

Omnibot



The Old Robots Web Site

Omnibot[®]2000 - Disassembly Procedure

This process Addresses the Mechanical Disassembly of the Robot and does not address the Electronics. Accompany this Procedure is additional pictures that you can expand to see more details as needed.

This Robot has IC's and Transistors and are of the earlier designs. Static discharge can damage the electronics. It is recommended that you have and use a Static grounding wrist strap.



1. Make sure the robot is shut off. Open the rear door and remove the battery retainer and the large 6 V 4 AH DC rechargeable battery and the two small AA battery's. Close the door.

2. Turn the robot on to his back make sure that the head is free and not supporting the robot, then remove the six screws from the bottom of the robot keeping the base and housing together.



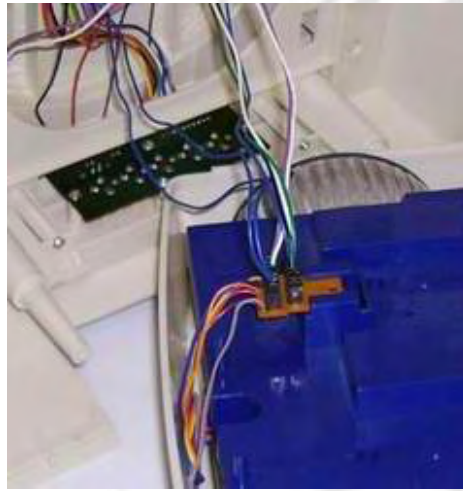
Keep these longer screws separate to reinstall the base.





3. Separate the bottom base slowly from the housing and remove the draw from the robot.

4. Turn the base and unplug the three plugs from the drive box that go to the robot. Make sure that you record where the plugs go.

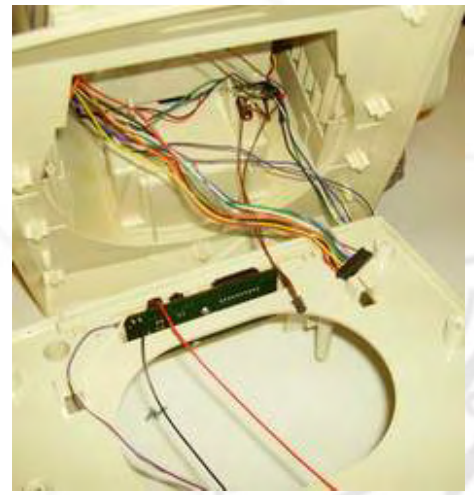
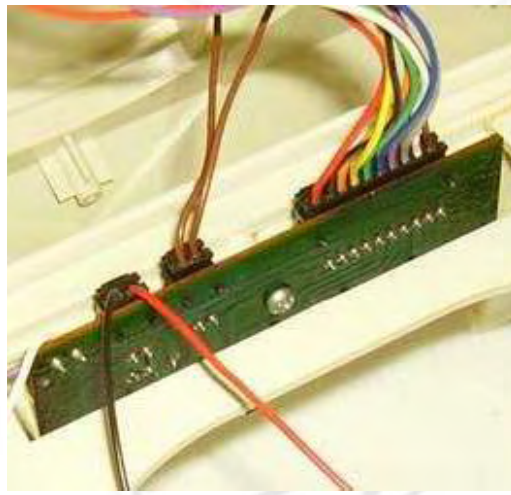
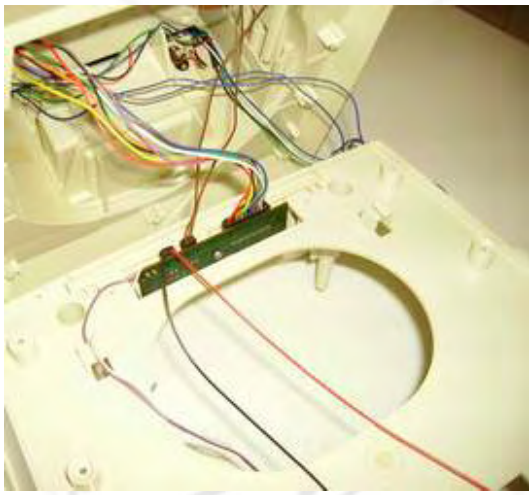


5. Remove the screws from the base housing of the robot. With wires still attached, separate the base housing from the robot, turn it and lay it flat on the table. Do not try to remove it yet.

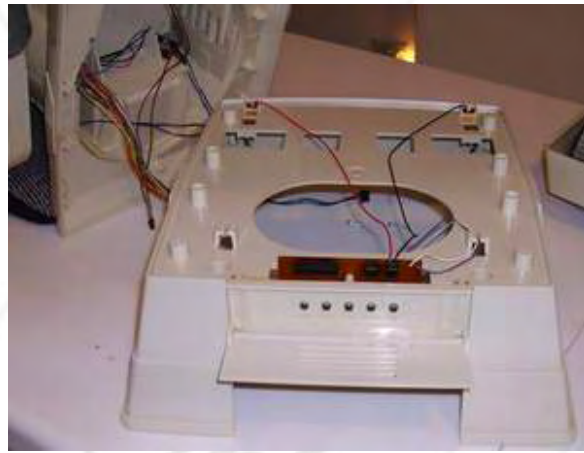


6. Leave the wires for the tray and remove the wires and plugs that go to the external Jacks board on the base housing from the robot.

* (ANTENNA - If your robot has a base antenna you have to detach it at this stage.)



7. Remove the base housing from the robot.



8. Open the rear door and remove the two plugs from the accessories interface board on the door. These two plugs and harness will have to be pushed into the robot. Close the door.



9. Remove the six screws from the back of the robot, and spread it apart slowly and very little (1 inch). (BE CAREFUL)



10. Spread the body apart just far enough to remove the left arm, put it down, and lift the head out. The robot back is still attached to the front by the wiring and the right arm can slip out and fall (BE CAREFUL)

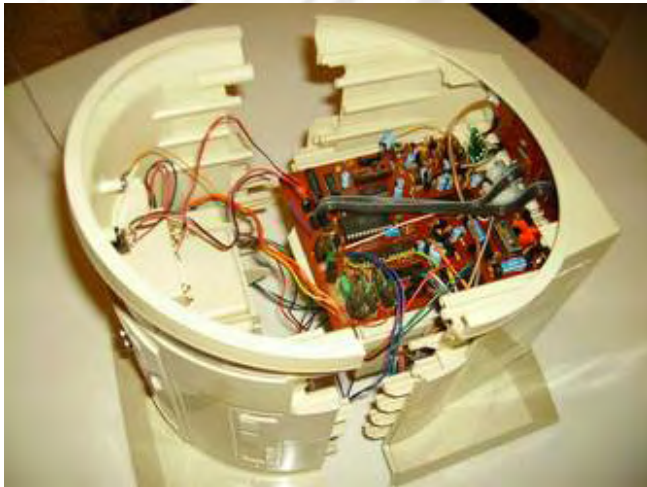
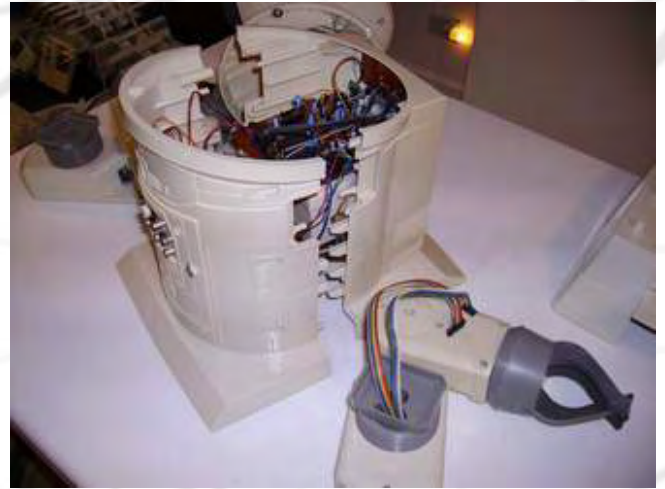
11. Un-plug the head from the circuit board, two plugs, and put the head down.



