

You are here: [DD-WRT Wiki Hauptseite](#) / [LaFonera](#) / [Hardware](#) / [Replace LEDs](#)

[english](#) [deutsch](#) [français](#)

## Contents

- [1 Austausch der grünen LEDs](#)
- [2 Preparation](#)
- [3 Step by Step guide](#)
  - ◆ [3.1 The original green LEDs](#)
  - ◆ [3.2 Removing these unwanted things](#)
  - ◆ [3.3 Soldering the new \(very ingenious, hot, blue\) LEDs](#)
- [4 Advanced possibilities / hot working tips](#)
  - ◆ [4.1 Colours of the LEDs](#)
  - ◆ [4.2 Soldering tip with heavy soldering iron](#)

## Austausch der grünen LEDs

**Heute lernst Du wie Du die grünen LEDs Deiner LaFonera mit andersfarbigen austauschen kannst**

As nearly everything (except my girlfriend) in my environment (my car, my PC, my speakers) has blue coloured LEDs, I decided to change the colour of the LaFonera Status LEDs, too.

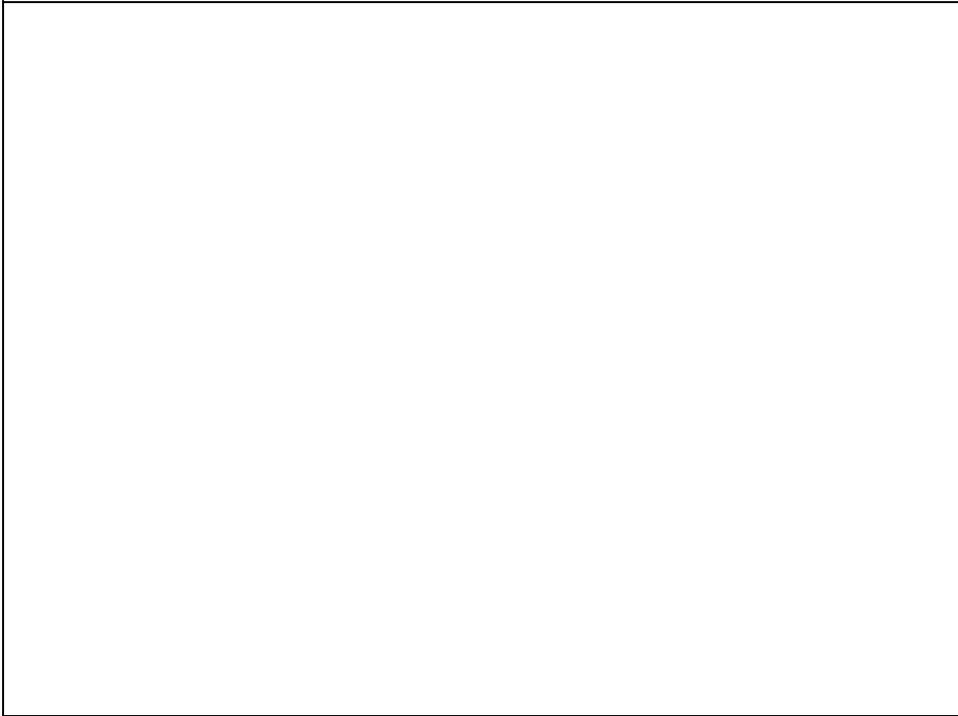
I think it is very simple to do this modification - if you have some soldering skills.

## Preparation

Before you start you have to organize some things:

- 3 new LEDs (original 2,2V / but 3,3V are working, too)
- electric soldering iron (with very small tip)
- tin-solder (take the finest you can get)
- forceps
- small trimming knife
- one hour of your free time (if you do this modification carefully - and you really should take enough time)

