

**Metal Arm Base Assembly Guide. Updated  
11.16.2005**

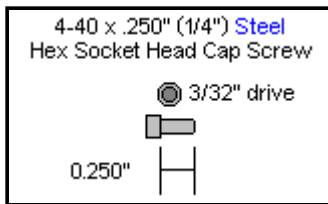
**Safety first!** Wear eye protection and never touch a powered robot!



**Image of aluminum arm base.**

**Step 1.**

Attach the "L" shaped bracket to the base as shown, using three 4-40 x .250 screws.



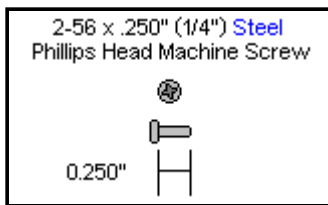
**3 x**



**Figure 1.**

**Step 2.**

Attach the Multi-Purpose bracket as shown. Use two 2-56 x .250 screws.



**2 x**



**Figure 2-2.**

**Step 3.**

Attach the "C" bracket to a Multi-Purpose bracket as shown. See the diagram below for detailed information.

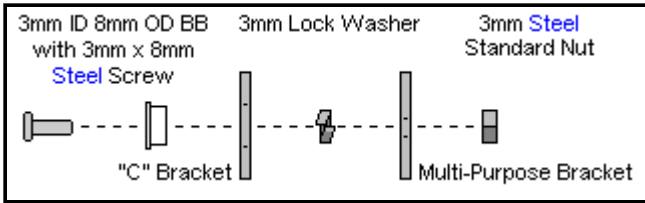


Figure 3-1.

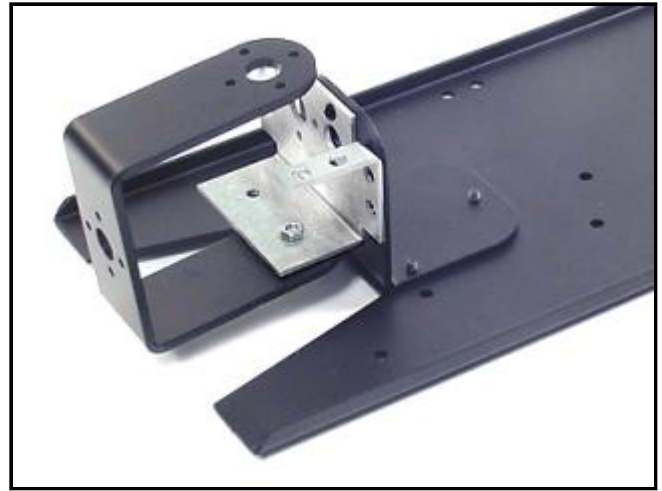


Figure 3-2.

**Step 4.**

Attach a servo as shown. Use four 3x8mm screws, 3mm washers, and nuts.

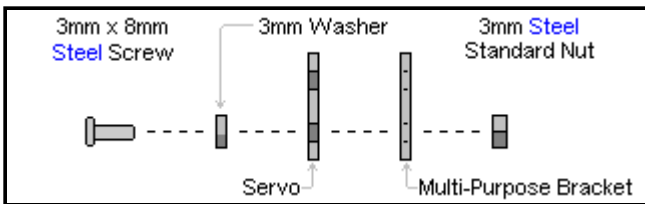


Figure 4-1.

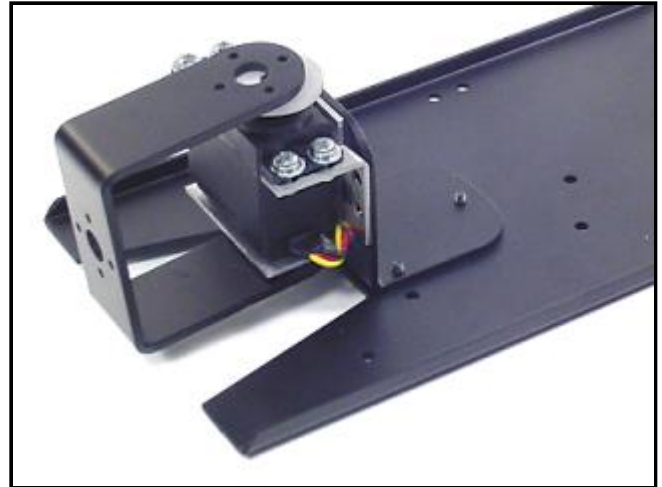


Figure 4-2.

**Step 5.**

Attach the two-servo bracket and the "C" bracket to the servo as shown. Use two 2-56 x 3/8" screws and 2-56 nuts.

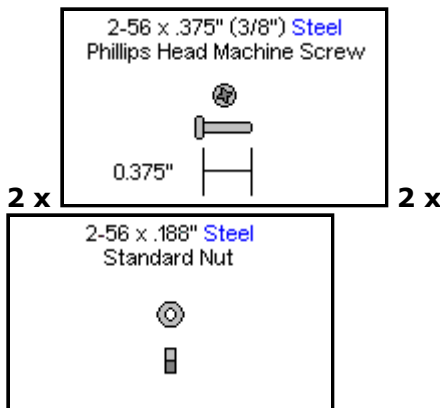


Figure 5.

**Step 6.**

Attach the four rubber feet to the bottom of the base as shown.

Note: The two left-most holes can be used for mounting the base to a piece of plywood. Use #4 x 3/4" tapping screws.

