

Sleep detector Hat

- Arduino with a leveling unit, if the leveling system goes over a certain amount for a specific amount of time it will activate the wake-up mechanism and only deactivate once the level goes back to normal range. It will be attached to a hat.
- Other components will be either attached to the hat
- Or will have wires from the hat to dashboard/device
- Arduino has a container that it is fitted in and an outlet for wires .
- Arduino container connected to hat by elastic band.

Sleep detector Hat

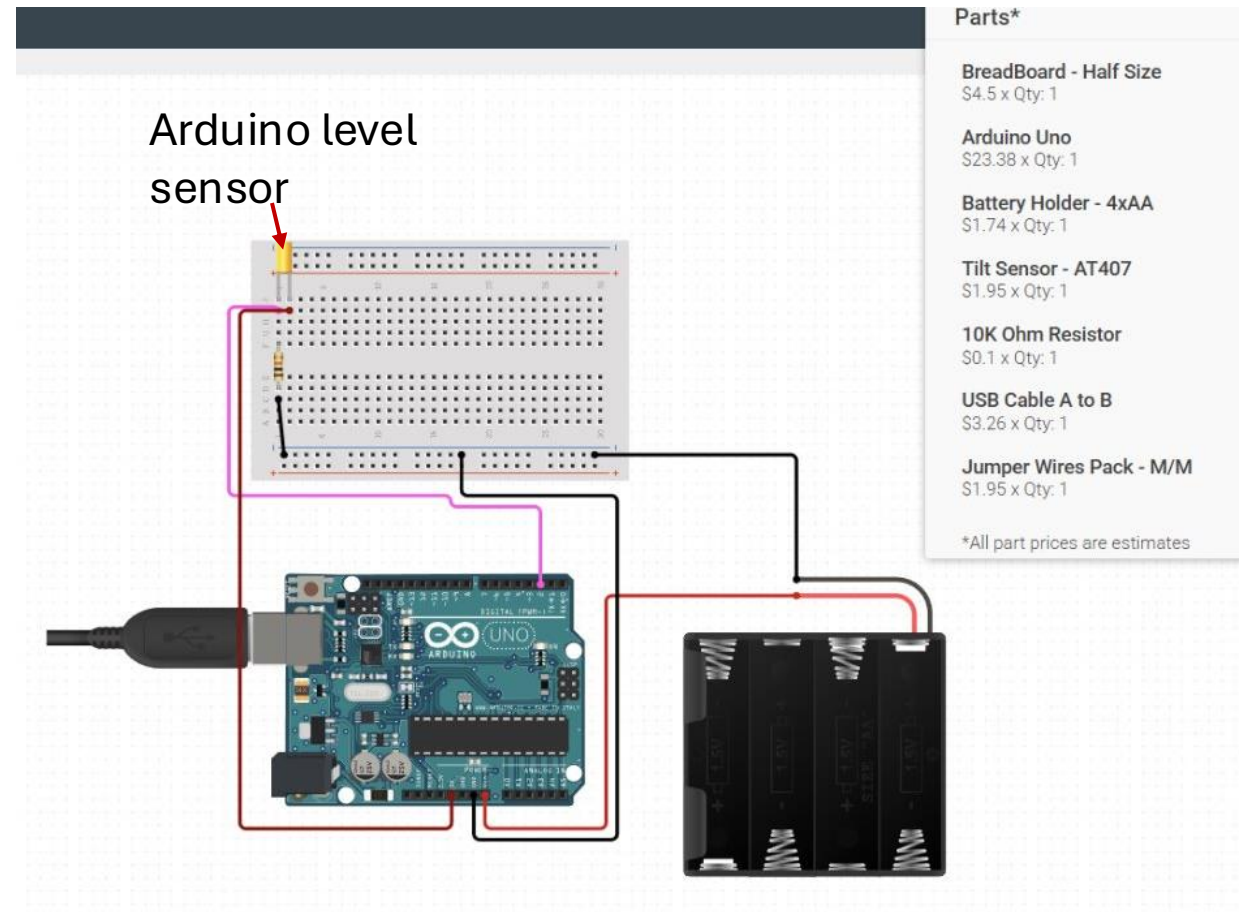
- **Arduino level sensor**

- https://www.google.com/ack?sa=L&ai=DChsSEwixv2Vn7iQAxWrQH8AHU00DewYACICCAEQARoCb2E&co=1&ase=2&glid=EA1aIQobChMlsb79LZ-4kAMVq0B_AB1NNA3sEAOYASABEgl2XPD_BwE&cid=CAASNuRoG63bhhpuENL05A9u-Y76Ko6DY9U3cvSwcJOKKNpPSqSZ4pZvOgz02ytSOB7DVkUOeD0q2g&cce=2&category=acrcp_v1_32&si_g=AOD64_1KN4b1RUFd44KCrM1KzXTmJFZJMg&ctype=5&q=&nis=4&ved=2ahUKewjLgfmVn7iQAxV3kWoFHVIRmzEQ9aACKAB6BAgDEA8&adurl=

