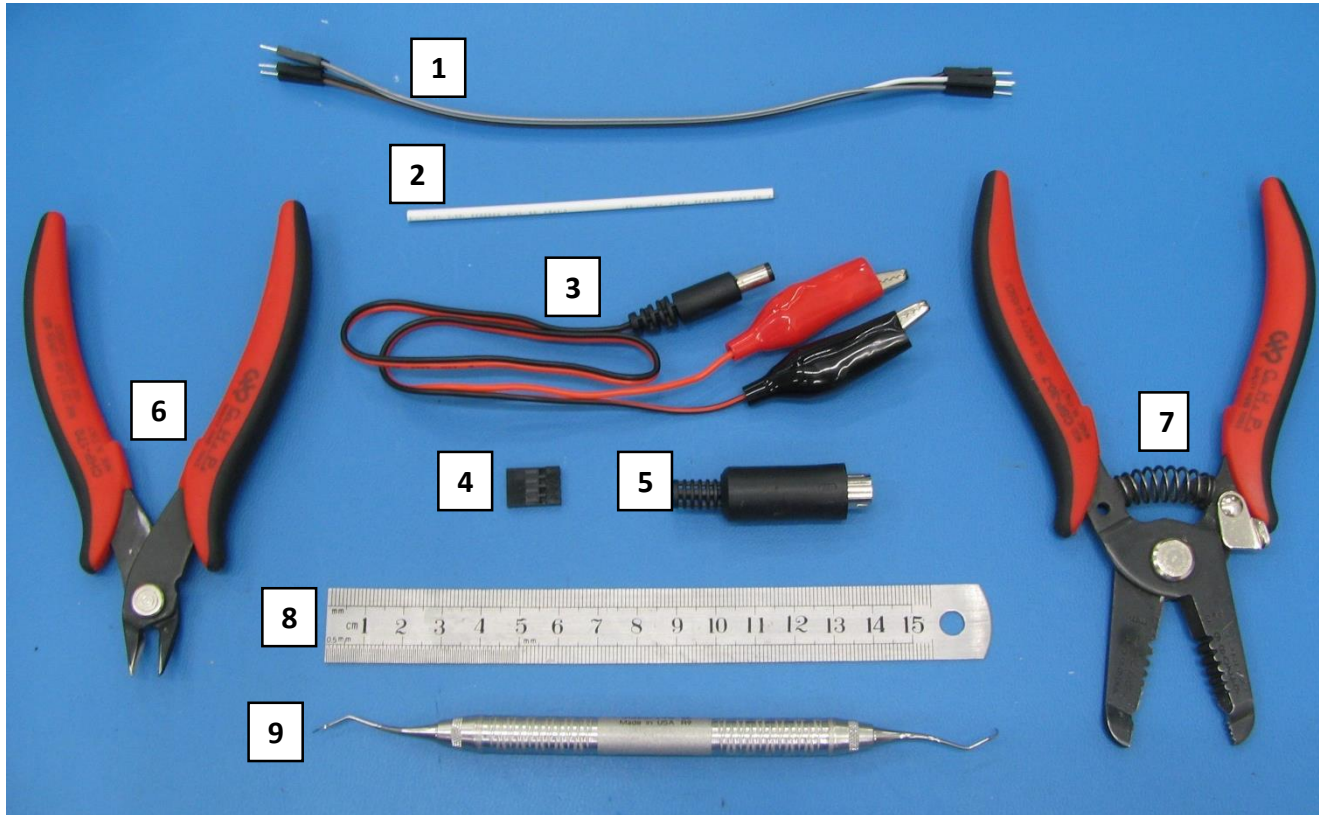


SYNTHIAM

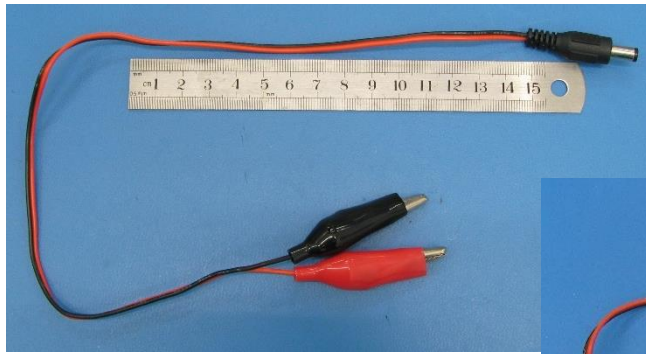
Assembly Instructions

Roomba Cable [E-46]

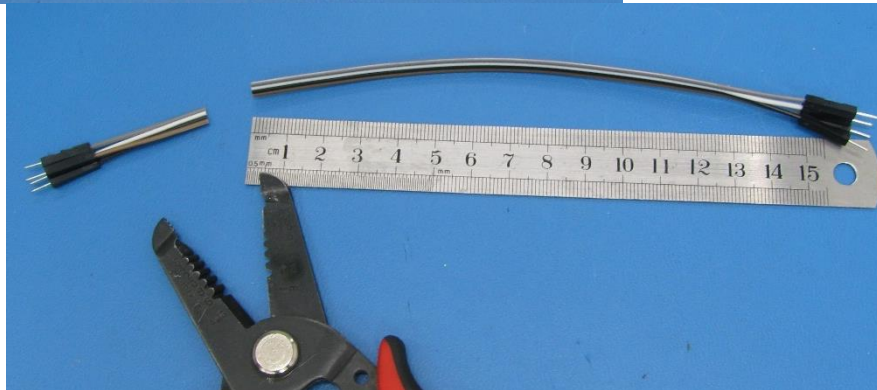


PARTS & TOOLS

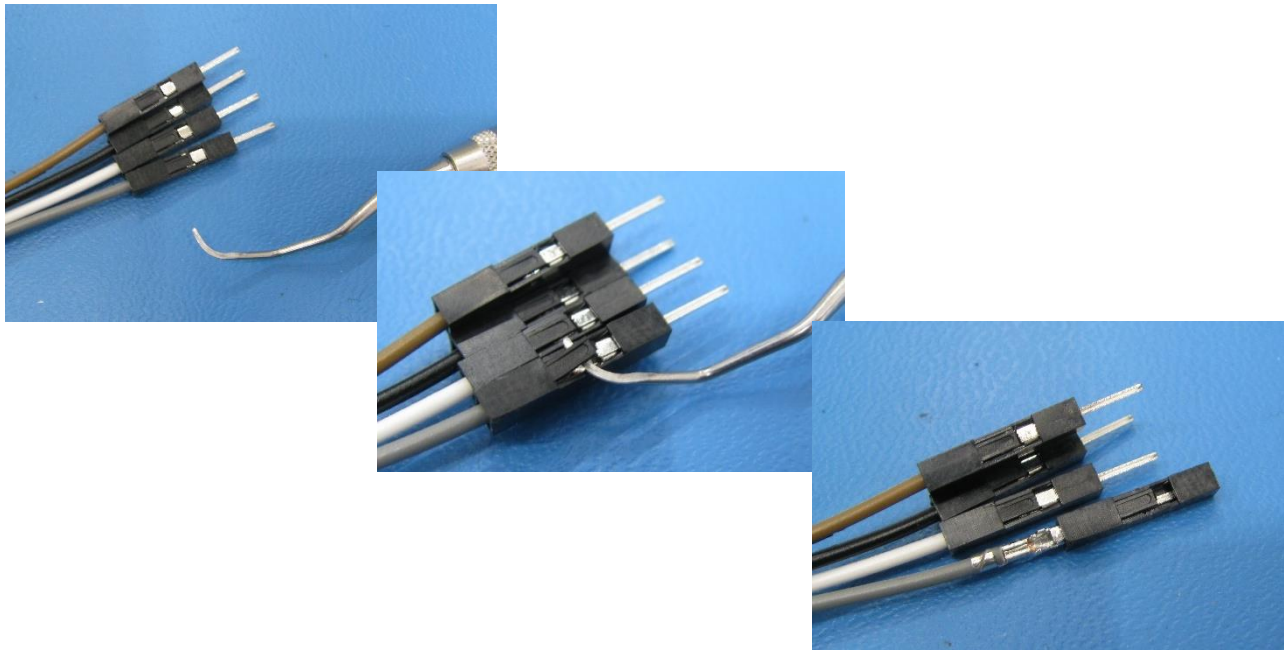
#	Qty	Name
1	1	4 wire Male to Male Dupont cable
2	1	1/16" Heatshrink Tubing
3	1	2.1mm Barrel Plug + Alligator Clips
4	1	0.1" Pitch 4 position Dupont header
5	1	7 pin mini DIN male connector
6	1	Flush Cutters
7	1	Wirestrippers
8	1	Ruler
9	1	Pick



