



# Super Nintendo 50/60 Hz Switchless Mod + LED Mod

Super Nintendo, Mod, LED, Region Free.

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# INTRODUCTION

This guide shows you how to mod your super nintendo region free without a switch and with new LED lights.

btw. This mod doesn't work on 1 Chip SNES or SNES Mini.



## TOOLS:

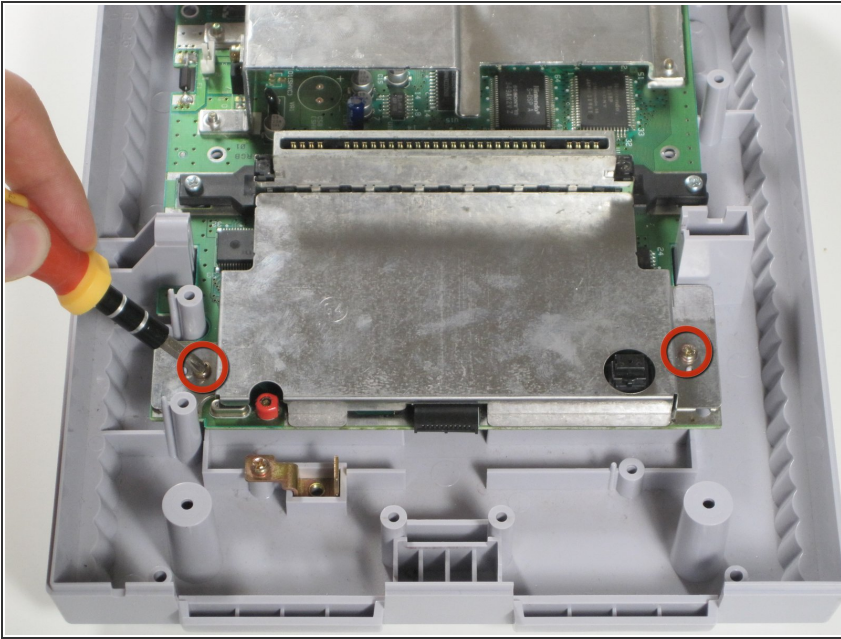
- [Gamebit 4.5mm](#) (1)
- [Phillips #2 Screwdriver](#) (1)
- [Tweezers](#) (1)
- [Double-Sided Tape](#) (1)
- [Desoldering Pump](#) (1)
- [Metal Spudger](#) (1)
- [Universal Programmer](#) (1)
- [Flush Wire Cutters](#) (1)
- [Soldering Iron](#) (1)
- [Desoldering Braid](#) (1)



## PARTS:

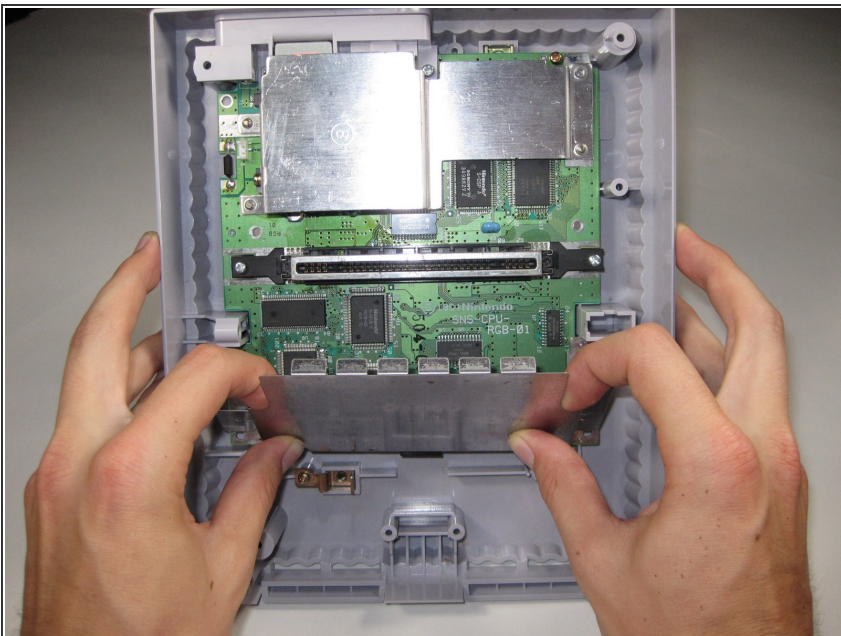
- [PIC 16F630 \(Snes Regionfree Chip\)](#) (1)
- [Resistor 10K ohm](#) (1)
- [Wire Wrapping Wire](#) (1)
- [Heat Shrink Tubing Assortment](#) (1)
- [Resistor 2K Ohm](#) (1)
- [Resistor 220 Ohm](#) (1)
- [5 mm Through-Hole 3Pin Led Light, Red-Green Dual Color](#) (1)

