

Installation tutorial for Console Customs PS3 TrueFire Standard

Rapid fire Microchip for Sixaxis and Dualshock 3 controllers

This tutorial is designed to aid you in installation of a console customs rapid fire microchip. There is no one way to install this chip but this method is what I have found works the best and allows the chip to fit inside the controller.

This installation requires soldering several wires 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 understanding them before beginning your installation.

Proceed with this installation at your own risk. We will not be held responsible for any damage to yourself, your controller, your PS3 console or any other equipment.

Tools needed:

- Small Phillips head screwdriver
- Soldering iron (A 15w/30w from radio shack about \$15)
- Solder (rosin core solder from radio shack works well so there is no need for flux)
- 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
- 9/64th drill bit (or close to it, a 1/8th will work as well but the hole will be a little big)
 - Small pocket knife or razor blade (optional but helpful)

Please visit our website at www.consolecustoms.com

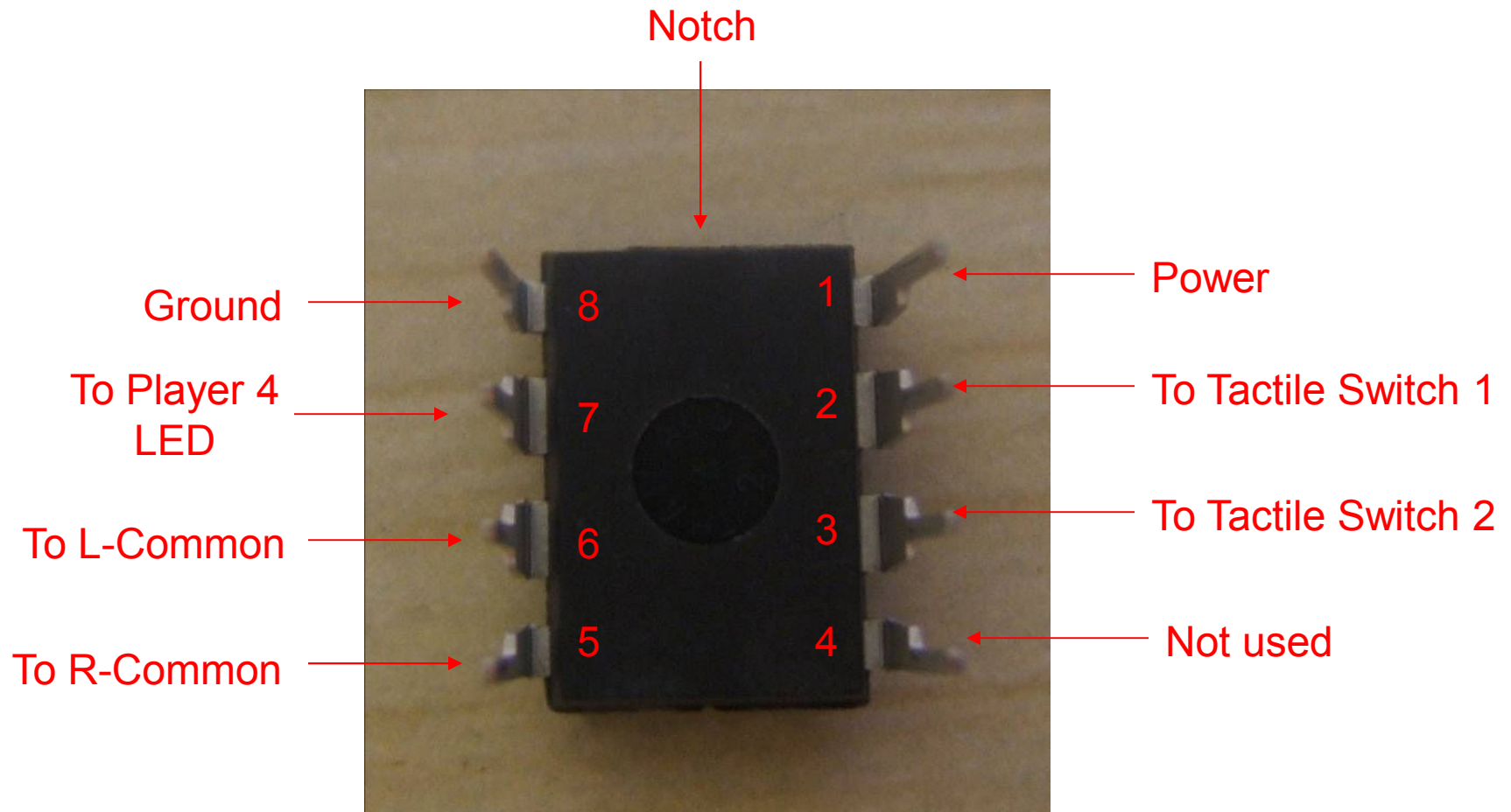
Kit Contents

- You should have the following items in your kit
 1. (1) 8-pin Microcontroller
 2. (2) tactile switches
 3. Aprox. 12" of 4 different colors of wire



Step 1: You will start by taking the PIC chip and putting it on its back, also called (dead bug). Note the location of the notch that is on the top of the chip, the pin numbers and their purpose.

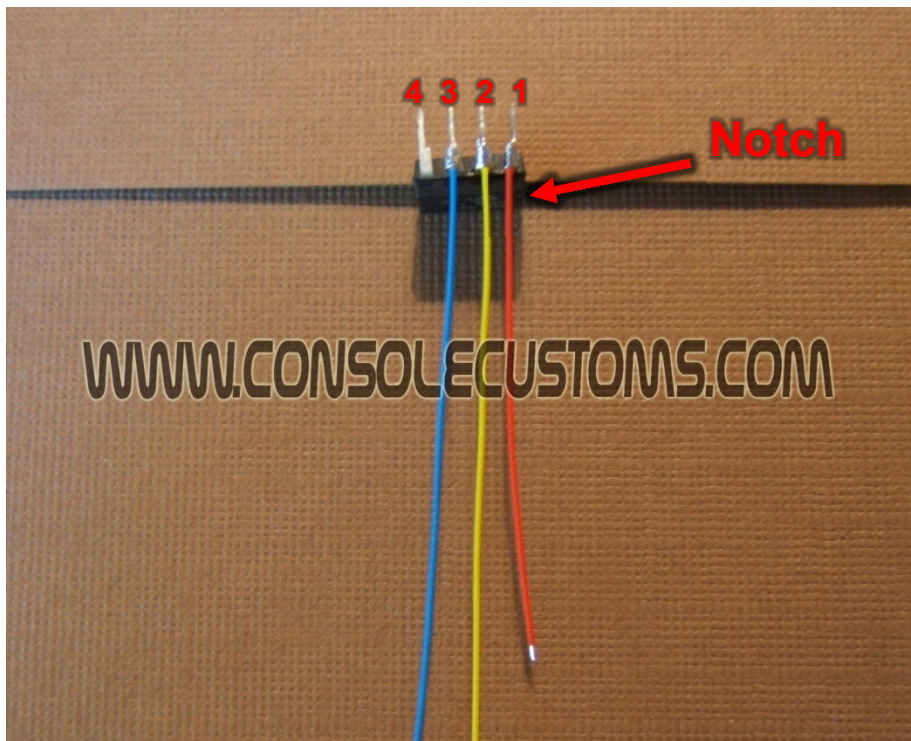
- In this tutorial we will be using all of the pins except pin 4.



Step 2: Soldering Wires to the microcontroller

- Make sure you pay attention to the location of the notch that is on top of the chip.
- **LEFT IMAGE**
 - Pin 1 (red wire) is for Power inside the controller and should be 1.5 inches long.
 - Pin 2 (yellow wire) is for the right side rapid fire button, and should be aprox 5 inches long.
 - Pin 3 (Blue wire) is for the left side rapid fire button, and should be aprox 5 inches long. (only required of you want two rapid fire buttons)
- **RIGHT IMAGE**
 - Pin 5 (red wire) is for the R-Common line inside the controller and should be 1.5 inches long.
 - Pin 6 (Blue wire) is for the L-Common line inside the controller and should be 1.5 inches long.
 - Pin 7 (Yellow wire) is for the Player 4 LED and should be 1.5 inches long.
 - Pin 8 (White wire) is for Ground inside the controller and should be 1.5 inches long.

tip: For information on proper soldering visit <http://www.curiousinventor.com/guides/How To Solder>



Step 3: Opening the controller

- Remove the 5 screws indicated below.
- The controller also has a clip holding it together in-between the two thumbsticks at the bottom. The left image shows approximately how the clip is located inside the controller. You can usually squeeze the back cover of the controller together at the center to pop off the back cover. But you may need to use a small knife or screw drive to unlatch the clip.

