

AFM, AFMr and RFM Wiring Instructions Big-O Martian w/LED Eyes Kit:

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Kit (per Martian) includes:

- 1 Big-O Martian with LED Eyes
- 2 Wire Taps
- 2 Small Plastic Ties
- Wiring Harness (Optional)

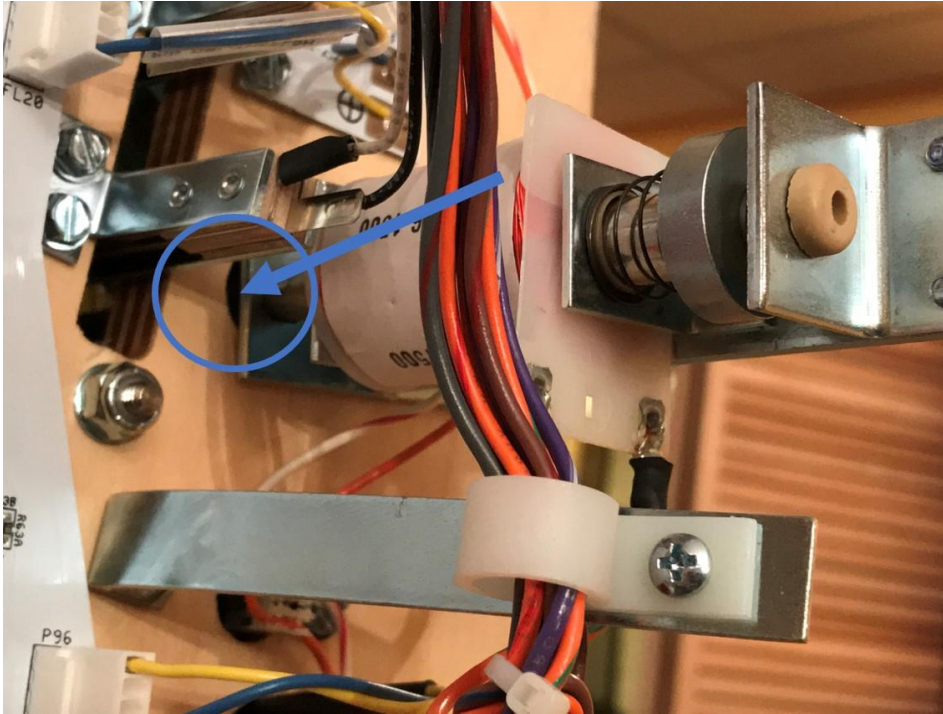
Please feel free to download this document for reference during the installation process.

All components were inspected and tested before shipping.

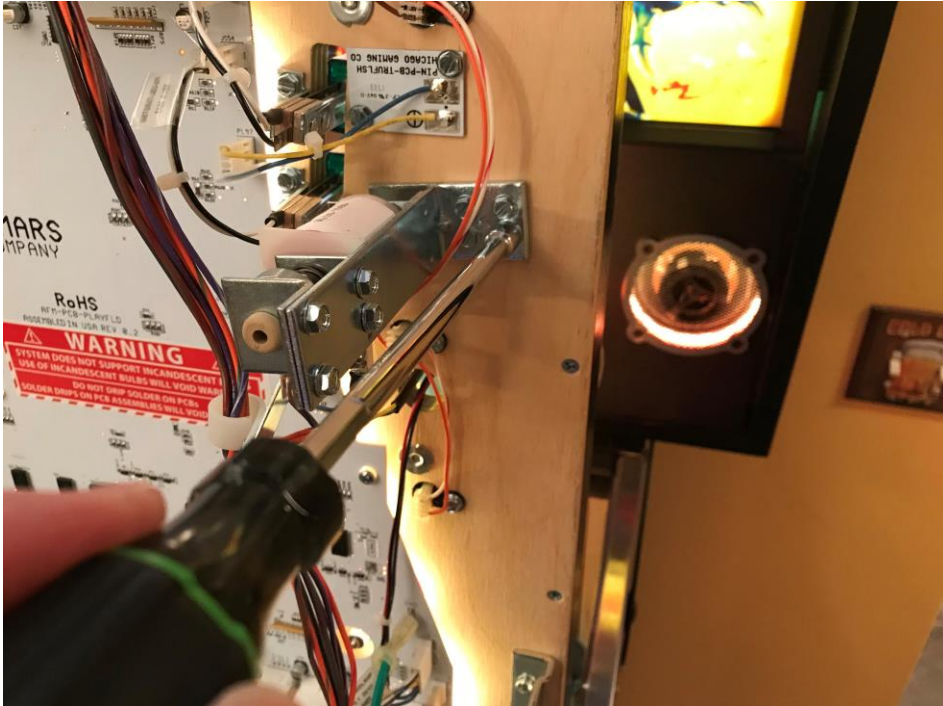
**PLEASE READ THROUGH THESE INSTRUCTIONS FIRST BEFORE
STARTING INSTALLATION TO ENSURE PROPER INSTALLATION.**

