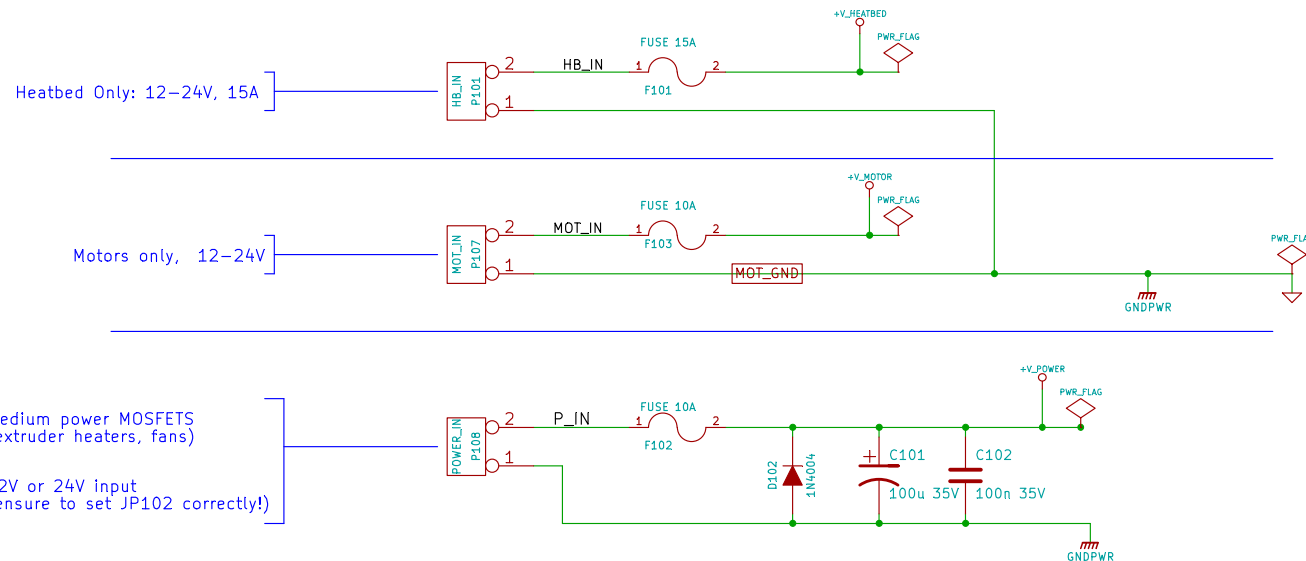
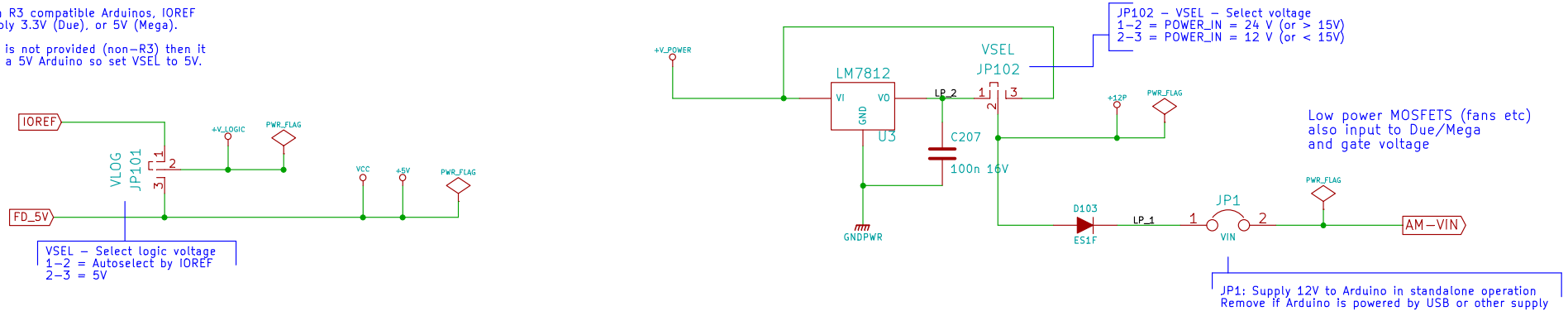


Power



Note: On R3 compatible Arduinos, IOREF will supply 3.3V (Due), or 5V (Mega).

