

Name	Quantity	Cost	Component
U3	1	15.89	GY-521 MPU-6050 3 Axis Accelerometer Gyroscope Module 6
U6	1	55.89	Elegoo (Arduino) Uno R3
Rpot1	1	11.88	CLT1100 360 Degree Rotary Encoder Code Switch Digital Potentiometer
S2	1	8.11	a12081400ux0336 5 x Momentary SPST NO Red Round Cap Push Button Switch
R1, R9, R8	3		1 kΩ Resistor
M2	1	15	DC 6-12V 5000RPM Electric Powerful Vibrating Vibration Motor
D1	1		Red LED
	20 (included with arduino)		Wires
	1 (included with arduino)		Breadboard

Role
Accelerometer & Gyroscope to get velocity and angular velocity readings from device
Our device's micro-controller
A potentiometer used for our device's reel / crank
A button on the front of our device
Resistors to use in our circuit
Vibration motor used to provide feedback
Only for demo purposes in circuit diagram
To connect components and build our circuits
Used as a base for our circuit

**Where To Obtain**

<https://www.amazon.ca/Gikfun-MPU-6050-Accelerometer-Gyroscope-EK1091x3C/dp/B07JPK26X2>

[https://www.amazon.ca/Elegoo-Project-Starter-Tutorial-Arduino/dp/B01D8KQZF4/ref=sr\\_1\\_1\\_sspa?crid=1MIJOSRHXRBDX&keywords=arduino+uno+r3&qid=1666641292&qu=eyJxc2MiOiI0LjEwIiwicXNhbiJoYm41MCIslFzcjEljMuZlZlOjQ3dD8=&electronics&prefix=Aruino+Uno+%2CElectronics%2C183&sr=1-1-spons&psc=1](https://www.amazon.ca/Elegoo-Project-Starter-Tutorial-Arduino/dp/B01D8KQZF4/ref=sr_1_1_sspa?crid=1MIJOSRHXRBDX&keywords=arduino+uno+r3&qid=1666641292&qu=eyJxc2MiOiI0LjEwIiwicXNhbiJoYm41MCIslFzcjEljMuZlZlOjQ3dD8=&electronics&prefix=Aruino+Uno+%2CElectronics%2C183&sr=1-1-spons&psc=1)

[https://www.amazon.ca/Cylewell-Crossite-Potentiometer-Arduino/dp/B07GZSCG39/ref=sr\\_1\\_21\\_sspa?crid=1MIJOSRHXRBDX&keywords=arduino+uno+r3&qid=1666639793&qu=eyJxc2MiOiI0LjEwIiwicXNhbiJoYm41MCIslFzcjEljMuZlZlOjQ3dD8=&electronics&prefix=Arduino+Uno+%2CCaps%2C93&sr=8-21-spons&psc=1](https://www.amazon.ca/Cylewell-Crossite-Potentiometer-Arduino/dp/B07GZSCG39/ref=sr_1_21_sspa?crid=1MIJOSRHXRBDX&keywords=arduino+uno+r3&qid=1666639793&qu=eyJxc2MiOiI0LjEwIiwicXNhbiJoYm41MCIslFzcjEljMuZlZlOjQ3dD8=&electronics&prefix=Arduino+Uno+%2CCaps%2C93&sr=8-21-spons&psc=1)

[https://www.amazon.ca/Xuxifai-L2081400uX-Digital-Momentary-Button-Switch/dp/B019DSZQ90/ref=asc\\_df\\_B019DSZQ90/?tag=google-shopping-20&linkCode=sd0hvndq=29294400445&hvpos=shvmt=&hvpmr=qhvar=46735718063136530748&hvppone=hvpmnt=&hvpmr=hvmd=&hvpmr=hvmdcmld=&hvpmr=hvclpochp=9000893&hvtagrt=pila-493295509598&pse=1](https://www.amazon.ca/Xuxifai-L2081400uX-Digital-Momentary-Button-Switch/dp/B019DSZQ90/ref=asc_df_B019DSZQ90/?tag=google-shopping-20&linkCode=sd0hvndq=29294400445&hvpos=shvmt=&hvpmr=qhvar=46735718063136530748&hvppone=hvpmnt=&hvpmr=hvmd=&hvpmr=hvmdcmld=&hvpmr=hvclpochp=9000893&hvtagrt=pila-493295509598&pse=1)

