Installation tutorial for Console Customs

Xbox ONE MaxFire – ONE V3 Flex PCB

This tutorial is designed to aid you in installation of a console customs MaxFire ONE V3 Flex Circuit board in all versions of Xbox One controllers with and without the built in 3.5mm Headset port.

This installation requires soldering several connections to extremely small confined spaces. We do not advise attempting this installation if you are a beginner at soldering. We recommend reading through all of the instructions and understand them before beginning your installation.

WARNING: Please proceed with this installation at your own risk. We will not be held responsible for any damage to yourself, your controller, your Xbox ONE console or any other equipment.

This tutorial requires opening your controller which will void the warranty of your controller.

Tools needed:

- Torx T8 Security/tamper proof driver
- Torx T6 screwdriver
- Soldering iron (A 15w/30w from radio shack is about $12)
- Solder (We use rosin core solder from radio shack so there is no need for flux $4)
- Wire strippers (that can strip 30ga wire, a 30ga wire wrap tool from radio shack includes a 30ga stripper $8)
- Wire cutters
- Hot glue gun
- 1/8th inch drill bit (optional)
- Small pocket knife or razor blade

Please visit our website at www.consolecustoms.com

For questions or help please email us at support@consolecustoms.com

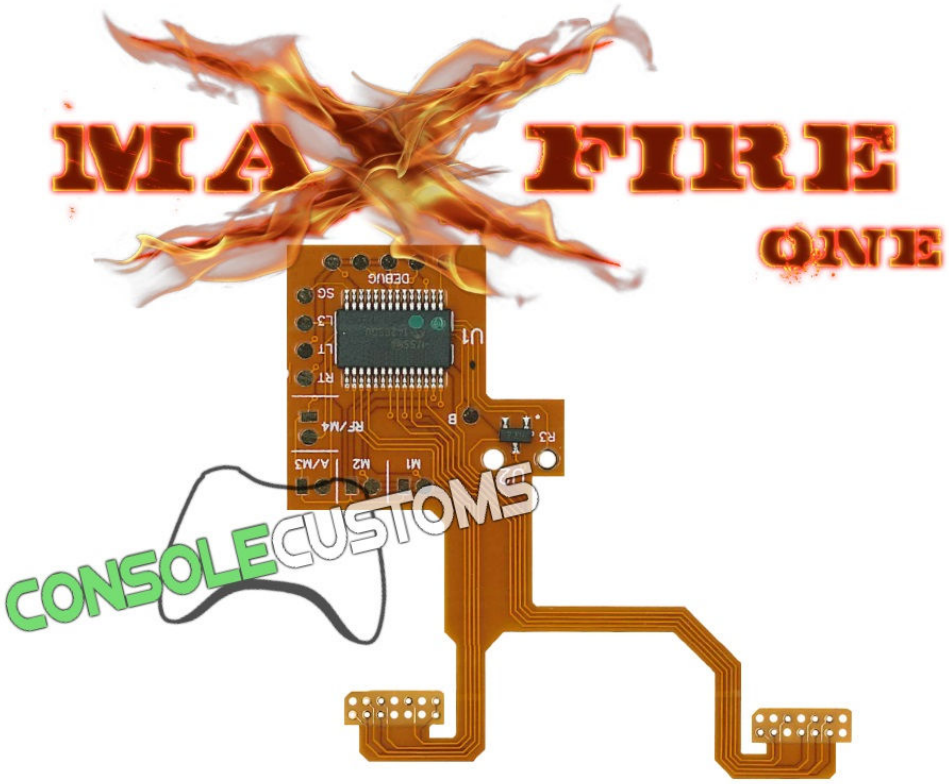
Sending pictures with support requests will help us to help you quickly!

ATTENTION!!

This guide covers all versions of Xbox One controllers, The original controllers without the 3.5mm Headset port, the newer controllers with the #.5mm headset port and also Elite controllers. Most steps are the same for all versions, however the connection points for the triggers are different Please pay attention to the guide for the proper location to connect the triggers for your controller.

First lets start by looking at what is in your kit.

- You should have the following items in your kit
  1. (1) MaxFire-One Flexible Circuit board
  2. Buttons (optional and vary by what you purchased)
  3. 30ga. Wire
  4. De-soldering braid



