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# Roomba Discovery 4XXX & 4XX Servicing and Repair Guide

## Chapter 5: Replacing the Motherboard

This guide explains how to replace the motherboard on a Roomba Discovery 4XXX or 4XX series, pictured below:

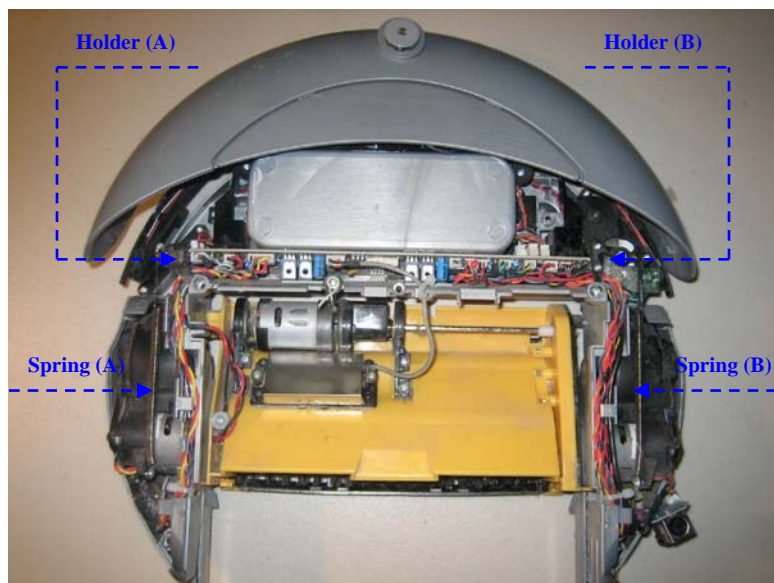


Please note that if your Roomba is under warranty, servicing the robot will void the warranty. For robots under warranty, please consult the warranty policy of the distributor where purchased, and/or contact iRobot's customer service.

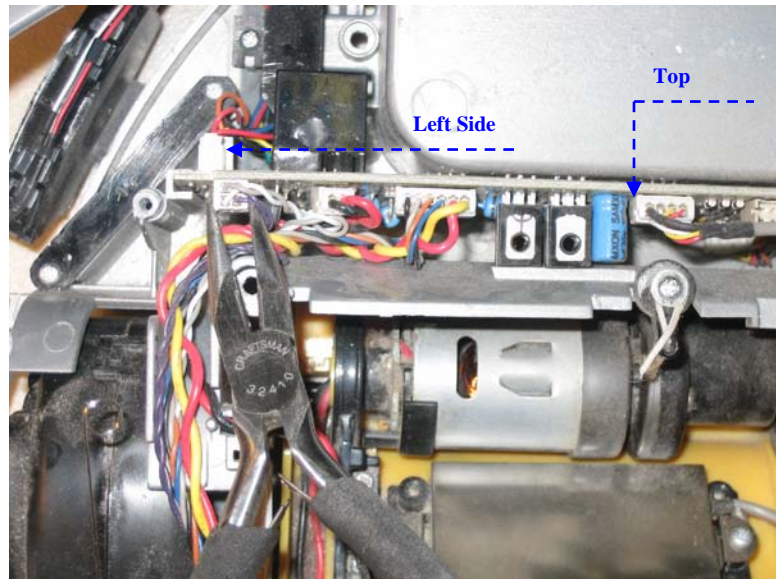
## 5.1 Motherboard Replacement

### Removal Phase

- 1- Unhook Spring (A) and (B) from Holder (A) and (B). Then Remove Holders (A) and (B).



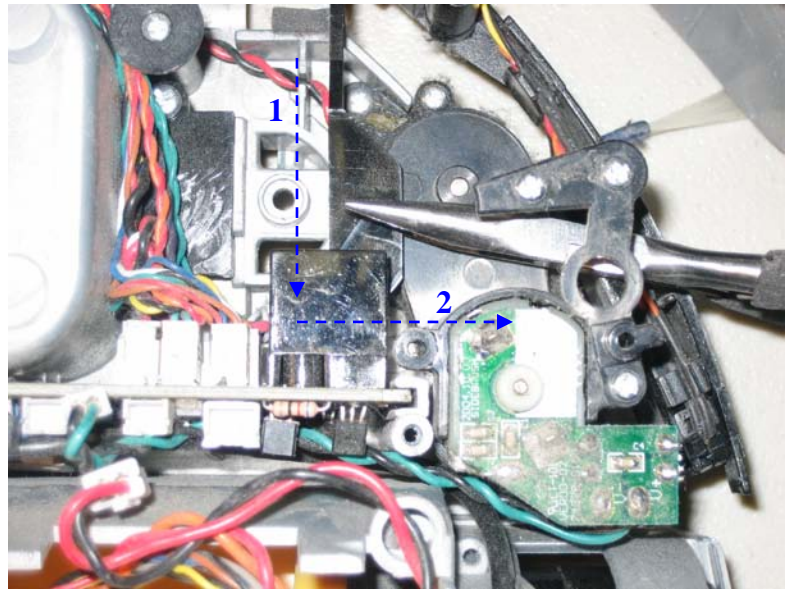
- 2- Remove the connectors on the motherboard on top and on the left side of the motherboard.