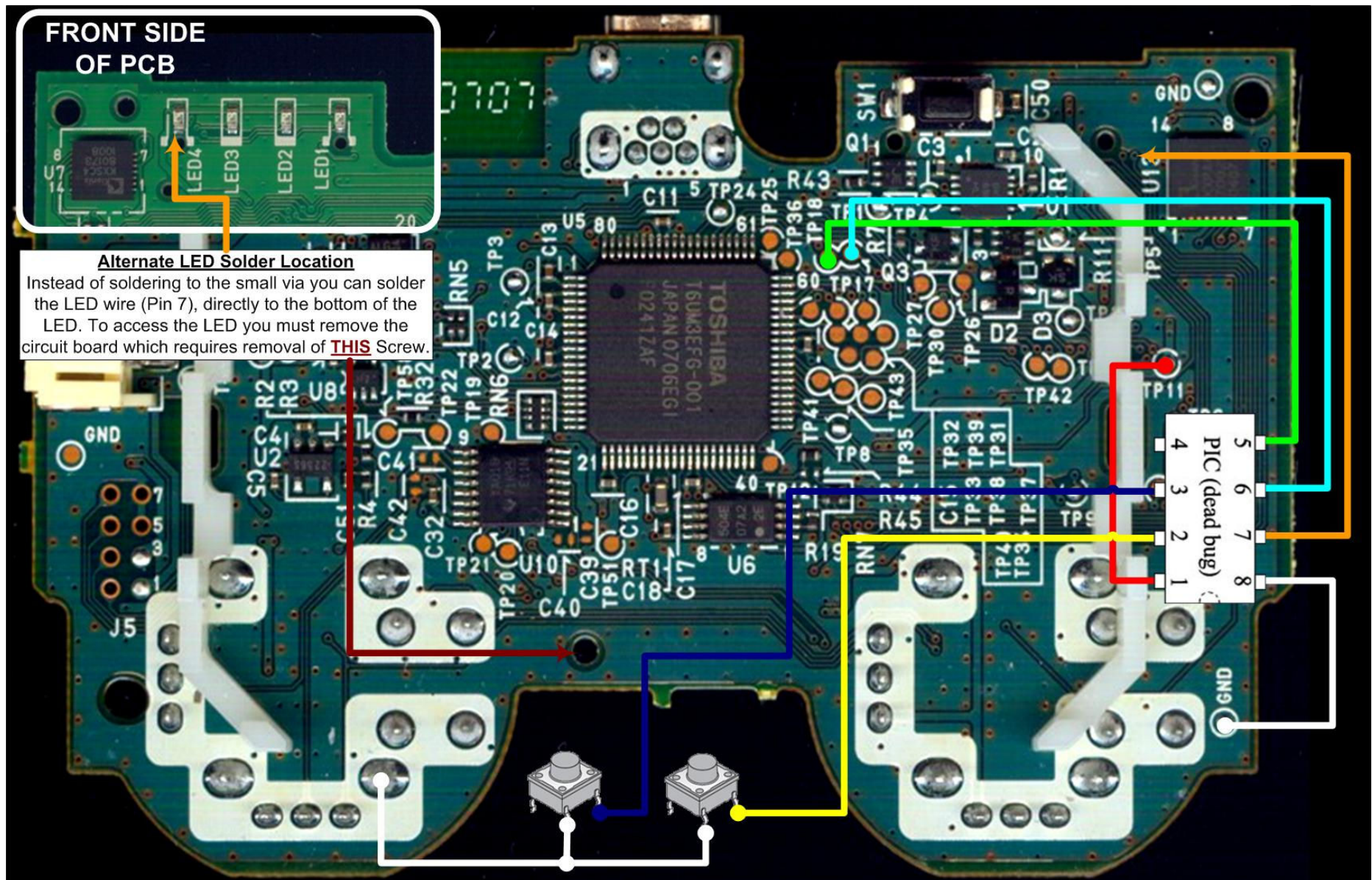


Step 4: Identifying your controller

There are currently 6 different circuit board layouts that you may find inside your controller. The next pages show each type and the solder location for each type. Following these diagrams is a more detailed installation guide using the current 4th generation dualshock 3 controller.

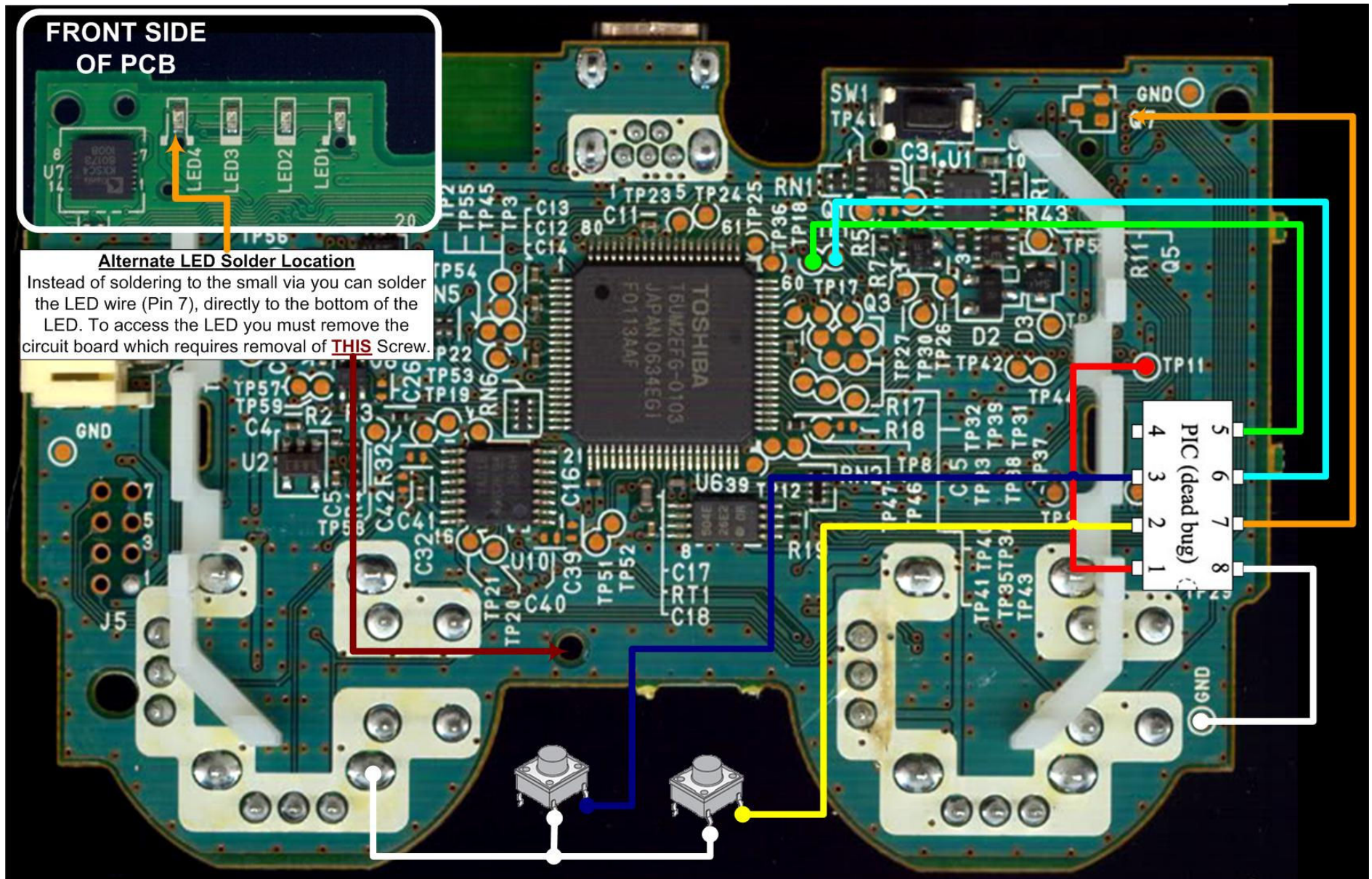
Step 4a: Original Sixaxis Version 1

- This controller is the original sixaxis (without rumble) , it is very similar to the version 2 sixaxis on the next page but the player 4 LED location on the back side of the circuit board is different.
- The Player 4 LED is a very small via just to the left of the “3” in the vertical marking “U13” on the PCB