- **Wires**

- https://www.ebay.com/itm/174945261771?_skw=wires+96-117cm&itmmeta=01K816XNYENFJW99G1M374Q0VWV&hash=item28bb8cd8cb:g:MU sAAOSws2dgJgK9&itmprp=enc%3AAQA KAAAA8FkggFvd1GGDu0w3yXCmi1eXnfOWnmNsyOidFfULA4MK96X2oCO35XPYu ec3rVsgmcbgqV1unVE%2BuOKYgTYwclYy68INO%2B48LBS6nVi%2FfZVRxiLQHCvcXm9TbhWTjFBjwE22xuF99u2duEjde%2FiaHoHrI TEJ2tmZcHJm%2FGvGEs3jntAj6uL%2BhoquAbf%2Bs9Og3HJ04qvdXaCZleuXfvSEet2cbPDyV4BFBjs4kc8D3%2ByCOypZtCuu7wTWqgbM1vuGy18fe5ITXJODprUI%2BfS6esABSQjkc1TmPNh1GKI719ZGgabFop4bt1esCt%2FnaWCY0A%3D%3D%7Ctkp%3ABFBMqt_2psBm

Arduino system

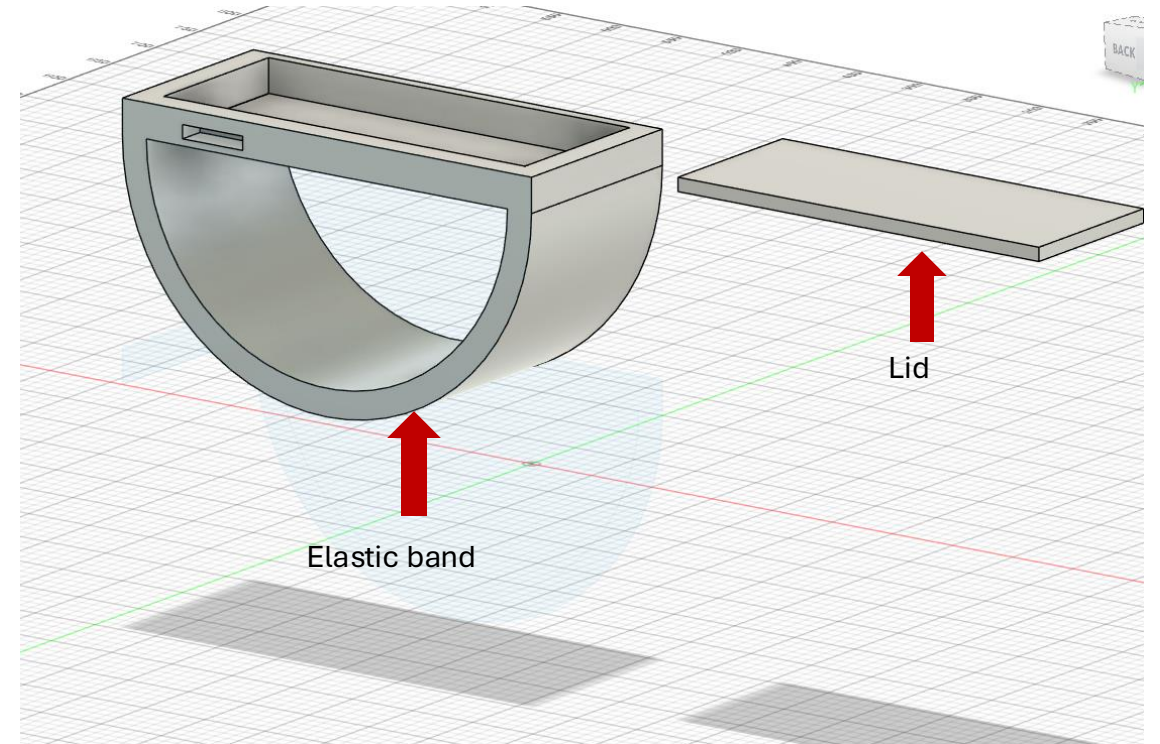


Sleep detector Hat

Hat



Arduino mount that
straps the hat



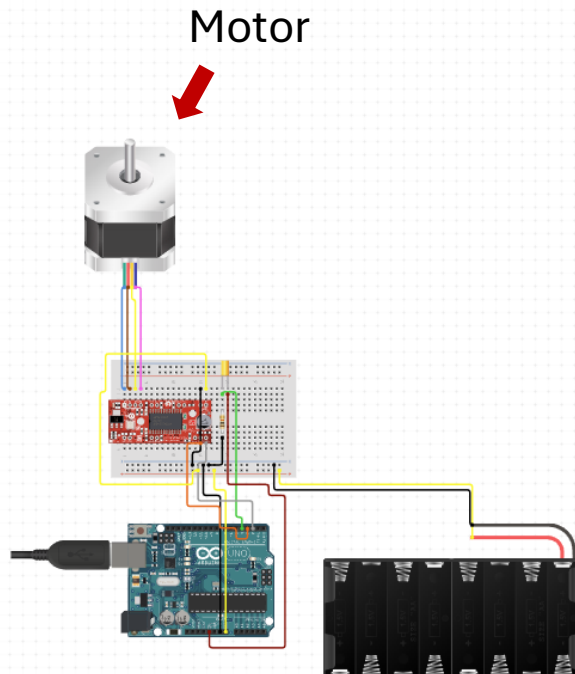
Hat spray

- System attached to dashboard via suction cup
- The suction cup had a 3d printed holder on top to hold the fart spray and motor. Wires will be connected to the hat discretely.
