

Installation tutorial for Console Customs

Xbox ONE MaxFire – ONE V2 PCB

This tutorial is designed to aid you in installation of a console customs MaxFire ONE V2 Circuit board in the newer Xbox One Controllers with 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

ATTENTION!!

This guide is only for the newer Xbox One controllers which have a 3.5mm headset port on the bottom. Please see the image below.

If your controller DOES NOT have this port



Opening the Controller, Part 1

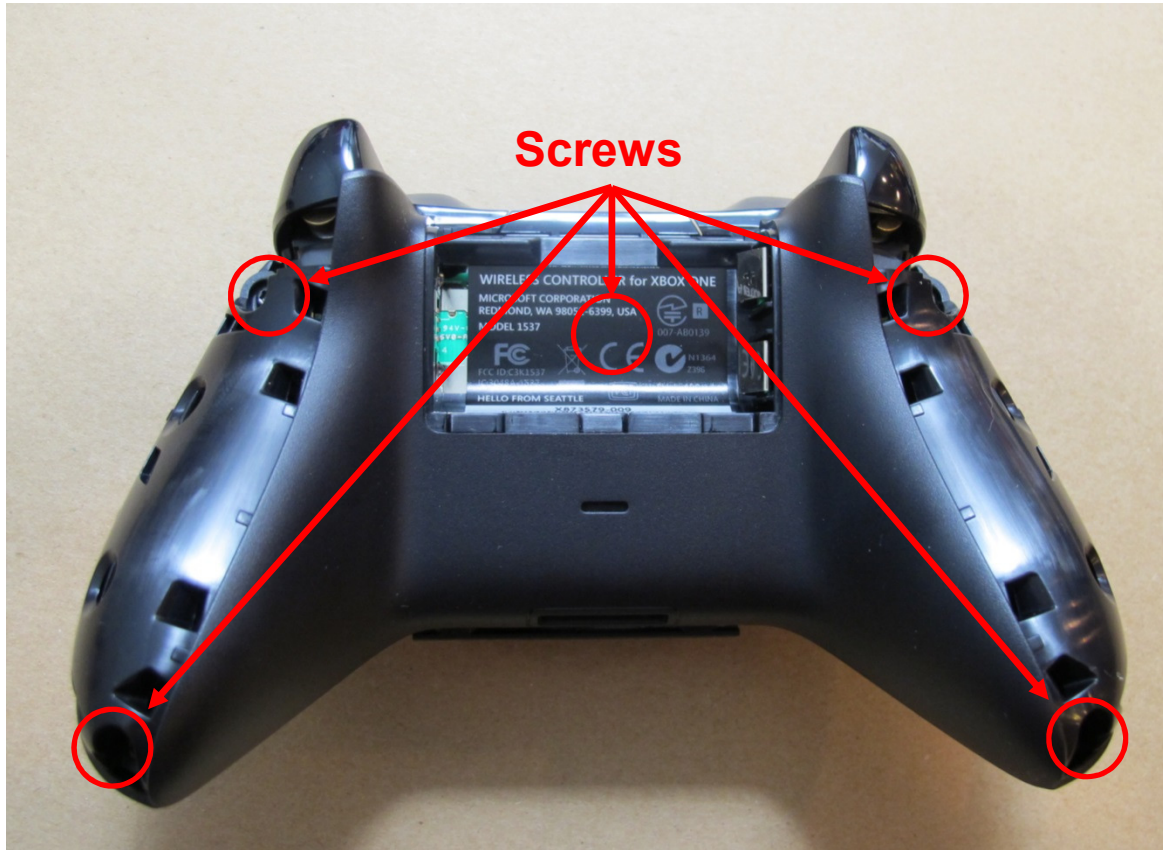
First lets get the controller open. As you will notice there are no visible screws on the controller, Microsoft has hidden them under the hand grips and in the battery compartment. So to start you will want to remove the hand grip covers. You can use a plastic pry tool to do this or just your fingernails 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

