

RAMPS 2.0

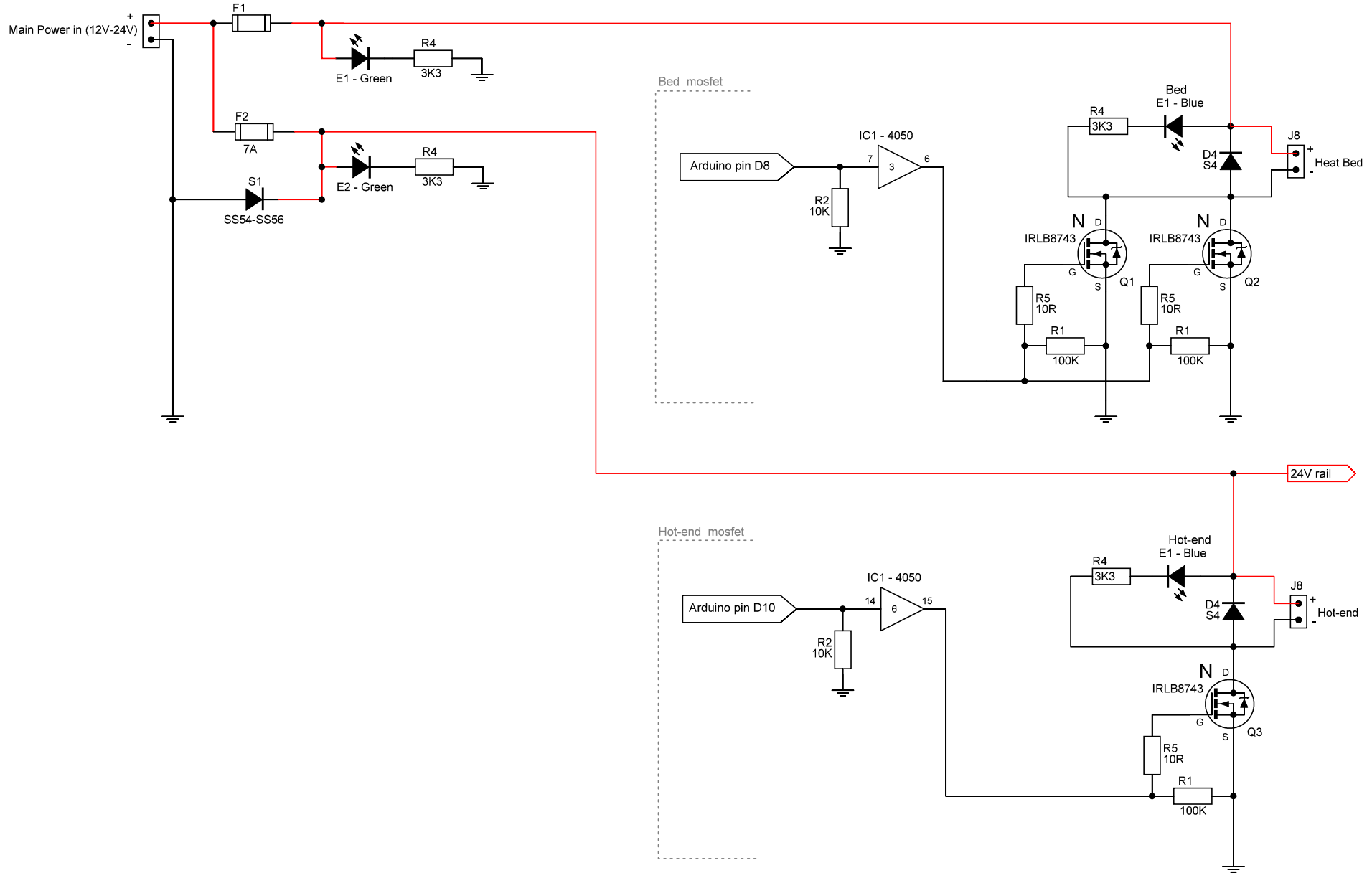
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Reversing input power,
and/or inserting stepper drivers incorrectly
will destroy electronics and cause a fire hazard!

Main Power Main Mosfets (A)

