



Reactivate USB Port after electrical overload

Both USB ports were dead after an electrical overload or shortage. SMC reset alone didn't help.

Reactivate one port by providing (the faulty one?) with +5V.

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INTRODUCTION

This is a description of a successful reactivation of dead USB ports on the mentioned MacBook model. Do this with care and only if you know what you are doing! Do it on your own risk!

TOOLS:

- desktop power supply (1)
- USB cable (1)
- FTDI programmer or other device where you can access the 5V and GND pins (1)
- Multimeter (1)

Step 1 — SMC reset and electrical checks



- Both USB ports of a MacBook were dead after a shortage or overload on a Ramps Board that was connected to the Mac via an Arduino Board.
- Normally Mac OS shows a message that tells you that the USB device got deactivated due to a power surge on that port. In this case the message wasn't displayed. It was later displayed after a reboot. Anyway both USB ports were instantly dead.
- Here and there in the internet people advise to perform a SMC reset. That was done but didn't help. But you should try the SMC reset first.
- Make yourself familiar with the pinout of your USB cable. Find the ground (GND) and measure with a multimeter if there is still an connection between both ground pins of the USB ports.
- Check that there is really no power between ground and the +5V pin of the USB cable.

Step 2 — Provide port with 5V from external power supply



- Double check that you have a proper working, good quality desktop power supply.
[https://en.wikipedia.org/wiki/Power_supply...](https://en.wikipedia.org/wiki/Power_supply)
- Set it to +5V DC and double and triple check the power and the polarity with a multimeter.
- Connect ground of the USB port with ground of the external desktop power supply.
- Maybe you can use just a usb cable but I preferred to use a cable with a device. I used an FTDI breakout board from sparkfun because there the pins are relatively good accessible.
- Supply the USB device (I suppose on the port that caused the problem) with 5V from the desktop power supply on the 5V pin of the USB plug.
- The LEDs on the FTDI light up and it is recognized by the Mac.
- For whatever reason the second USB port got reactivated, too. It works without the need to provide the connected USB device with external power.