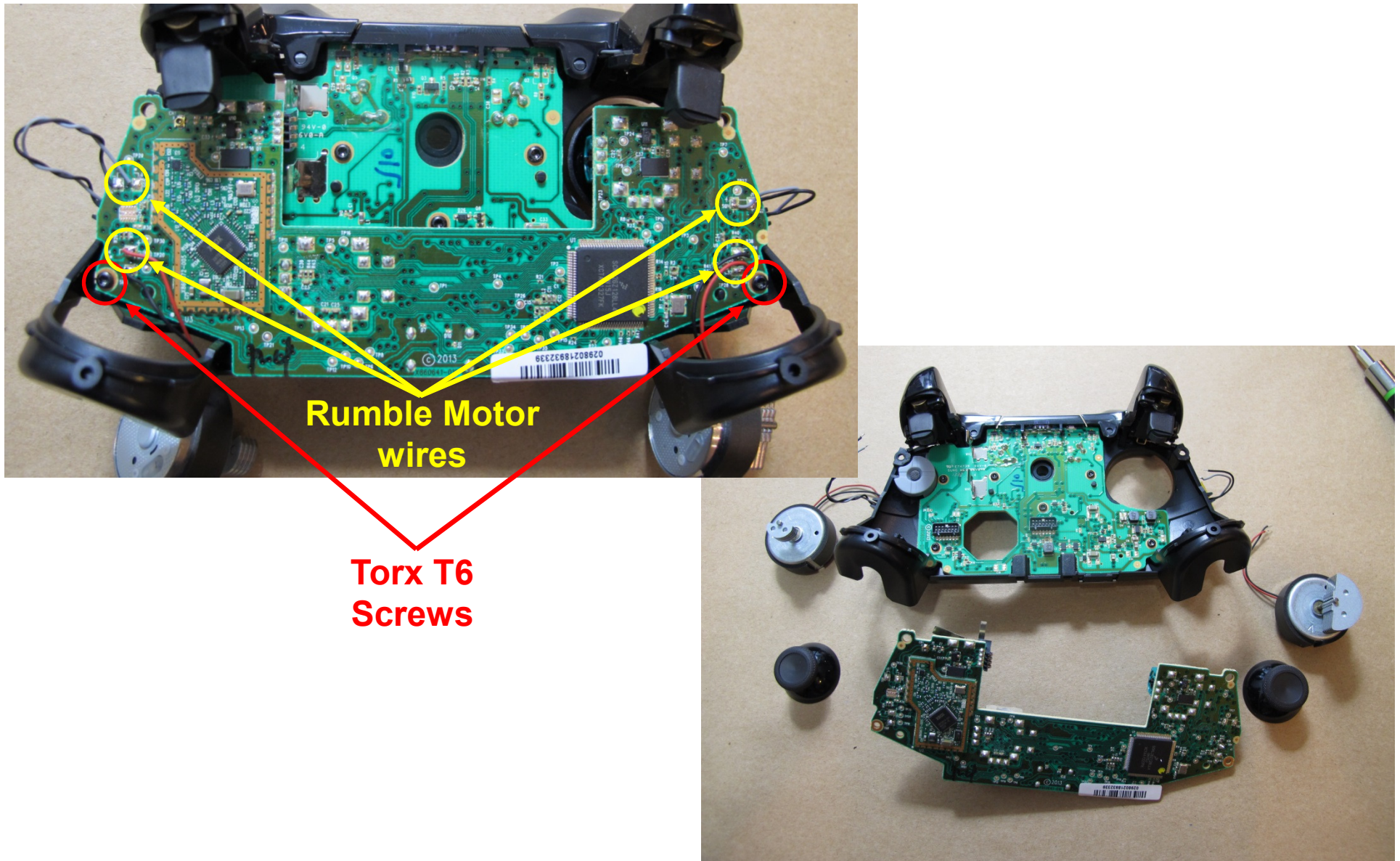
Next You will want to remove the 5 screws that hold the shell together. These are Torx T8 Security screws and have a small post in the center of them which require the use of a Torx T8 security screwdriver to remove them.

With the screws removed both the front and back halves of the shell are easily removed.



Opening the Controller, Part 3

With the shell apart you will see two circuit boards which have two connectors hooking them together. We will be mainly working with the Smaller "U" shaped circuit board that is on the back. To remove this you will want to remove the two Torx T6 screws on the lower right hand corners and de-solder the wires for all 4 rumble motors. With all these removed the back circuit board can be lifted out of the controller. because the two boards are plugged in together it can take a little bit of effort so separate the boards.