- Once activated the Arduino sends signal from hat through wire to dashboard holder and activates motor to a ring clamp that tightens to press an atomizer button to spray fart spray.
- It will spray once and if the signal is still active it will wait for a few second before spraying again.
- After the first spray motor will reverse to loosen a bit before spraying again if needed

Hat spray



Arduino system



Parts*

BreadBoard - Half Size
\$4.5 x Qty: 1

Arduino Uno
\$23.38 x Qty: 1

EasyDriver - Stepper Motor Driver
\$14.95 x Qty: 1

Stepper Motor
\$14.95 x Qty: 1

Battery Holder - 8xAA - 12V
\$5.95 x Qty: 1

Tilt Sensor - AT407
\$1.95 x Qty: 1

10K Ohm Resistor
\$0.1 x Qty: 1

USB Cable A to B
\$3.26 x Qty: 1

Jumper Wires Pack - M/M
\$1.95 x Qty: 1

Jumper Wires Pack - M/F
\$1.95 x Qty: 1

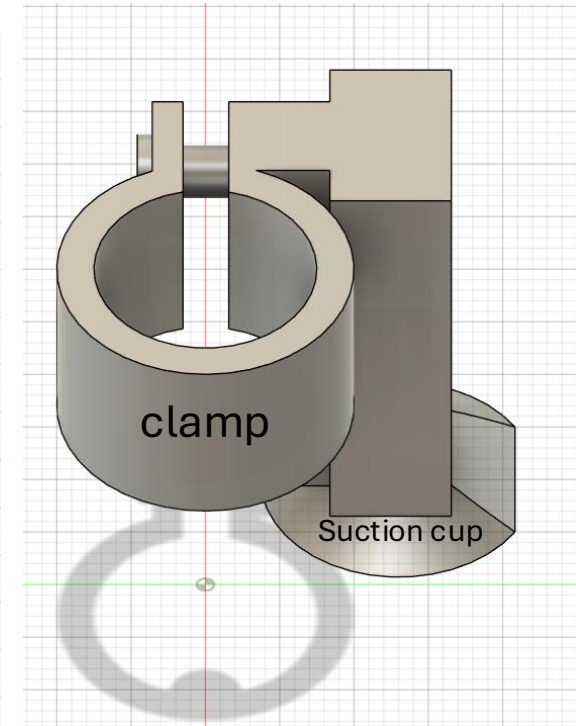
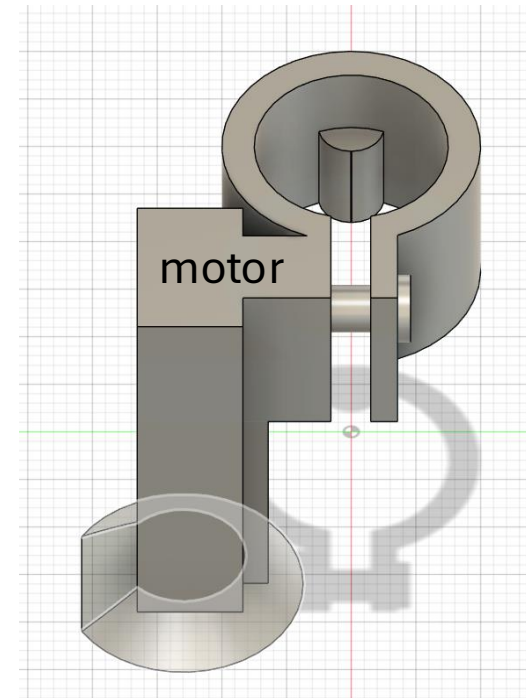
Male Headers Pack- Break-Away
\$0.66 x Qty: 1

