

## Bearables Bear Kit /PIM319



A complete Bearables Bear Kit with coloured LED badge, motion sensor, thread, needles, and battery. Sewable, hackable, wearable, adorable!

**Bearables** is a range of woodland-themed wearable LED badges and sensors. Wear the badges on their own, or connect them to one of the sensors with conductive thread to bring them to life. Designed for kids\* (suggested age 8+) and grown-up kids alike!

Attach the acorn motion sensor to the Bear badge and when you move the sensor your badge's LEDs will light up.

In their five star review, [The MagPi](#) said that Bearables were "excellent value for money" and that "the badge kit has everything you need to sew your interactive badge and sensor to clothes".

*\*Contains small parts. Not suitable for children 3 years or younger. This is not a toy. Keep battery out of reach of children. If ingested, seek medical help immediately.*

### **Kit contains**

- Bear badge with 12 LEDs (multi-coloured)
- Acorn motion sensor
- 3m stainless steel conductive thread
- 3 sewing needles
- CR2032 3V coin cell battery
- 2x sticker sheets
- Instructions
- Reusable box

### **Features**

- 12 coloured LEDs (blue, green, yellow, orange, red, pink)
- 12 light patterns
- Multi-functional button (mode change, sleep, trigger mode)
- [PIC16F1503](#) microcontroller
- Sewable hooks
- Tilt switch motion sensor
- Battery life of 3-4 days with a CR2032 coin cell battery

### **Using your Bearables badge**

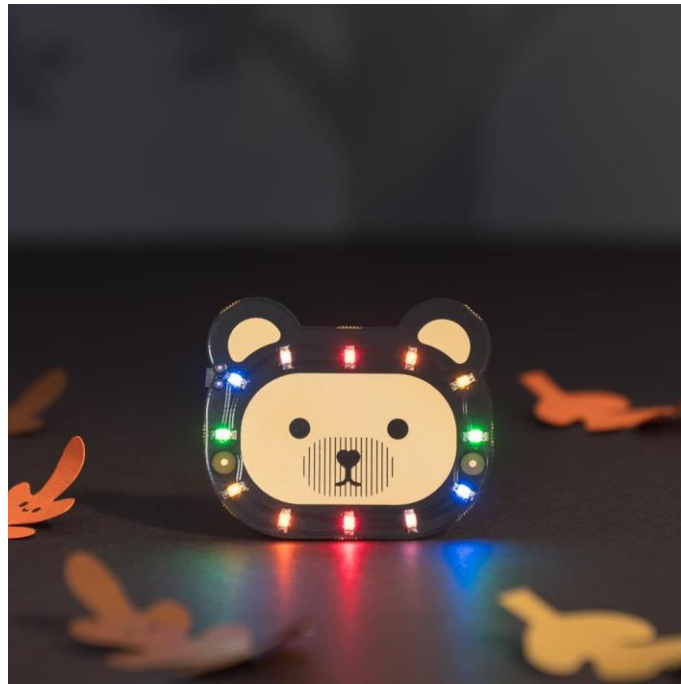
Press the multi-functional button on your badge briefly to cycle through the light patterns. Each of the LEDs will light to indicate which of the 12 patterns is currently selected. Press and hold the button to put your badge into sleep mode.

The nifty design of the badges and sensors means that it's super-simple to connect them. It doesn't matter which way round they're connected. Just connect one hook on the badge to one hook on the sensor with conductive thread, then do the same with the other two hooks.

Once a sensor is connected, press and hold the multi-functional button to put your badge into trigger mode. Now when you trigger the sensor, the LED lights on your badge will light up.

## Notes

- **Bearables badges and sensors are not waterproof or washable**
- **Be aware that conductive thread is sharp!**
- Ensure that the two pieces of conductive thread connecting your Bearables badge and sensor do not touch, bearing (pun intended) in mind that they may touch when the fabric is creased or folded. Nothing bad will happen, the sensor just won't work as it should.
- The hooks on the back can be shorted without any damage to the badge, although it may trigger the LEDs similar to triggering them with a sensor. A painted or coated safety pin will work better than a bare metal one.
- A dab of clear nail varnish on the conductive thread around the hook can help to give a better, more reliable connection
- Badge dimensions: 41x35x5mm (LxWxH)
- Sensor dimensions: 25x18x4mm (LxWxH)





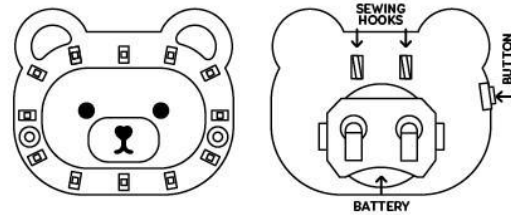
## Sewing

**Sew this badge onto your coat or bag. If you connect the sensor to the badge with conductive thread, it will trigger the badge lights.**

Electronics and washing machines do not mix. You'll want to sew this onto something you don't wash very often, or maybe use some metal poppers?

It's always handy to have a grown up on hand to help out. Make sure that the two runs of thread don't touch and short circuit. You can use a little dab of clear nail varnish to secure the thread to the hooks once wound around.

## Using Your Badge



### Step 1

Slide the coin battery into the battery holder on the back of the badge with the + on the battery facing upwards.

### Step 2

If a sensor is connected, press and hold the button to put your badge into trigger mode. If no sensor is attached then this will put the badge to sleep.

### Step 3

Press the button briefly to cycle through the 12 light patterns.



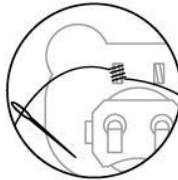
### Step 1

Knot the thread at one end and pull the other end through the needle.



### Step 2

Put the needle through the fabric and do 2-3 stitches on top of each other to anchor the thread.



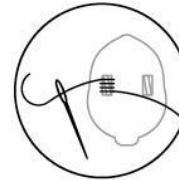
### Step 3

Loop the thread around one of the hooks on the back of the badge, repeat this 4-5 times, as tightly as you can.



### Step 4

Anchor the thread again, as you did in step 2, then run a stitch to where you'd like the sensor to be.



### Step 5

Repeat steps 2-4 to attach the first hook on the sensor to the fabric.



### Step 6

Repeat steps 1-5 to attach the second hook on the badge and the second hook on the sensor.

For more tips visit [pimoroni.com/bearables](http://pimoroni.com/bearables)

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