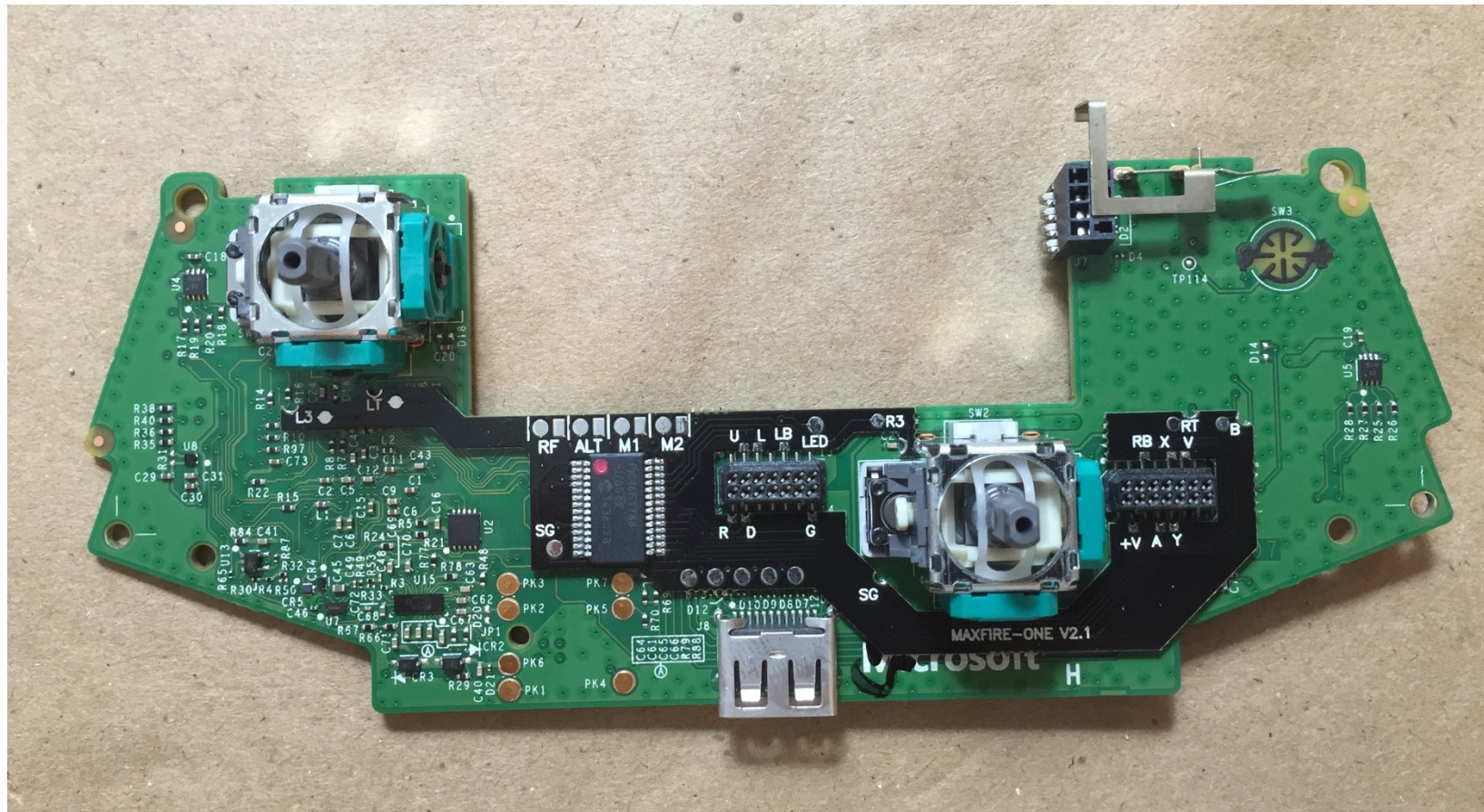


New controller information and Placing the board, Part 4

This mod was designed for the original controllers that did not have the 3.5mm headset port. However they do still work in the newer controller with a slightly different installation. All connections which are made directly to the two plugs are still the same, However the right and left triggers, Theft Thumbstick, B Button and the SG (signal) connection must be made with wires. The LED connection must also be made with a wire but is the same on both controllers.

Place the mod in the controller as shown below. It may be a tight fit around the right thumbstick, if you experience this make sure there are no rough edges on the board just above the "MAXFIRE-ONE V2.1" name. if there are you can use a knife or sandpaper to smooth this out which normally makes the board install much easier.

The mod will sit on top of many of the small resistor and capacitors in the controller, this is OK. Just be sure it is positioned as you see below.



