

Servos and the BOE-BOT

Reference:

For more complete documentation, the following items are available from www.parallax.com or www.tcc.edu/faculty/webpages/PGordy

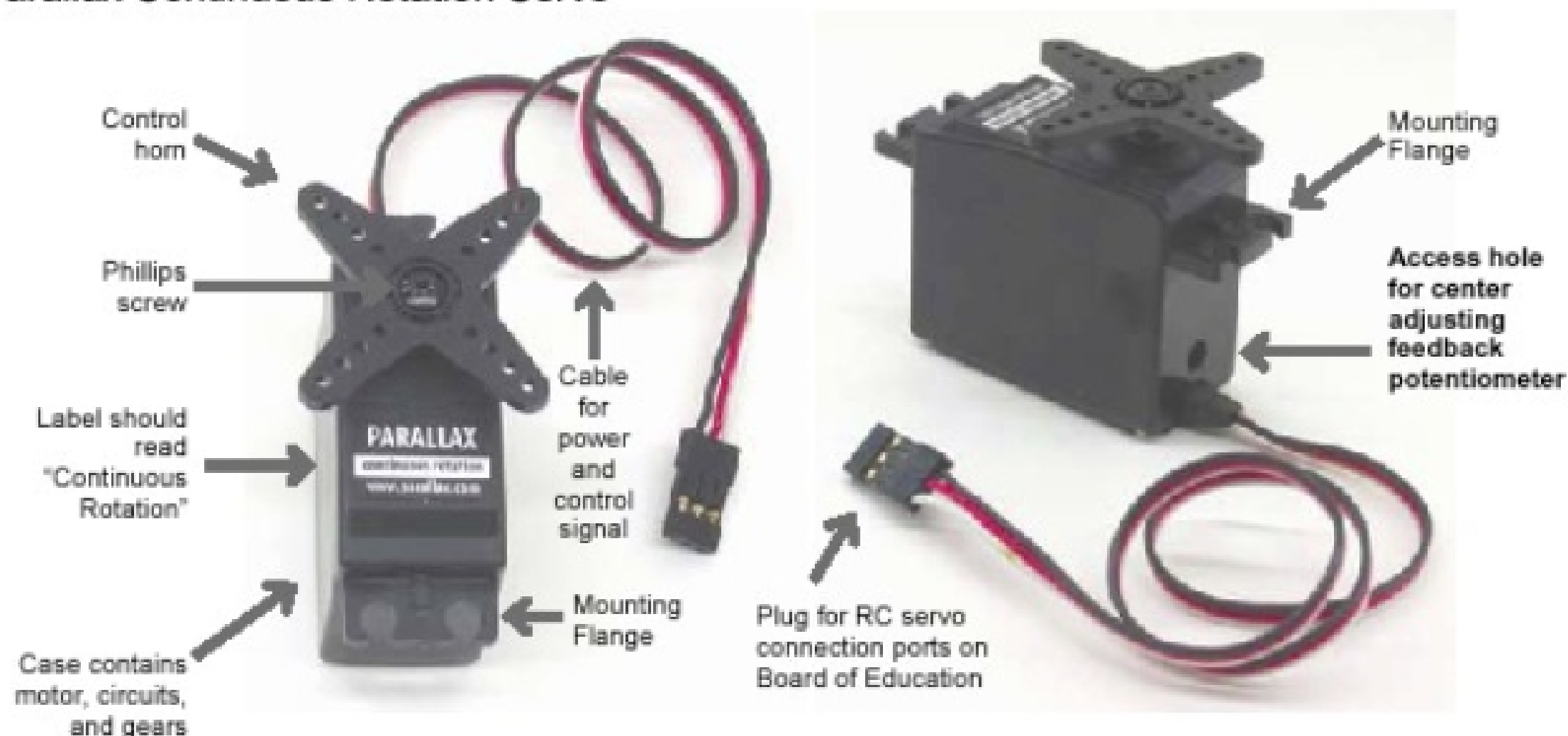
- [Robotics with the BOEBOT Version 2.2](#)
- [BASIC Stamp Syntax and Reference Manual Version 2.1](#)