12. Un-plug the right arm cables from the circuit board, two cables and plugs.



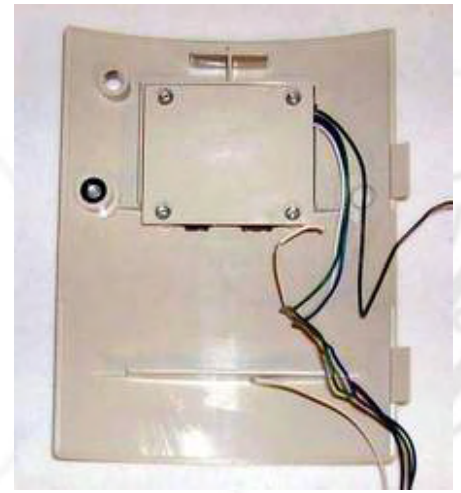
13. Remove the right arm from the body and put it down.



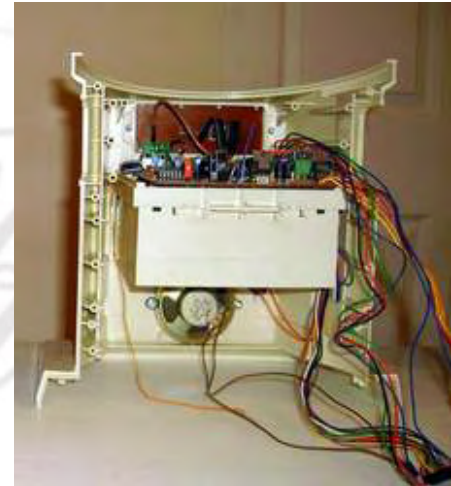
14. The robot back is still attached to the front. You have to un-plug the front housing from the back housing by disconnecting the remaining wires. Take special care in disconnecting the clock wires for these are push in connectors and it is easy to damage them.

* (ANTENNA - If your robot has a back antenna you have to detach it at this stage.)

15. Push the one plug and harness to the outside of the robot. Push the other two plugs and harness to the inside of the robot. With all of the plugs and harness clear from the rear door, remove the rear door.

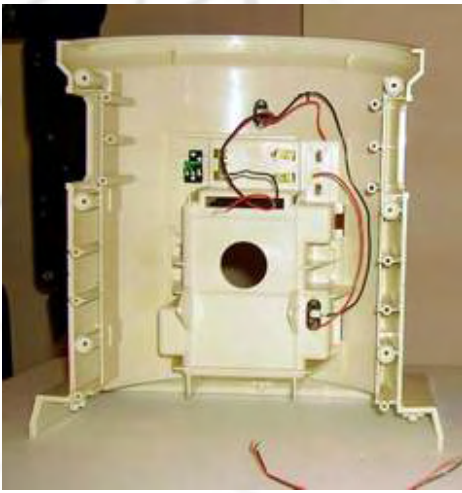


16. Separate the back housing from the front housing.



17. You have now disassembled the major components of the robot. Disassembly of the components will be addressed separately. To reassemble the robot reverse the procedure.

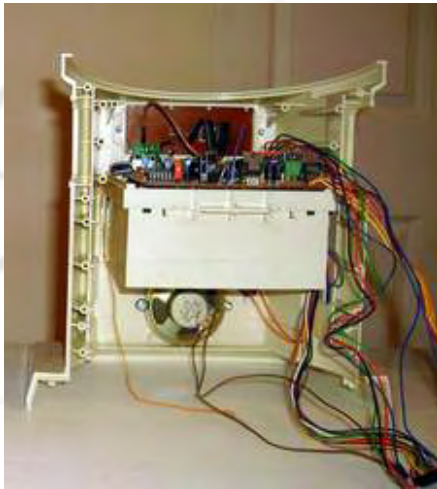
Following is full size pictures of what is contained in this document, plus more information for a more detail understanding and view.



Back - Inside



Back - Outside



Front - Inside



Front - Outside



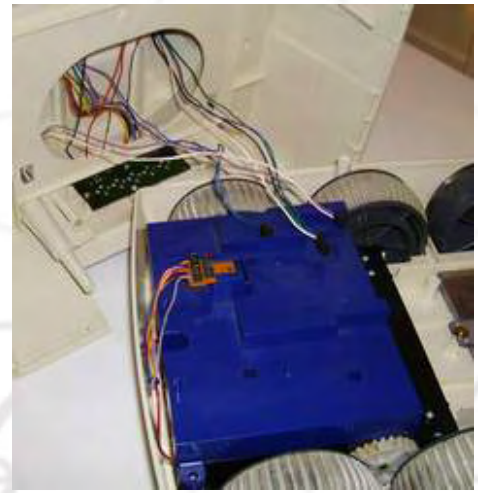
Robot - Base



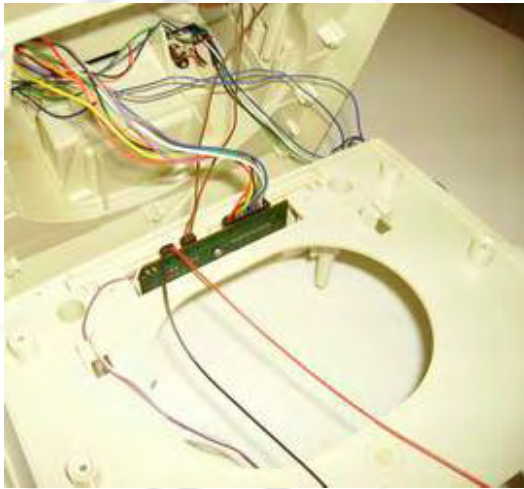
Base with Draw



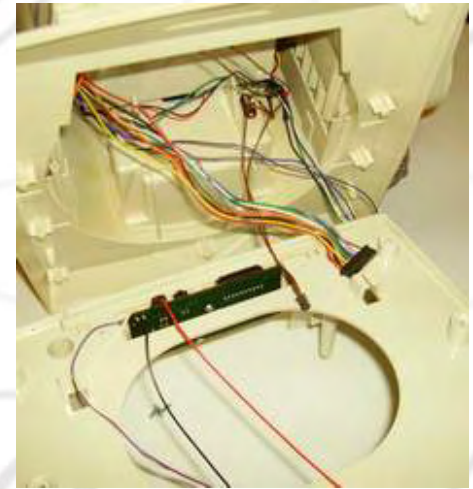
Base - Outside



Base - Outside



Base Extension - Plugs In



Base Extension - Plugs Out



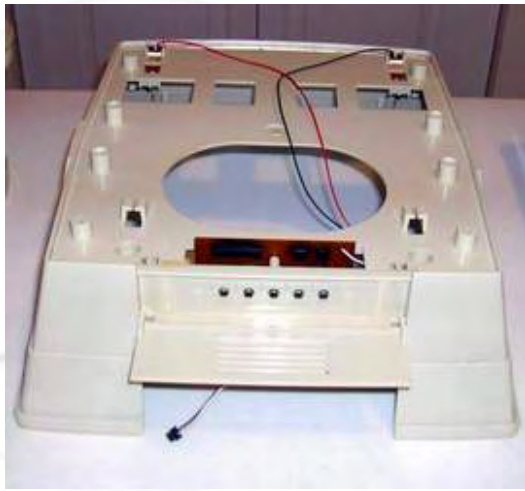
Robot Base Extension / Without Trey



Robot Base Extension / With Trey

FYI - Shown is the robot **without** the tray to show you the robot looks like with and without the tray.