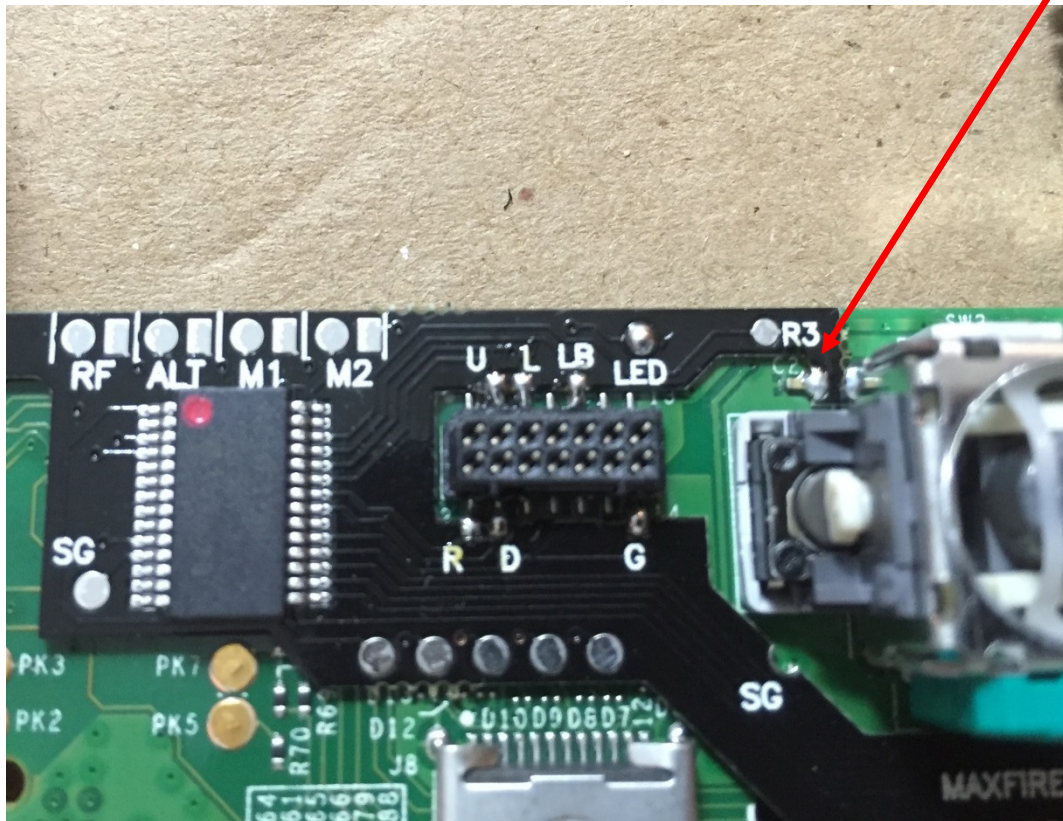
Making the solder connections, Part 5

Now that you have the board in you will see that there are solder pads that line up to legs around the two connectors. Make sure everything is lined up and make your first solder connections. We suggest starting with the R3, This solder connection is to one side if a small capacitor. Once this is done the board will stay in place and you can make the other 12 connections to the legs of the 2 connectors.

Below are some close ups of the connections.

Tip: soldering to the legs of the connector can be difficult as they are small and close together. We have found that it works best to place the tip of your soldering iron on the side of the leg so that it is touching the side of the leg and also the pad on the MaxFire-One board. Wait about 3 seconds for the leg to heat up from the soldering iron, then introduce the solder and it should flow nicely to the leg and board.

If you bridge to legs together with solder see our troubleshooting section for using the desoldering braid to remove the solder.