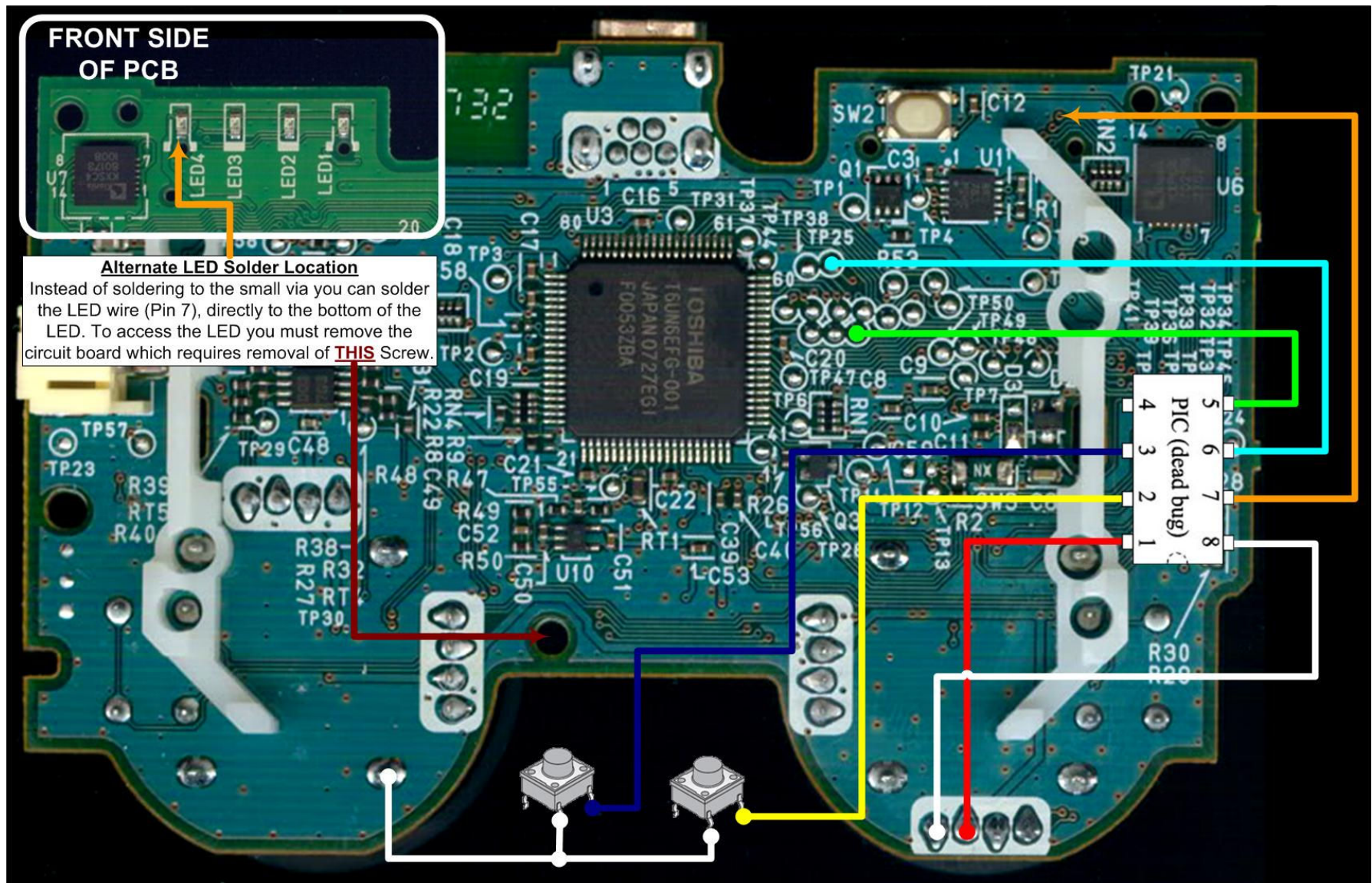
Step 4b: Original Sixaxis Version 2

- This controller is the original sixaxis (without rumble), it is very similar to the version 1 sixaxis on the previous page but the player 4 LED location on the back side of the board is different.
- The Player 4 LED is a very small via just to the top left of the “Q” in the marking “Q7” on the PCB



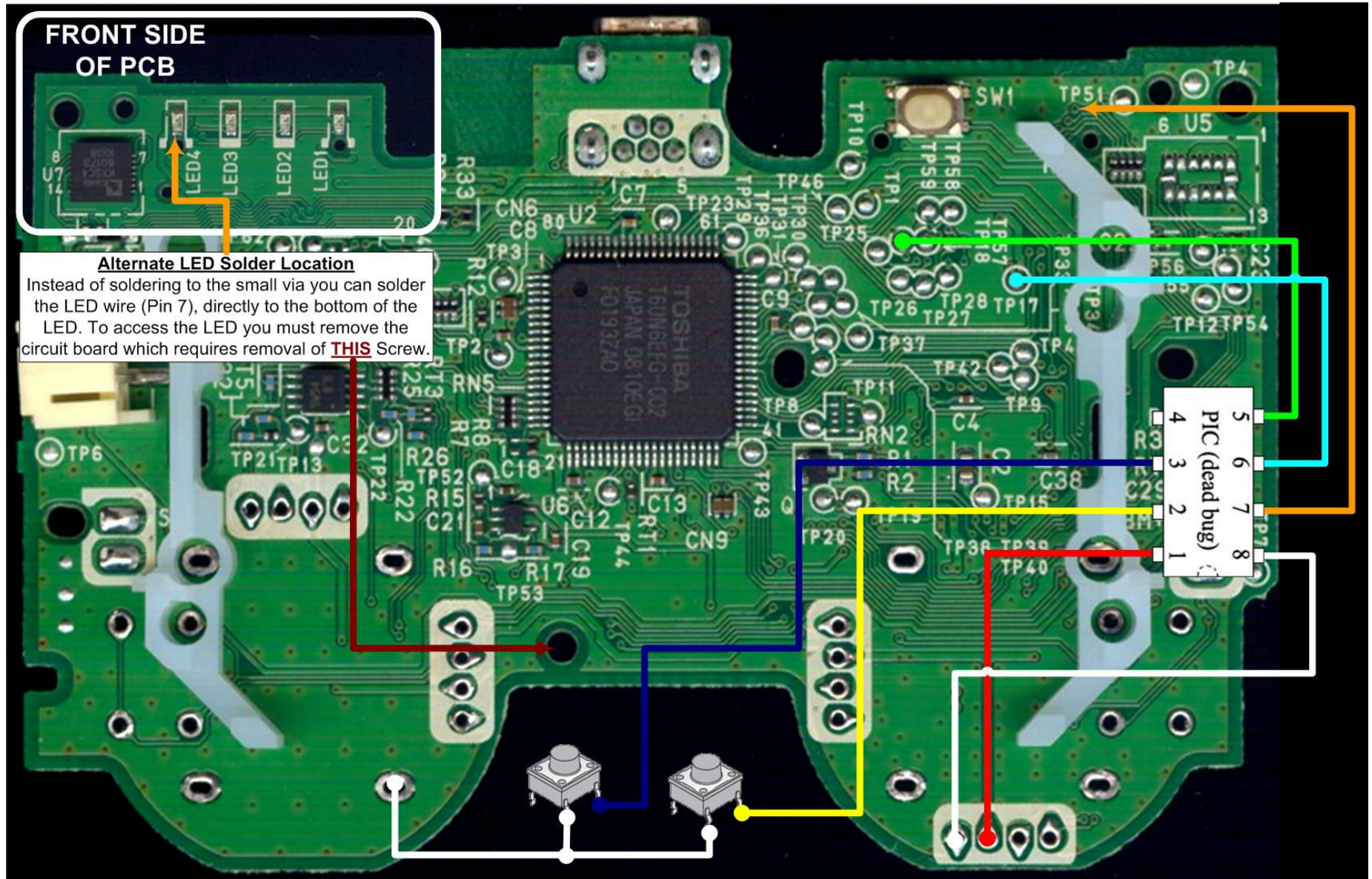
Step 4c: Dualshock 3 version 1 and Sixaxis version 3

- Next is the Sixaxis 3rd Generation and 1st Generation Dualshock 3. These are both the same layout and solder points. The only difference is the dualshock has rumble motors. Some versions of this controller do not have the small square chip that is in the upper right corner of the PCB in this picture but all solder points are in the same location.
- The player 4 LED on this controller is a very small via that is just to the top right of the white plastic battery holder.