FYI - Shown is the robot **with** the tray attached to show you what the tray looks like inserted into the robot.



Base Extension Housing & Door - Rear



Base Extension Housing - Front



Base with Draw - Inside



Base - Outside



Left Arm



Right Arm With Electronics



Head



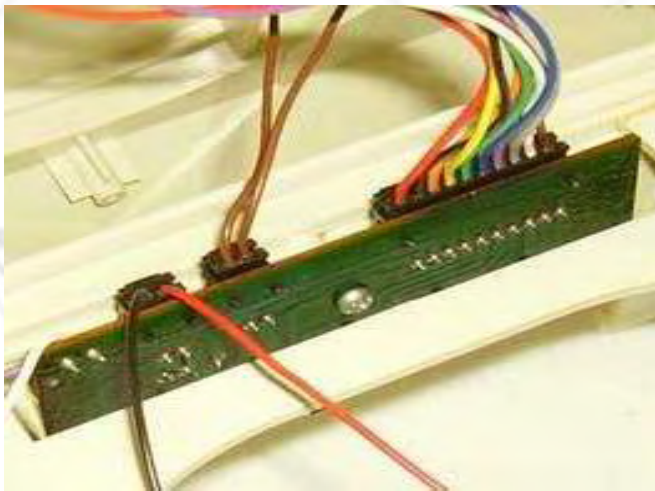
Robot Rear With Door Open



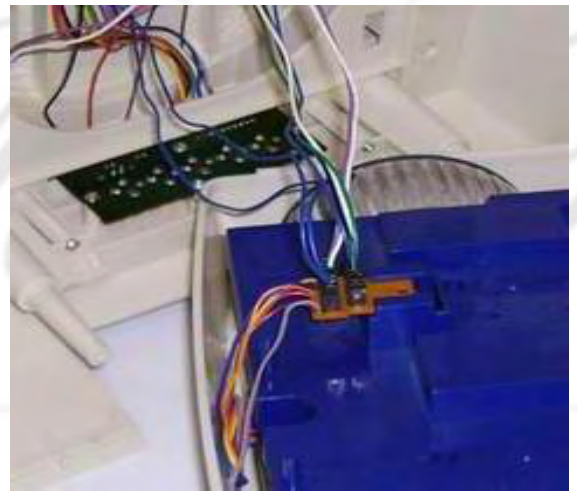
Battery Compartment



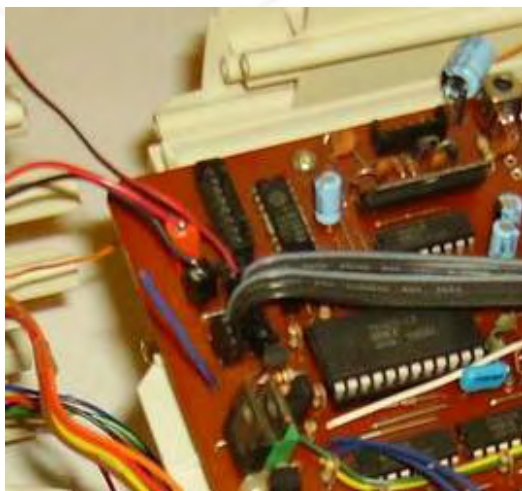
Battery Compartment Door



Power Distribution Board



Power Train Plugs



Circuit Board With Power



Right Arm Power Connectors



Robot Parts



Robot Parts

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The Old Robots Web Site

Omnibot[®]2000 - Tray Disassembly Procedure

This process Addresses the Mechanical Disassembly of the Robot Tray. Follow all of the steps in sequence to achieve better results. This is an example of a actual problem that was resolved.

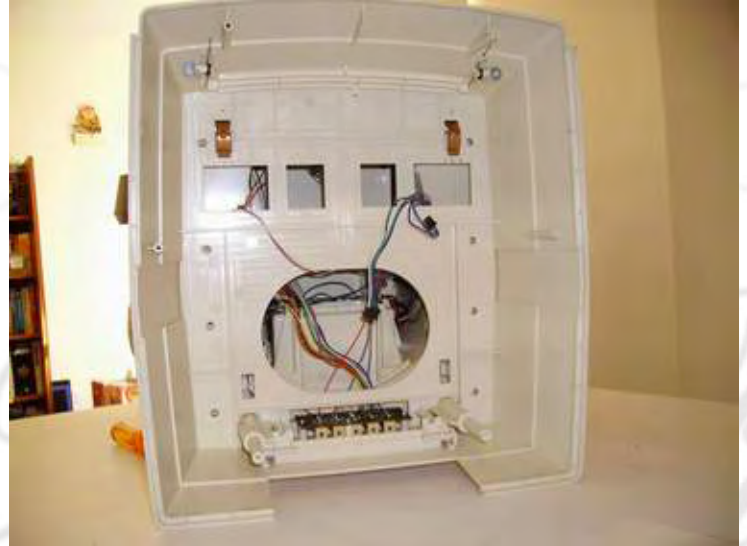
By clicking on the pictures you will get an Overly Enlarged Picture for a more detail view if needed.

The Omnibot 2000 Robot With And Without Tray



Robot Base Extension / With Tray

FYI - Shown is the robot **with** the tray attached to show you what the tray looks like inserted into the robot.

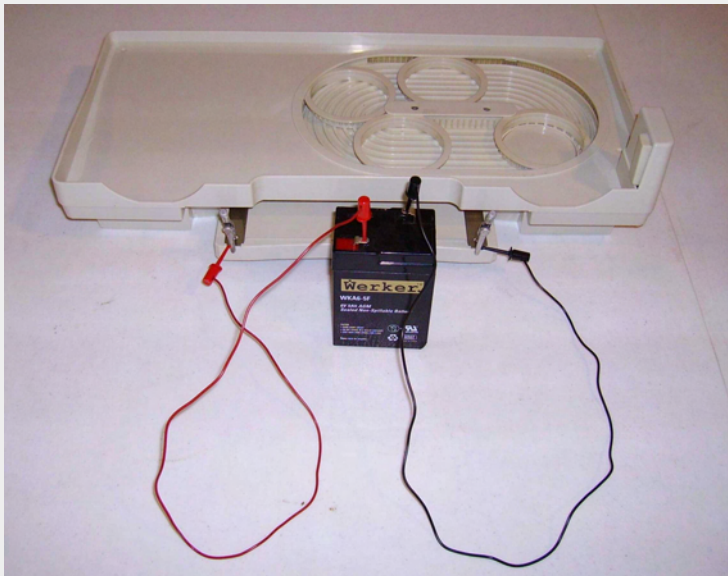


Robot Base Extension / Without Tray

FYI - Shown is the robot **without** the tray to show you the robot looks like with and without the tray.