**NO NOT PULL OR TWIST THE WIRES, kit was fully tested
before shipment. Doing so may result in pulling the LED
leads out during installation, please be very careful...!!!**

1. Remove glass, balls, anything loose, etc.
2. Remove Martian to be replaced from Martian Solenoid Bracket
3. Pull playfield straight back, then lift the playfield and place in the upright position.
4. Locate the 4 Martian Solenoid Bracket locations and note that each has a small space through the playfield at the base of the Solenoid Bracket.



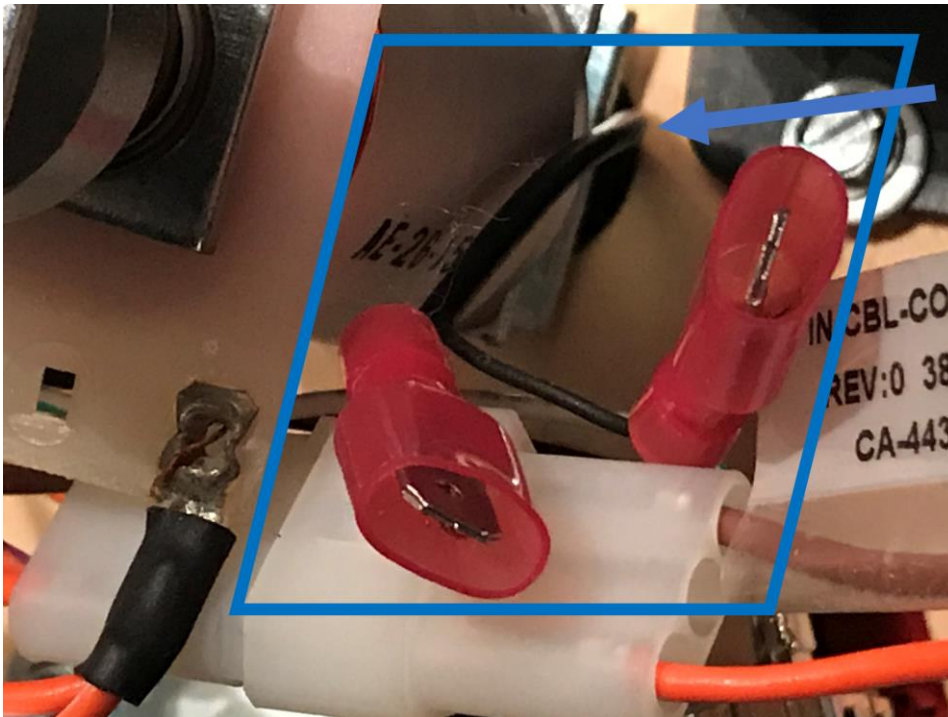
5. Carefully loosen the 4 screws holding the Martian Solenoid Bracket for the Martian that you are replacing.



6. Lower playfield down to rest on the playfield leg support.

7. Adjust the Martian Solenoid Bracket to enlarge the already available small space between the solenoid bracket and the playfield opening, then insert the LED wires from the Big-O Martian through that opening.

Please Note: The LED wires from the Big-O Martian have Stacon's attached to the ends. If necessary, the solenoid bracket can be fully removed to enable the LED wires to more easily be passed through the opening.

