Installation tutorial for Console Customs PS3

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. I do not advise attempting this installation if you are a beginner at soldering. I recommend reading through all of the instructions and understand them before beginning your installation.

Please proceed with this installation at your own risk. I 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.net

Also visit our ebay store at http://stores.ebay.com/console-customs

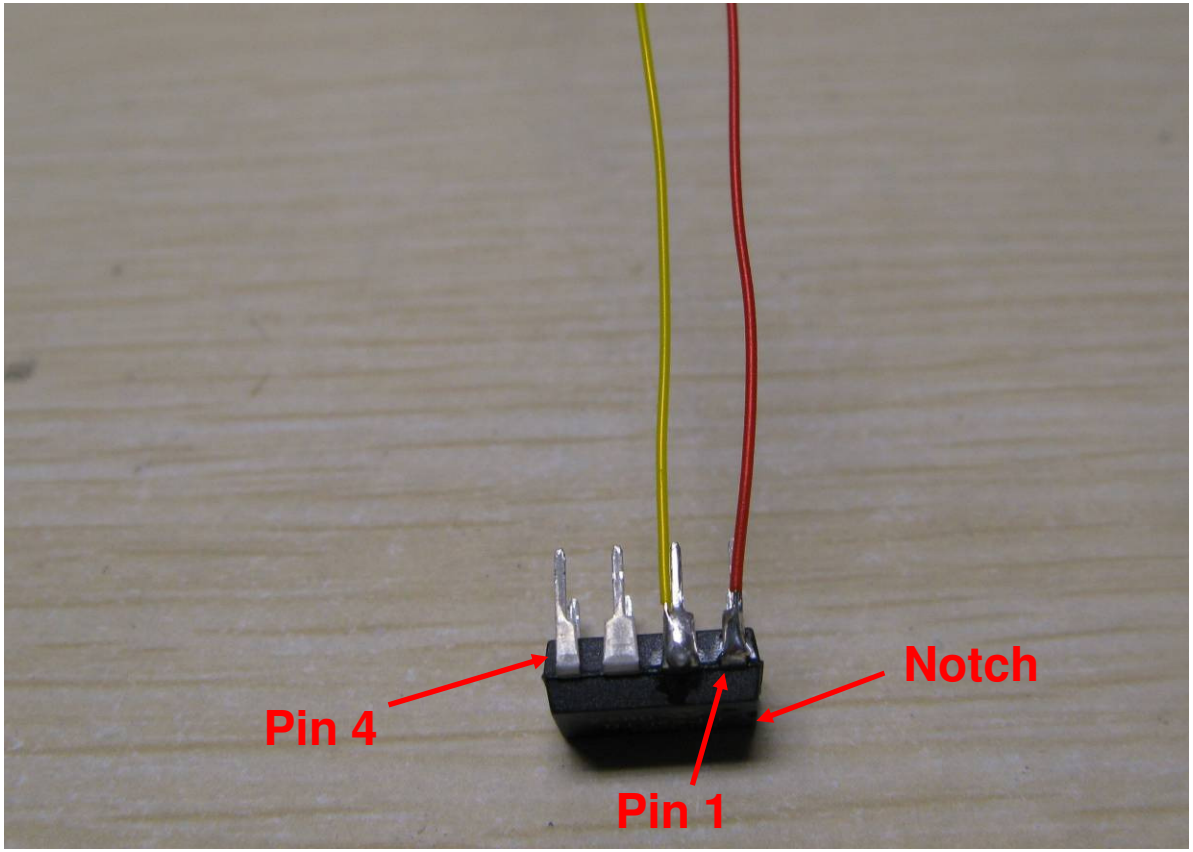
Step 1: Kit Contents

- You should have the following items in your kit
  1. (1) 8 pin PIC microcontroller
  2. (1) NPN Transistor
  3. (1) tactile switch
  4. Aprox. 18” of 2 different colors of wire

Step 2: Soldering the Power and button wires to the chip.

- You will start by putting the chip on it's back (also called dead bug) or on it's side like have done here. Note the location of the notch that is on top of the chip. Be sure you orient the chip correctly or it will not work.
- Start by soldering a short piece of wire approximately 1.5 inches long to pin 1. This is the power wire and is the red wire in this picture.
- Next solder another wire to pin 2. This wire should be approximately 5 inches long. This is the yellow wire in the picture. This wire will goto the button that we will install later in the tutorial.

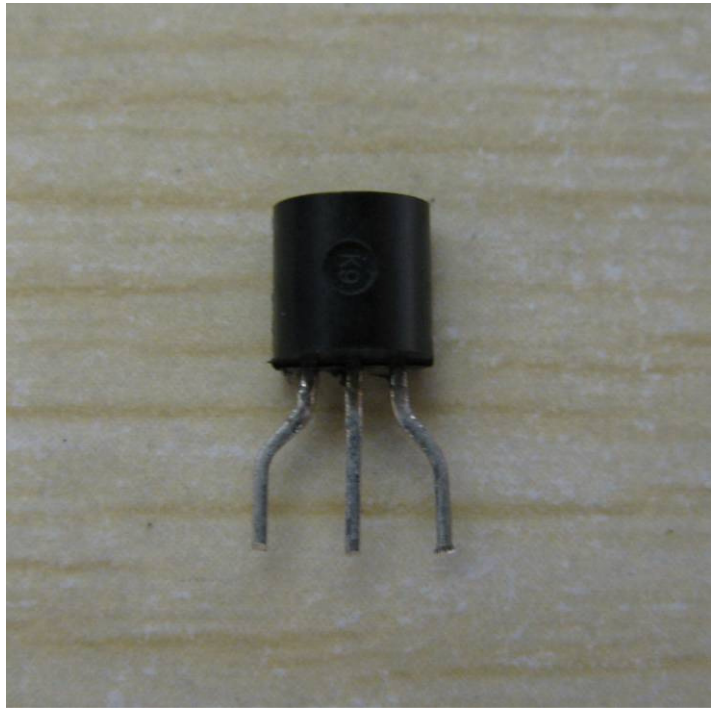
tip: For information on proper soldering visit http://www.curiousinventor.com/guides/How_To_Solder



Step 3: preparing the transistor.

- You will need to attach the transistor to one leg of the chip. So we will cut and bend the legs to make that process easier.
- The Left image shows the transistor as you will receive it, in your kit.
- The middle image shows the legs of transistor cut to the length they should be. This is approximately ¼ inch.
- Finally you will take and bend the outside two legs over the rounded edge of the transistor as shown in the right side image.