Disassembly the Omnibot 2000 Tray

Testing the Omnibot 2000 Tray



1. Hook up a 6V 4.0 AH battery to the tray. The negative side go to the terminal closest to the switch and the positive goes furthest from the switch.
- 2 Press the switch and hold it down for a few moments. The internal area that hold the glass on the tray should start moving and go through a complete cycle.
3. If the tray does not go through a complete cycle it is broken.

Cleaning the Omnibot 2000 Tray



4. Place the tray flat on the table.
5. Take the two screws out from the centre of the turn table and remove the bracket.
6. Remove the four travelling rings from the turn table.
7. Clean the guides in the table and rings from the table.

Note: In the disassembly process leave the rings out and go to the next step. If you are only cleaning the table insert the rings and reverse the process.



Continuing Disassembly the Omnibot 2000 Tray

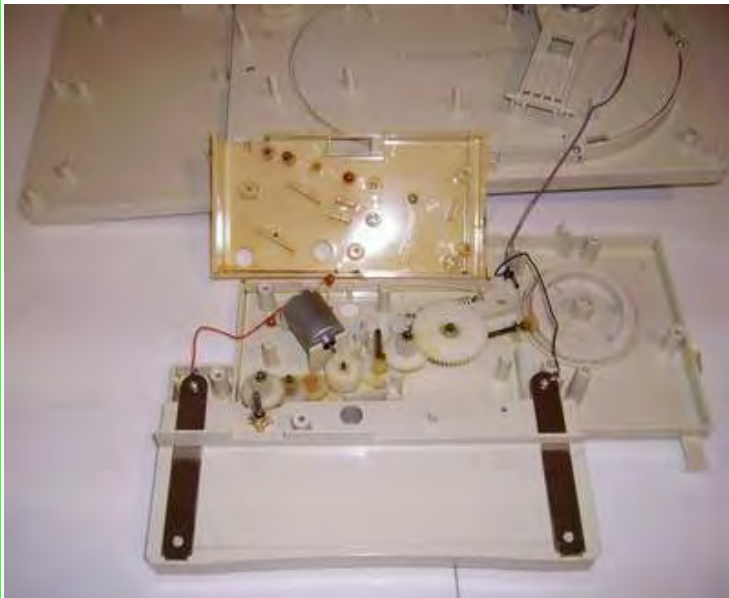
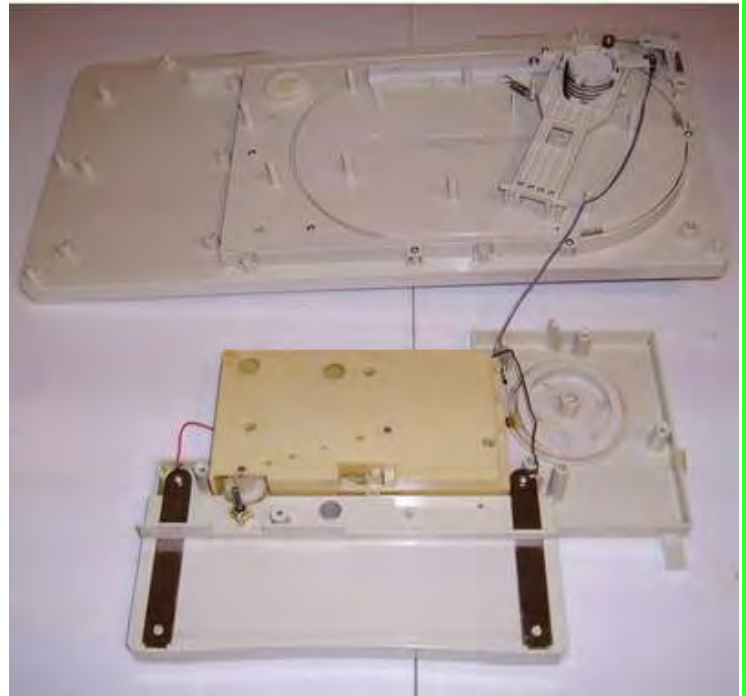
8. Turn the tray over and unscrew 10 screws and lift off the back.



9. Remove the six screws from the tray housing.

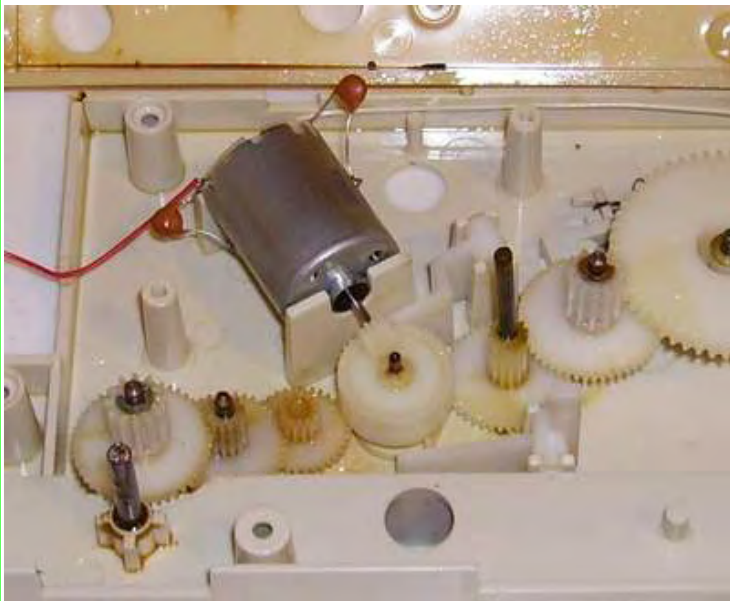


10. Separate the slowly and turn over and lay it on the table. Do not stretch the wire that attach to the tray top.



11. Remove the four screws from the gear assembly and separate carefully. The gears are attached to both sides of the gear box.
BE CAREFUL.

12. Inspect the box to insure that the gears mesh correctly and there are no stripped teeth on the gears. In this picture the gear on the motor is not meshing with the other gear. It is loose and slipped forward on the motor shaft.

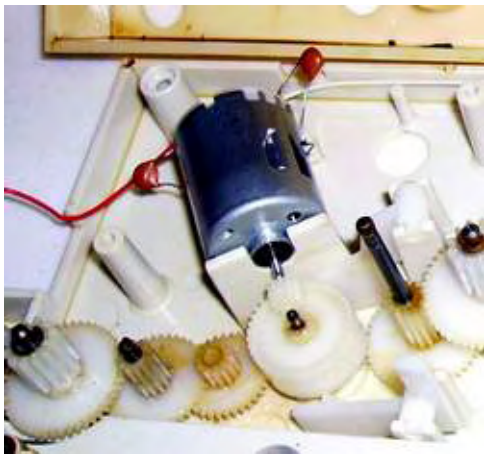


13. A test and closer view of the motor shows that it is loose on the shaft.

Repair of the Omnibot 2000 Tray/Motor Gear

14. Remove the motor with the gear and repair.

15. Fasten the gear to the motor shaft through knurling the motor shaft. Remember this is a old gear and reinstall the motor/gear.