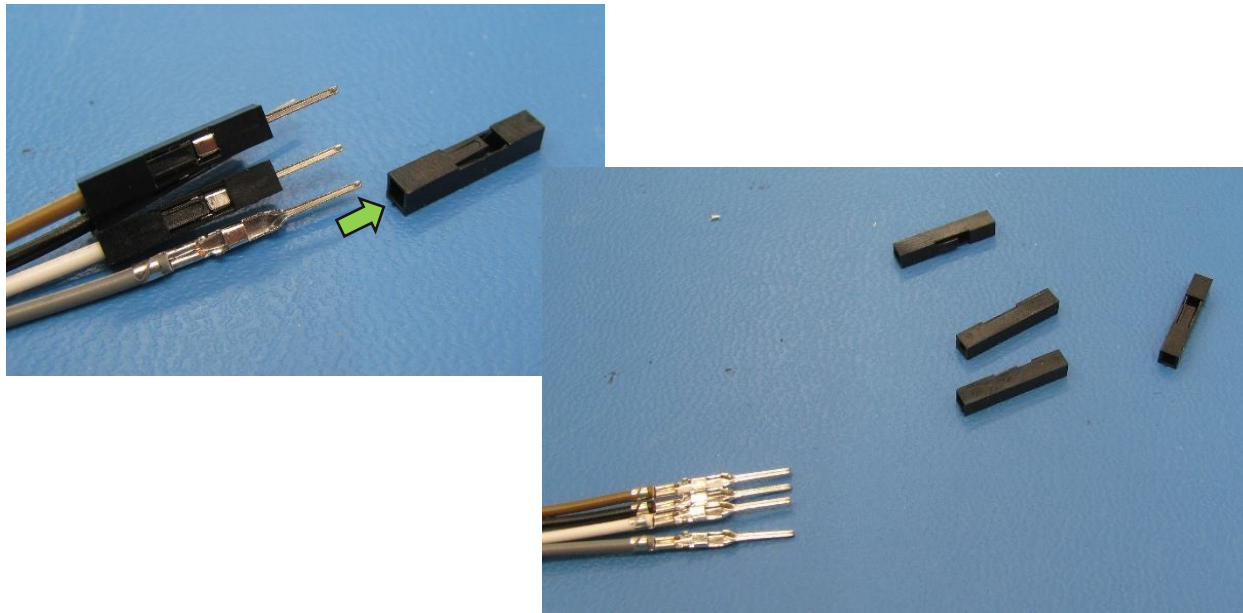
Step 1. Use the wirestrippers to cut the wire at 15cm away from the back of barrel plug. This will now be referred to as the 2-wire cable.



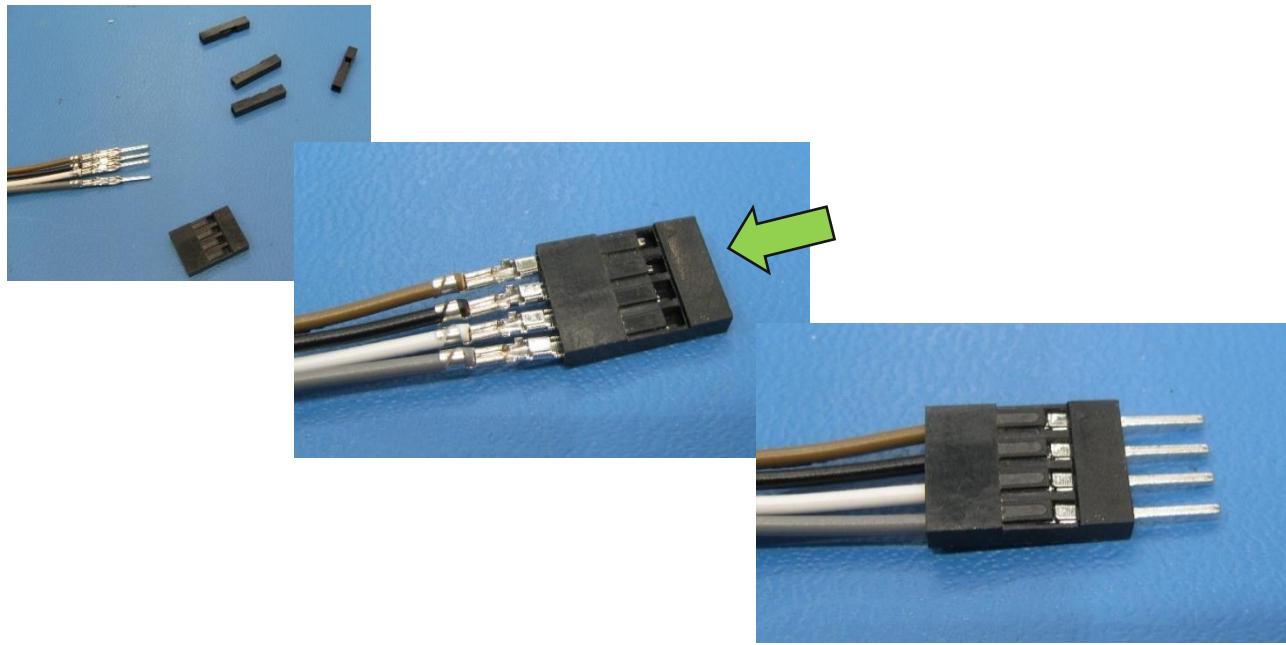
Step 2. Use the wirestrippers to cut the 4-wire cable at 15cm away from the Dupont connectors.



Step 3. Using the pick to lift up the locking tab on the Dupont connectors on the 4-wire cable.