*All part prices are estimates

- **Fart spray**

- https://www.google.com/aclk?sa=L&ai=DChsSEwjmNsq2rqQAxUchFoFHe7DBKsYACICCAEQAxoCdnU&oe=1&se=2&gclid=EAlaIQoBCM8jUqtg6kAMVHIRaBR3uwwSfEAQYASABEGLejPD_BwE&ei=BVP6a3hMrWUwbkPhLTU8Aw&cid=CAASlwHkalLhzpDklodW huA4BVp-VZEOvIKeDVeYYprnEL5-aNj2B9WNgngXL5ZEDeOAN5P9Xi6EtSjInSRQWYXZnoGmP6FNrfdX2BfNTGZSGGAzfRO7lz7e8xlrZKSyrfxnaGgDstOUMI-VuZJl7hRdrvf_Z2QxvnL7bdYdrWPg-Fm0QXS4A1E7fyN6HLxIS7jGjnCKDuSJ&cce=2&category=a&crp_v1_32&sig=AOD64_3zOeMAAt4fEL3U2h38BZ2qMhKA&ctype=5&q=&nis=4&sqj=2&ved=2ahUKewid-M6q2rqQAxU1SjABHQQaFc4Q9aACKAB6BAgGEA8&a&durrl=

Spray bottle holder



Hot sauce hat

- Hot sauce bottle attached to side of hat with tubing from hot sauce into mouth. Once activated a pump will be turned on and pump hot sauce into mouth until deactivated.
- System attached to bowler hat
- Connected to Arduino level system
- System contained within the hat
- Hot sauce can be replaced if needed

Hot sauce hat

- Pumps

- <https://www.amazon.com/Peristaltic-Titration-Miniature-Measuring-Instruments/dp/B0CZKWGGBK?th=1>
- https://www.amazon.com/Kamoer-Peristaltic-Hydroponics-Nutrient-Analytical/dp/B07GWJ78FN/ref=pd_rhf_dp_s_ci_mcx_mr_hp_d_sccl_1_2/135-6434728-0020013?pd_rd_w=y6P9f&content-id=amzn1_sym_c5dee08d-b11d-4c8c-b272-714fd8f96f22-amzn1_symc1ce8a41e-053b-4bdc-9570-9f81c17d9d85&pf_rd_p=c5dee08d-b11d-4c8c-b272-714fd8f96f22&pf_rd_r=J6ZQFPVX4MCQS1QHPR6&pd_rd_wg=rHWYf&pd_rd_r=ddeeef78-eeab-49cf-baa6-29d8a92f65ff&pd_rd_i=B07GWJ78FN&psc=1

