

XBOX360

Legacy Modchip

Tyr's Hand

Installation Instructions





Tyr's Hand Modchip Installation Instructions

Tools needed

- XBOX360 Controller with CG2 Circuit board
- Viking360 Legacy modchip
- Soldering Iron and solder
- 30 AWG wire (American wire gauge) or similar
- Wire strippers (capable of stripping above wire)
- Electrical tape
- Torx T-8 Security Screwdriver
- Hobby knife



Remove the screws and cover

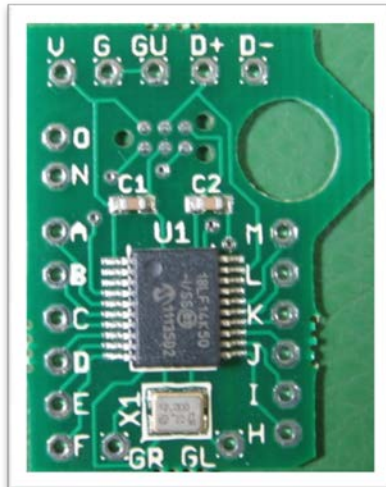


Once the 7 screws are removed, remove the back cover from the controller. Set the screws and screwdriver aside for later.

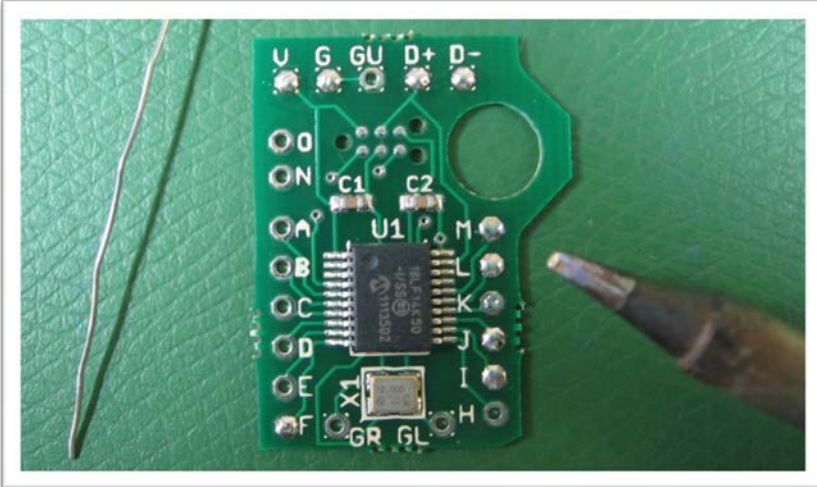


Prepare the modchip

Prepare the modchip by “tinning” the ten solder pads we will use. You can “tin” a pad by applying a little solder. We will tin these pads: V, G, D+, D-, F, M, L, K, J, and I.