2022-Mar-03

12-15A for 12V Main Power Supply
7A for 24V Main Power Supply



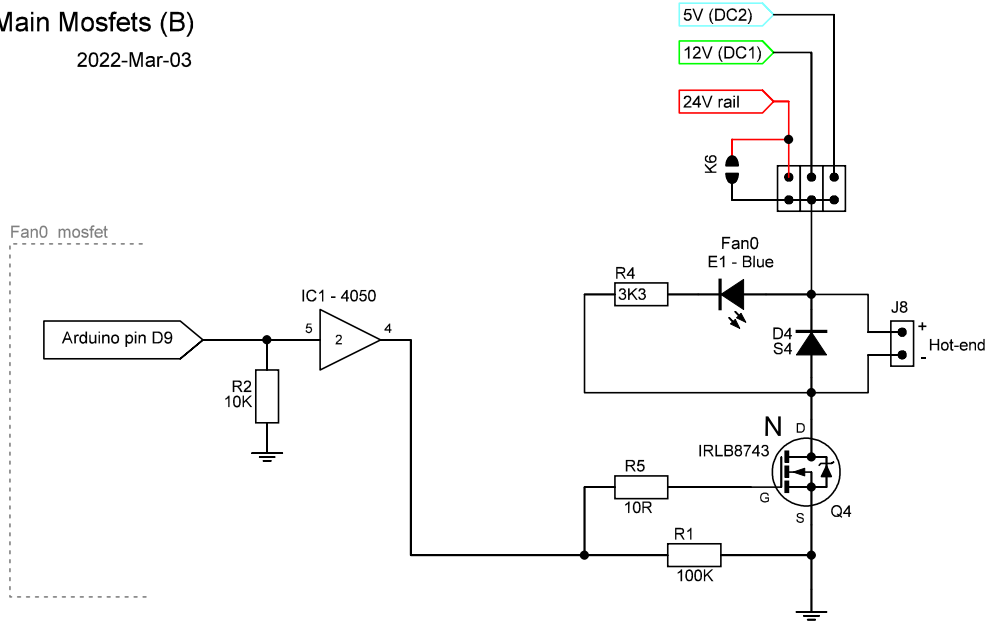
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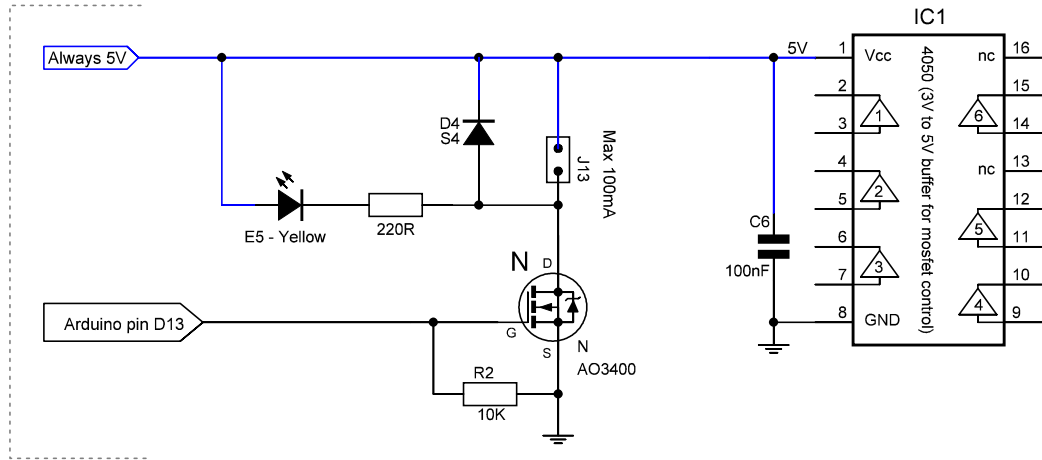
Main Mosfets (B)

