The W.A.S.P. Solderless

Warning: CHOKING HAZARD -Small Parts. Not for Children Under 9 yrs.

Parental Supervision Recommended for Children Younger than 12

9-Volt Battery Not Included

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Troubleshooting

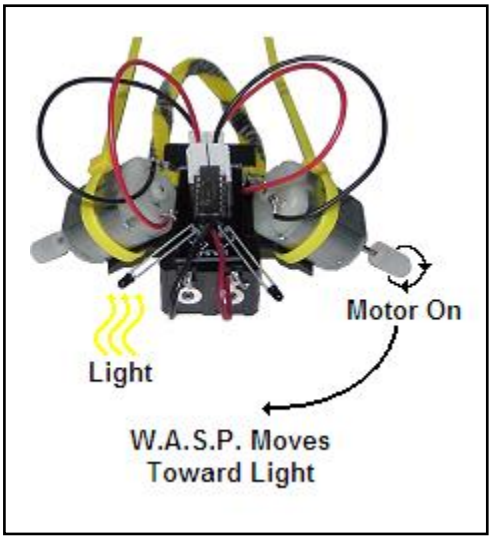
If you have any questions or comments about this kit, feel free to contact us at sheekgeek@sheekgeek.com. Emails will be responded to within 1-3 business days.

Disclaimer of Liability

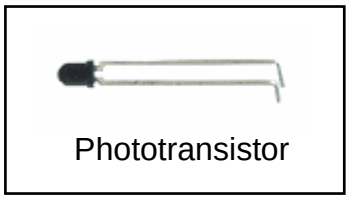
Our chips are intentionally purchased LEAD-FREE; however, due to the nature of electronic manufacturing, some parts in this kit may have trace amounts of lead, a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling. SheekGeek is in no way responsible for any damages whatsoever. By purchasing or building this kit, you waiver all rights to any compensation due to any damages of person and/or property. Please observe all safety precautions when building this kit.

How The W.A.S.P. Robot Works

Before you build your W.A.S.P robot, you should read this section to learn about how your W.A.S.P. robot works



The name W.A.S.P. stands for **W**iggling **a**nd **S**pinning **P**hotovore. The words "wiggling" and "spinning" describe the action of the robot. The W.A.S.P robot wiggles like a worm and spins like a top. The word "photovore" describes the type of robot. A photovore is a type of robot that follows light.



The phototransistors act as the eyes of the W.A.S.P robot. The phototransistor is a type of sensor. Your W.A.S.P robot senses light with its phototransistors.

Printed Circuit Board

First, the phototransistors tell the circuit where there is the most light. Next, the circuit turns on one of the motors. The motor that turns on is opposite of the phototransistor that receives the most light. This is how the W.A.S.P robot follows light. You can use the picture diagram at the top of the previous page to help clarify how the W.A.S.P. robot works.

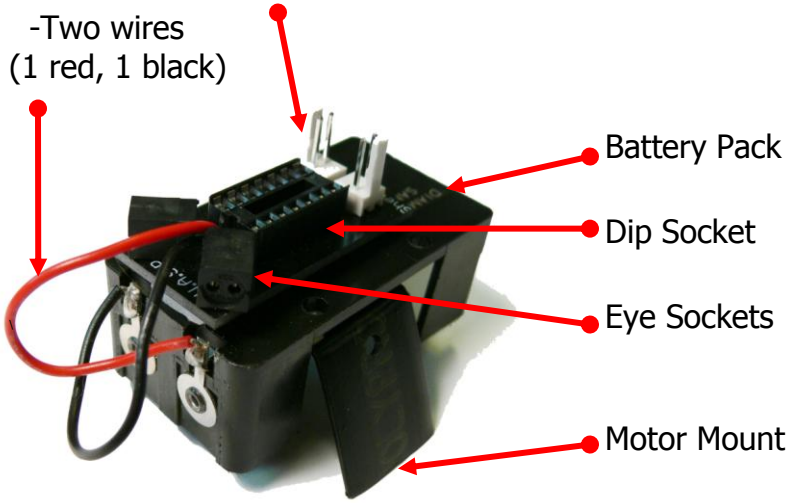
The best way to see how the W.A.S.P. robot works is to play with it. Build your robot and then take it to a dark room with a hard floor. You can control the movement of your W.A.S.P robot easily with the beam of a flashlight. The W.A.S.P. robot will also follow the beam of a flashlight in daylight, as long as the light is the same brightness everywhere. Experiment with your robot on different floor surfaces. Can he move well on pavement? Experiment with your robot in different lighting situations. Can you control him with a flashlight outside?