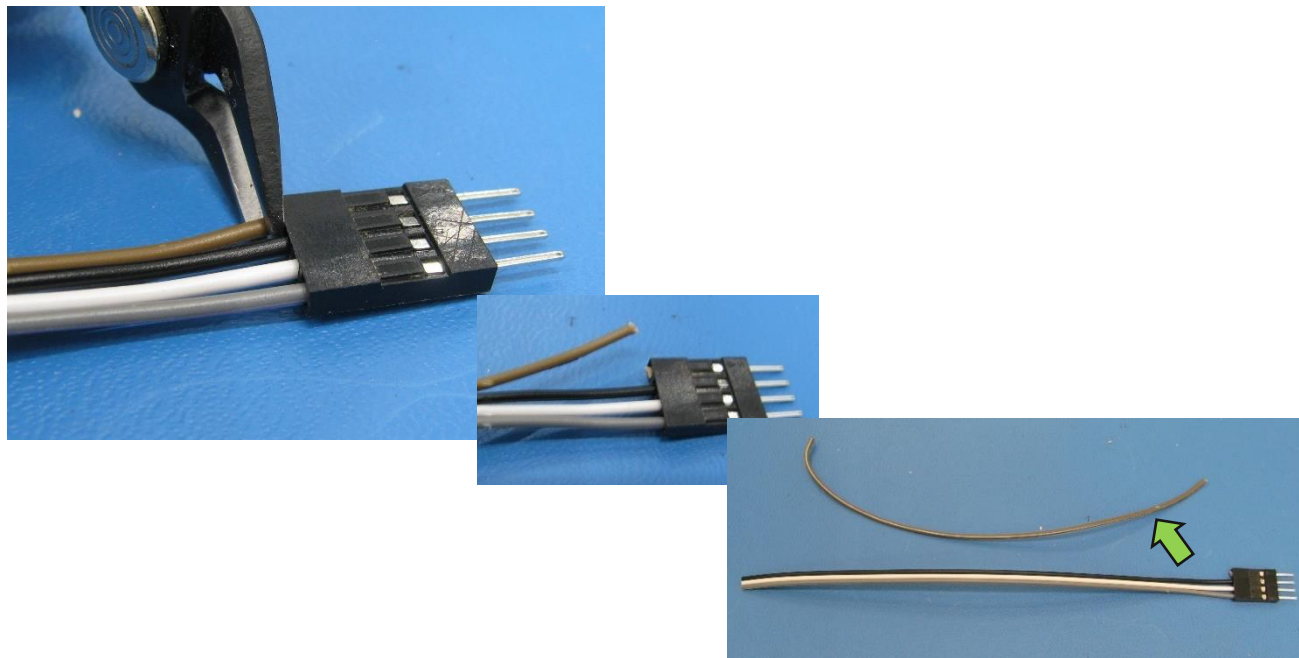


Step 4. Remove all 4 Dupont connectors from the 4-wire cable.

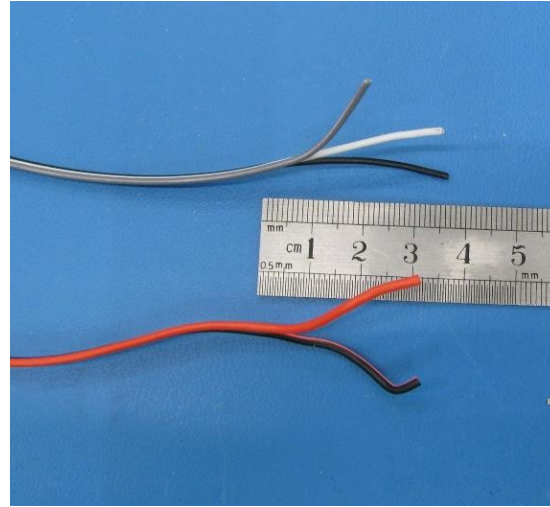
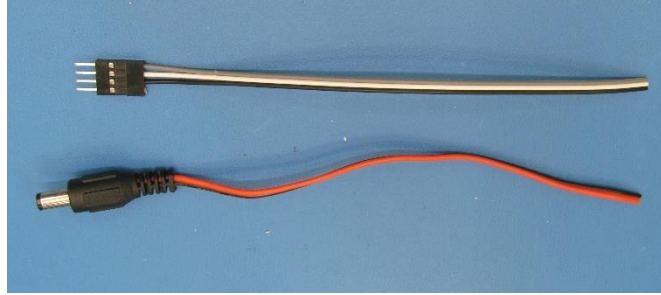


Step 5. Insert the 4 position Dupont connector onto the 4 male pins of the 4-wire cable.

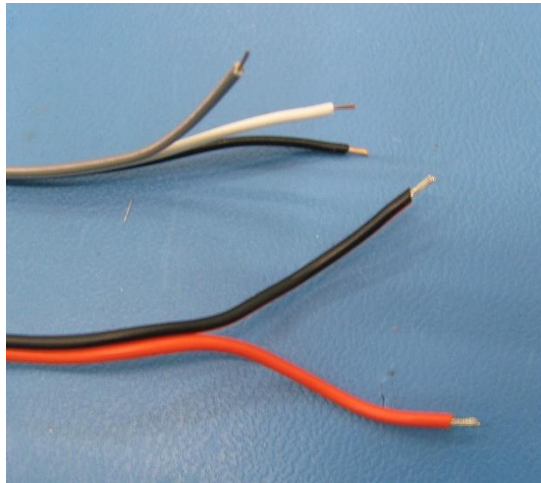
IMPORTANT The Locking tabs on the Dupont connector must clip into position.



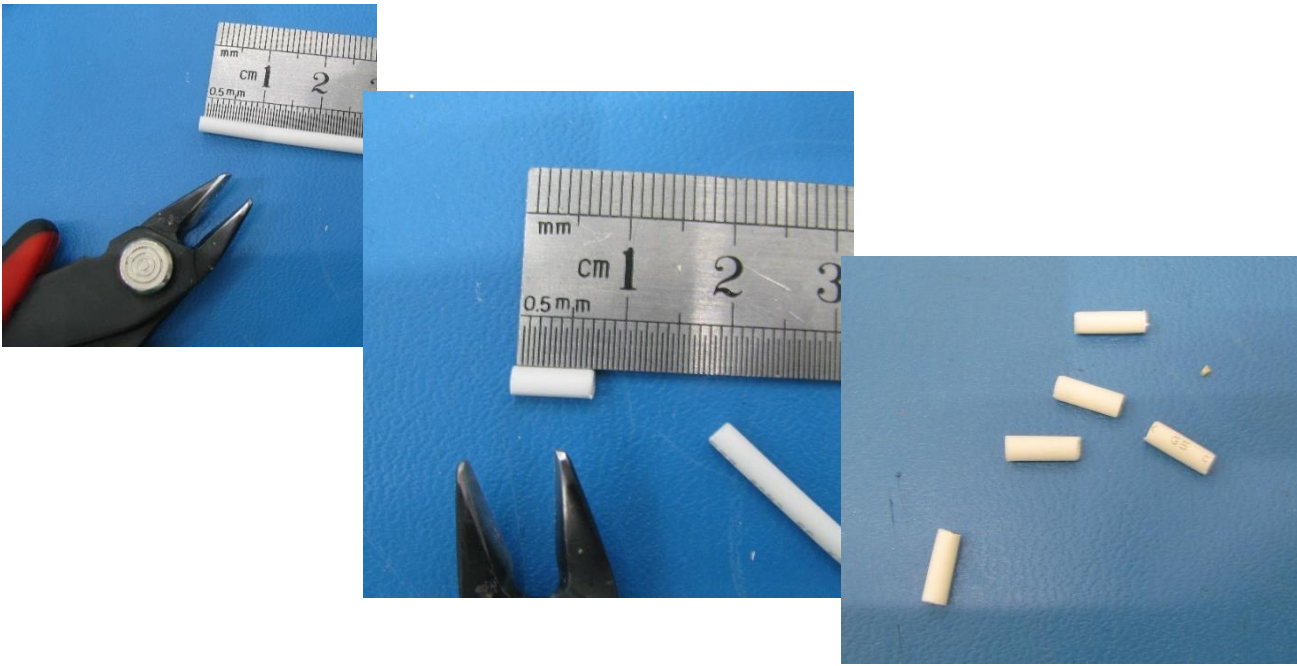
Step 6. Using the sidecutters cut the brown wire as close to the 4 position Dupont connector as possible and strip the wire off the ribbon. This will now be referred to as the 3-wire cable.



