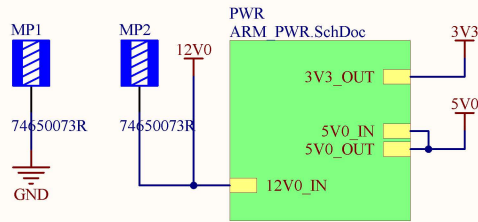
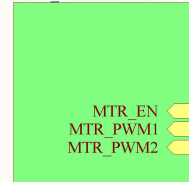


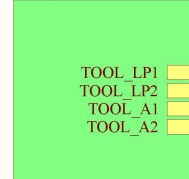
QSET Arm Control Board



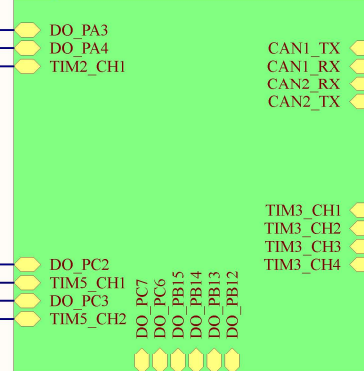
HB_MTR_DRIVE
ARM_Motor.SchDoc



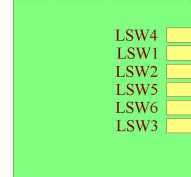
TOOLING
ARM_TOOLING.SchDoc



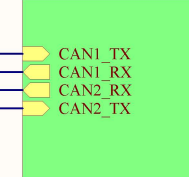
STM32F446
ARM_MCU.SchDoc



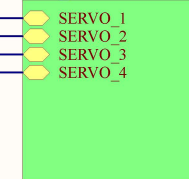
Limit SW
ARM_LIMIT_SW.SchDoc



CAN
CAN.SchDoc

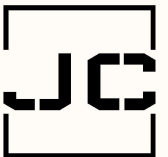


SERVO
ARM_SERVO.SchDoc



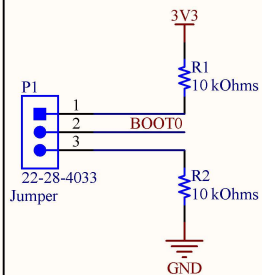
QUEEN'S
SPACE
ENGINEERING
TEAM

Title: ARM Control Board				
Page Contents: TOP.SchDoc				
Drawn By: Jacob Chisholm			Checked By: None	
Size: A4	Number: 1	Revision: *****		
Date: 1/10/2025	Time: 5:50:20 PM	Sheet 1	of 9	
License:				
Email: JacobChisholm1010@gmail.com			Website: https://jchisholm204.github.io	
File: C:\Users\Jacob\Documents\GitHub\robocopyright\Arm_Control_Board\TOP.SchDoc				

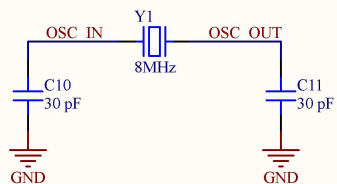
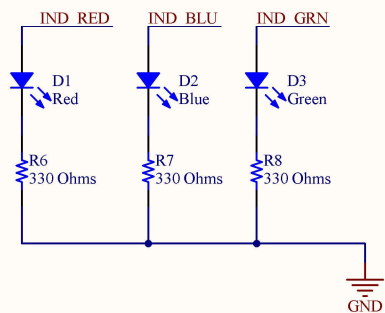