PARTS LIST

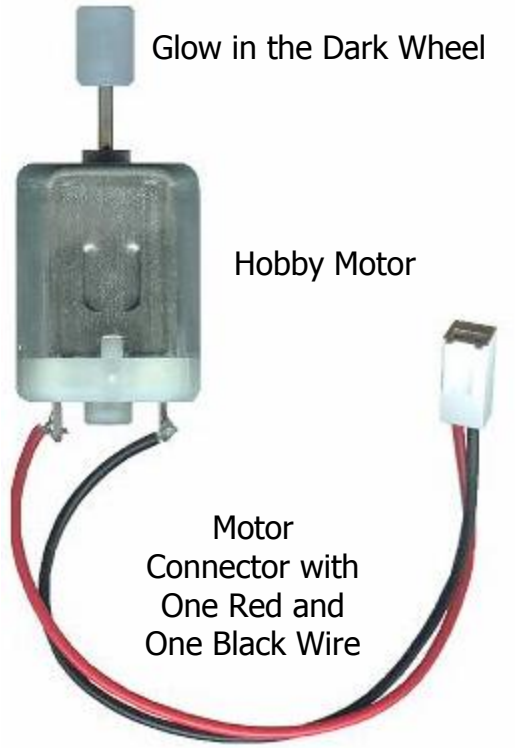
74HCT14N
A Chip- The "Brain"

Phototransistors
The "Eyes"

Pre-Assembled Piece:
-Motor Connector
-Two wires
(1 red, 1 black)



Parts list continued



Glow in the Dark Wheel

Hobby Motor

Motor Connector with One Red and One Black Wire

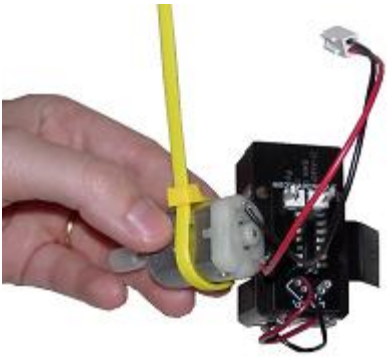
Zip Ties

Chenille Stems

The W.A.S.P. Solderless Robot Kit

Instructions: Page 1

1. Place the motor on the mounting bracket with the vent facing out. The vent is the two notches on one of the motor sides.



2. Attach the motor to the mounting bracket with the zip tie.

3. Repeat Steps 1 and 2 with the other motor. Make sure the vent is facing out.

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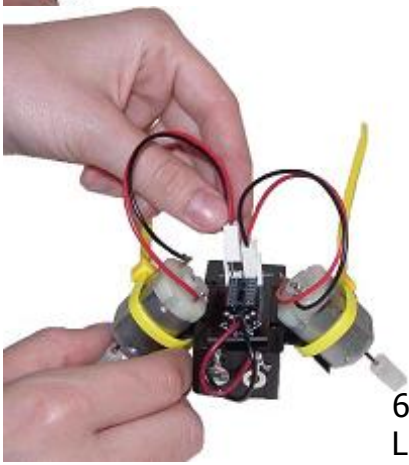
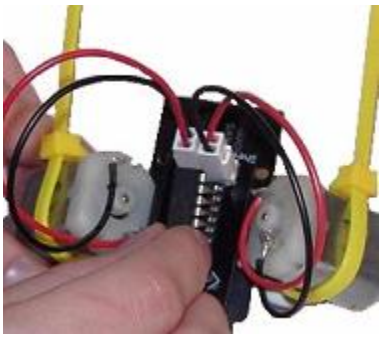
4. Insert the motor connection into the slot closest to that motor. The slot on the right is for the motor on the right. The slot on the left is for the motor on the left.