### Your working materials



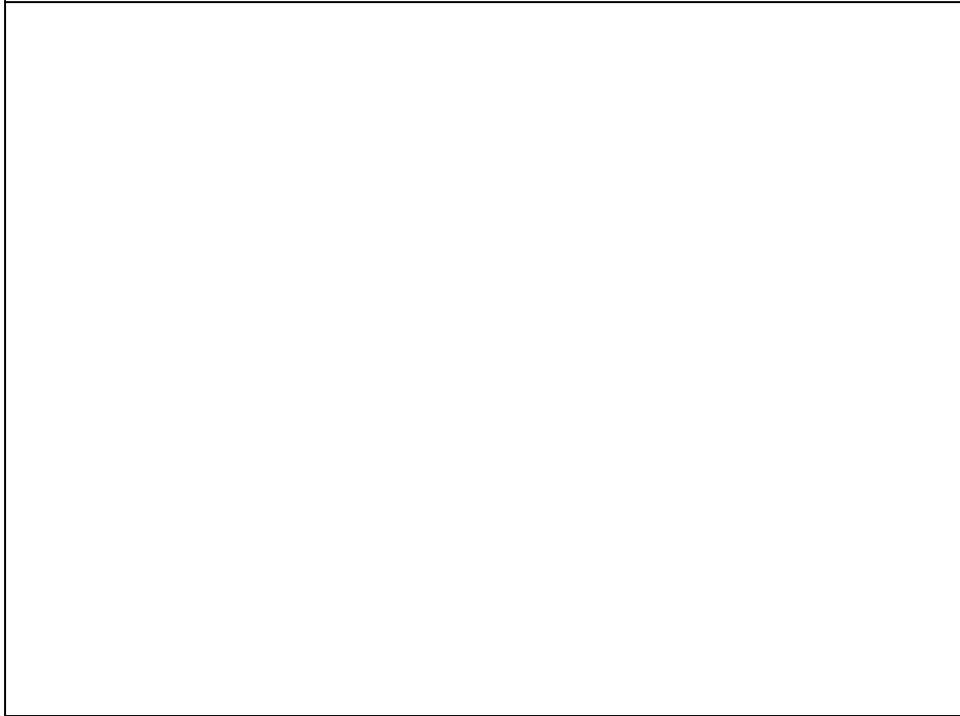
[view in high resolution](#)

## **Step by Step guide**

### **The original green LEDs**

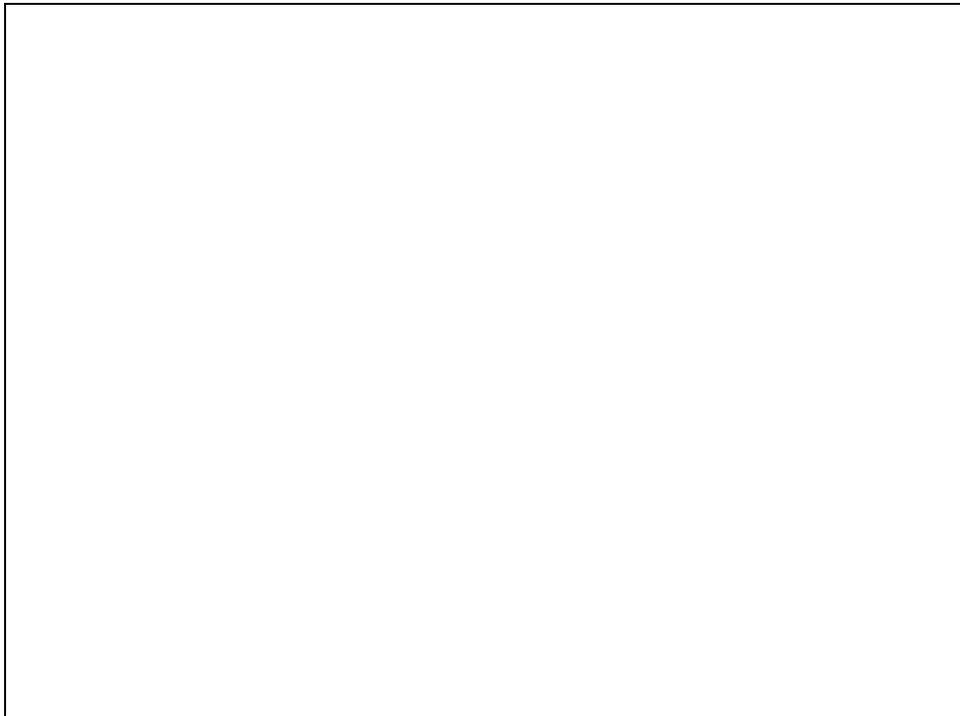
Here is your workspace. You will be working on this side of the LaFonera's PCB for the next hour.

