

# 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 (I use a cheap 15w/30w from radio shack about \$15)
- Solder ( I use rosin core solder from radio shack 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
- 3/16 drill bit (or close to it)
- Small pocket knife or razor blade (optional but helpful)

Please visit our website at [www.consolecustoms.net](http://www.consolecustoms.net)

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

Step 1: Before we even get into the controller we are going to assemble the chips and attach all of the wires.

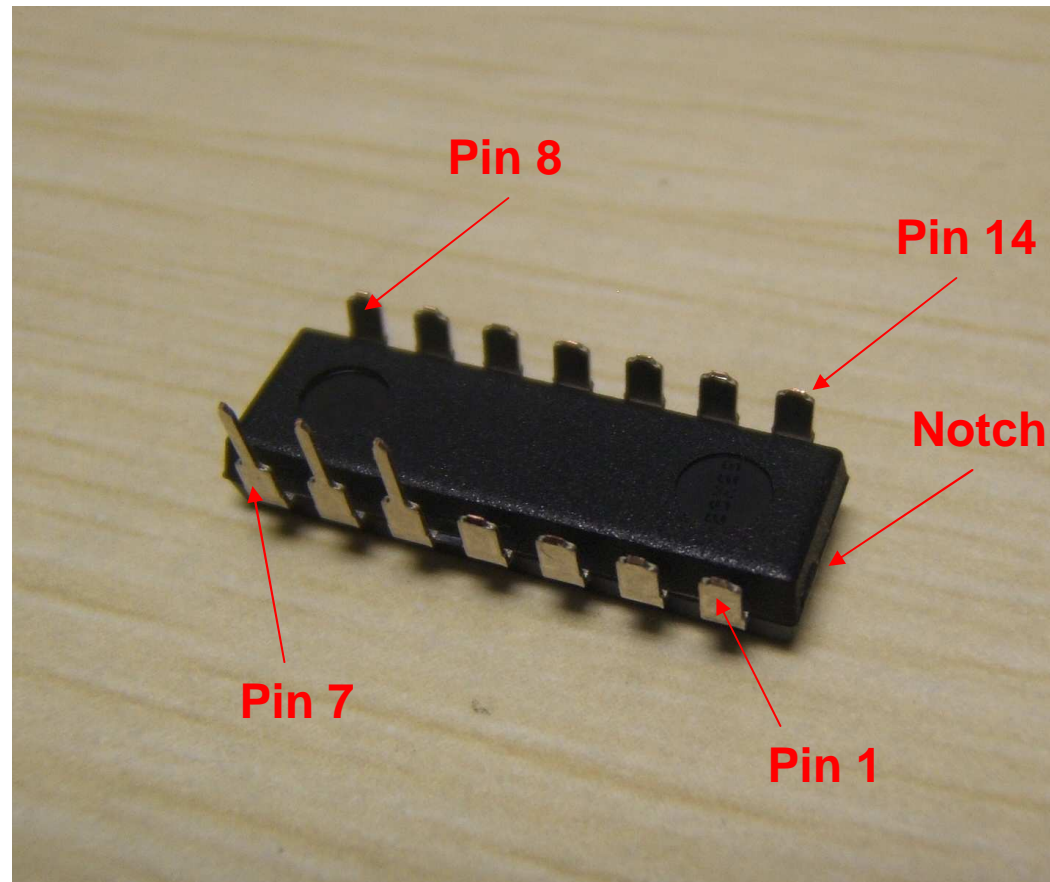
- You should have the following items in your kit
  1. (1) 14 pin PIC microcontroller
  2. (1) 14 pin logic switch
  3. (1) tactile switch
  4. 30ga. Wire



Step 2: You will start by taking the Logic Switch and putting it on its back, also called (dead bug). Note the location of the notch that is on the top of the chip.

*note: the logic switch can be identified by the part number "SN74HC4066NE4" that is displayed on top of the chip. The PIC will say "PIC" followed by a part number on top of the chip.*

