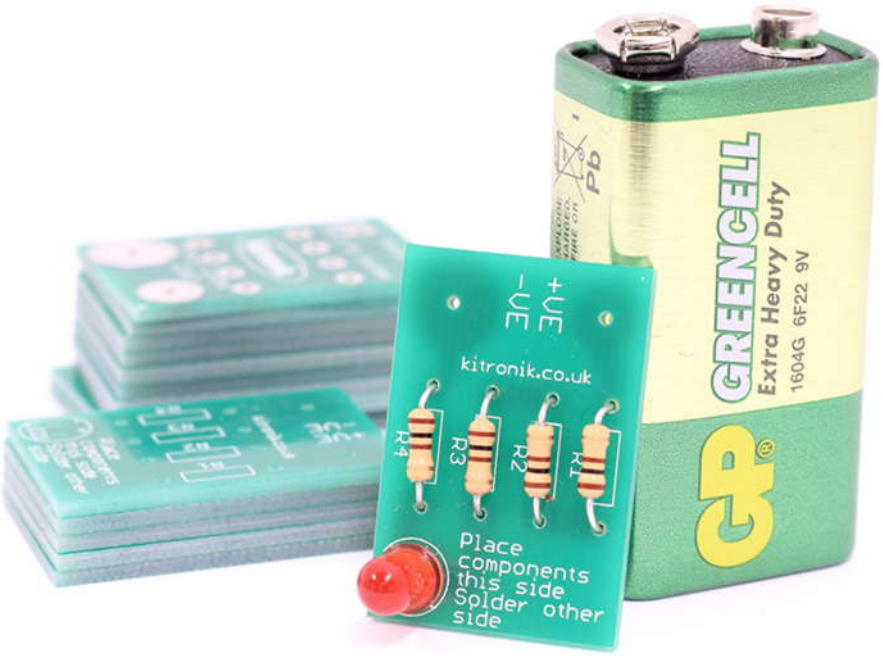
Kitronik

ESSENTIAL INFORMATION

BUILD INSTRUCIONS
HOW THE KIT WORKS

DEVELOP YOUR SOLDERING SKILLS WITH THIS

LEARN TO SOLDER CLASS PACK



Version 1.0

Learn to Solder

www.kitronik.co.uk/2163

Build Instructions

Before you start, take a look at the Printed Circuit Board (PCB). The components go in the side with the writing on and the solder goes on the side with the tracks and silver pads.

1 PLACE RESISTORS

Start with the resistor R1. The text on the PCB shows where R1 should go. It doesn't matter which way around the resistor goes into the board. Solder the resistor, remembering to trim the legs afterward.
Repeat with R2, R3 and R4.

PCB Ref	Value	Colour Bands
R1,R2, R3, R4	100Ω	Brown, black, brown

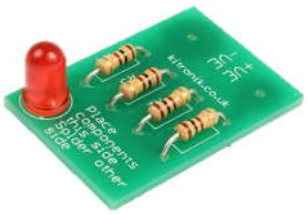
2 PLACE THE LED

Solder the LED. Ensure that the positive leg is inserted into the correct hole. The positive leg is the longer one. Use the PCB markings to help.

3 INSPECT YOUR WORK

Check there is a component in each place indicated on the PCB.

Check all the solder joints are good.



4 TEST YOUR WORK

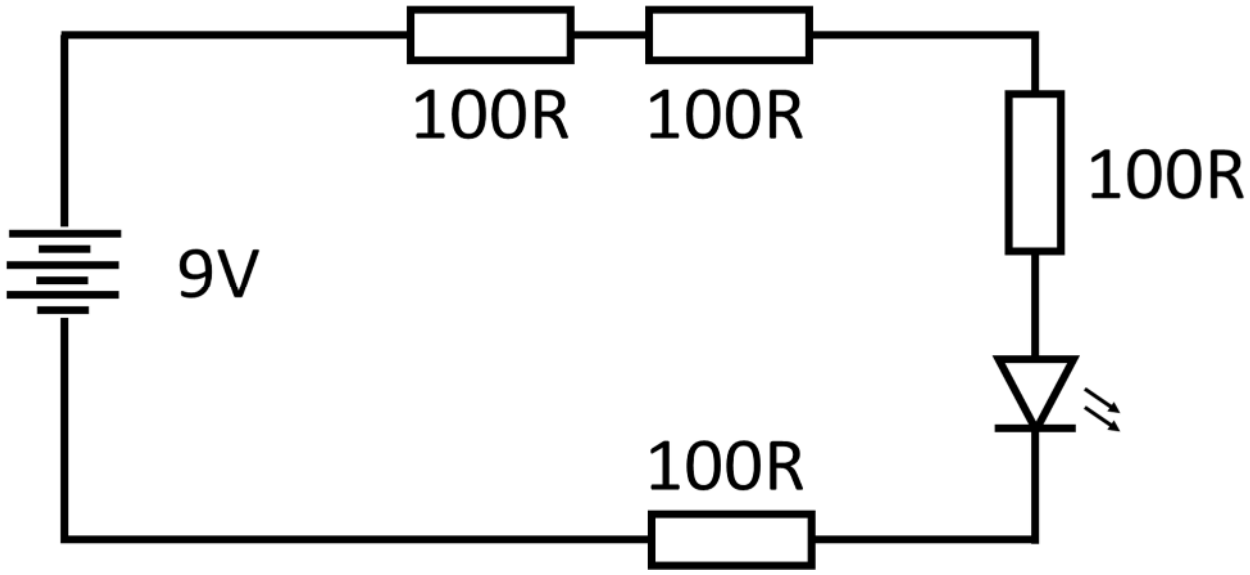
Place the PCB on a PP3 battery.

Check the LED lights up.

Checking Your Learn to Solder PCB

- Check the solder joints are all good.
- Is the LED correct way round?

How the Learn to Solder PCB Works



The circuit diagram for the Learn to Solder PCB is shown above. It is a very simple circuit. The 9V battery that powers the circuit is connected via the PCB pads.

LEDs can be damaged if the current through them is not limited.

With a 9V battery, and forward voltage drop of 2.1V on the LED, a 400 Ω current limiting resistor will give a current of 17.5mA. The LED specification is maximum current of 25mA, so the LED will light with good brightness.
The resistance has been split to give 8 solder joints to practice, rather than 2. The 4 100Ω resistors in series add up to 400 Ω.

Online Information

Two sets of information can be downloaded from the product page where the kit can also be reordered from. The 'Essential Information' contains all of the information that you need to get started with the kit and the 'Teaching Resources' contains more information on soldering, components used in the kit, educational schemes of work and so on and also includes the essentials. Download from:

www.kitronik.co.uk/2163


This kit is designed and manufactured in the UK by Kitronik

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