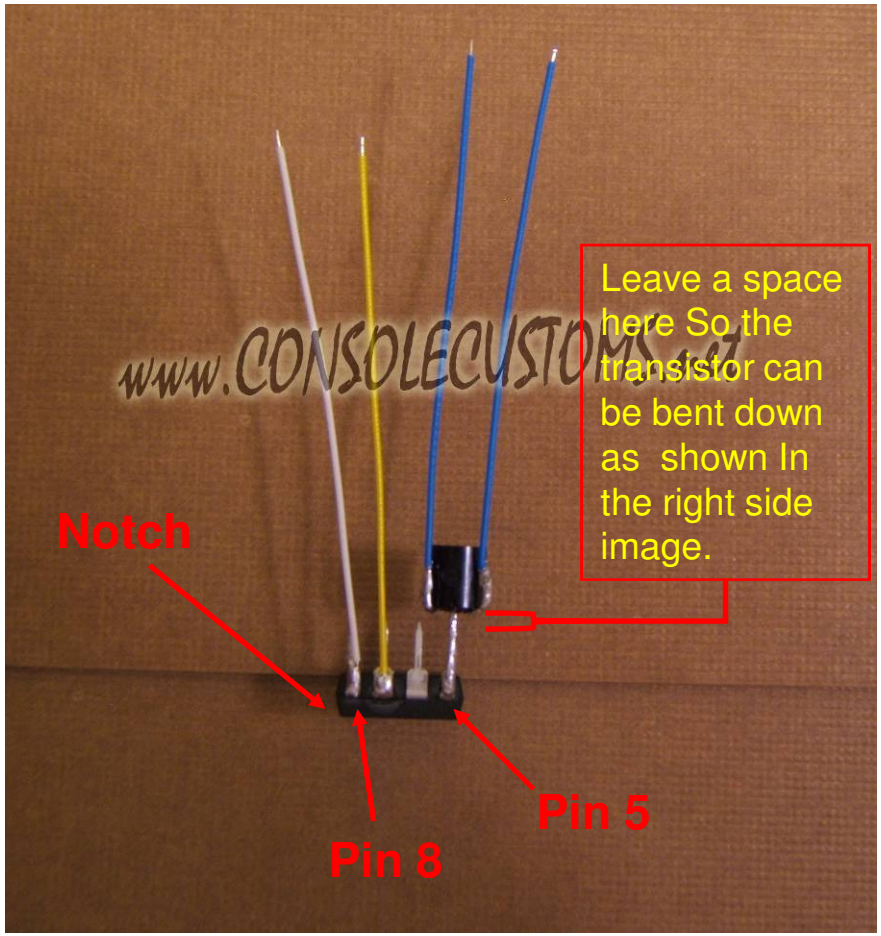
tip: For information on proper soldering visit http://www.curiousinventor.com/guides/How_To_Solder

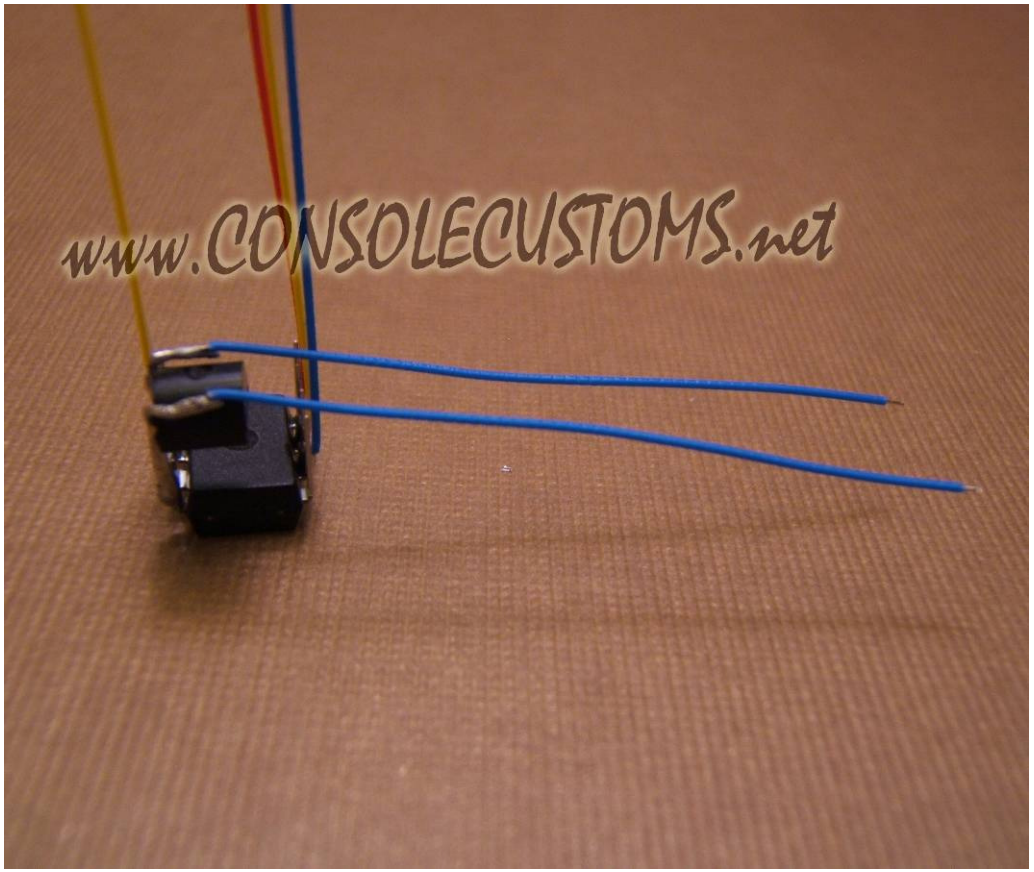


Step 4: Soldering the transistor, ground wire, LED wire and R1 wires to the chip.

- Now take the transistor that you just prepared and solder it to pin number 5 of the chip. Make sure that the black part of the transistor sits higher than the top if the pins so it can be bent down.
- Solder a wire to each of the two pins you bent back on the transistor. Shown here in blue. These two wires should be approximately 1.5 inches and will go to the connections in the controller for R1 or R2.
- Next is Pin 7 (yellow wire in the image) which will go to the player 4 LED. This wire should be 1.5 inches long.
- Finally is pin 8 (white wire in the image) is the ground wire. This should also be 1.5 inches long.

tip: For information on proper soldering visit http://www.curiousinventor.com/guides/How_To_Solder