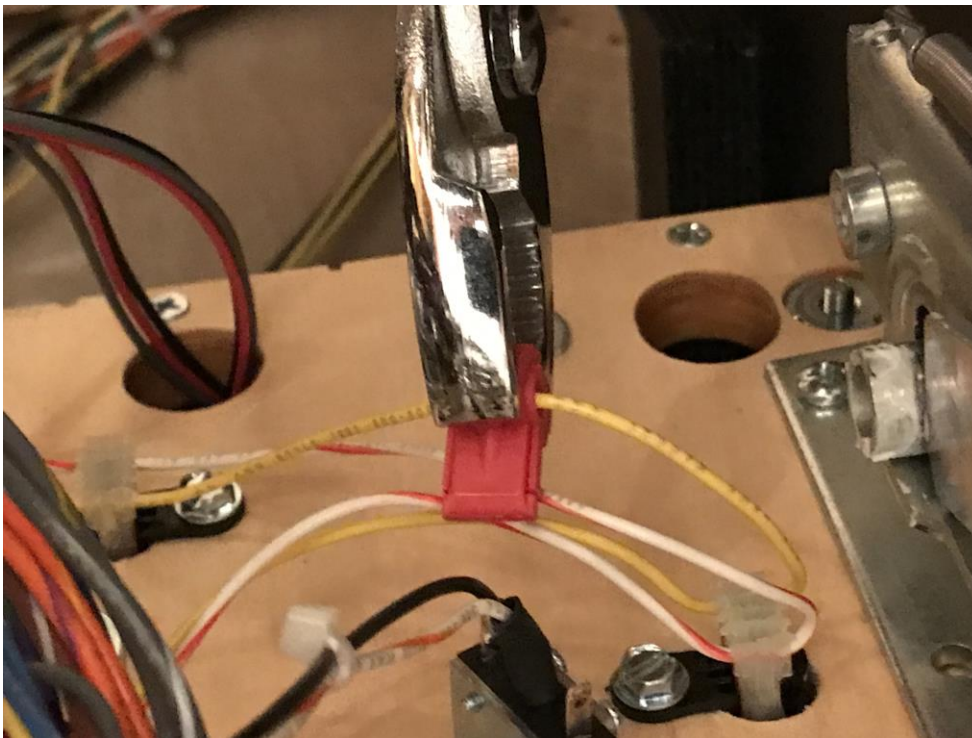


8. Install the Big-O Martian on the Martian Bracket.
9. While adjusting the Martian Solenoid Bracket to enlarge the space, carefully pull the wire through the opening to remove most of the slack above the playfield (Note: You may have to re-raise the playfield to do this). **DO NOT PULL ALL OF THE SLACK THROUGH THE PLAYFIELD HOLE.**
 - a. Leave enough slack in the wire above the playfield to allow the Martian to freely travel up and down as the solenoid moves the Martian. **Not leaving enough slack could result in damage to the Big-O Martian or the wiring.**
 - b. Test to confirm there is enough slack by lifting the Martian Bracket.
 - c. See picture in instruction 27 for an example of the proper amount of slack.
10. Lift the playfield and place in upright position.

11. Tighten the 4 screws holding the Martian Solenoid Bracket while ensuring that the wires are in the available opening and are not pinched. This will ensure that you **Do Not Pinch the Components Inside of the Wiring Heat Shrink!**
12. (For ONLY AFM and AFMr) The BIG-O Martian LED wiring will be connected to the General Illumination circuit wiring. Next to each of the 4 Martian Solenoid Brackets, you will find a set of wires (one Orange or Yellow and the other White with a Red stripe) to connect to. This will be accomplished using the two Red Wire Taps provided.

Note: If you purchased the **Optional Wiring Harness**, skip ahead to step 21.

13. Connect one of the Wire Taps to the Orange or Yellow wire by pressing the wire into the Wire Tap and closing the Wire Tap. Use pliers to compress the Wire Tap until it is fully closed as shown in the picture below.



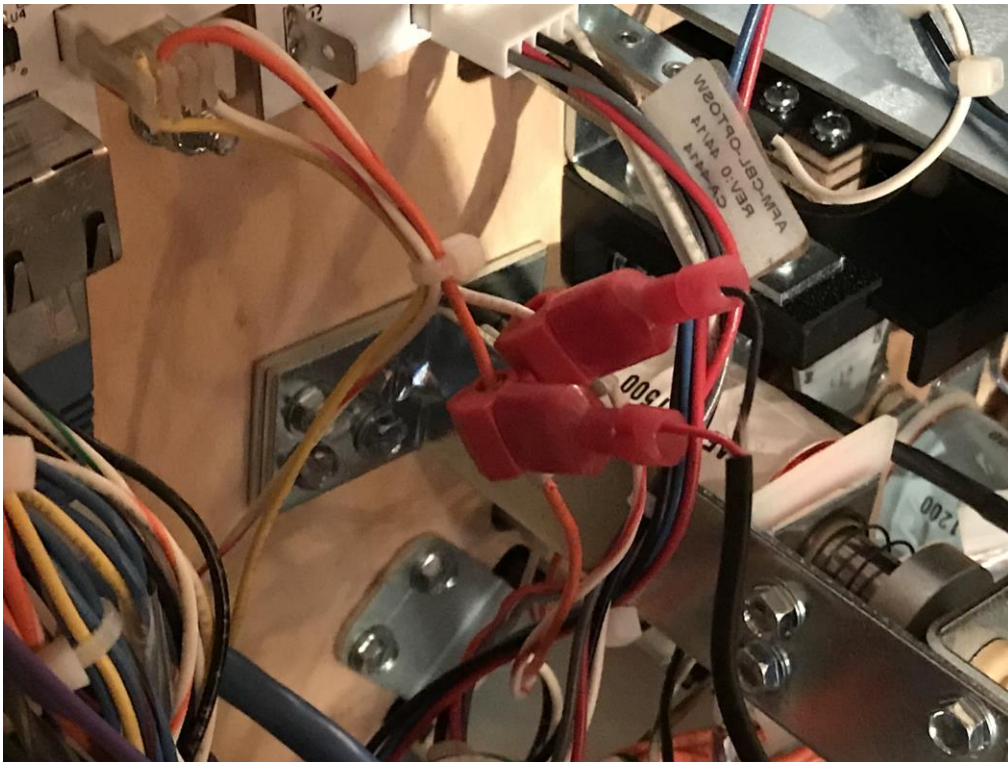
Please Note: If the Wire Tap is not fully closed, it is possible to have a bad connection which could result in the Big-O Martian's eyes not being on consistently. To avoid this issue, ensure that the Wire Tap is fully closed.