If IOREF is not provided (non-R3) then it must be a 5V Arduino so set VSEL to 5V.



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File: Power.sch

Sheet: /Power/

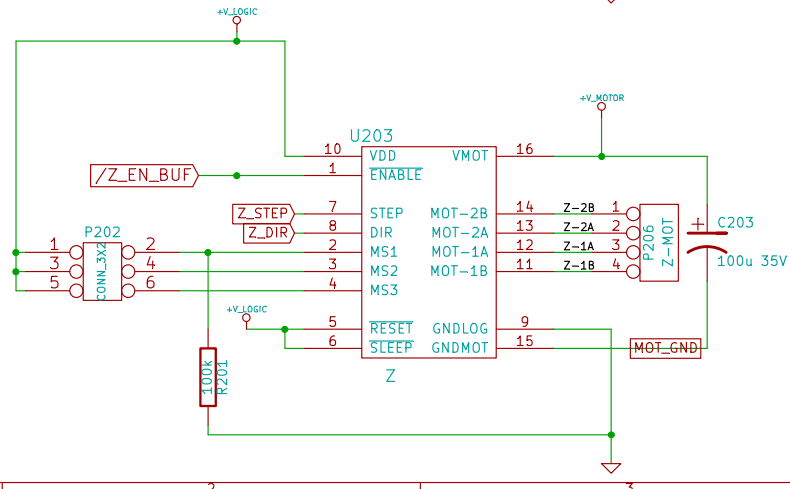
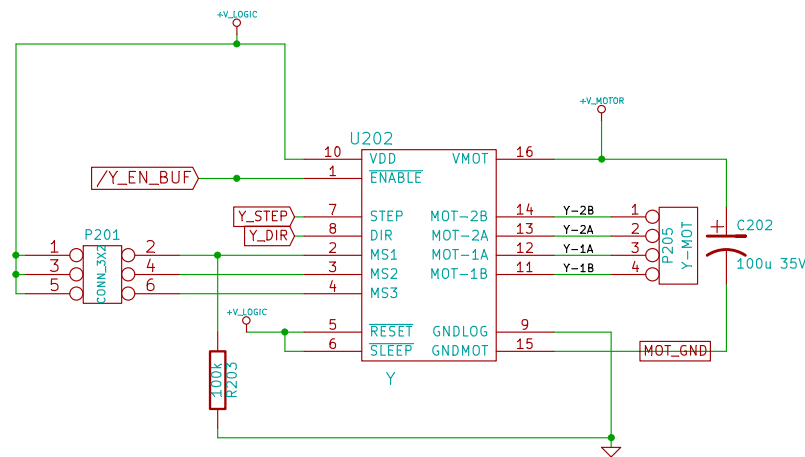
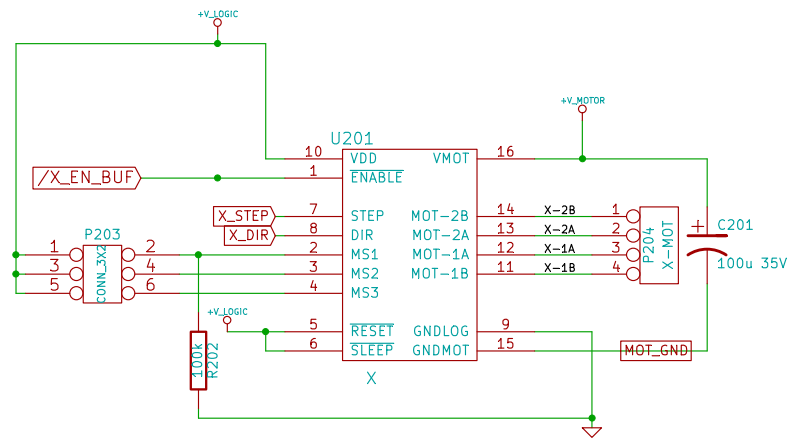
Title: RAMPS-FD (RAMPS for Arduino Due)