2022-Mar-03

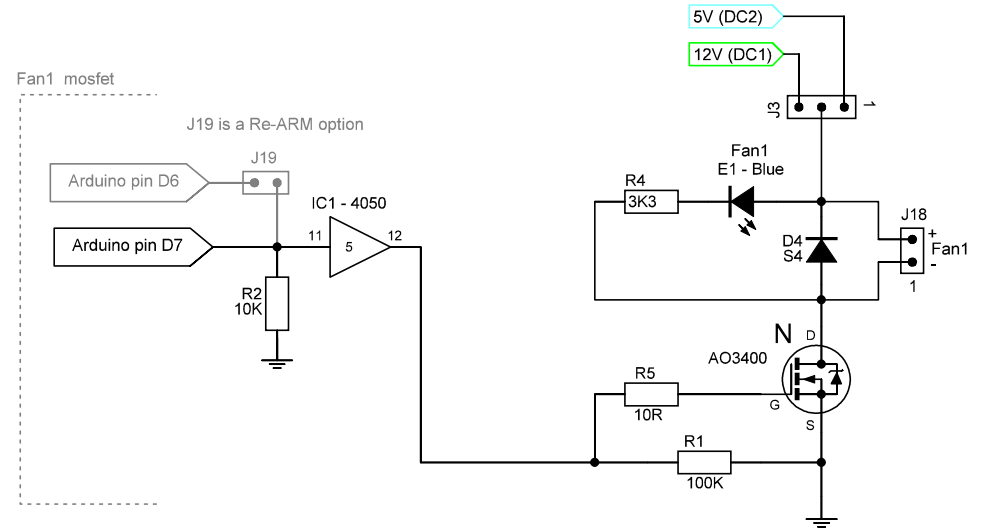
Fan0 mosfet



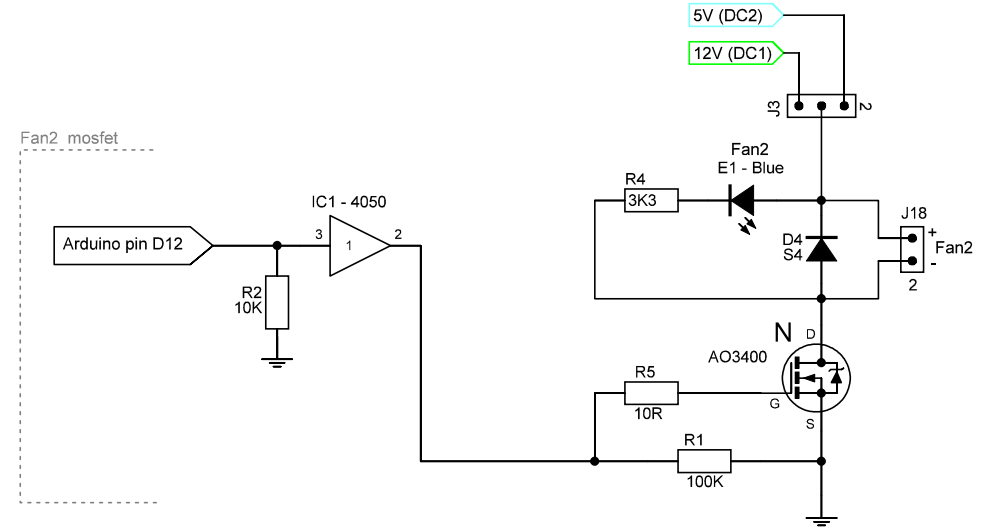
Debug LED



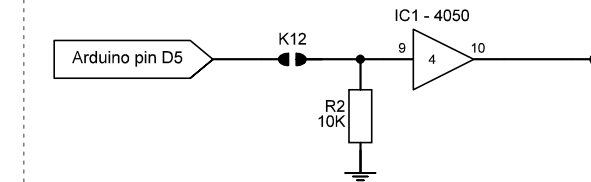
Fan1 mosfet



Fan2 mosfet



Spare



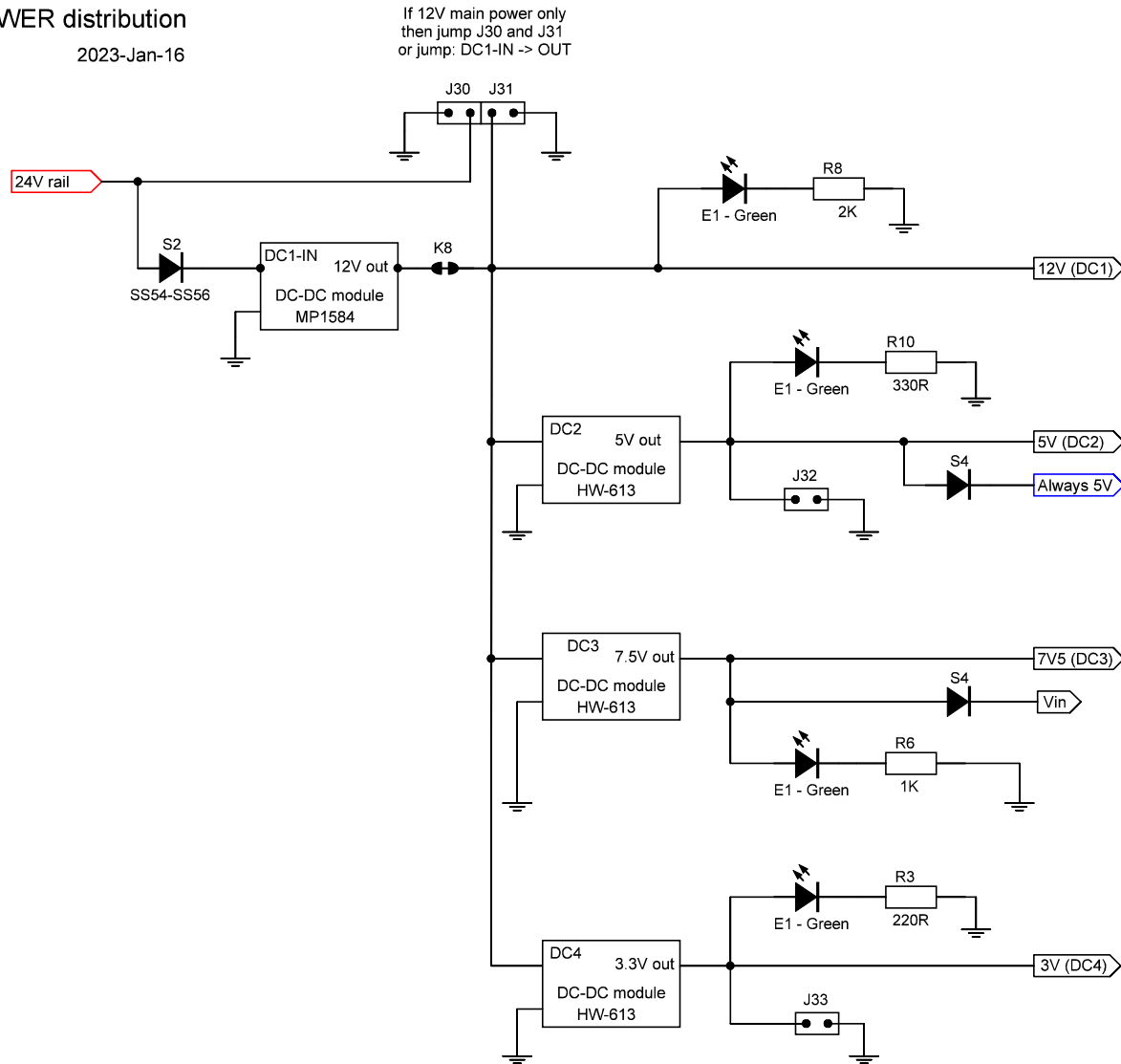
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POWER distribution