14. Connect the second Wire Tap to the White wire with a Red stripe. Use pliers to compress the Wire Tap until it is fully closed.

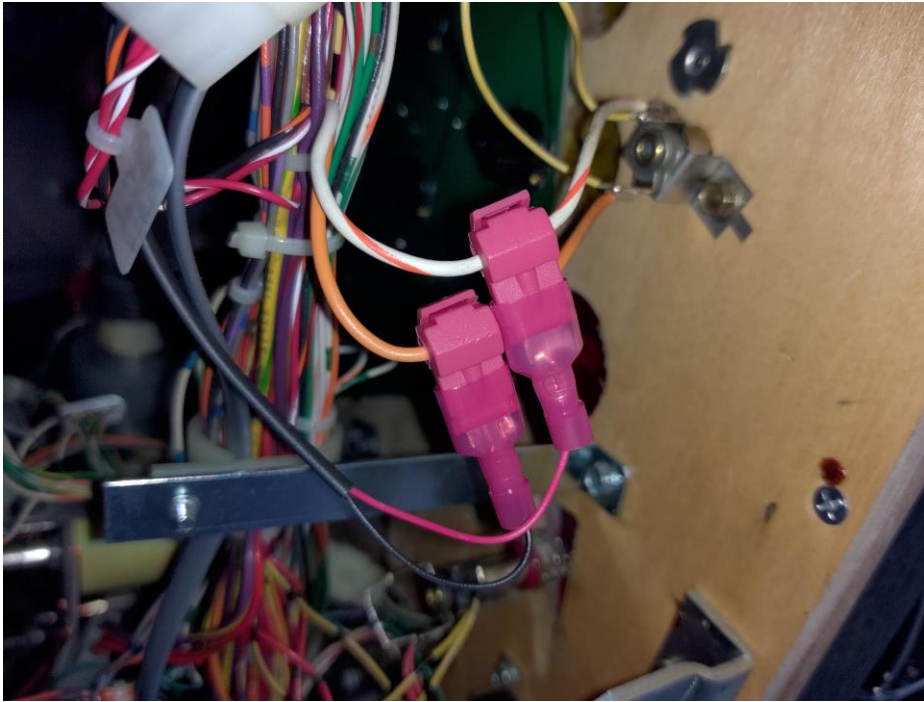
15. The wires from the Big-O Martian have a Stacon on the ends of both the Red and the Black wires. These Stacon's will be connected to the Wire Taps as follows.

- Plug the Red wire Stacon into the Wire Tap on the Orange / Yellow wire.
- Plug the Black wire Stacon into the Wire Tap on the White wire with a Red Stripe. into