Servo

A servo is a single device that contains:

- Motor
- Gearbox that gears down the motor to provide slower speeds (than most motors) and higher torque (power to turn).
- Built-in electronics such that the motor position or speed can be controlled by a series of pulses. The servo is powered using 5V (4.8 – 6.0 V)

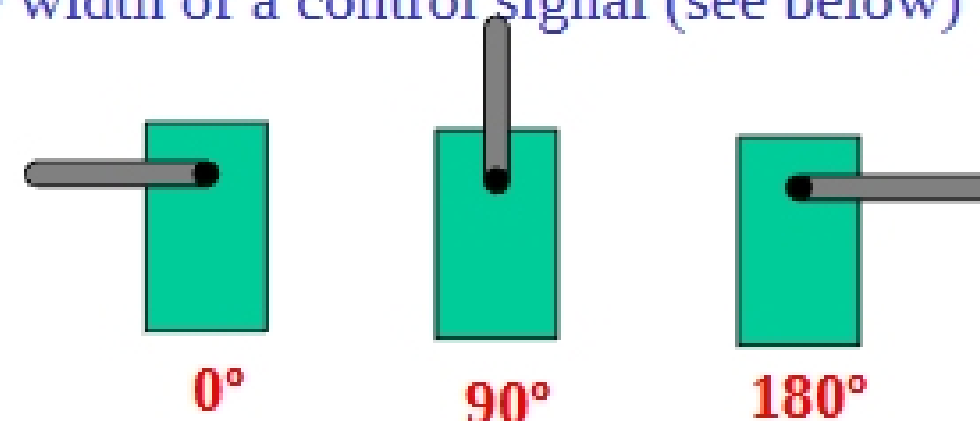
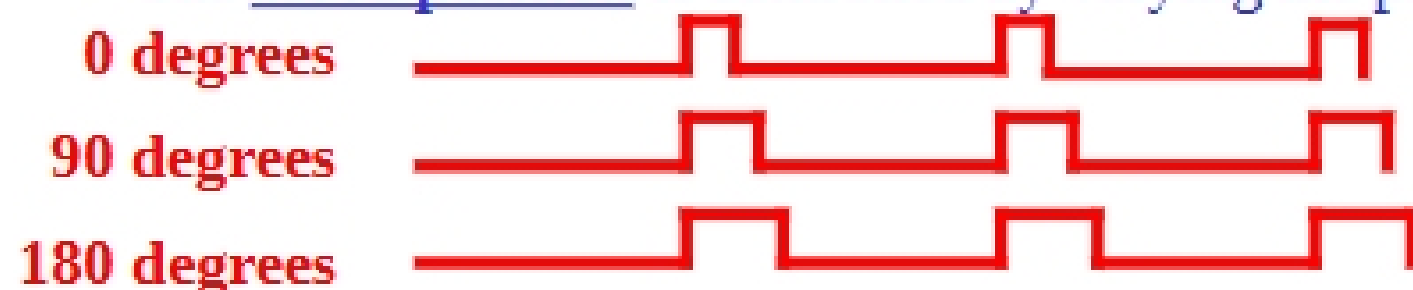
Figure 2-1
Parallax Continuous Rotation Servo



Types of servos

There are two types of servos:

- Unmodified servos – the servo can turn over a certain range, such as 180°
 - This type of servo is commonly used on RC (radio control) cars and airplanes for steering, moving control flaps, etc.
 - Most servos are of this type
 - Available in hobby stores, such as Hobbytown USA or Hungates
 - The servo position is controlled by varying the pulse width of a control signal (see below)



- Modified servos

- This type of servo has been modified internally so that it will turn continuously.
- This type of servo is useful as a drive motor for a robot, such as the BOE-BOT.
- The servo speed is controlled by varying the pulse width of a control signal (see below)