To Reassemble reverse the procedure

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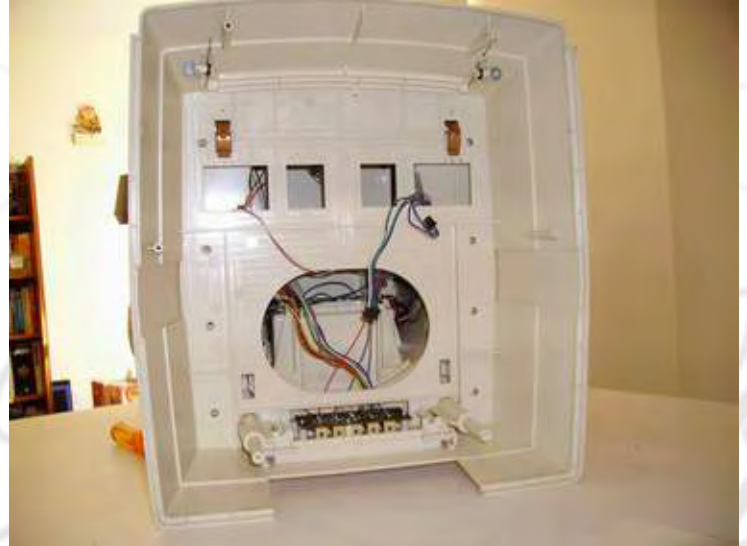
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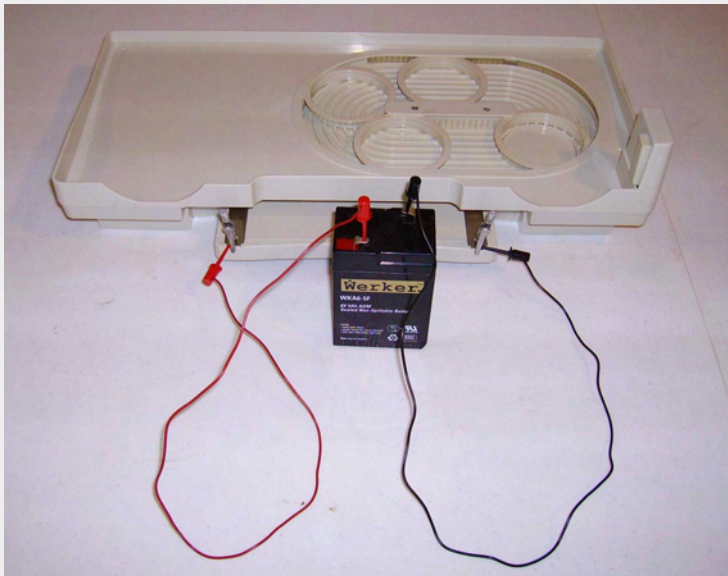


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Continuing Disassembly the Omnibot 2000 Tray

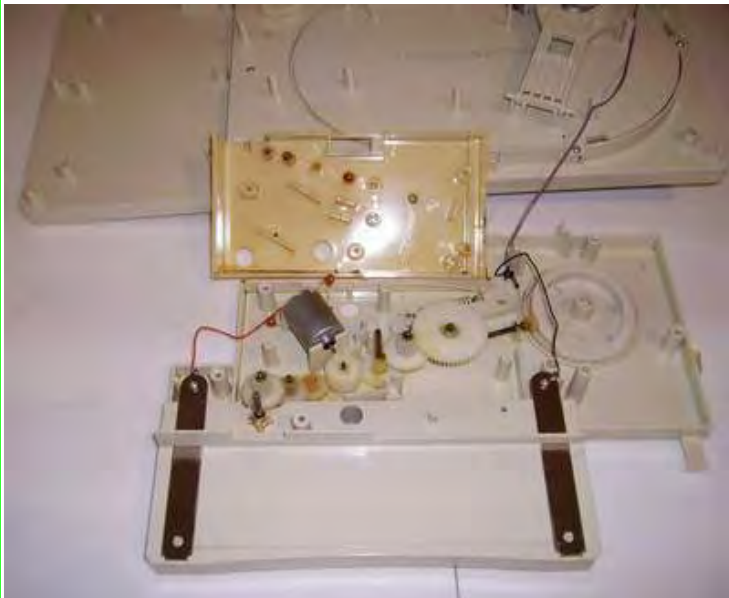
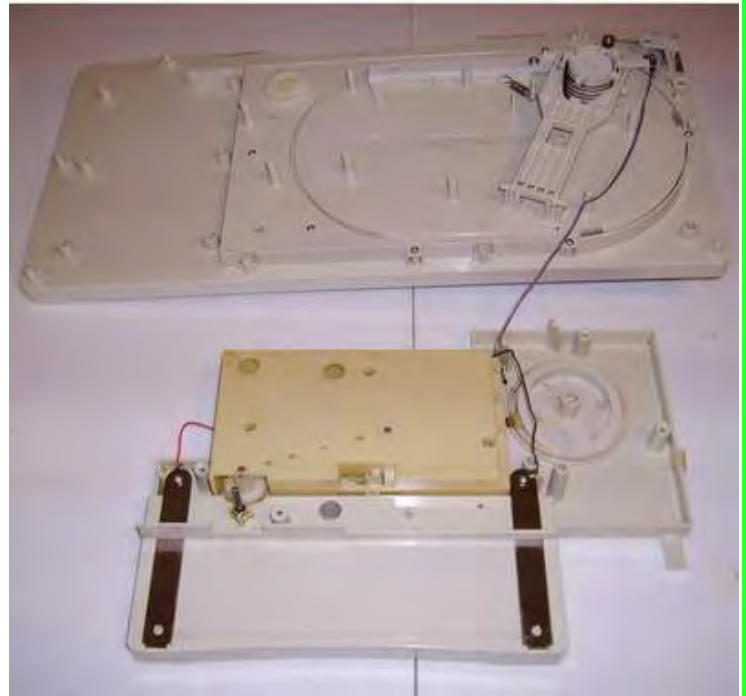
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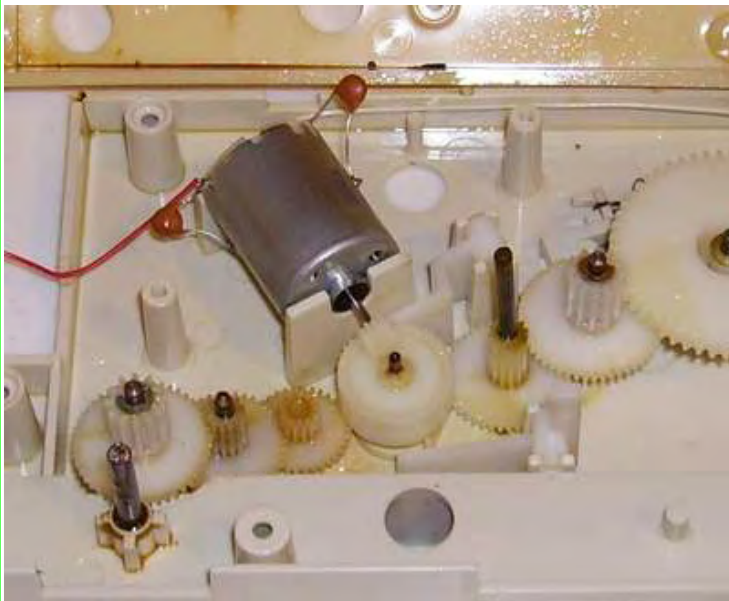
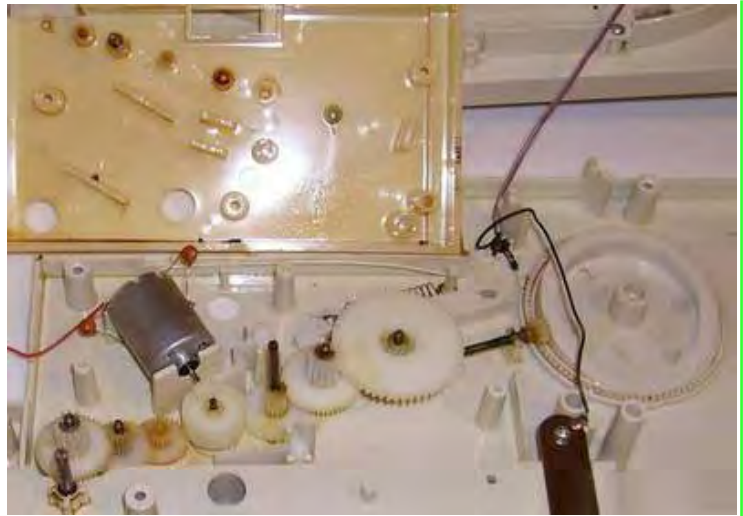


