Dummy Alarm Project

This Dummy Alarm project makes an LED flash briefly once every 5 seconds to imitate the indicator light of a real alarm. The circuit is designed to use very little current to prolong battery life so that it can be left on permanently. An on/off switch is not included, but could be added if you wish. The 7555 timer IC used is a low power version of the standard 555 timer. A 'superbright' red LED is used because this provides a bright flash with a low current. The LED is off for most of the time so the average total current for the circuit is less than 0.2mA. With this very low current a set of 3 alkaline AA cells should last for several months, maybe as long as a year.

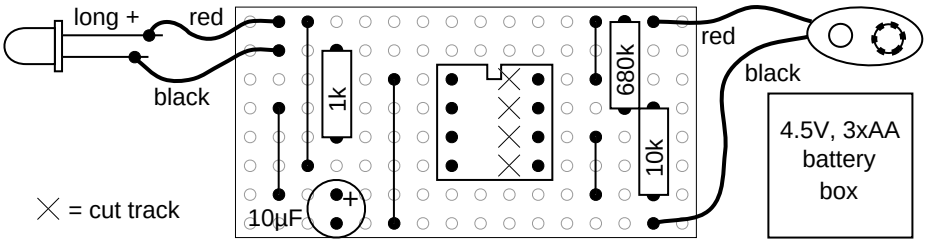
The circuit will work with a standard 555 timer IC (such as the popular NE555) but this will increase the average current to about 2mA and the battery life will be much shorter.

You can use a greater supply voltage (15V maximum) for this circuit but the 1kΩ resistor for the LED should be increased to keep the LED current low at about 3mA. For example to use a 9V PP3 battery change the 1kΩ resistor to 3.3kΩ. Note that AA cells will last longer than a 9V PP3 battery.

Parts Required

- resistors: 1k, 10k, 680k
- capacitor: 10µF radial
- LED, red superbright, 5mm diameter
- stripboard: 8 rows × 16 holes
- 7555 low power timer IC
- 8-pin DIL socket for IC
- battery clip
- 4.5V battery box for 3 AA cells

Stripboard Layout



Circuit diagram