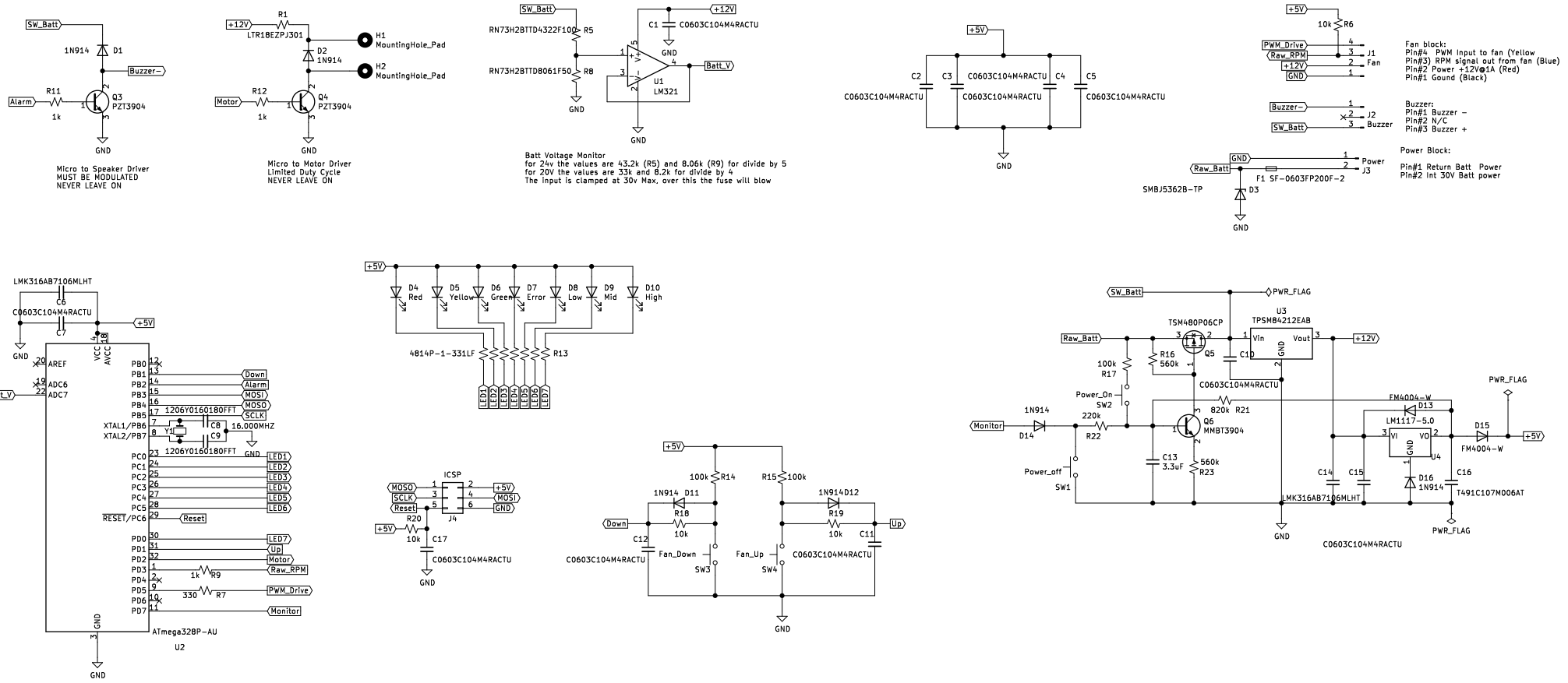
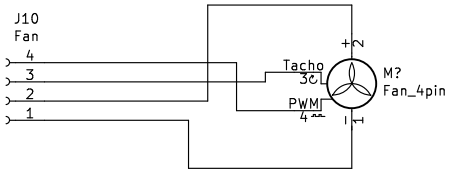
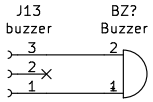
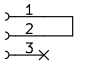
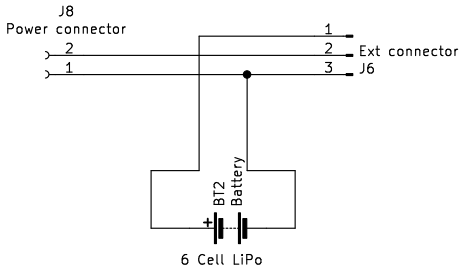
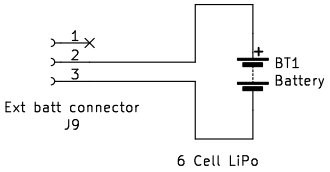