- Hat

- <https://www.amazon.com/Bowler-Vintage-Cloche-Upturn-Church/dp/B0CX5GNQ8Y>

- Hot sauce

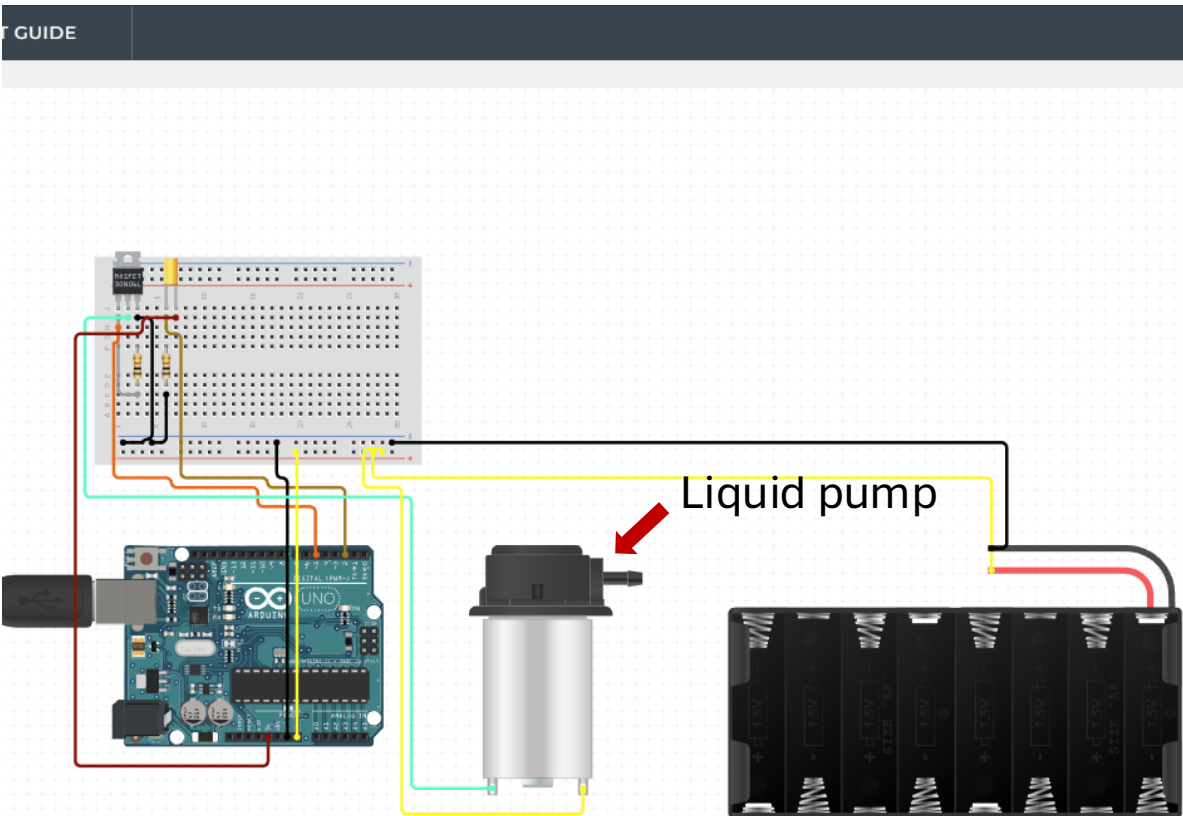
- <https://www.walmart.com/ip/The-Original-Louisiana-Brand-Hot-Sauce-12-fl-oz/53952986?wl13=706&selectedSellerId=0&wmlspartner=wlp>

- Tubing

- https://www.amazon.com/Assortment-2mm-3mm-4mm-5mm/dp/B0CC312XMC/ref=sr_1_4?dih=eyJ2lpjMSI9_W2red5afB2mWaluUzlxI5K43kpAlVksnslh9khM3kYclUe5oFYG72omH5VdDleksuEd51xfoYQGxgWdB8d04zP370fZDsBtFZlhYvsOBxAhezCDK7yWnDC7jP0-C3lKEfnPt7_cO89GR6hUndCgX0qQZlT2TQfXA6ACGi3stBQsPSkAMKh01KlVT14w8TP30c4Eg5knlQDqIY_j5YfHbQqMT1ZfHSZjIA04kikEU8JE_v4QNQsWhUNFHX3l4dhlGf6a631UP08IB_U-lrTKRhpno&dih_tag=se&keywords=2mm%2Bplastic%2Btubing&qid=1761668263&sr=84&th=1

