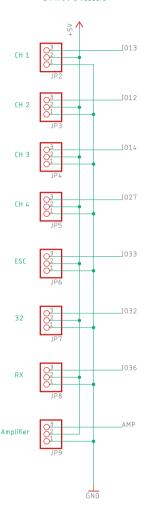
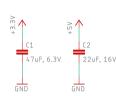
3 Pin I / O headers

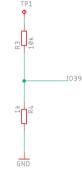


Optional filter capacitors



These capacitors are optional The controller will also work without them, but may be less stable

Optional battery monitor TP1



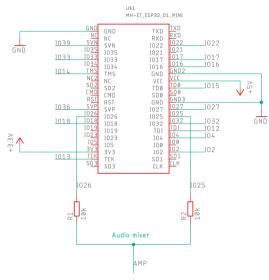
Resistors only required, if you want to measure the battery voltage, using "#define BATTERY_PROTECTION"

Note on the ESP32 D1 Mini boards

- There are many clones out there, which can have the following drawbacks:

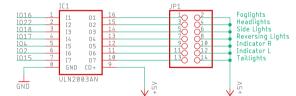
 The voltage regulator (the small 5 pin package) with "4BZK" marking is not working (boot issues), if voltage is above about 5.25V! Working replacements: MIC5205-3.3 "KB33", LP2985AIM5-3.3 "LORA"

 -Boards with this regulator are working (tested up to 6.5V supply voltage): "32VG"
- some boards come without USB port protection diode (on the top left side of the USB connector), just with a 0 0hm resistor (marked with "0"). This can damage your computer, if the controller is supplied with an ESC / BEC above 5V and connected to the USB port at the same time!!
- -The PCB thickness is not always the same, so 2 different housing versions are required



R1 & R2 resistors only required, if you want to connect an audio amplifier

Light outputs (comon positive) Always use series resistors according to: https://www.digikey.de/en/resources/conversion-calculators/conversion-calculator-led-series-resistor



- This controller does not have a reverse polarity protection
- Disconnect the battery before wiring anything
- Double check the wiring before re connecting the battery!



This controller is able to run the following software: https://github.com/TheDIYGuy999/Rc_Engine_Sound_ESP32 https://github.com/TheDIYGuy999/wirelessTrailerESP32web

Manuals and pre compiled software: https://thediyguy999.github.io/TheDIYGuy999_ESP32_Web_Flasher/flash.html

Besides every standard "crawler mode" ESC, it can also be used with this ESC: https://www.pcbway.com/project/shareproject/RZ7886_based_ESC_for_ESP32_Sound_and_Light_Controller_f8f4a805.html

TheDIYGuy999

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