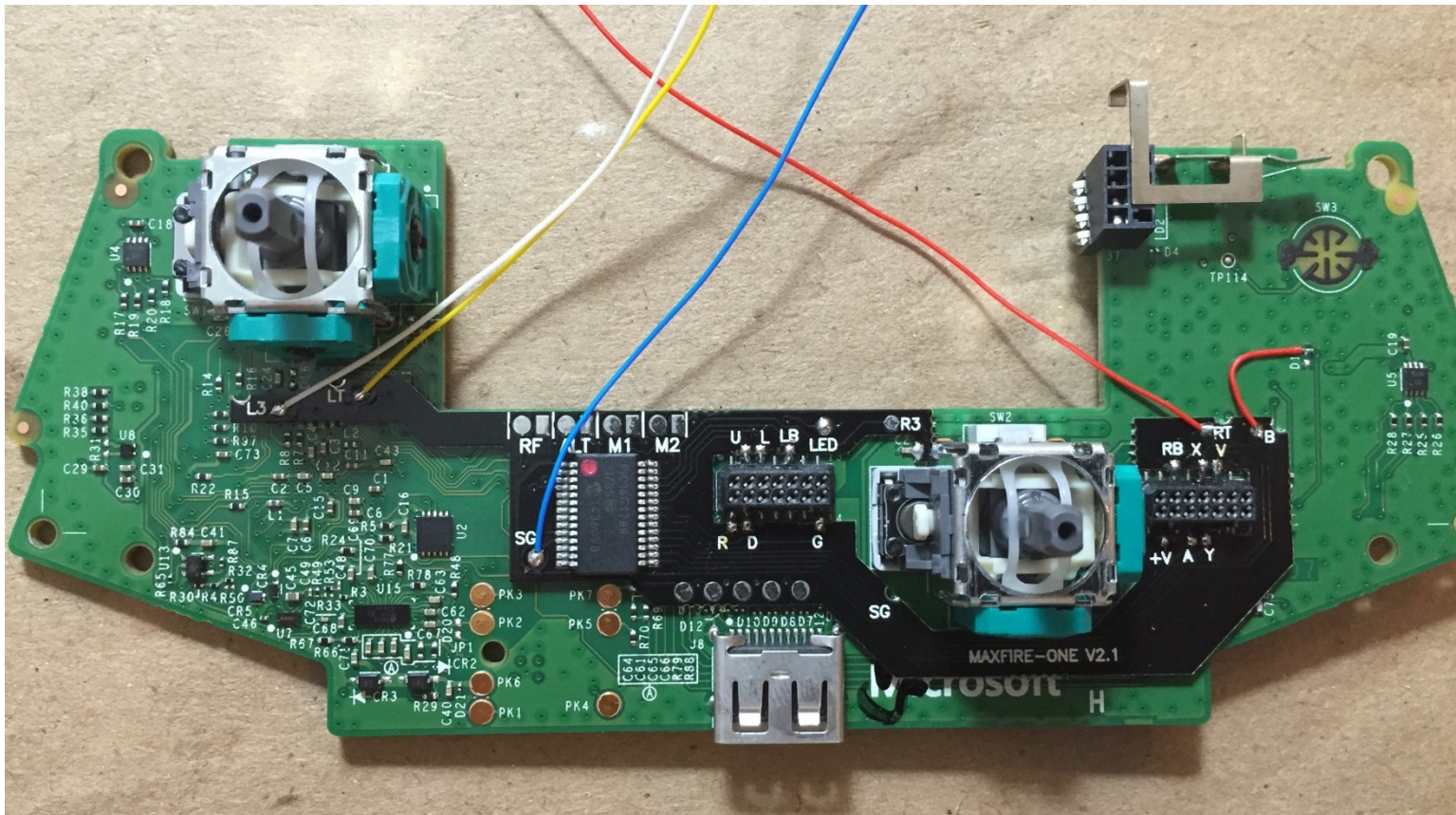
Making the wire connections, Part 6a

Now you can move onto the wire connections for RT, LT, L3, B and SG, you will notice that there are small round solder pads near each if these markings on the board. Solder a piece of wire from each pad to the corresponding location inside the controller. As shown below on this and the next page.

* Please note we have used multiple wire colors here to help show where each is going. Your kit may contain only 1 or 2 wire colors, These should be used for making all connections, the wire color is not relevant to the specific buttons connections any color wire can be used for any connection.

B Button (short red wire) – This is the only connection that is made on the same side of the board. Just above the mod you will see two empty solder pads labeled “D14” Run a short piece of wire from the “B” pad on the mod to the top pad of “D14”.

Attach wires to the 4 other connections as shown below. The RT wire should be around 4 inches long and the rest can be about 1.5 inches long. Now flip the board over to make these connections to the controller.