**The original green LEDs - off**



[view in high resolution](#)

**The original green LEDs - on**



[view in high resolution](#)

## Removing these unwanted things

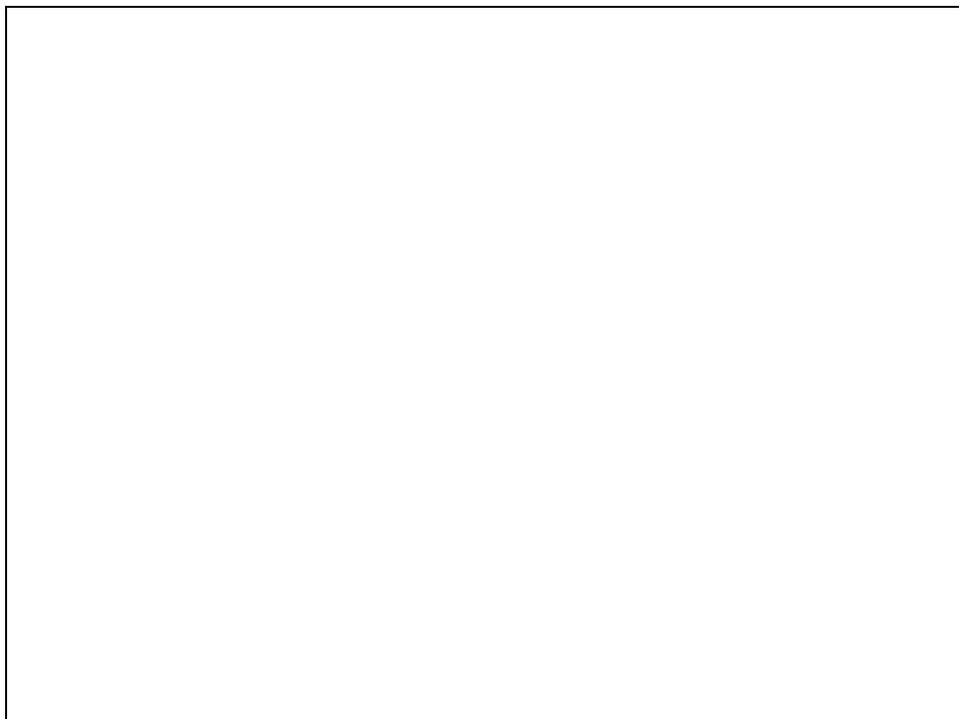
First you have to desolder the old LEDs. Be careful not to destroy the fine tracks on the PCB.

- Lay your knife under the first LED and warm up one side of it so you can *gently* press this side of the LED away from the PCB (don't use too much force, or you'll break the pad completely off the PCB).  
**Tip:** It usually helps if you melt a tiny bit of new solder onto the pad when you start (the flux in the new solder will help the old solder on the pad to liquidize).
- Then take your forceps to remove the LED after you warmed up the other side.
- Take your soldering iron again to flatten the solder on the PCB pads. This is important if you want to place the new LED in a plane position. **Tip:** You can use a junk piece of electrical wire (*not* solid, single core, though) as solder wick to suck up the excess solder from the pad. Braided copper wire (often sold as "bell wire") works best for this.

Repeat these steps two more times!

**now your Fonera is without any lights**

**Original green LEDs removed**



[view in high resolution](#)

## Soldering the new (very ingenious, hot, blue) LEDs

Before you start please note the position of the plus pole of the old LEDs. It is on the right side of them (if you have all three LEDs to your body - LAN and AC connection away from your body). All LEDs have a small

point, line or a cut edge at the side of the plus-pole.