Size: A4 Date: 2 jan 2014

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Rev: v1 Issue B

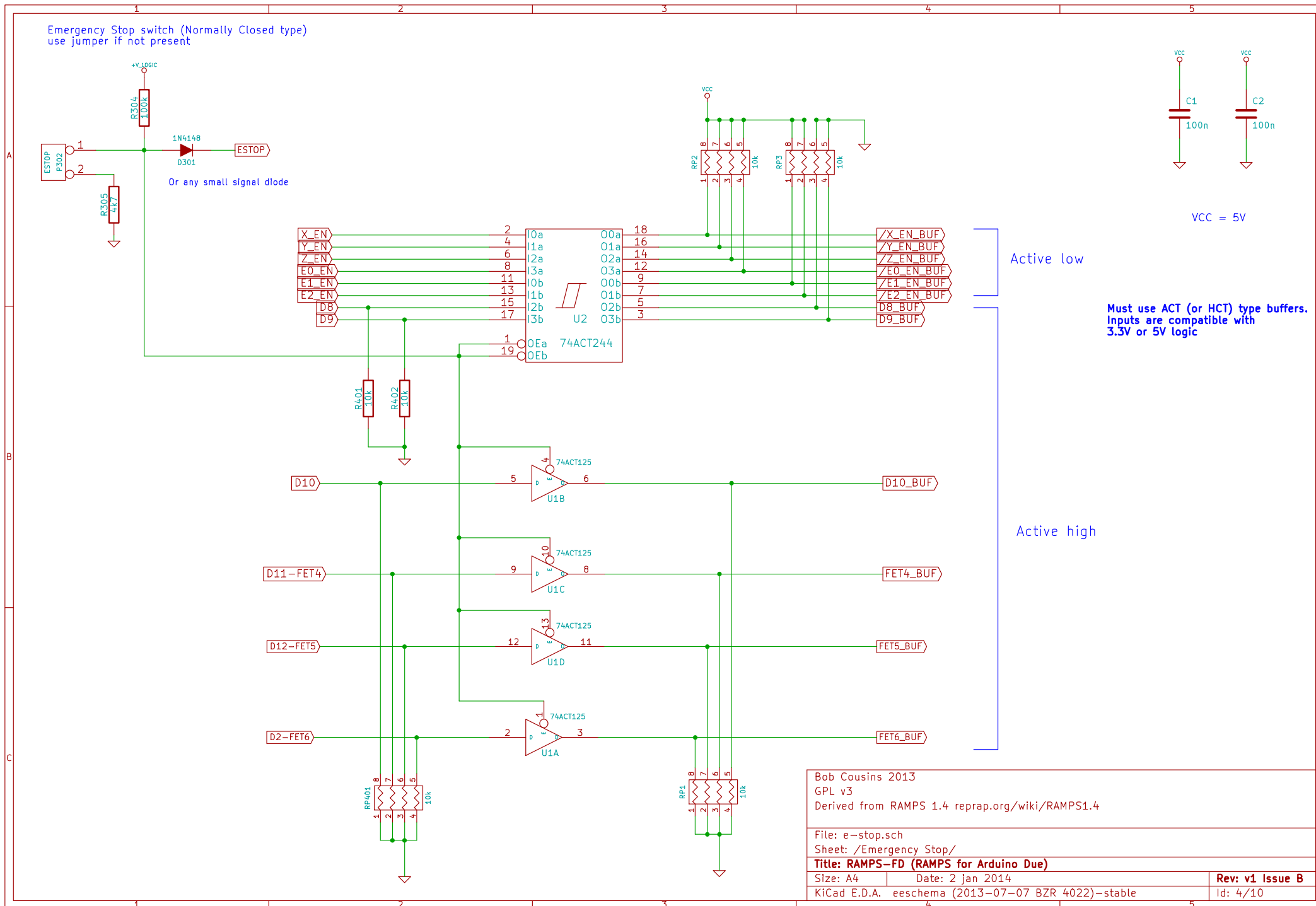
Id: 2/10

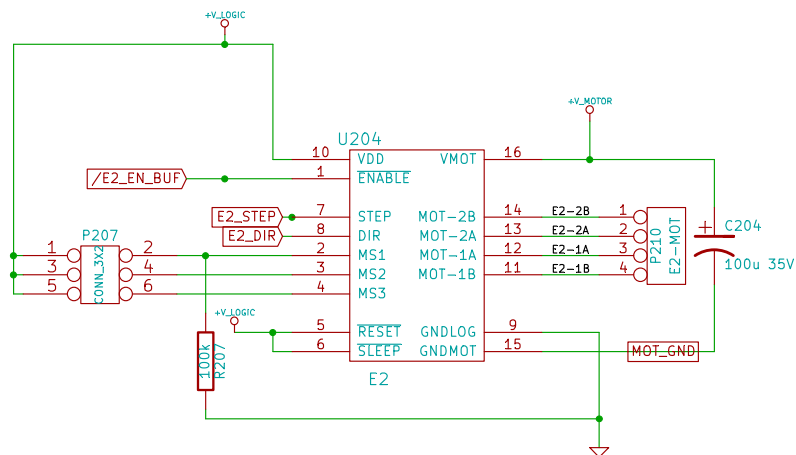
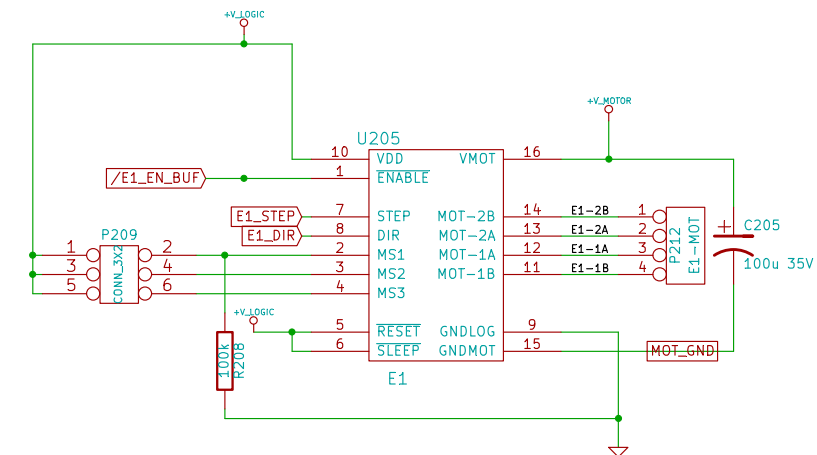
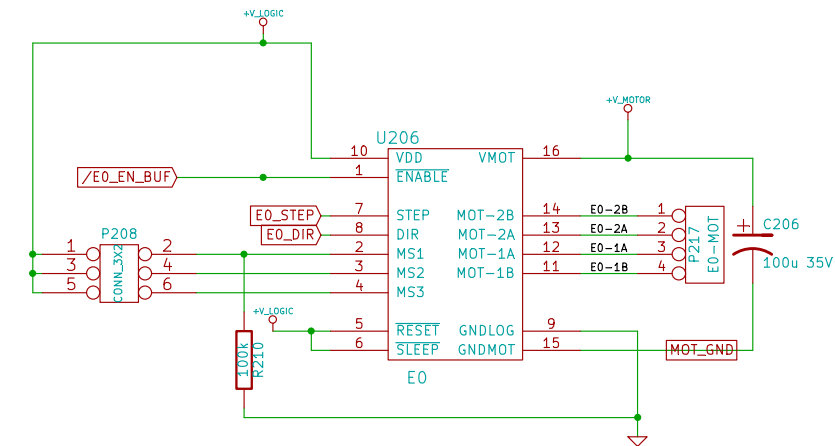


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 Derived from RAMPS 1.4 reprap.org/wiki/RAMPS1.4

File: steppers.sch
 Sheet: /Stepper Drivers/
Title: RAMPS-FD (RAMPS for Arduino Due)

Size: A4	Date: 2 jan 2014	Rev: v1 Issue B
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File: steppers2.sch
 Sheet: /Stepper Drivers 2/
Title: RAMPS-FD (RAMPS for Arduino Due)

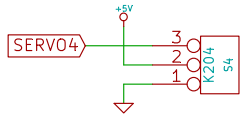
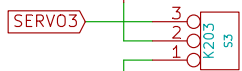
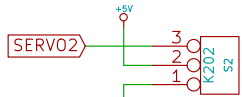
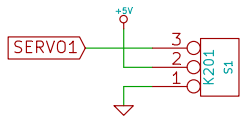
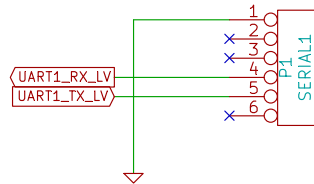
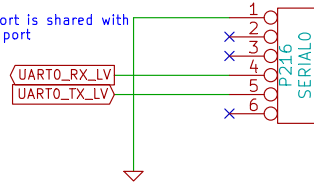
Size: A4	Date: 2 jan 2014	Rev: v1 Issue B
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NB: On Arduino Due: IOs on this page are not 5V tolerant. Do not exceed 3.3V.

