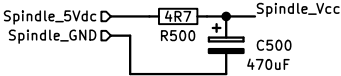
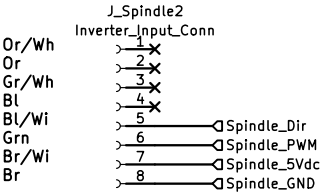


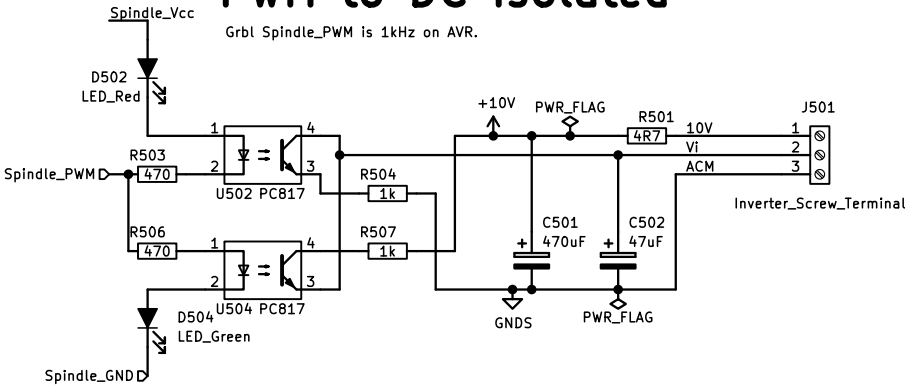
# Adapter PCB in Inverter.

Same pinout for  
RJ-45 connector.

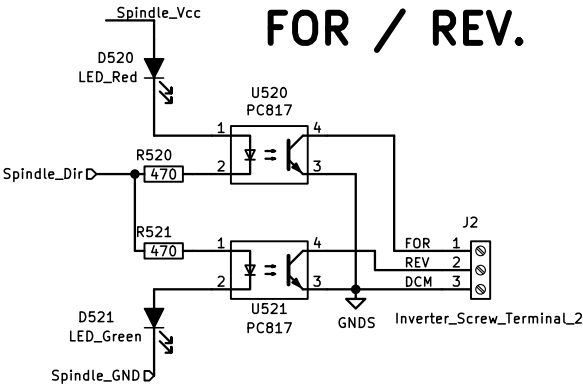


## PWM to DC Isolated

Grbl Spindle\_PWM is 1kHz on AVR.

