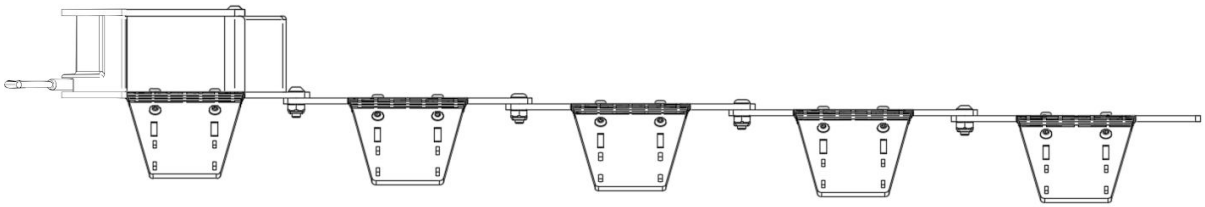
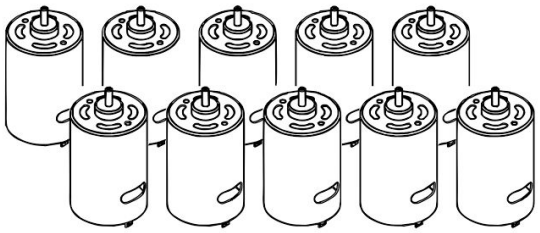
Run Wire and Install Motors

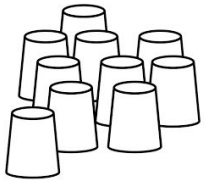
Items required:



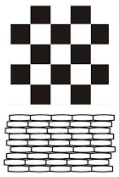
Make-A-Pede Chassis



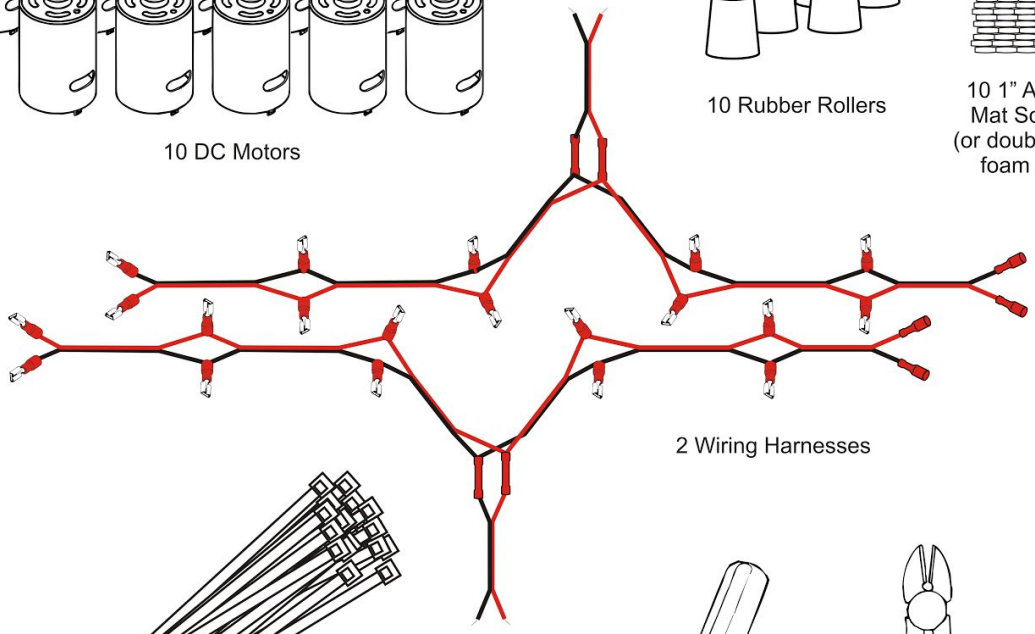
10 DC Motors



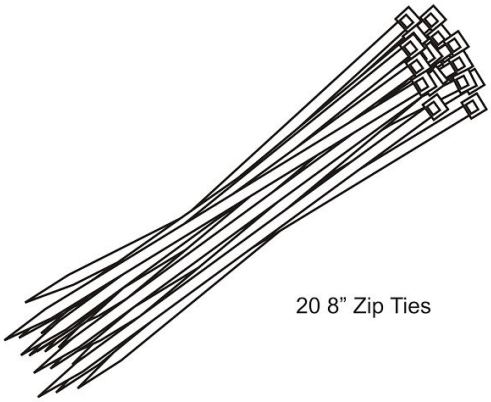
10 Rubber Rollers



10 1” Anti-slip Mat Squares (or double-sided foam tape)