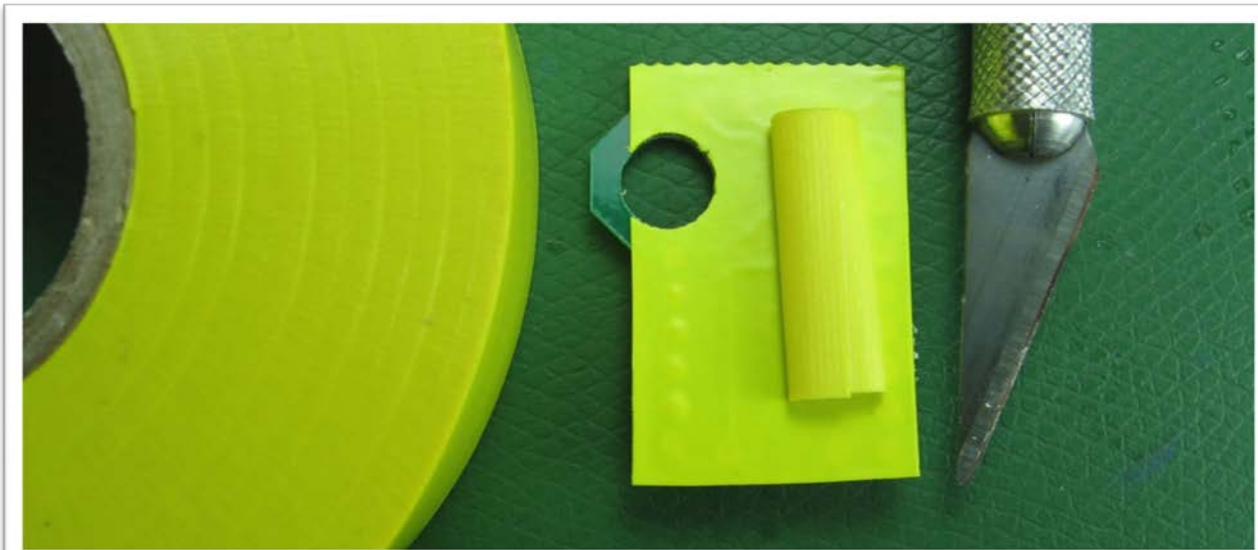


Modchip before tinning



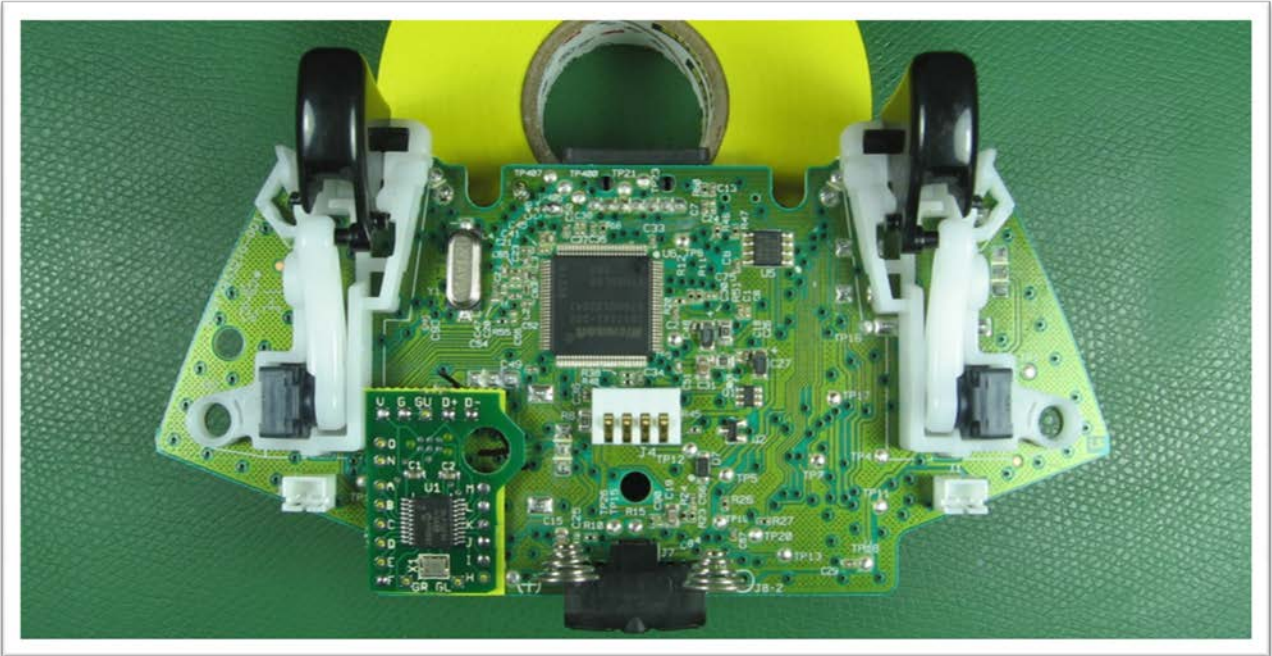
Modchip after tinning

Finish preparing the modchip by putting a piece of tape on the back of the modchip. This will ensure that the modchip does not “short circuit” with the controller’s circuit board. You can also use a second small piece of tape made into a “loop” to help hold the modchip in place on the circuit board. You can use a hobby knife to remove the tape covering the large hole in the modchip.



Place the modchip

Put the modchip onto the circuit board as shown below. Make sure the bottom of the modchip is flush with the bottom of the circuit board and the left side of the modchip is resting against the white plastic of the trigger.