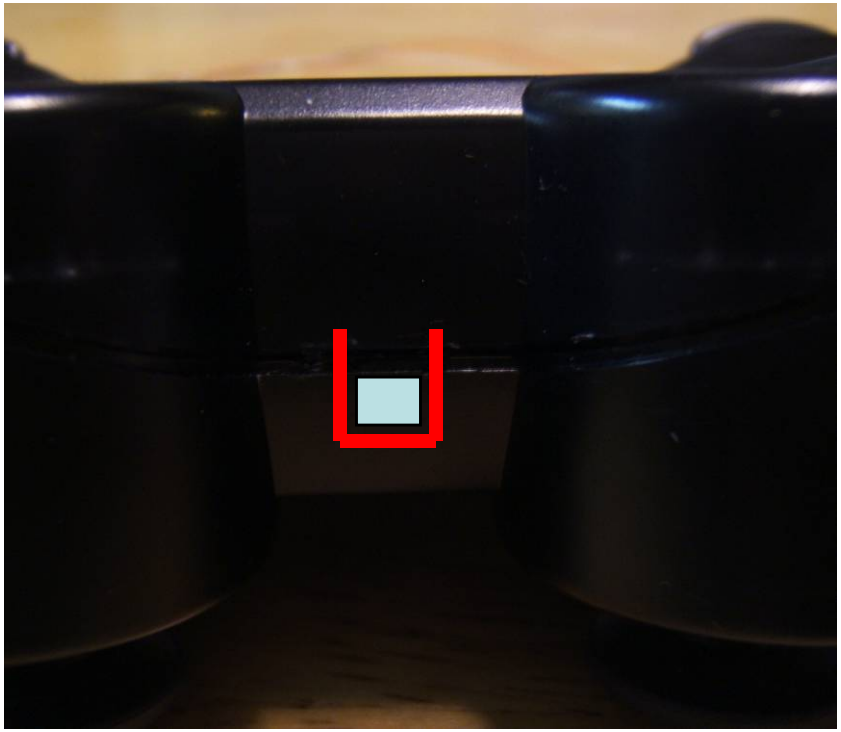




Step 5: Opening the controller

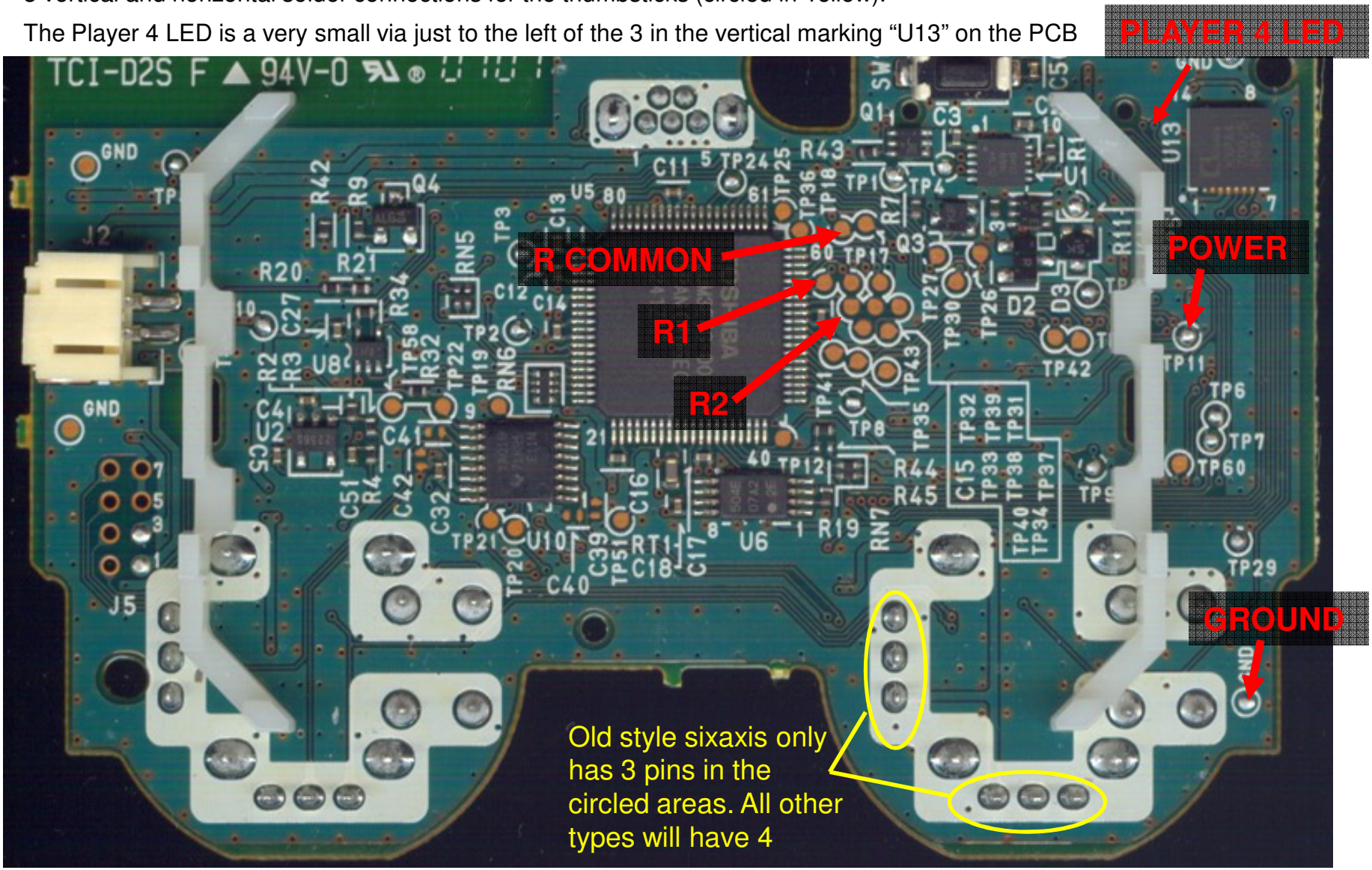
- Remove the 5 screws indicated below.

- 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 6: Identifying your controller

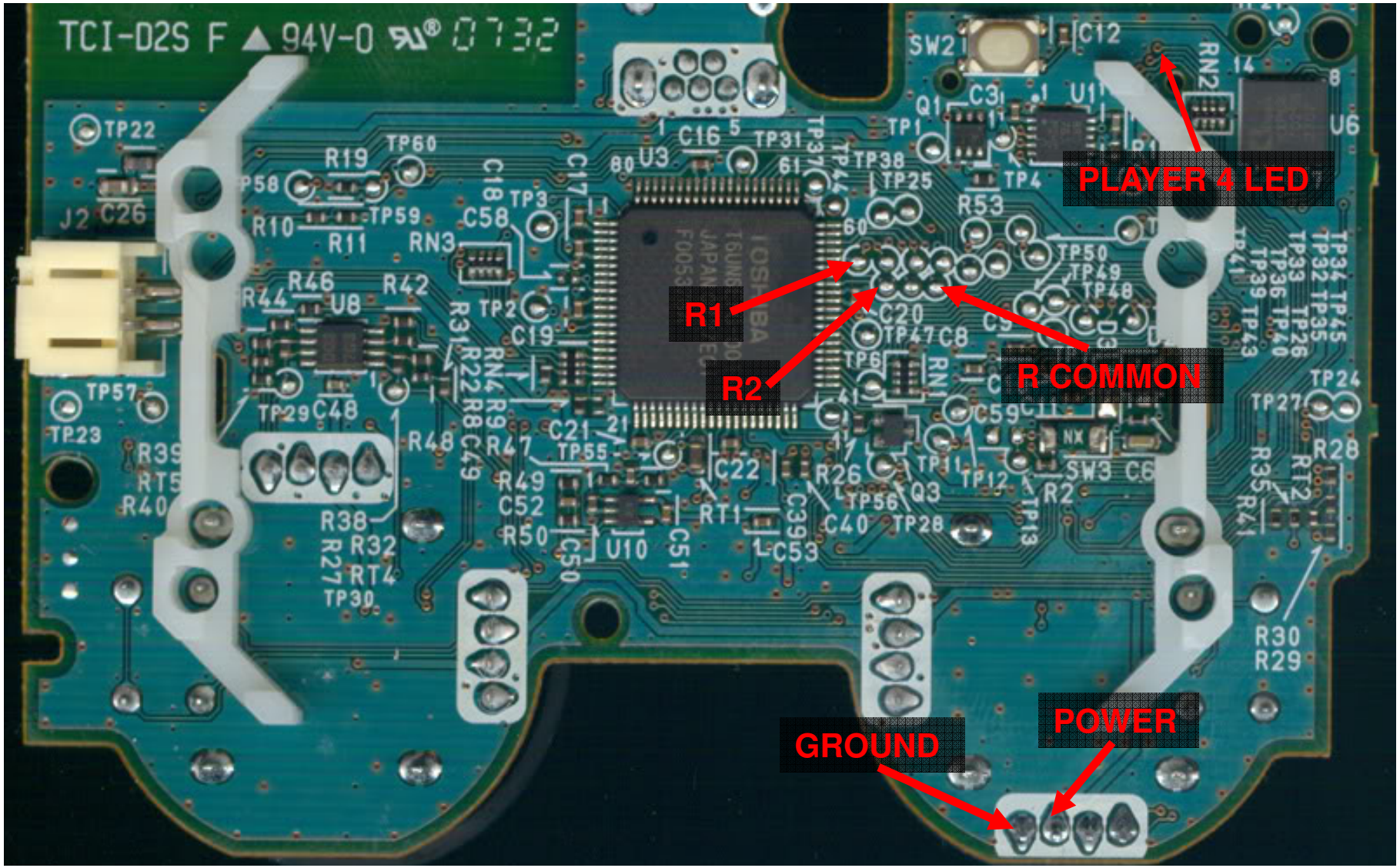
- Currently there are 2 different types of Sixaxis controllers (no Rumble) and 3 types of dualshock 3 controllers. Below you will find pictures and solder locations for each type of controller.
- First the Old style Sixaxis – This is easily Identified by the solder connections for the thumbsticks. This is the only controller with 3 vertical and horizontal solder connections for the thumbsticks (circled in Yellow).
- 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 6 cont.: Identifying your controller

