Sheet: ADC-logic

output

File: ADC-logic.sch

ADC

Sheet: ESP8266

ADC

Switch2

GPIO16

Sheet: RF433Hz-Receiver

output

File: RF433Hz-Receiver.sch

RF433Mhz

GPIO14

Switch1

GPIO12

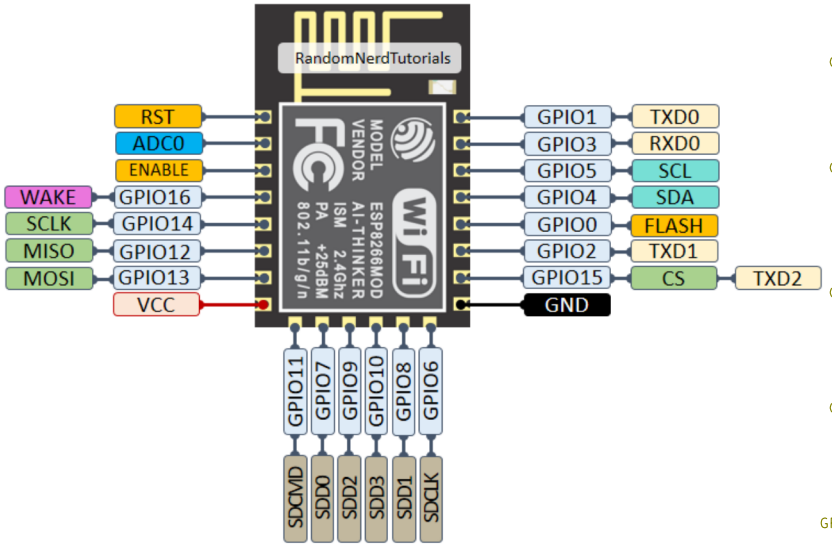
Relay1

GPIO13

Extra1

GPIO10

Maybe button footprint fix



(TX Led)

GPIO1

TX

(RX Led)