SW_Batt
1N914
D1
Buzzer-
Alarm
R11
1k
Q3
PZT3904
GND
Micro to Speaker Driver
MUST BE MODULATED
NEVER LEAVE ON
+12V
R1
LTR18EZPJ301
D2
1N914
H1
MountingHole_Pad
H2
MountingHole_Pad
Motor
R12
1k
Q4
PZT3904
GND
Micro to Motor Driver
Limited Duty Cycle
NEVER LEAVE ON
SW_Batt
RN73H2BTTD4322F100
R5
RN73H2BTTD8061F50
R8
GND
C1
C0603C104M4RACTU
+12V
GND
U1
LM321
Batt_V
GND
Batt Voltage Monitor
for 24v the values are 43.2k (R5) and 8.06k (R9) for divide by 5
for 20V the values are 33k and 8.2k for divide by 4
The input is clamped at 30v Max, over this the fuse will blow
+5V
C2
C3
C0603C104M4RACTU
C4
C5
C0603C104M4RACTU
C0603C104M4RACTU
C0603C104M4RACTU
GND
+5V
10k
R6
PWM_Drive
Raw_RPM
+12V
GND
J1
Fan
Fan block:
Pin#4 PWM input to fan (Yellow
Pin#3) RPM signal out from fan (Blue)
Pin#2 Power +12V@1A (Red)
Pin#1 Gound (Black)
Buzzer-
SW_Batt
J2
Buzzer
Buzzer:
Pin#1 Buzzer -
Pin#2 N/C
Pin#3 Buzzer +
GND
Raw_Batt
F1 SF-0603FP200F-2
J3
Power
Power Block:
Pin#1 Return Batt Power
Pin#2 Int 30V Batt power
SMBJ5362B-TP
D3
GND
LMK316AB7106MLHT
C6
C0603C104M4RACTU
C7
+5V
GND
VCC
AVCC
AREF
ADC6
ADC7
Batt_V
PB0
PB1
PB2
PB3
PB4
PB5
XTAL1/PB6
XTAL2/PB7
PC0
PC1
PC2
PC3
PC4
PC5
RESET/PC6
PD0
PD1
PD2
PD3
PD4
PD5
PD6
PD7
Down
Alarm
MOSI
MOSO
SCLK
LED1
LED2
LED3
LED4
LED5
LED6
LED7
Reset
Up
Motor
Raw_RPM
PWM_Drive
Monitor
1206Y0160180FFT
C8
16.000MHZ
Y1
C9
1206Y0160180FFT
1k
R9
330
R7
GND
ATmega328P-AU
U2
GND
+5V
D4
Red
D5
Yellow
D6
Green
D7
Error
D8
Low
D9
Mid
D10
High
4814P-1-331LF
R13
LED1
LED2
LED3
LED4
LED5
LED6
LED7
ICSP
MOSO
SCLK
Reset
+5V
MOSI
GND
J4
R20
10k
C17
C0603C104M4RACTU
GND
+5V
100k
R14
R15
100k
1N914
D11
R18
10k
1N914
D12
R19
10k
Down
Up
C12
C11
C0603C104M4RACTU
Fan_Down
SW3
Fan_Up
SW4
C0603C104M4RACTU
GND
SW_Batt
PWR_FLAG
Raw_Batt
TSM480P06CP
Q5
R16
560k
100k
R17
Power_On
SW2
C10
C0603C104M4RACTU
U3
TPSM84212EAB
Vin
Vout
GND
+12V
1N914
D14
Monitor
220k
R22
Power_off
SW1
Q6
MMBT3904
820k
R21
C13
3.3uF
560k
R23
FM4004-W
D13
LM1117-5.0
VI
VO
GND
U4
D15
FM4004-W
+5V
PWR_FLAG
C14
C15
C16
T491C107M006AT
D16
1N914
LMK316AB7106MLHT
GND
PWR_FLAG
C0603C104M4RACTU
Micro_Power_Down is active High output from the Micro.
Latching this line low will power down the unit.
Up is active low input to the Micro.
When low this signals the Micro the Up button is depressed.
Up is debounced in hardware.
Do Not USE int Pull Up.
Down is active low input to the Micro.
When low this signals the Micro the Down button is depressed.
Down is debounced in hardware.
Do Not USE int Pull Up.
RPM is an input to the Micro.
When active, is a frequency directly related to fan speed
Monitor is an input to the Micro.
It is active low and signals the micro that the power down button is being pushed.
A diode is used to isolate the micro from.n positive voltages.
As a result of this an internal PULL UP must be used on this input.
Sheet: Battery Interconnect
File: Batt_wiring.sch
For Software and Hardware Development Only!
Not for Human Use!
Sheet: /
File: 4-mill-vent.sch
Title:
Size: B
Date:
Rev:
KiCad E.D.A. kicad (5.1.5)-3
Id: 1/4