OPTIONAL BUTTONS

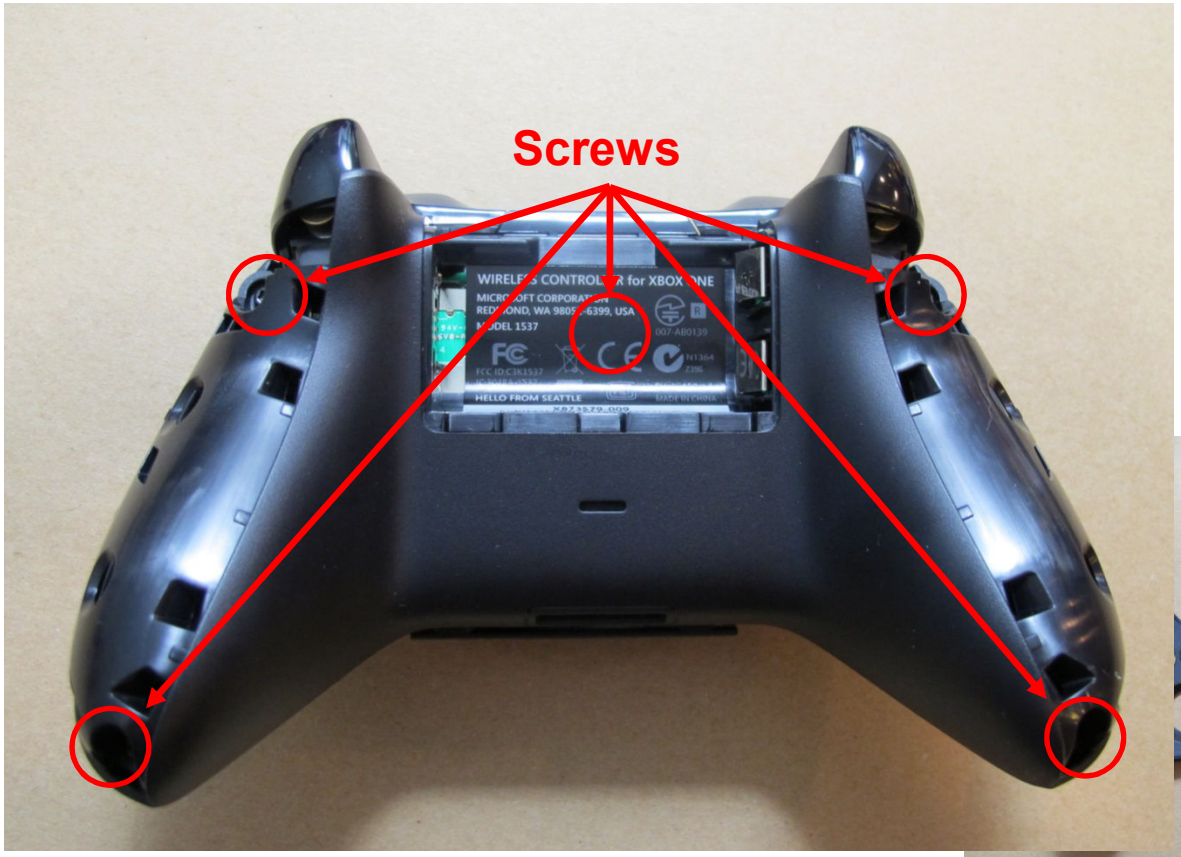
Opening the Controller, Part 1

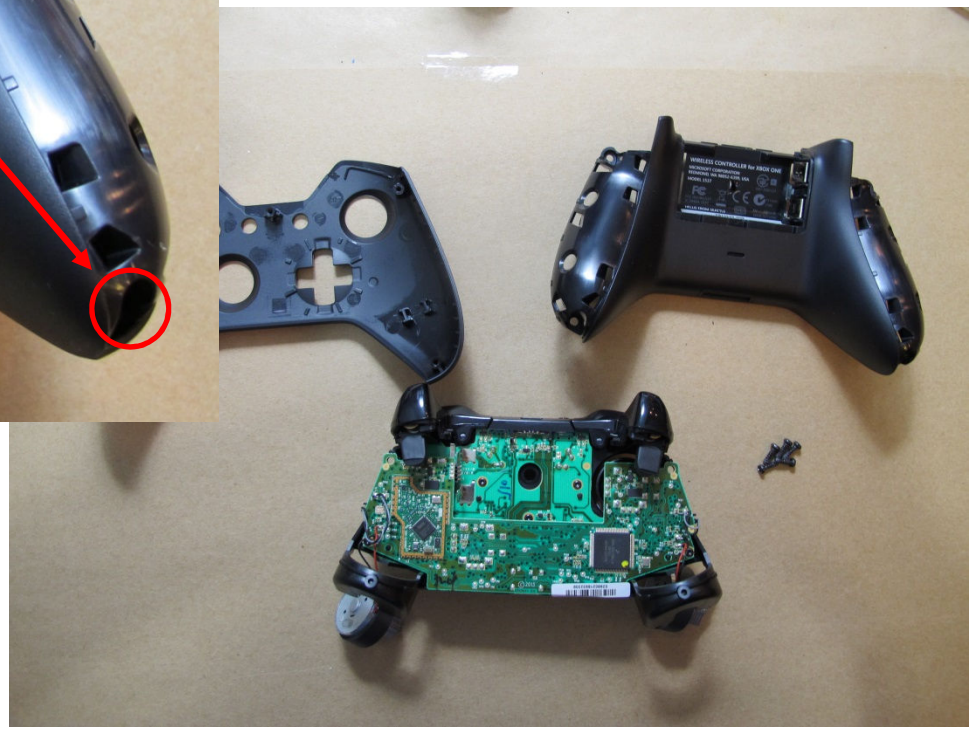
First lets get the controller open. As you will notice there are no visible screws on the controller, Microsoft has hidden them under the hand grips and in the battery compartment. So to start you will want to remove the hand grip covers. You can use a plastic pry tool to do this or just your fingernails which we find to be faster and easier. The clips face inward so you want to pull out and away as demonstrated in the picture below. Don't try to just rip it all the way off from one side you may break clips this way. Just pull till you hear the clips pop off on one side then go to the other side and do the same thing.

Opening the Controller, Part 2

Next You will want to remove the 5 screws that hold the shell together. These are Torx T8 Security screws and have a small post in the center of them which require the use of a Torx T8 security screwdriver to remove them.

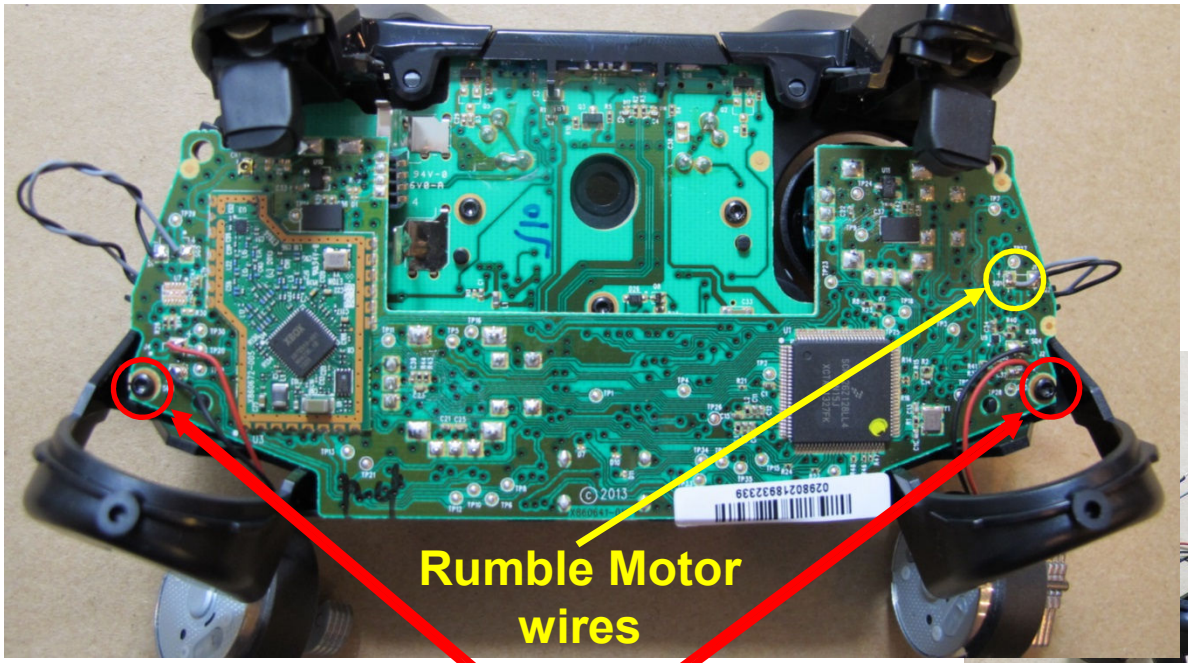
With the screws removed both the front and back halves of the shell are easily removed. You will also want to remove the thumbsticks.