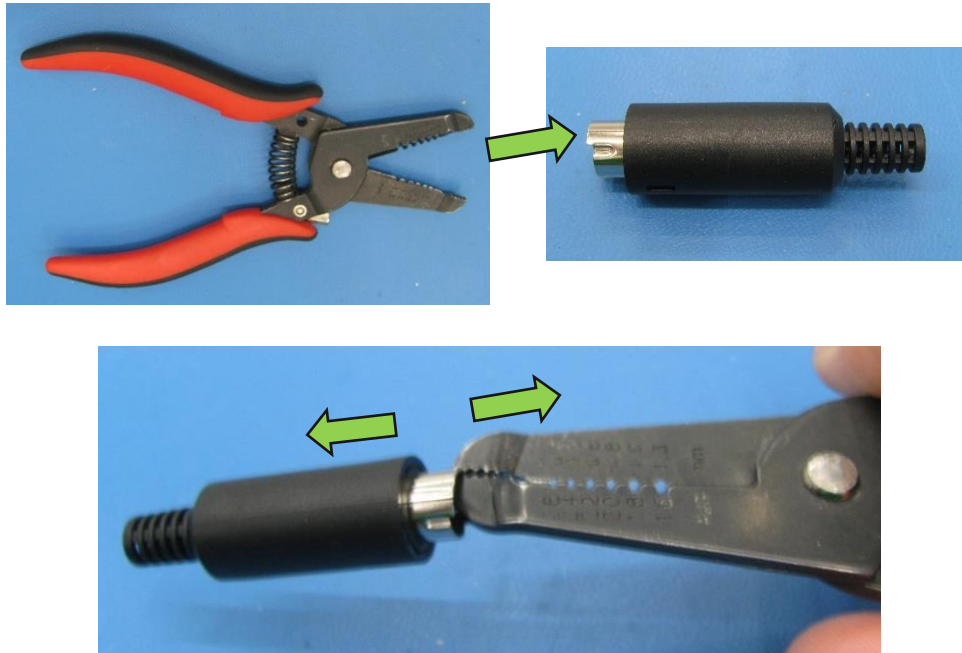
Step 7. Peel the ribbon wires back 3cm on the 2-wire and the 3-wire cables.



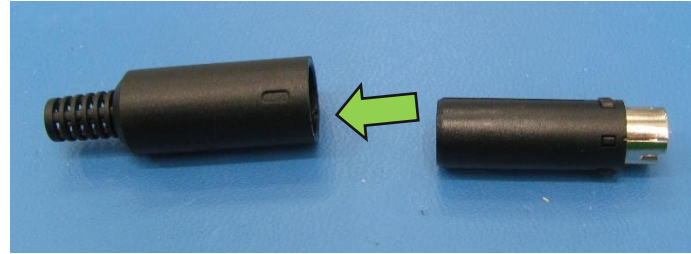
Step 8. Use the wirestrippers (22AWG setting) to strip off 3mm of insulation from all the wires on the 2-wire and 3-wire cables.



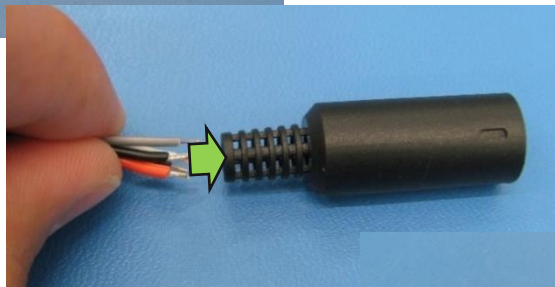
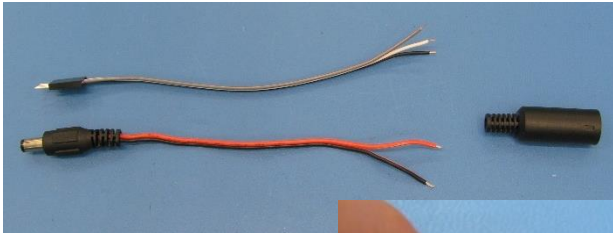
Step 9. Use the sidecutters to cut 5 x 7mm long pieces from the Heatshrink.



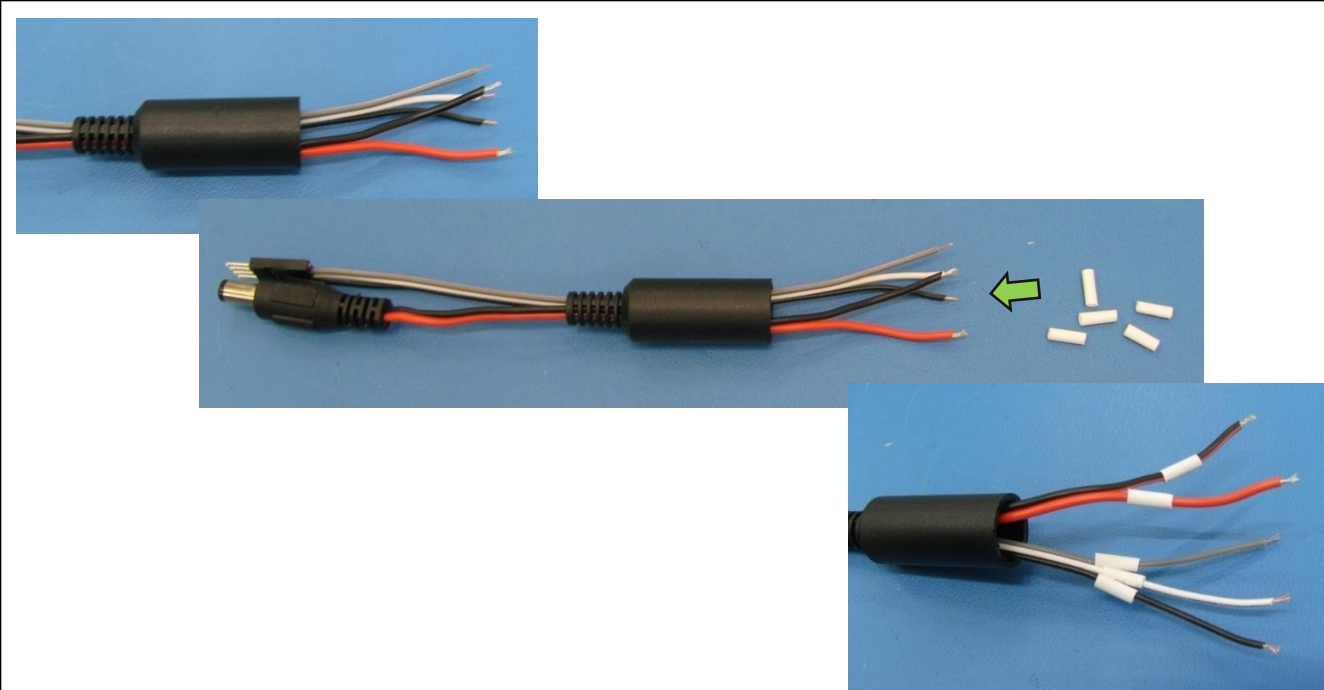
Step 10. Use the wirestrippers to remove the rubber shield from the DIN connector.