[https://www.amazon.ca/Elegoo-Project-Starter-Tutorial-Arduino/dp/B01D8KQZF4/ref=sr\\_1\\_1\\_sspa?crid=1MIJOSRHXRBDX&keywords=arduino+uno+r3&qid=1666641292&qu=eyJxc2MiOiI0LjEwIiwicXNhbiJoYm41MCIslFzcjEljMuZlZlOjQ3dD8=&electronics&prefix=Aruino+Uno+%2CElectronics%2C183&sr=1-1-spons&psc=1](https://www.amazon.ca/Elegoo-Project-Starter-Tutorial-Arduino/dp/B01D8KQZF4/ref=sr_1_1_sspa?crid=1MIJOSRHXRBDX&keywords=arduino+uno+r3&qid=1666641292&qu=eyJxc2MiOiI0LjEwIiwicXNhbiJoYm41MCIslFzcjEljMuZlZlOjQ3dD8=&electronics&prefix=Aruino+Uno+%2CElectronics%2C183&sr=1-1-spons&psc=1)

[https://www.amazon.ca/BLS-Electric-Powerful-Vibrating-Vibration/dp/B0733DHWS5/ref=sr\\_1\\_58\\_sspa?crid=33HCKIKJ2CD&keywords=vibration+motor&qid=1666640645&qu=eyJxc2MiOiI1U4IdiwicXNhbiJoYm41MCIslFzcjEljMuZlZlOjQ3dD8=&electronics&prefix=vibration+motor+%2CCaps%2C88&sr=8-58-spons&psc=1](https://www.amazon.ca/BLS-Electric-Powerful-Vibrating-Vibration/dp/B0733DHWS5/ref=sr_1_58_sspa?crid=33HCKIKJ2CD&keywords=vibration+motor&qid=1666640645&qu=eyJxc2MiOiI1U4IdiwicXNhbiJoYm41MCIslFzcjEljMuZlZlOjQ3dD8=&electronics&prefix=vibration+motor+%2CCaps%2C88&sr=8-58-spons&psc=1)

[https://www.amazon.ca/Elegoo-Project-Starter-Tutorial-Arduino/dp/B01D8KQZF4/ref=sr\\_1\\_1\\_sspa?crid=1MIJOSRHXRBDX&keywords=arduino+uno+r3&qid=1666641292&qu=eyJxc2MiOiI0LjEwIiwicXNhbiJoYm41MCIslFzcjEljMuZlZlOjQ3dD8=&electronics&prefix=Aruino+Uno+%2CElectronics%2C183&sr=1-1-spons&psc=1](https://www.amazon.ca/Elegoo-Project-Starter-Tutorial-Arduino/dp/B01D8KQZF4/ref=sr_1_1_sspa?crid=1MIJOSRHXRBDX&keywords=arduino+uno+r3&qid=1666641292&qu=eyJxc2MiOiI0LjEwIiwicXNhbiJoYm41MCIslFzcjEljMuZlZlOjQ3dD8=&electronics&prefix=Aruino+Uno+%2CElectronics%2C183&sr=1-1-spons&psc=1)

[https://www.amazon.ca/Elegoo-Project-Starter-Tutorial-Arduino/dp/B01D8KQZF4/ref=sr\\_1\\_1\\_sspa?crid=1MIJOSRHXRBDX&keywords=arduino+uno+r3&qid=1666641292&qu=eyJxc2MiOiI0LjEwIiwicXNhbiJoYm41MCIslFzcjEljMuZlZlOjQ3dD8=&electronics&prefix=Aruino+Uno+%2CElectronics%2C183&sr=1-1-spons&psc=1](https://www.amazon.ca/Elegoo-Project-Starter-Tutorial-Arduino/dp/B01D8KQZF4/ref=sr_1_1_sspa?crid=1MIJOSRHXRBDX&keywords=arduino+uno+r3&qid=1666641292&qu=eyJxc2MiOiI0LjEwIiwicXNhbiJoYm41MCIslFzcjEljMuZlZlOjQ3dD8=&electronics&prefix=Aruino+Uno+%2CElectronics%2C183&sr=1-1-spons&psc=1)