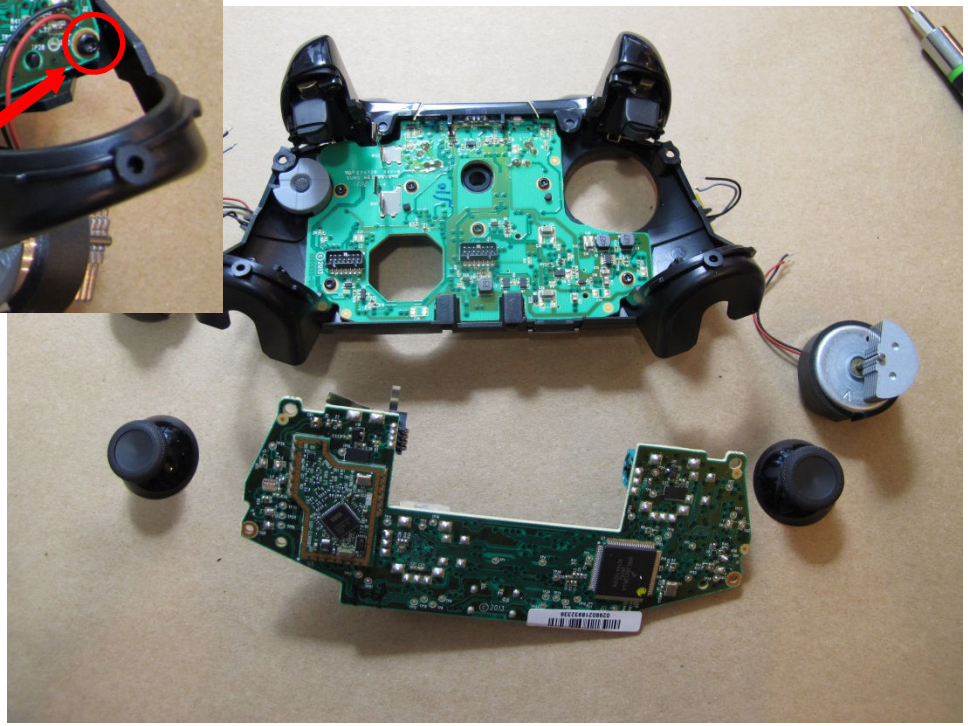




Opening the Controller, Part 3

With the shell apart you will see two circuit boards which have two connectors hooking them together. We need to remove the smaller “U” shaped board to access the connectors and install our mod. To remove this you will want to remove the two Torx T6 screws in the lower corners (circled in red below) and de-solder the wires for the left trigger rumble motor (Circled in Yellow below). You only need to remove the wires for this one rumble motor to be able to move the board enough to access the plugs, the other rumble motor wires are longer. You could remove them all to make accessing the other side easier but it is not necessary. With the screws and wires removed the back circuit board can be lifted up to disengage the 2 plugs, this can take a little force as the plugs are tight.