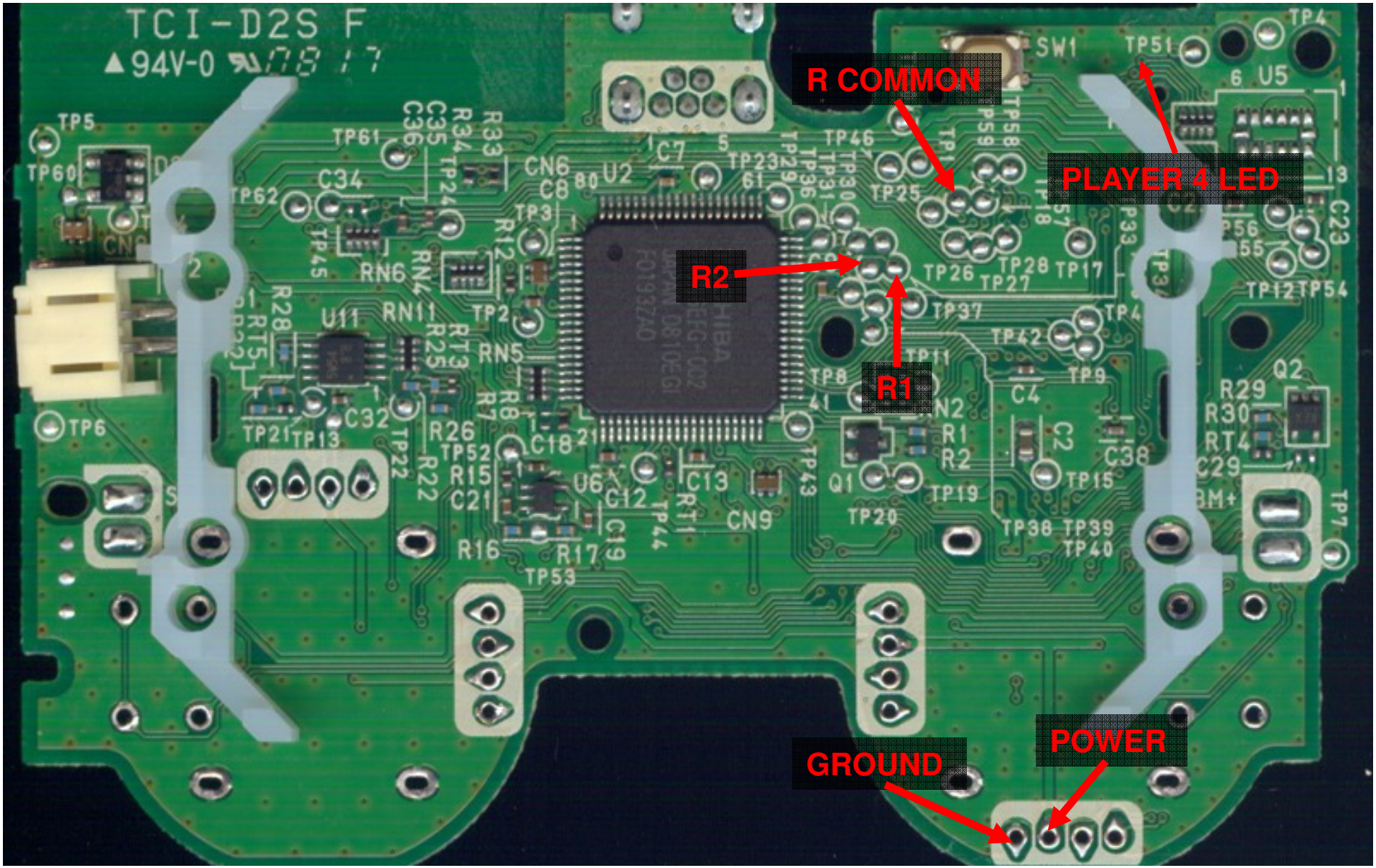
- Next is the new style Sixaxis and 1st Generation Dualshock 3. These are both the same layout and solder points. The only difference is the dualshock has rumble motors. Some versions of this controller do not have the small square chip that is in the upper right corner of the PCB in this picture but 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.



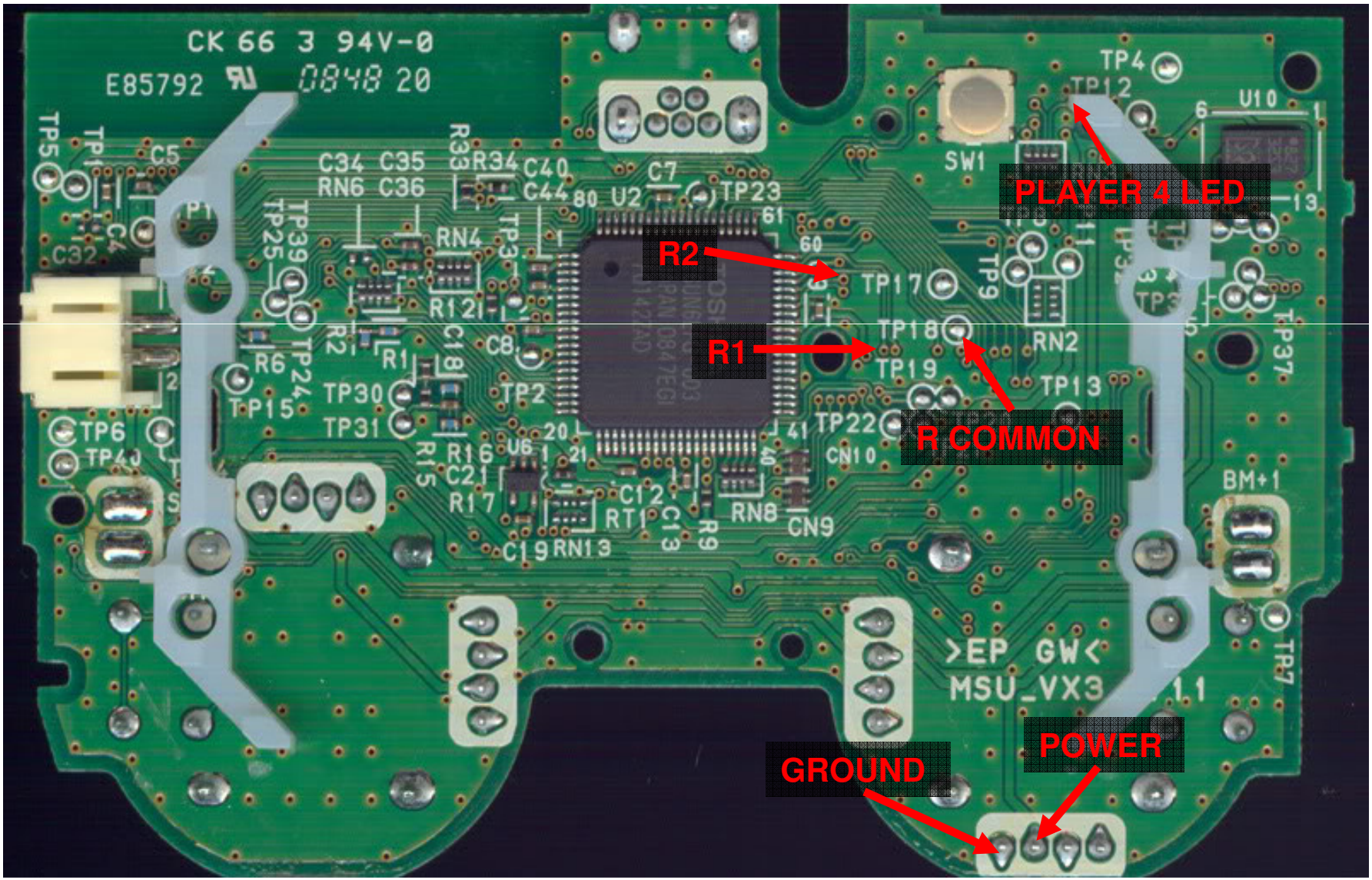
Step 6 cont.: Identifying your controller

- Next is the 2nd generations dualshock. 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.