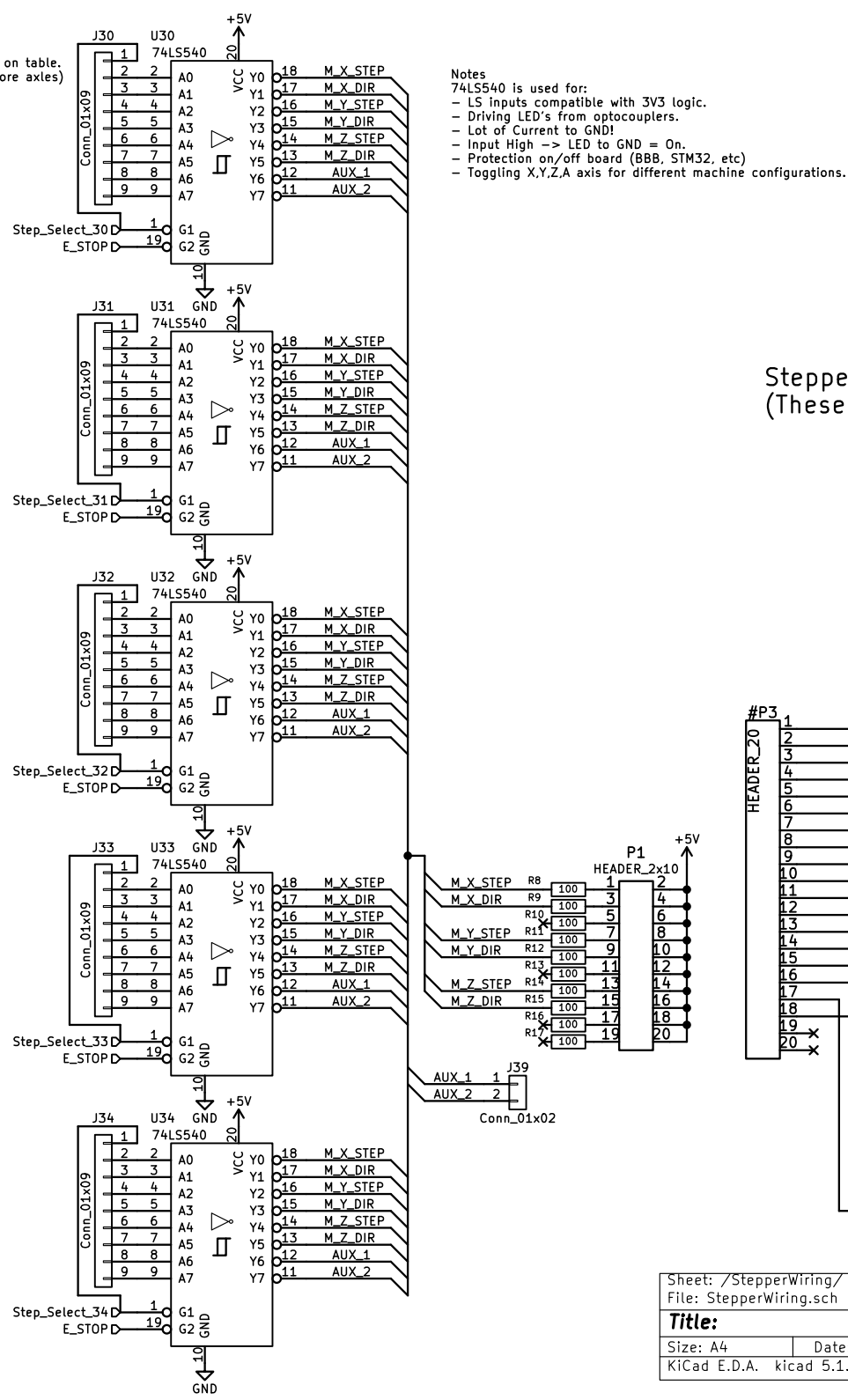
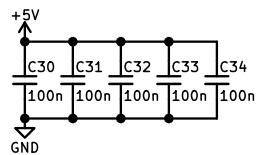
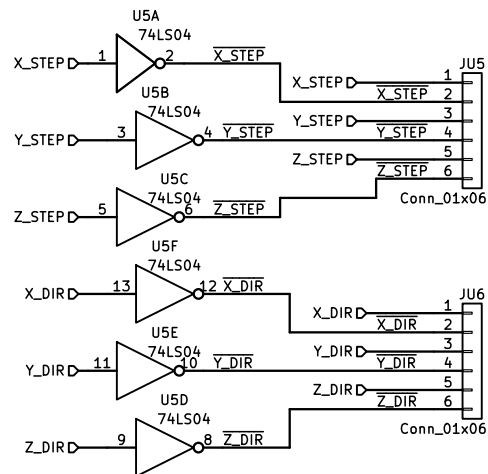


## FOR / REV.



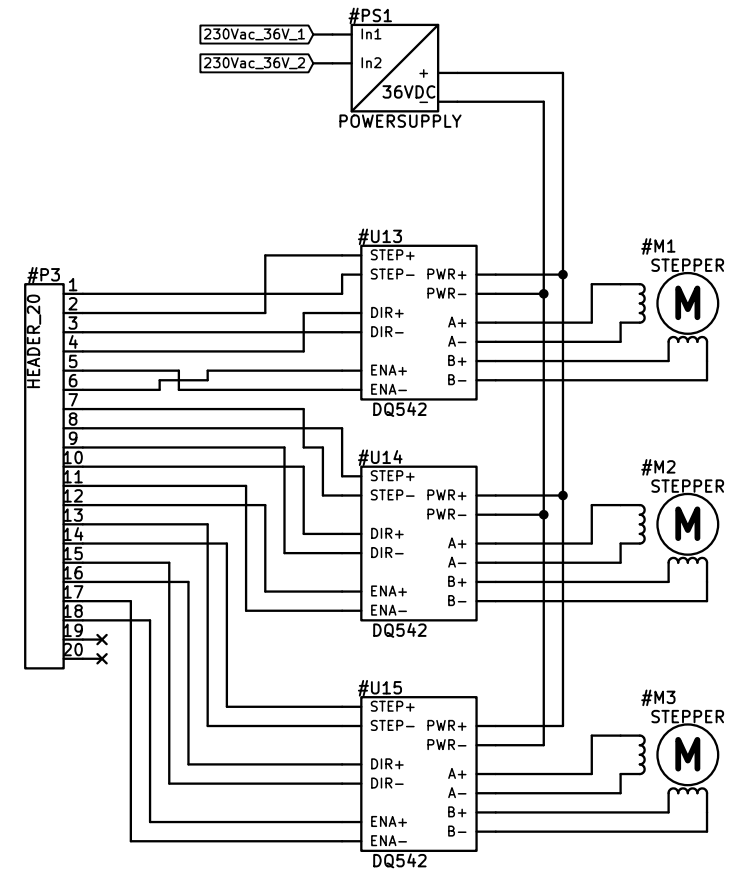
Sheet: /Inverter_Adapter.s/ File: Inverter_Adapter.sch		
Title:		
Size: A4	Date: 2019-05-30	Rev:
KiCad E.D.A. kicad 5.1.0+dfsg1-1		Id: 2/5