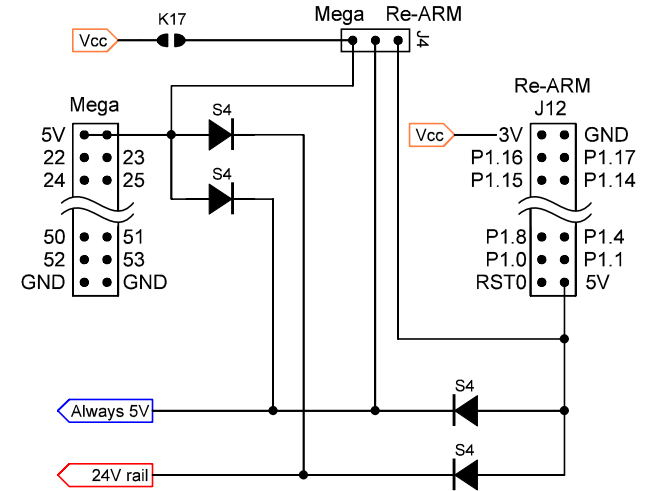
2023-Jan-16

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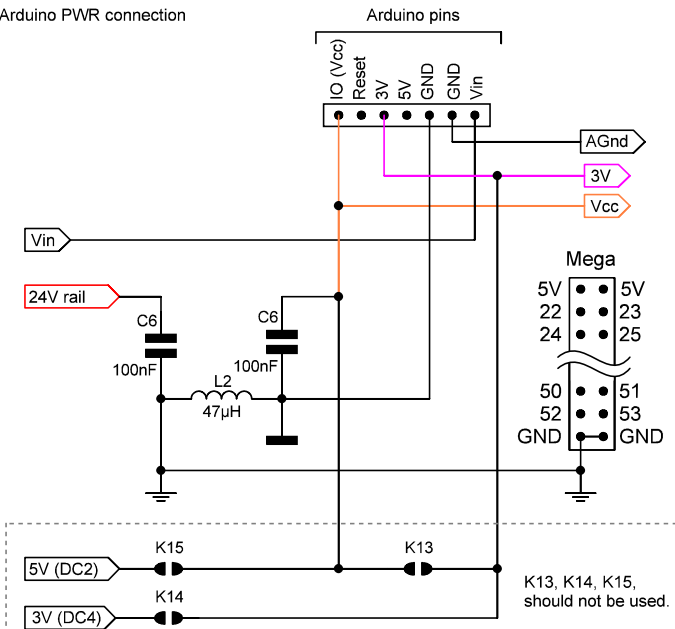
5V power sources

Use J4 to raise
"Always 5V" to actual 5V
Mosfets will run cooler this way



For TMC stepper drivers, there should always be some power on the Vmot ("24V rail"). Even while the Arduino is only powered via USB

Arduino PWR connection



K13, K14, K15,
should not be used.

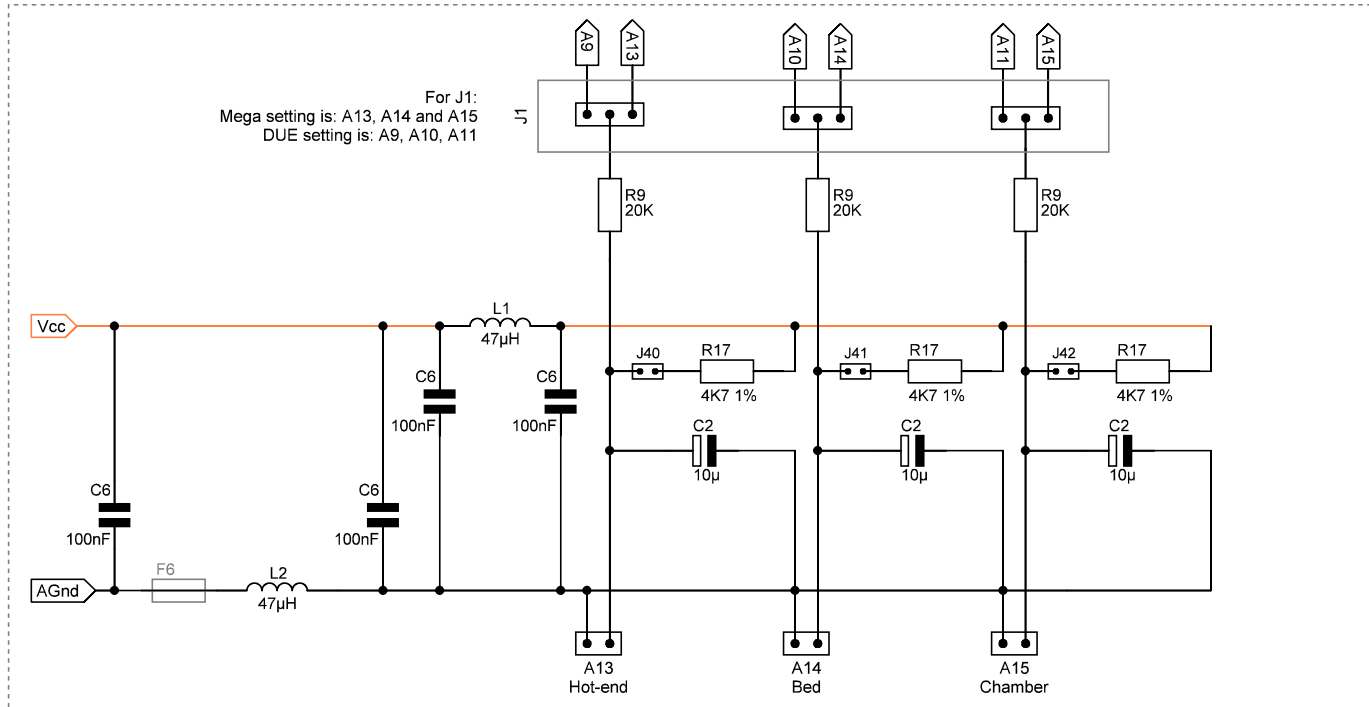
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Temperature