Step 6 cont.: Identifying your controller

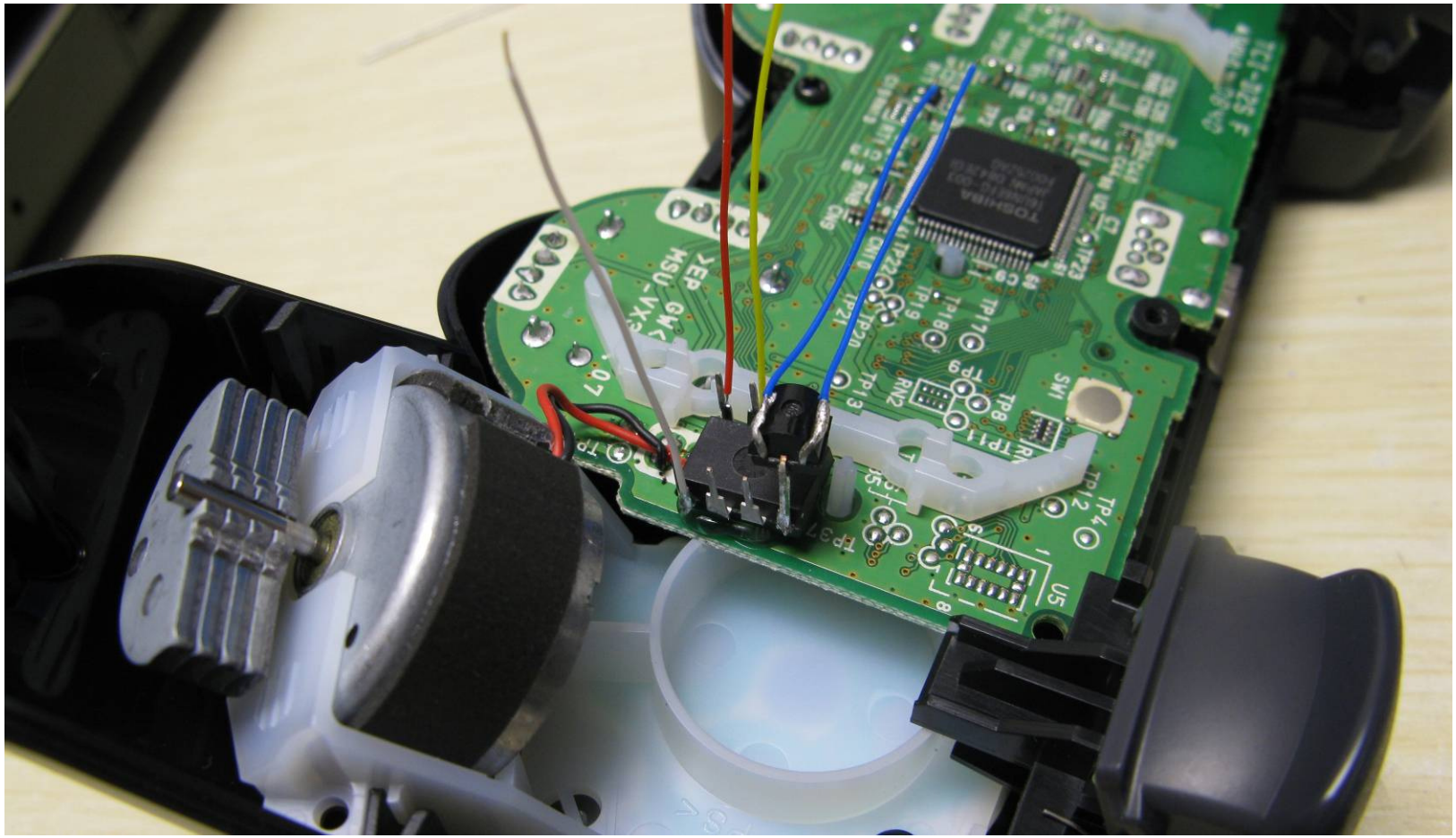
- Finally is the 3nd generations dualshock. Unfortunately Sony did not leave us any large solder pads for the R1 and R2 solder points in this controller. So we will be using this as our sample for the rest of the installation as it is the hardest to work with.
- The player 4 LED solder point is a very small via on this board and is covered by the battery holder in this picture, but it is just under the “T” in “TP12” that is written on the PCB.



Step 7: Mounting your Chip.

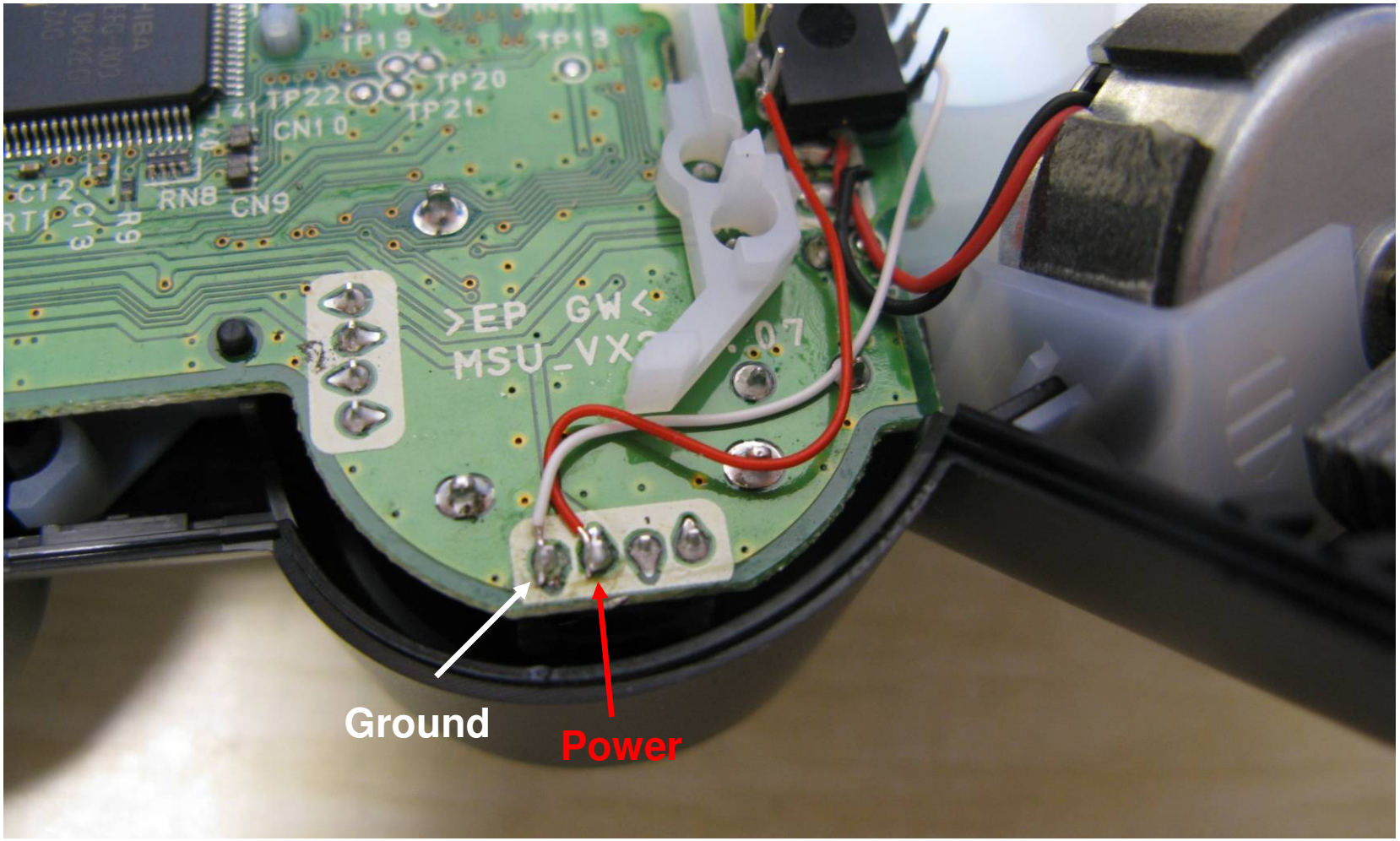
- We will proceed with the installation using the 3rd generation dualshock 3 controller as this is the hardest to work with due to the small solder points for the R1 and R2.