- J30 through J31 for different axle configurations:
- "Normal" XYZ mode.
  - Vertical mode: Worpiece clamped on Z, Spindle on table.
  - PLC control of 4th axle (untill Grbl supports more axes)
  - Oscillating Spindle grinder mode.
  - Other weird configurations.

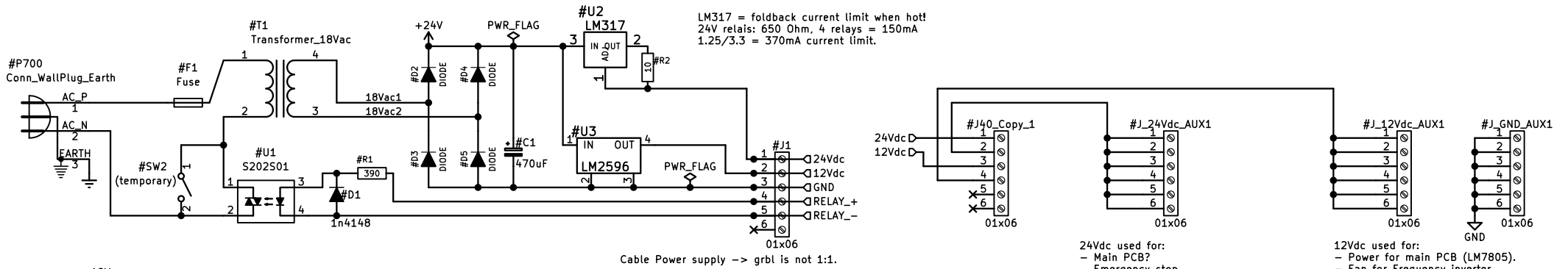


- Notes
- 74LS540 is used for:
  - LS inputs compatible with 3V3 logic.
  - Driving LED's from optocouplers.
  - Lot of Current to GND!
  - Input High -> LED to GND = On.
  - Protection on/off board (BBB, STM32, etc)
  - Toggling X,Y,Z,A axis for different machine configurations.

Stepper motor drivers wired individually.  
(These do not fit on a BCB!)



Sheet: /StepperWiring/ File: StepperWiring.sch		
<b>Title:</b>		
Size: A4	Date: 2019-05-30	Rev:
KiCad E.D.A. kicad 5.1.0+dfsg1-1	Id: 3/5	

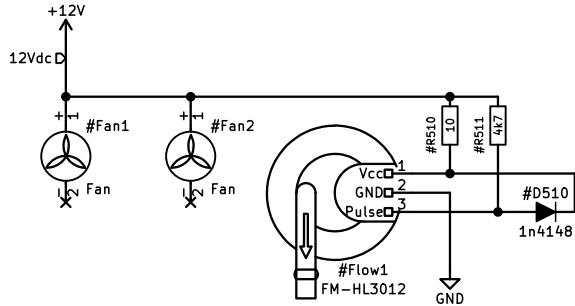


24Vdc used for:

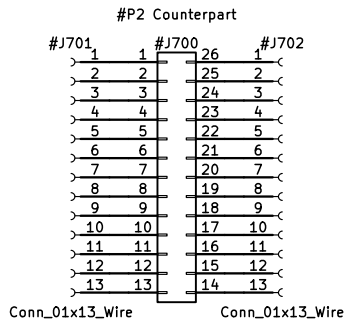
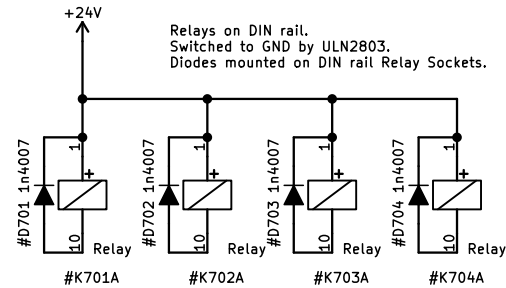
- Main PCB?
- Emergency stop.
- Relay Frequency Inverter.
- Relay 36V Power Supply for Steppers.
- Relay for pump Spindle cooling.
- Relay for Vacuum / backside.

