

BRAIN Quick-Start Guide: Hardware

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The out-of-the-box (preprogrammed) configuration of the BRAIN is intended for testing its functionality upon receipt. BEST encourages teams to program the BRAIN themselves to gain this valuable experience. This guide will lead you through a simple hook-up and checkout of the BRAIN controller before installing any software.

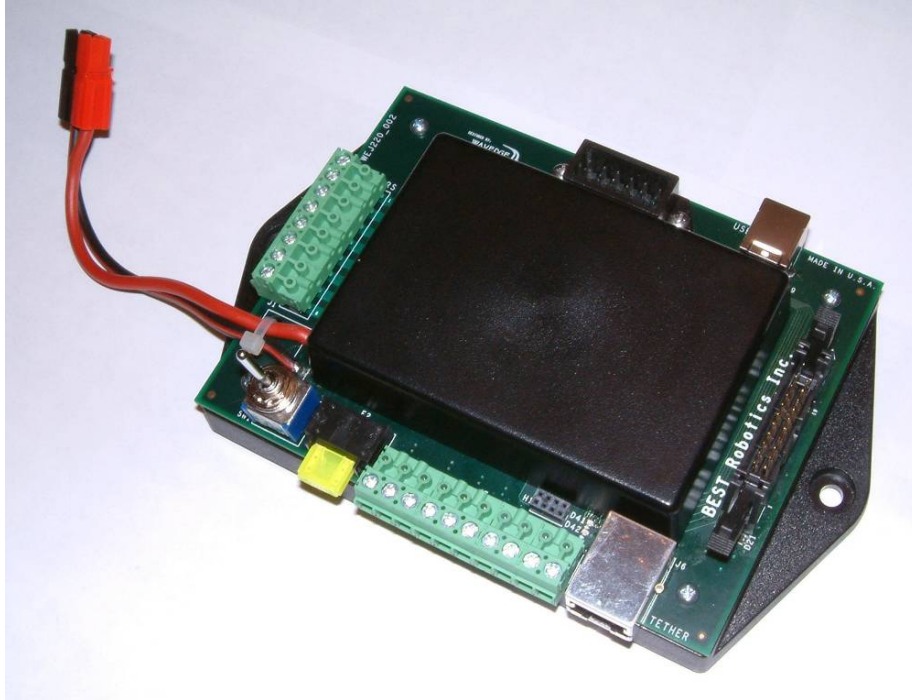


Figure 1. This is your BRAIN.

To start using your BRAIN, follow these steps:

1. Cut four 6-inch pieces of wire. Prepare each end of the wire by removing about 1/4 inch of the insulation and tinning the wire with solder.
2. Solder one end of each wire to each of the terminals on your Globe motors.
3. Using a small screwdriver, loosen the screws in the first four motor connections (See Figure 2 for the locations). Do not remove the screws completely.
4. Place two wires from one of the motors into the square holes underneath the screws of the first two motor connections. Tighten the screws to hold the wires firmly.
5. Repeat step 4 for the other motor, using the next two motor connection places.
6. Connect your receiver box to the receiver box connector on the BRAIN.
7. Connect two of your servos to servo positions 3 and 4.
8. Verify that the BRAIN is turned off (switch oriented towards the fuse).
9. Connect the battery to the BRAIN.
10. Turn on your transmitter.
11. Turn on your BRAIN.
12. To test your BRAIN, move the joysticks. You should see the motors and servos move.
13. Congratulations! You've just had a glimpse at the heart of the next generation of BEST robots.

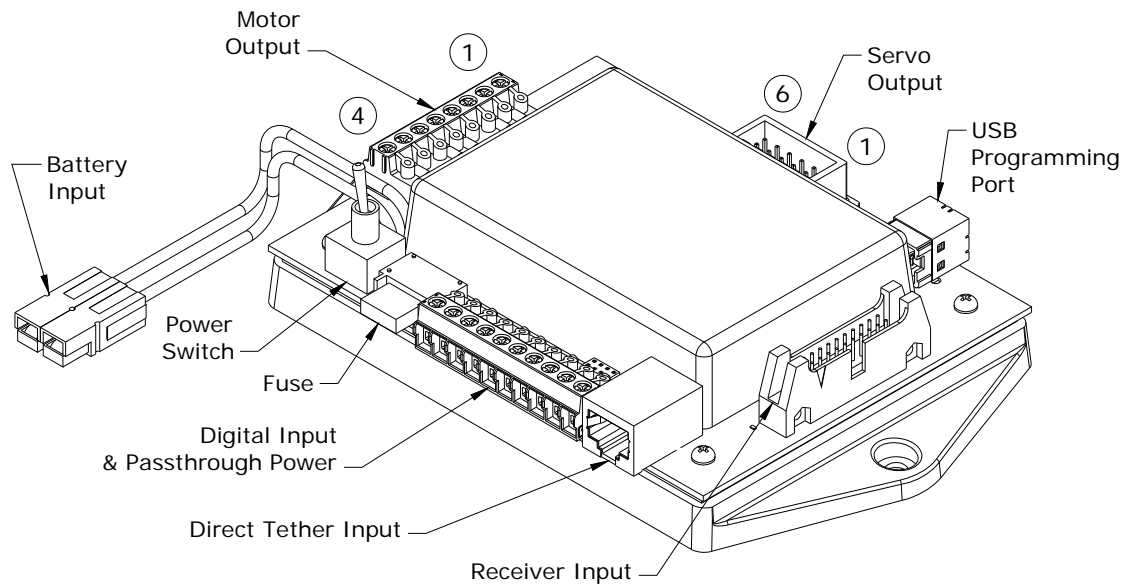


Figure 2. This is your BRAIN with the parts labeled.



Figure 3. This is your first complete BRAIN test setup.

Now that you have a functioning BRAIN, experiment with it. Try reversing the location of your motor wires. Arrange the motors as they will be arranged on your robot, and see if you can make the motors turn in the correct direction to move your robot forward and in reverse or to turn it left and right.