

## USB tester

by [brunoip](#) on June 15, 2010

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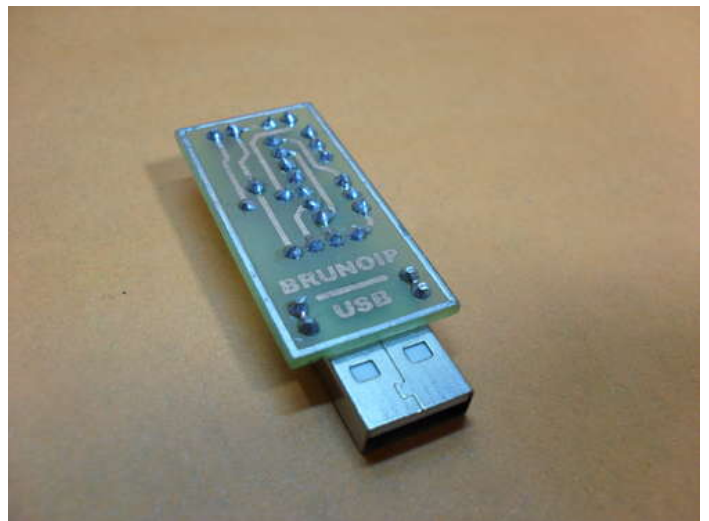
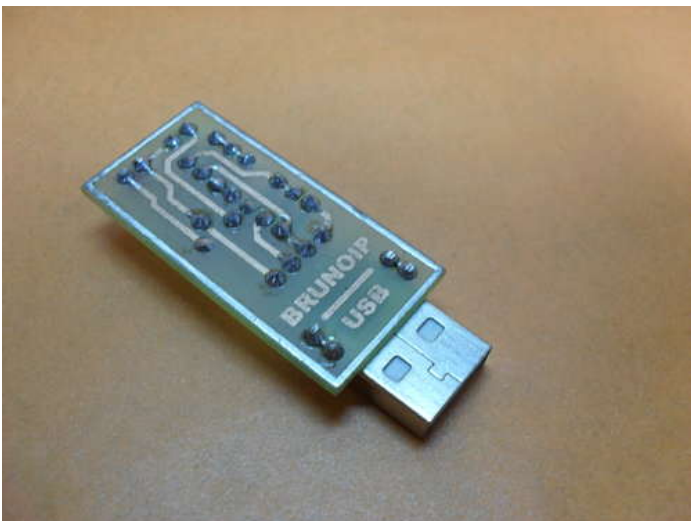
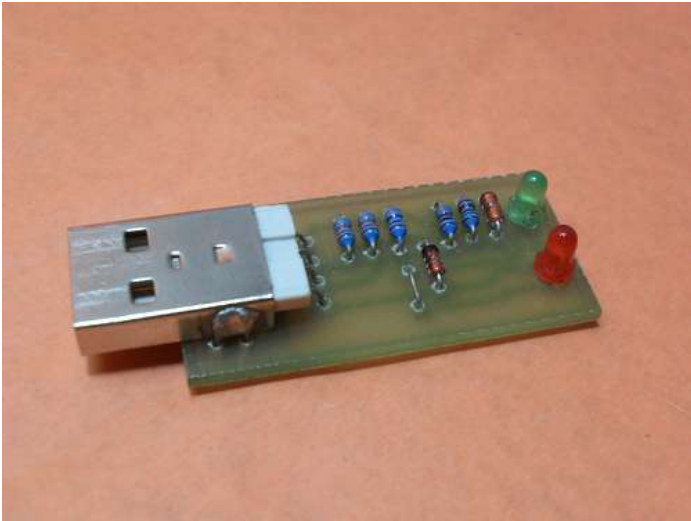


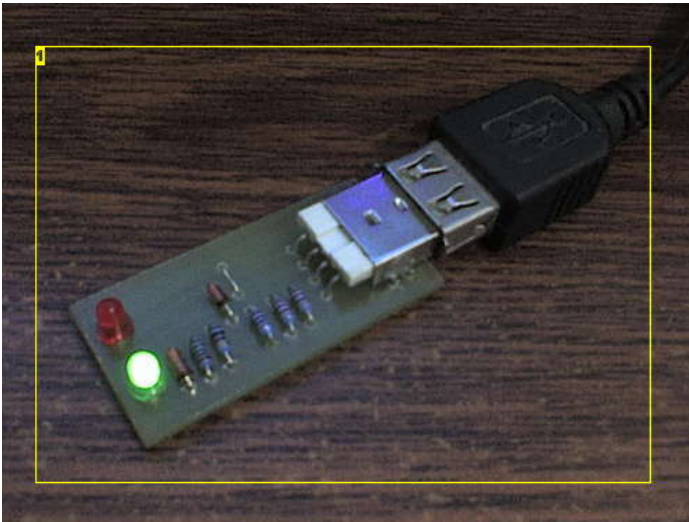
Author:brunoip Bruno Games  
Robots and video games...

## Intro: USB tester

This simple device allows you to check the correct working of the USB ports of any computer, using a green led and message from your operative system. It will allow you to test the proper assembly of any port without risking any expensive device. If you normally work fixing computers this is a must in your tool kit.