GPIO3

RX

GPIO5

L-SDL

GPIO4

L-SDA

GPIO0

Flash Button

GPIO2

Extra2

GPIO15

Relay2

File: ESP8266.sch

Sheet: Relay1

Relay1

Control_pin

File: Relay1.sch

Sheet: Relay2

Relay2

Control_pin

File: Relay2.sch

Sheet: Reed Switches

Switch1

out1

Switch2

out2

File: Reed Switches.sch

+3V3

Extra1

1

2

3

J101

GND

+3V3

Extra2

1

2

3

J103

GND

External RTC module

+3V3

1

2

L-SDL

L-SDA

3

4

5

6

J102

RTC

GND

HC06

TX

RX

GND

1

2

3

4

J104

UART

+3V3

Sheet: Power

USB or 7-12V DC Input circuit

File: Power.sch

Remote Relay Switches

https://github.com/Grehasopt/Electra

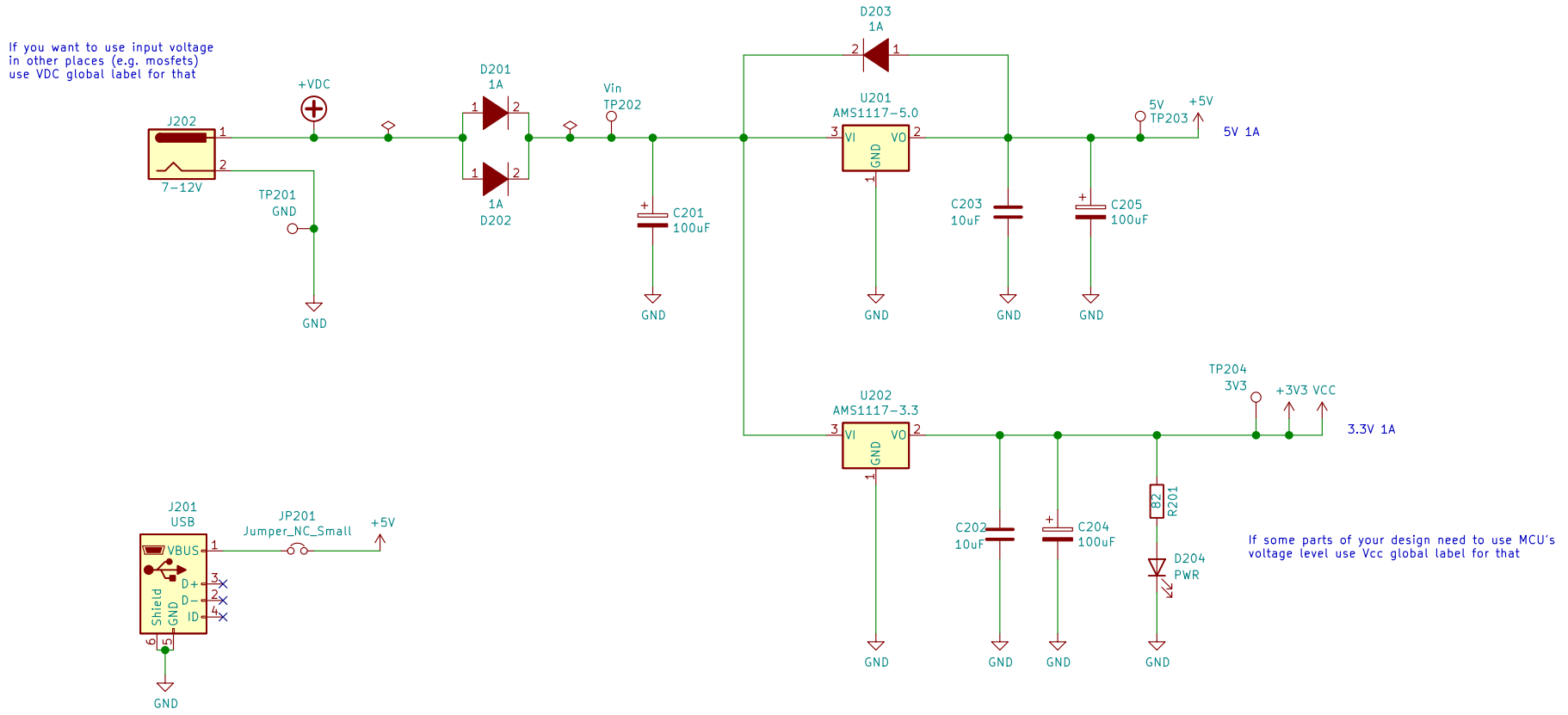
Grehasopt

Sheet: /

File: Electra.sch

Title: Electra Project

Size: A4	Date: 2021-04-01	**Rev: 2.0**
KiCad E.D.A. kicad 5.1.9-73d0e3b20d88ubuntu18.04.1		Id: 1/8