Hot sauce hat

Arduino system



Parts*

BreadBoard - Half Size
\$4.5 x Qty: 1

Arduino Uno
\$23.38 x Qty: 1

Peristaltic Liquid Pump with Silicone Tubing
\$24.95 x Qty: 1

Battery Holder - 8xAA - 12V
\$5.95 x Qty: 1

N-Channel MOSFET 60V 30A
\$1.46 x Qty: 1

10K Ohm Resistor
\$0.1 x Qty: 2

Tilt Sensor - AT407
\$1.95 x Qty: 1

USB Cable A to B
\$3.26 x Qty: 1

Jumper Wires Pack - M/M
\$1.95 x Qty: 1

Jumper Wires Pack - M/F
\$1.95 x Qty: 1

*All part prices are estimates

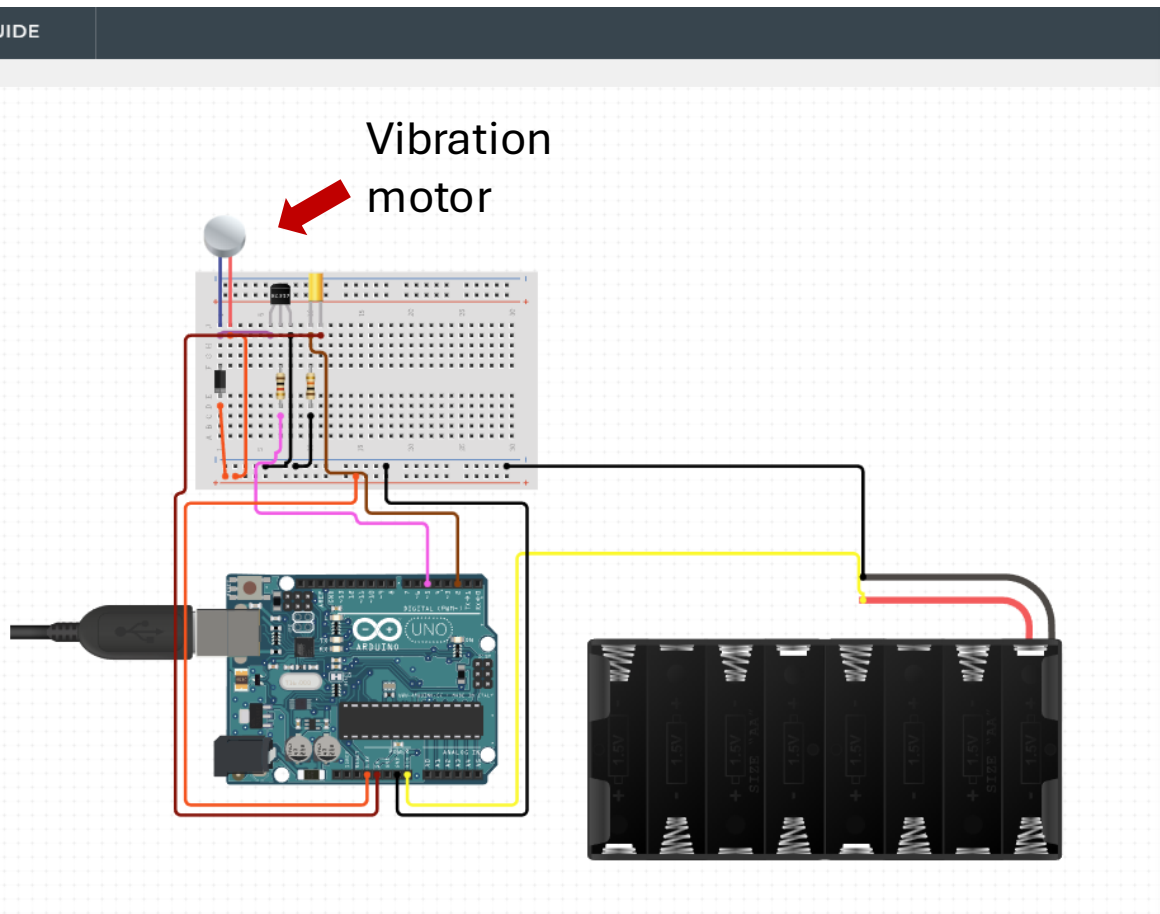


Vibration

- Connected to Arduino level system on hat
 - Will be a bracelet that is separate from the hat system, but the 2 systems will be connected through an interface.
 - Once conditions are met for the hat detection system the bracelet will activate and vibrate very intensely until deactivated
- Vibration
 - <https://www.digikey.com/en/products/detail/dfrobot/FT0774/14322639>
 - Velcro wrist band
 - https://www.amazon.com/Self-Adhesive-Securing-Buckles-Adjustable-Reusable/dp/B088FH1289/ref=sr_1_1?dih=eyl2ljinMSI9_BH569wohoxFEq4yC-TeHMD6lClEKapqLUXZITVHtWejdS-Fmv37lOwkkgNPXequDuQ86W7HbhtB7Phn38wkUijPMZWKEjYt4rkgaX8bjx609POoL4bX9bugtz4fQluA5ms0lMa8gDGvI5cBqGfWqc5M0mAlUnqCkxZB2hmSRSh5F5Abxl0_X5CeuG5NRQvRMRrELJVPtcYmZQonjS82lJEL_rYHuxi9ckTSBABIwFAlHfyW4m97G4t2q-GuSAK-E-HE4MTFWG8Sap5zNzB47Of_9lty8uRYGLJMSRcol2aUQg_PVdU-wwd1jg45PvpPBzRCxlcigV3r28GbwqInScy108&dih_tag=se&keyword=velcro%2Bbracelet&qid=1761235905&sr=8-1&th=1