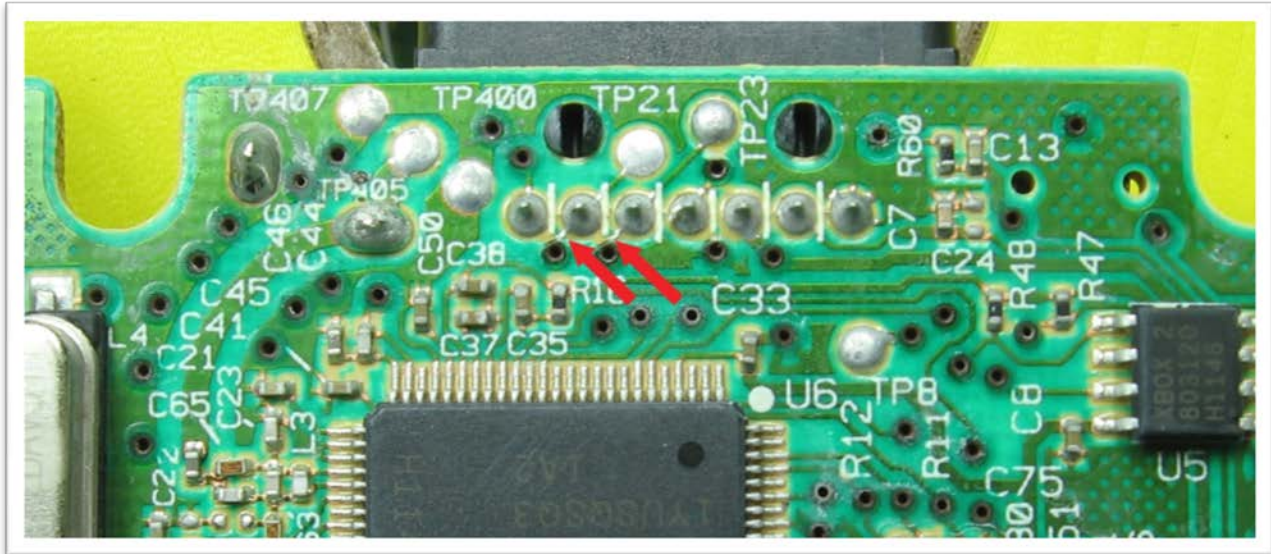
Strip the wires

We are ready to begin installing wires. Use the wire strippers to cut and strip the wires. Only a very small amount of wire needs to be stripped to get the job done; see photo below for an example.

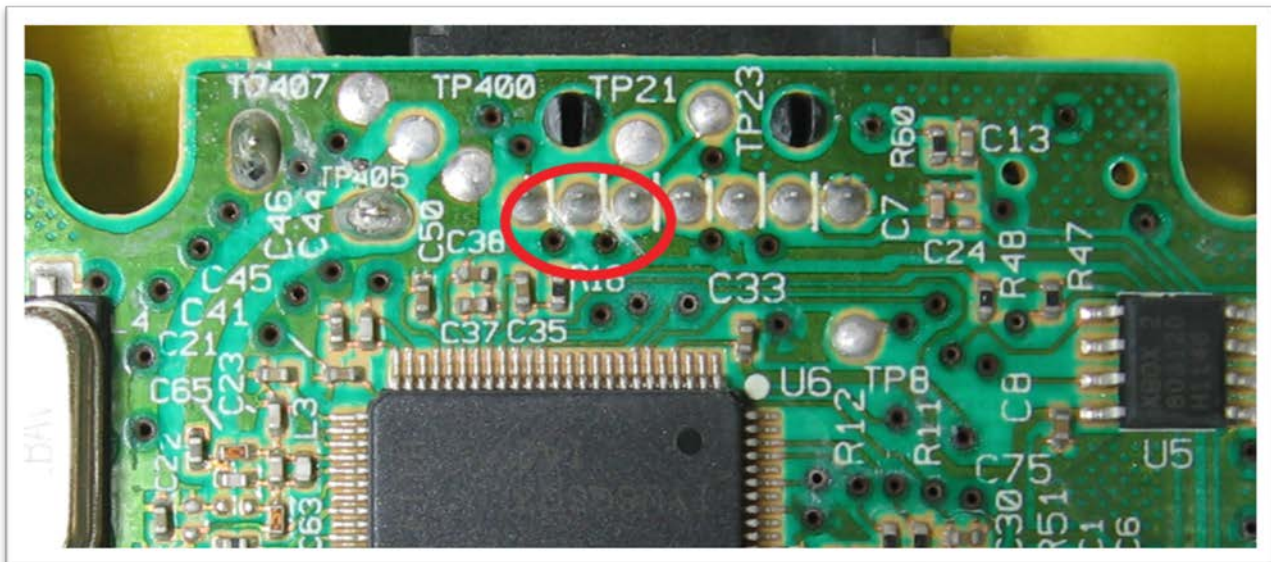


Prepare the circuit board

Traces for the D+ and D- connections need to be severed from the PNC port so the modchip can talk to the computer via USB. Cut the traces marked below:

