Klip Halo Board for the BBC micro:bit

www.kitronik.co.uk/5632

Introduction: The Klip Halo board for the BBC micro:bit breaks out each of the 19 micro:bit GPIO pins, with easily accessible, clearly marked connection points compatible with both crocodile clips and 4mm banana plugs. The connector bar, with its captive nuts, includes connection points for the 0, 1, 2, +3V and GND main pins which can be soldered. Detailed information regarding the uses of each micro:bit pin can be found at: www.microbit.co.uk/device/pins

The BBC micro:bit **must** be powered from an external supply. For example, the 2xAAA Battery Holder with JST Connector (www.kitronik.co.uk/2271).
CAUTION: There is no reverse polarity or over voltage protection on the board.
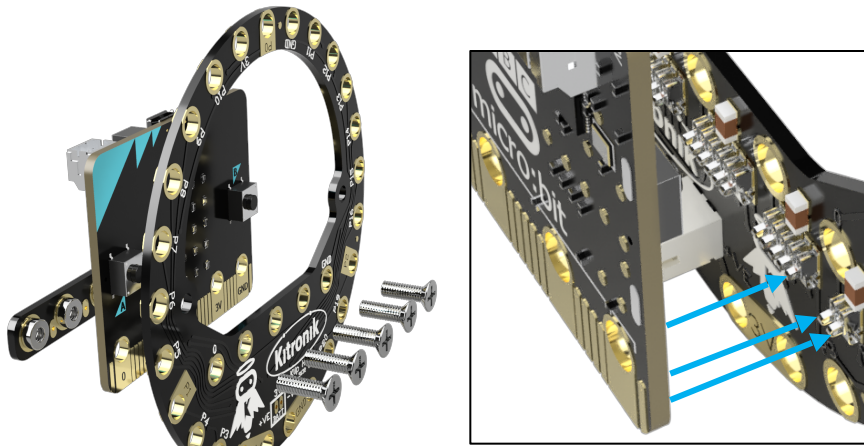
Connecting a BBC micro:bit:

The board has been designed so that the BBC micro:bit can be bolted to the back using the 5 supplied M3x8 countersunk machine screws. Snap out the connector bar using finger pressure then remove the connecting sections with a small pair of pliers. The captive nuts should face the micro:bit when assembled.

 Care must be taken to ensure the spring connectors on the Klip Halo are aligned with the micro:bit finger connector, and are not damaged. (Blue arrows show spring connector lining up).
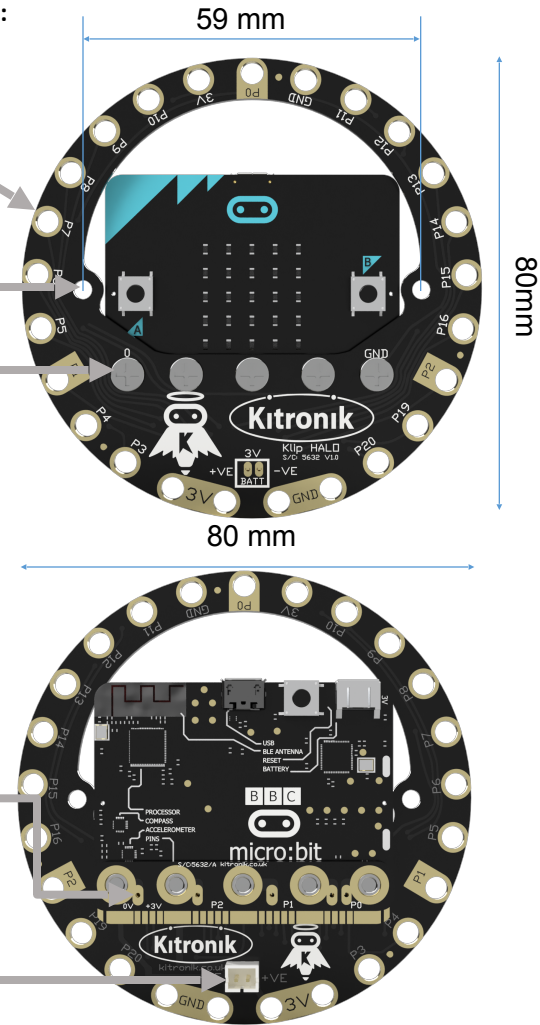
Layout and Dimensions:

19 Break Out, 3 GND and 3 +3V Connections

2x M3 mounting holes

BBC micro:bit compatible screw connections

59 mm

80mm

80 mm

**Main pin solder connections.
(Left to Right: GND, +3V, 2, 1 0)**

**JST Connector for battery
(3V max)**

The Klip Halo board is 10mm thick (including micro:bit and bolts)

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Electrical Information

Operating Voltage (Vcc)	3.0V **(Not suitable for LiPo batteries)**
Number of Pin Break Outs	19 GPIO
Number of Solder Connections	5 (GND, +3V, P2, P1, P0)

JavaScript Blocks editor code

Example: Connect Kitronik Electro-Fashion Sewable LED positive terminals to Klip Halo break out pins P3, P6, P13 and P15, and the negative pins to GND using conductive thread.

The BBC micro:bit LED display will be turned off.
Button A will flash each LED in turn around the Klip Halo.
Button B will flash all the LEDs together.

Example Uses: Uses for the Klip Halo could include attaching external components using crocodile clips, or connecting to Kitronik electro-fashion products. For more details see: www.kitronik.co.uk/e-textiles-conductive-thread.html

You can find more detailed powering information here.