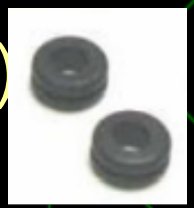
ssembling and Testing Your Robot

Mounting the Topside Hardware

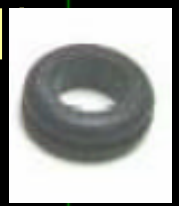
- Parts
  - Boe-Bot Chassis (1)
  - Standoffs (4)

  - 1/4” 4-40 Screws (4)

  - 9/32” Rubber grommets (2)



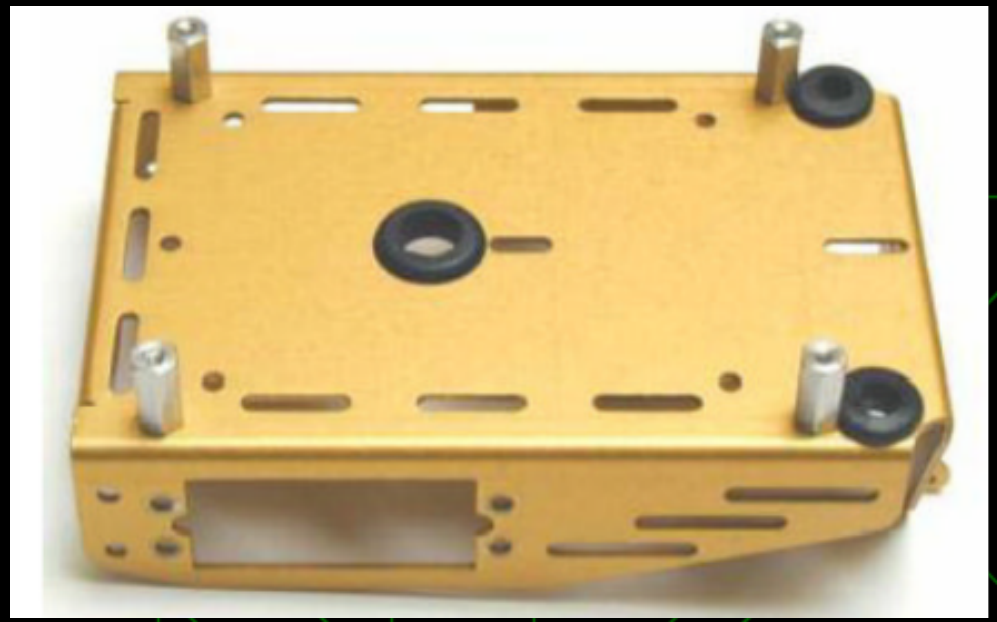
  - 13/32” Rubber grommet (1



Mounting the Topside Hardware

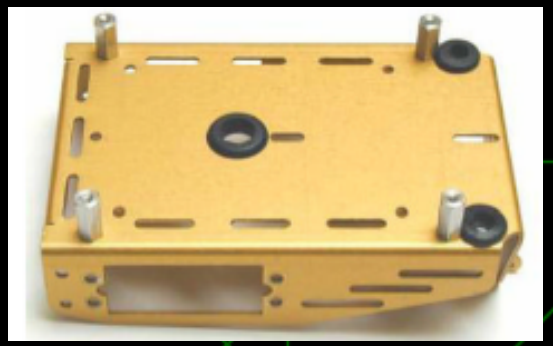
- Assembly

1. Insert the 13/32” rubber grommet into the hole in the center of the Boe-Bot
2. Insert the two 9/32” rubber grommets into the two corner holes as shown.
3. Use the four 1/4” 4-40 screws to attach the four standoffs to the chassis as



Mounting the Servos

- Parts
  - Partially assembled Boe-Bot chassis (1)