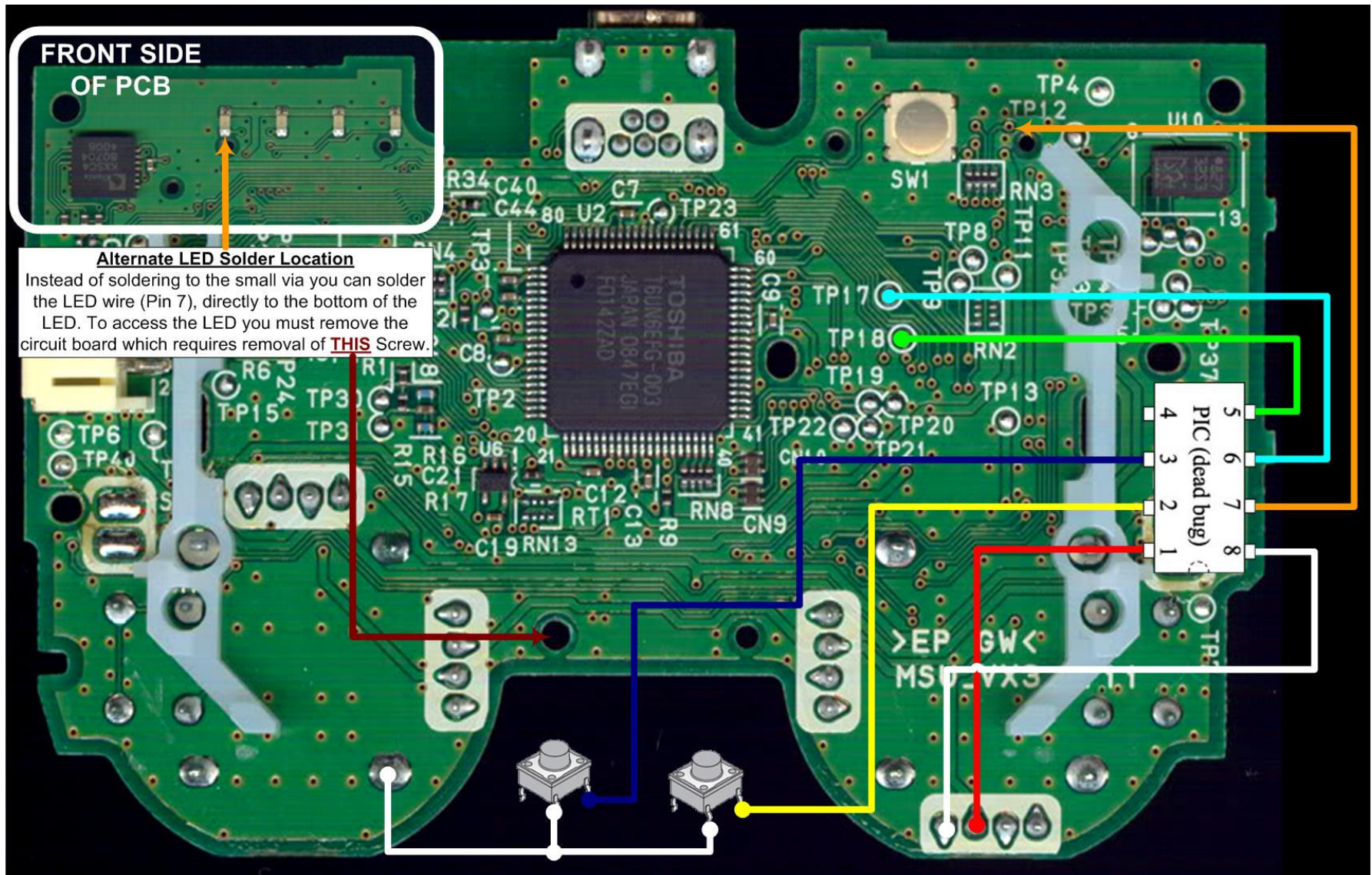


Step 4d: Dualshock 3 version 2

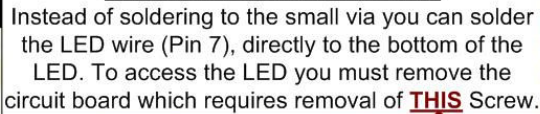
- Next is the 2nd generations dualshock 3 controller. Pay close attention to the markings on the PCB so you are sure to find the correct layout for your controller.
- The player 4 LED is a very small via just under the P in “TP51” that is written on the PCB.



- Next is the 3rd generations dualshock 3 controller.
- The player 4 LED solder point is a very small via on this board and is normally covered by the battery holder but in this picture we have cut away the top portion of the holder, which you will need to do as well. The correct point is just under the “T” in “TP12” that is written on the PCB.

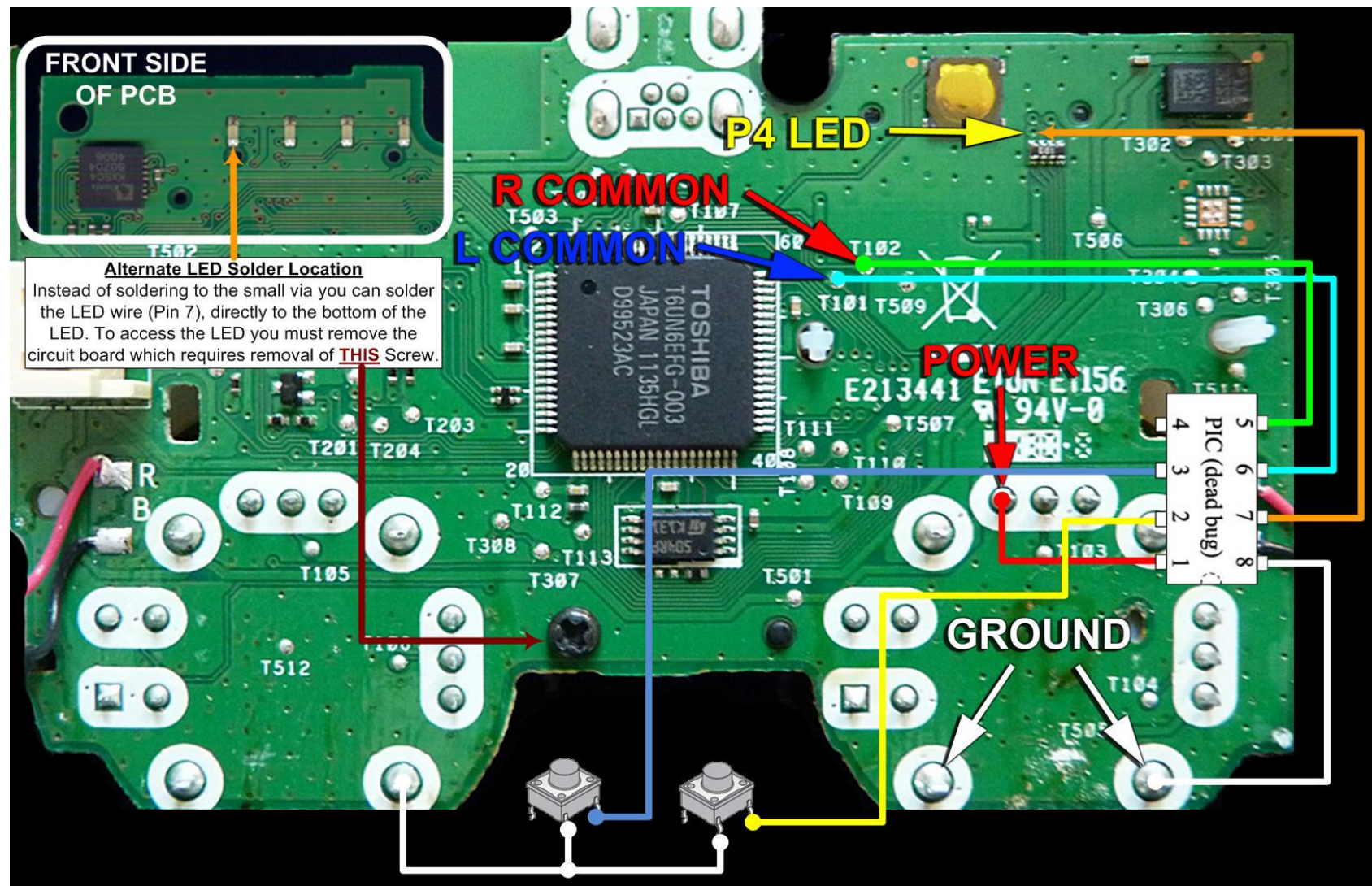


- Next is the 4th generations dualshock 3 controller. We will use this style controller in the rest of our guide.
- The player 4 LED solder point is a very small via on this board and is normally covered by the battery holder but in this picture we have cut away the top portion of the holder, which you will need to do as well. The correct point is just under the “T” in “TP12” that is written on the PCB.