## Step 1 — Motherboard



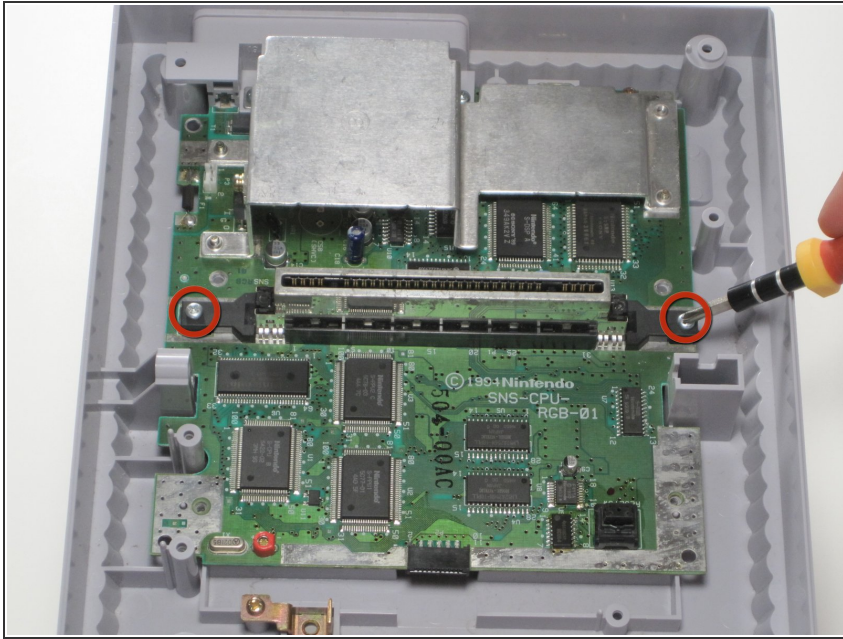
- Remove the two Phillips two 11.6mm screws that connect the front shield to the motherboard.

## Step 2



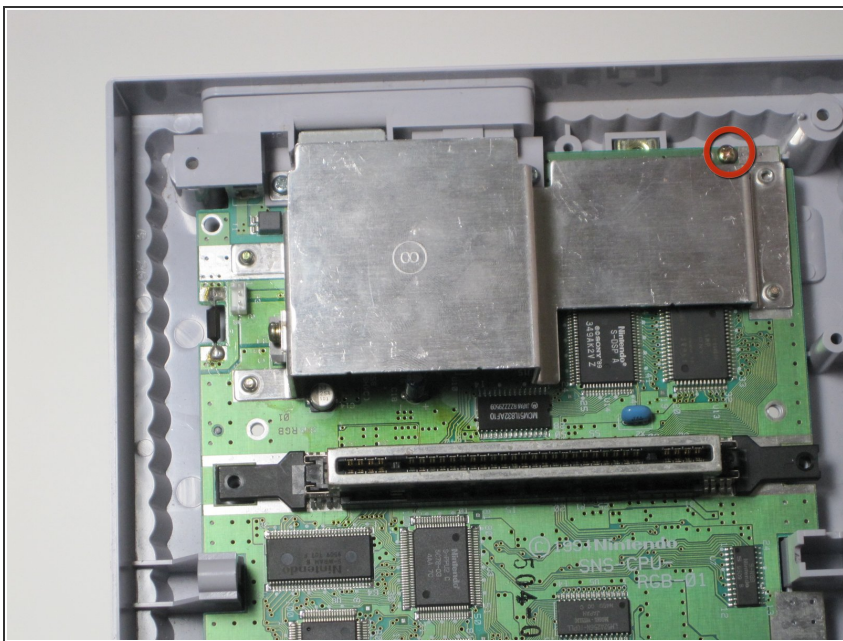
- Lift the front shield straight up to remove it from the motherboard.

