

Material	Description	Quantity	Cost	Total	
MultiMoto Arduino Shield	(Model: LC-82) - H-Bridge controller with four actuator allowing to control speed and current independently	1	\$48.99	\$48.99	Used
12 Volt 2A Power Adapter	Supply AC to DC 2.1mm X 5.5mm Plug 12v 2 Amp Power Supply Wall Plug Extra Long 8 Foot Cord	1	\$8.99	\$8.99	Not Used
High Speed Linear Actuator	Model PA-15 - 4" stroke, 11lbs force, 9.05"/sec speed	3	\$145.00	\$435.00	Used
Arduino Mega 2560 Rev3	54 digital I/O pins, 16 analog inputs, and a larger space sketch	1	\$27.00	\$27.00	Used
LPPS- 22 Series Linear Potentiometer position sensor with rod end joints	Ruggedized Linear Potentiometer, Measure the linear motion or position of target with measuring range 0-4 inches.	1	\$175.00	\$175.00	Used
100-240V AC to DC 12V 10A 120W Power Supply Adapter Transformer	AC to DC 12 V 10A 120 Power Adapter	1	\$18.88	\$18.88	Used
LPPS- 22 Series Linear Potentiometer position sensor with rod end joints	Ruggedized Linear Potentiometer, Measure the linear motion or position of target with measuring range 0-4 inches.	2	\$175.00	\$350.00	Used
3mm Rounder I2C I/O Breakout Board 20x4 LCD Module Shield for Arduino Uno Mega2560	LCD Display and I2C for the connection of the LCD to Mega	1	\$12.99	\$12.99	Used
Black Heat Resistant Rubber Pad Thin Silicone Grade Rubber Gasket Sheet 12 by 12 inch 1/32 inch Thick Gaskets	Needed for the vibration of the motors	2	\$8.99	\$17.98	Not Used
Mounting Brackets Set - 2 Brackets for PA-15		3	\$17.00	\$51.00	Used
12"x12" Sheet of Metal	The base of the device	4	\$20.98	\$83.92	Used
Bolts and Nuts	To secure the 3D prints and base components	1	\$20.00	\$20.00	Used
Matrix Array 4"x4" 16 Keys Keypad	User Interface to interact with the motors and GUI	1	\$6.79	\$6.79	Used
Elastic cords	Handles for carrying of the device	1	\$2.23	\$2.23	Used
3-D Printed Components	Syringe and Motor Holders	1	\$87.63	\$87.63	Used
Total Cost				\$1,346.40	
Budget Remaining				\$153.60	
Device Reproduce Cost				\$1,319.43	