Making the wire connections, Part 6b

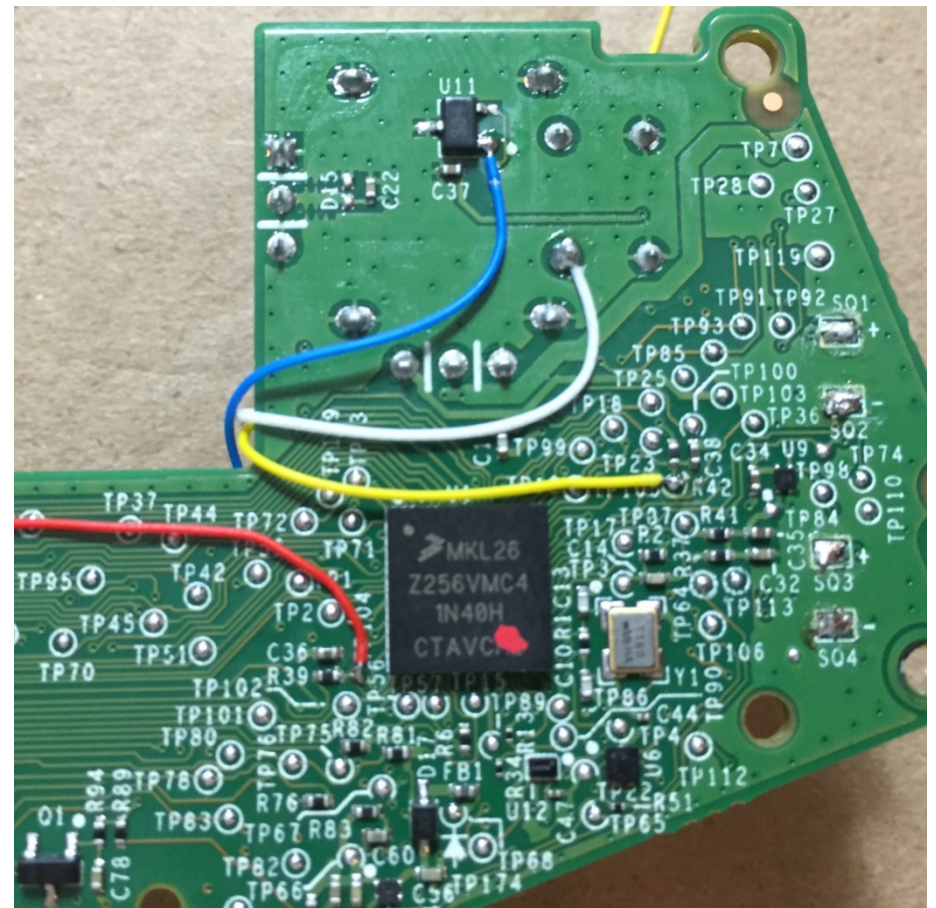
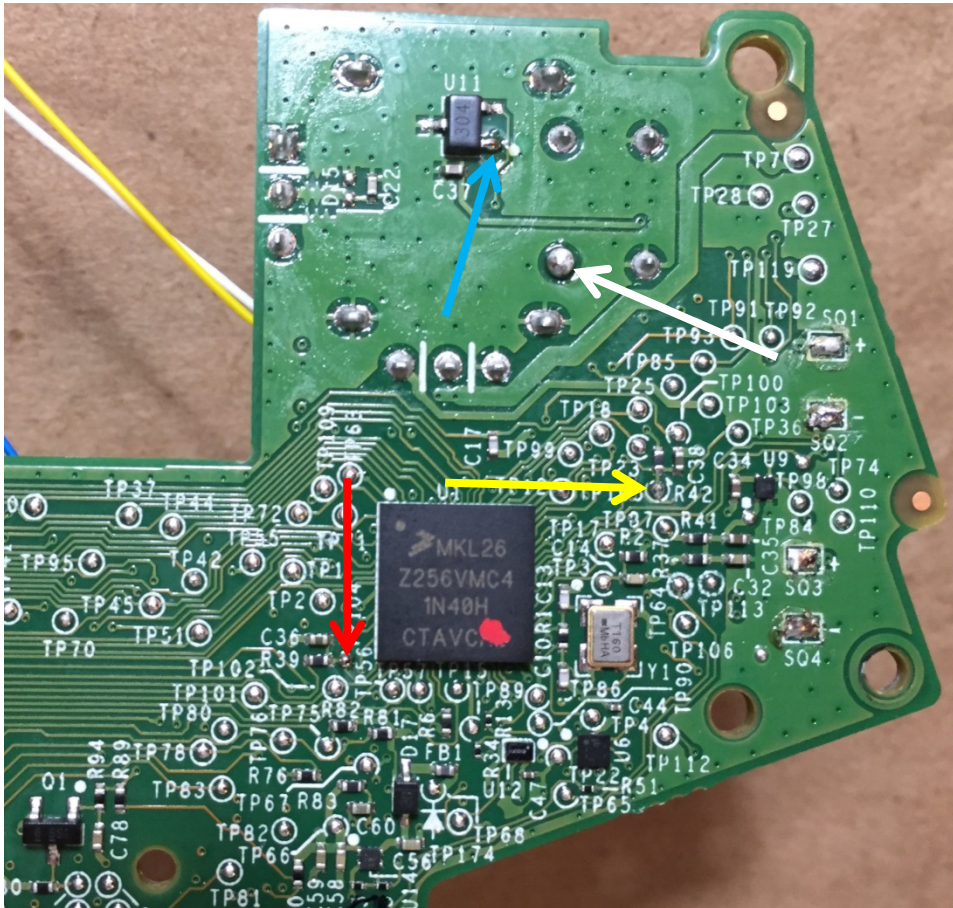
Now on the other side of the board, The left image has arrows point to each connection location and the right side shows the wires soldered in place. Below are more details for each wire.

RT (red 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 go to the bottom right leg of the black Sensor at the top of the circuit board.