### Step 3



- Remove the two silver 15.6 mm Phillips #2 screws on either side of the 62 pin connector.

### Step 4



- Remove the 11.8 mm Phillips #2 screw near the rear of the SNES.

## Step 5



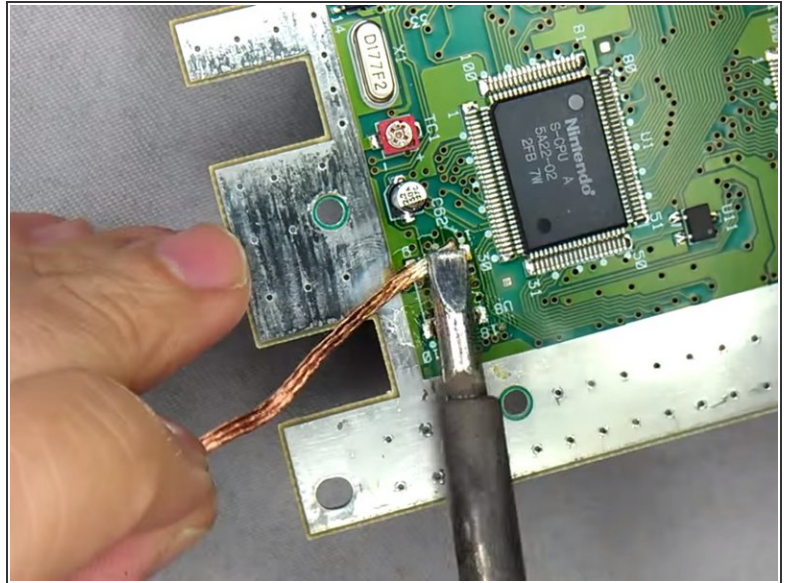
- Lift the motherboard straight up to remove it.

## Step 6 — The Two Chips



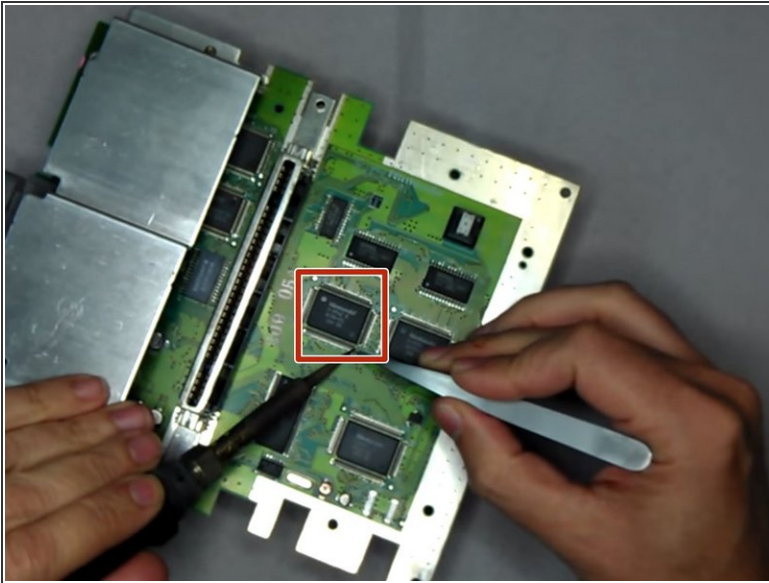
- The Two Chips that you need on your Super Nintendo
- ⓘ This mod only works on original Super Nintendo with 2 Chips, this mod doesn't work on the 1 Chip Snes.

