



## Wireless Tally Light - DIY with ESP8266



RickPWR

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### Summary

Model of a DIY wifi tally lights, compatible with open source project VTally.

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[tally](#) [atem](#) [switcher](#) [vtally](#)

Hi there !

This is a tally light model designed by my own, the goal was to give each camera operator an indication if he is on air, or in preview by the control room.

This is a project I made for my video production association "La Calebasse", hence the engraving.

The software is based on an Open source project <https://wifi-tally.github.io/>

What you need :

- 3D printed :
  - 1 x " 1-Front\_Case"
  - 1 x "7-Back\_case"
  - 1 x "12-LED 3D printed BACK"

- 1 x “ 11-LED 3D printed diffuser”
- 2 x “4-Led\_sheet”
- 2 x “ ESP Spacers”
- 4 x “Internal clamp Spacers”
- Buy separately :
  - 4 x M3x30
  - 4 x M3 nuts
  - 1 GO-Pro to cold shoe mount (we found a pack of 5 for 20\$)
  - 8 x 4 led strip of WS2812B white with 100led/meter

You will also need a wifi modem with an instance of Vtally Hub running (see the link above). You can for example use a Raspberry Pi linked by RJ45 to a wifi modem, which is also connected to a Black Magic switcher.

You can build as many tally light as you want and connect them to the same wifi. You can also connect you phone and use it as a tally light indicator.

According to the GitHub page, here are the compatible switcher :

- **Blackmagic Design ATEM**
- **OBS Studio**
- **Roland V-8HD, Roland V-60HD**, and maybe others
- **vMix**

This model is build around a ESP8266 Module, designed to be mounted vertically on a cold-shoe. I decided not to 3D print a cold shoe mount because it would be far to fragile to hold any shock. This is why I prefer using a Go-pro style mount and a metal off-the-shelf GO-Pro to cold shoe mount.

This design does not include any internal battery option, because we considered that a USB power supply is far more reliable and easy to find in the video production field. To provide as much current as possible to the LED strip, we used the VIN pinout of our ESP modules, which is directly connected to the 5V output of the micro USB plug.

The LEDs are diffused using a 3D printed cover in white, I used matte white with the ironing feature of Cura enabled to smooth out imperfections.

Feel free to ask questions if something isn't clear !

# Model files



**esp-tally-light-2-1-front\_case.stl**

📄 x1 Black



**esp-tally-light-2-7-back\_case.stl**

📄 x1 Black



**esp-tally-light-2-12-led-3d-printed-back.stl**

📄 x1 White with ironing setting enabled, with supports



**esp-tally-light-2-11-led-3d-printed-diffuser.stl**

📄 x1 White with ironing setting enabled, with supports



**esp-tally-light-2-4-led\_sheet.stl**

📄 x2



**m3-spacers-esp-spacers.stl**

📄 x2



**m3-spacers-internal-clamp-spacers.stl**

📄 x4

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