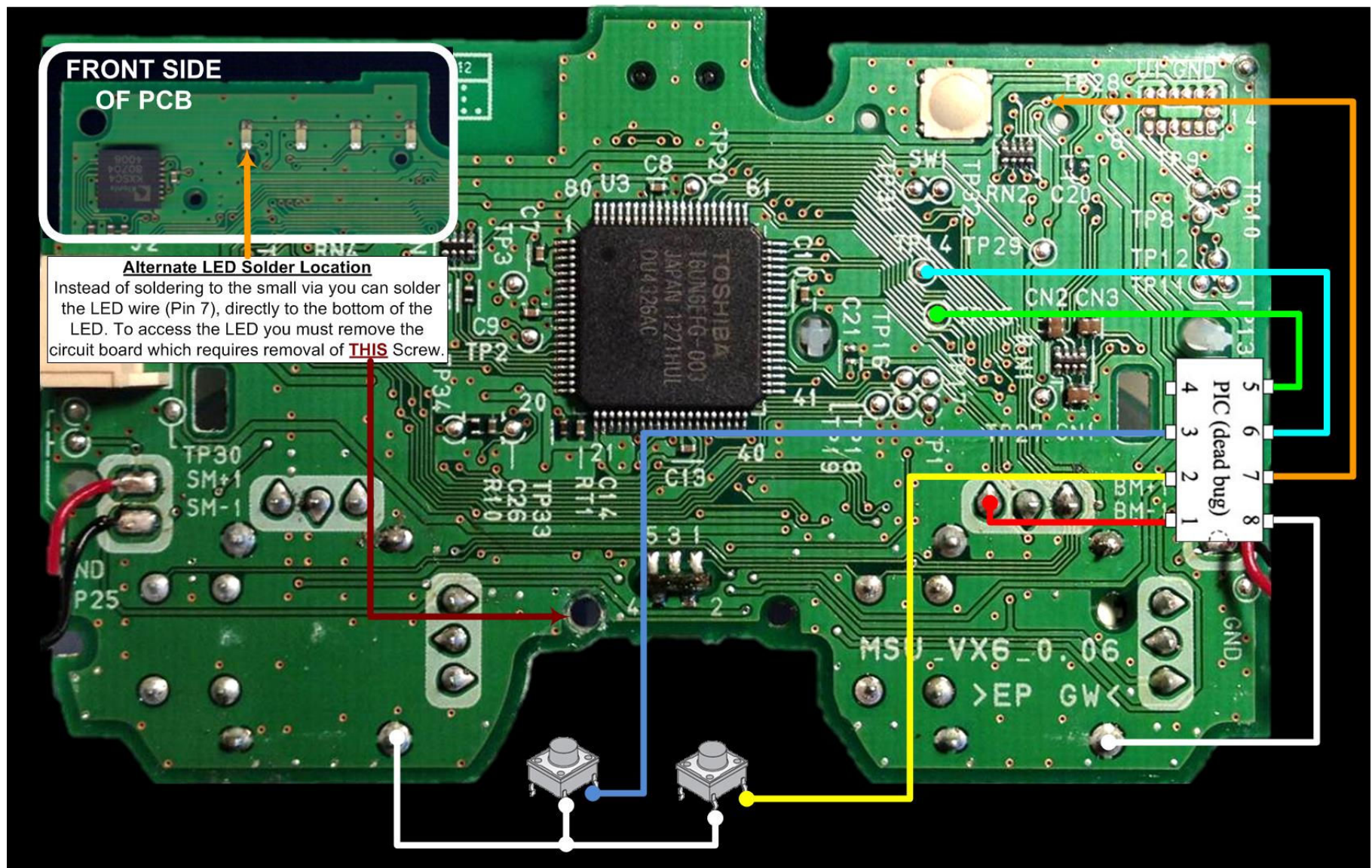
Step 4g: Dualshock 3 version 5

- Next is the 5th generations dualshock 3 controller
- The player 4 LED solder point is a very small via on this board. All 4 player light connections are just to the right of the reset button in a square pattern. The player 4 LED connection is the one that is in the lower left of the 4 connections. This spot can be hard to solder to because of the close location to the resistors below it. So we suggest to use the alternate location on the front of the board.



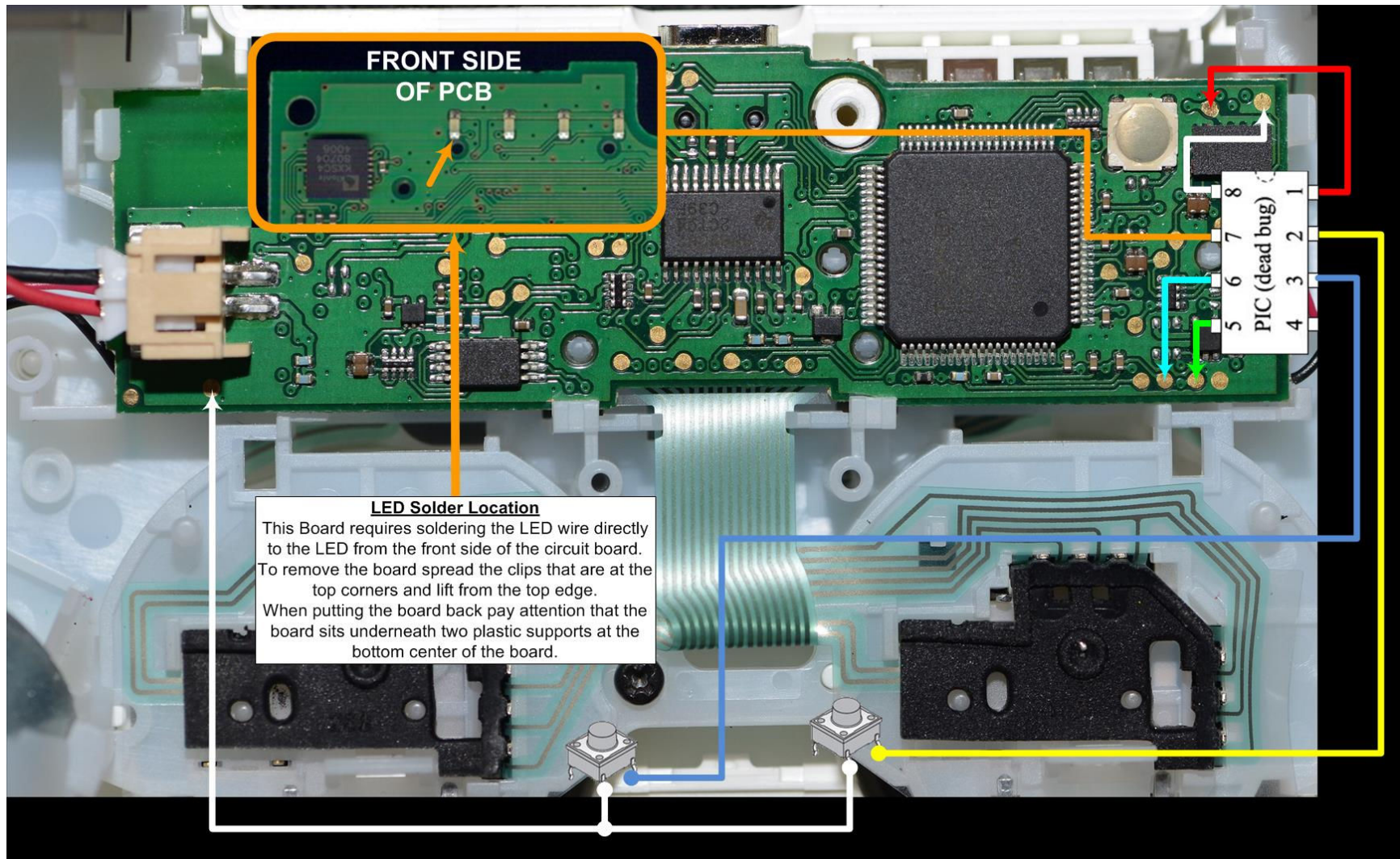
Step 4h: Dualshock 3 version 6

- Next is the 6th generations dualshock 3 controller
- The player 4 LED solder point is a very small via on this board in the upper right corner. The correct point is just below and to the left of the “T” in “TP28” that is printed on the circuit board.