You can also test the new LEDs before you solder them. Just take them with your forceps onto the newly clean connections for the LEDs. Now you know in which direction you have to solder them (maybe you did before - but now you are sure).

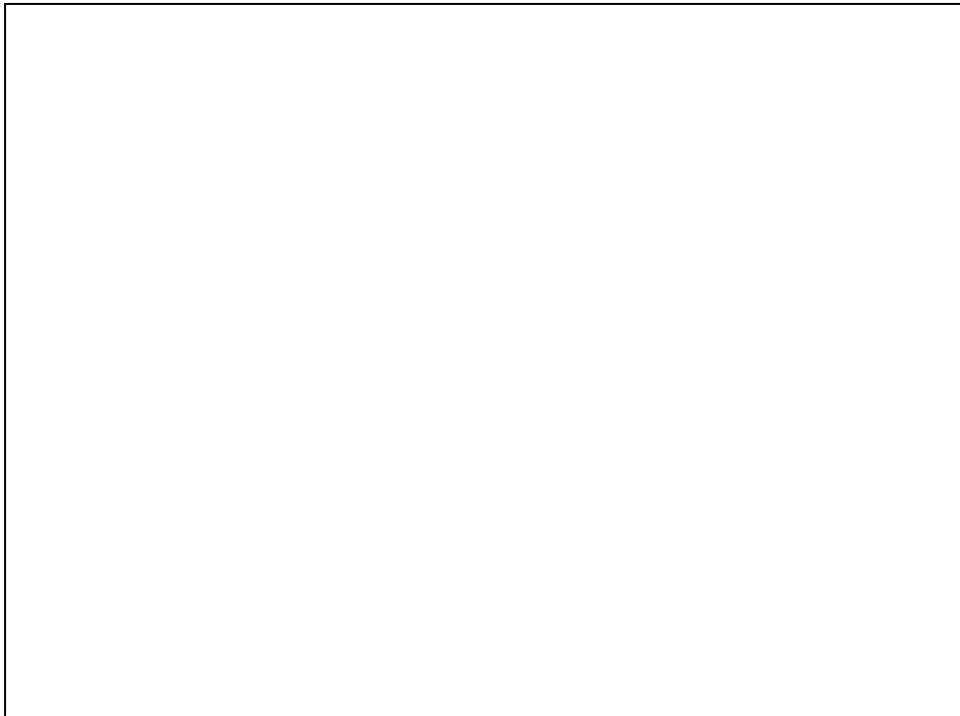
- Place the first LED carefully on the PCB in the middle of this little white frame printed on the PCB.
- warm up your soldering iron and heat one side of the LED carefully (there are very small items near the LEDs - so be careful!)

**at this time you can relocate the new LED, so it is in the right position**

- Now heat up the other side of the LED shortly. The tin on the pcb and some more tin on your soldering iron should be enough to fix it strongly.

That's it. You have soldered your first new LED on your LaFonera. Repeat these three steps and you only have to clean up your workspace before you have finished your work.

