Required hardware for Raspberry Pi LEDS and a button.

Shopping list:

<http://robomaa.fi/index.php?route=product/product&product_id=1942&search=distance+flight+>

<http://robomaa.fi/1-pin-dual-female-jumper-wire-9-23-cm-pack-of-10?search=jumper>

<http://robomaa.fi/400-point-breadboard?search=breadboard>

<http://robomaa.fi/jumper-wires-connected-15cm-m-f-20-pack?search=jumper&page=1>

<http://robomaa.fi/jumper-wires-connected-15cm-m-m-20-pack?search=jumper&page=1>

<http://robomaa.fi/resistor-330-ohm-1-6th-watt-pth-20-pack?search=resistor>

<http://robomaa.fi/led-mixed-bag-10mm?search=LED&page=2>

Wires

**1-Pin Dual-Female Jumper Wire - 9" (23 cm) - Pack of 10**

- This is needed for connecting the led to raspi gpio.

<http://robomaa.fi/1-pin-dual-female-jumper-wire-9-23-cm-pack-of-10?search=jumper>

If we wish to have a breadboard for testing several components, we also need these (**RECOMMENDED**). It will also make connecting a lot easier:

Breadboard:

* Used for connecting devices to gpios
* Mostly for testing, but can be used in the end device if needed

<http://robomaa.fi/400-point-breadboard?search=breadboard>

# Jumper Wires - Connected 15cm (M/F, 20 pack)

* Used for connecting raspi to breadboard

<http://robomaa.fi/jumper-wires-connected-15cm-m-f-20-pack?search=jumper&page=1>

Jumper Wires -male to male 20 pack

* Used for connecting breadboard pins together

<http://robomaa.fi/jumper-wires-connected-15cm-m-m-20-pack?search=jumper&page=1>

For production, a breadboard is not optimal. Instead we should a soldering board. The equipment for soldering can probably be borrowed somewhere (but this is most likely more for sprint 5)

* <http://robomaa.fi/solder-able-breadboard-mini?search=breadboard>

Components

Resistor:

**Resistor 330 Ohm 1/6th Watt PTH - 20 Pack**

* Required so the gpios don’t give too much power
* <http://robomaa.fi/resistor-330-ohm-1-6th-watt-pth-20-pack?search=resistor>

**Led:**

* 10 mm LEDs
* <http://robomaa.fi/led-mixed-bag-10mm?search=LED&page=2>
* Other options:
* <http://robomaa.fi/komponentit/ledit/led-rainbow-pack-5mm-pth>
* <http://robomaa.fi/led-mixed-bag-5mm?search=LED&page=2>
* If you wish to have something similar to Echo Dot, maybe something like this could be cool
* Please note that I have not researched more on this and I’m not certain how well it works on a raspberry pi
* <http://robomaa.fi/led-products?product_id=1907>

Button:

* Something big (10cm diameter)
* <http://robomaa.fi/big-dome-push-button-blue?search=button>
* Something smaller
* <http://robomaa.fi/momentary-push-button-switch-12mm-square?search=button&page=1>

Verto notes:

<https://www.adafruit.com/product/164>

<https://www.conrad.de/de/led-streifen-mit-offenem-kabelende-12-v-502-cm-kalt-weiss-barthelme-y51515215-182004-182004.html>

<https://www.conrad.de/de/ic-platine-epoxyd-l-x-b-160-mm-x-100-mm-35-m-rastermass-254-mm-conrad-components-su527831-inhalt-1-st-531380.html>