- Start by using some hot glue to hold the chip and transistor 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.



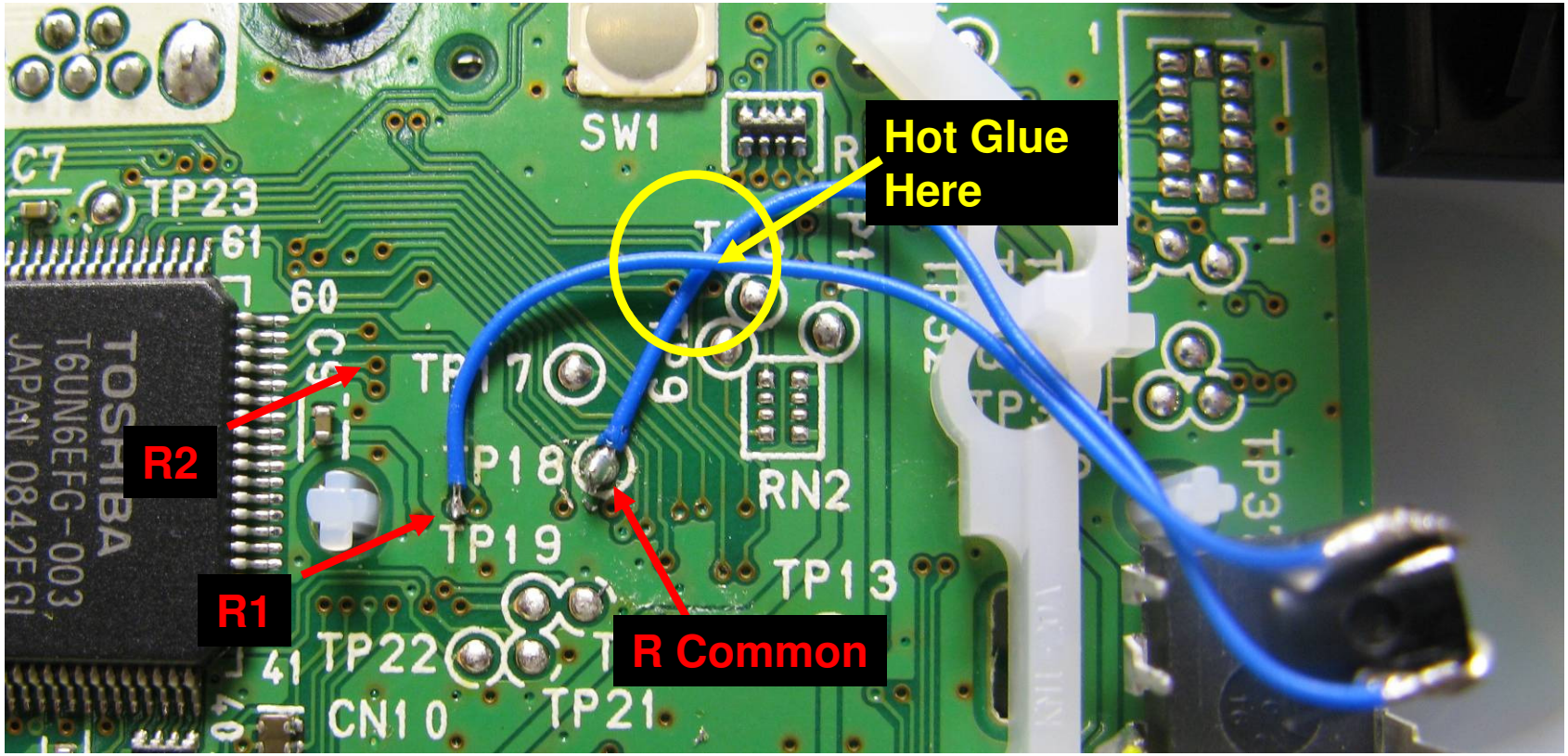
Step 8: Attaching the power and ground.

- Refer to the controller identification for the proper power and ground points for your controller type.
  - *Note - All controllers except the old style sixaxis controller use the same power and ground as this image.*
- Here you can see the power and ground wires soldered in place. The power being the red wire and ground being the white wire.



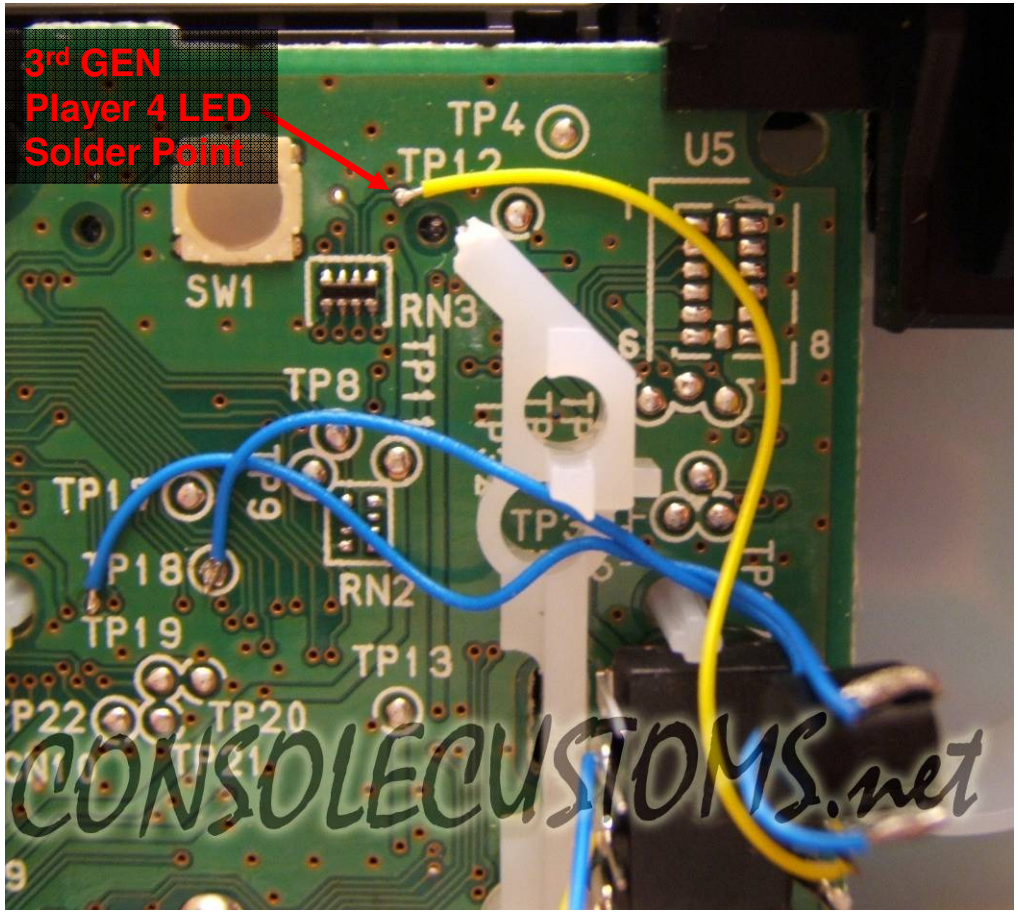
Step 9: Attaching the R1 and R common wires.