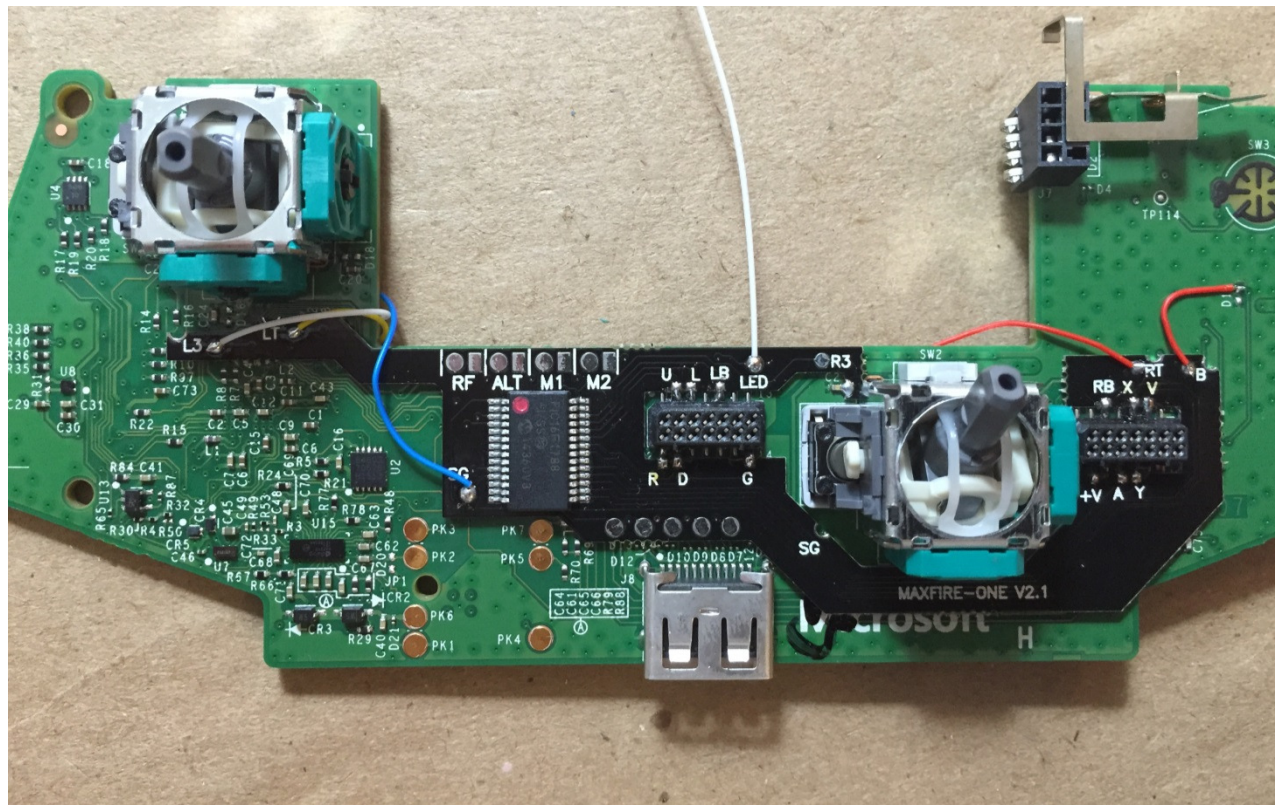


LED and optional buttons wires, Part 7

Now You only have one more required connection to make which is for the LED. To make this connection you need a small, approximately 2 inch long piece of wire. You will want to solder this to the pad labeled LED before placing the circuit board back in the controller.

You will also want to solder wires for any buttons you would like to add. Buttons are optional but offer some additional great features. Up to 4 buttons can be added. As they are labeled on the board the do the following. The RF button pads allow you to use a button instead of Left on the D-pad for enabling rapid fire and other features. The ALT pad allows for adding a button to use instead of UP on the D-pad for enabling alternate features. The M1 and M2, pads allow for adding Programmable Reflex remapping buttons, the buttons can have any controller button mapped to them so you can have a Jump, crouch or any other button on the back of the controller so you do not need to take your thumb off the thumbstick to perform these actions.

For any of these buttons you will want to add wires that are around 5 inches long before putting the board back in the controller.