*Ps: I'm from Argentina so let me know any grammar mistake*





#### Image Notes

1. This USB port works fine.



#### Image Notes

1. This is the message of the operating system. Basically says it detected a device connected but has not been recognized.

### Step 1: The circuit

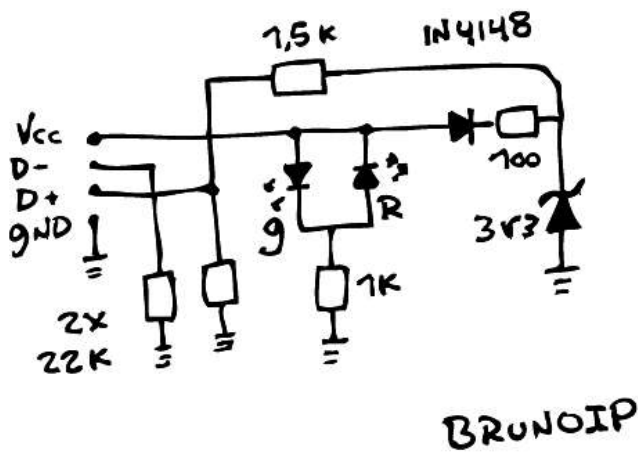
The circuit is very simple using only some discrete components.

The operation is simple, you connect it to the USB port, if it's okay, the green LED is lit in all its intensity and you will have a message from your operative system telling you that a USB device has been detected. If the polarity is reversed the red LED is lit in all its intensity. Any other combination causes lit one of the two LED but very dim.

#### You will need:

The PCB (see step 2)  
 The USB connector (see step 3)  
 Two 22K resistors  
 One 1k resistor  
 One 100 ohm resistor  
 One 1.5 k resistor  
 One 3v3 zener diode  
 One 1N4148 diode  
 Two leds (green and red)

The diagram was extracted from this forum (in Spanish): <http://www.ucontrol.com.ar/forosmf/proyectos-en-general/probador-usb/>





## Step 2: The board

The PCB is very small and simple.  
I made it using the method of ironing.  
PDF file annexed contains the design ready for printing.

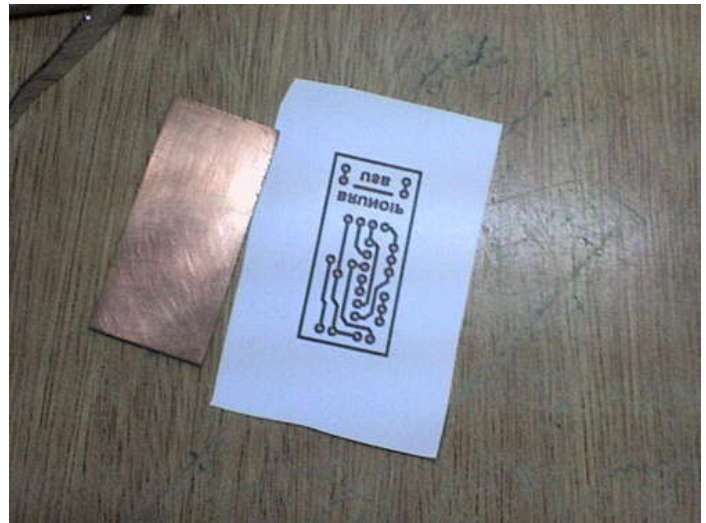
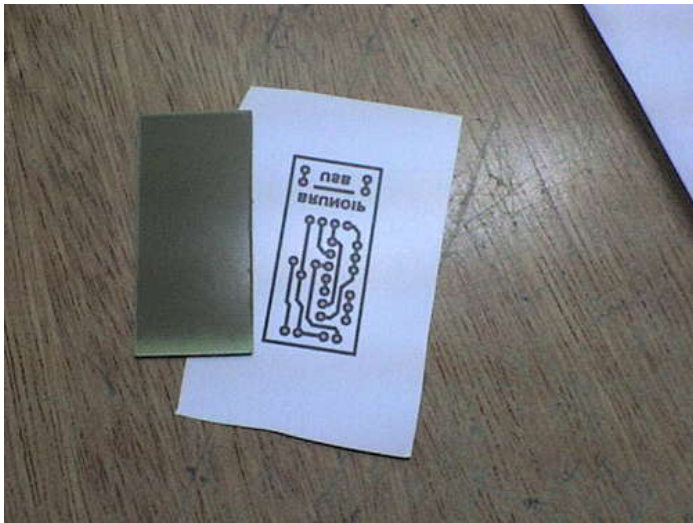
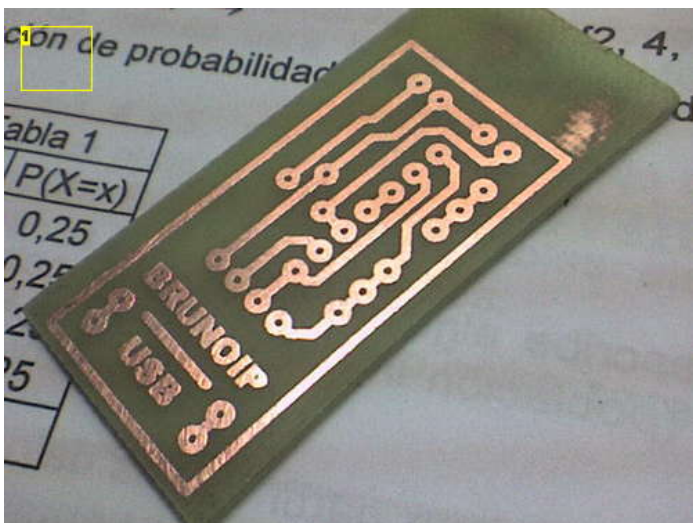