5. Next, plug in the other motor connection.



6. Pick up the chip. Line up the notch in the chip with the "U" on the board. Insert the chip into the socket. Make sure all the pins match up. This means the notch should be facing towards the "eyes.

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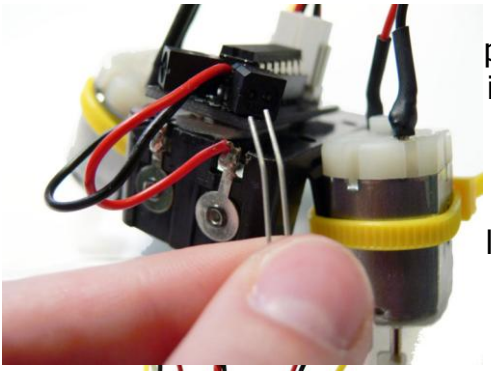
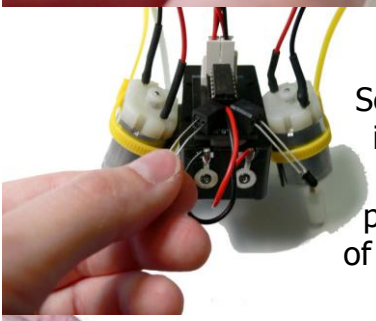


7. Insert the phototransistor into the 2-hole socket as shown in the picture. The longer piece of metal should go into the right hole.



8. Insert the Second phototransistor into the other 2-hole socket. Once again, place the longer piece of metal into the hole on the right.

9. Twist the chenille stems together to help build part of the W.A.S.P.'s body.

10. Insert the twisted chenille stems into one of the holes of the battery holder. Bend in place.

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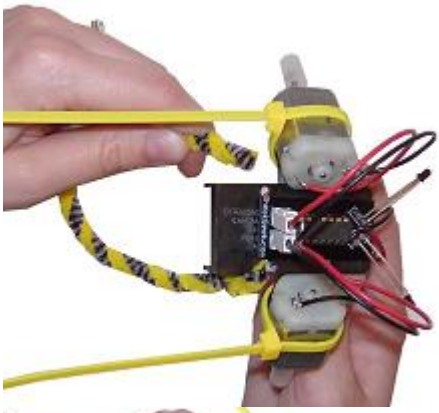
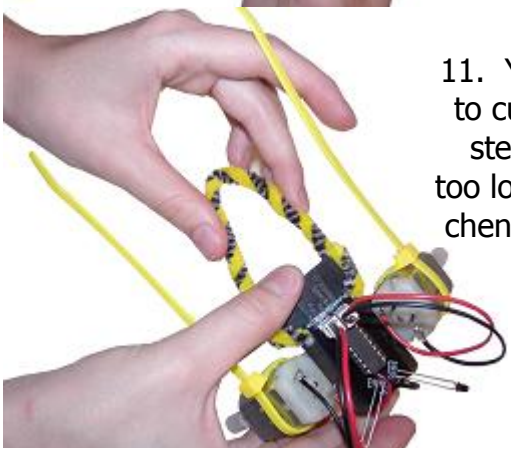
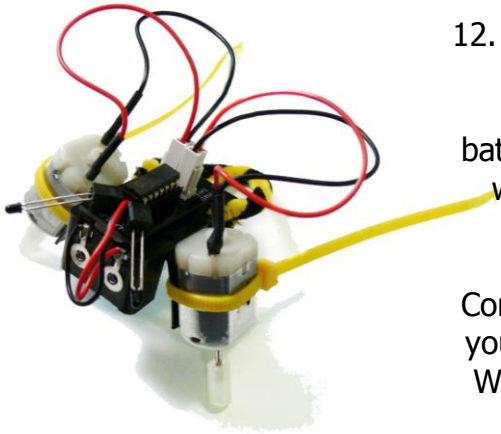


10. Insert the other end of the chenille stems into the other hole in the battery holder and bend in place.



11. You may want to cut the chenille stems if they are too long. Bend the chenille stems into a shape that helps the body of the W.A.S.P. balance.



12. Now, all you need to do is plug in the battery and play with the robot that you just made! Congratulations, you have built a W.A.S.P. robot!

Remember:

When you are done playing with your W.A.S.P. robot, remember to take the battery out!

Notes about my new robot:

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