

1 Bill of Materials

Part	Part No.	Supplier and Website	Qty.	Unit Price	Currency	Unit Price (CAD)	Price
Nano Microcontroller	Elegoo Nano board CH340/ATmega328P, closest to A000005 Arduino product	Arduino https://store.arduino.cc/usa/arduino-nano	1	22	USD	\$27.50	\$27.50
PLA Filament (chassis, wheels, clips, gears)	N/A	MECH 223 Price Guidelines	80g	\$0.04/g	CAD	\$0.04/g	\$3.20
Tight-Tolerance Multipurpose O1 Tool Steel Rod, 3.88mm Diameter x 915mm	47764	Fastenal https://www.fastenal.com/products/details/47764?term=O1+Steel+Drill+Rod&pageno=3	17.56"	\$4.63/3ft	CAD	\$4.63/3ft	\$6.78
1/8" Acrylic Sheet	ACRY24470.187PM24X48	eoplastics http://www.eoplastics.com/ACRY24470-187PM24X48	76mm x 76mm plate + 85mm x 40mm plate	\$46.96 /1152in^2	USD	\$58.77/1152in^2	\$0.72
Steel Sheet Metal (0.024")	S124	Metals Depot https://www.metalsdepot.com/steel-products/steel-sheet	5.49in^2	\$9.24/2ft^2	USD	\$11.55/2ft^2	\$0.22
Cylindrical Battery Holder	534-092	Mouser https://ca.mouser.com/ProductDetail/Keystone-Electronics/927qs=sGAEpIMZZMt13fpse6CWDYVh9FApKpUCF%2fjeT9O8Klw%3d	8.00	0.53	CAD	\$0.53	\$4.26
PM 4.5 V DC Motor Mabuchi	FC-280SA 2470	MECH 223 Price Guidelines	2.00	3.00	CAD	\$3.00	\$6.00
Subminiature Relay	HK 3FF	Lee's Electronics https://leeselectronic.com/en/product/3192.html	3.00	2.00	CAD	\$2.00	\$6.00
Photoresistor 5516 100V 540nm Light 5~10k Dark 500k	Photoresistor 5516 100V 540nm Light 5~10k Dark 500k DE4200	Dipmicro http://www.dipmicro.ca/store/PHRES-5516	1.00	0.38	CAD	\$0.38	\$0.38
Switch	TL3305AF260QG	Mouser https://ca.mouser.com/ProductDetail/E-Switch/TL3305AF260QG?qs=sGAEpIMZZMsGjVA3toVBKeJCRa1nG8XqQWVbJ3%2fajg%3d	2.00	0.26	CAD	\$0.26	\$0.52
LED's	5588	Lee's Electronics https://leeselectronic.com/en/product/5588.html?search_query=LED+clear+orange&results=3	2.00	\$1/5	CAD	\$0.20	\$0.40
370 ohm resistor	MF1/4DC3700F	Mouser https://ca.mouser.com/Passive-Components/Resistors/Through-Hole-Resistors/Images/_/N-7h7z5?P=1z0wl28	3.00	0.08	CAD	\$0.08	\$0.23
56 kohm resistor	SFR2500005602FR500	Mouser https://ca.mouser.com/ProductDetail/Vishay-BC-Components/SFR2500005602FR500?qs=sGAEpIMZZMsPqMdJzcrNwsdig2g%252bAcehw2AmwomhBHQ%3d	2.00	0.15	CAD	\$0.15	\$0.30
Battery Clip	HH-3449	Mouser https://ca.mouser.com/Power/Battery-Holders-Clips-Contacts/Images/_/N-cicxg?Nao=200	1.00	1.66	CAD	\$1.66	\$1.66
Circuit Boards	PC-3	All Electronics https://www.allelectronics.com/item/pc-3/solderable-perf-board-2-1/2-x-3-1/8/1.html	1 (split in half)	1.50	USD	\$1.88	\$1.88
Diodes	1n 58 18	Mouser https://ca.mouser.com/productdetail/?qs=JV7IzIMm3yJEIYWkht%2FsQ%3D%3D	3.00	0.38	CAD	\$0.38	\$1.15
Accelerometer and Gyro Sensor	MPU-6050 GY521	Lee's Electronics https://leeselectronic.com/en/product/15544.html?search_query=Accelerometer+and+Gyro+Sensor+MPU-6050+GY521&results=1	1.00	14.50	CAD	\$14.50	\$14.50
9V Duracell Battery	610237	Walmart https://www.walmart.ca/en/ip/duracell-coppertop-9v/6000016956627	1.00	2.74	CAD	\$2.74	\$2.74
Miscellaneous	N/A	MECH 223 Price Guidelines	N/A	N/A	N/A	N/A	\$2.00
Elastic Bands							
Hot Glue							
M3 Screws			6				
M3 Nuts			5				
Pop Bottle							
Paint							
Paper							
Bugles							
Yarn							
Electrical Tape							
Wire							
Headers							
Epoxy							
						Total	\$80.43

Table 1: Bill of Materials