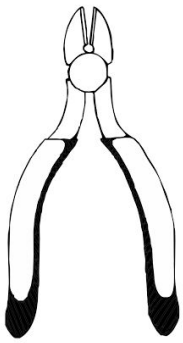


2 Wiring Harnesses



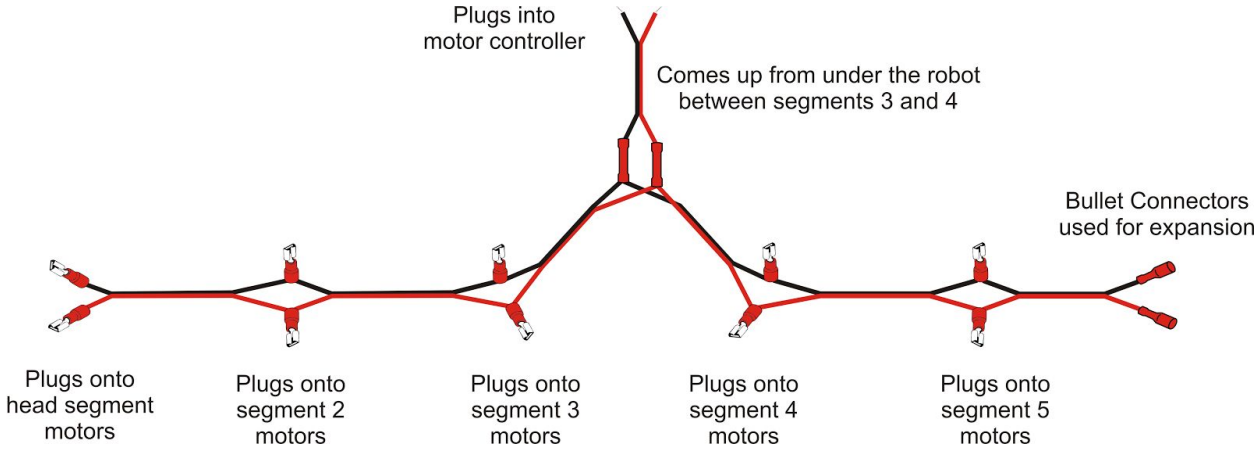
20 8” Zip Ties

Awl

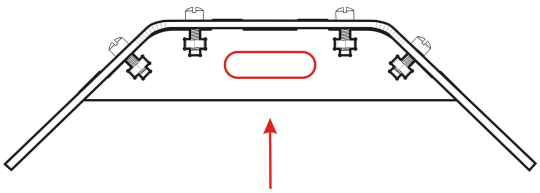


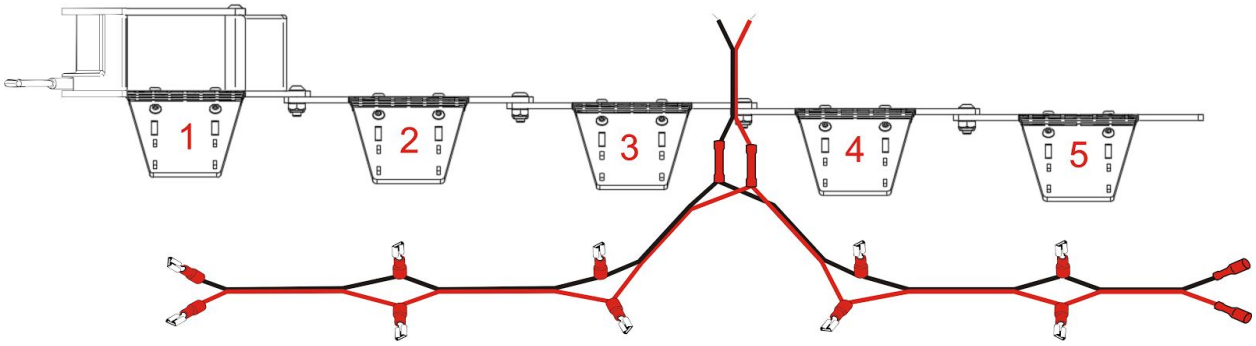
Zip Tie Cutters

Step 1: Familiarize yourself with the parts of the wiring harness. There are two wiring harness: one for the left side motors and one for the right side motors.