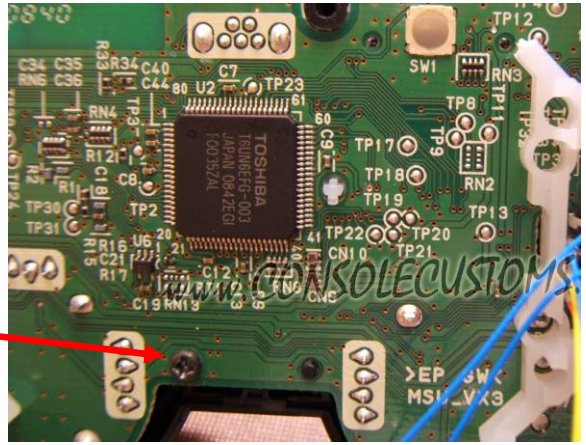
- Again this is the 3rd generation dualshock 3 controller shown. **<u>Refer to the controller identification to find the solder points for your controller.</u>**
- You will solder one of the blue wires from the transistor to the R common point on the controller and the other to either the R1 or R2 solder point depending on which you want the button to perform the rapid fire for.
- As you can see the solder point for the R1 location on the 3rd gen is extremely small. It also has a coating over it that must first be scraped away with a knife to expose the bare metal. Be careful when scraping this small point to not expose metal around the point as this will open up an opportunity for a short causing the rapid fire to not work.
- Once you are done use some hot glue to hold these wires in place. Do not put hot glue directly on the solder points. If you do it will make it much harder to go back and fix a mistake, instead hot glue only the wires away from solder points such as where the two wires cross in our picture.

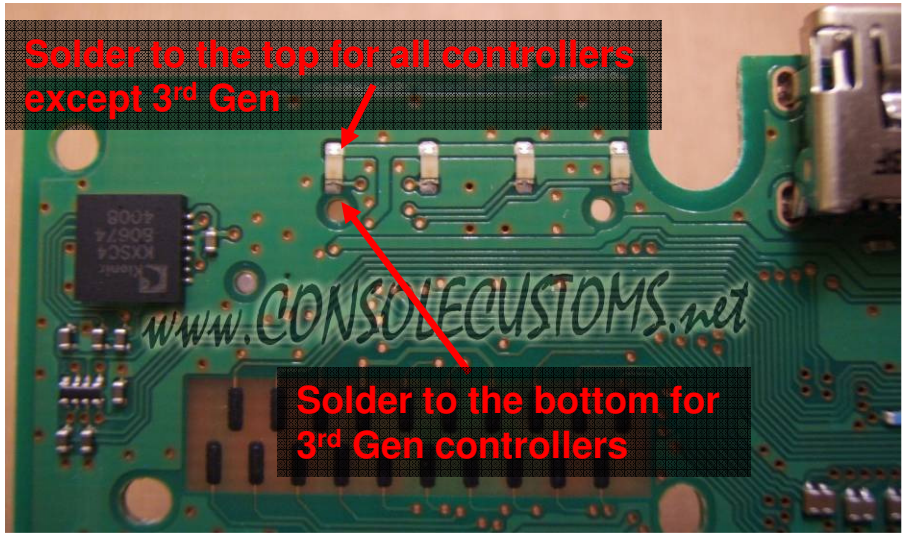


Step 10: Attaching the LED wire.

- Again this is the 3rd generation dualshock 3 controller shown. **Refer to the controller identification to find the solder points for your controller.**
- There are two ways you can hook up the LED. One is using the LED points shown on the controller identification which are on the back of the PCB and easy to get to, but are also very small. The other option is to remove the PCB and solder directly to the LED. We will show you both methods.
- First is the left image using the small via that is on the back of the PCB, on the 3rd gen that we are using you need to cut the battery holder for easy access to the via. All other controller types do not require cutting the battery holder. Once you have the coating over the via scraped you can solder you wire.
- The second method is to remove the PCB. To do so remove the small screw show in the top right side image. And pull the PCB up. Watch the triggers as you are removing the PCB as they sit on the PCB. Also on some Dualshock 3 controllers you may also need to unscrew the rumble motors.
- With the PCB out you will see something similar to the bottom right side image. The player 4 LED is the one all the way to the left. On the 3rd gen controllers like the one shown you will need to solder your wire to the bottom of the LED, all other controller types you will solder to the top of the LED.