MCU

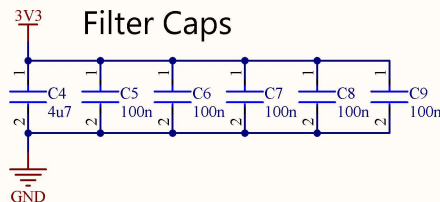
Boot Jumpers



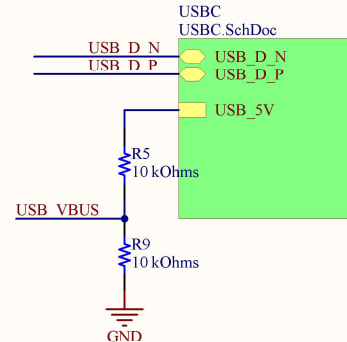
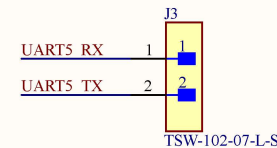
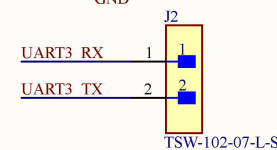
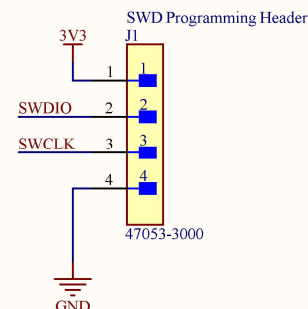
Indication



Filter Caps



MCU Connectors



Title: **ARM Control Board**

Page Contents: **ARM_MCU.SchDoc**

Drawn By: **Jacob Chisholm** Checked By: **None**

Size: A4 Number: **2** Revision: *********

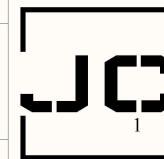
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License:

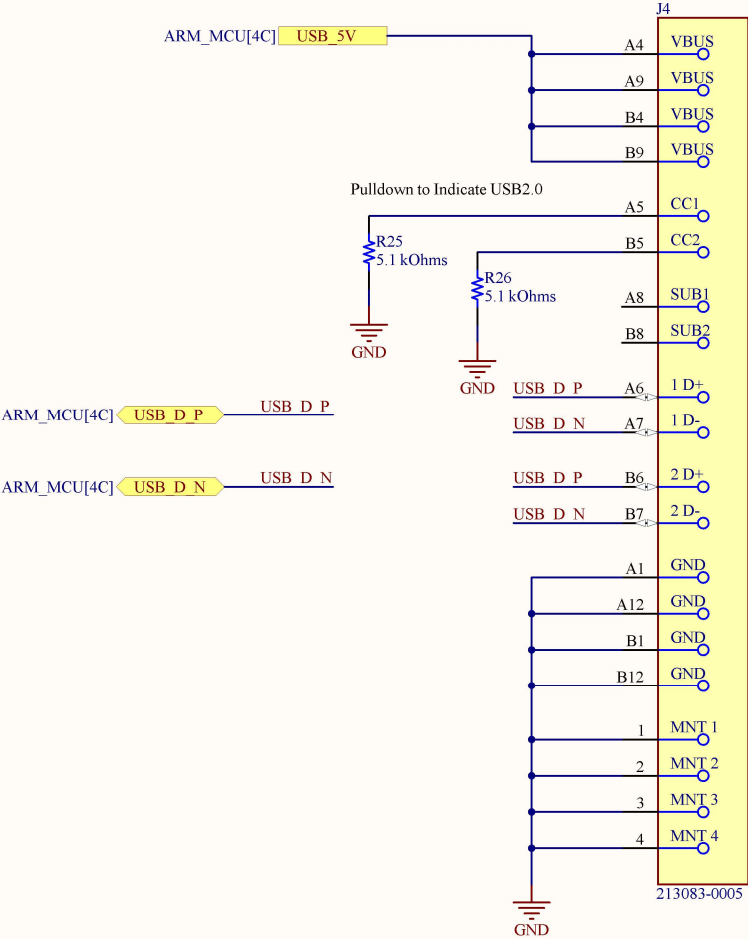
Email: JacobChisholm1010@gmail.com

Website: <https://jchisholm204.github.io>

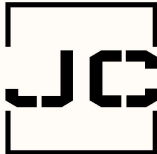
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USB C Connector