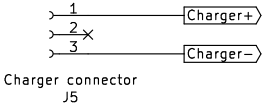


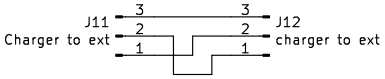


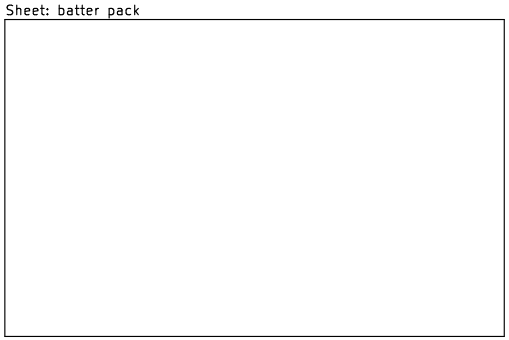








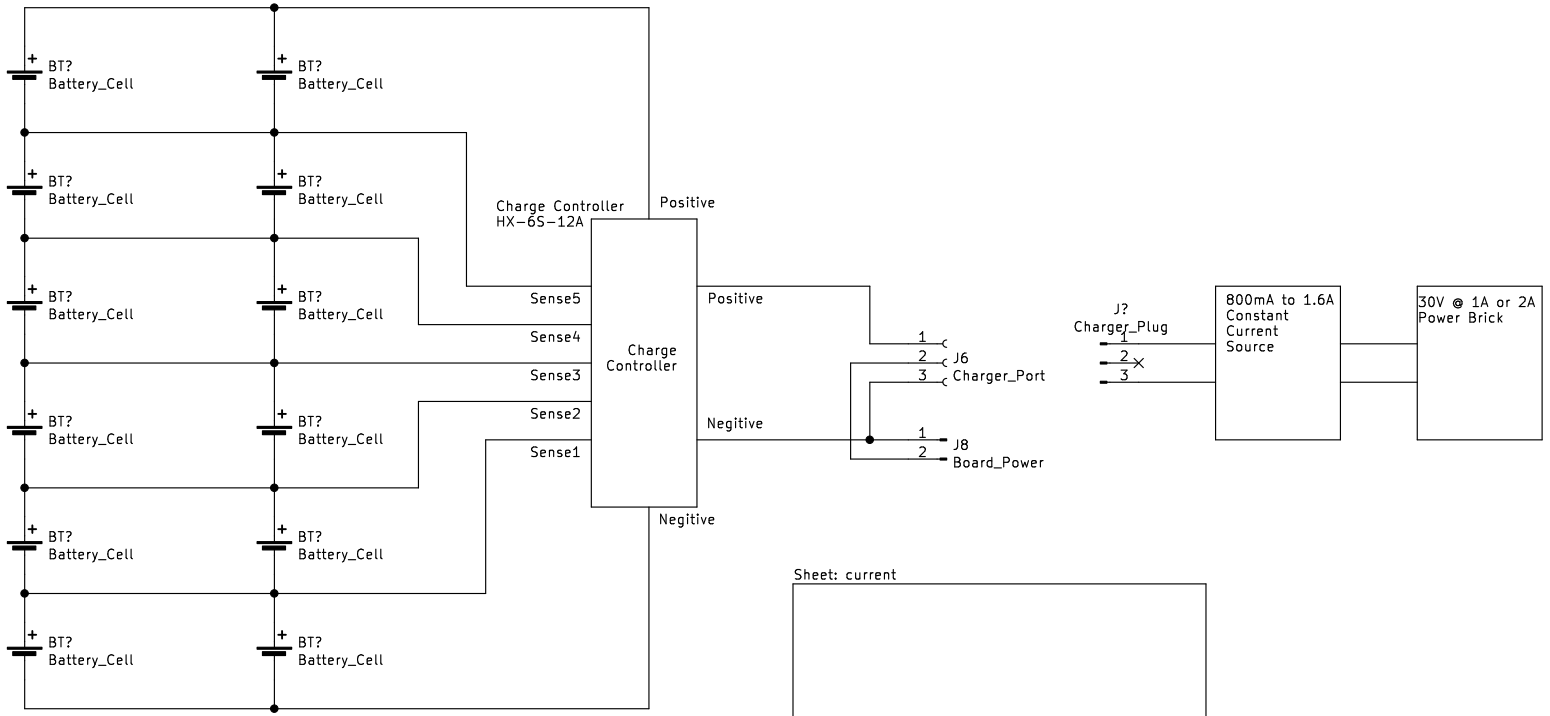




Sheet: /Battery Interconnect/
File: Batt_wiring.sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (5.1.5)-3		Id: 2/4



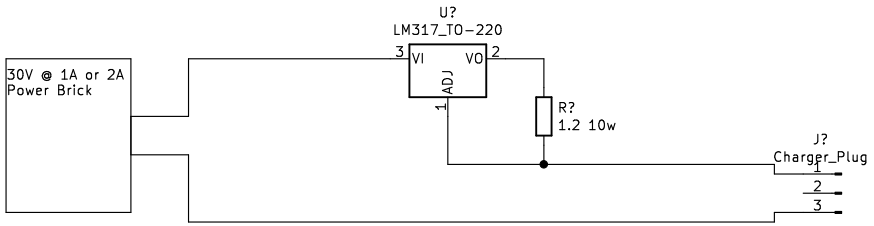
Sheet: current

File: file5F29C46B.sch

Sheet: /Battery Interconnect/batter pack/
File: file5F1CA469.sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (5.1.5)-3		Id: 3/4



Heatsink both parts to 1.5 x 2 x 0.25 inch metel plate

Not to be used for production!

Sheet: /Battery Interconnect/batter pack/current/
File: file5F29C46B.sch

Title:

Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (5.1.5)-3		Id: 4/4