2022-Mar-03

NTC Temperature sensing



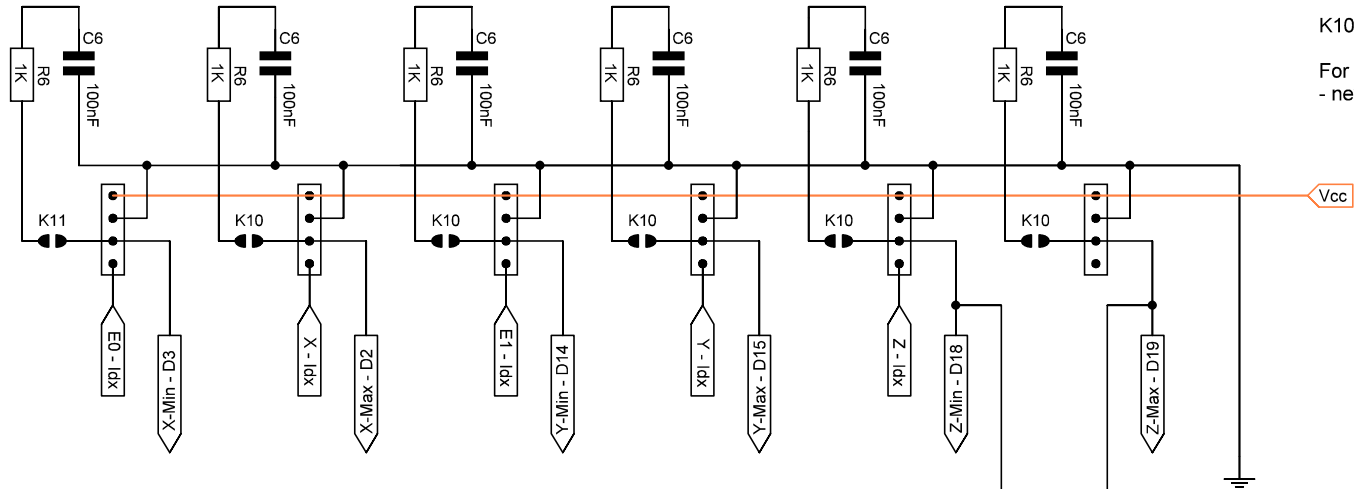
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End-stop

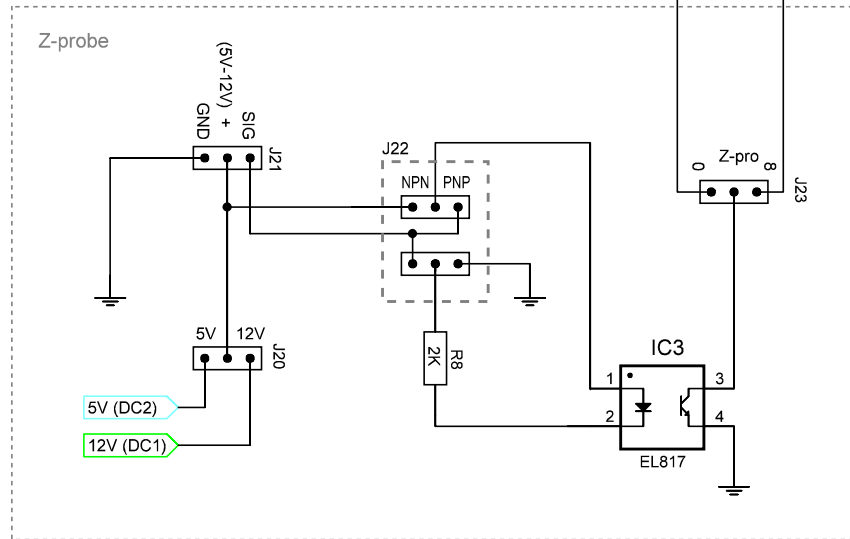
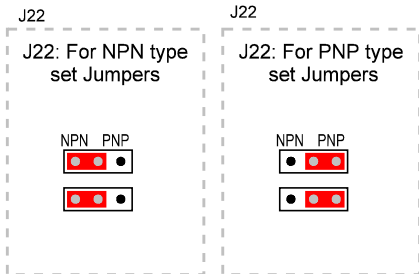
2023-June-13



K10 + K11 is experimental

For Re-ARM
- never use K10 + K11

J20: select power supply for the Z-probe
J21: connector for the Z-probe
J22: selector for NPN or PNP type probe
J23: Use Z-min or Z-max for Z-probe detection