- 3- Remove the lever for the bump sensors from the motherboard. Using a pair of pliers, pull down (towards motherboard) and then to the left.



- 4- Remove the contact for the bump sensor on the right side using the same method as on the left side.



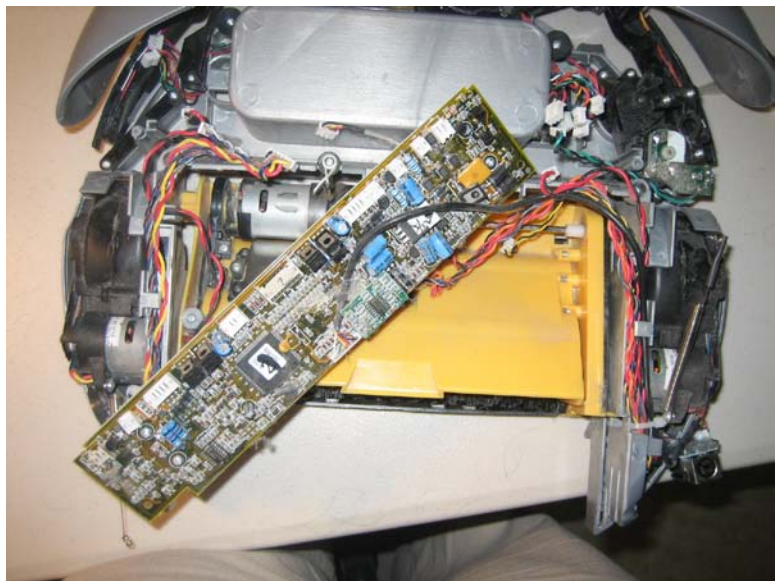
- 5- Pull the left side of the motherboard up out of its socket. This will make it easier to remove the connections on the right side of the motherboard.



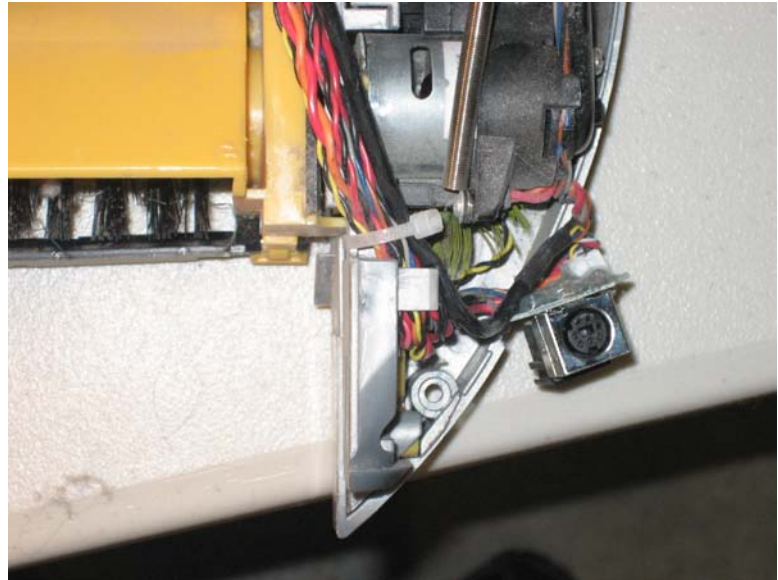
**6-** Remove the connections on the right side of the motherboard.