16. Example of Typical AFMr Connection

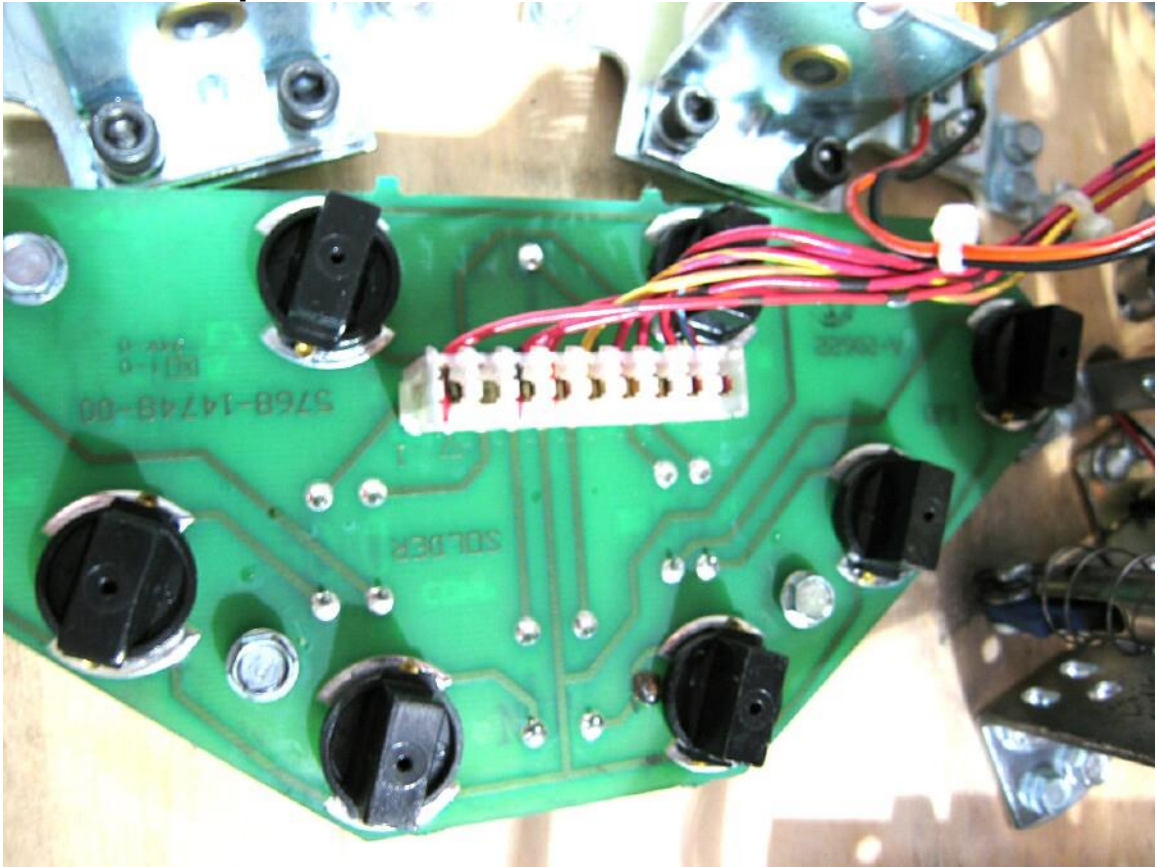


17. Example of Typical AFM original Connection



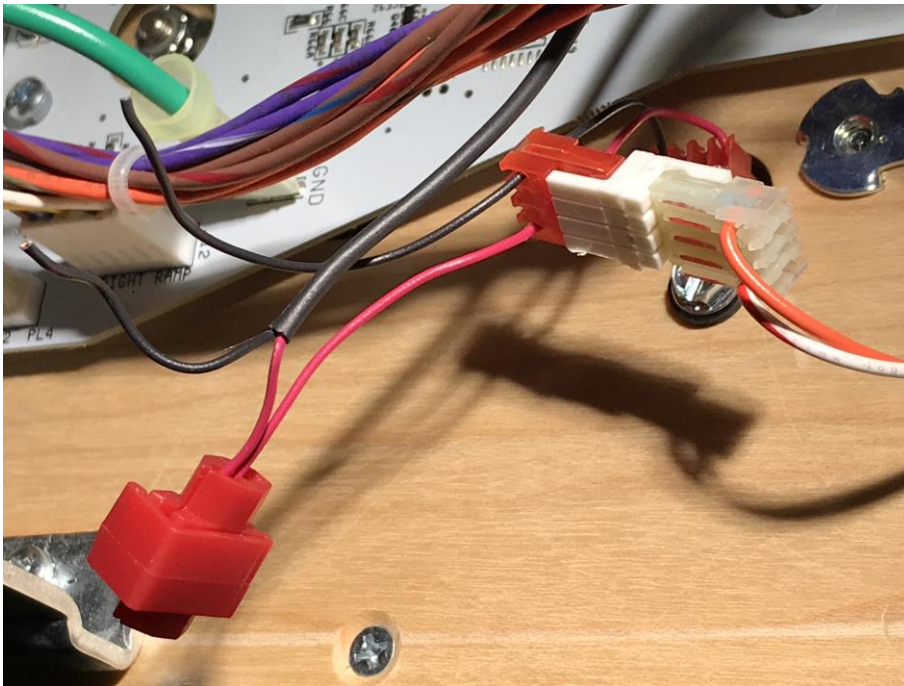
18. **RFM Wiring** This will be a bit different as there is no General Illumination circuit, in this case the wiring will be connected very near to the connector/s on the light circuit board connectors. (green circuit board/s). To install for the right Martian, it is to the "right Loop arrow lamp", Black wire connects to Yellow/Green, and the Red to the Red/Green, and for the left Martian, it is to the "left loop arrow lamp" connector, Black- to Yellow/Green and the Red- to the Red/Brown.