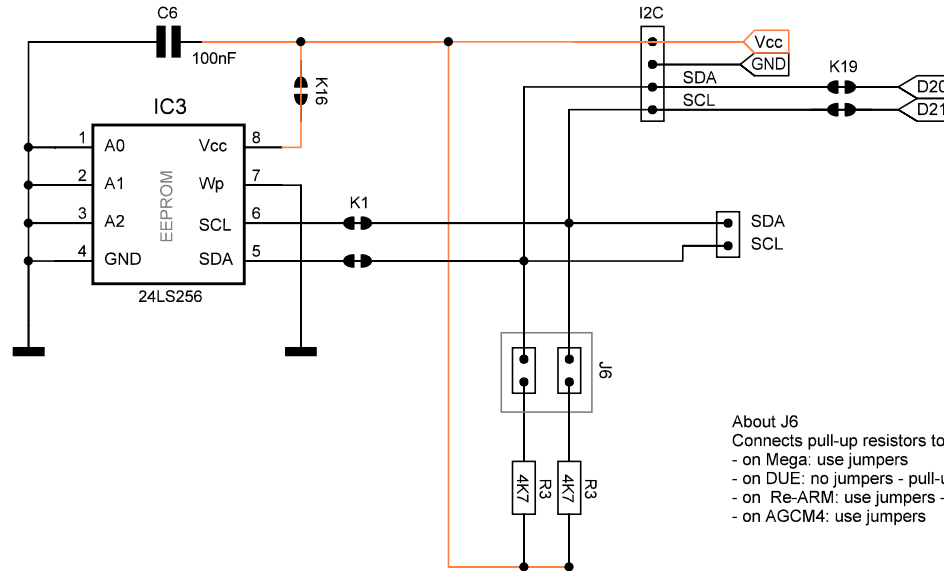
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I2C and EEPROM