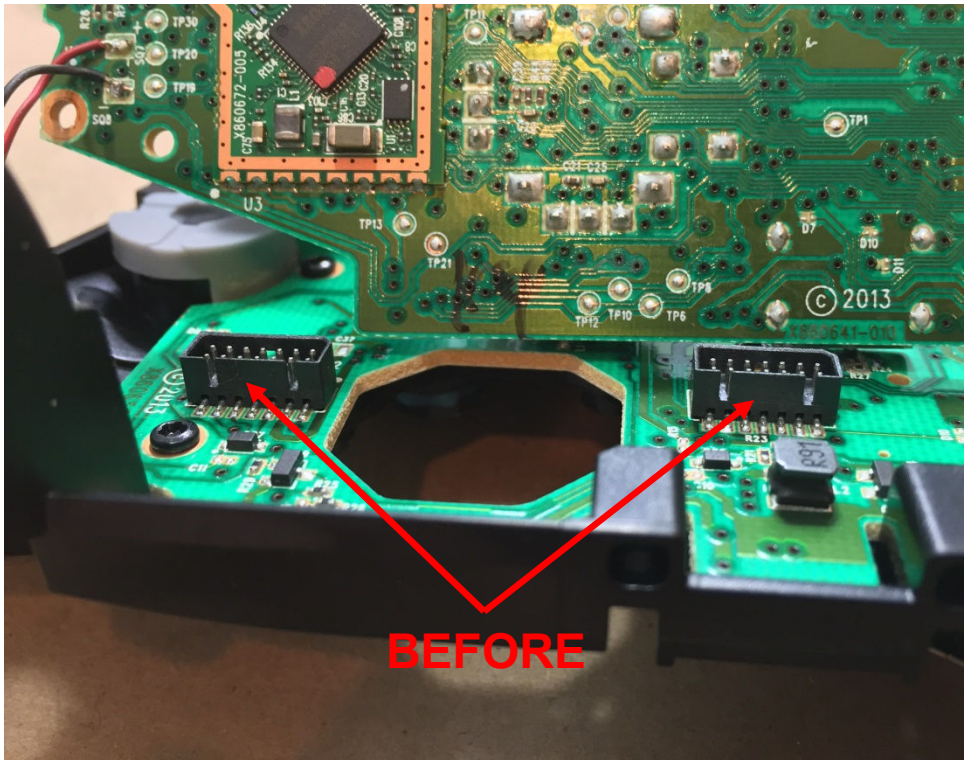


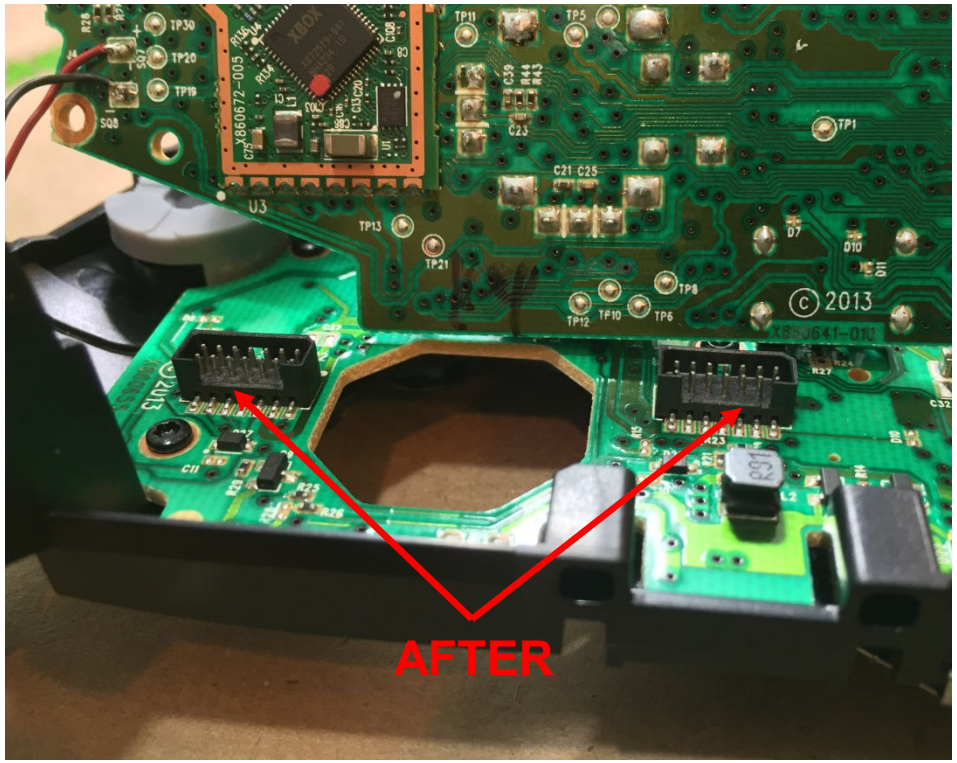


Preparing the plugs, Part 4

Lift and rotate the smaller circuit board do that you can access the two plugs on the larger circuit board. To install the mod you must remove the center section of the plug housing as shown below. This will easily snap off using your fingernail or grabbing and bending forward with small needle nose pliers.

Please note that removing this part of the plug will not harm the integrity of the plug as all 4 corners are still intact and the alignment pins will still be guided by the outside edges of the now larger opening.

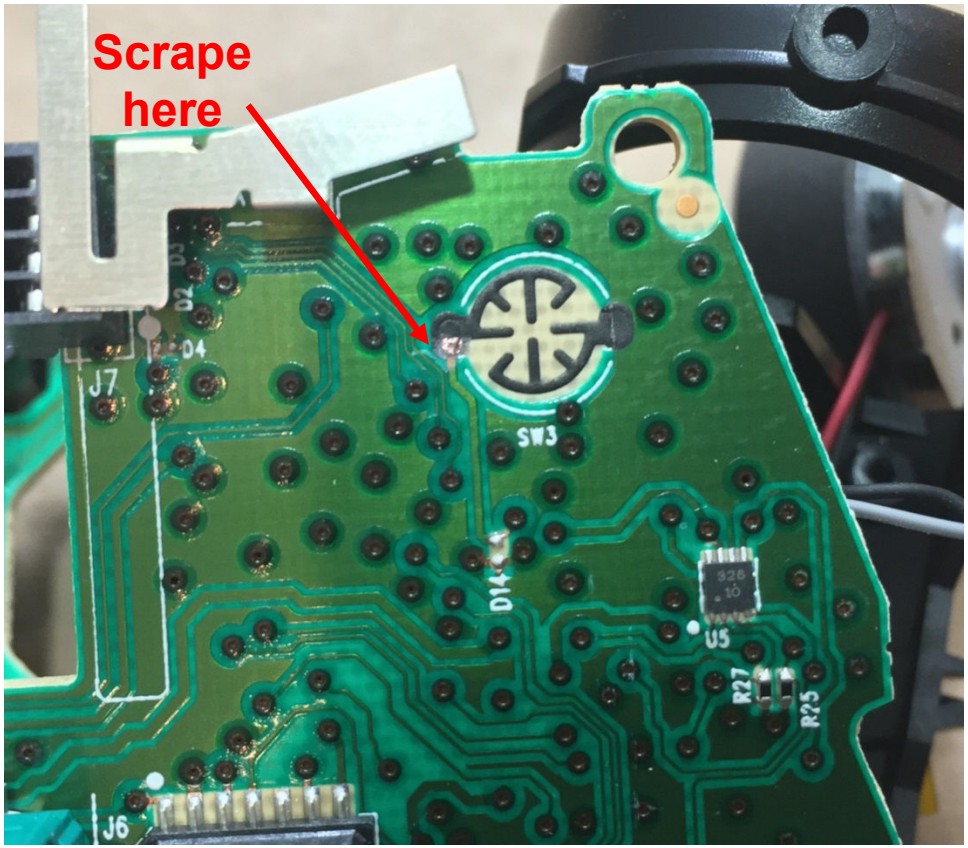




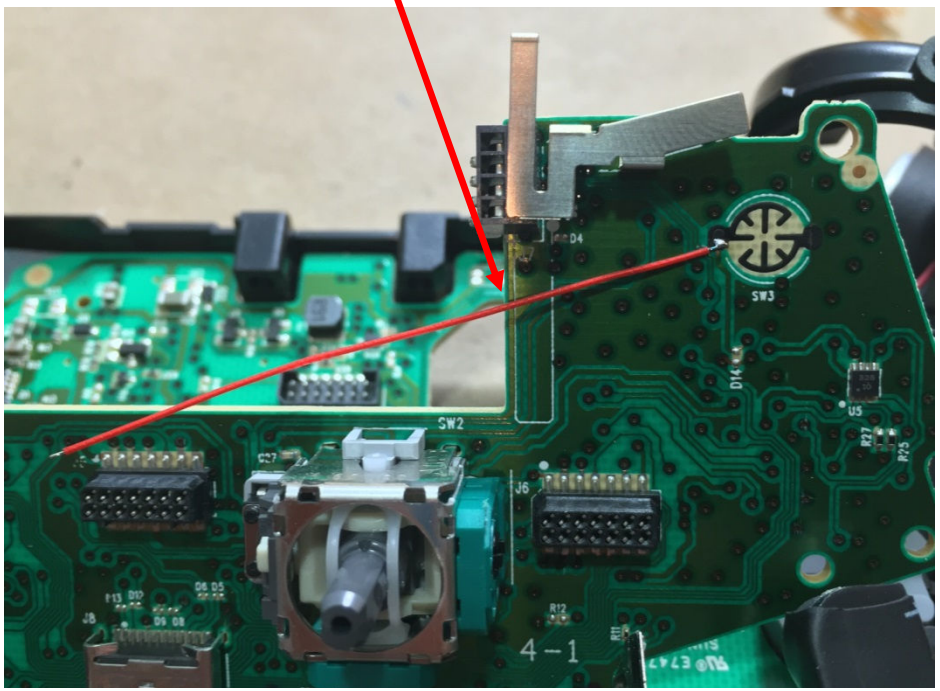
Prepare the “B” Button, Part 5

Before installing the mod we also need to prepare the B button. This is the only solder point on the back side of the board. To access it, completely flip over the “U” shaped board. The B Button connection pad is in the upper right corner. You will need to connect to the small circle on the left side of the button. This area is coated with a conductive carbon film and this cannot be soldered to so part of it will need to be removed.

