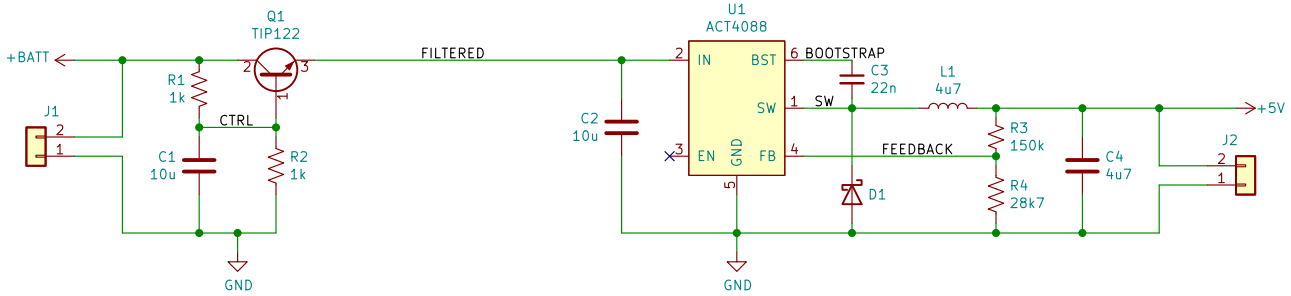

Ripple Rejection

Uses and emitter-follower to filter out unwanted ripple from power line. Cut off frequency is calculated simply:

*freq = 1 / 2*pi*C1*R1*beta*

TIP122 beta is >1000

R2 is only populated if ripple exceeds Vbe.
Vbe is 5V for TIP122

5V Regulator

5V 1A Buck Regulator. Used to power all control systems on the drone. Stepped down to 3V3 as needed locally within sub-systems

Although the schematic uses ACT4088 chips,
it can accomodate AP3211 chips BUT THEY MUST BE FLIPPED

H1
M3

Used to generate 5V at about 1A for drone control circuitry
Designed to remove noise from motor switching

Title: Ripple Rejecting Regulator		
Savo Bajic	Date: 2022-04-05	**Rev: 1.1**
KiCad E.D.A. kicad 6.0.1-79c1e3a40b-116-ubuntu21.04.1	Size: USLetter	Sheet: 1/1