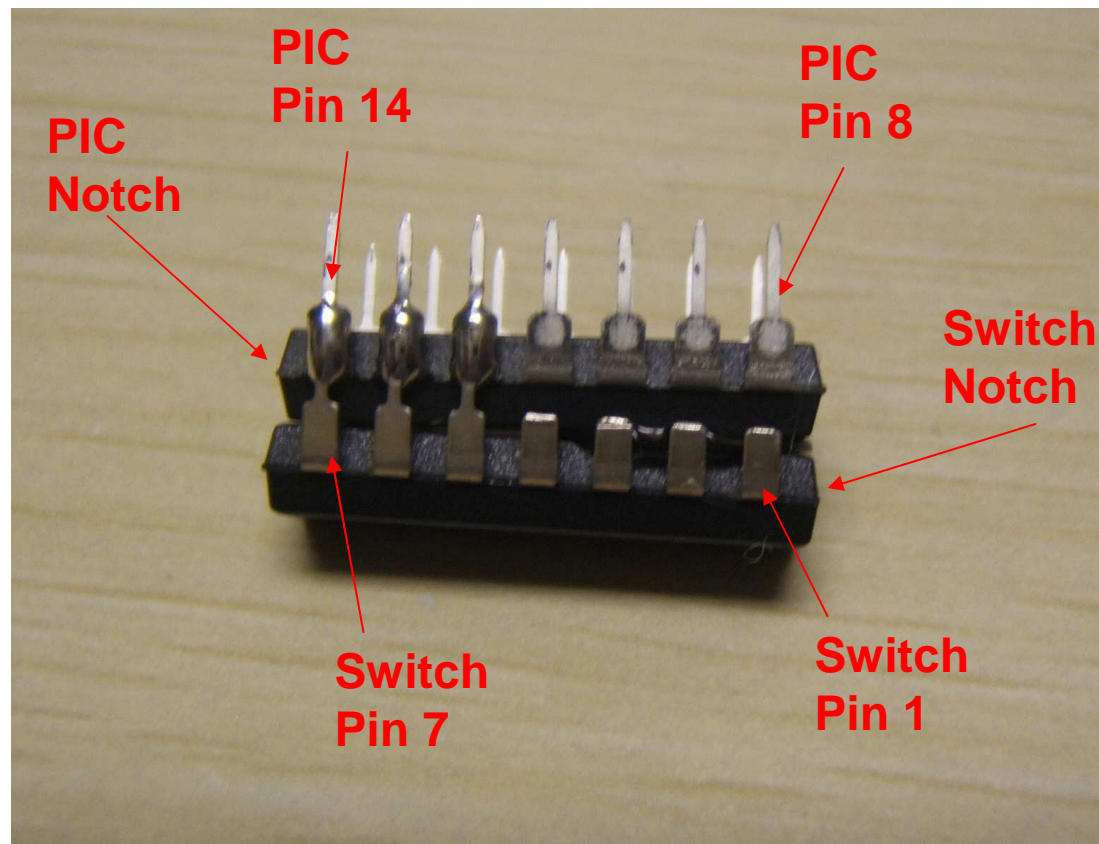
- You will want to remove only the top half (skinny part) of the pin from pins 1-4 and 8-14. You will leave pins 5,6 and 7 full length.
  - *Tip: A pair of side cutters or wire cutters works get for this*



Step 3: Next you will Solder together the PIC and the switch.

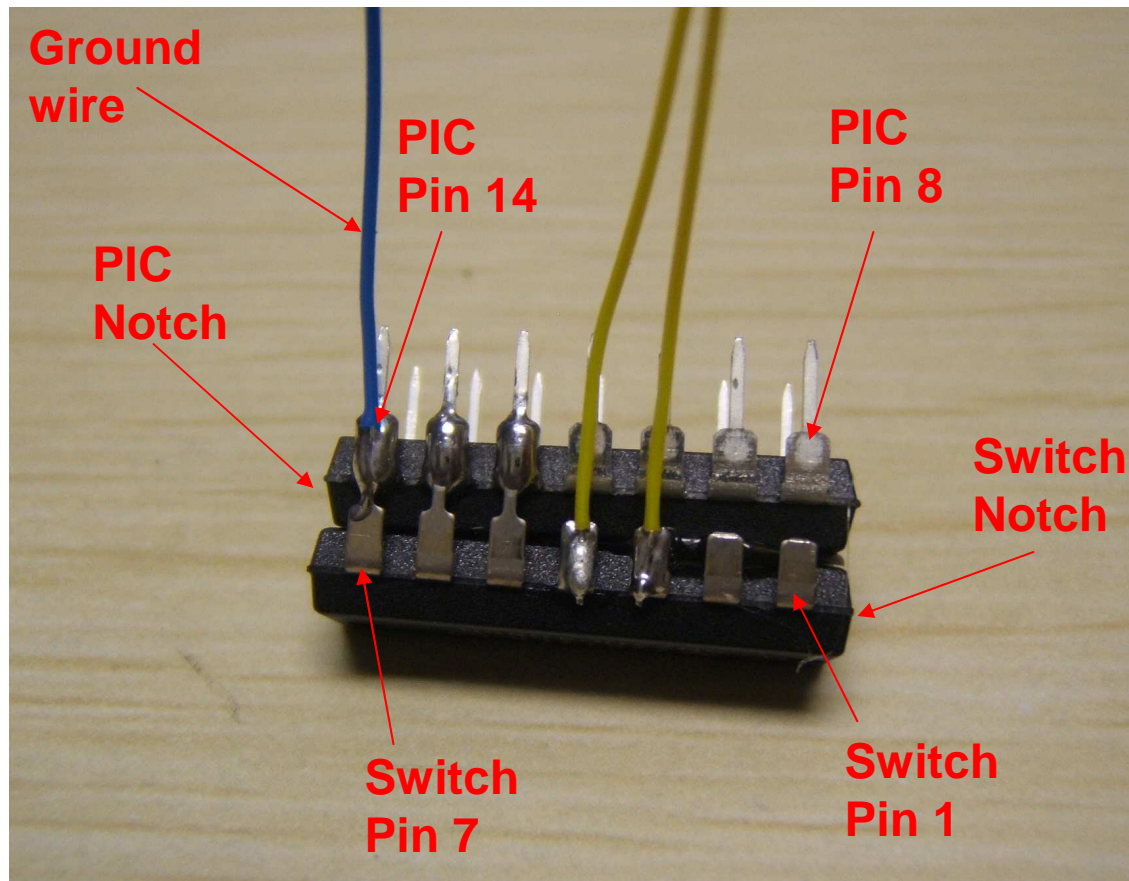
*Tip: Use a small dab of hot glue to hold the chips together.*

