Recovery Board Review 1 Notes

1. Add frames -> frames ->
2. Break schematic into separate sheets
   1. Power sub-schematic (power’s usually first one)
      1. Both SPS
   2. LiPo charger in a sub-schematic
      1. Group -> move from sheet to sheet using move command
   3. MicroController Sheet
      1. Group and move to new sheet from original
3. On an EAGLE sheet, good to use a frame, and start it at Origin (useful later with multiple sheets)
4. Put Umbilical connection on Power sheet
5. LiPo charger
   1. Battery charger is deciding whether to use the external power or 3S
6. Do not use internal pull up/down resistors for safety critical systems. Use external 10k ohm resistors to pull down externally for digital i/o.
7. Potentiometer from LA will go to an analog GPIO pin on the stm32f0.
8. Two different connectors
   1. One for Linear actuator
   2. One for DC motor
9. On DC motor have voltage divider take 5V into 3.3V to send into digital I/O on Stm32
10. Battery charger direct into battery positive terminal from umbilical
11. Read battery voltage using gpio line
12. Add a speaker to whine once low battery

ToDO

1. Connectors to use: plug-in connector 0.1 inch pin header OR 0.1 in connector
2. Steal the 3.3 SPS from OreSat
3. Replace the “+3.3V” with the 3.3V from the OreSat SPS
4. Remake the BPR-301 symbol to include an LED and PhotoTransistor
   1. You want a symbol that tells you what’s going on
   2. Copy the symbol on the datasheet. Resistances for the sensor: 10K for R\_L and diode 3.3-1.1/5mA = R\_D
5. Add N-Channel Mosfet to the ground and the gate
6. Find a low current battery charger chip BC.
7. CAN will be coming