## Step 7 — The Lockout Chip



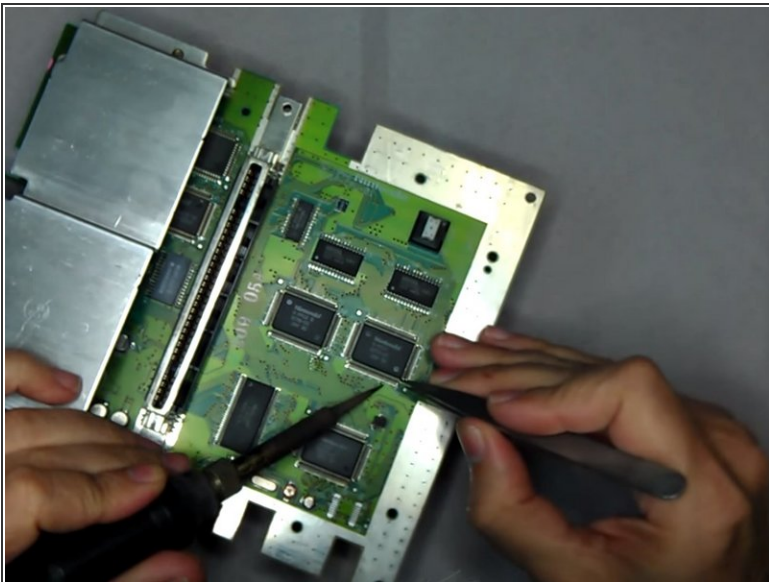
- Remove the Lock Out chip (use the solder gun)
- ☞ After removing the lock out chip there will probably be leftover of solder where the chip used to be so try to remove the solder as good as you can
- ⓘ To remove the solder leftover, you can use the soldering iron and solder wick.

## Step 8 — PPU 2



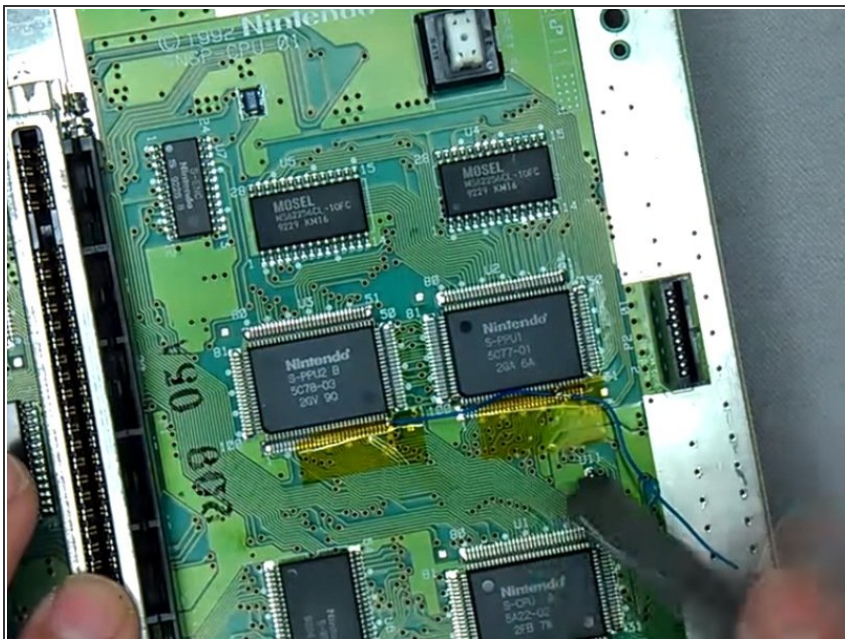
- Lift up the PPU2 Pin 30 from the Motherboard