- You will put together the PIC and the switch with the notches on top opposite of each other. By doing this you will line up pins 5, 6 and 7 of the switch (that are still full length) with pins 12, 13 and 14 of the PIC.
- Now solder together these three sets of pins that are touching as shown in the image.
  - tip: For information on proper soldering visit [http://www.curiousinventor.com/guides/How\\_To\\_Solder](http://www.curiousinventor.com/guides/How_To_Solder)



Step 4: Now you will start to attach the wires.

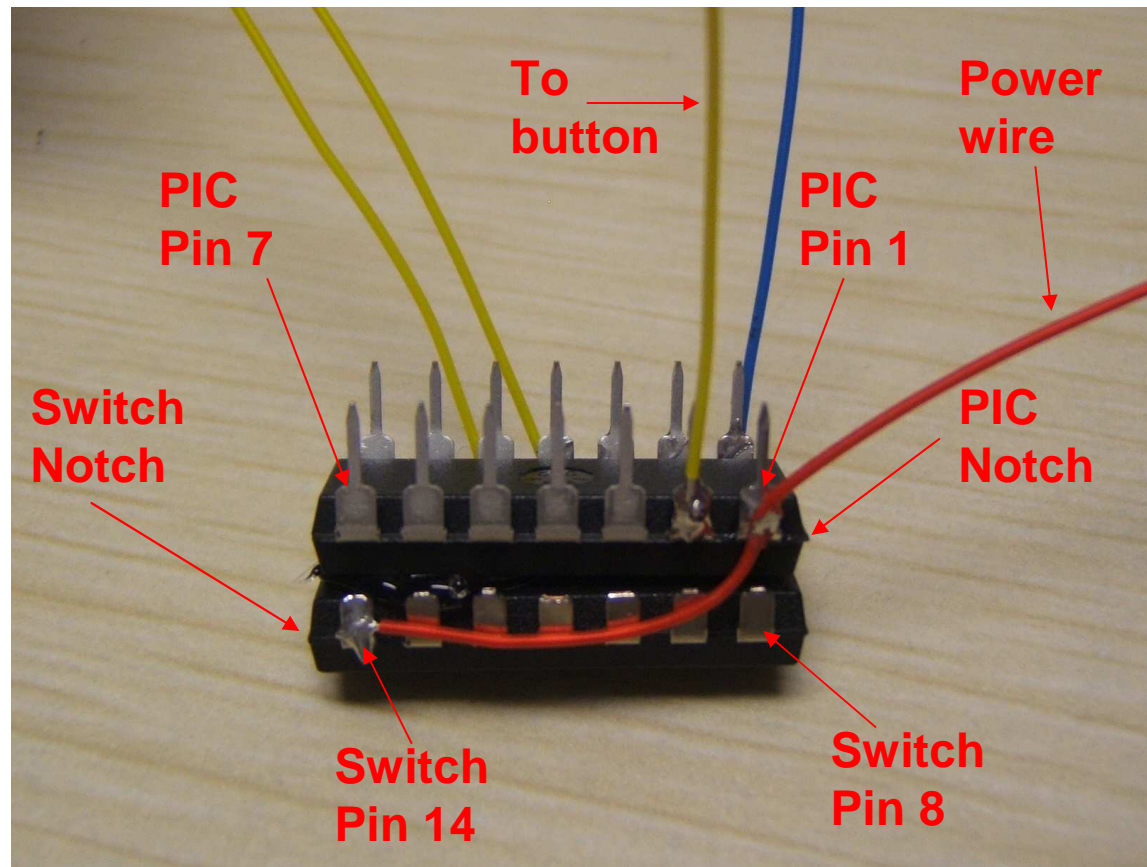
- Using your soldering iron attach a 2" long wire to the already soldered together pin 14 of the PIC and 7 of the switch. This will be your ground wire.
- Next take two wires both 2" long and solder one to pin 3 of the switch and one to pin 4 of the switch. These will go to the connections for R1 or R2 in the controller.
- *tip: Only strip about 1/8" of the wire for soldering. Exposing more bare wire could cause a short if the bare wire touches something it should not.*