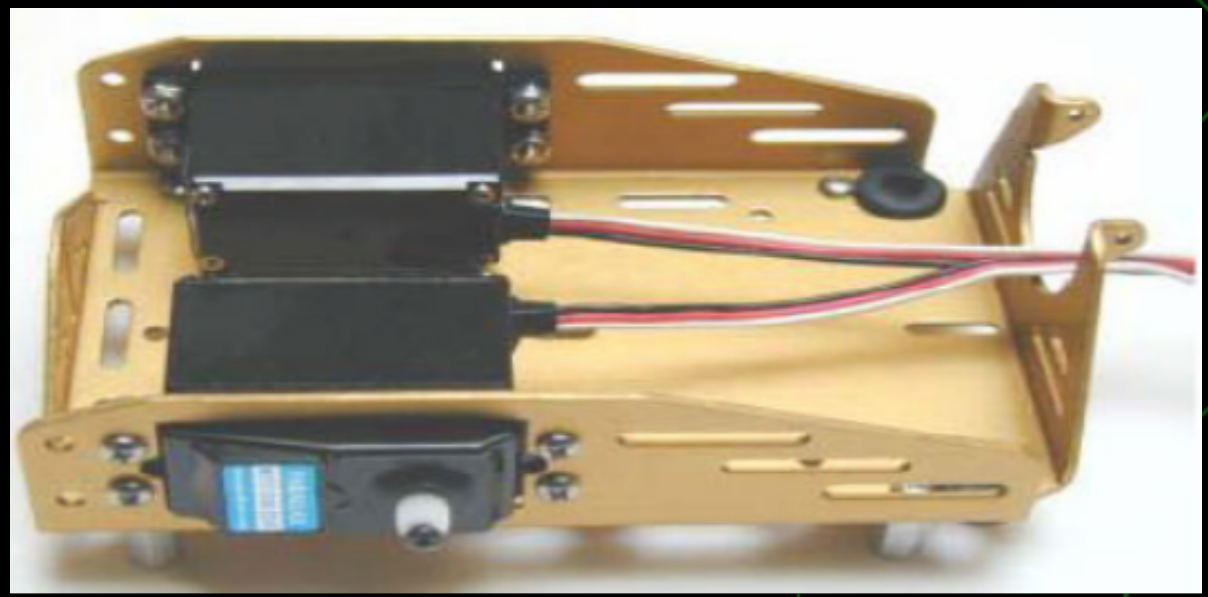
  - Servos (2

  - 3/8” 4-40 screws (8)

  - 4-40 locknuts (8)

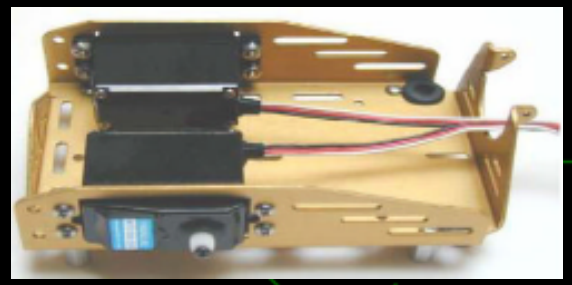
Mounting the Servos

- Assembly
  - Use the eight 3/8” 4-40 screws and locknuts to attach each servo to the Boe-Bot chassis as shown.



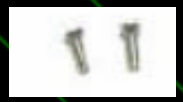
Mounting the Battery Pack

- Parts
  - Partially assembled Boe-Bot chassis (1)



  - Empty Battery Pack (1)

  - Flathead 4-40 screws (2)

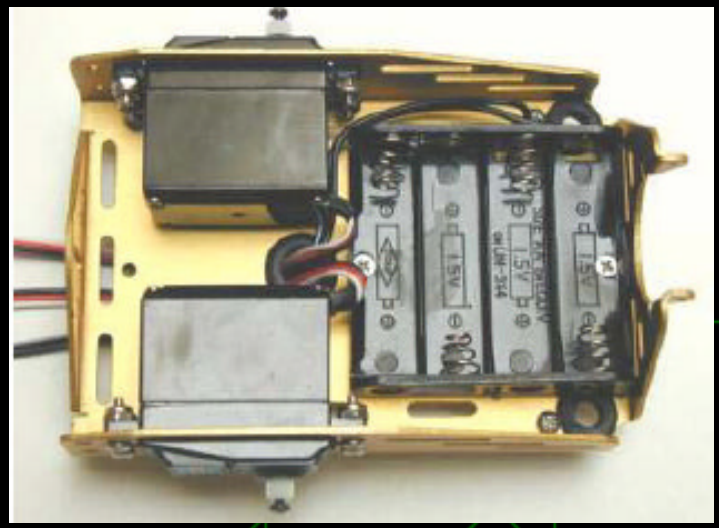


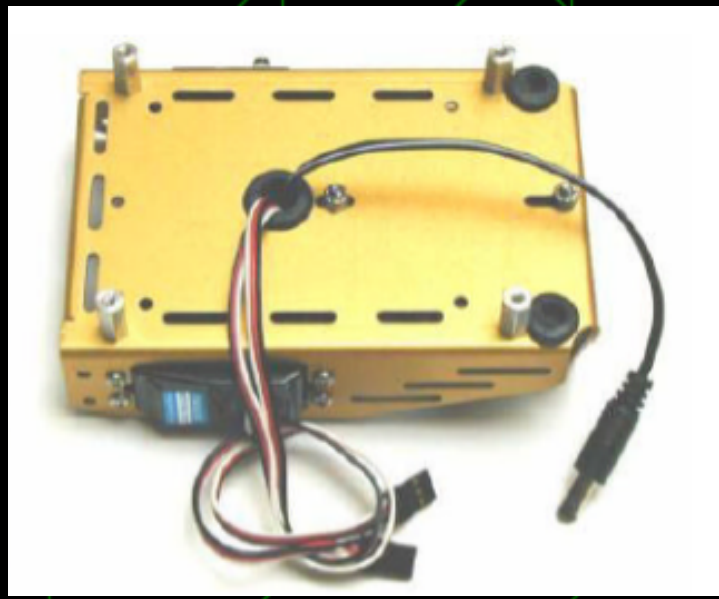
  - 4-40 locknuts (2)