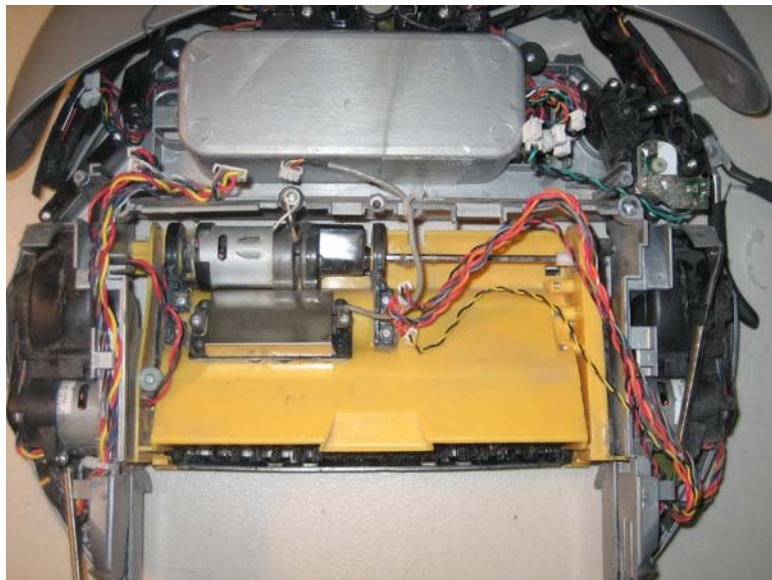
**7-** Remove the motherboard from its sockets.



**8-** Remove any tie-wrap or glue from the motherboard wires.

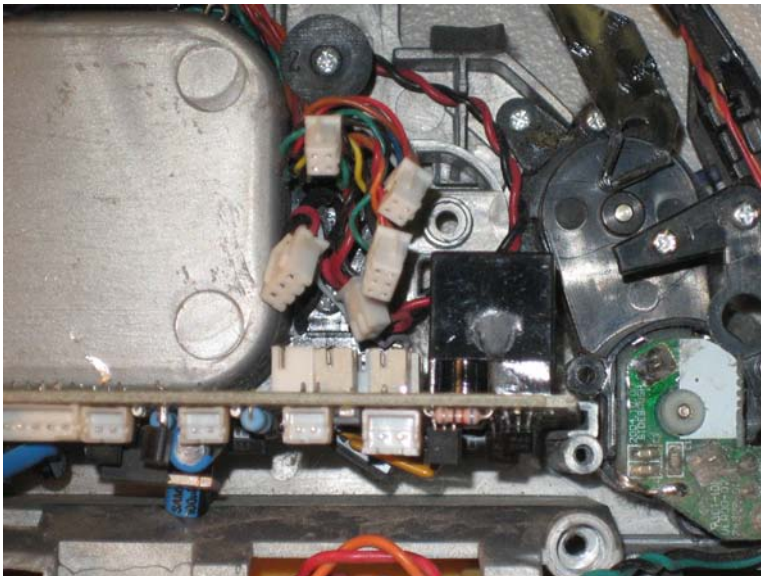


**9-** Remove the motherboard.



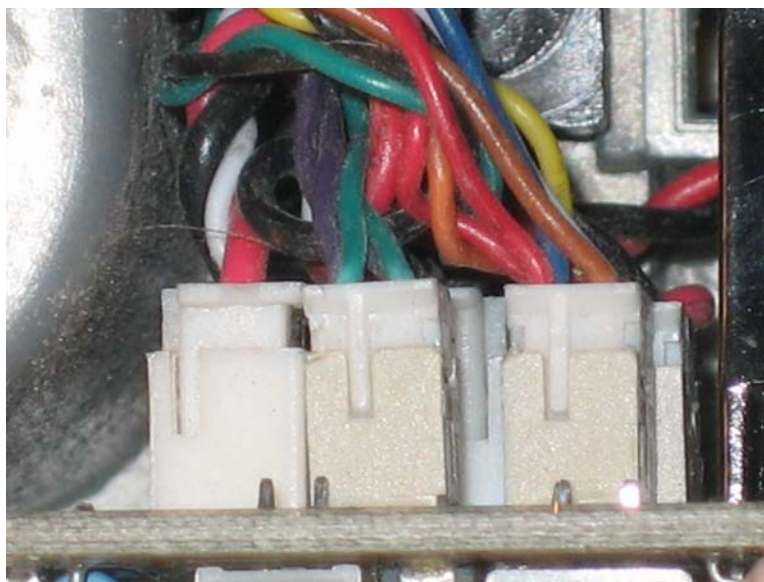
**Assembly Phase**

- 1- Place the replacement motherboard in the motherboard sockets.



- 2- Connect the connectors on the right side of the motherboard. most connectors should only connect in one place. Make sure to connect the green and purple wire in the middle and the brown, red, white and blue connector to the right.