## Step 5: Attaching wires on the other side of the chips

- Now you will attach a wire to pin 2 of the PIC. This will go to the button that you will put into the controller later.
- Finally you will attach a wire from pin 14 of the switch, to pin 1 of the PIC with about 1 inch extra off of pin 1. This will be your power wire and is the red wire in the image.
- *tip: use your soldering iron to melt the casing of the wire where you will be attaching to pin 1. this way you can attach one continuous wire from pin 14 of the switch to pin 1 of the PIC to the power in the controller.*



## Step 6: 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.



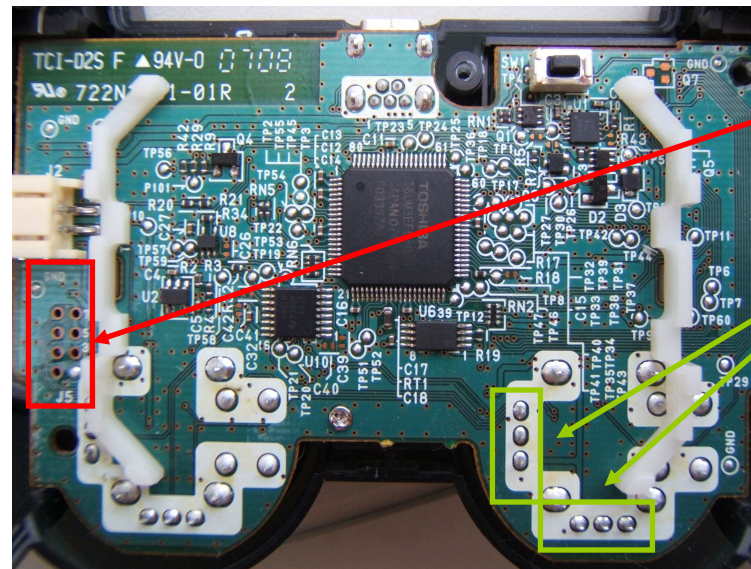
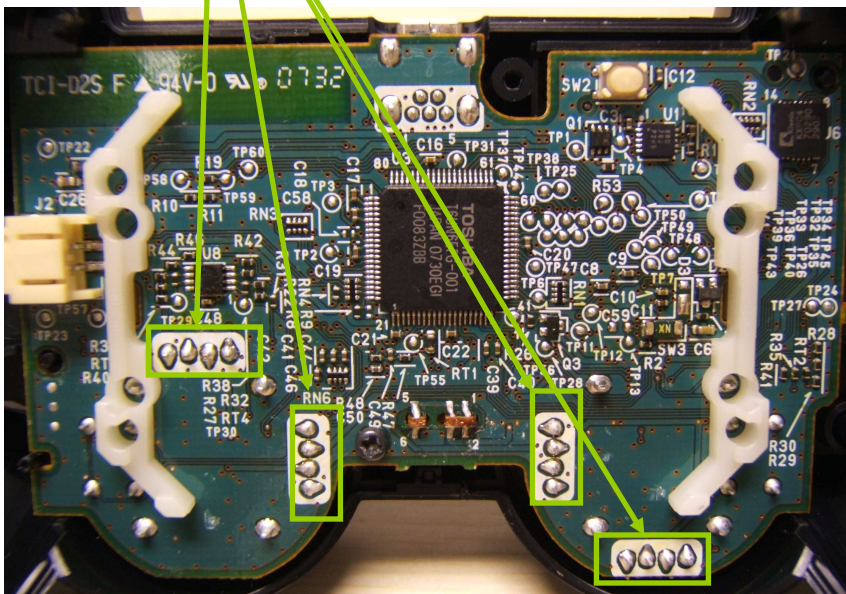


## STOP!

There are now two different PCB layouts for the sixaxis controller. The new style is very similar to the dual shock 3. All three are shown below. The solder points for each type will be shown on the follow step.

