

Project Components: Vendor Selection, Features to Evaluate, Principle of Operation

Jon Erickson, 11 Feb 2020

The below list compiles suggested vendors that are known to have a very good selection of legitimate products. Also included are some tips/experiential wisdom about features to evaluate. Suggest avoiding amazon--not fun working with cheap, knock-off parts.

General electronics – microcontrollers– bluetooth/wireless - accelerometers:

Vendors:

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

<https://www.sparkfun.com/>

<https://www.mouser.com/>

- Adafruit Feather boards an Teensy 3.x are among favorite microcontrollers.
- IMUs: sparkfun and adafruit both have high-performance, small form factor models.

Servo motors – gear hubs - batteries:

Vendors:

<https://www.robotshop.com/>

<https://www.servocity.com/>

Servos are selected based on torque, speed, and operating voltage:

<https://www.servocity.com/what-servo-should-i-use>

<https://www.rchelicoptertfun.com/rc-servos.html>

Make sure you understand PWM, the operational principle of controlling servos:

<https://learn.sparkfun.com/tutorials/pulse-width-modulation>

Silicone molding – mold release agents:

Vendors:

<https://www.smooth-on.com/>

<https://www.reynoldsam.com/>

The Shore hardness scale is the parameters specifying whether the cured product is soft and gummy vs. hard like a construction hat. More info here: <https://www.smooth-on.com/page/durometer-shore-hardness-scale/>

Make sure you get an appropriate mold release agent!

General Mechanical Components:

Vendors:

<https://www.mcmaster.com/>

<https://www.lowes.com/>

McMaster sells everything under the sun from gaskets to rods, screw, etc. Of course, nothing beats a trip to the hardware store.