Bi-colour Mini Torch

www.MaximumOctopus.com/electronics/torch.htm

You’ll find the latest versions of the instructions at the address above.

Thank you for purchasing the bi-colour mini torch kit! I hope you have lots of fun with it!

If you have any suggestions for future boards then please let me know. I’ll send you some free boards if I like your idea!
Kit Contents

This kit was put together by a team of highly skilled octopuses; it should contain the following items:

1) The main PCB
2) 1x Coin cell battery holder
3) 2x 6mm x 6mm push button switches
4) 2x 100 ohm resistors
5) 1x 5mm bi-colour LED

Important Things to Remember

⚠️ This kit is designed to run from a single 3V coin cell, any of the 20xx series will work. **Do not exceed 3V** or the LED will be damaged.

*Before* soldering any components check and then double-check that they are correctly oriented.

Don’t rush, and have lots of fun!

If you need a good tutorial on soldering then SparkFun Electronics has a good one ([https://www.sparkfun.com/tutorials/106](https://www.sparkfun.com/tutorials/106)) as does Adafruit Industries ([http://www.ladyada.net/learn/soldering/thm.html](http://www.ladyada.net/learn/soldering/thm.html)).
Building Instructions

You will need a soldering iron, solder, an octopus (or a set of handy helper things) and wire cutters. To keep some of the large components in place while soldering you might find Blue-Tac useful to stop them moving around or falling off.

Take your time and check the placement of every component before soldering them in place!

STEP 1 – Coin cell socket

The battery that will power the mini-torch will sit in this socket. It is important that it oriented correctly; the “notch” which represents the positive battery connection must point inwards.

STEP 2 – Switches

These switches are responsible for turning on one of the LED elements present in the bi-colour LED. They may need a small amount of pressure to get them in place, don’t push too hard! It doesn’t matter which way around they go.

STEP 3 – Resistors (100 ohm)

Each resistor limits the current available to the respective LED element. Place them either way around, but I always like my resistors to face the same way!

STEP 4 – Bi-colour LED

The LED in this kit contains two separate LED elements (hence, bi-colour).

Place it in to the socket so that only around 6mm of the lead is above the PCB, then gently bend the LED so that it is at right angles to the PCB (and facing outwards).
Bi-colour LED (Common Anode)

R1 100Ω

R2 100Ω

S1

S2

BATTERY
If you have any comments or suggestions for this kit then please let us know.

For more information, updates and details of new kits check out the following links:

- **Website**: [www.MaximumOctopus.com](http://www.maximumoctopus.com)
- **Twitter**: [http://www.twitter.com/maximumoctopus](http://www.twitter.com/maximumoctopus)
- **Blog**: [http://maximumoctopus.wordpress.com](http://maximumoctopus.wordpress.com)
- **Online store**: [http://store.MaximumOctopus.com](http://store.MaximumOctopus.com)
- **YouTube**: [https://www.youtube.com/user/freshneyorg](https://www.youtube.com/user/freshneyorg)

This kit was designed and manufactured in the UK.

(c) Maximum Octopus Limited 2015

Last update: March 17th 2015