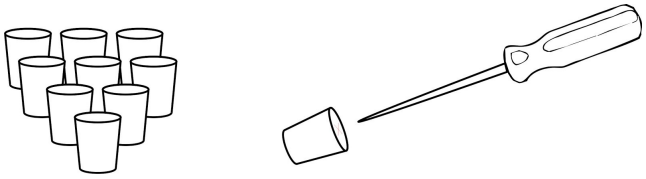


Step 2: Starting between segments 3 and 4, run the end of the wiring harness with the bullet connectors through segment 4 and 5 lining up the motor connectors to where the motors will go. Then run the other end of the wiring harness through segments 3, 2 and 1. Again, lining up the motor connectors to where the motors will go. Repeat for second harness.

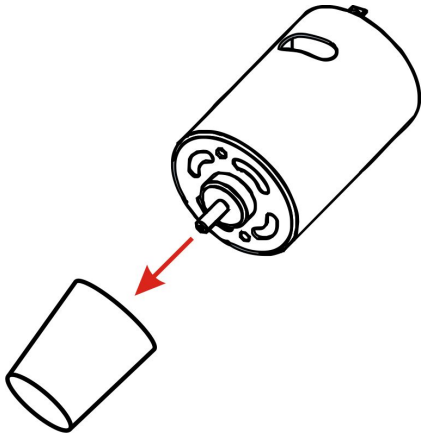




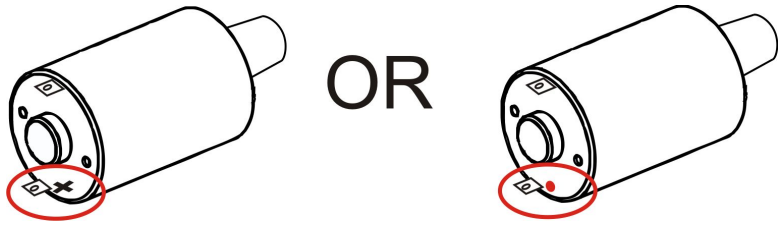
Step 3: Using the awl, poke a hole in the larger end of the rubber stopper. This is easiest to do by using ***moderate*** pressure and twisting the awl into the stopper. Be careful not to go all the way through but go ***almost*** all the way through. If your awl is not very sharp, you can start the hole with a thumbtack and then followup with the awl. Repeat this step for all ten stoppers. ***Caution: Be careful when using a sharp awl. Younger children should get assistance with this step.***



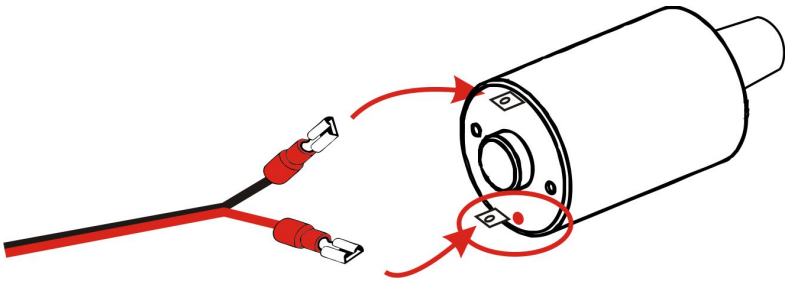
Step 4: Applying moderate pressure, press one of the rubber stoppers onto the motor shaft of one of the motors. Repeat this step for all ten motors.