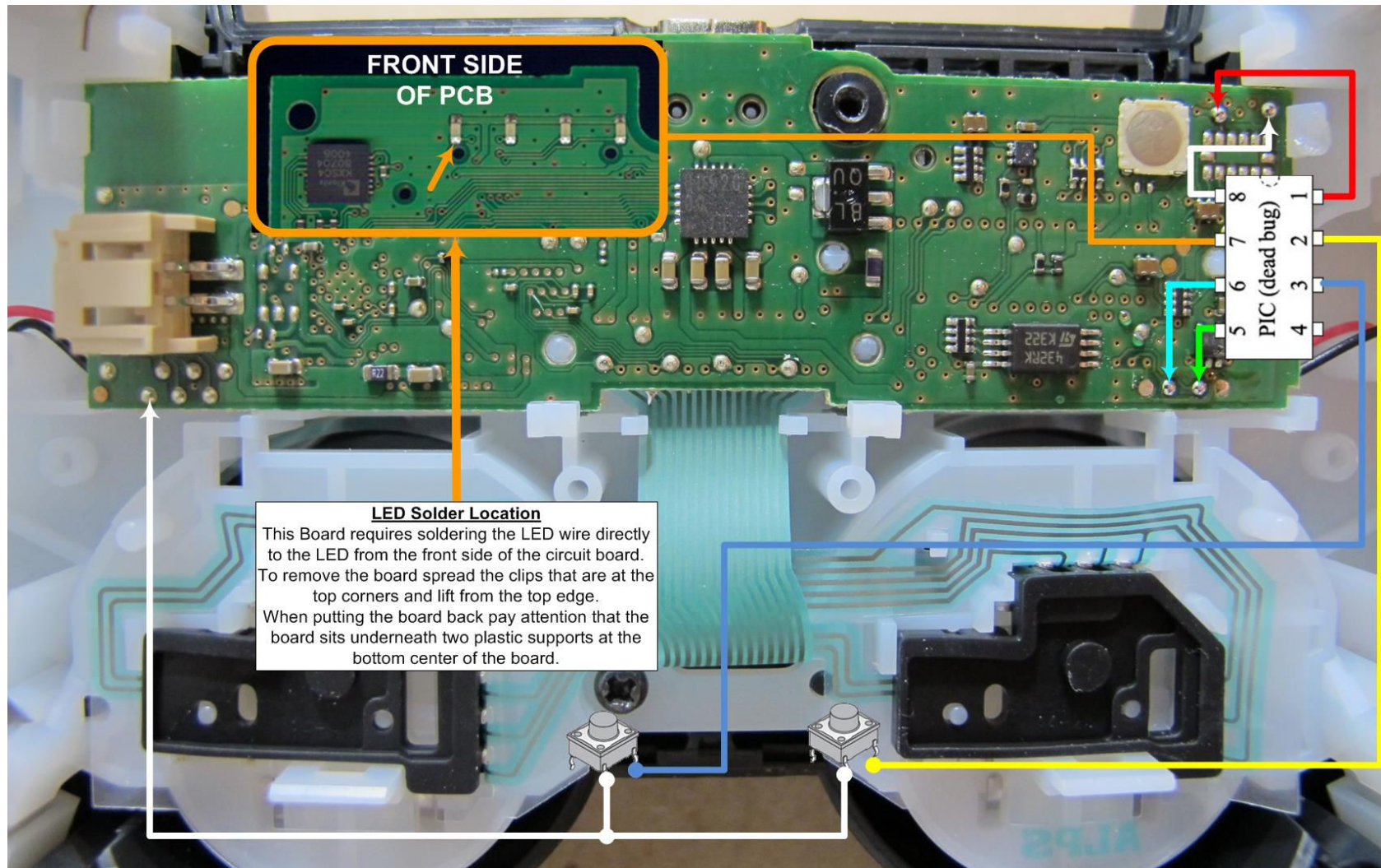
Step 4I: Dualshock 3 version 7

- Next is the 7th generations dualshock 3 controller. This controller is very different from all previous versions. The board is about half the normal size and the thumbsticks are mounted to a plastic support and not to the circuit board.
- Please note in this version we turned the chip 180 degrees from all the rest so the notch is near the top of the board. This just puts all the connections close to where they need to go.
- The player 4 LED wire on this board must be soldered directly to the LED on the front of the board. To remove the board push out on the two clips located at both top corners of the board. Rotate the board up from the front and pull out.



Step 4J: Dualshock 3 version 8

- Finally is the 8th generations dualshock 3 controller. This controller is very different from all previous versions. The board is about half the normal size and the thumbsticks are mounted to a plastic support and not to the circuit board.
- Please note in this version we turned the chip 180 degrees from all the rest so the notch is near the top of the board. This just puts all the connections close to where they need to go.
- The player 4 LED wire on this board must be soldered directly to the LED on the front of the board. To remove the board push out on the two clips located at both top corners of the board. Rotate the board up from the front and pull out.



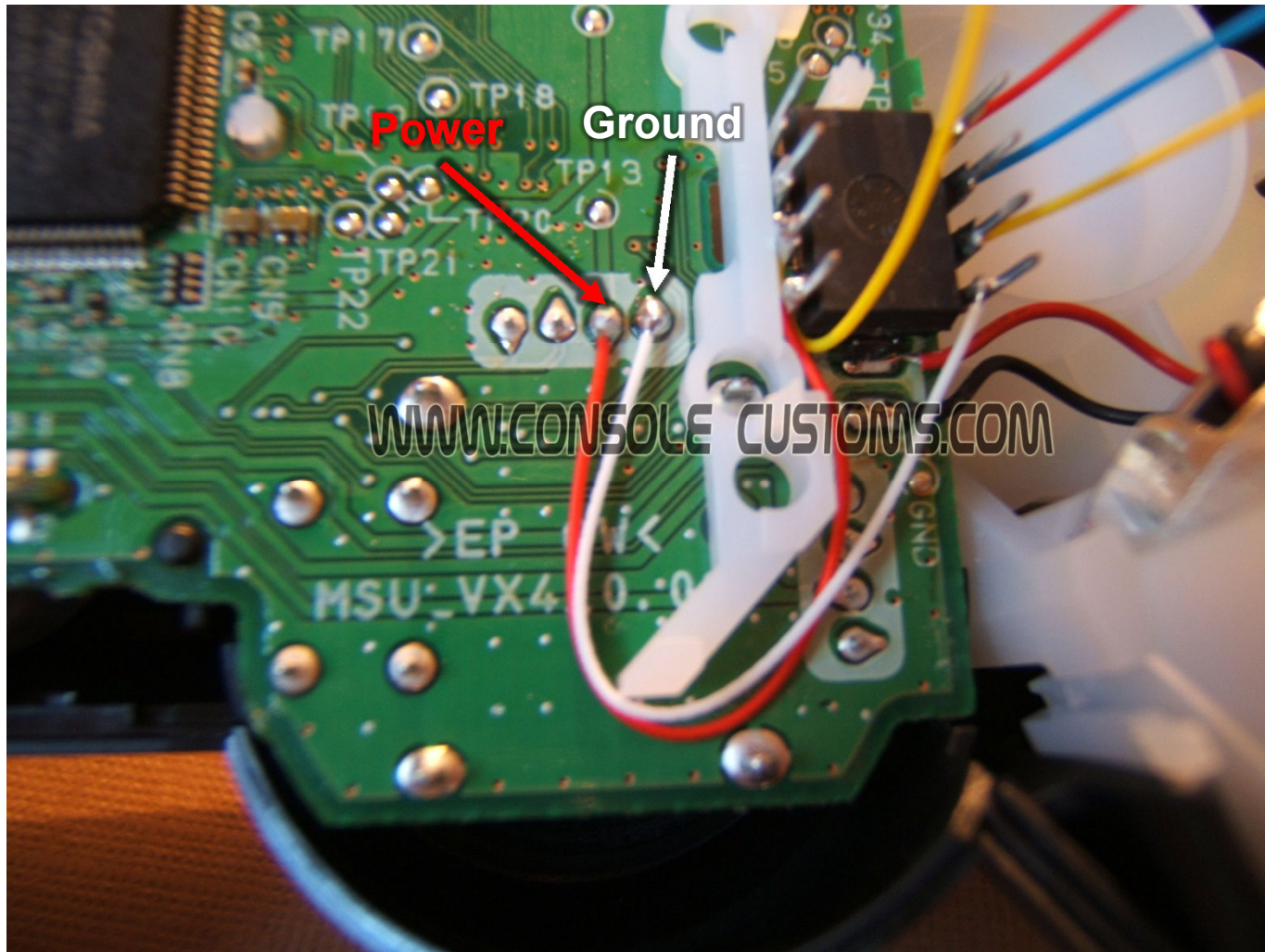
Step 5: Mounting your Chip.