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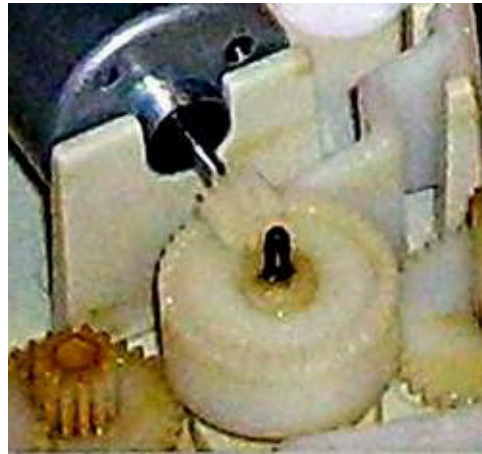


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Repair of the Omnibot 2000 Tray/Motor Gear

14. Remove the motor with the gear and repair.

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To Reassemble reverse the procedure

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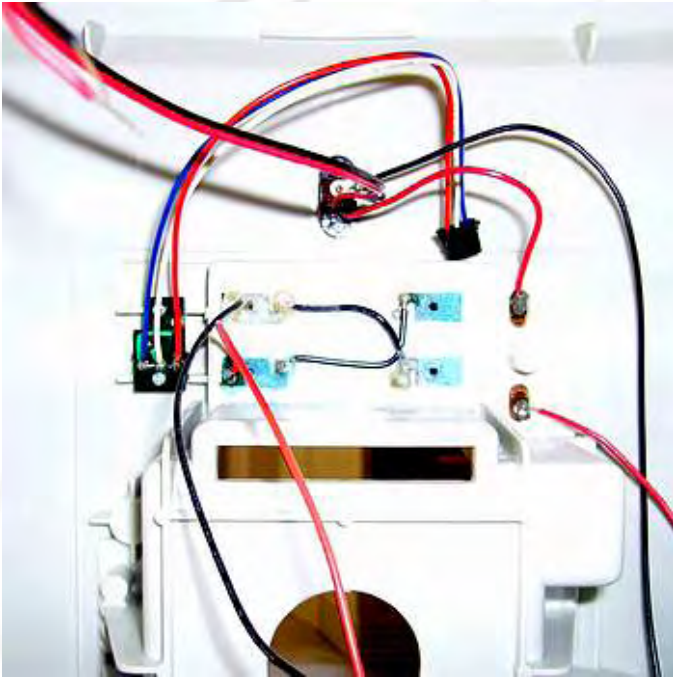
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Hearoid Omnibot[®] - Battery Contact Replacement

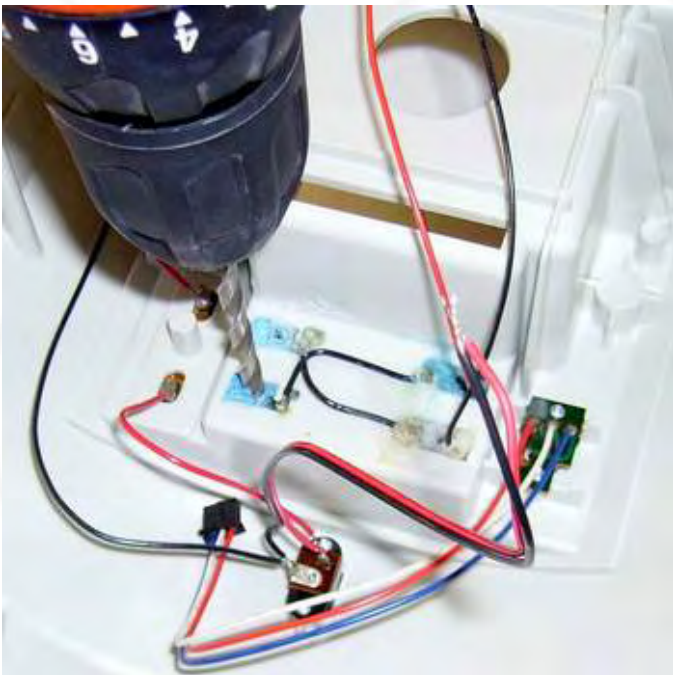
Replacing Hearoid Omnibot Battery Contacts.



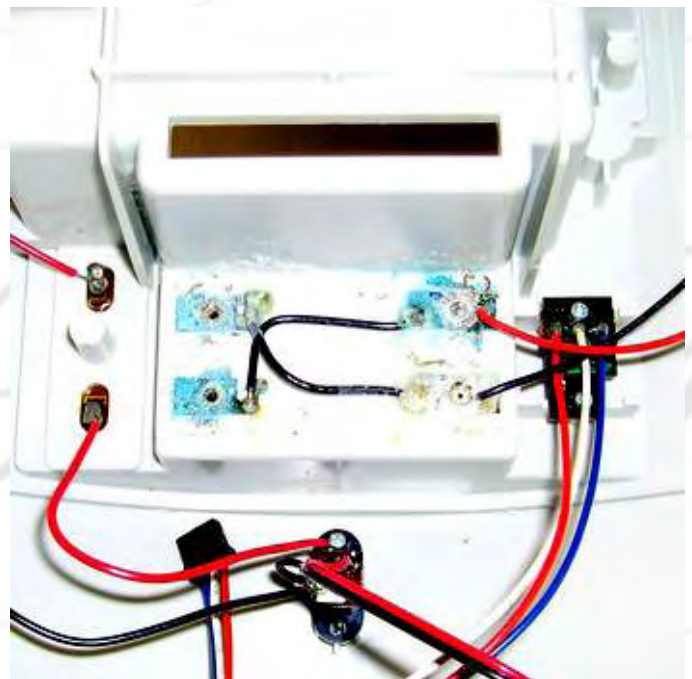
1. Check the wires to insure that you know how they are hooked up. These batteries are wired in parallel.