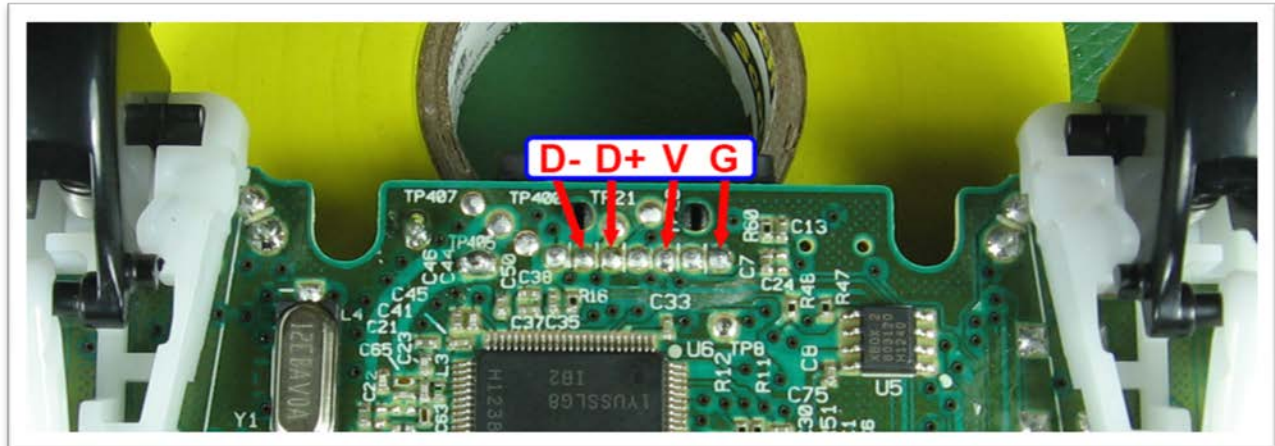


After cutting the traces the circuit board should look like this:

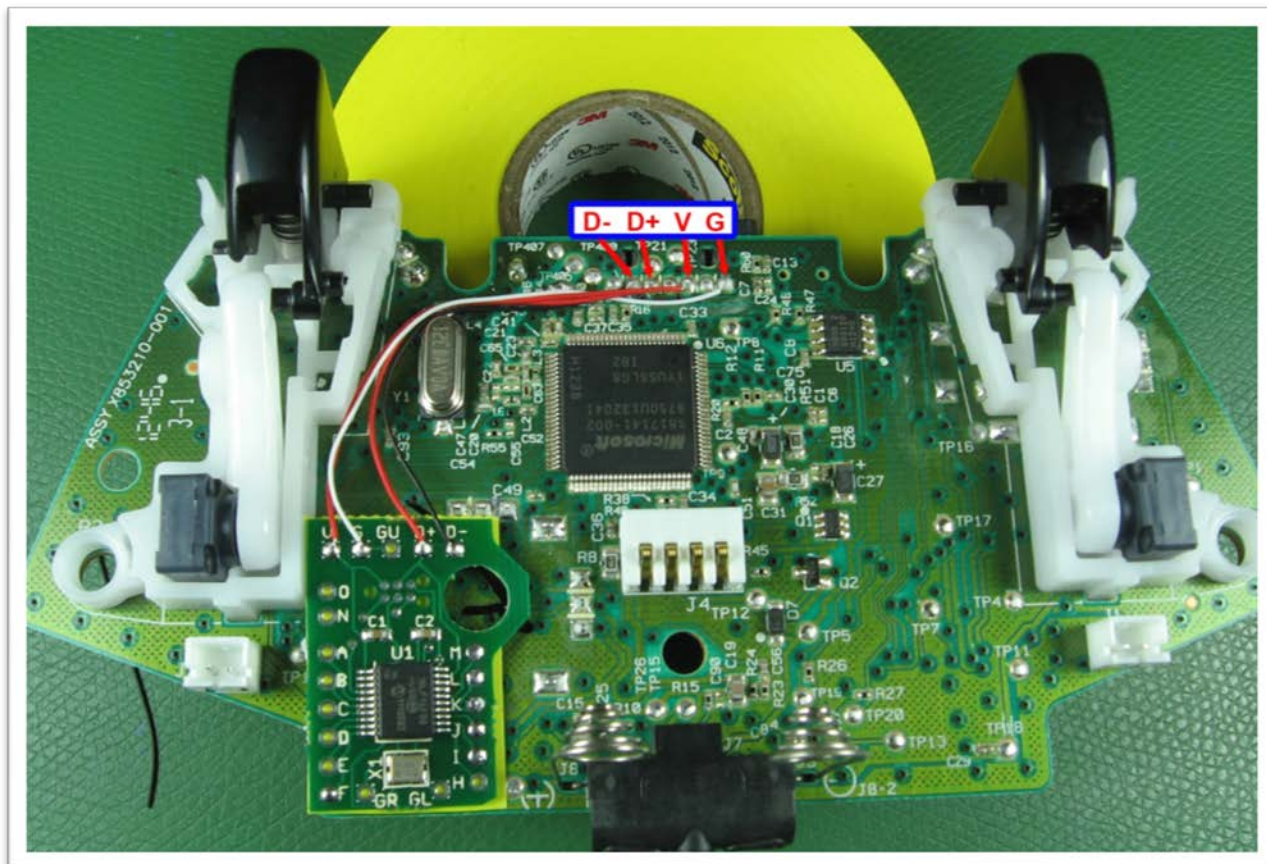


Solder the wires

Solder the first four wires, "V, G, D+ and D-" per the diagram below:

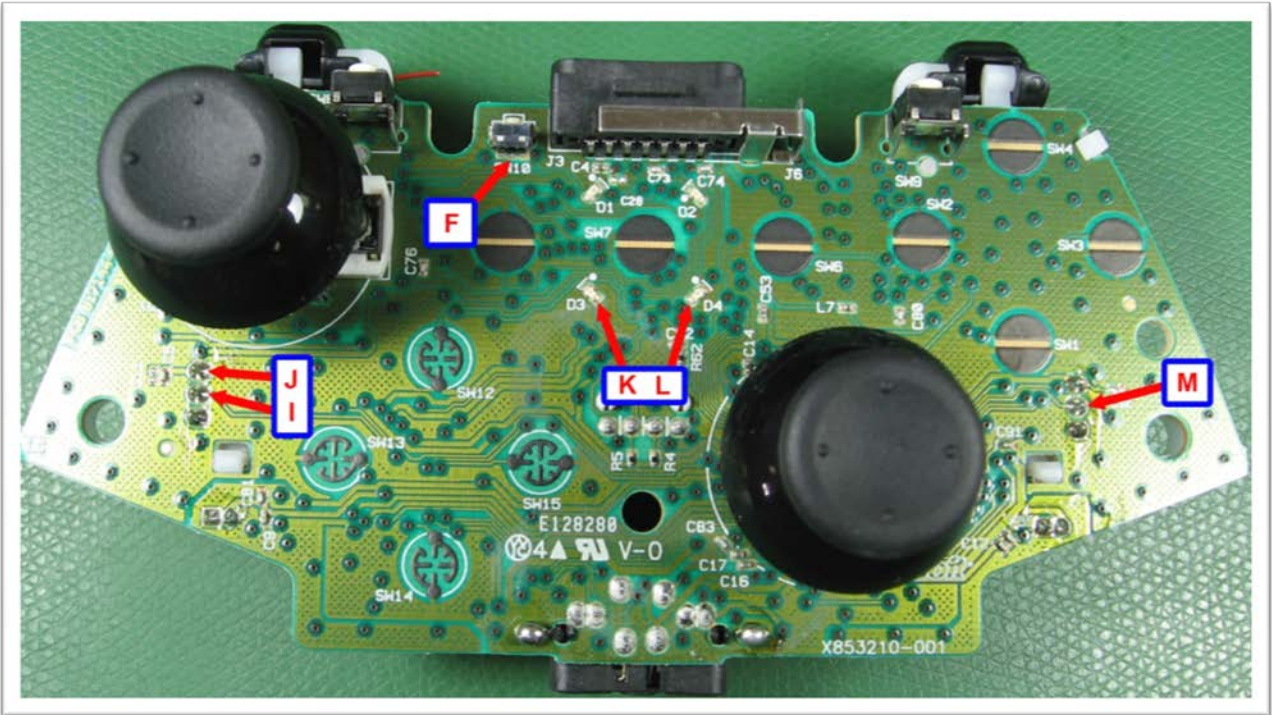


Here is an example of a clean installation of the first four wires.