For more details on the motherboard connections, see [Roomba Discovery 4XXX & 4XX Servicing and Repair Guide, Ch. 13: Motherboard Connections.](#)



- 3- Reconnect the bump sensor levers to the motherboard. Pull on the lever with pliers and insert it into the left side of the bump sensor. Repeat this for the right side bumper lever also.



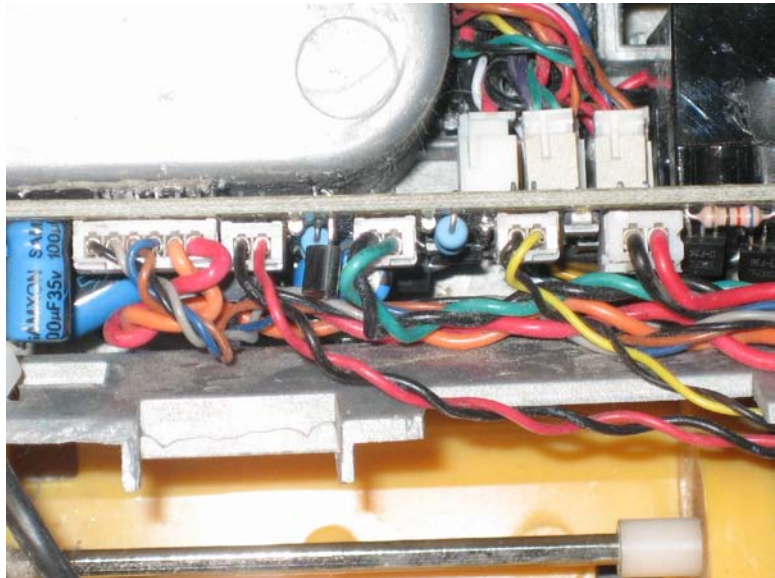
- 4- Connect the other connections to the motherboard. Most connectors can go only in one place.

For more details on the motherboard connections, see [Roomba Discovery 4XXX & 4XX Servicing and Repair Guide, Ch. 13: Motherboard Connections](#).



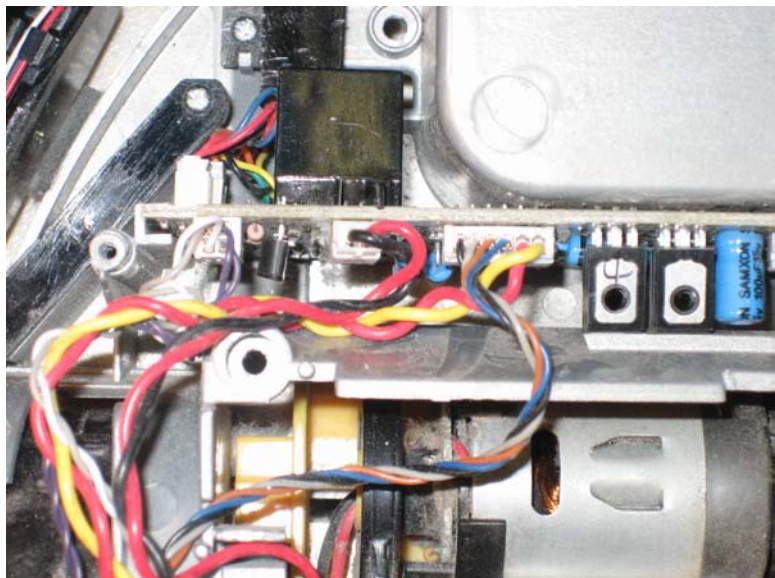
- 5- Right side connections:**  
Make sure to connect the red and black connector beside the right drive wheel connection, then connect the green and black wire and the yellow and black wire after that.

For more details on the motherboard connections, see [Roomba Discovery 4XXX & 4XX Servicing and Repair Guide, Ch. 13: Motherboard Connections.](#)