Step 11. Slide the rubber shield completely off the DIN connector.



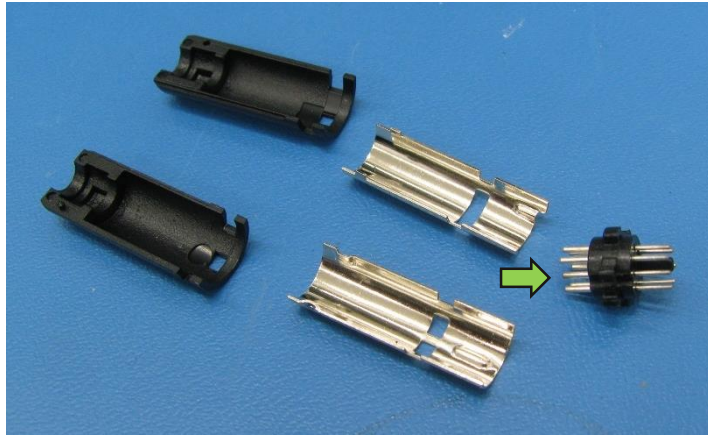
Step 12. Take the 2-wire and 3-wire cables and push them through the small end of the rubber shield.



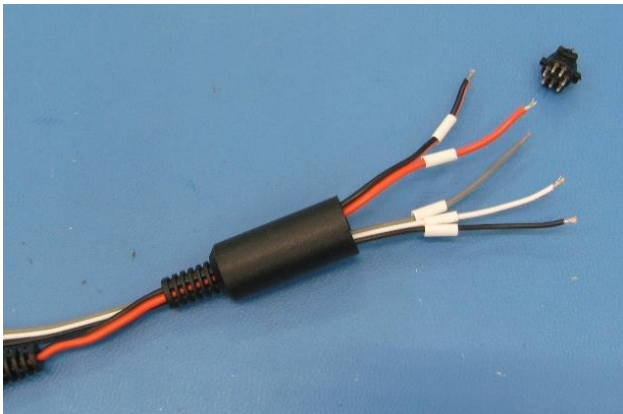
Step 13. Place the 5 x Heat Shrink pieces onto the 2-wire and 3-wire cable as shown.



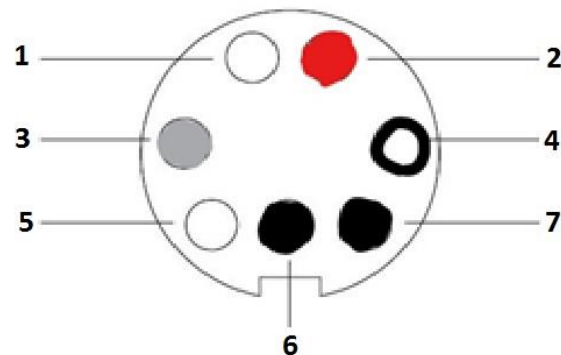
Step 14. Separate the plastic shells from the DIN Connector.



Step 15. Separate the metal shells from the DIN connector to release the pin block.

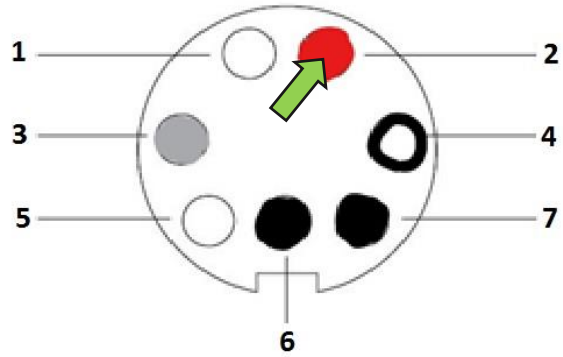


WIRING DIAGRAM

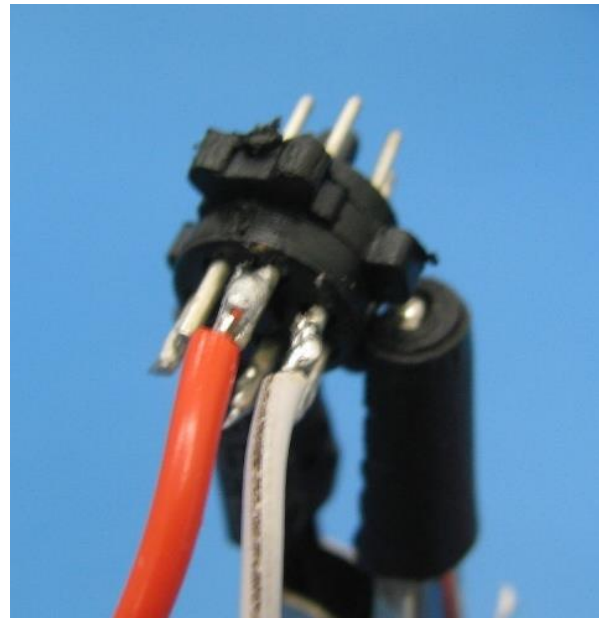
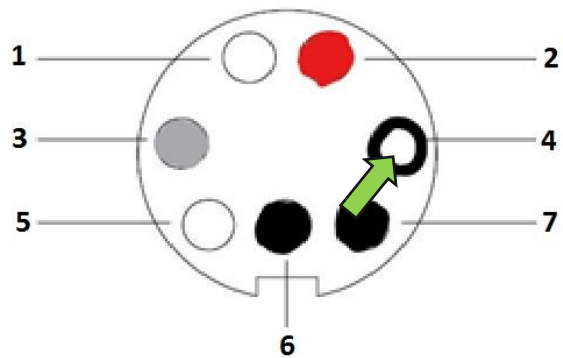


Wiring Diagram (Solder side of pin block):

