

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.

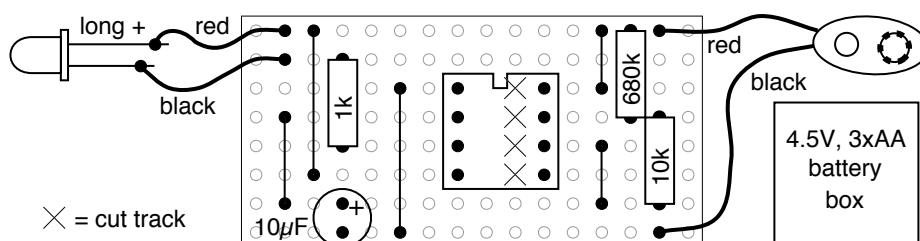
The circuit will work with a standard 555 timer IC (such as the popular NE555) but this will increase the average current to about 2mA and the battery life will be much shorter.

You can use a greater supply voltage (15V maximum) for this circuit but the $1\text{k}\Omega$ 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 $1\text{k}\Omega$ resistor to $3.3\text{k}\Omega$. Note that AA cells will last longer than a 9V PP3 battery.

Parts Required

- resistors: 1k, 10k, 680k
- capacitor: 10 μ F radial
- LED, red superbright, 5mm diameter
- stripboard: 8 rows \times 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