19. **Example of circuit board, and circuit board wiring connector, this is NOT an actual picture from RFM.**



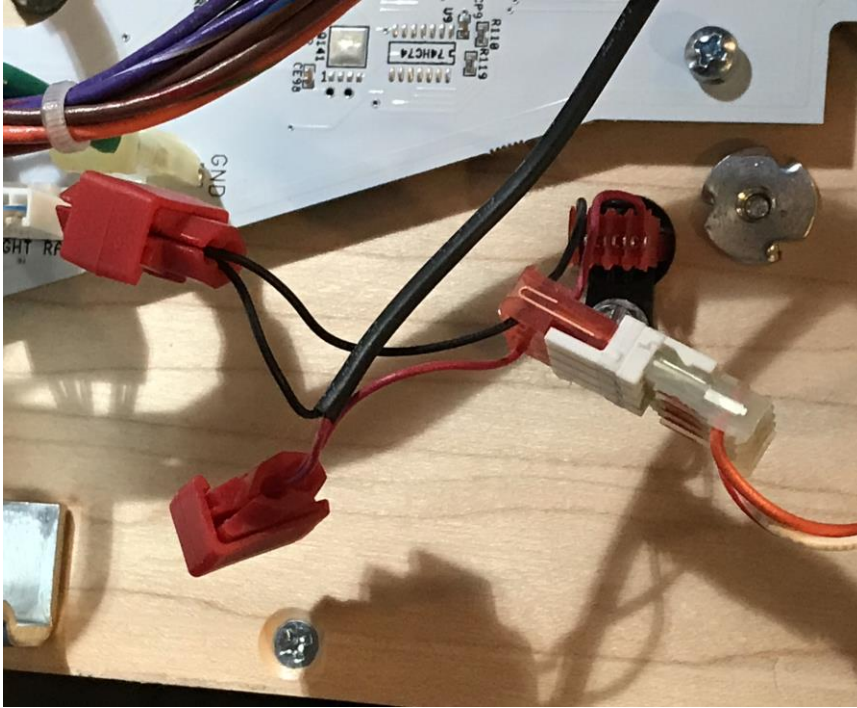
20. Skip ahead to step 27.

21. **Optional Wiring Harness** – The optional Wiring Harness allows you to plug the Big-O Martians into a Playfield bulb instead of connecting directly to the existing factory wiring. **The Wiring Harness should be connected to the Big-O Martian before plugging the Harness into a Playfield Bulb connector. This makes the installation process much easier to complete.**
22. Connect the Red wire from the Big-O Martian to the Red wire from the Wiring Harness, as shown below. Press the wires into the Wire Tap. Use pliers to press the metal connector into the Wire Tap until it is flush with the Wire Tap housing. Close the Wire Tap cover.



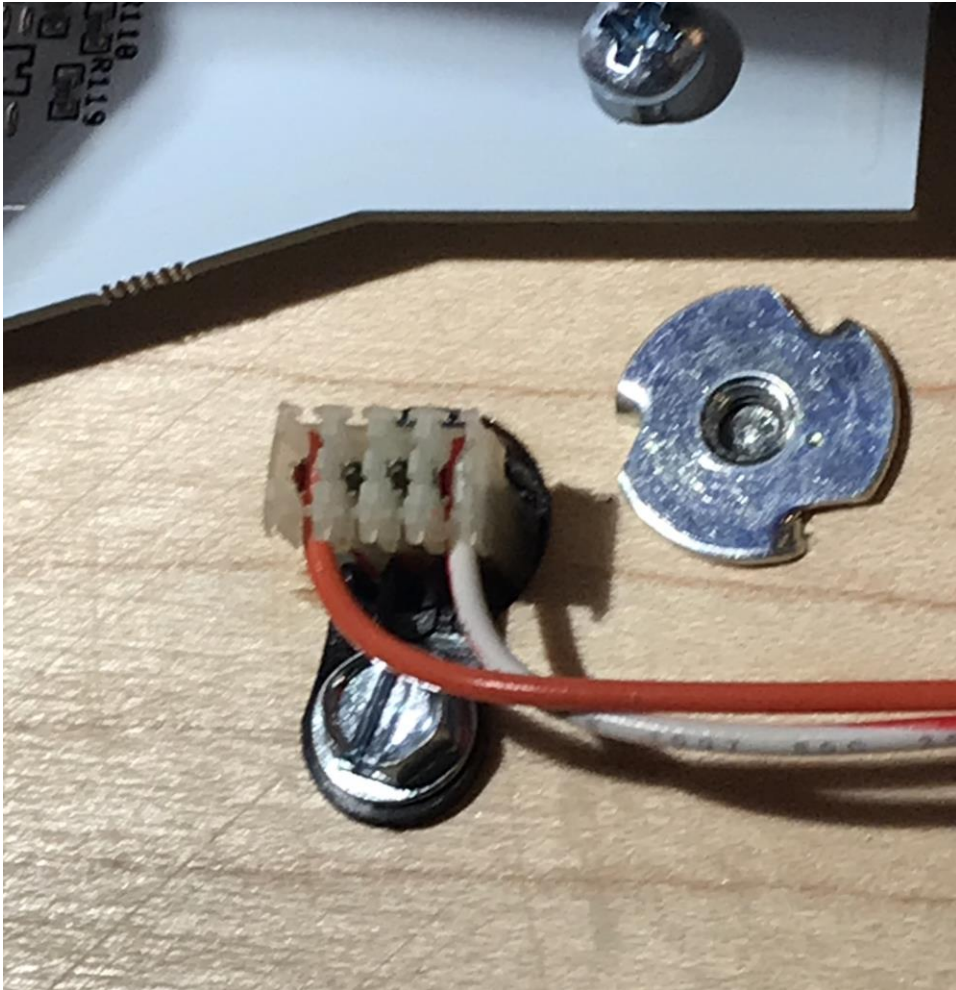
Please Note: If the metal connector is not pressed flush with the Wire Tap housing, it is possible to have a bad connection which could result in the Big-O Martian's eyes not being on consistently. To avoid this issue, ensure that the metal connector is flush with the Wire Tap housing.