**The new blue LEDs - off**



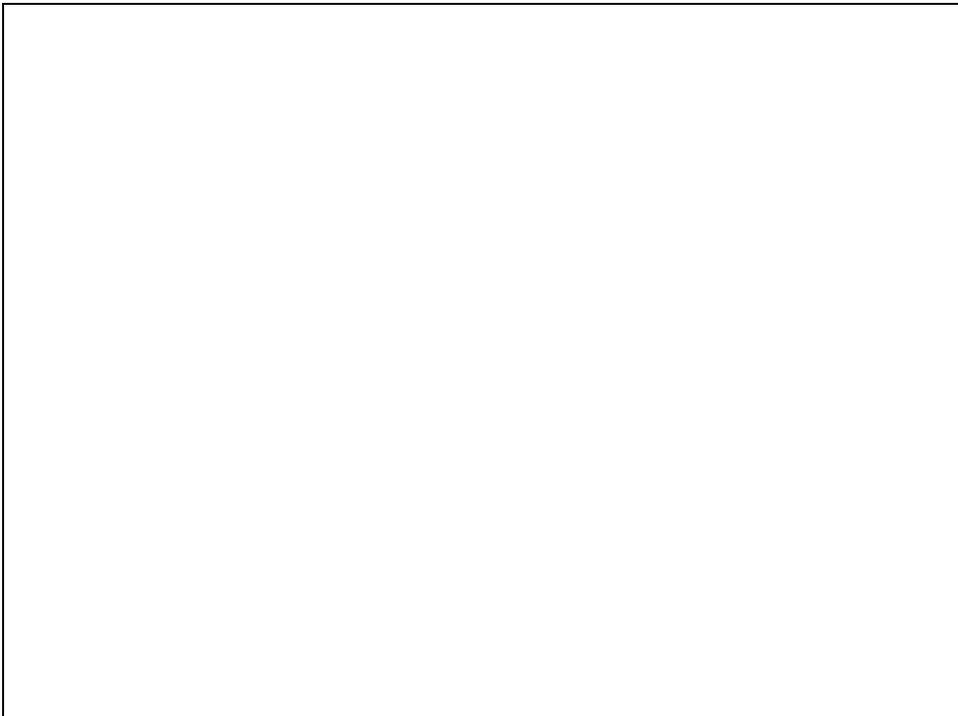
[view in high resolution](#)

**The new blue LEDs - on**



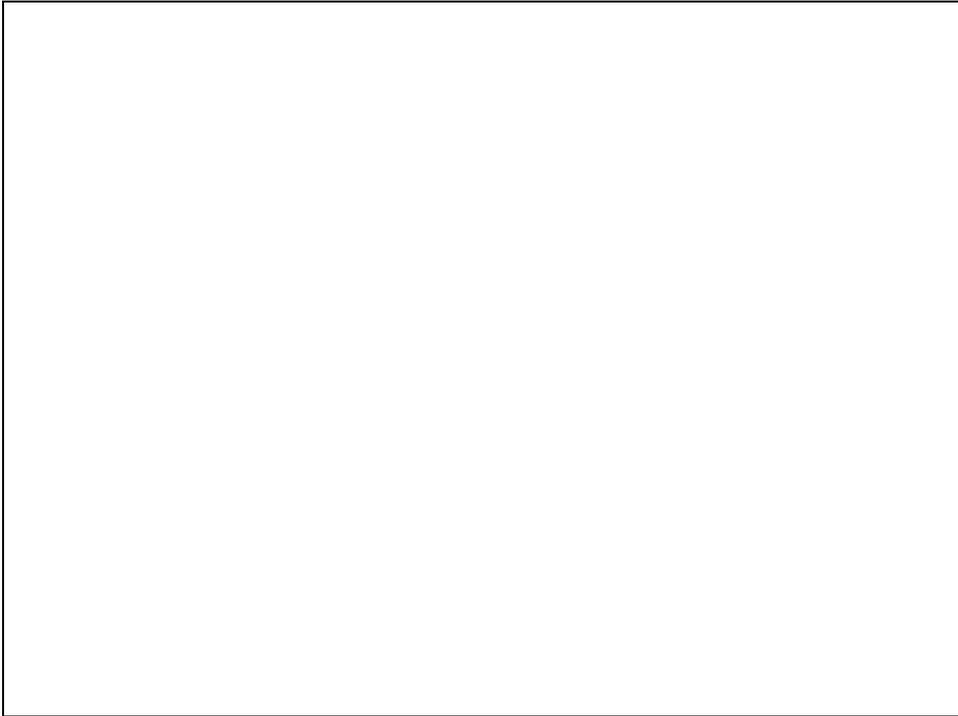
[view in high resolution](#)