## Step 9 — PPU 1



- Now lift up Pin 24 on PPU 1

## Step 10 — Wire Time



- Wire the lifted pins (PPU 2 Pin 30 & PPU1 Pin 24) together
- ❗ You need to use a Soldering Iron to wire the pins together
- ❗ You can also use tape to hold the wires down to the motherboard

## Step 11 — Program



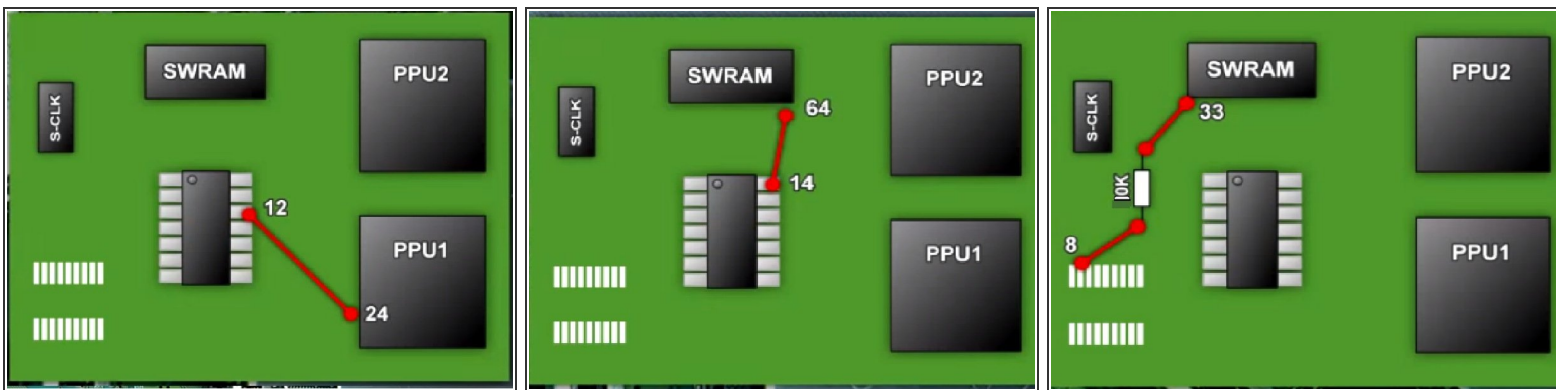
- Now you have to put the PIC16F630 Chip into the programmer and Flash the chip with the Super CIC File.
- File can be downloaded here:  
<http://sd2snes.de/files/supercic.zip>