- We will proceed with the tutorial using the 4th generation dualshock 3 controller.
- Start By unplugging the battery from your controller. This will reduce the possibility of creating a short and causing damage to your controller.
- Then use some hot glue to hold the chip in place on the PCB. Notice that we have pushed it right up against the white piece of plastic that is sticking through the PCB. (not all controller versions have this piece, so just mount it anywhere in this general location. Just make sure it is not hanging over the edge of the PCB or the controller will not close correctly.



Step 6: Attaching the power and ground.

- Refer to the controller identification for the proper power and ground points for your controller type.
- Here you can see the power and ground wires soldered in place. The power being the red wire and ground being the white wire. We have also routed the wires around the bottom of the battery holder keeping them as short as possible.



Step 7: Attaching the Player 4 LED wire.

- This is the most difficult connection to make as the solder location is very small. If you do not feel confident in making this solder connection you can remove the Circuit board from the front half of the case and solder directly to the LED as shown in the diagrams of step 4. This makes the soldering easier but also means you will be removing the R1/R2/L1/L2 buttons and the rumble motors which will all need to be put back into place properly after making your solder connection.
- To solder to the via for the player 4 LED you must first clean off the green protective coating. This can be done with a small pocket knife or our proffered method of using a small drill bit (about twice the diameter of the via) and give it a few twists by hand with light pressure. This ensures a clean via without exposing bare metal in the surrounding areas.
- Once clean you can solder your wire as shown in the Right side image.
- Make sure you use as little solder as possible. Also be sure to keep the solder and bare wire away from any other bare metal. If you exposed metal in any area surrounding the via and the wire or solder makes contact with it the LED will not work.



Step 8: The R-Common and L-Common lines.

- These two connections are what allow the mod chip to take control of all the buttons in the controller. For all styles of the circuit board these are a nice large solder pad.
- These are the last two connections you need to make from the chip to the controller.



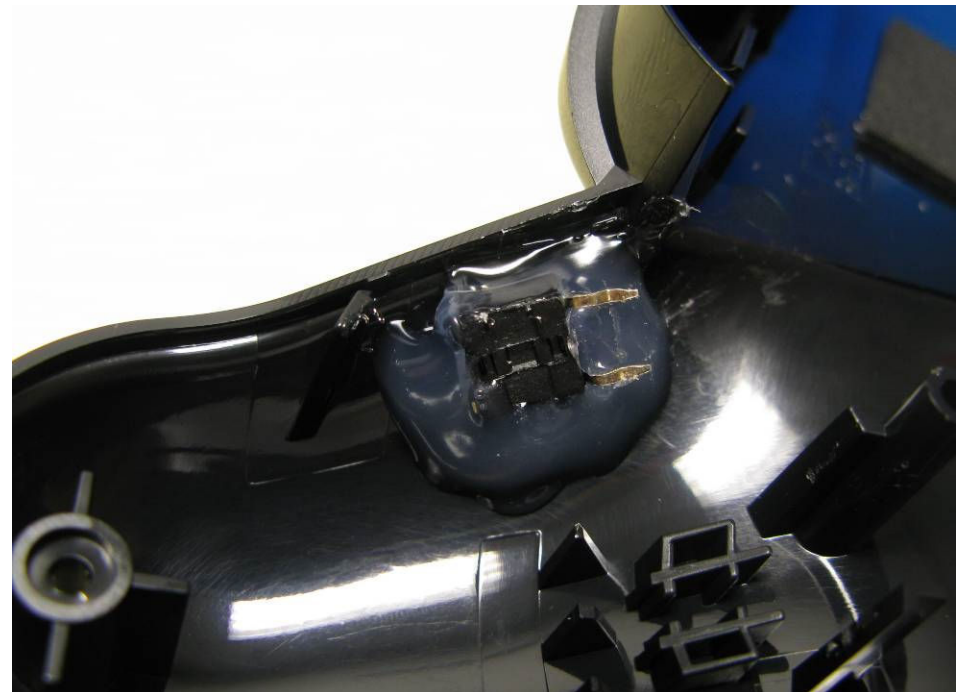
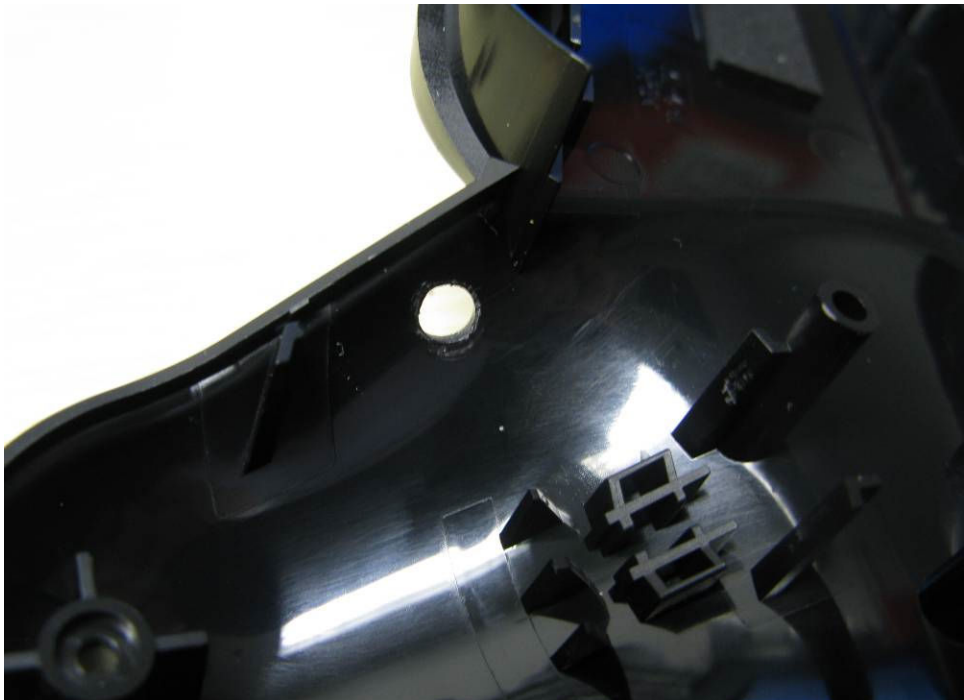
Step 9: Keep Everything in place.

- Before moving on to installing the button you should use some hot glue to help hold all the wires in place. Do not glue over top of the solder connection as this will make it much more difficult to access later on in the event of a problem. Instead glue the wires down just behind the solder connections.



Step 10: Installing the Rapid Fire Buttons.

- This installation can be done with just one button or with two buttons depending on if you would like to have two buttons for rapid fire. Each can be assigned it's own controller button for rapid fire use.
- Using your 9/64th Drill bit make a hole for installing the rapid fire button(s) into your controller. We put ours just to the inside of the hand grip(s) for easy access. You can put where button(s) where ever is comfortable for you. Just be sure that nothing will be getting in the way when you go to close up your controller.
- The button comes with 4 legs but on two of the legs are needed. Removing the two unused legs will make the installation easier. Refer to the image at the right to see which two legs should be removed.
- Again use a generous amount of hot glue to hold the button in place.
- Once installed you can bend the legs out flat so that it will fit better in the controller.