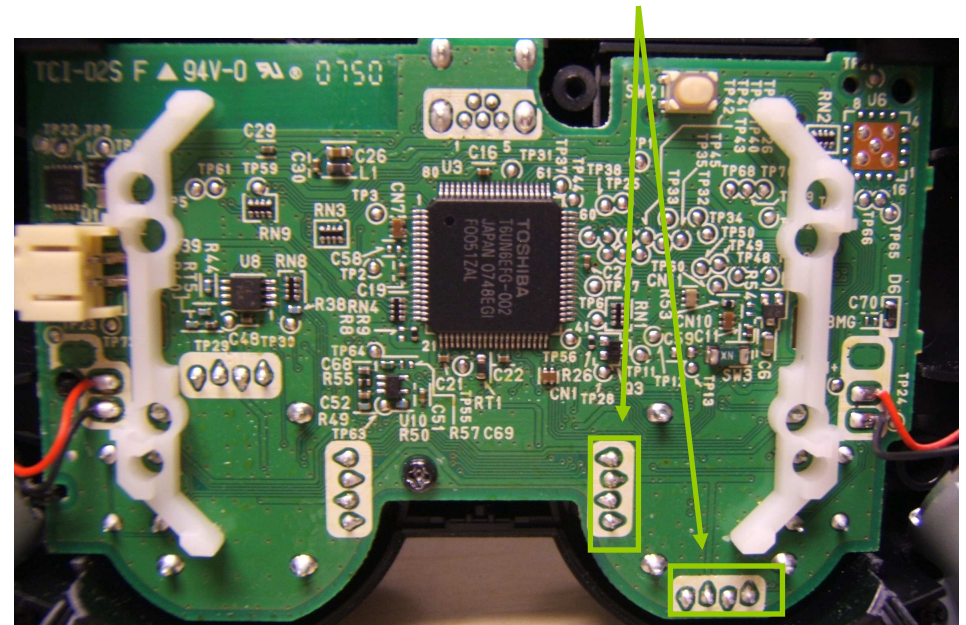
### NEW Sixaxis PCB style

– This is identified by the Four solder points in the horizontal and vertical axis for the thumbsticks



OLD Sixaxis PCB style – This is identified by the 8 solder points directly under the battery plug. This style also has only three solder points in the horizontal and vertical axis for the thumbsticks