## Step 12 — The Pins



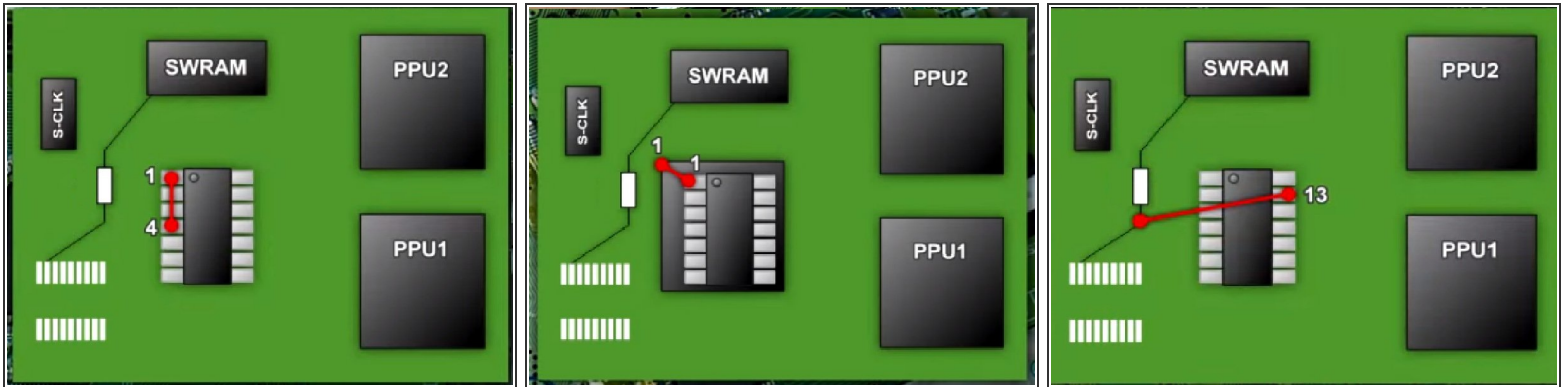
- Bend the pins outwards
- Then clip the pins
- Use double sided tape and put it on top of the CPU and put the Super CIC on top of the double sided tape.

## Step 13 — The Wires



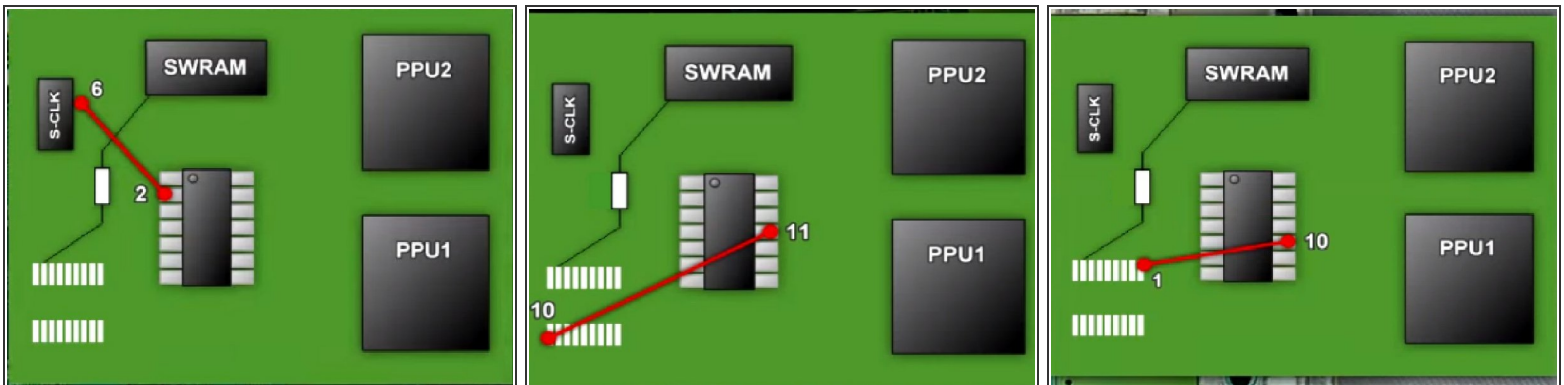
- Pic 1: Solder a wire from Super CIC Pin 12 to PPU1 Pin 24
- Pic 2: Solder a wire from Super CIC Pin 14 to SWRAM Pin 64
- Pic 3: Solder the 10k Ohm Resistor to the pin 8 (where the old CIC used to be) and to SWRAM Pin 33