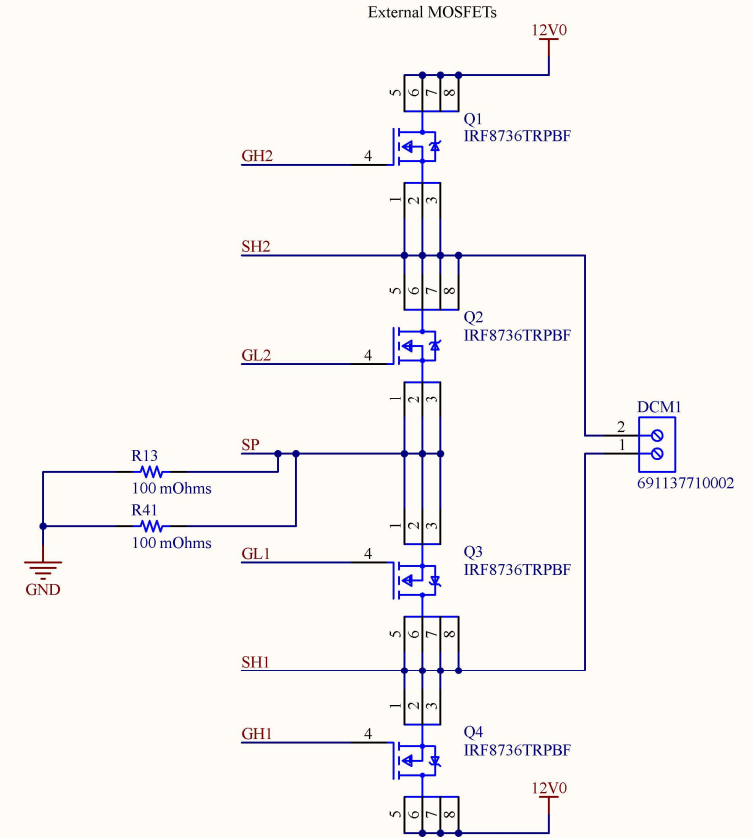
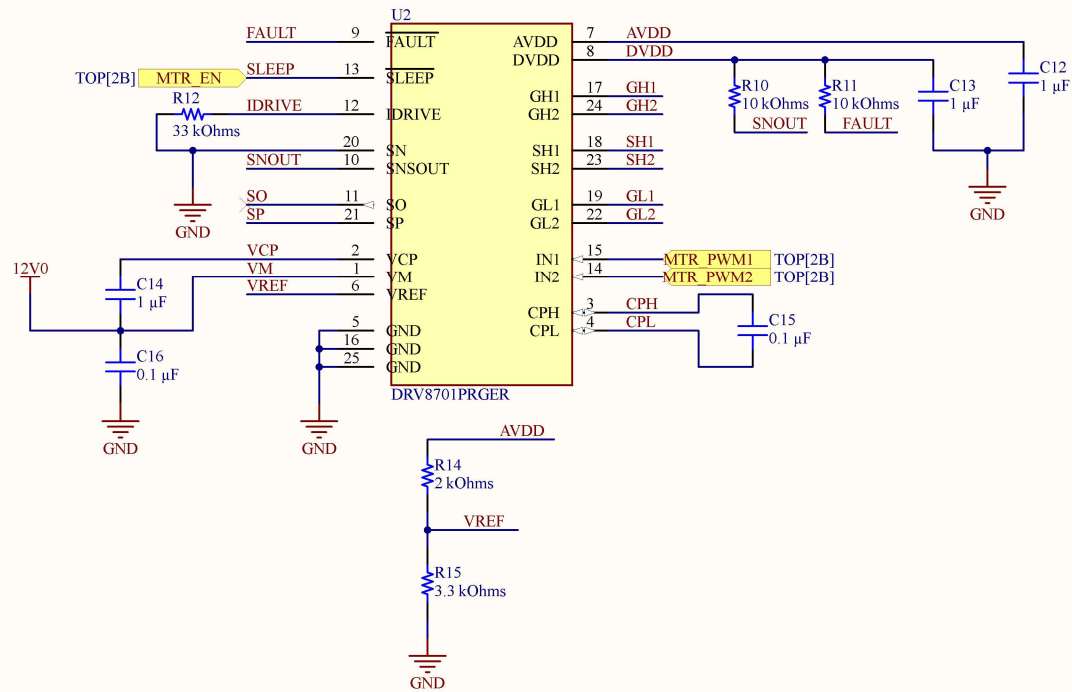
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Size: A4	Number: 3	Revision: *****	
Date: 1/10/2025	Time: 5:50:22 PM	Sheet 3 of 9	
License:			
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File: C:\Users\Jacob\Documents\GitHub\robocopyright\Arm_Control_Board\USBC.SchDoc			