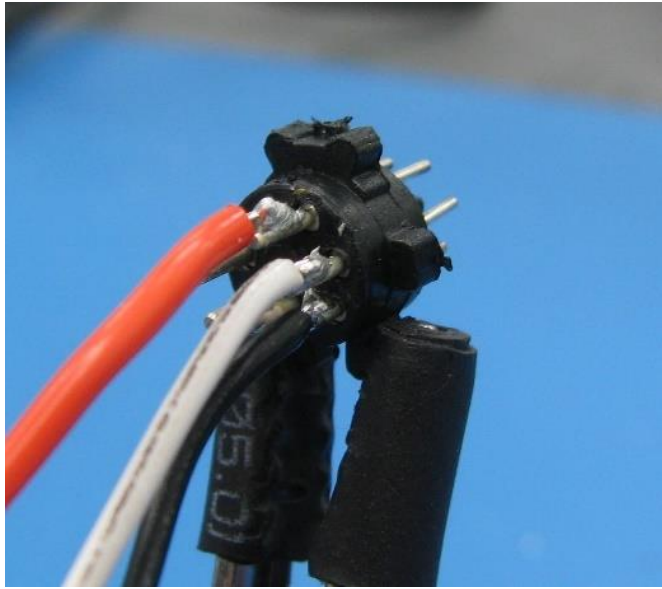
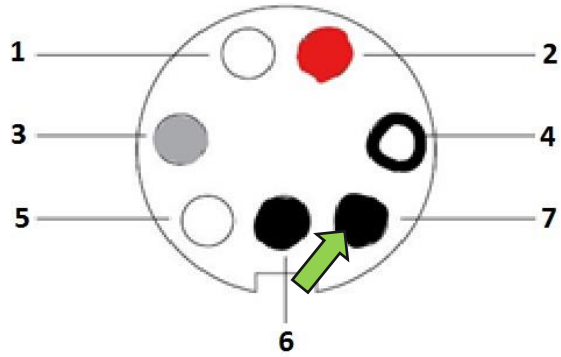
- 1 – N/C
- 2 – Red Wire
- 3 – Grey Wire
- 4 – White Wire
- 5 – N/C
- 6 – Black Wire
- 7 – Black Wire



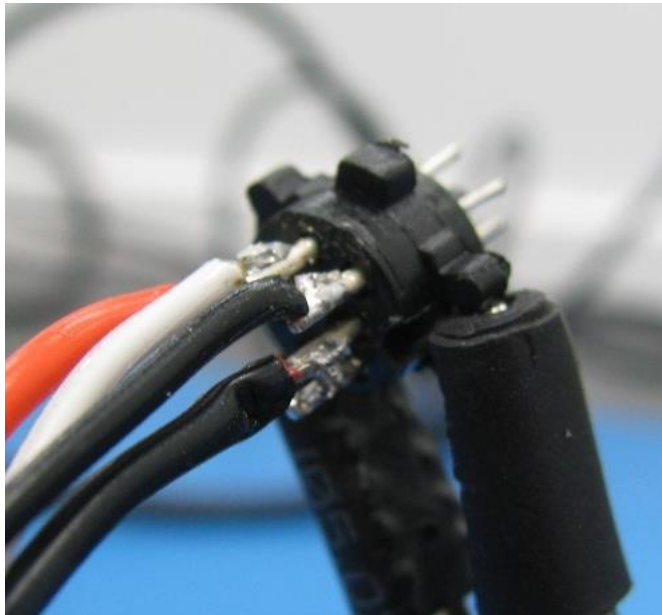
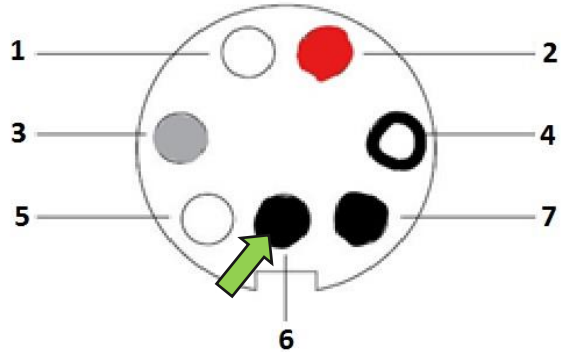
Step 16. Solder the 2-wire cable Red wire to position 2 on the DIN connector pin block.



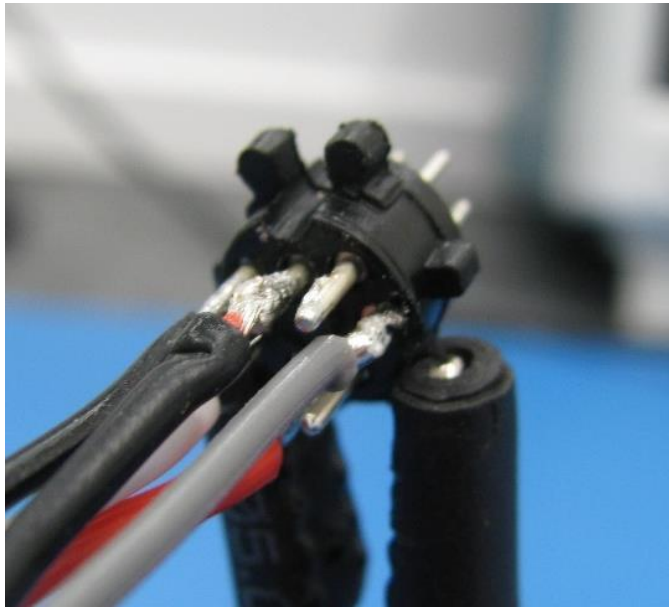
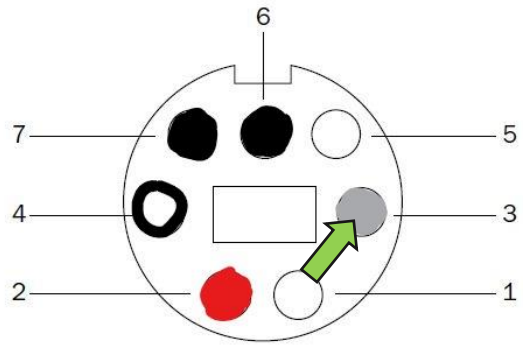
Step 17. Solder the 3-wire cable White wire to position 4 on the DIN connector pin block.



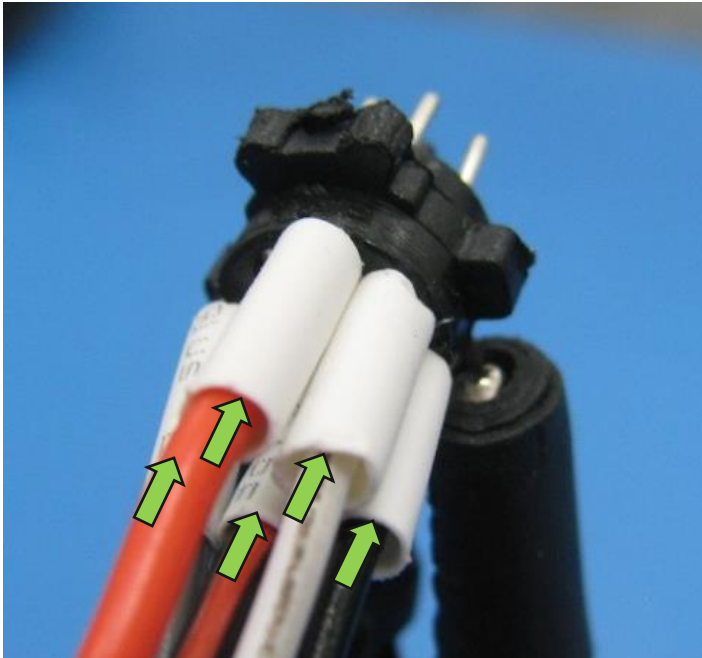
Step 18. Solder the 3-wire Black wire to position 7 on the DIN connector pin block.