12Vdc used for:

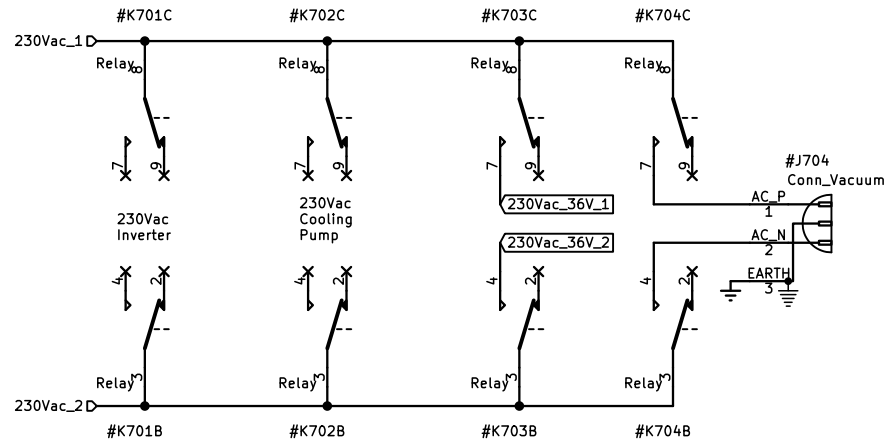
- Power for main PCB (LM7805).
- Fan for Frequency inverter.
- Fan for radiator.



Flowsensor Max 20V.  
Has pullup to 24Vdc on main PCB.  
Use either D510 to limit voltage on pulse pin, or use 12V pullup here.



Adapter from IDC cable to individual wire connectors.  
(Green with orange wedge activator).  
Distributes signals off the main PCB.  
For pinout, see connector on main PCB.

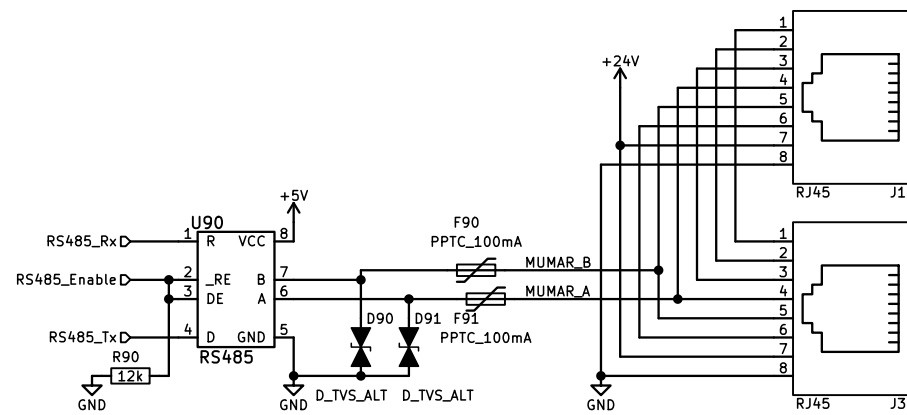


Options for later:

- Flood cooling.
- Mist cooling.
- Vacuum / dust collector.

This power supply is not on the main PCB. Build it separately.  
This part of the schematic is also (ab) used for other stuff not on the PCB.

Sheet: /Auxiliary_Power/ File: Auxiliary_Power.sch		
<b>Title: Auxiliary power Supply, 24Vdc / 12Vdc</b>		
Size: A4	Date: 2019-05-30	Rev:
KiCad E.D.A. kicad 5.1.0+dfsg1-1		Id: 4/5



Sheet: /Mumarnet/ File: Mumarnet.sch		
<b>Title: Mumarnet</b>		
Size: A4	Date: 2019-05-30	Rev:
KiCad E.D.A. kicad 5.1.0+dfsg1-1		Id: 5/5