## Step 14 — The Wires Part 2



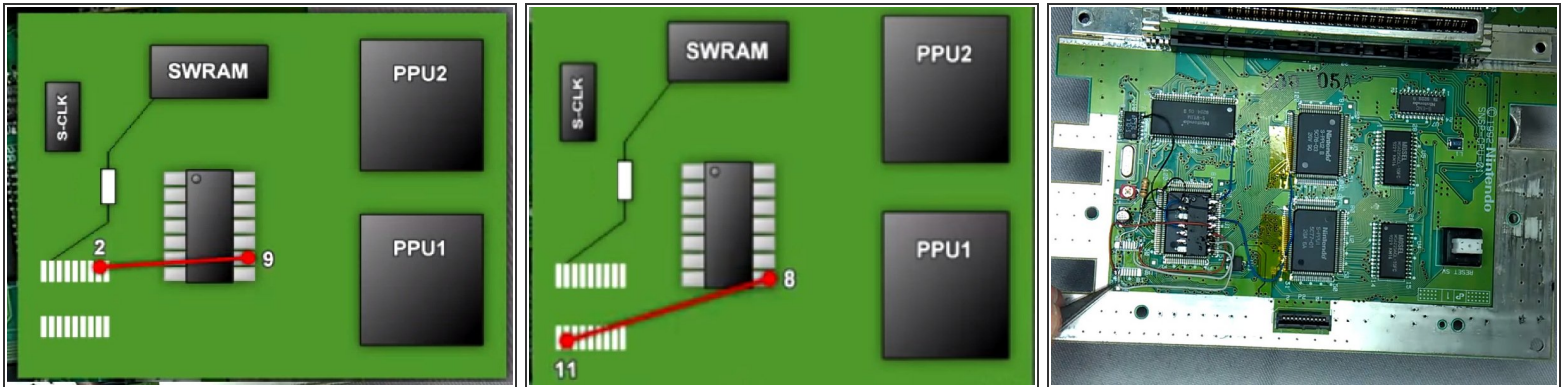
- Pic 1: Solder a Wire from Super CIC Pin 1 to 4 on the same chip.
- Pic 2: Solder a wire from Super CIC Pin 1 to the CPU Pin 1
- Pic 3: Solder a wire from Super CIC Pin 13 to the End Point of the Resistor

## Step 15 — The Wires Part 3



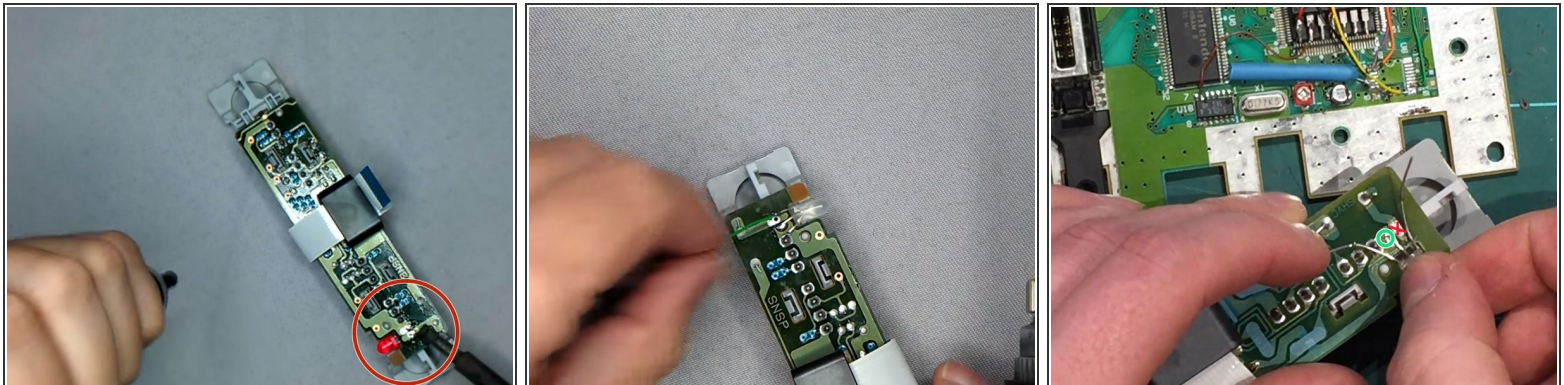
- Pic 1: Solder a wire from Super CIC Pin 2 to S-CLK Pin 6
- Pic 2: Solder a wire from Super CIC Pin 11 to Old CIC Pin 10
- Pic 3: Solder a wire from Super CIC Pin 10 to Old CIC Pin 1