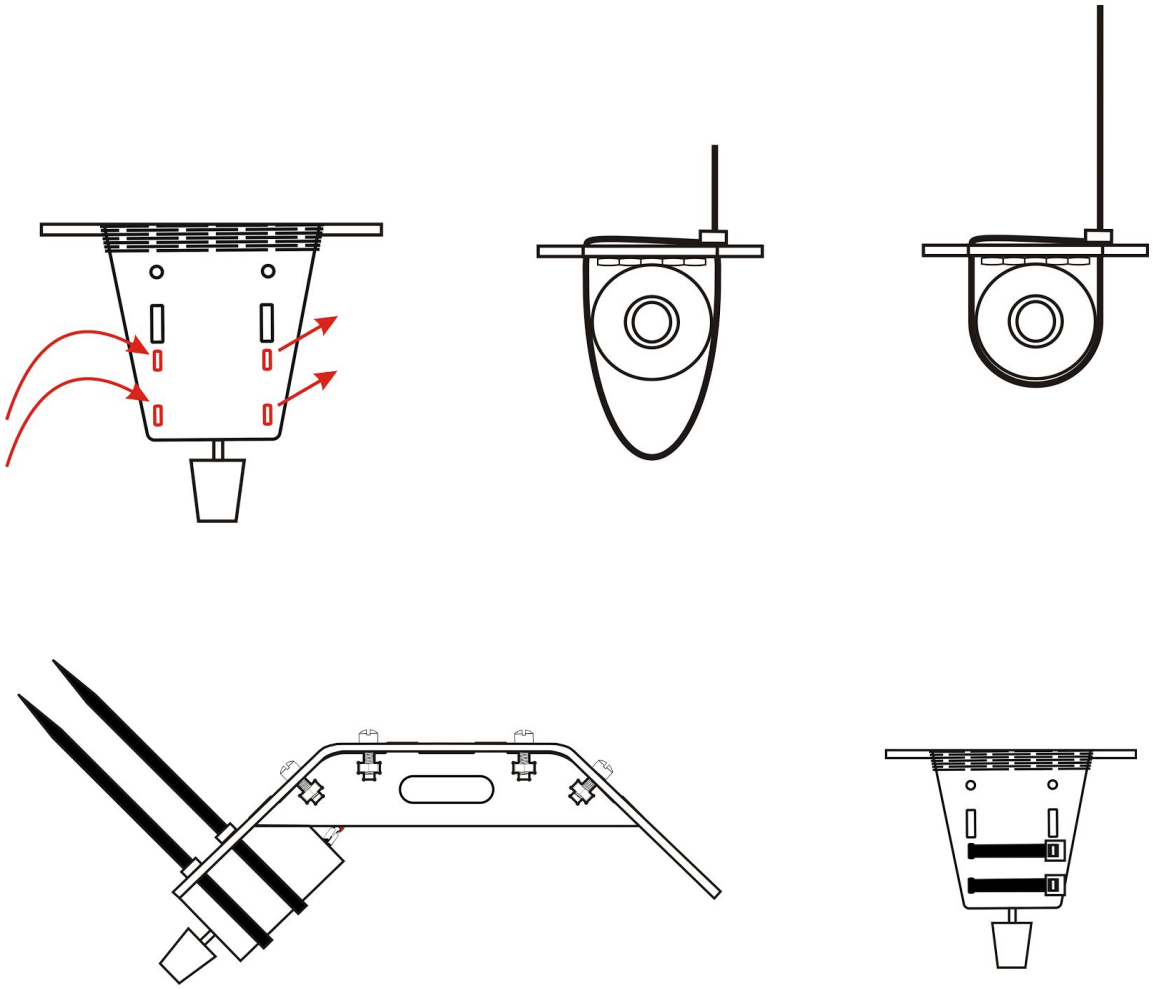
Step 5: All of the motors will have something to indicate the positive terminal on the back of the motor. It could be a '+' marking or, often it is a red dot. Identify this marking. Make sure that you can see it clearly while installing the motors. If it is hard to see, make a clear marking with a permanent marker on the motor casing. All of the positive motor terminals will be connected to the red wire and all the negative terminals will connect to the black wire. This will ensure that all the motors are turning the proper direction.



Step 6: Take one of the motors and carefully push the connector attached to the red wire onto the positive terminal of the motor. Make sure it goes all the way on. Tug on it to make sure it is secure. If it is loose, push it all the way on again and squeeze it gently with a pliers until it is secure. Push the connector attached to the black wire onto the negative terminal ensuring that it is secure as well.



Step 7: Now you are going to attach the motor to the segment using the anti-slip mat pieces and the zip ties. Hold one of the motors in position with an anti-slip mat square between the acrylic and the motor. Position the motor so the that front of the motor body lines up with the edge of the acrylic. The anti-slip mat helps to keep the motor from slipping out of the zip ties. You can also use double-sided foam tape if you have that. Run one zip tie down through the hole and back up again as shown on left below. Then run the end of the zip tie through the clasp until it catches. Position the clasp over the hole as shown in the middle illustration. Tighten the zip tie. Repeat for second zip tie. ***Caution: The zip ties should be pretty tight but do not tighten them so tight that you crack the acrylic.***



Step 9: Now hold on to the end of the zip tie and snip off the end as close to the clasp as possible so as not to leave a sharp end. ***Caution: Flying zip tie ends can cause injury to the eyes. Hold the end of the zip tie or cover the end with your hand while snipping the end.***

Repeat steps 6-9 for all motors.