Motors

H-Bridge

Used to Control a Linear Actuator in the Wrist



Title: **ARM Control Board**

Page Contents: **ARM_Motor.SchDoc**

Drawn By: **Jacob Chisholm** Checked By: **None**

Size: A4 Number: **4** Revision: *********

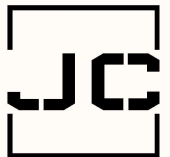
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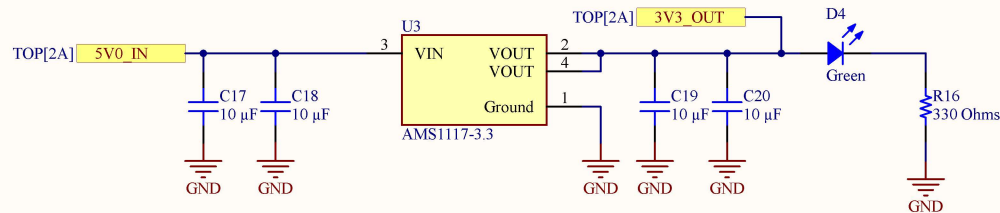
Website: <https://jchisholm204.github.io>

File: C:\Users\Jacob\Documents\GitHub\robocopyright\Arm_Control_Board\ARM_Motor.SchDoc