**Outside - detail of the LEDs**



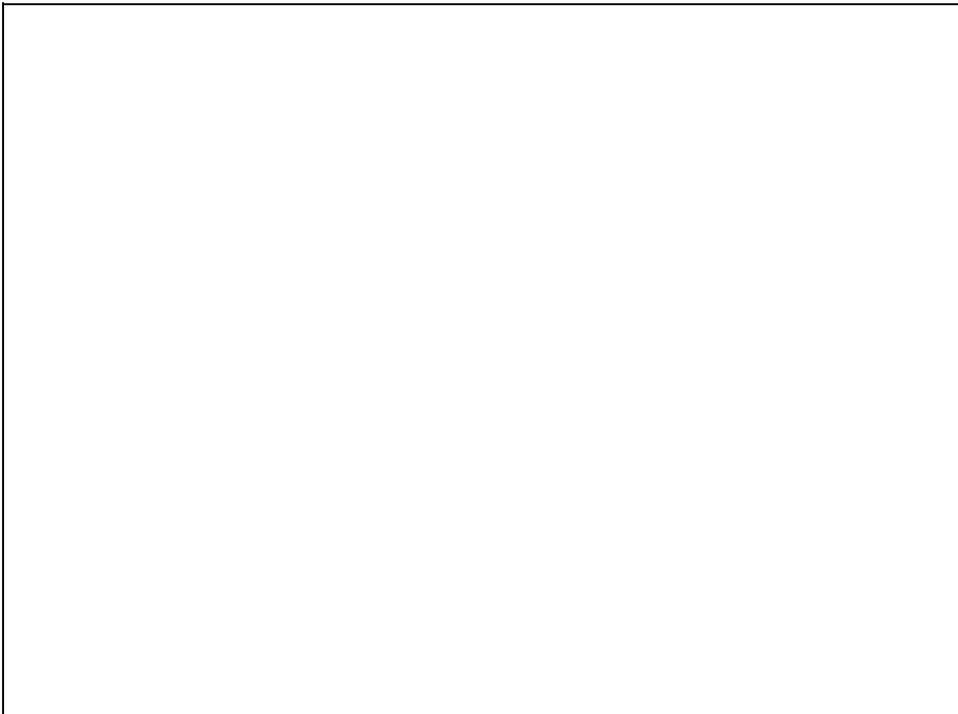
[view in high resolution](#)

**Inside - complete PCB**



[view in high resolution](#)

**Outside view of the finished work**



[view in high resolution](#)

## Advanced possibilities / hot working tips

### Colours of the LEDs

You can use different colours of new LEDs, maybe

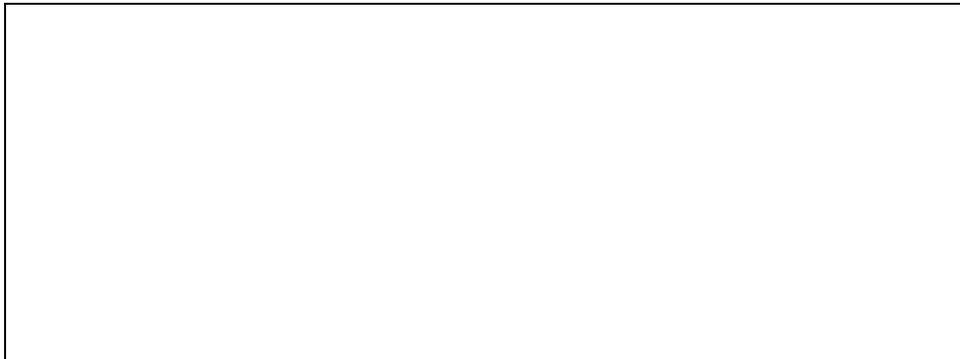
yellow - red - blue

or just use one colour for all three LEDs. It's on you!

### Soldering tip with heavy soldering iron

If your soldering iron is too big for the very small SMD-LEDs you can attach a paperclip on it. This gives you the possibility to work much more precisely with these small items. If you add some tin between the connection of soldering iron and paperclip the heat will be much better carried forward. Make sure to attach it strongly enough so that it won't get lost. Maybe you have to test which paperclip works best for you, because they are made of some different materials.

Attach a paperclip on your soldering iron



[view in high resolution](#)

this page was made by [wildblue!](#)