*** IMPORTANT – To remove the carbon coating you will need to scrape it with a knife, however you need to be sure to only remove the lower HALF of the circle as we have done in the picture. There is only copper under this circle and if you scrape the entire pad you will disconnect it from the rest of the printed carbon and the button will not work. So take your time and start at the very bottom edge and work your way up and expose just enough copper to solder the wire.**



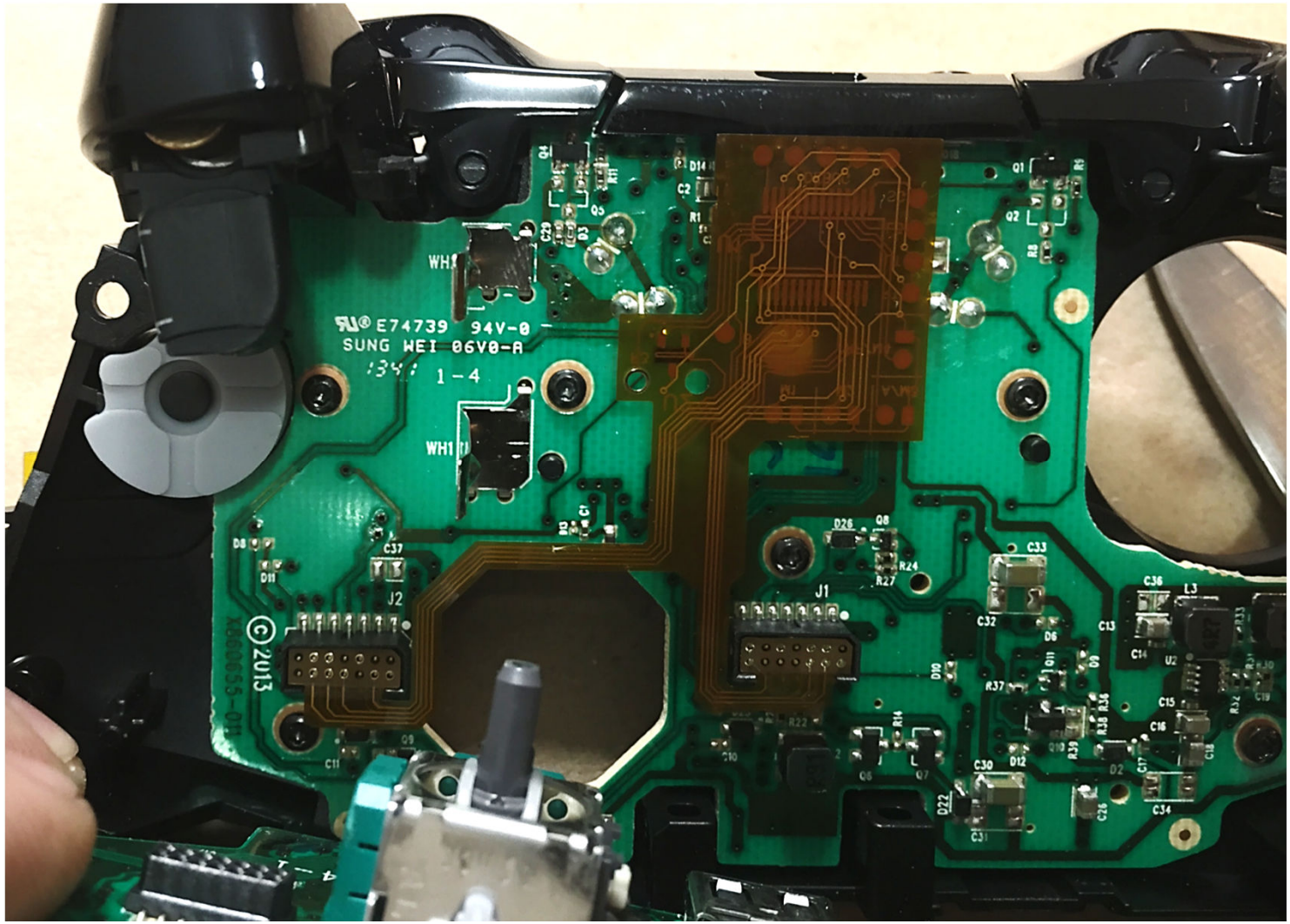
Solder wire to newly exposed copper. This wire should be around 2.25 inches (55mm) long.



Installing the board, Part 6

Now we can install the circuit board. This board makes it's connections to the plugs by pressure. And lays inside the plugs. Move the smaller "U" shaped board so you can see the plugs as shown below and lay the flex in place. Push the mod onto the plugs with your finger to get them started. They are a tight fit so you will not be able to push them very far, this is OK as the plugs themselves will push the flex down evenly over the pins, you only need to be sure they stay in place before the plugs are put together.