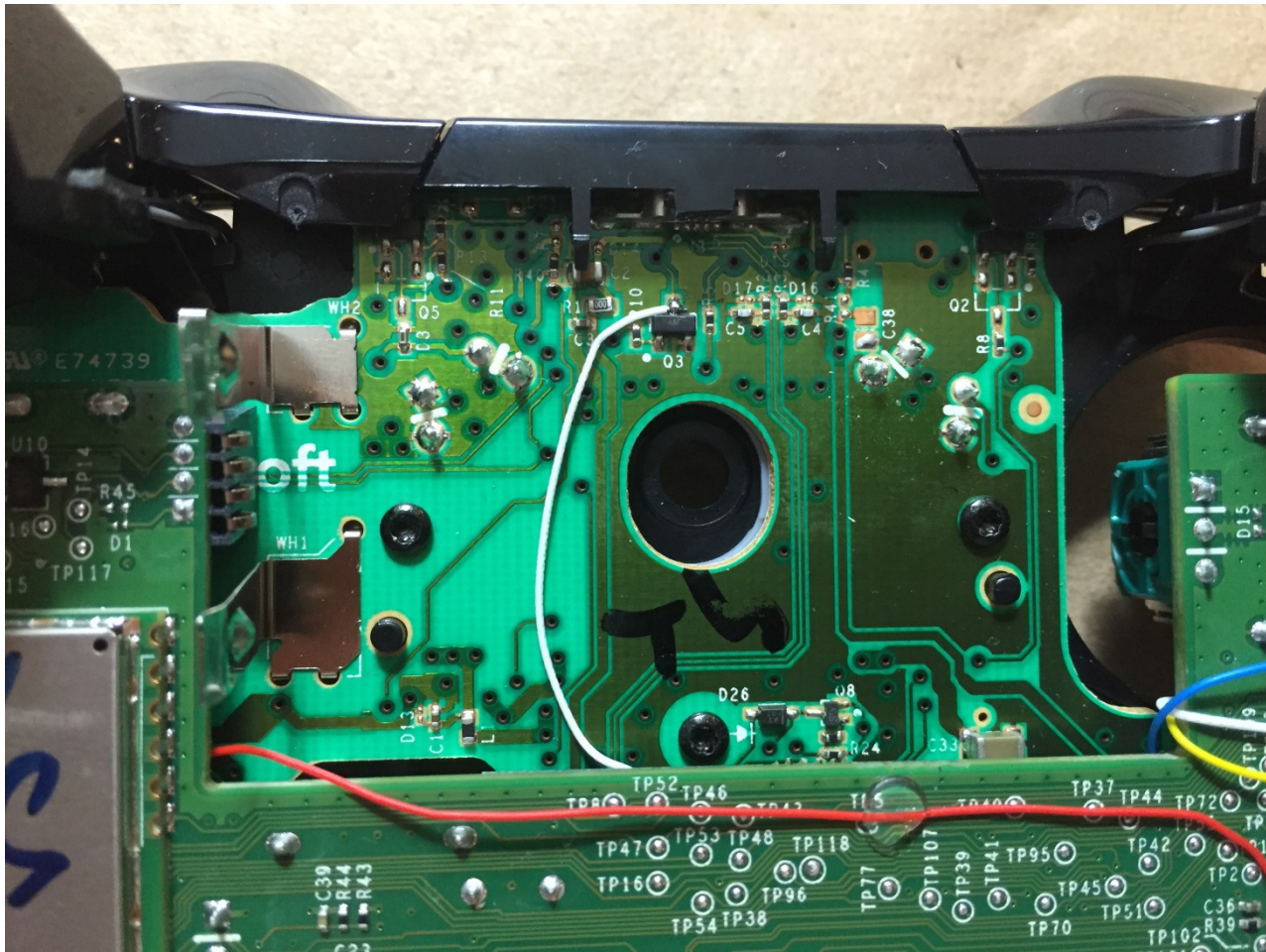


LED connection and reassembly, Part 8

Now place the board back in the controller and solder the LED wire as shown in the picture below.

At this point you are done and just need to reassemble the controller unless you would like to add buttons. See the next page for adding buttons.

Don't forget to reinstall the Torx T6 screws in the "U" shaped board and resolder the Rumble motor wires. The board is labeled with + and - symbols for the rumble motors, your Gray or red wires are the + connections and the black wires are the - connections.



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.

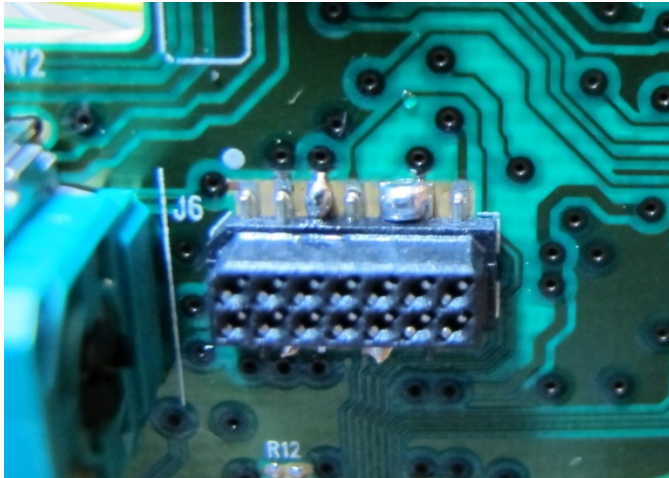
To mount the button drill a 1/8th inch hole in the shell in your desired location, normally somewhere on the back of the shell. Just be sure before drilling that when closing the controller the button will fit and not make contact to the circuit board or other shell components. There is a lot of open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



Troubleshooting.

With the small connections in the controller a common problem can be bridging together legs of the connectors as shown below.



If this happened you can do two things.

1. Try and swipe the solder away between the pins. This does not always work but works best with a clean soldering tip and first allowing the solder to cool, If you keep trying this method on solder that is hot it will just become more fluid and less likely to separate.
2. Remove the excess solder and start again. There are several ways to remove solder such as using a solder sucker or desoldering braid. We prefer desoldering braid as is easier to work with and can be purchased at electronics stores like Radio shack for around \$3 - \$4. As shown in the picture below you just take the braid and place it over the solder you want to remove then place your soldering iron on top of the braid. Allow a few seconds for the iron to heat the braid and the solder and you should see the solder wick into the braid. Then just quickly remove the iron and the braid leaving nice clean connections.