Remote Relay Switches
https://github.com/Grehasopt/Electra
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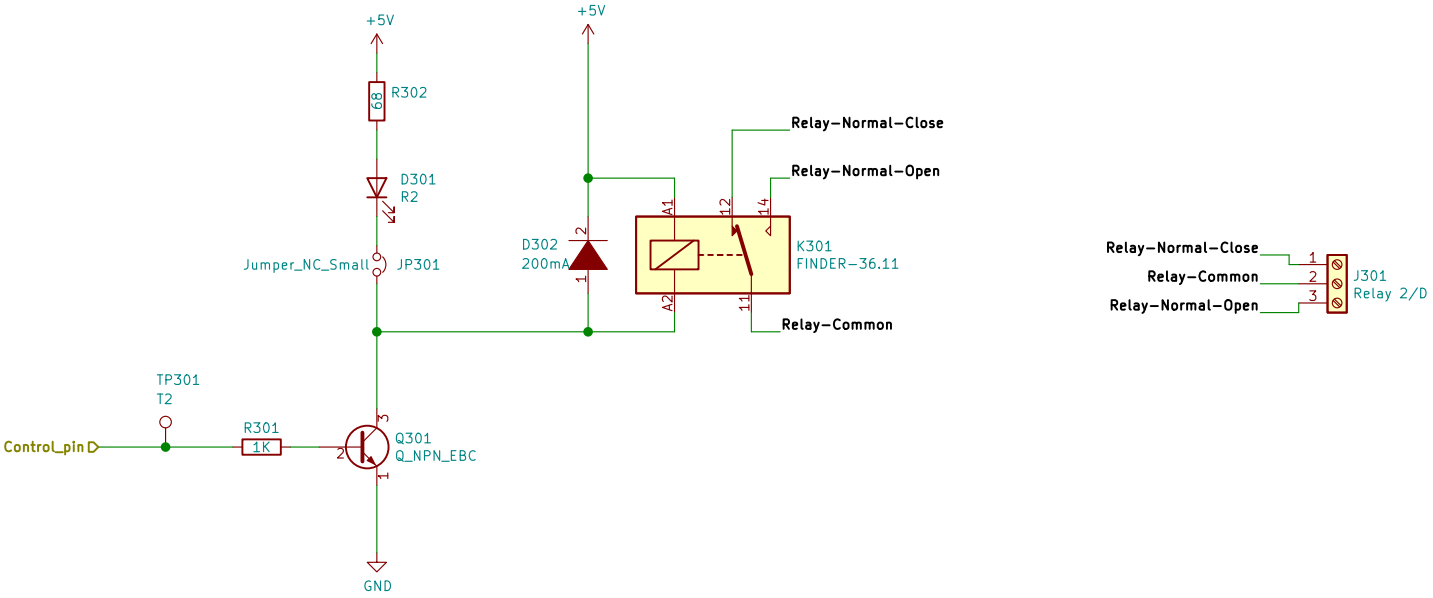
Sheet: /Power/
File: Power.sch

Title: Electra Project

Size: A4	Date: 2021-04-01	**Rev: 2.0**
KiCad E.D.A.	kicad 5.1.9-73d0e3b20d88ubuntu18.04.1	Id: 2/8



Remote Relay Switches
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Sheet: /Relay2/
File: Relay2.sch

Title: Electra Project

Size: A4	Date: 2021-04-01	**Rev: 2.0**
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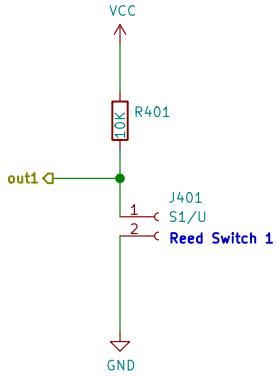

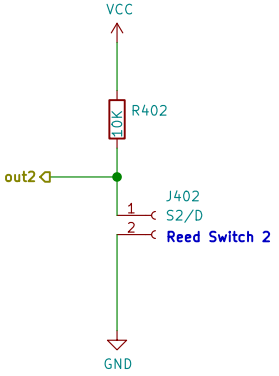

Remote Relay Switches
https://github.com/Grehasopt/Electra
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Sheet: /Reed Switches/
File: Reed Switches.sch