## Step 16 — The Wires Part 4



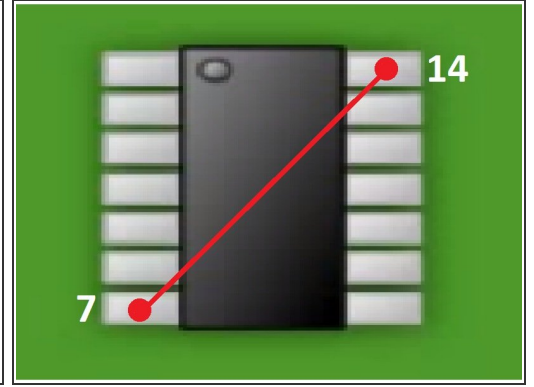
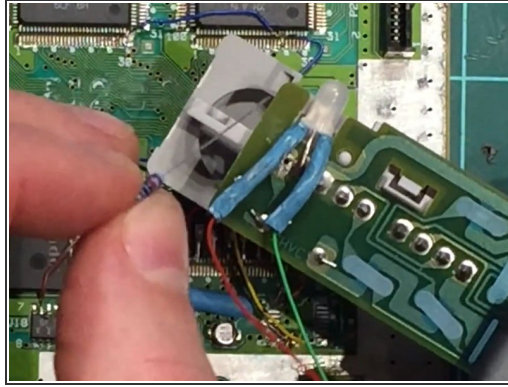
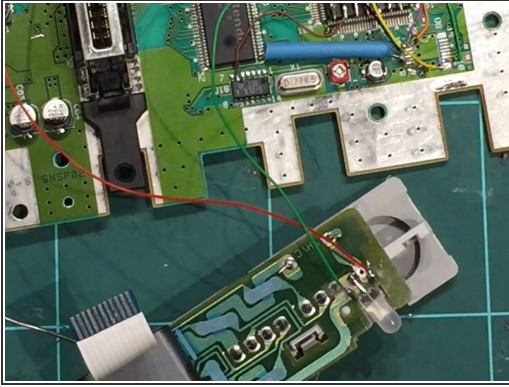
- Pic 1: Solder a wire from Super CIC Pin 9 to Old CIC Pin 2
- Pic 2: Solder a wire from Super CIC Pin 8 to Old CIC Pin 11
- Pic 3: You've soldered most of the wires now, lets go to the LED Mod

## Step 17 — The LED Mod



- Plug out the controller ports and solder out the LED Light.
- ⓘ When the solder points have been desoldered, you can use the tweezers to pull out the led light
- Solder on the new LED Light with the middle pin on the left solder hole
- ⚠ Do Not solder the middle pin on the LED Light to the right solder hole as it will then be stuck in only one color!

## Step 18 — Led Resistors



- Solder 2 wires on the left and right pins on the led light, green wire on the left pin and red wire on the right pin.
- After that you should put the wires into one heat shrink tube each, remember to heat the heat shrink tubes when its over the pins.
- Then you have to solder the 2k Resistor to the red wire and the 220 ohm Resistor to the green wire.
- Then the last thing you need to do is to solder a wire from Super CIC Pin 7 to Pin 14.

## Step 19 — The End



- You're Now Done! You just need to put your Super Nintendo back together and then you have a Region Free Switchless Super Nintendo!
- Green Light (PAL)
- Red Light (NTSC) [For American and Japanese Games]
- Orange Light (Auto)

To reassemble your device, follow these instructions in reverse order.

These screenshots have been taken by 2 videoes, one from Global Garage and Chips y Bits on YouTube! I made this guide since its a little easier to read a guide with pictures like this instead of watching a 30 min video