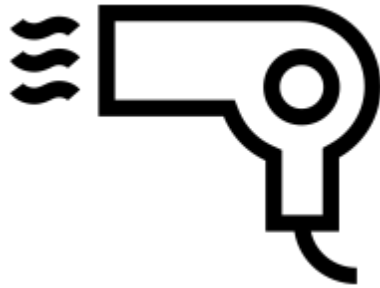
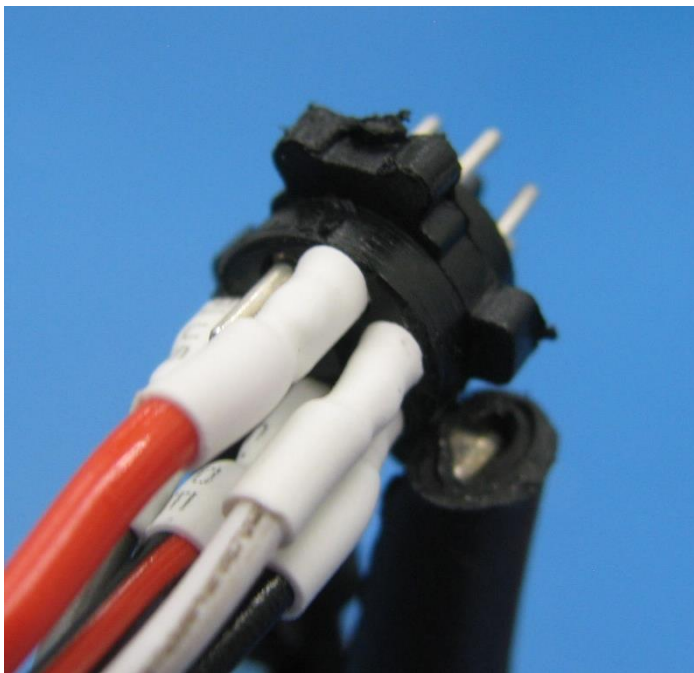
Step 19. Solder the 2-wire Black wire to position 6 on the DIN connector pin block.



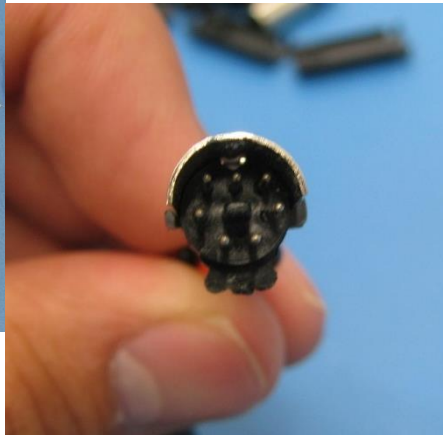
Step 20. Flip the pin block 180 degrees and solder the 3-wire Grey wire to position 3 on the DIN connector.



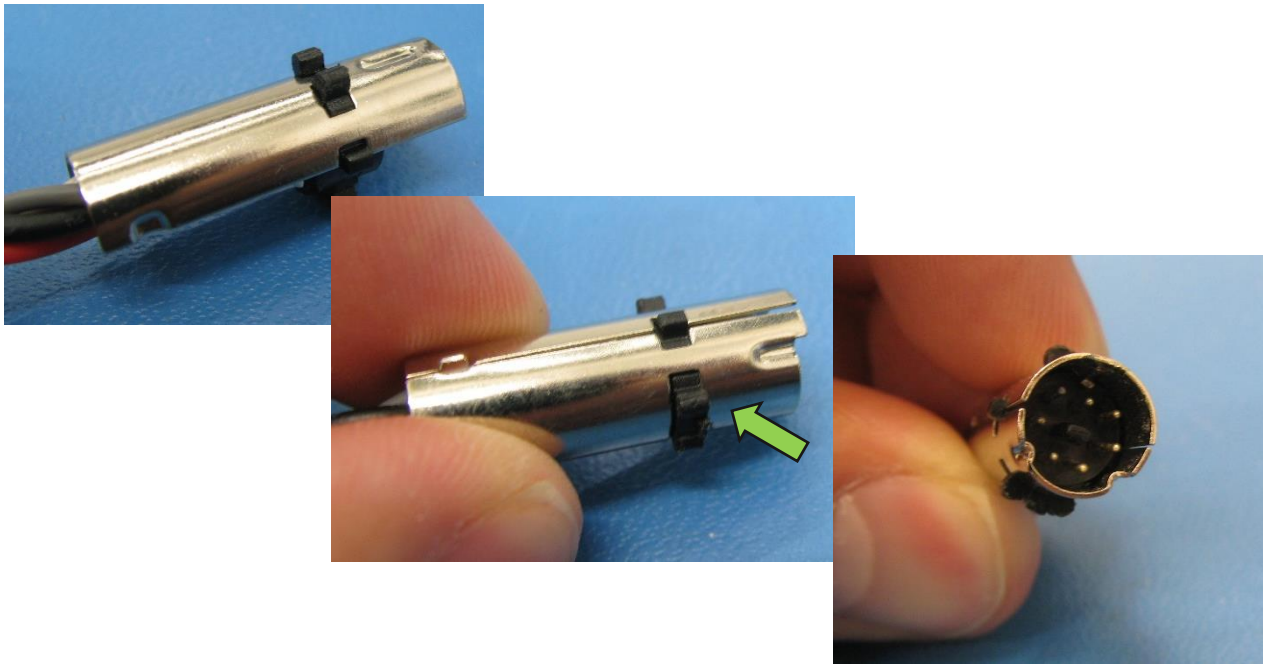
Step 21. Slide the 5 x Heatshrink pieces onto the solder connections.