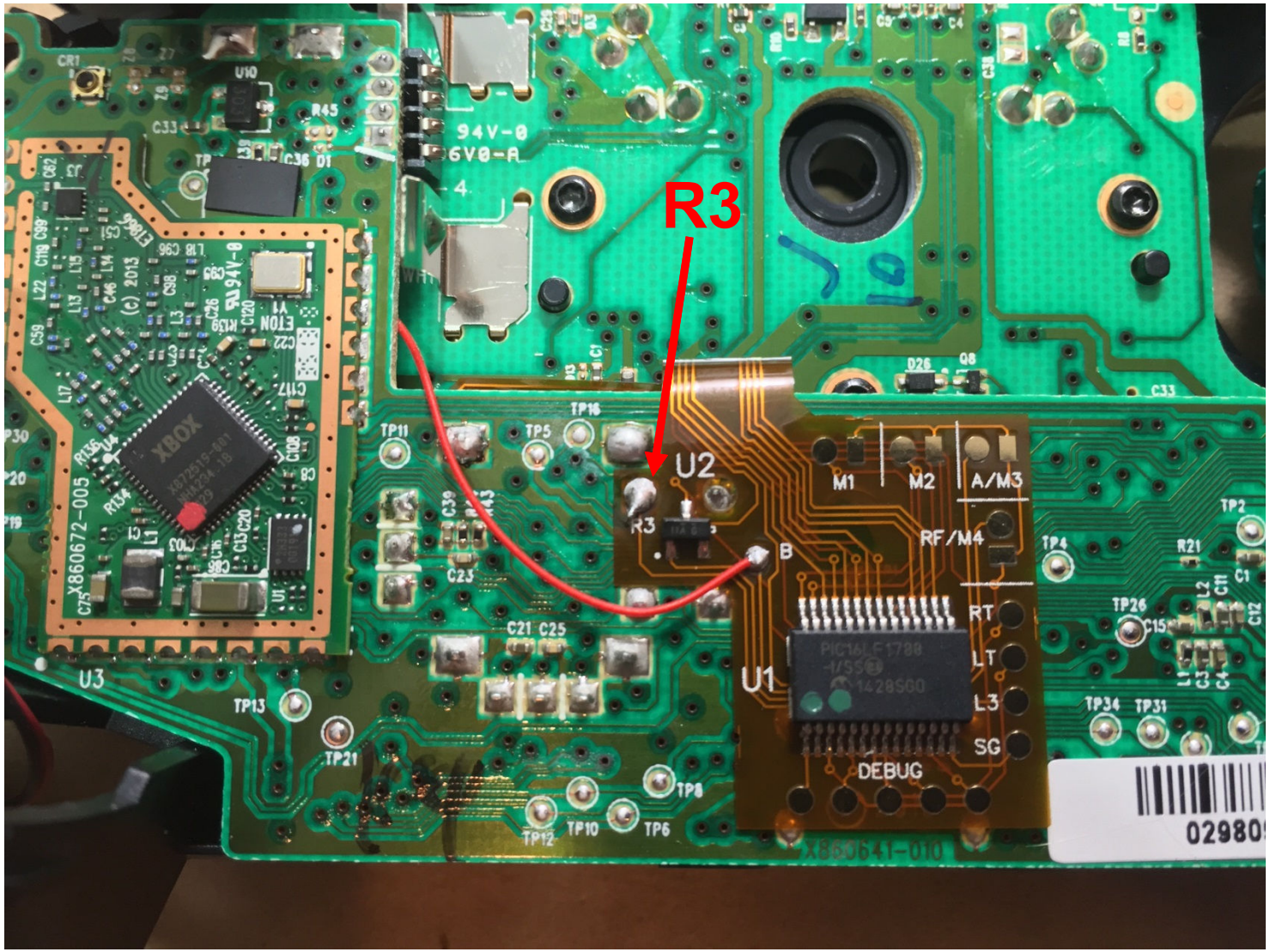
Once in place flip the "U" shaped board back over and align the plugs, Make sure the mod has not moved and push the Boards together. It will take a little force as the mod is tight going over the pins.



Connecting R3 and the B Button, Part 7

With the boards back together you can now flip the mod over onto the back of the U-shaped board. We will use a small dap of hot glue under the center of the board to hold it in place. Just be sure you line up the holes for the R3 connection so that this can be soldered.

Once in place solder the R3 connection directly to the board as shown and then solder your wire from the B button to the board on the mod labeled “B”