2022-Aug-05



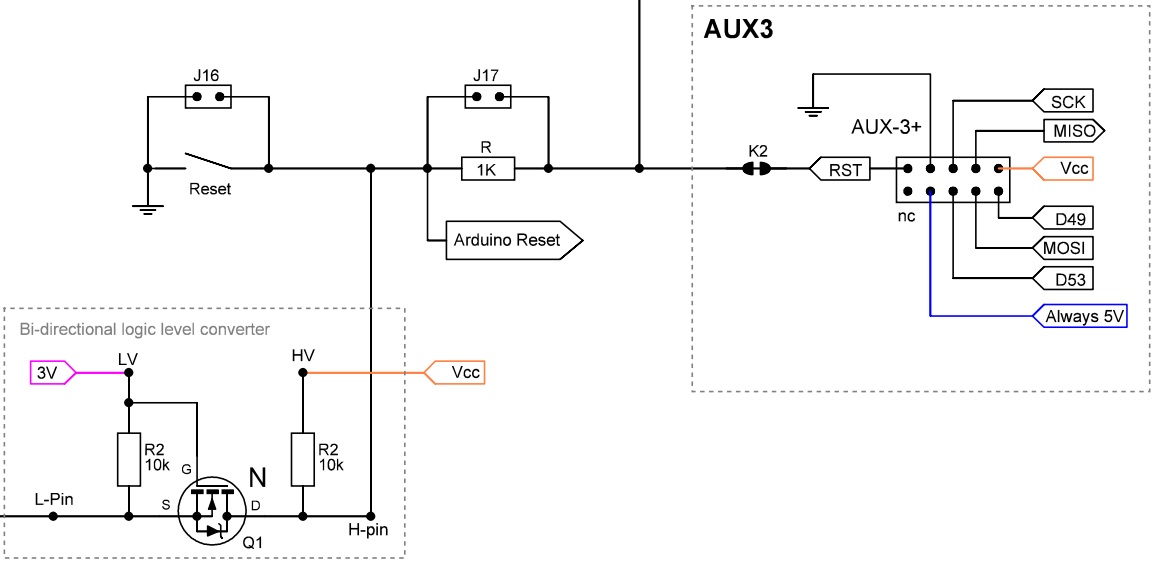
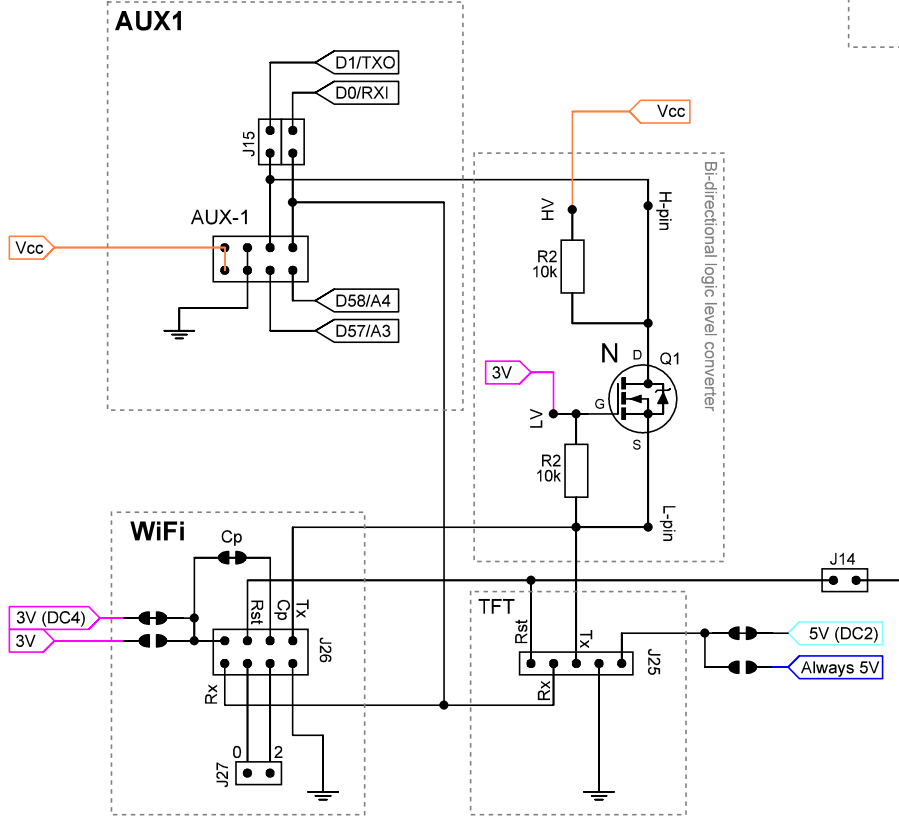
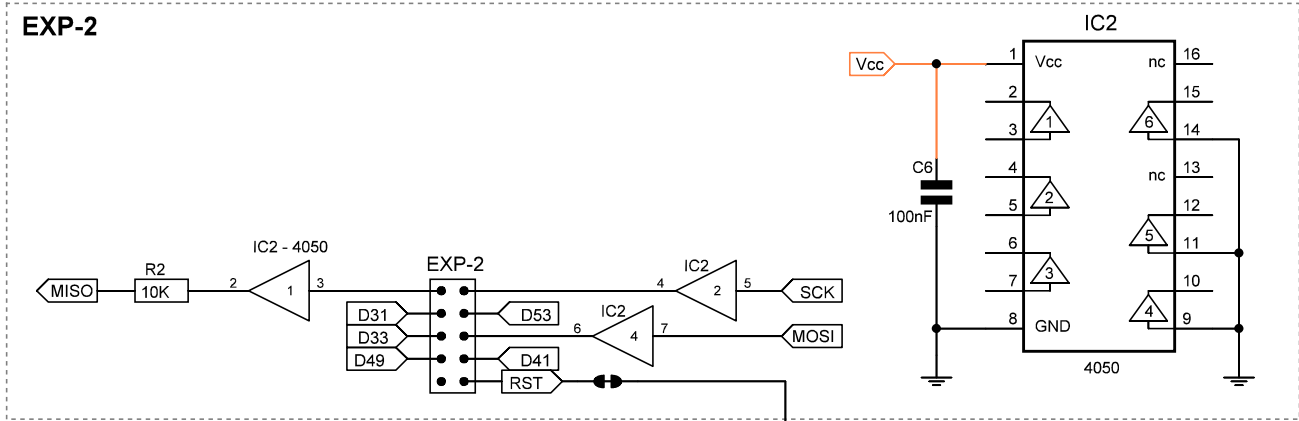
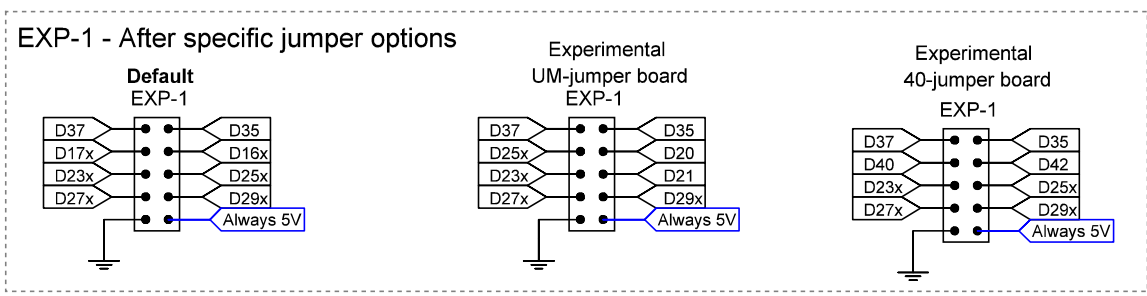
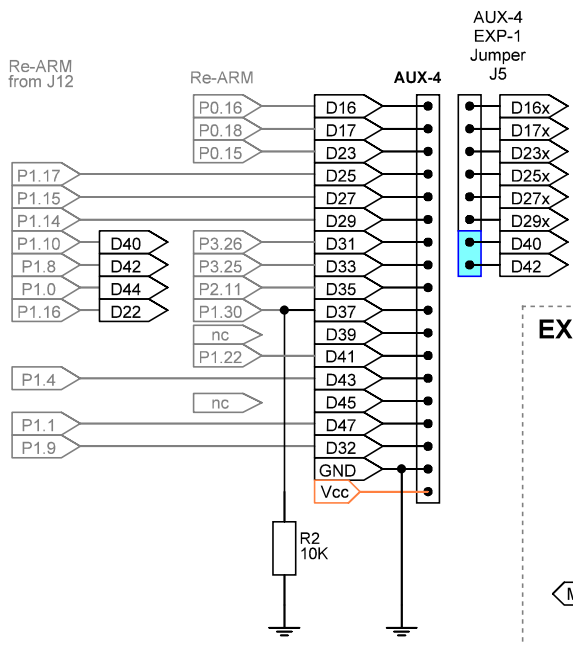
About J6
Connects pull-up resistors to the I2C lines
- on Mega: use jumpers
- on DUE: no jumpers - pull-up is integrated on the DUE controller
- on Re-ARM: use jumpers - Note: I don't know if I2C actually works on these pins on Re-ARM
- on AGCM4: use jumpers