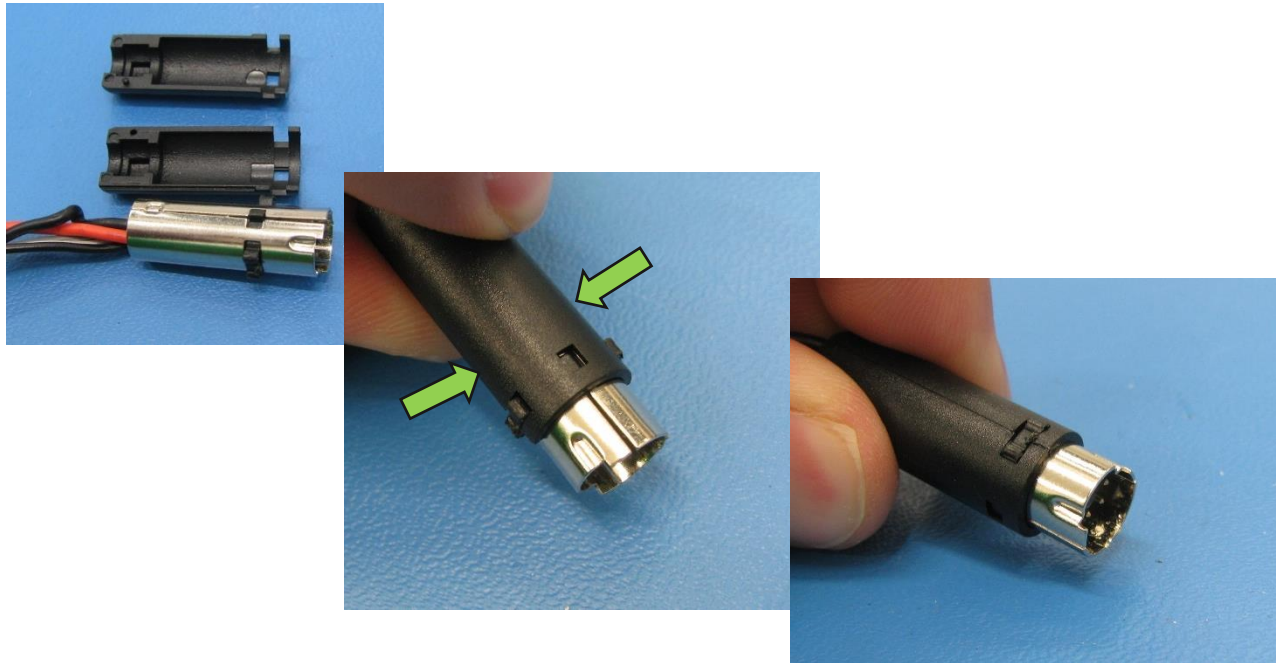
Step 22. Use a heat gun to shrink the 5 x Heat Shrink pieces.



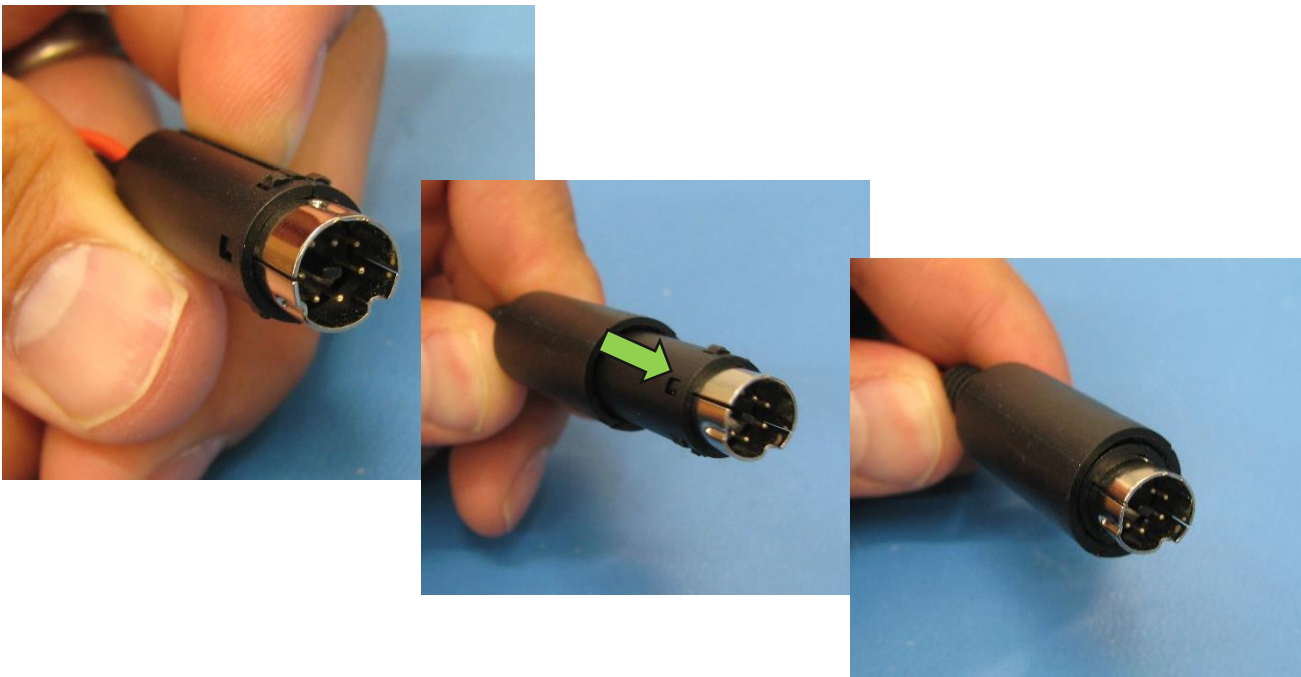
Step 23. Attach the bottom DIN connector metal shell onto the pin block.



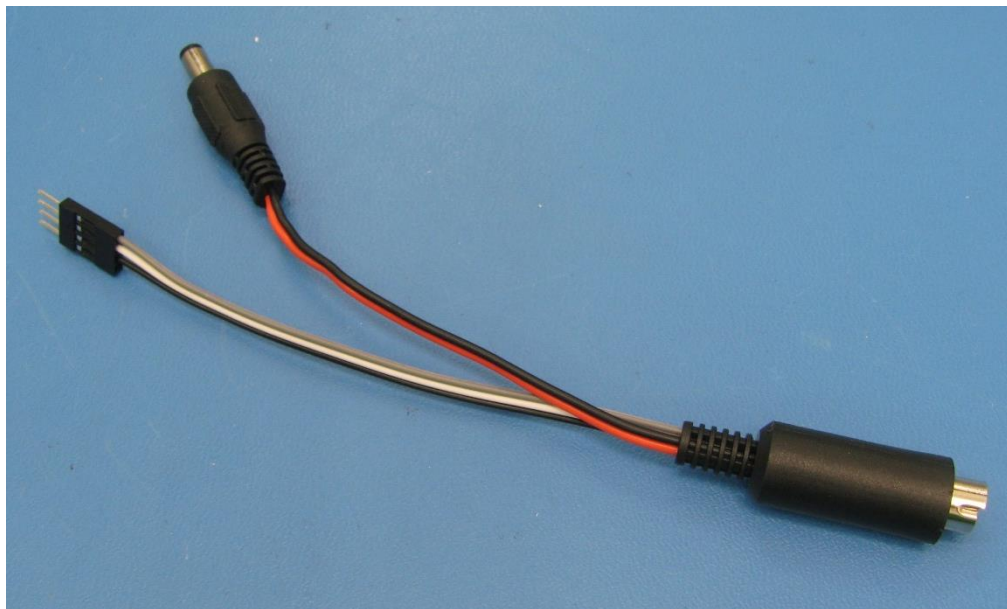
Step 24. Attach the top DIN connector metal shell onto the pin block.



Step 25. Attach the 2 x DIN connector plastic shells onto the metal shells.



Step 26. Push the Rubber shield from the wiring onto the DIN connector plastic shells until it locks in place.



E-46 is now complete!