Serial

Note: this serial port is shared with USB programming port

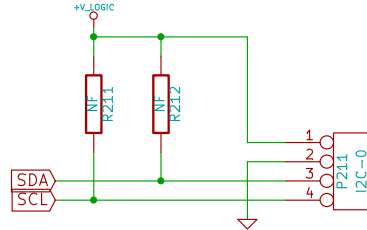
UART-TTL



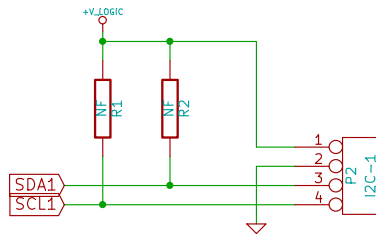
Servos

Need buffered outputs?

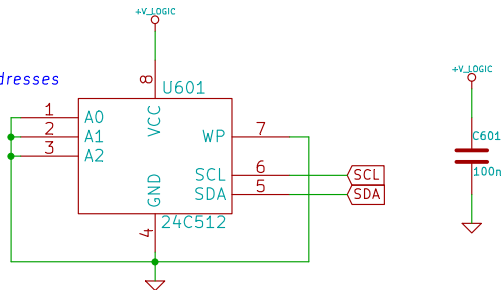
I2C



1k5 Pull ups on Due
Must not have external pullups to 5V if IOREF = 3.3V



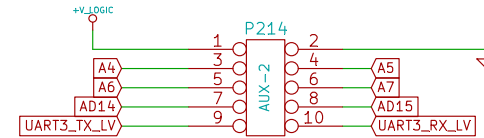
Might want to allow other addresses



EEPROM

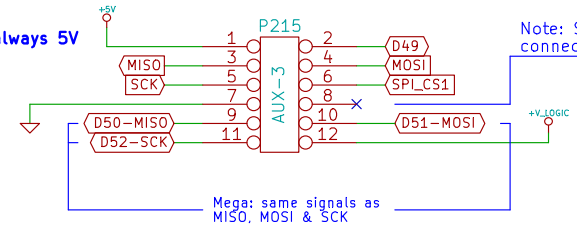
Aux connectors

Aux2



Aux3 - SPI

NB This pin is always 5V

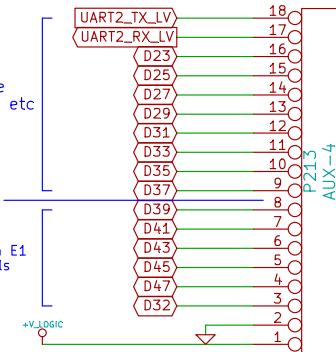


Note: Some add-on boards connect this pin to GND.

Aux4 - general IO

These are free for LCD panel etc

These are shared with E1 and E2 stepper signals



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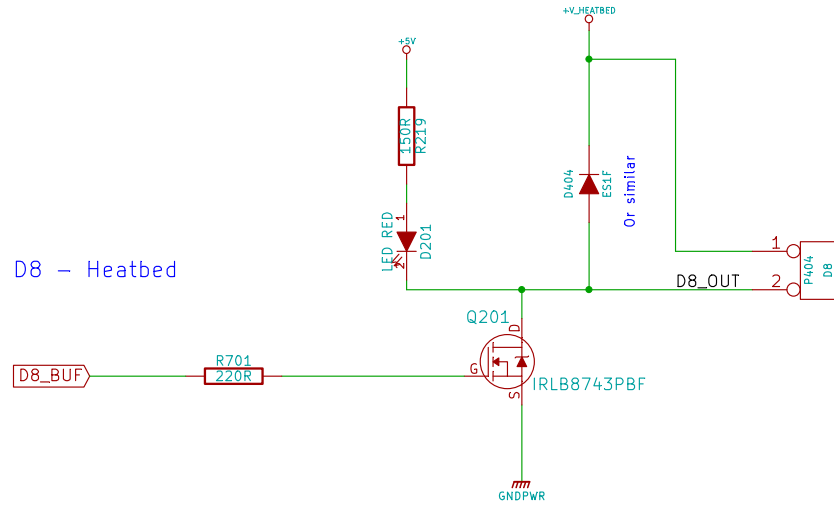
File: con_misc.sch
Sheet: /Misc Connectors/
Title: RAMPS-FD (RAMPS for Arduino Due)