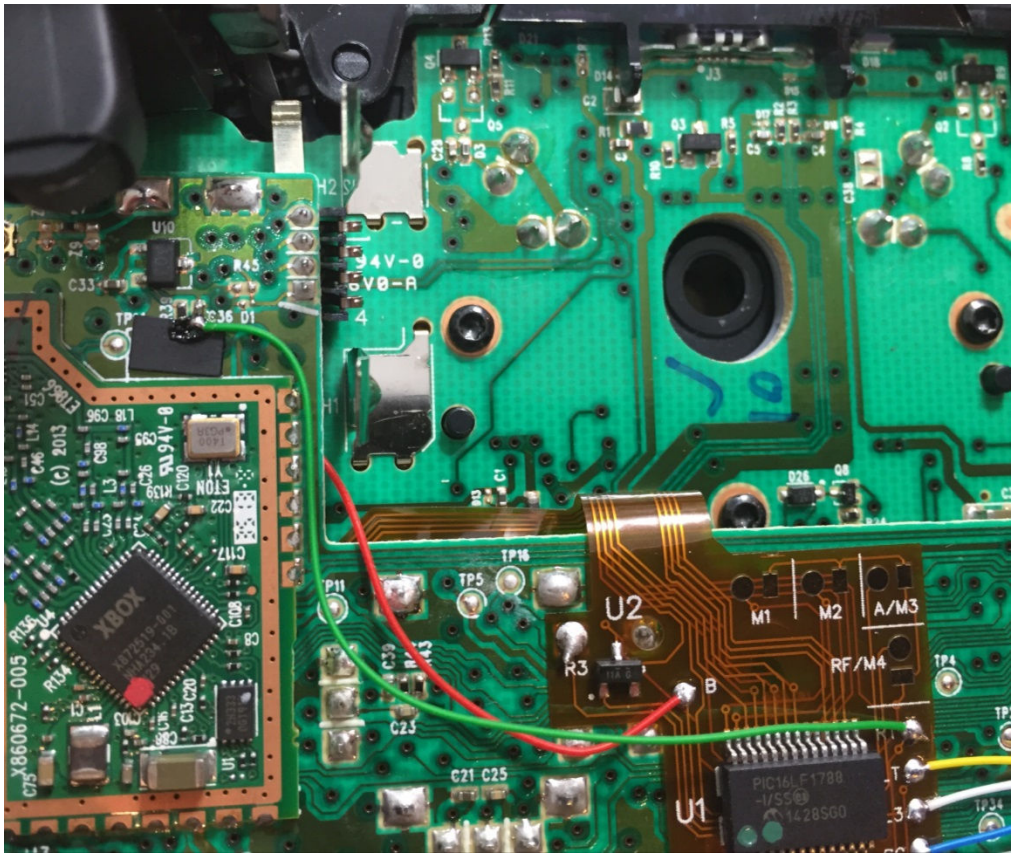


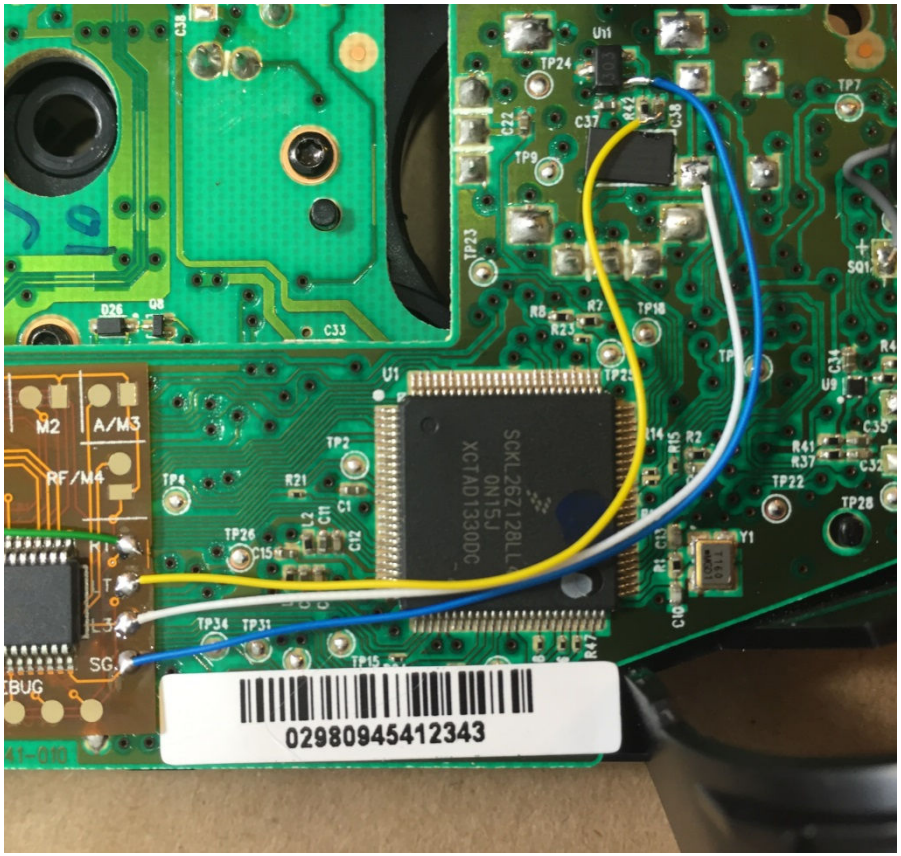
Making the wire connections, Part 8a (for controllers without the 3.5mm port)

This is where the connections will be different for the 3 controller types. Here you will find the connections for the older controllers without the 3.5mm headset port.

Solder the wires as shown for the Right and left trigger, L3 and the SG connection.

On this controller to connect with the triggers you must solder the bottom edge of a resistor or capacitor (known as an RC filter) The bottom edge of these two components are already connected together on the board. So it does not matter if you solder to just one or both. What you do need to do is be careful that you do not hold your soldering iron on these for very long as they are very small and can easily come off the board if the heat is to high on your iron or applied for to long. You should not touch the edge for more than 2-3 seconds at a time.





Making the wire connections, Part 8b (for controllers <u>with</u> the 3.5mm port)

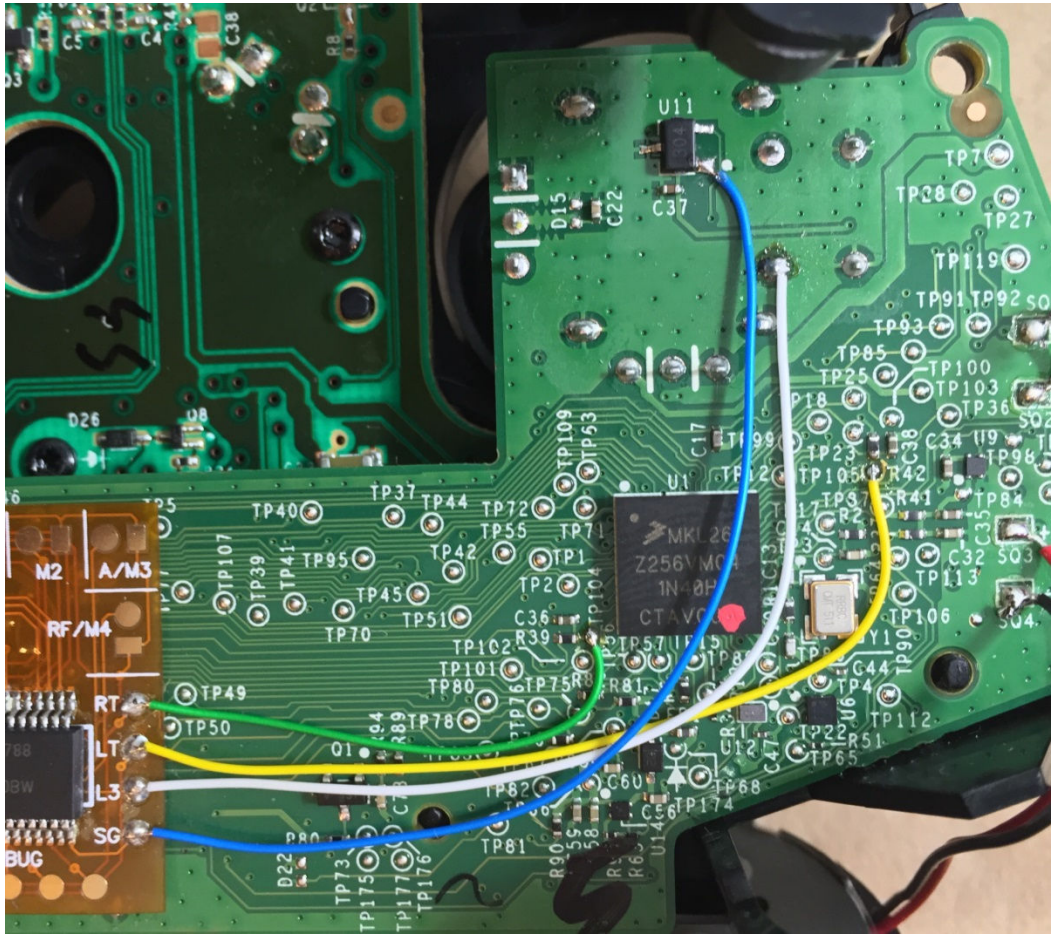
The left image has arrows point to each connection location and the right side shows the wires soldered in place. Below are more details for each wire.

RT (Green wire) – This wire will solder to the very small solder pad directly to the right of the black resistor labeled “R39” For RT and LT take care that only a very small portion of wire is exposed there are many other components and solder pads next to these which cannot touch the bare wire.

LT (yellow wire) – This wire will solder to the small pad directly below the Black resistor labeled R42

L3 (white wire) – This wire will solder to the large pad which is the bottom left of the 4 legs for the Thumbstick click button.

SG (Blue wire) – This wire will goto the bottom right leg of the black Sensor at the top of the circuit board.



