

Always be careful for short circuits - especially around the battery  
Push the wires fully down into the breadboard to ensure connection

5V regulator gets very hot - careful!!!

Prepare the board

Short orange wires to connect the two ends of each of the side lines together

Red long - connect Live bar on left to right

Red long - connect GND bar on left to right

2 screw terminal - 62J 64J

5V regulator - 58H 60H

3 screw terminal - 50F 54F

H-bridge terminal 1 in 40E down to 47F. Take care for terminal 1 position.

3 screw terminal - 33A 37A

White short wire - 62G 59G GND battery to 5V regulator

Brown short wire - 64F 60F 9V battery to reg input (to be removed later for switch)

Blue short - 59I GND bar regulator to GND bar

Brown short - 58I Live bar regulator to bar

short blue wires connect H-bridge terminal 4,5,12,13 (43,44) to GND wire

Brown short - Live bar 47D Live bar to Hbridge t8 Motor power

Brown short - Live bar 40G Live to Hbridge t16

Grey short - 42J 50J Hbridge Y4 t14 to screw terminal

Purple short - 45I 52I Hbridge Y3 t11 to screw terminal

Grey short - 45C 37C Hbridge Y2 t6 to screw terminal

Purple short - 42D 35D Hbridge Y1 t3 to screw terminal

Red long 47G Live bar Enable Hbridge to Live

Red long 40B Live bar Enable Hbridge to Live

---

Split the wire on the end of the motors 2cm. use the wire strippers to strip 1cm of wire.  
Fan the fibrous wire and twist the wires so as to create one strong wire from many.

Affix the breadboard to the robot platform using velcro.

Connect the motor wires to the 3 screw terminals. take care to connect the black to purple  
and red to grey. Black 35 Red 37 Red 50 Black 52

Connect the servo wires to the breadboard in 20F 21F 22F

Remove the brown wire in 60F 64F and replace with the two wires from the switch

Connect the motor control wires to arduino

41A to arduino green pin9

41G to arduino yellow pin6

46A to arduino green pin10

46G to arduino yellow pin5

Power the arduino with Vin and GND

60J to arduino Vin green

29 GND bar to arduino GND red

Servo connection

20H yellow to arduino pin11

21H purple to Live bar

22I blue to GND bar (servo connector joins these)

IR sensor connection

Red to Live bar

Black to GND bar

Yellow to Arduino pin A0