Size: A4	Date: 2 jan 2014	Rev: v1 Issue B
KiCad E.D.A. eschema (2013-07-07 BZR 4022)-stable		Id: 6/10

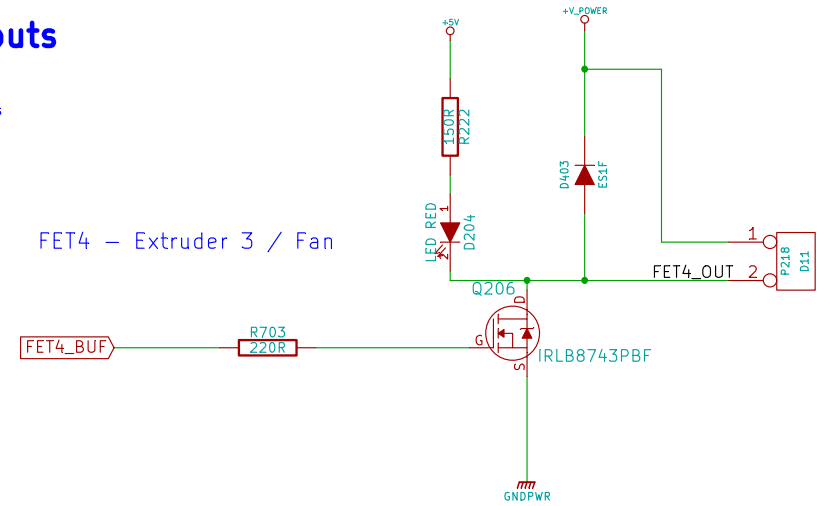
MOSFET Outputs

Non-inverting drivers

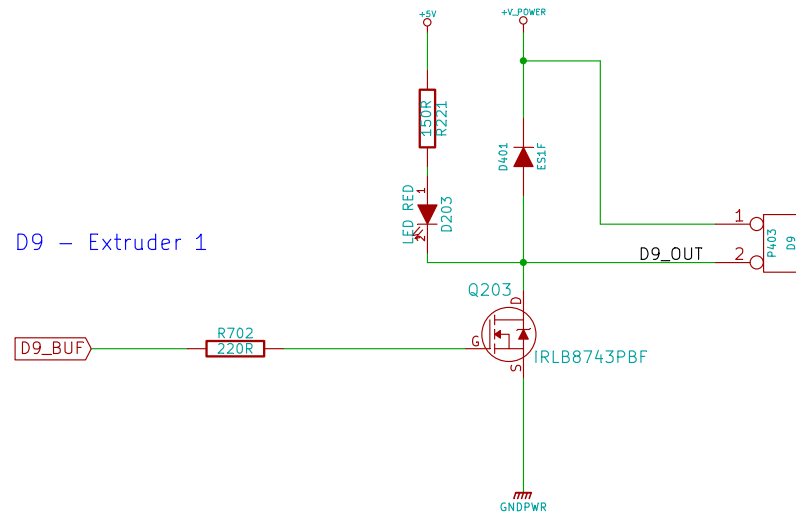
D8 – Heatbed



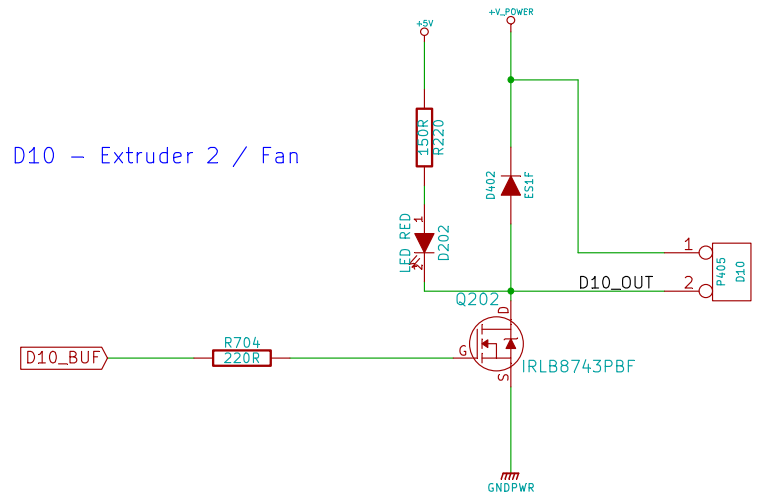
FET4 – Extruder 3 / Fan



D9 – Extruder 1



D10 – Extruder 2 / Fan



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Derived from RAMPS 1.4 reprap.org/wiki/RAMPS1.4