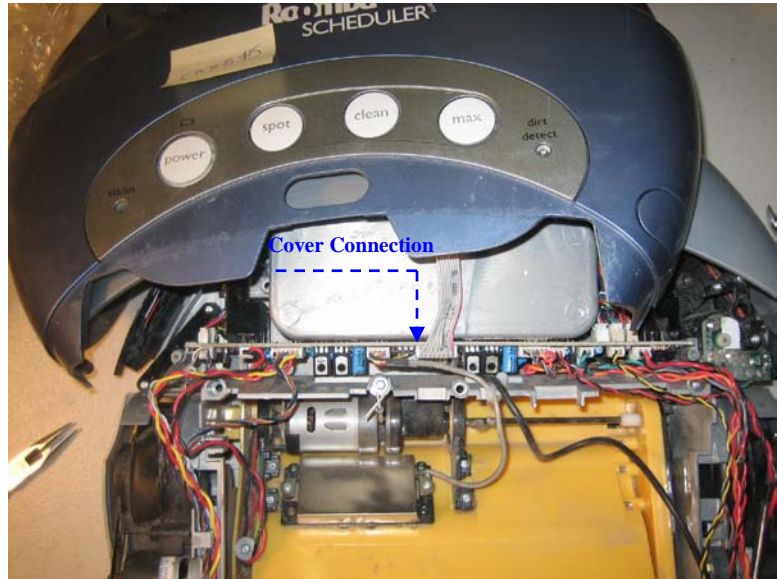


- 6- Left Side Connections:**  
Do as before, reconnecting the different connectors in their respective places.

For more details on the motherboard connections, see [Roomba Discovery 4XXX & 4XX Servicing and Repair Guide, Ch. 13: Motherboard Connections.](#)



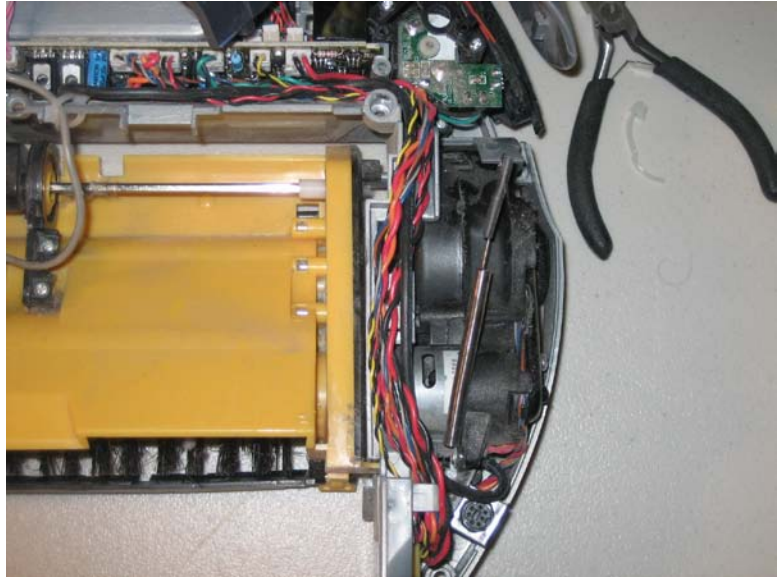
**7-** Connect Roomba's cover to the motherboard.



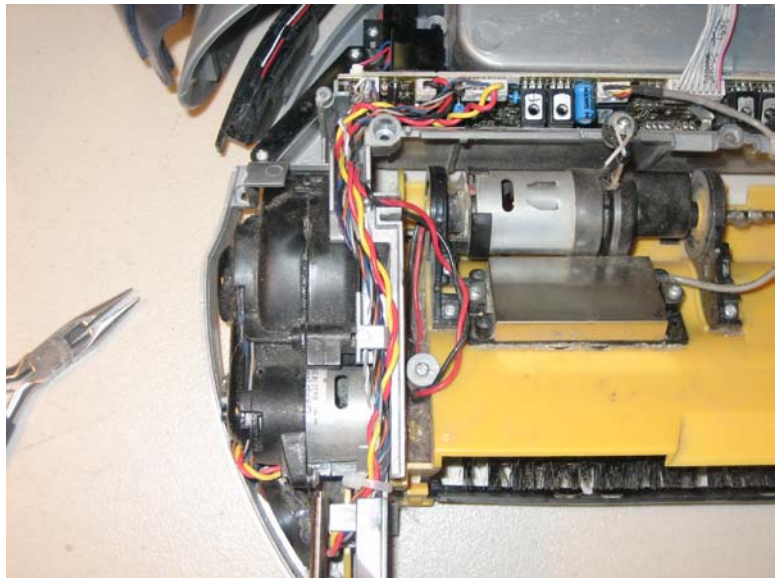
**8-** Place the power and SCI plug correctly in its socket.



**9-** Place the wires on the right side correctly.



**10-** Place the wires on the left side correctly.



**11-** Place hot glue where needed (as shown in figure), and you are done.

[For details on how to reassemble the Roomba's frame, please see the Roomba Discovery 4XXX & 4XX Servicing and Repair Guide, Ch. 2: How to Open Roomba / Replace Frame.](#)