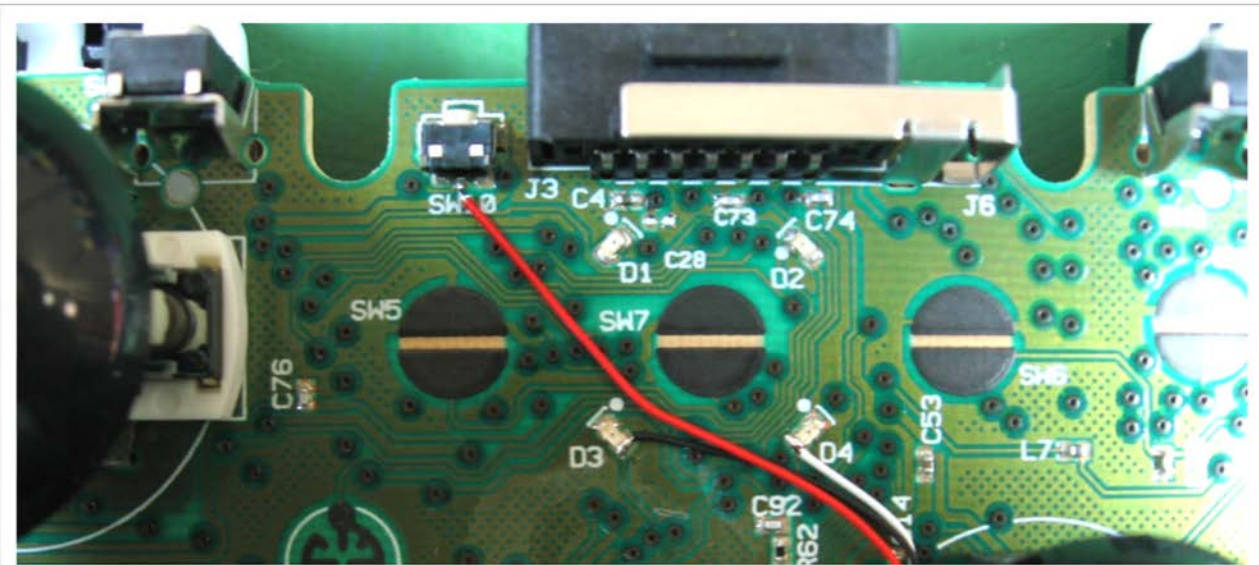


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Now it is time to wire the “F, I, J, K, L, and M” wires to the opposite side of the circuit board per the diagram below:

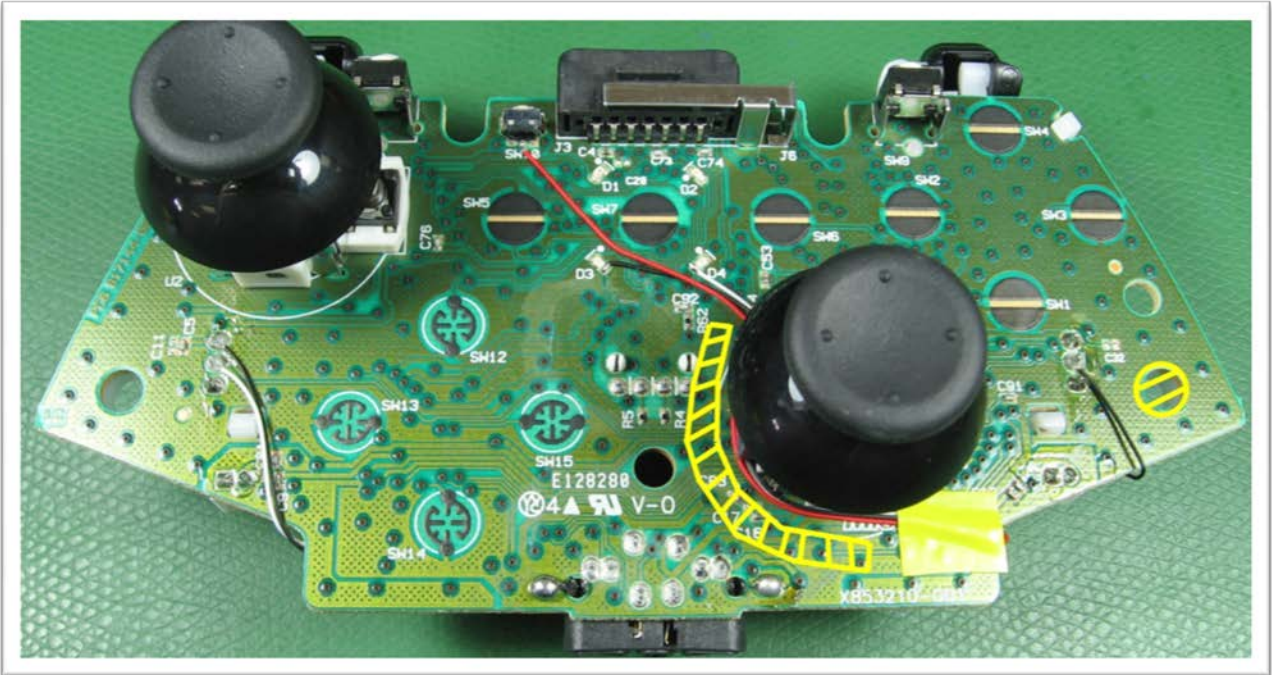


The F wire is soldered to the center pin on the sync button. To make soldering this wire easier you can pre-tin the center pin. If you bridge the center pin to one of the outside pins, flux can be used to un-bridge the connection. To wire the K and L wires to the LEDs place a dab of solder on the lower side of the LEDs in the location shown above. This will make it easier to attach the wires as shown below:



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Below is an example of a clean installation of the rest of the wires. Be careful not to cover the LEDs or the Guide Button pad with the F wire. The F, K and L wires need routed as shown around the left side of the right thumbstick; be careful to stay out of the yellow "Keep Out" areas shown below:



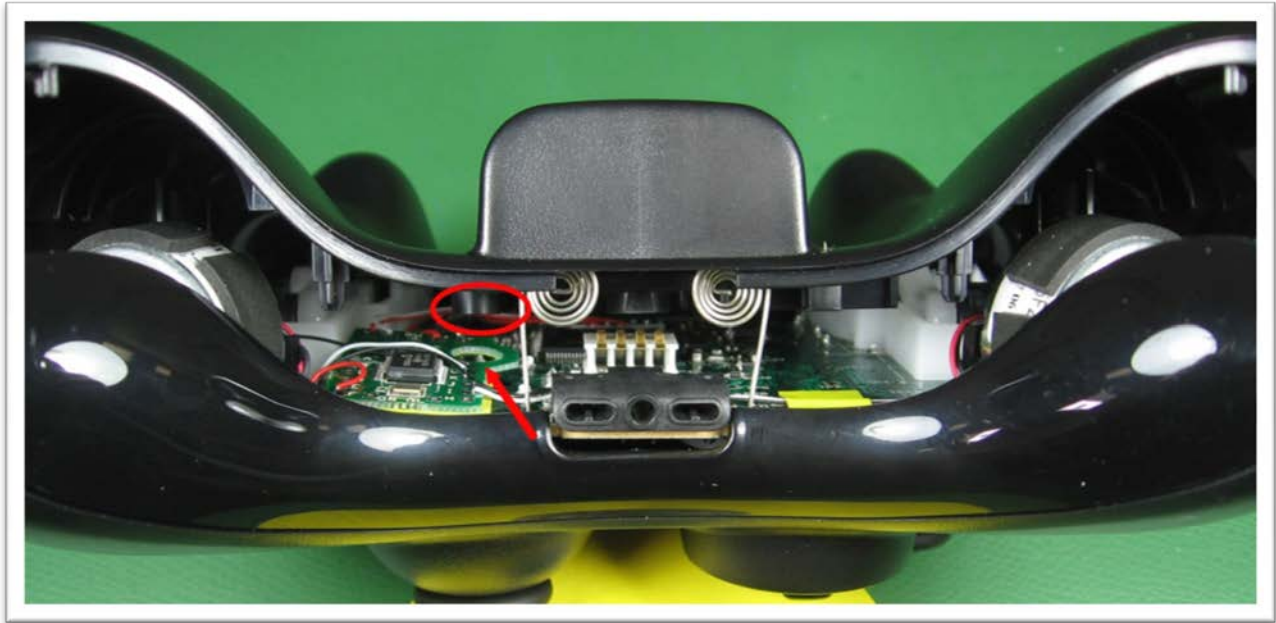
Now it is time to wire the F, I, J, K, L and M wires to the modchip as shown in the diagram below:



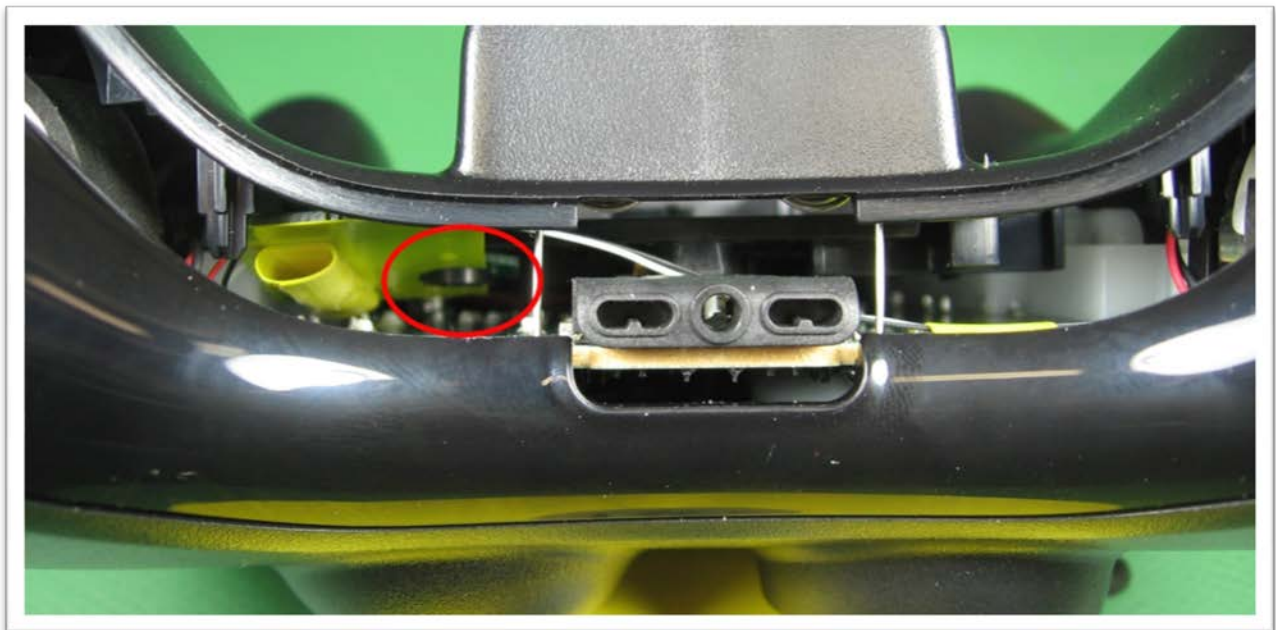
You can tape the J and I wires to hold them in place and help keep them out of the yellow "Keep Out" circle.

Put the controller together

After you place the controller circuit board back into the top of the shell and install the rumble pads start to put the bottom of the shell on but stop as shown in the diagram below:



Using some tweezers or similar small object, push the modchip up so the hole in the modchip is around the post circled in the above diagram. When this is complete it should look like the diagram below:



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Once the controller is closed make sure the J and I wires are visible and not pinched by the case. Wire placement should be as shown below:



Now you can put the 7 screws back in the controller.





Test the Controller

To test your new Tyr's Hand controller visit: <http://www.viking360.com> to download the latest software for your controller. You will need the following files:

- Legacy Controller Software
 - o [http://www.viking360.com/downloads/legacy/Viking360 Legacy Rapidfire Customization Software v1.0.1.zip](http://www.viking360.com/downloads/legacy/Viking360%20Legacy%20Rapidfire%20Customization%20Software%20v1.0.1.zip)
- Tyr's Hand test code
 - o <http://www.viking360.com/downloads/legacy/test-code-tyrs-hand.zip>
- Tyr's Hand all in one driver (this is the driver installed on Tyr's Hands when shipped from Viking360)
 - o <http://www.viking360.com/downloads/legacy/all-in-one-driver-tyrs-hand.zip>

For information on how to program your Tyr's Hand controller please download the Tyr's Hand Programming Instructions PDF from Viking360.com:

<http://www.viking360.com/downloads/legacy/instructions/tyrs-hand-programming-instructions.pdf>

When the test code is programmed onto your controller you can use the following table to determine if your controller is wired correctly.

XBOX360 Tyr's Hand Button Test Codes					
<u>Long name</u>	<u>Short name</u>	<u>LED</u>	<u>Photo</u>	<u># of Flashes</u>	<u>Solder Joint</u>
Sync Button	SY	3		5	F
Left Trigger	LT	3 <u>THEN</u> 4	 	1	I
Right Trigger	RT	3 <u>THEN</u> 4	 	2	M