Image Notes  
1. Almost done



Image Notes  
1. The toner needs to be removed



## Image Notes

1. You just have to cut the excess

## File Downloads



usb.pdf ((595x841) 14 KB)

[NOTE: When saving, if you see .tmp as the file ext, rename it to 'usb.pdf']

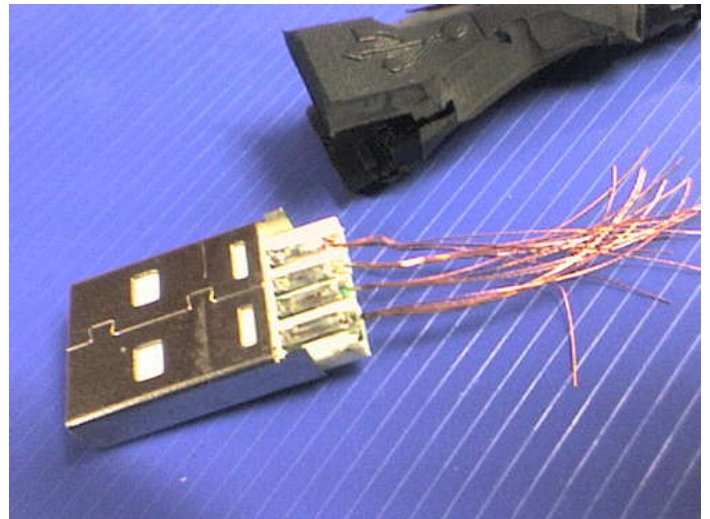
### Step 3: The connector

This project seeks to be economical so you're not going to buy a connector. We will recycle a cable that does not work.

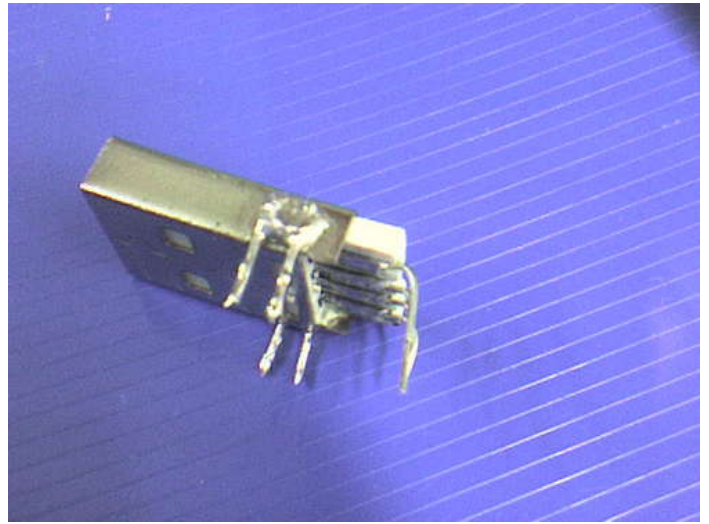
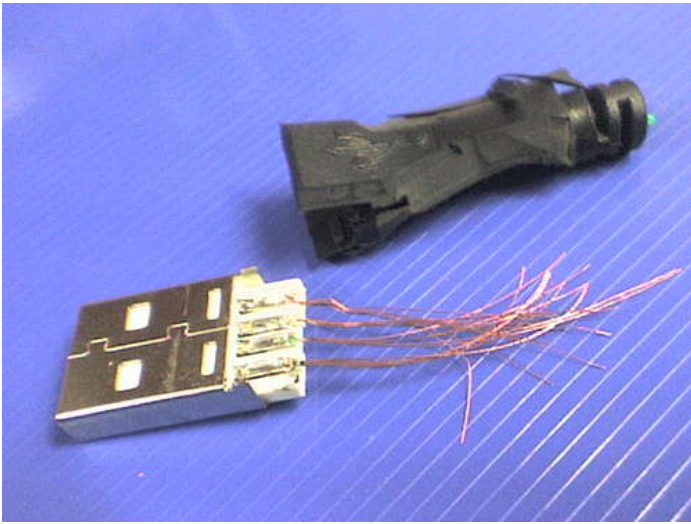
First we remove the plastic guard with a knife.

Then remove the remains of cable and solder it new terminals.

Finally I soldered two terminals to the metallic body to keep it firmly attached to the PCB:







#### Step 4: Soldering components

The components are easy to weld.  
Try not to overheat the diodes and not allow shorts in the PCB.  
Use the second image as an assembly guide.