File: con_outputs.sch
Sheet: /Mosfet Outputs/
Title: RAMPS-FD (RAMPS for Arduino Due)

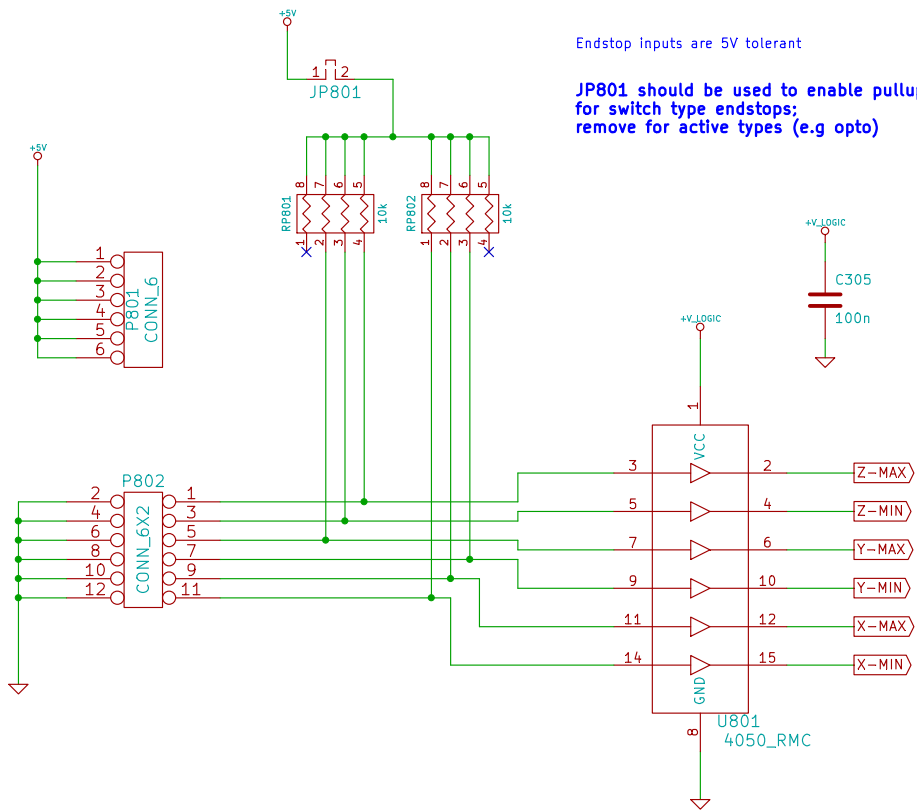
Size: A4 Date: 2 jan 2014
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Endstops

Endstop Inputs are 5V tolerant

JP801 should be used to enable pullups
for switch type endstops;
remove for active types (e.g. opto)



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Derived from RAMPS 1.4 reprap.org/wiki/RAMPS1.4