Making the wire connections, Part 8c (for Elite Controllers)

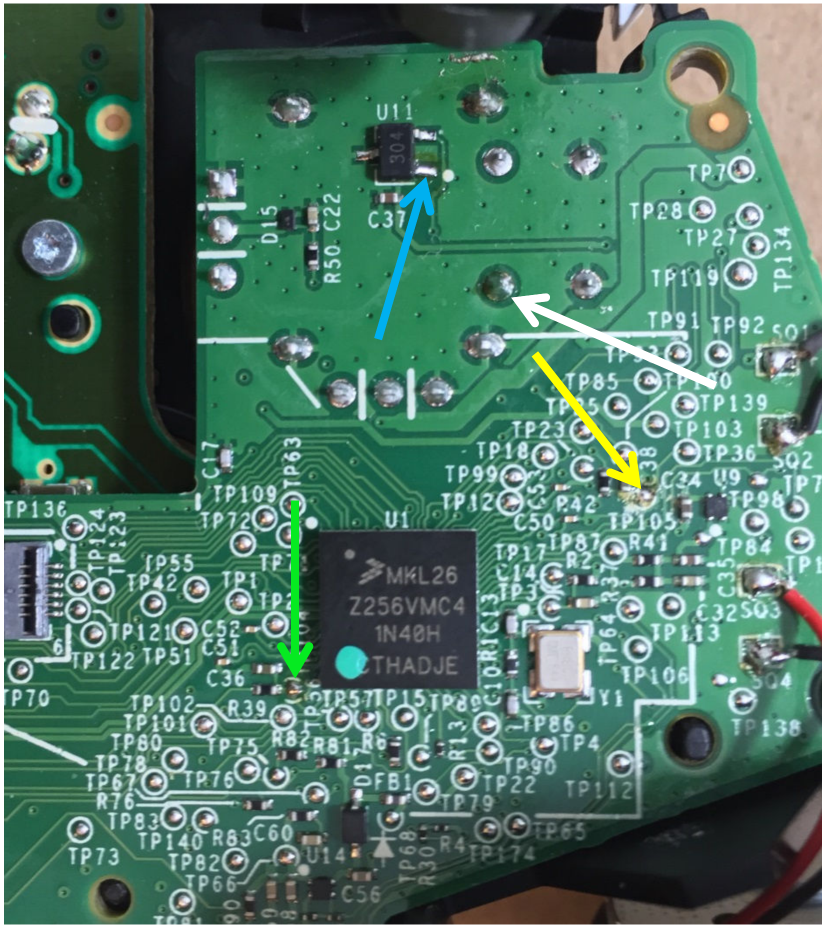
The left image has arrows point to each connection location and the right side shows the wires soldered in place. Below are more details for each wire.

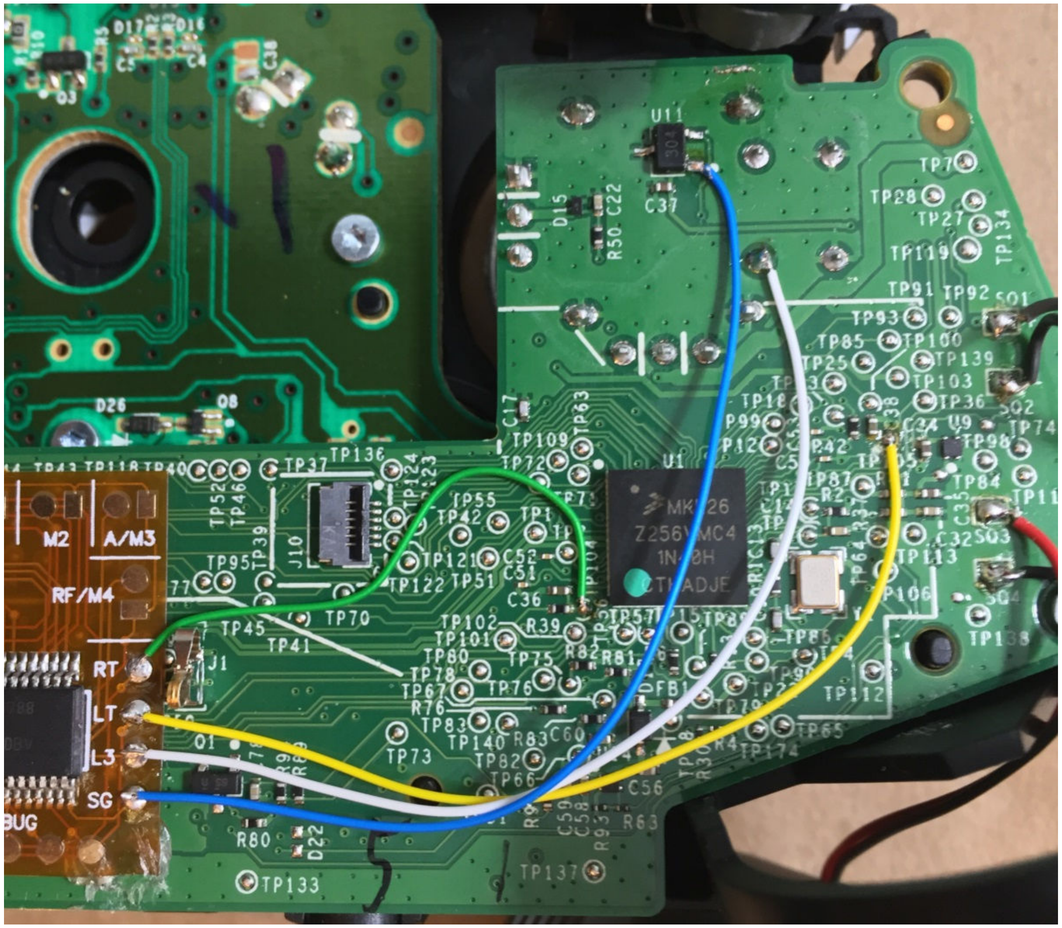
RT (green wire) – This wire will solder to the very small solder pad directly to the right of the black resistor labeled “R39” For RT and LT take care that only a very small portion of wire is exposed there are many other components and solder pads next to these which cannot touch the bare wire.

LT (yellow wire) – This wire will solder to the small pad directly above the lebel on the board that says TP105

L3 (white wire) – This wire will solder to the large pad which is the bottom left of the 4 legs for the Thumbstick click button.

SG (Blue wire) – This wire will goto the bottom right leg of the black Sensor at the top of the circuit board.





Complete.

The full user guide for this mod can be found at this link

http://www.consolecustoms.com/dl/xone/Xbox_One_MaxFire-ONE_V2-V3_Manual.pdf

If you have any questions please email is at support@consolecustoms.com

Installing the optional Buttons.

To install buttons, first take the button and remove one pair of legs. A pair of legs are on the same side edge of the button (see image below). With the two remaining legs you will solder the wire from the board to the button.

To mount the button drill a 1/8th inch hole in the shell in your desired location, normally somewhere on the back of the shell. Just be sure before drilling that when closing the controller the button will fit and not make contact to the circuit board or other shell components. There is a lot of open area in the Xbox One shells so it should not be hard to find a location that works for you.

After drilling the hole glue in the button using HOT GLUE, do not use super glue as super glue can seep into the button can cause it to stop working. Most thicker 2 part epoxies will also work if hot glue is not available.