2. Make sure that the batteries are removed from the rear housing.



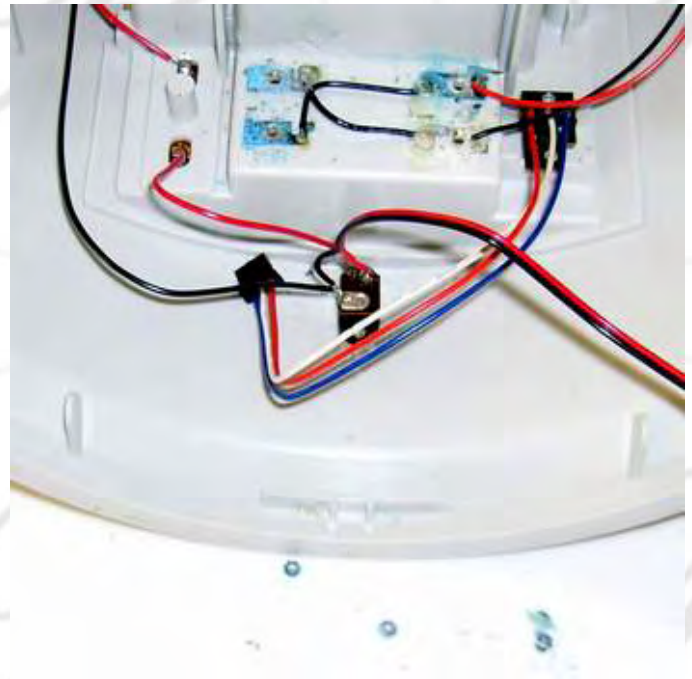
3. Place the housing flat on the table. Use a oversize drill bit and lightly drill the rim off the eye lit that hold the battery contacts in place.



4. **DO NOT** drill through the battery contacts or the plastic housing.



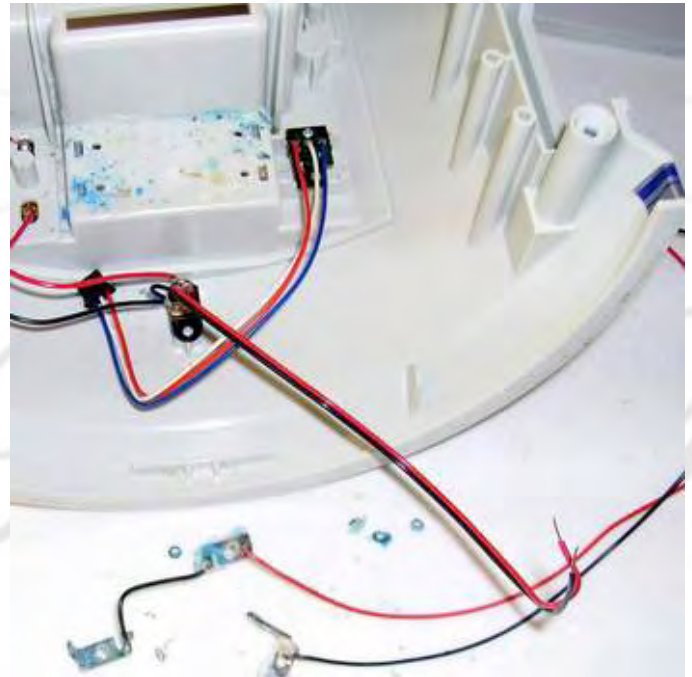
5. Once the eye lit ridge is removed take a punch smaller than the hole and gently tap all four of the eye lit out.



6. This picture shows the eye lit removed from the housing and battery contacts.



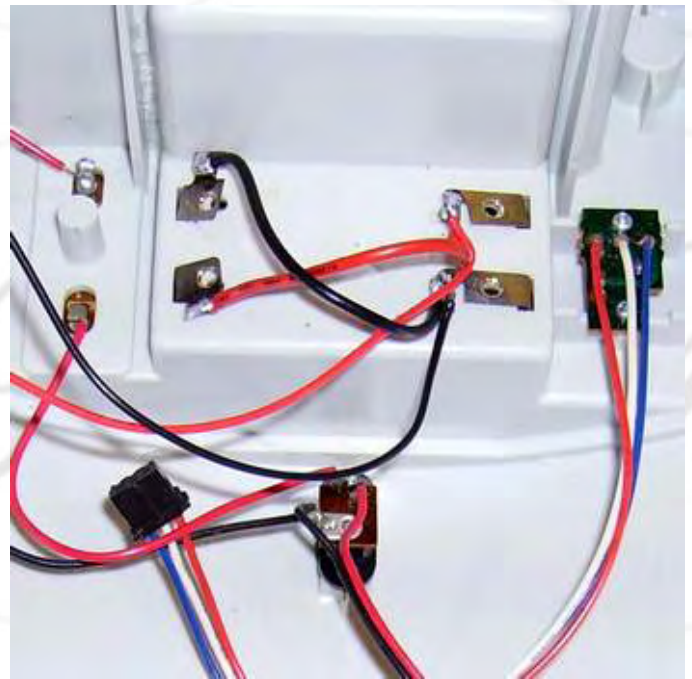
7. Gently pry the battery contacts out.



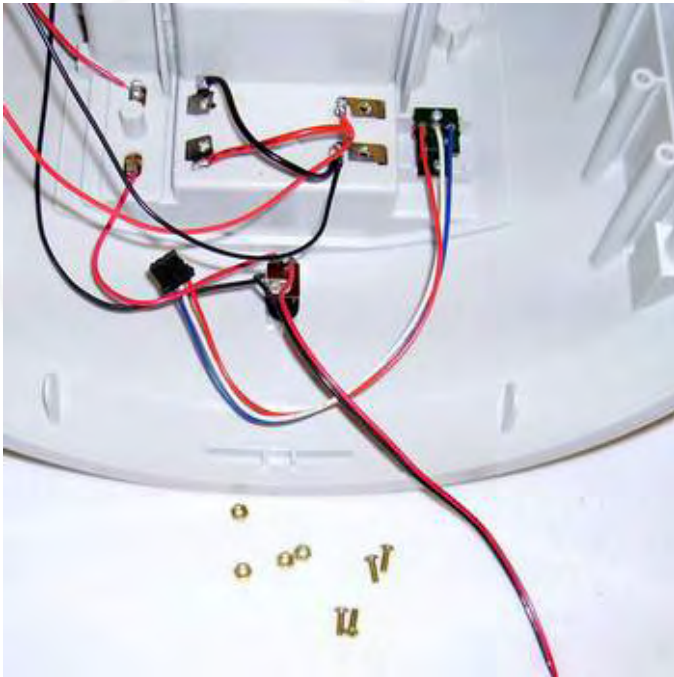
8. Remove the battery contacts and wires and plug.



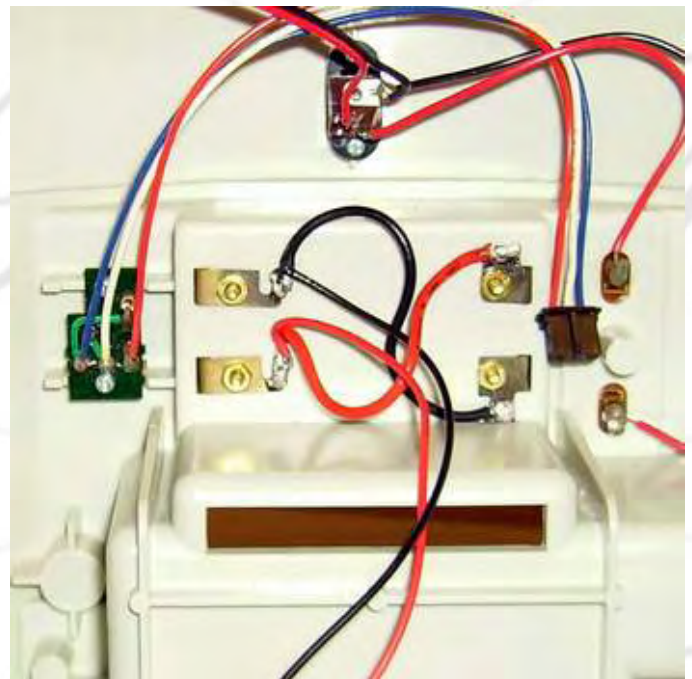
9. This is what the contacts with wire and plug will look like, Replace the battery contacts and solder the wires to the contacts.



