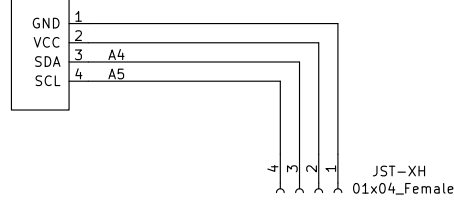
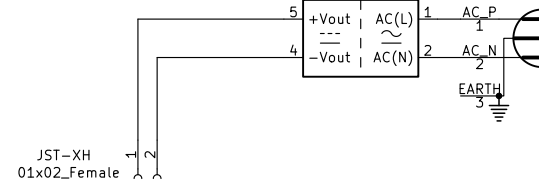


20x4 LCD Screen - ERM2004FS-3



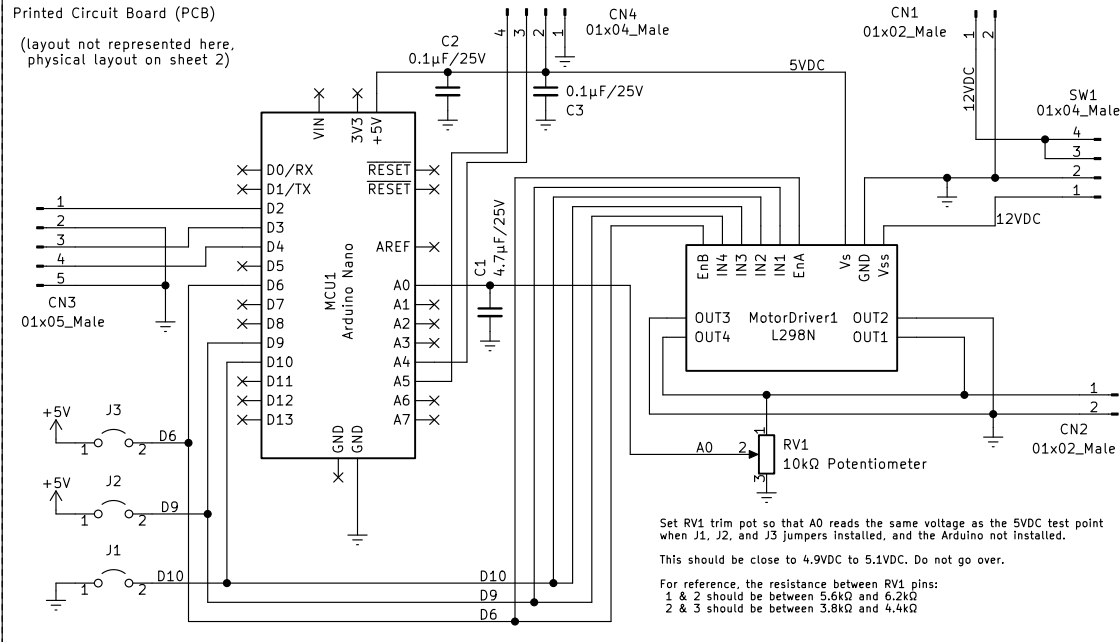
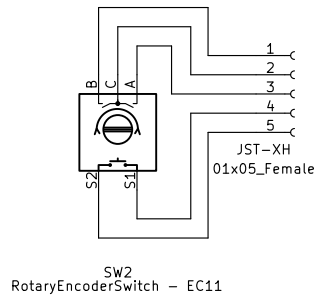
PS1  
120VAC to 12VDC (4A)



PCB Layout

Printed Circuit Board (PCB)

(layout not represented here,  
physical layout on sheet 2)

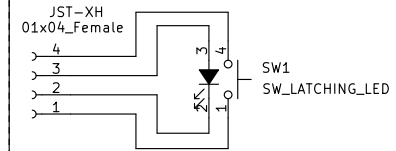


Set RV1 trim pot so that A0 reads the same voltage as the 5VDC test point when J1, J2, and J3 jumpers installed, and the Arduino not installed.

This should be close to 4.9VDC to 5.1VDC. Do not go over.

For reference, the resistance between RV1 pins:  
1 & 2 should be between 5.6kΩ and 6.2kΩ  
2 & 3 should be between 3.8kΩ and 4.4kΩ

J1, J2, and J3 jumpers must be used to tune RV1, and must be removed before the Arduino is installed.



Ensure DC motor is correctly wired for proper fan rotation direction. Motor should be spinning counter-clockwise when looking at the motor from the shaft end, with the motor terminal end facing away.

First try:  
- positive motor terminal (marked red) to PCB "MOTOR +"  
- negative motor terminal (unmarked usually) to PCB "MOTOR -"  
If spinning clockwise after trying the above, reverse polarity so that:  
- positive motor terminal (marked red) to PCB "MOTOR -"  
- negative motor terminal (unmarked usually) to PCB "MOTOR +"

Use this schematic as a reference only, the physical layout of the PCB is shown on sheet 3.