Title: Electra Project

Size: A4	Date: 2021-04-01	**Rev: 2.0**
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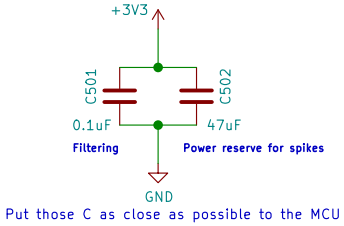
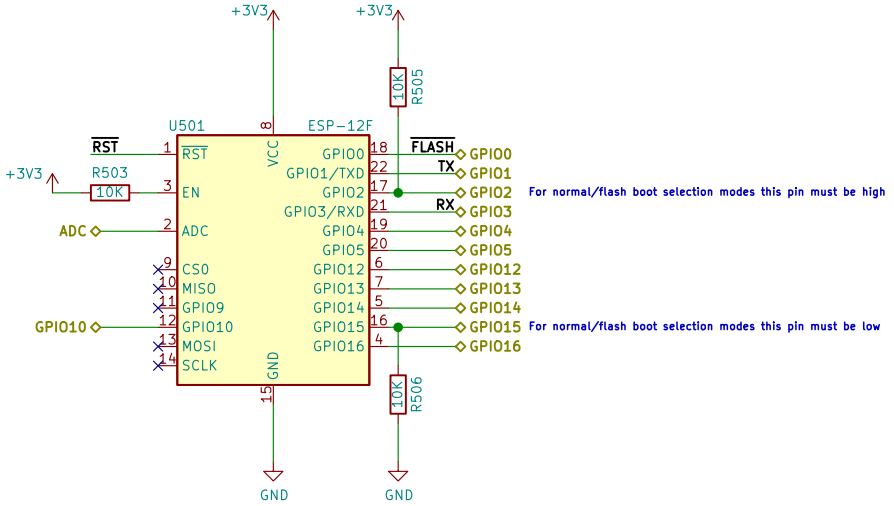
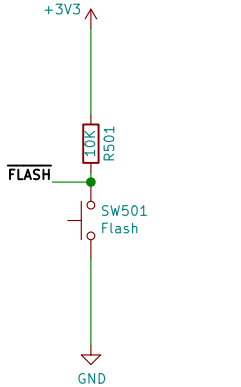
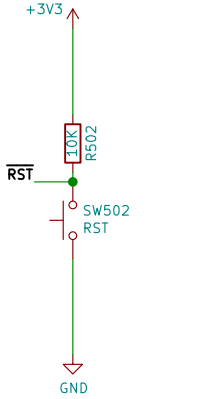


Put those C as close as possible to the MCU

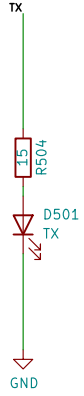


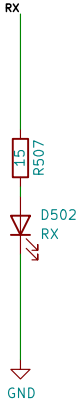


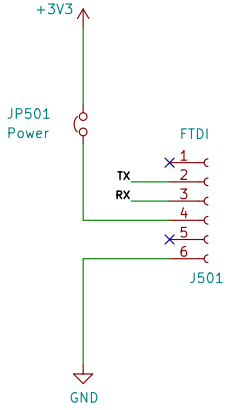
Pull-Up Flash pin with button
For flashing this pin must be low



Pull-Up Flash pin with button
Reset is Active low







ESP8266 "Bare minimum" connection for booting and flashing (resistors, buttons and ftdi connection pins included)

Remote Relay Switches

https://github.com/Grehasopt/Electra

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Sheet: /ESP8266/

File: ESP8266.sch

Title: Electra Project

Size: A4	Date: 2021-04-01	**Rev: 2.0**
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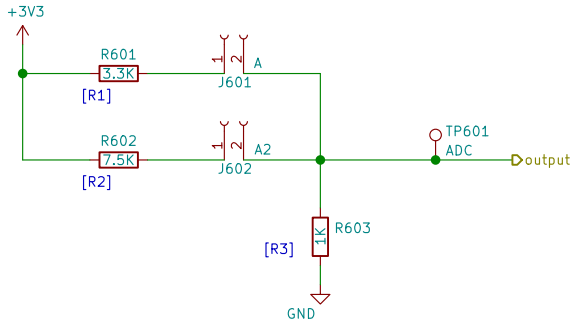

* Condition A (Pressed Button 1): Say R1/R3=n1 => Vo1 = 3.3/(n1+1)
* Condition B (Pressed Button 2): Say R2/R3=n2 => Vo2 = 3.3/(n2+1)

* Condition C (Both buttons pressed! Vo MUST be less than 1V!):
So .. if K=(n1*n2)/(n1+n2) [parallel connection] then:
Vo = 3.3/(K+1)

Based on that, for R3 = 1K, R1 = 7.5R3 and R2=3.3R3
Vo1 ~= 0.388V
Vo2 ~= 0.767V
Vo ~= 1.003V

Use ADC with voltage divider trick to add extra two input button. If you change values of these resistors you are able to still use it as an analog pin.