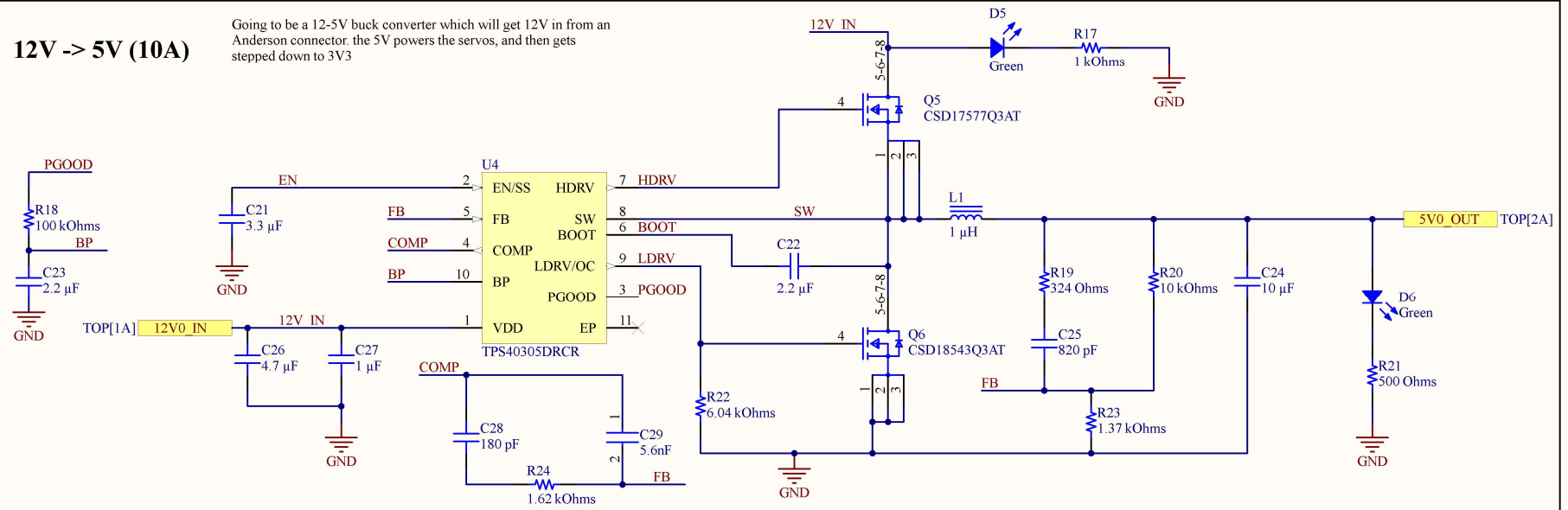
Power

5V -> 3V3 LDO with Indicator LED



12V -> 5V (10A)

Going to be a 12-5V buck converter which will get 12V in from an Anderson connector. the 5V powers the servos, and then gets stepped down to 3V3



Title: **ARM Control Board**

Page Contents: **ARM_PWR.SchDoc**

Drawn By: **Jacob Chisholm** Checked By: **None** Matthew Szalawiga

Size: A4 Number: **5** Revision: *********

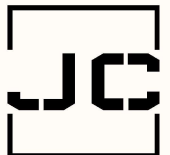
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Email: JacobChisholm1010@gmail.com

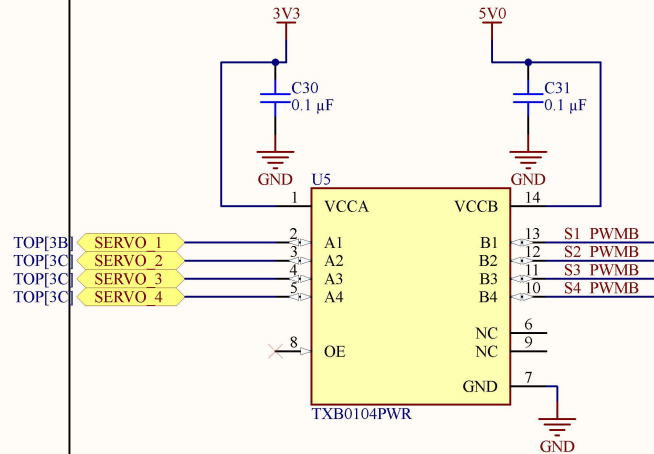
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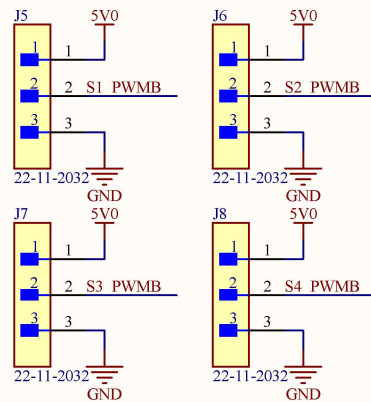