Project directory on Thingiverse: <https://www.thingiverse.com/thing:4743929>  
Project directory on Github with PCB files: <https://github.com/nairck/TurbofanDriver>

Original design by Nairck  
with PCB design by Cyberfox361

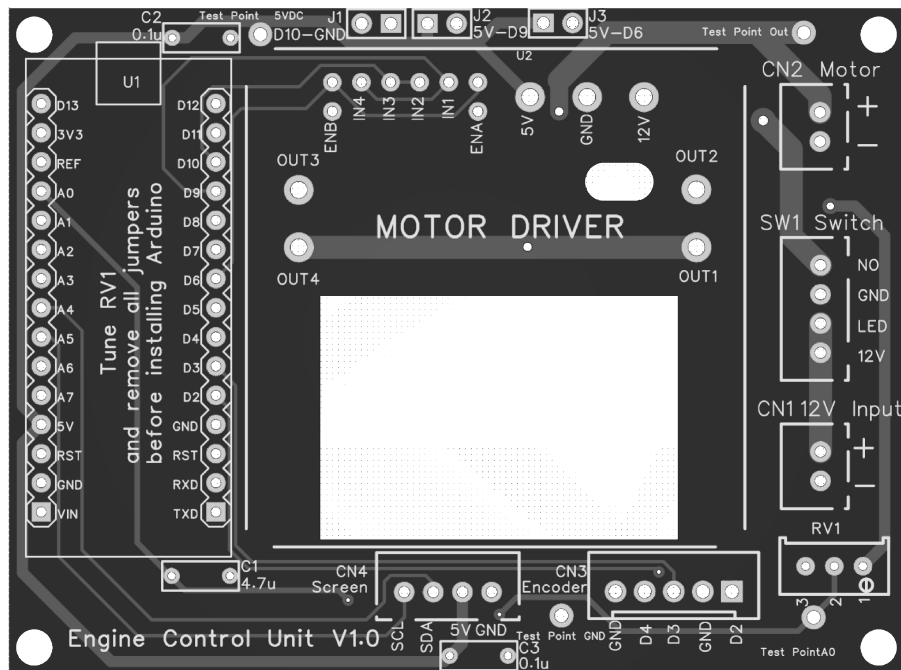
Sheet: /  
File: Control Schematic V3.kicad\_sch

**Title: Control Schematic - V3**

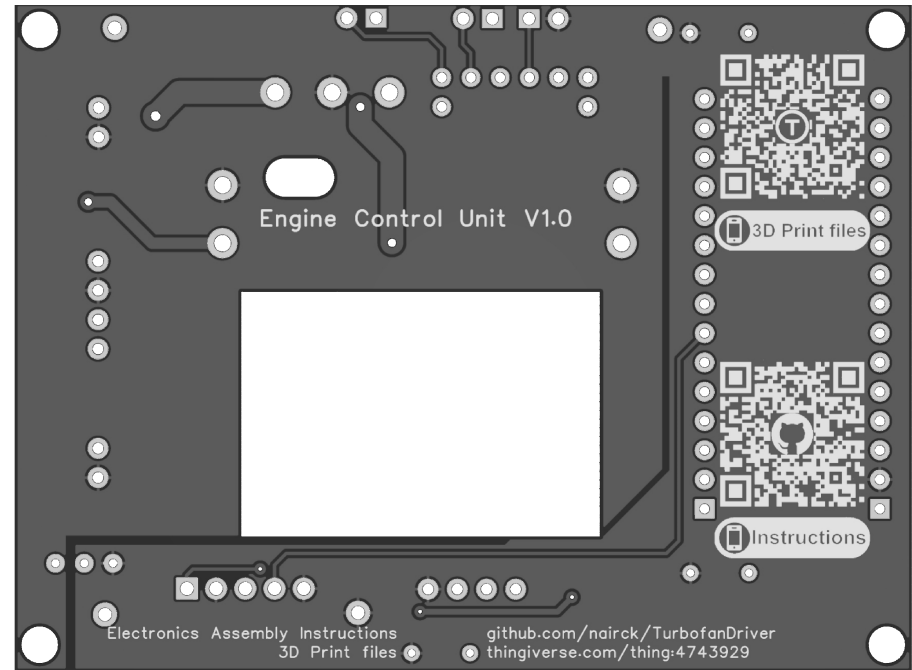
Size: A4 Date: 2024-09-07  
KiCad E.D.A. kicad (6.0.4)

Rev: A  
Id: 1/2

# PCB Top



# PCB Bottom



Original design by Nairck  
with PCB design by Cyberfox361

Sheet: /PCB Layout/  
File: PCB Layout.kicad\_sch

**Title: Control Schematic – V3**

Size: A4 Date: 2024-09-07

KiCad E.D.A. kicad (6.0.4)

Rev: A

Id: 2/2