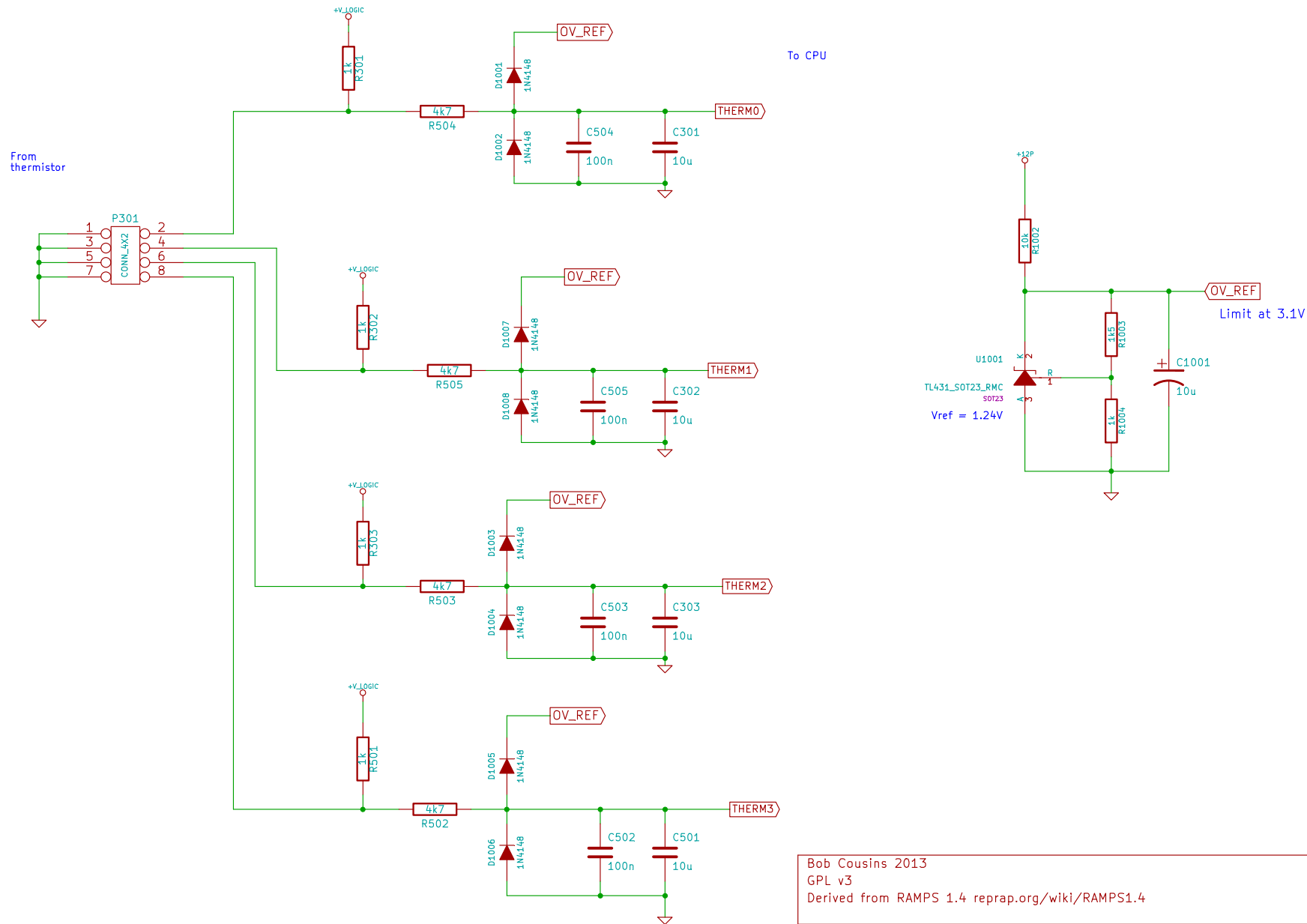
File: con_inputs.sch
Sheet: /Endstop Inputs/

Title: RAMPS-FD (RAMPS for Arduino Due)

Size: A4 Date: 2 jan 2014
KiCad E.D.A. eeschema (2013-07-07 BZR 4022)-stable

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Thermistor Inputs



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File: thermistor_inputs.sch
 Sheet: /Thermistor inputs/
Title: RAMPS-FD (RAMPS for Arduino Due)

Size: A4	Date: 2 jan 2014	Rev: v1 Issue B
KiCad E.D.A. eeschema (2013-07-07 BZR 4022)-stable		Id: 10/10