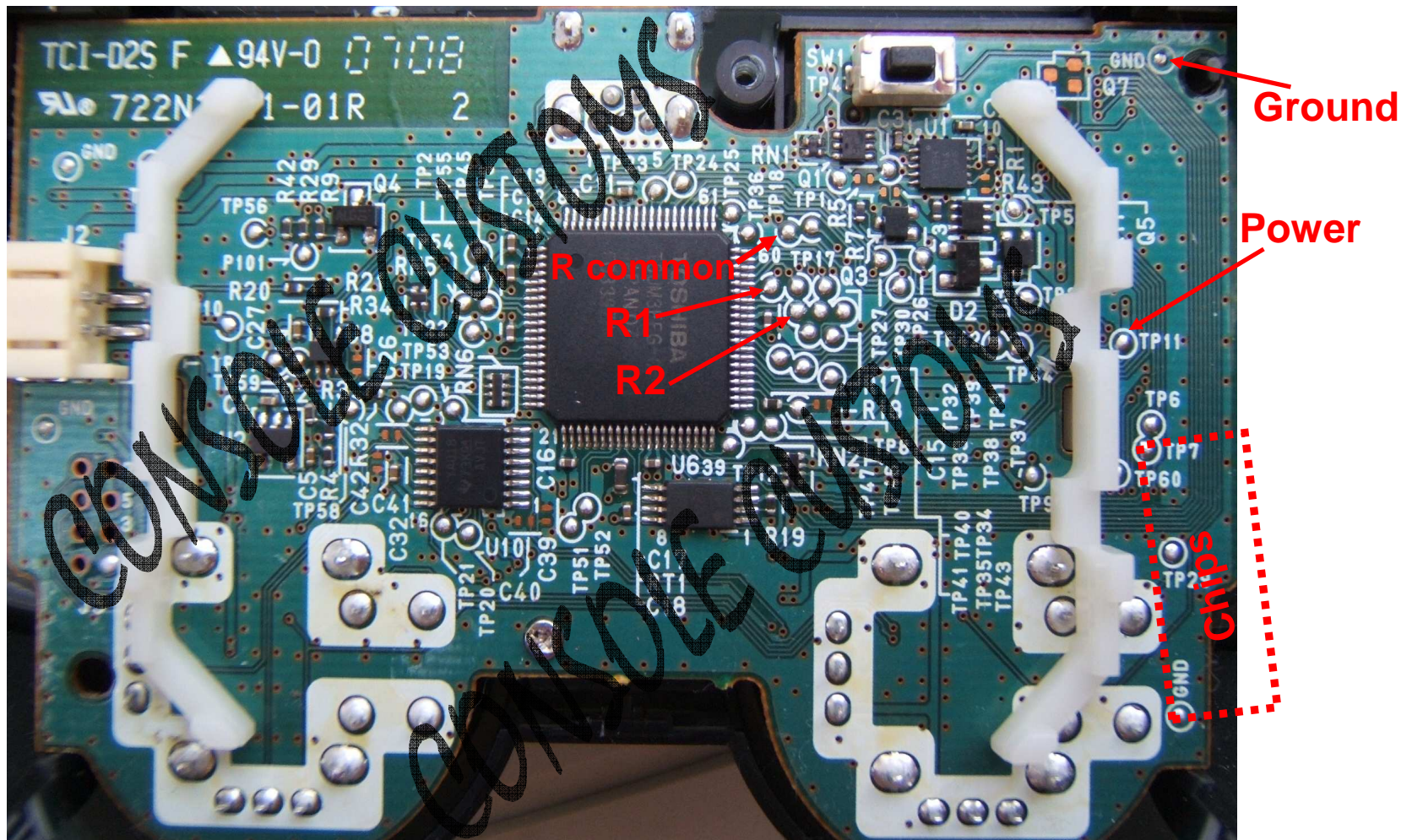
Dualshock PCB – This is identified by the addition of the rumble motors and also the Four solder points in the horizontal and vertical axis for the thumbsticks





Step 7a: Where it all goes – Now that you know which PCB style you have we can begin the installation. 7a (this page) shows the connections for the OLD style sixaxis PCB.

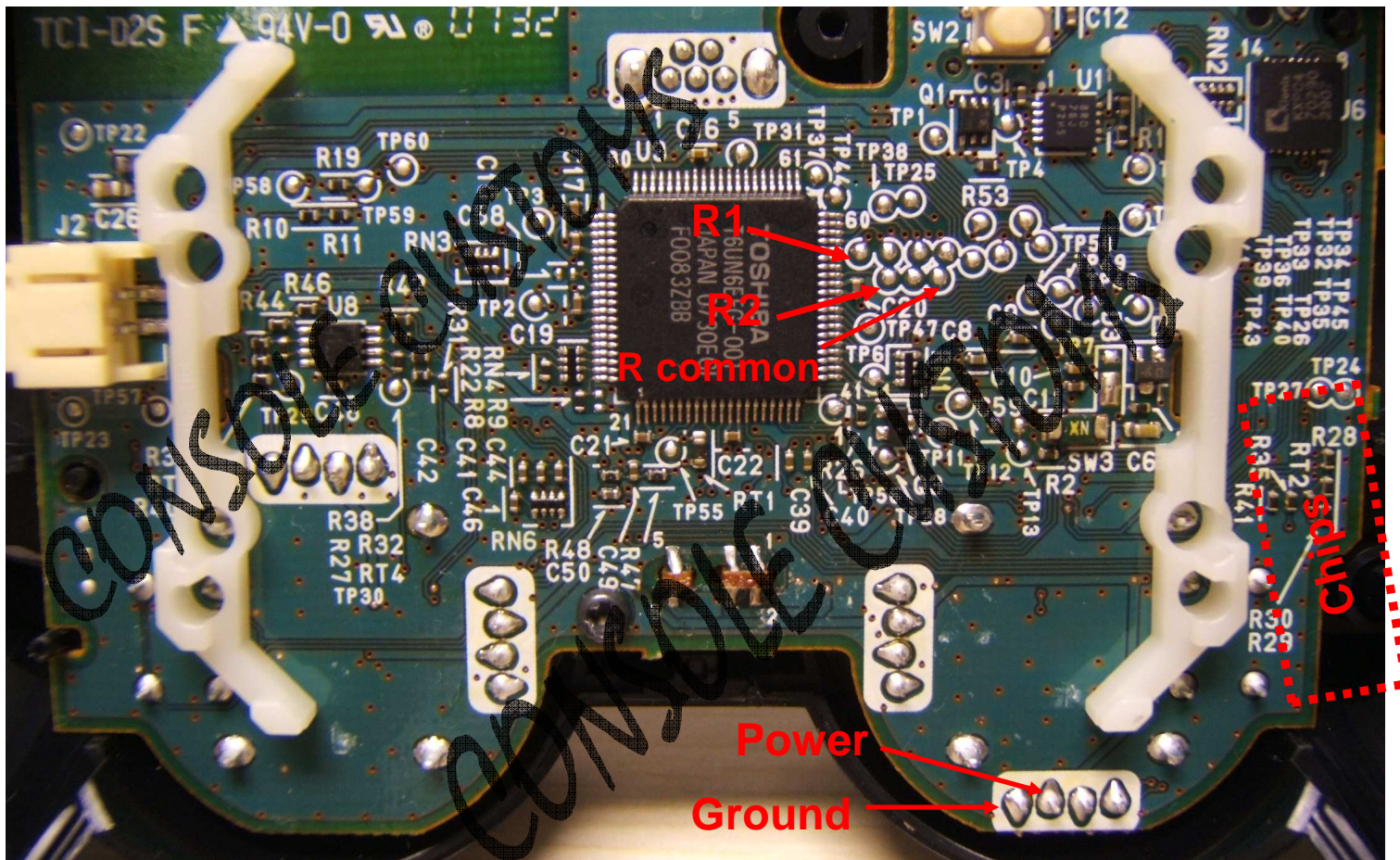
- The red wire used in the tutorial coming from Pin 1 of the PIC will go to the Power solder point shown.
- The blue wire used in the tutorial coming from Pin 14 of the PIC will go to the Ground solder point shown.
- The two yellow wires used in the tutorial from pins 3 and 4 of the switch will go to the R connections. 1 wire will go to the R common connector. The other will go to either the R1 connection or R2 connection depending on which button you would like rapid fire for. It does not matter which of the 2 wires go to the R common or R1/R2 connections.