Mounting the Battery Pack

- Assembly

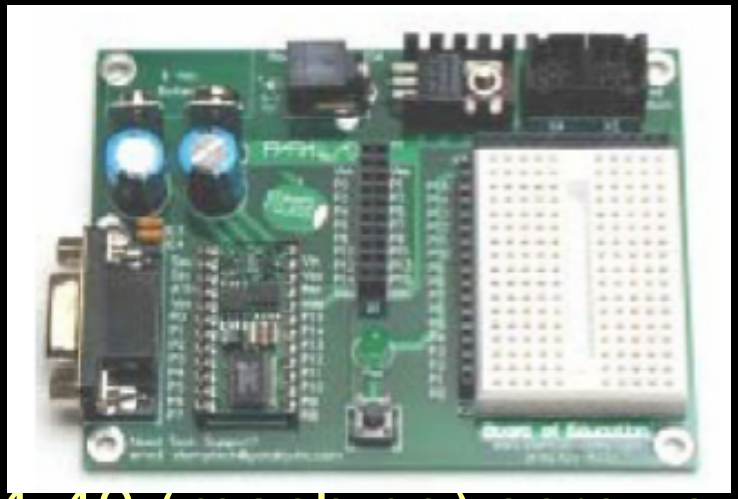
- Use the flathead screws and locknuts to attach the battery pack to underside of the Boe-Bot chassis. Make sure to insert the screws through the battery pack then tighten down the locknuts on the topside of the chassis.
- Pull the battery pack's power cord through the hole with the largest rubber grommet in the center of the chassis.
- Pull the servo lines through the same hole.
- Arrange the servo lines and supply cable.





Attaching the Board of Education to the Boe - Bot Chassis

- Parts
  - Partially assembled Boe-Bot chassis (1)
  - Board of Education with BASIC Stamp 2 (1)



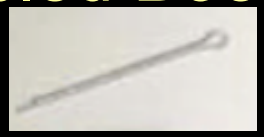
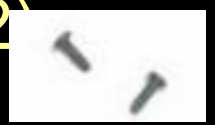
  - 1/4” 4-40 (machine) screws (4)

Attaching the Board of Education to the Boe-Bot Chassis

- Assembly
  - Make sure the white breadboard on the Board of Education is above where the servos are mounted on the chassis.
  - Use the four 1/4” machine screws to attach the Board of Education to the standoffs.
  - Plug the servo into servo port 12, and plug the other servo into servo port 13.

Make sure the “Black” and “Red” Labels to the right of the servo port line up with the servo connector’s black and red wires be fore plugging it in a servo.

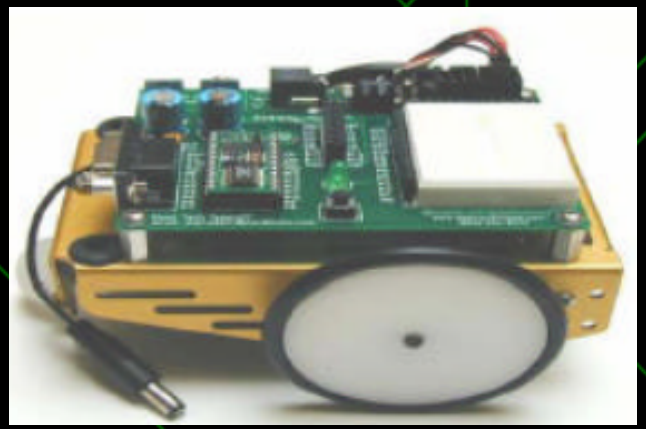
The Wheels

- Parts
  - Partially assembled Boe-Bot chassis (1)
  - 1/16” Cotter pin 
  - O-ring tires (2) 
  - 1” Polyethylene ball (1) 
  - Wheels (2)
  - small black screws (2) 

The Wheels

- Assembly

1. Run the cotter pin through the holes in the tail of the Boe-Bot chassis so that it holds the one-inch plastic ball in place
2. Seat each o-ring tire in the groove on the outer edge of each plastic wheel.
3. Each plastic wheel has a recess that fits on a servo output shaft. Press each plastic wheel onto a servo output shaft making sure the shaft lines up with and sinks into the recess.
4. Use the black screws to attach the wheels to the servo output shafts.



Communicating with your PC

- Parts
  - 1.5 V AA batteries (4)
  - Serial Cable (1)

  - Parallax CD (1)

Communicating with your PC

- Assembly

1. Load the batteries into the battery pack so that the polarity symbols on each battery match those printed on the inside of the battery pack.
2. Plug the female end of the serial cable into one of your computer's unused serial ports.
3. Plug the male end of the serial cable into the DB9 socket on the BOE.
4. Use the black screws to attach the wheels to the servo output shafts.
5. Plug the battery pack back into the BOE