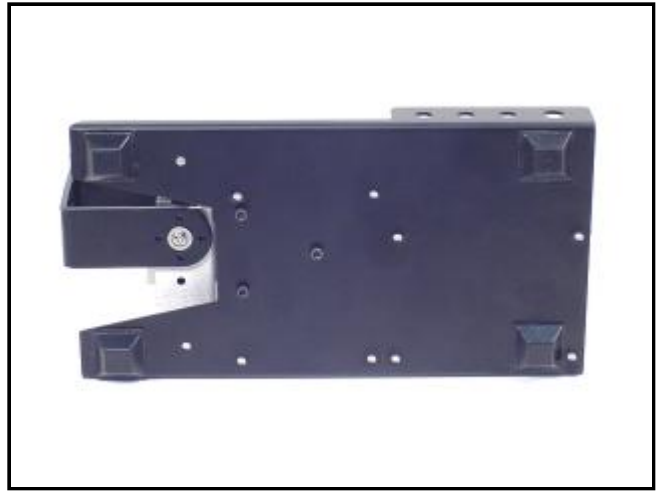


Figure 6.

**Step 7.**

Attach the 3/8" hex spacers as shown, using eight 4-40 x .250 screws. Eight additional screws are included to attach electronics.

4-40 x .250" (1/4") Steel  
Hex Socket Head Cap Screw

3/32" drive

0.250"

8 x



Figure 7.

**Step 8.**

Install the arm and electronics as shown. Connect the servos to the appropriate channels, as indicated in the table below.

SSC-32 Channel	Servo
10	Base Rotate
11	Shoulder (Y adapt.)
12	Elbow
13	Wrist
14	Gripper (Open/Close)
15	Gripper Rotate (optional)

Table 8-1

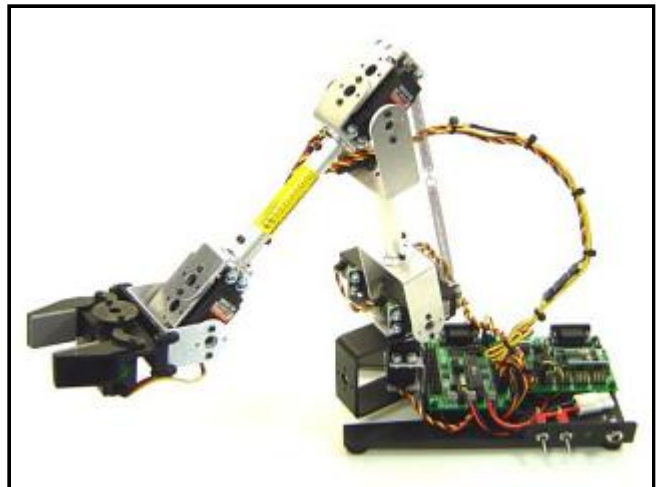


Figure 8.

**Step 9.**

Figure 9 illustrates how the power switch works, and which pins on the 5.5mm plug to use.

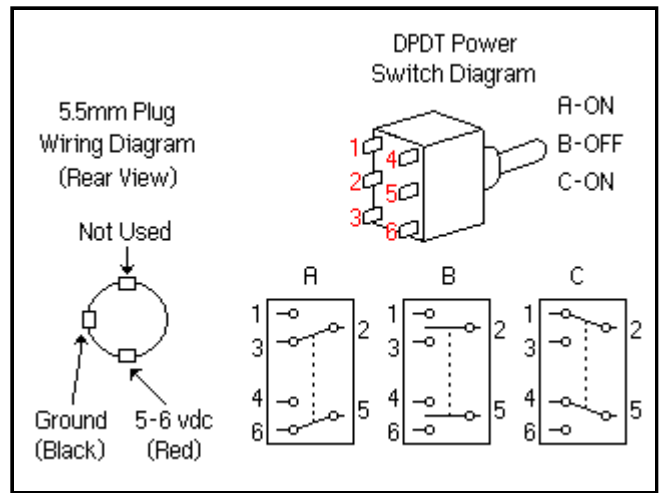


Figure 9.

**Step 10.**

It is convenient to be able to turn on the servos separately from the electronics so programs can be downloaded without the servos moving. By using a DPDT switch power can be applied to the Bot Board and SSC-32 electronics (VL) in one position, or power can be applied to VL and the SSC-32 servo power input (VS) in the other position. Figure 10 illustrates this.

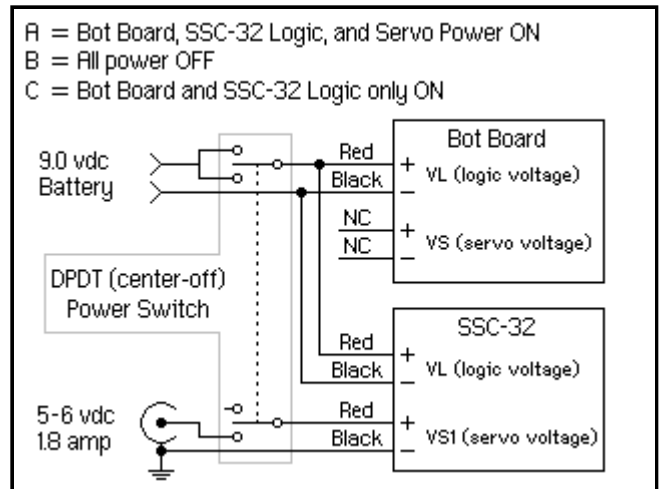


Figure 10.