Remote Relay Switches
https://github.com/Grehasopt/Electra
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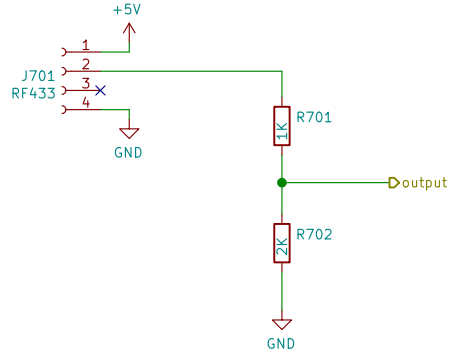
Sheet: /ADC-logic/
File: ADC-logic.sch

Title: Electra Project

Size: A4	Date: 2021-04-01	**Rev: 2.0**
KiCad E.D.A.	kicad 5.1.9-73d0e3b20d88ubuntu18.04.1	Id: 6/8

External RF433Mhz module header connection



Remote Relay Switches
https://github.com/Grehasopt/Electra
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Sheet: /RF433Hz-Receiver/
File: RF433Hz-Receiver.sch

Title: Electra Project

Size: A4	Date: 2021-04-01	**Rev: 2.0**
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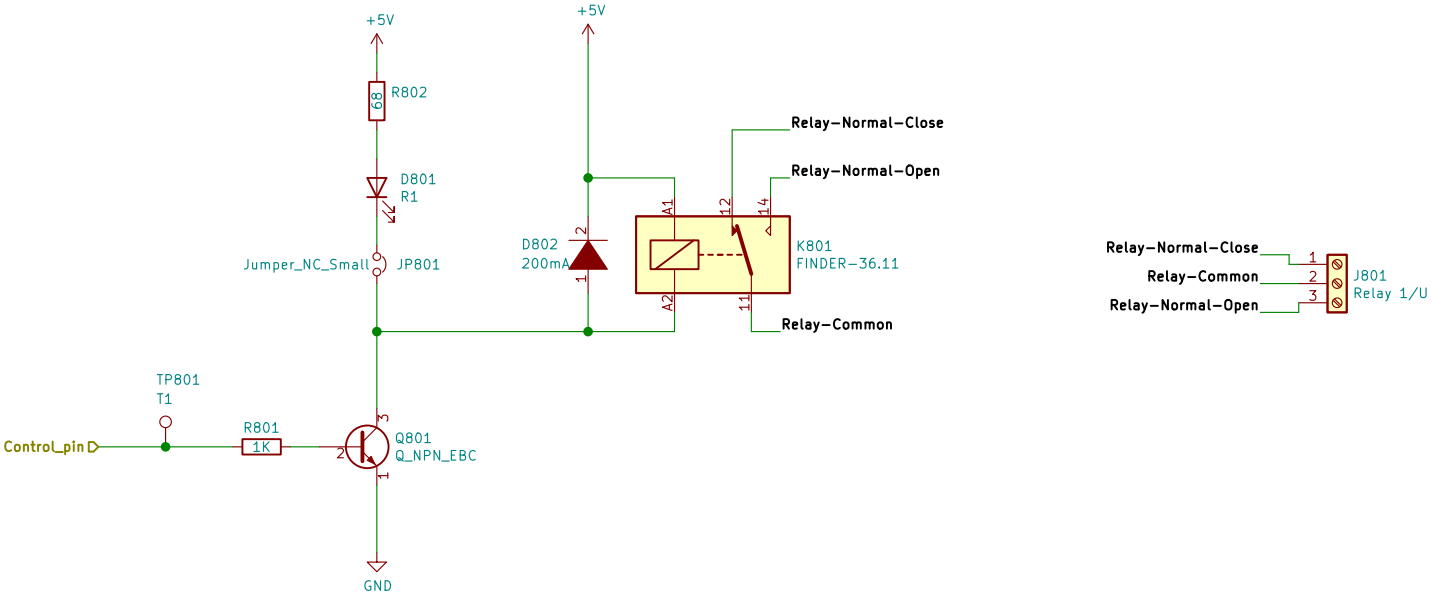

Remote Relay Switches
https://github.com/Grehasopt/Electra
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Sheet: /Relay1/
File: Relay1.sch

Title: Electra Project

Size: A4	Date: 2021-04-01	**Rev: 2.0**
KiCad E.D.A.	kicad 5.1.9-73d0e3b20d88ubuntu18.04.1	Id: 8/8