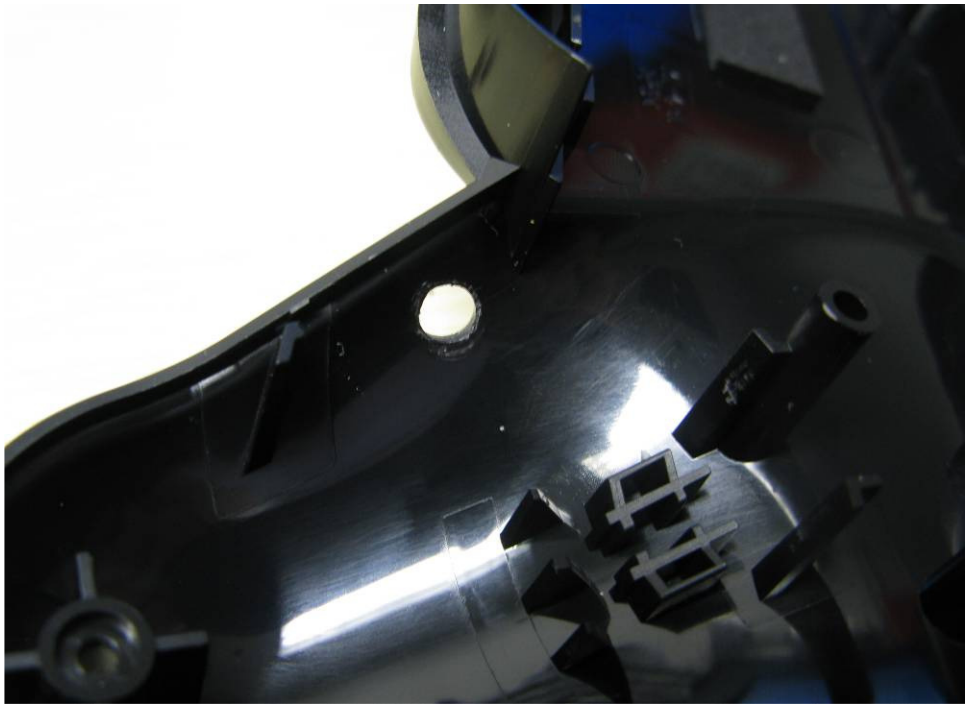


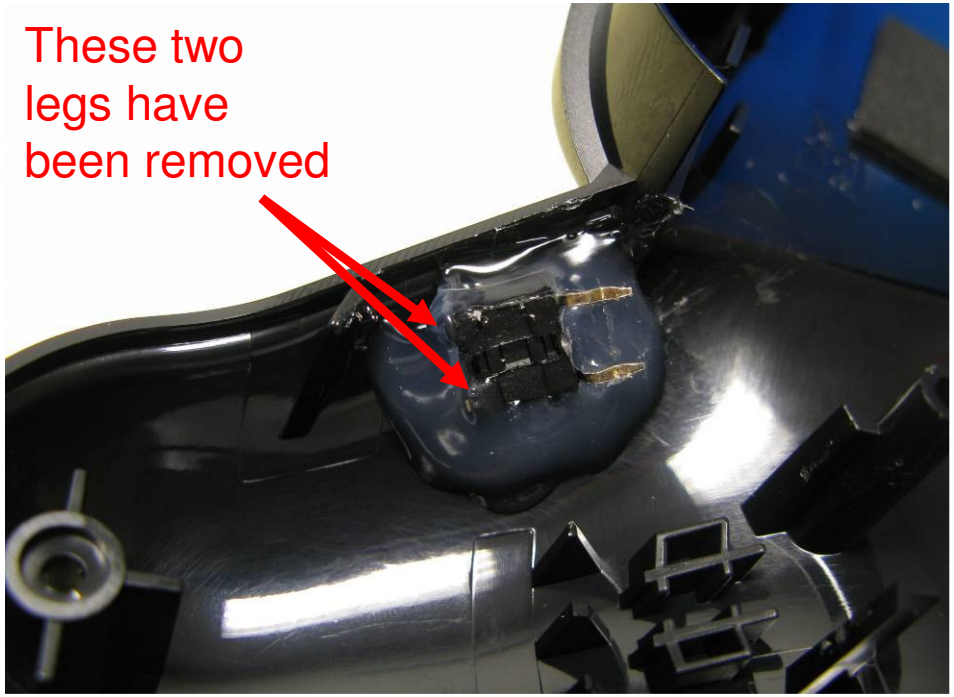




Step 10: Installing the button.

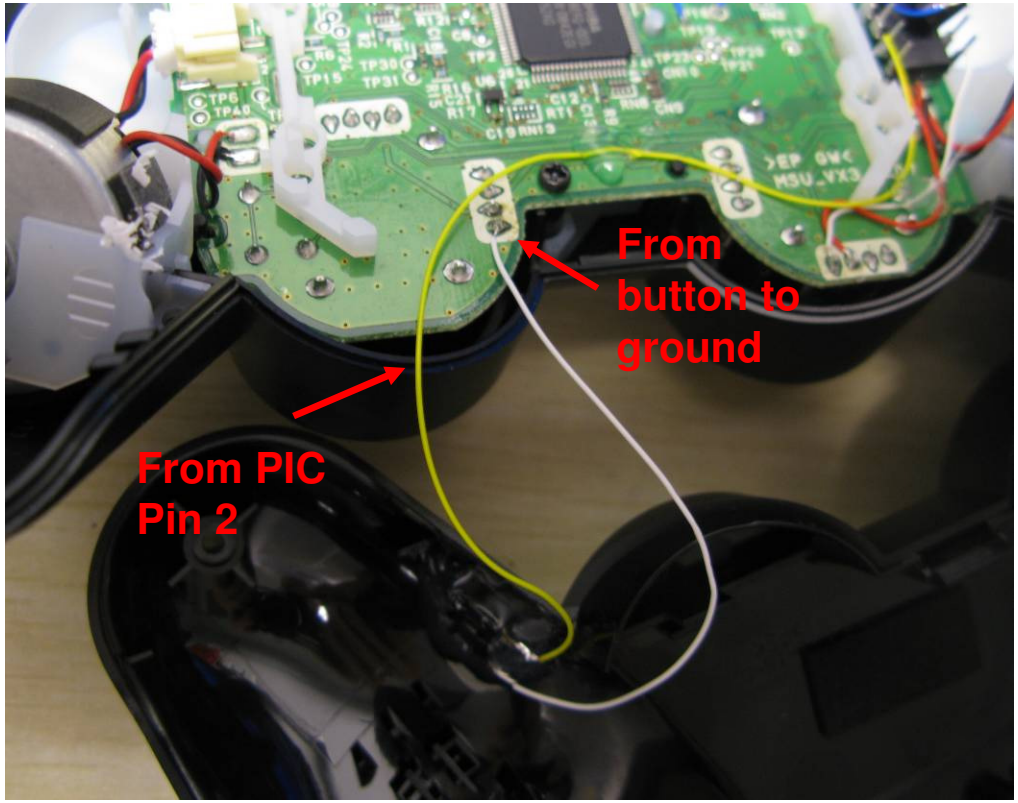
- Using your 9/64th Drill make a hole for installing the button into your controller. We put ours on the inside of the right side hand grip. You can put where button where ever is comfortable for you. Just be sure there is clearance for the rumble motor or whatever else may interfere with the controller closing correctly.
- You button has 4 legs on it and you really only need 2. When looking at the button you will see it has two legs on one edge of the button and the other two are directly across. You want to remove two legs that are on the same edge. You will end up with a button that has 3 sides with no legs and one side with two legs. See the right side image below for additional information.
- Finally use a generous amount of hot glue to hold the button in place.





Step 11: Final Steps.

- Connect the wire from pin 2 of the PIC to one of the legs of the button. Shown here as the yellow wire.
- Finally use a piece of wire to connect the second leg of the button to ground. In this picture this is the white wire.
  - Note: this picture again shows the 3rd gen dualshock 3 controller. All of the controllers can use this same grounding point <u>except</u> the old style sixaxis. For the old style sixaxis refer to the controller identification images for different ground points.



Thank you for purchasing one of our custom Playstation 3 Rapid fire controllers. We appreciate your business and work hard to provide a 5 star experience to all of our customers. If for any reason you are having trouble with your controller or have general questions, please contact us at consolecustoms@yahoo.com. Below you will find helpful information on using your new controller or mod.

PS3 RFP-1 Single speed 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.net or from our youtube page www.youtube.com/consolecustoms.

- This controller has 4 speed settings but they can only be used/accessed one at a time. The controller will come in the in the default speed 1. To change the speed the controller must first be OFF and NOT plugged into a charge/sync cable. With the controller OFF, press and hold the button on the back. While holding the button turn on the controller. You should see the player 4 LED flash. It will flash based on the setting it is switched to. 1 flash = speed 1, 2 flashes = speed 2, etc… The controller can only change one speed at a time. So if you want to go from speed 1 to speed 3 you will need to turn the controller off and back on again two times. Each time holding in the button when you turn on the controller.

  - **Speed 1:** COD 4/MW2 fast speed
  - **Speed 2:** COD 5 fast speed
  - **Speed 3:** COD 4/5 slow speed
  - **Speed 4:** GTA 4 (Rapid fire must be installed on R2 for GTA4)

- Once you have selected your speed you will fire using the button on the back. The button always fires with rapid fire and R1 always fires normally.

Thank you,
Console Customs