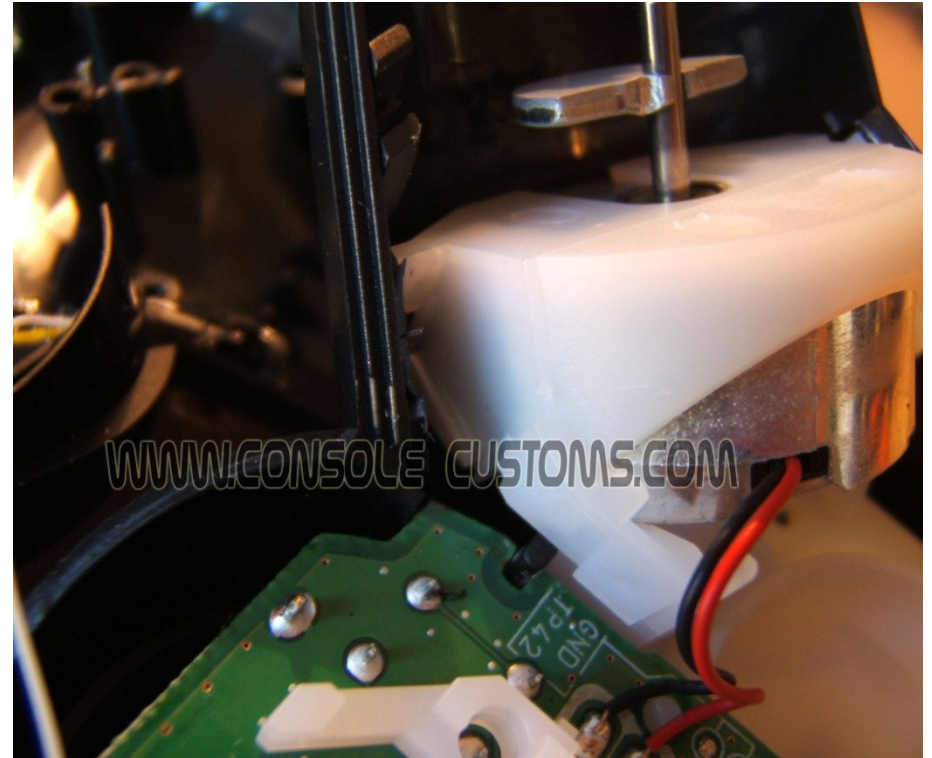
Step 11: Final Steps, Attaching wires to the button.

- Start by connecting the wire from Pin 2 (yellow wire) to one leg of the button you have installed on the right side grip.
- Then do the same with the wire from pin 3 (Blue Wire) to the button on the left side Grip (skip this step if you are only installing one button.)
- Then solder a second small section of wire to the remaining leg of each button and then to GROUND inside the controller. There are many locations for ground inside the controller but we like to use the location shown below which is the Ground post for the thumbstick.
- Finally use more hot glue to hold the wires in place. Both on the button(s) and in the controller.
- For all controller types EXCEPT the Dualshock 3 Version 4, you can now put your controller back together and start using your new mod. For dualshock 3 Version 4 controllers please view the next page for an additional modification to the case that is needed to make the buttons fit.
- Please refer to the following pages on how to use your new mod.








Step 12: Modifying the case for Dualshock 3 Version 4 controllers only.

- With the Dualshock 3 Version 4 controllers Sony implemented a new way of holding the rumble motors in place. They now use a clip that takes up a lot of space right where your button will go. So you will need to remove one side of the clip in order for the buttons to fit properly. This will not cause any problems for the rumble motors as they are already completely surrounded in plastic and held down in several other places.
- Using a sharp knife, such as a box cutter cut out both the black and white plastic part of the clip that is on the inside of the hand grip.
- The black part of the clip is thicker and requires a bit more force to cut out. We find it works best to slide your knife in-between the clip and the controller case and use two hands to push down on your knife. The cases are quite thick so there is very little risk of cutting through the controller case when doing this.
- Once the Black plastic piece is removed you can do the same for the white piece and slide your knife in-between the clip and the white plastic that is surrounding the rumble motor. This one will cut through much easier.
- Once this is complete your controller should close up without issue.



PS3 TrueFire Standard rapid fire:

- This mod has many different features and functions which we will explain below. Video instructions are available for all of these features on our website www.consolecustoms.com or from our youtube page www.youtube.com/consolecustoms.
- This controller has 3 game modes. Each mode has speeds designed for specific games but these are not the only games they will work for, this mod chip will work for almost every first person shooter available with the addition of our user programmable mode.
- To change the speed setting you only need hold the  button on the D-pad and tap the right side rapid fire button. To switch the game mode you must hold the  button on the D-pad and also hold the right side rapid fire button 4 seconds, after which you will see the player 4 LED flash. The number of flashes indicates the game mode. The chip will remember the game mode you are in even after turning off your controller.
 - **Game Mode 1:** Call of Duty 4 / Modern Warfare 2
 - OFF
 - Speed 1 – Fast
 - Speed 2 – Slow
 - Speed 3 – 3-round Burst
 - **Game Mode 2:** Call of Duty: Worlds at War
 - OFF
 - Speed 1 – Fast
 - Speed 2 – Slow
 - Speed 3 – 3-round Burst
 - **Game Mode 3:** User Programmable - This mode has standard firing and a burst fire speed that can be set by the user to one of 15 different speeds. You can also set the burst fire from 2 – 10 rounds. **Programming instructions on next page.**
- **Assigning Controller buttons** - You can assign any of the controller buttons(R1, R2, L1 ,L2, ▲, O, X, ■) to either of the rapid fire buttons(they can even be the same, both the left and right buttons could be assigned to R1 rapid fire if you desire). To assign controller buttons to the rapid fire buttons you will need to hold  on the D-PAD for 4 seconds. After 4 seconds you will see the player 4 LED flash very fast for 2 seconds and then go out. This means you are in the button assignment mode and can now let go of  on the D-PAD. Now all you need to do is hold the rapid fire button you want to assign and while holding the button press the controller button (such as R1). You will see the player 4 LED flash indicating a successful assignment. Release both buttons and follow the same procedure for the second rapid fire button if you desire. Once your button assignments are complete you will need to follow the same procedure of holding  on the D-PAD for 4 seconds until the player 4 LED flashes very fast for 2 second. You are now out of the rapid fire buttons assignment mode and can use the rapid fire buttons.

Thank you,
Console Customs

Changing the User adjustable rapid fire speed

- These instructions are also available as a video from our website www.consolecustoms.net and also our youtube page www.youtube.com/consolecustoms.
1. You first need to be in the user adjustable game mode (Game Mode 3). Use the procedure described on the previous page to switch the controller to the correct mode.
 2. Once in the user adjustable game mode. You will need to hold in (R1, R2, L1 and L2) all at the same time. Hold all 4 buttons for 5 seconds. You will see the player 4 LED come on and stay on for 2 seconds and then go out. This means you are now in the programming mode and can let go of the 4 buttons.
 3. While in the programming mode you will use the D-PAD to adjust the rapid fire speed and also the burst fire quantity. Use the UP and Down arrows on the D-Pad to adjust the rapid fire speed (UP = Faster, Down = Slower) Use the left and right arrows to adjust the burst fire quantity. (LEFT = Fewer, RIGHT = More)
 4. When pressing an arrow button you will see the player 4 LED flash 1 time to indicate that you have made a change. Once you have reached the min or max value the LED will no longer flash when pressing that arrow button.
 5. At any time you can check you current settings by Pressing the X or ▲. Pressing X will make the player 4 LED flash the number of bursts the burst fire is set to. Pressing ▲ will flash the current speed setting (1-15) Use the table below to see the conversion of each setting into shots per second. If the speed setting is greater than or equal to 10 the player 4 LED will have a longer flash to indicate 10 followed by shorter flashes to indicate the single digit. Example the LED flashing in a pattern of (---, -, -, -) one long flash followed by 3 short flashes would mean a setting of 13.
 6. To exit the user programmable mode just follow step 2 above. The mod will remember your setting even when the controller is turned off.

Rapid Fire Setting	Shots Per Second	Rapid Fire Setting	Shots Per Second
1	50	9	10
2	33.33	10	9
3	25	11	8.33
4	20	12	7.7
5	16.66	13	7.14
6	14.28	14	6.66
7	12.5	15	6.25
8	11.11		