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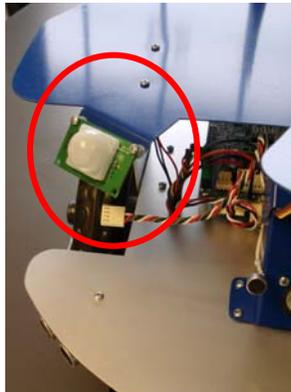
Using Motor Calibration Board (P/N: MCB2005) for X80 series robots

NOTE: This Calibration board is used to adjust the friction compensation used in the motor control and to allow robot going in a straight line when commanding same speed.

Step 1: Turn off robot, prepare 1 fine flat screwdriver and 1 Phillips screwdriver



Step 2: Unplug the two human sensor cables

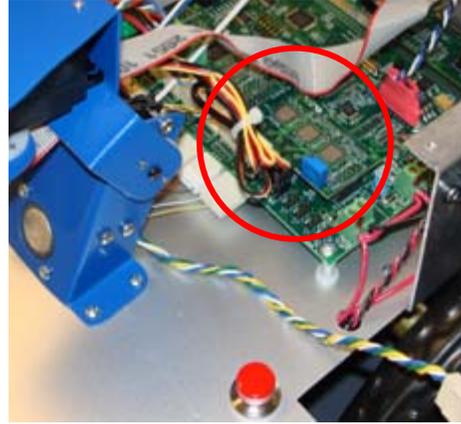
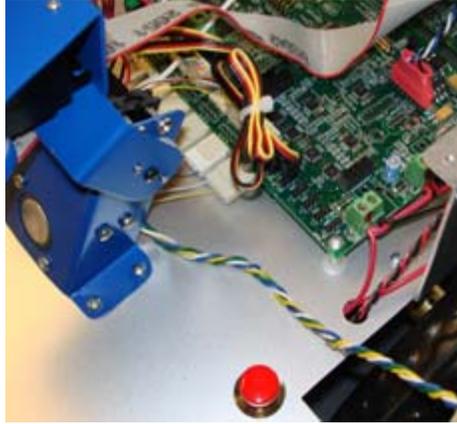


Step 3: Remove the 4 cover plate mounting screws and take off the top cover



Step 4: Upgrade the PMS5005 with the new firmware - X80v20.dri
* For detail instruction, please refer to PMS5005 user manual page 13,
http://www.drrobot.com/products/item_downloads/PMS5005_1.pdf

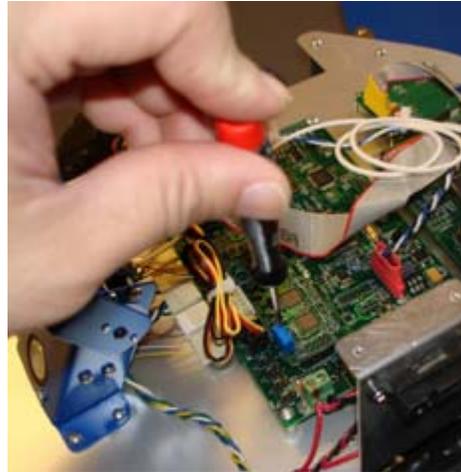
Step 5: Turn off robot, plug the Motor Calibration Board into the second motor drive module position.



Step 6: Put the robot on the floor and turn on the robot. After running the gateway program to connect the robot, run X80 program and click the go **Forward** button. Robot should move forward.

Step 7: Test the robot on the floor, if the robot is not going in a straight line and

- If robot drags to the right (clockwise viewed from top), you should turn the potentiometer on the Motor Calibration Board clockwise with a fine flat screwdriver;
- If robot drags to the left (counter-clockwise viewed from top), you should turn the potentiometer on the Motor Calibration Board counter-clockwise with a fine flat screwdriver;



Step 8: Repeat Step 7 until the robot is heading straight.

Step 9: After finishing the adjustment, turn off robot, assemble the top cover and plug the human sensors cables back.