23. Connect the Black wire from the Big-O Martian to the Black wire from the Wiring Harness using the second Wire Tap, as shown below. Use pliers to press the metal connector into the Wire Tap until it is flush with the Wire Tap housing. Close the Wire Tap cover.

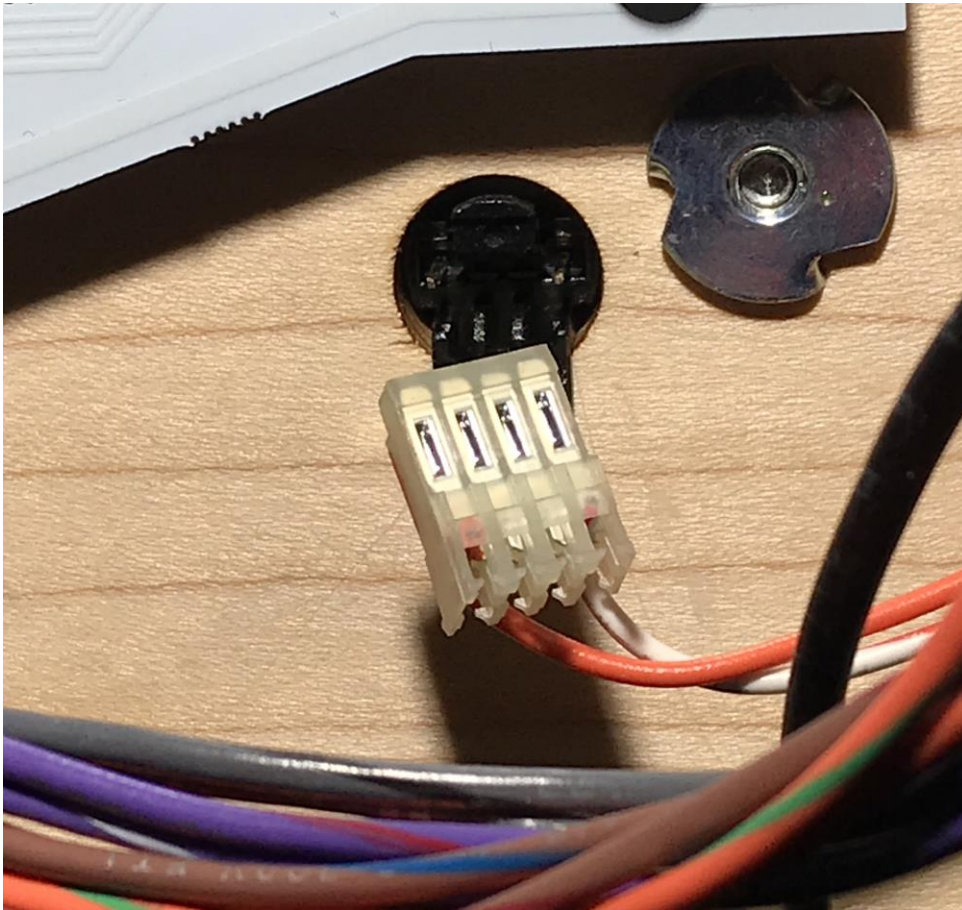


Please Note: If the metal connector is not pressed flush with the Wire Tap housing, it is possible to have a bad connection which could result in the Big-O Martian's eyes not being on consistently. To avoid this issue, ensure that the metal connector is flush with the Wire Tap housing.