Step 7b: Where it all goes – Now that you know which PCB style you have we can begin the installation. 7b (this page) shows the connections for the NEW style Sixaxis PCB and also the Dualshock 3 PCB (the new sisaxis is shown but connection points are the same for both).

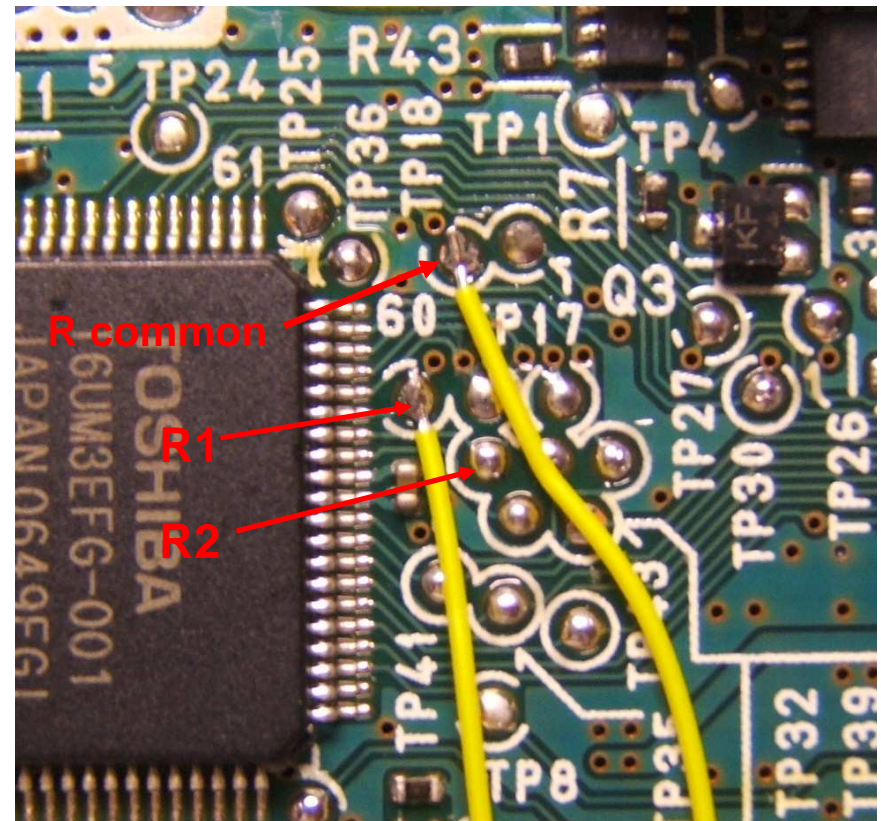
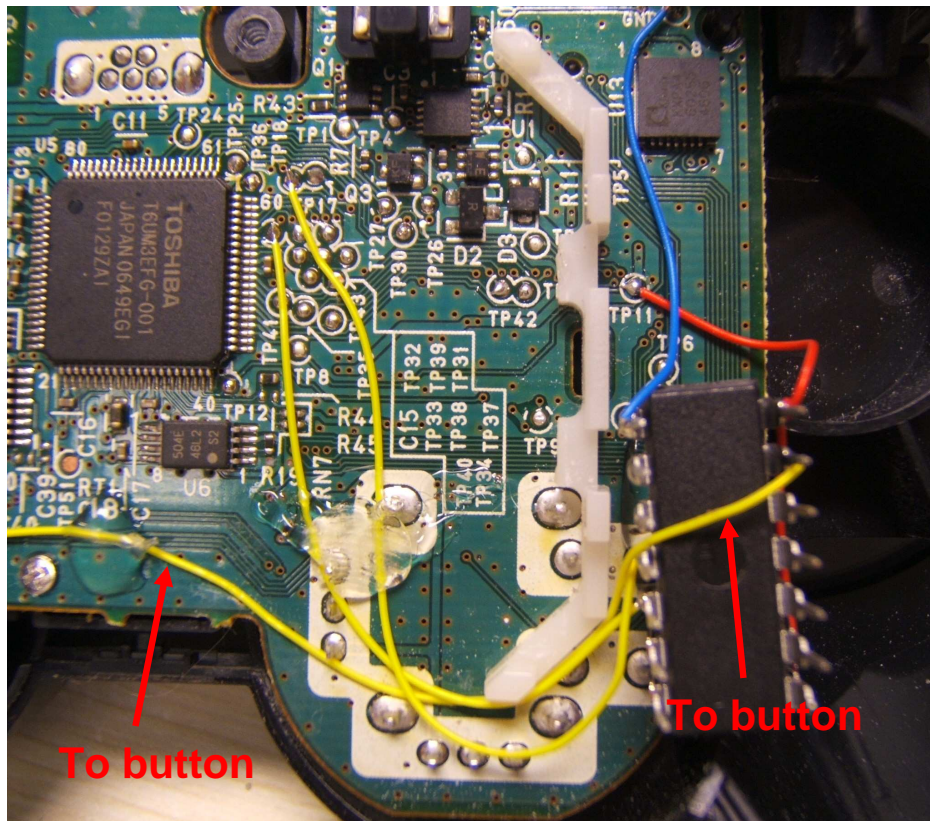
- The red wire used in the tutorial coming from Pin 1 of the PIC will go to the Power solder point shown.
- The blue wire used in the tutorial coming from Pin 14 of the PIC will go to the Ground solder point shown.
- The two yellow wires used in the tutorial from pins 3 and 4 of the switch will go to the R connections. 1 wire will go to the R common connector. The other will go to either the R1 connection or R2 connection depending on which button you would like rapid fire for. It does not matter which wire goes to the R common or R1/R2 connections.





## Step 8: Installation (old sixaxis PCB shown)

- Start by hot gluing your chips as shown and solder in your power and ground connections using the solder points shown in the previous step for your PCB type.
  - Next solder the two yellow wires from Switch pins 3 and 4 to the two R connections. The right side image shows a close up of the old style sixaxis PCB and connections for R1 rapid installed.
  - Then take the wire from pin 2 of the PIC and run it across the board hot gluing it in the middle to keep it out of the way when closing the controller.
- Tip: trim you wires so they are only as long as you need, then strip the end and solder into place. Long wires will just cause a place for something to snag when closing the controller.*





Step 9: Next you will install the button for the rapid fire.

- You can put your button where ever is most comfortable for you. Here we are showing how we install ours. Using your 3/16<sup>th</sup> drill bit make your hole and trim off any rough edges.
- Your button will have 4 legs, we only need two (one pair). Each pair is along the same edge so with one pair removed you will have three sides of the button with no legs and one side with two legs.
- Put the button in place and use hot glue to hold it in. Once in, fold over the two legs over top of the button.



## Step 10: Final steps

- Attach the button wire from pin 2 of the PIC to one side of the button you just installed.
- The other side of the button will need to be connected to ground this can be connected back to the ground of the PIC or to the location shown here with the white wire in the image. (old sixaxis PCB shown)
- re-assemble your controller and you are done.