10. After cleaning the housing reinsert the new battery contacts and wires into the housing.



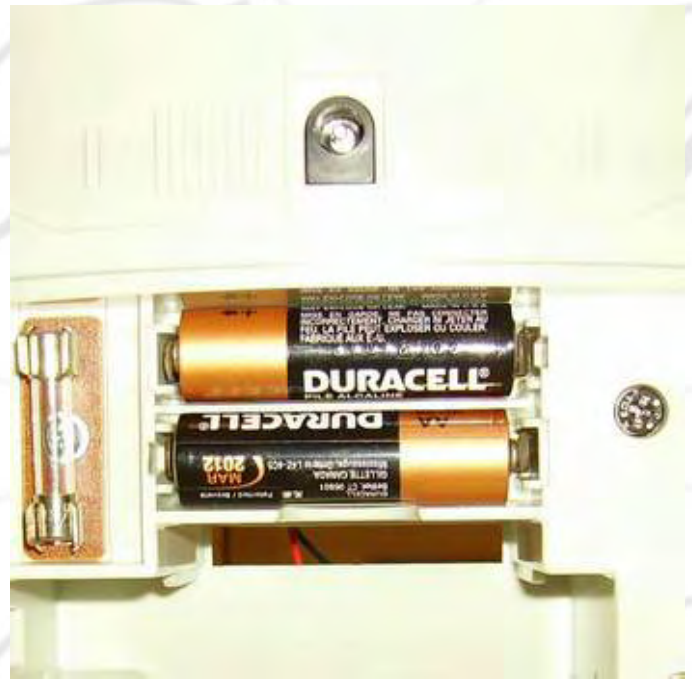
11. Use Brass 2/56 HEX MACH SC screws and nuts to fasten the battery contacts.



12. This is what the finished product will look like.



13. This is what the finished product will look like.



14. Install batteries into the robot housing.



15. Use a multi-meter to check conductivity both at the rear and the plug. The operation is finished.

BEFORE





Shown above are some examples of contacts that are in the robots and controllers. This is one reason that they do not power up.

AFTER



Shown above are some examples of contacts that have been replaced in the robots.

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Hearoid®Omnibot®- Disassembly Procedure



1. Make sure the robot is shut off. Turn the left and right ears toward the front of the robot one quarter turn. Do not force the ears because you can break off the ear tabs if they are forced.

2. Remove the faceplate and place all three parts in a safe remote place. If these parts are broken they cannot be replaced.

3. Make sure the robot is shut off. Open the rear door and remove the battery retainer and the large 6 V 4 AH DC rechargeable battery and the two small AA battery's. Close the door.



4. Turn the robot on to his back make sure that the head is free and not supporting the robot, then remove the six screws from the bottom of the robot keeping the base and housing together. Keep these longer screws separate to reinstall the base.

5. Separate the bottom base slowly from the housing from the robot.

6. Turn the base and unplug the plug from the drive box that go to the robot.

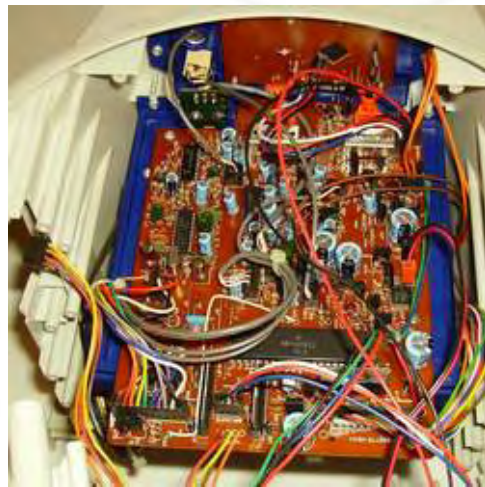
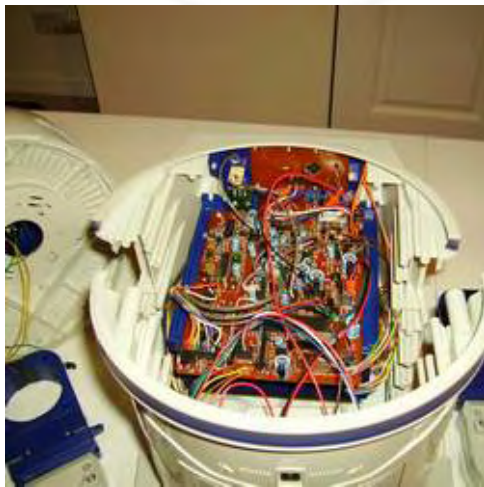


7. Remove the screw from the antenna that attaches to the housing.



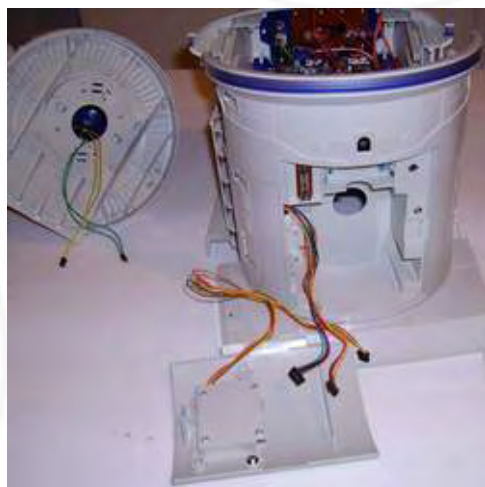
8. Remove the six screws from the back of the robot, and spread it apart slowly and very little (1 inch). (BE CAREFUL)

9. Separate the front from the rear housing just enough to remove the head from the housing.

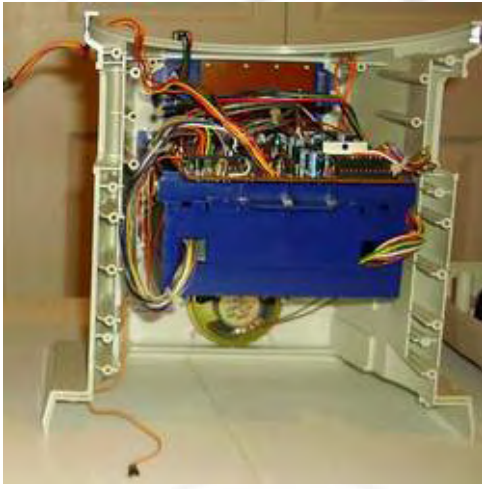


10. Unplug the head and put it aside.

11. Open the rear door and remove the two plugs from the accessories interface board on the door. These two plugs and harness will have to be pushed into the robot. Remove the door.



12. Unplug the rest of the wires from the front and rear housing and separate.



The robot is disassembled.



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