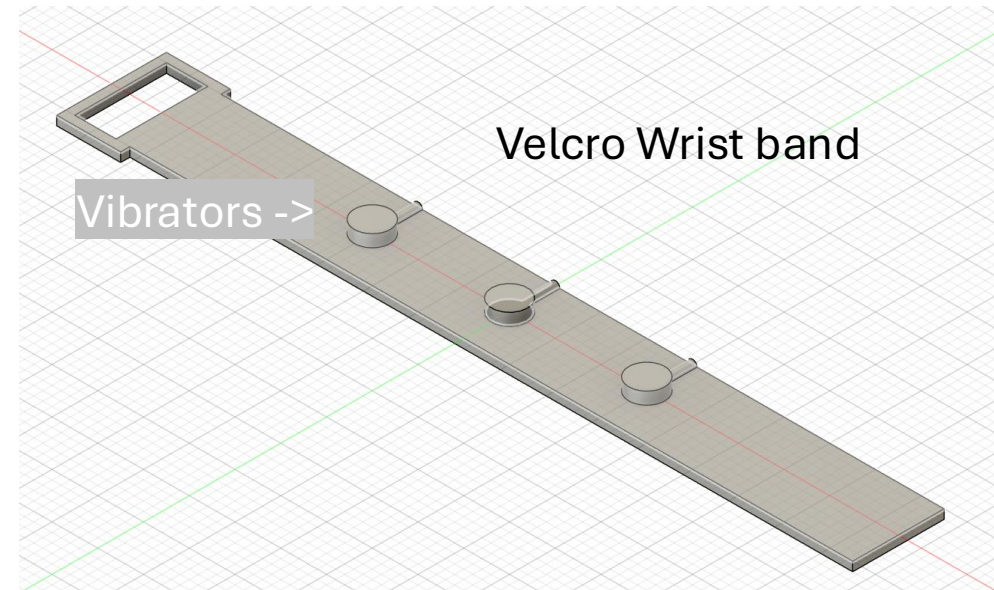
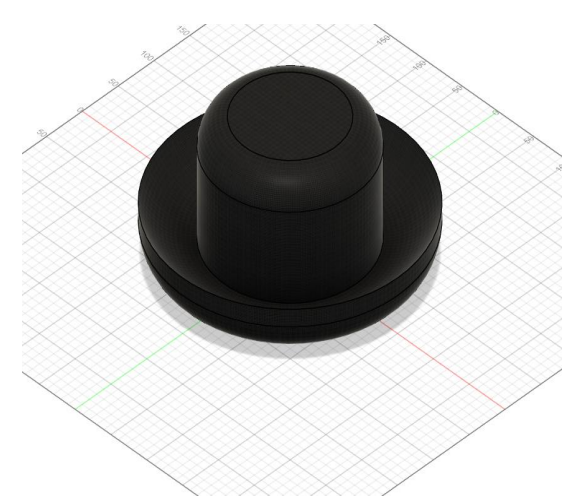
Vibration

Arduino system



Parts*

- BreadBoard - Half Size**
\$4.5 x Qty: 1
- Arduino Uno**
\$23.38 x Qty: 1
- Vibration Motor**
\$1.95 x Qty: 1
- Diode Rectifier - 1A 50V**
\$0.11 x Qty: 1
- Battery Holder - 8xAA - 12V**
\$5.95 x Qty: 1
- Transistor - NPN BC337**
\$0.27 x Qty: 1
- 1K Ohm Resistor**
\$0.1 x Qty: 1
- Tilt Sensor - AT407**
\$1.95 x Qty: 1
- 10K Ohm Resistor**
\$0.1 x Qty: 1
- USB Cable A to B**
\$3.26 x Qty: 1
- Jumper Wires Pack - M/M**
\$1.95 x Qty: 1
- Jumper Wires Pack - M/F**
\$1.95 x Qty: 1

