKO

Both types are possible
marked as 2,2 μF, 100 μF, 470 μF.
plus and minus shown on side



wire

wire with connection

wire without connection