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AUX (P1)

2023-Jan-16



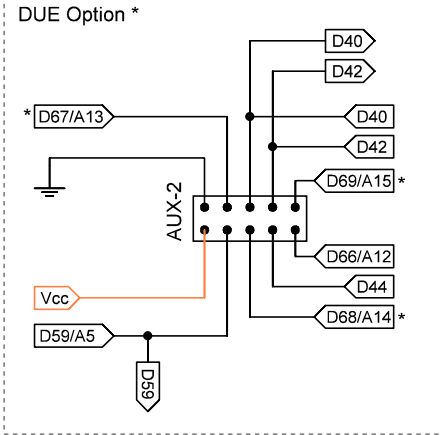
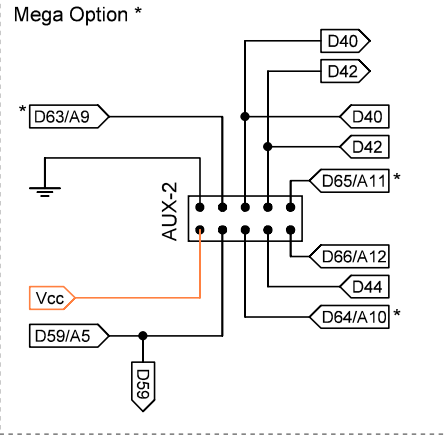
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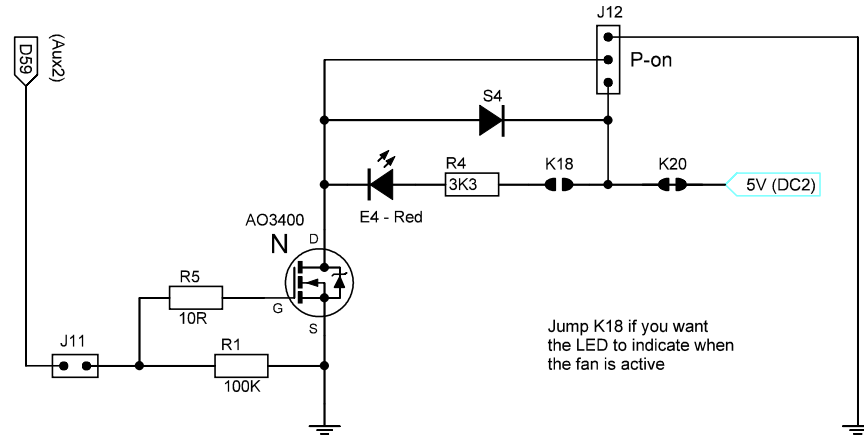
AUX (P2)

2023-Jan-16

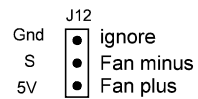
AUX-2



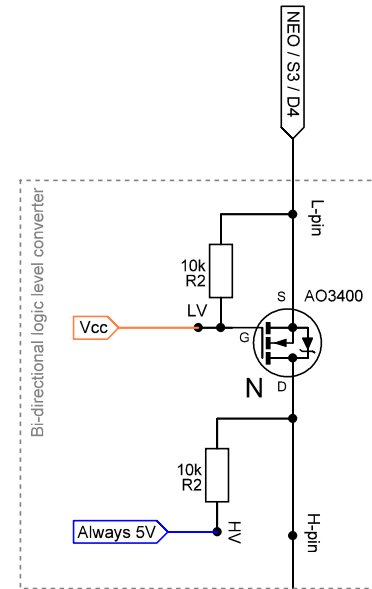
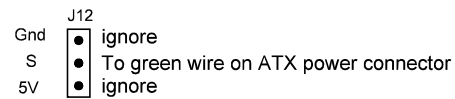
P-on / Fan3 (5V)



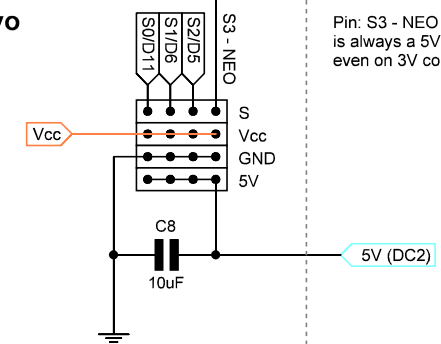
J12 as 5V fan connection



J12 as ATX power ON connection



Servo



Pin: S3 - NEO is always a 5V out signal even on 3V controllers

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Stepper drivers

2023-06-13

Reversing input power,
and/or inserting stepper drivers incorrectly
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** - Y can connect to one set of stepper pins
- X, E0, E1 can connect to two set of stepper pins
- Z can connect to three set of stepper pins

