

## Micro:Bit CoderKit LDR

### Included

- 1 x Acrylic Board
- 2 x Acrylic Spacers
  - 1 x Labelled
  - 1 x Plane
- 5 x Connectors and Screws
- 4 x Legs
- 5 x LDR
- 6 x 0 Ohm Resistor
- 6 x 10K Ohm Resistor

### Needed

- Micro:bit
- Conductive Paint
- Wire cutters

### Assembly

- Attach the legs to the acrylic board using the four corner holes. The track lines of the acrylic board should be on the bottom.
- Screw the connectors through the 5 holes in a line. **See image 1.**
- Place the spacers on top of the connectors. **See image 1.**
- Use 3 LDRs and insert them into the holes on each channel. **See image 2.**
- Insert a 10K Ohm resistor through each of the holes marked with by the resistor symbol. 3 in total. **See image 2.**
- The 0 Ohm resistors are used as bridges for the circuit. Use 3 0 Ohm resistors and insert one into each of the holes bridging the circuit underneath. **See image 2.**
- Use the wire cutters to trim excess wire from the bottom of the LEDs. Leave roughly 3mm of wire below the acrylic.
- Bend the wire along the line of the track marks to secure the LEDs. **See image 3.**
- Use the conductive paint to create the circuit map on the bottom of the acrylic board by following the track lines. The ideal paint width is 3mm - 4mm wide. **See image 4.**
- Leave to dry for at least 2 hours. For best results leave for 24 hours.

- Attach the micro:bit and begin coding. Example code can be downloaded from our website at the following link <https://sciencescope.uk/product/microbit-coderkit-four-board-set/>. This code uses the LDR Coderkit to create a reaction game. The BBC micro:bit will display a number 0, 1 or 2 on the LED matrix and you have 200ms to cover that LDR. (0, 1 and 2 represent the channels 0, 1 and 2 on the micro:bit) If you cover the LDR in time you get a smiley face, if not you get a sad face.

Image 1.

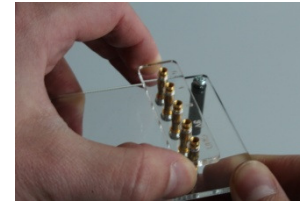


Image 2.

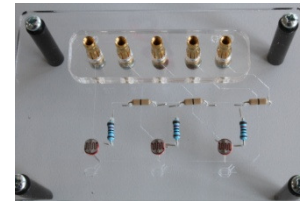


Image 3.

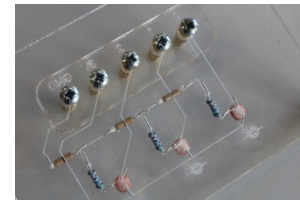


Image 4.