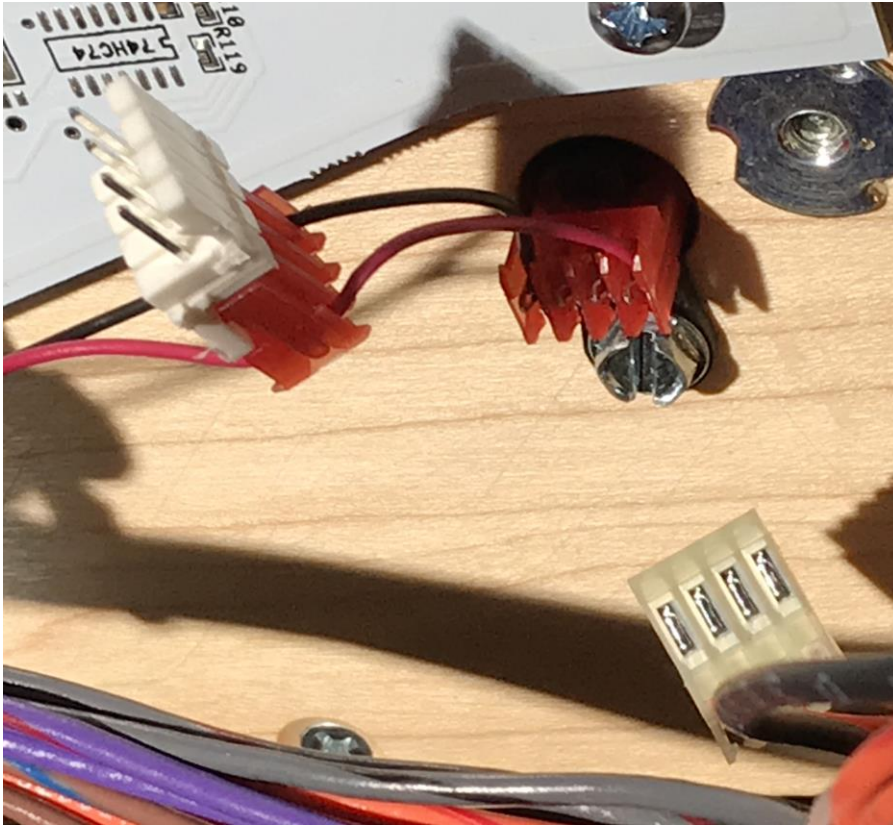
Playfield Bulb Connector



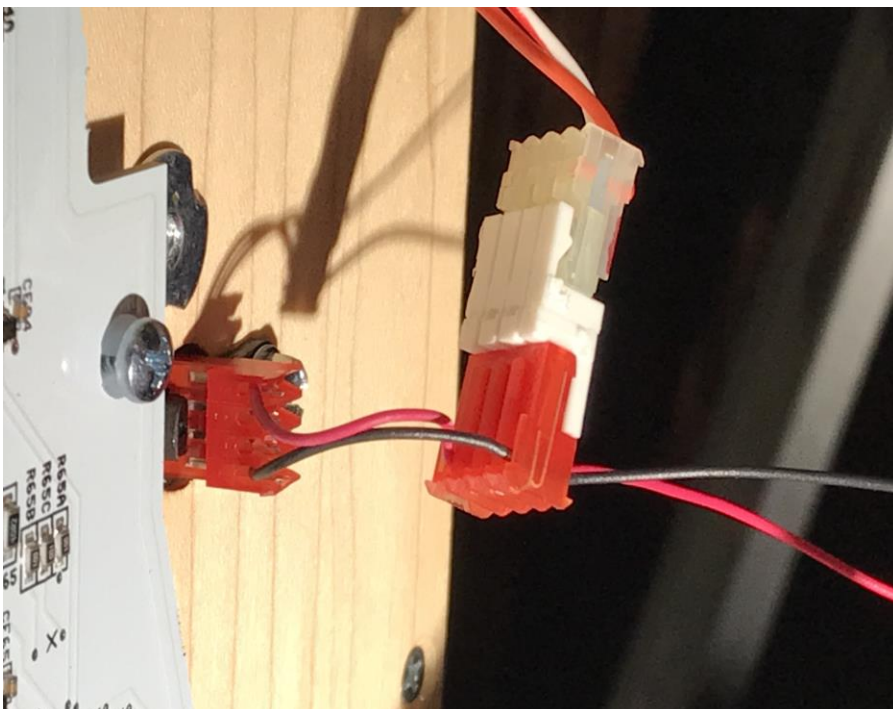
24. There is a tab holding the Playfield bulb connector in place. Remove the bulb connector by pushing the tab away from the bulb connector and pulling the bulb connector out of the bulb housing.



25. Insert the end red Wiring Harness connector into the bulb housing.



26. Connect the original white bulb connector to the white Z Connector.



27. If the Big-O Martian wires are too long and are hanging loose, they can be secured using the 2 provided Plastic Ties.

28. Lower playfield back to the down / horizontal position.

29. Replace glass.



Enjoy and please email me directly if there are any questions or comments.

Thank you, Mick Rogala

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