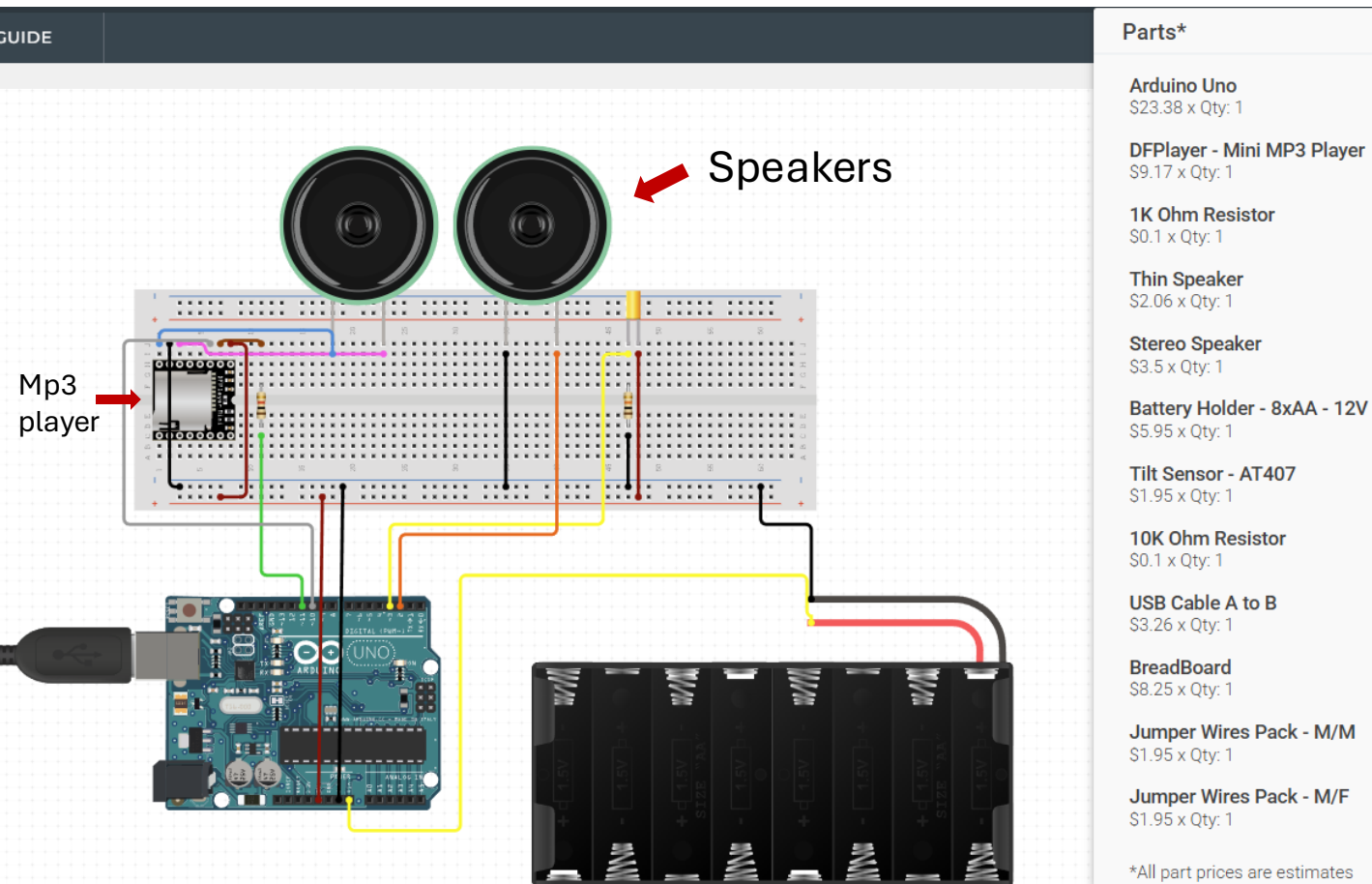


Beeping hat

- Arduino connected to the hat with speakers and an mp3
 - Once activated it will sound an alarm until deactivated
 - You can also upload your own personal alarm if they get use to the noise
 - Speaker will be placed close to each ear
- Arduino
buzzer noise
 - https://www.ebay.com/itm/354152746885?chn=ps&mkcid=28&google_free_listing_action=view_item

Beeping hat

Arduino system



Hat