Servo Logic Level Shifting

While most 5V Servos support 3V3 Logic, cannot guarantee the new ones will



Servo Headers



Title: **ARM Control Board**

Page Contents: **ARM_SERVO.SchDoc**

Drawn By: **Jacob Chisholm** Checked By: **None**

Size: A4 Number: **6** Revision: *********

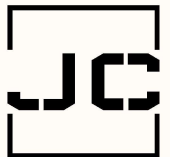
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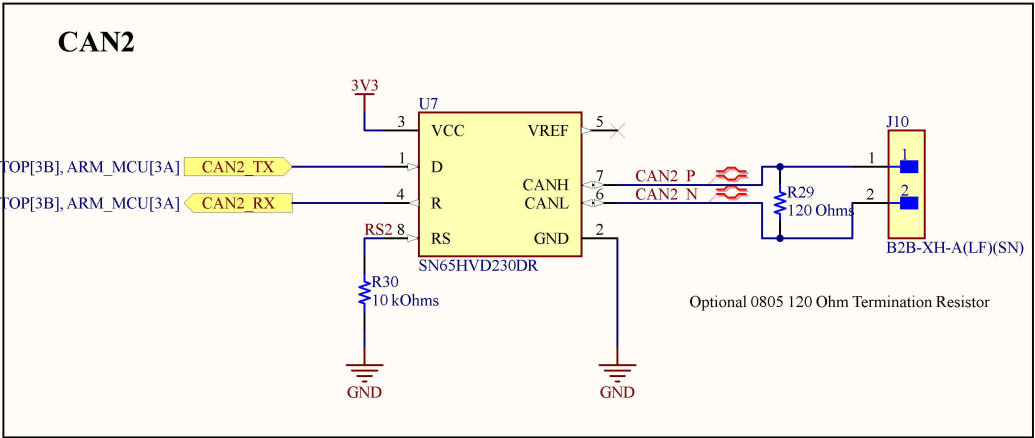
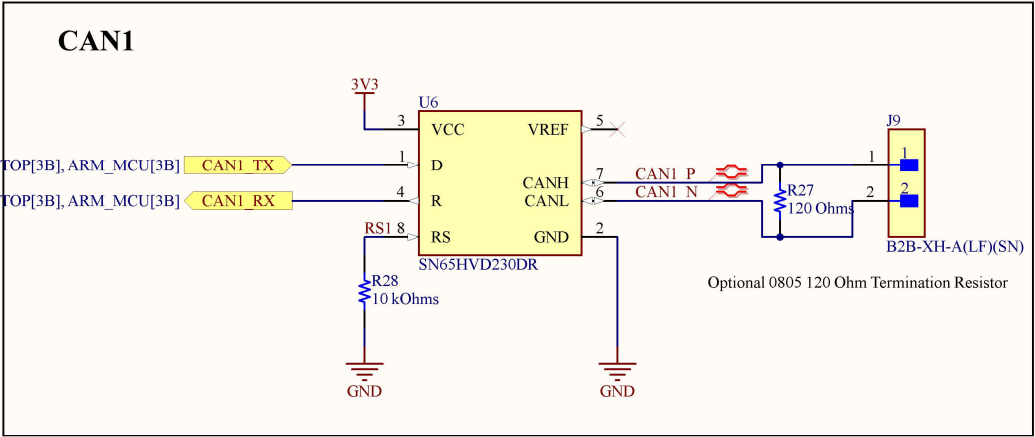
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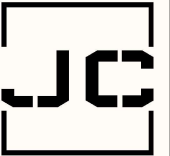
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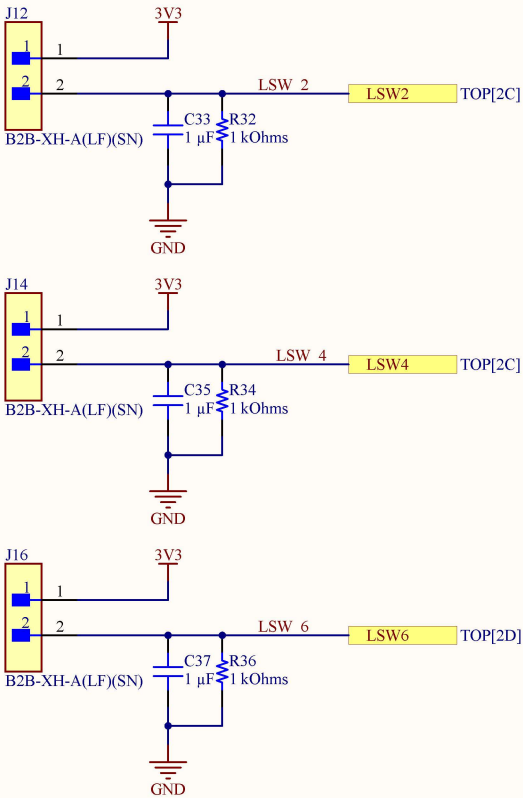
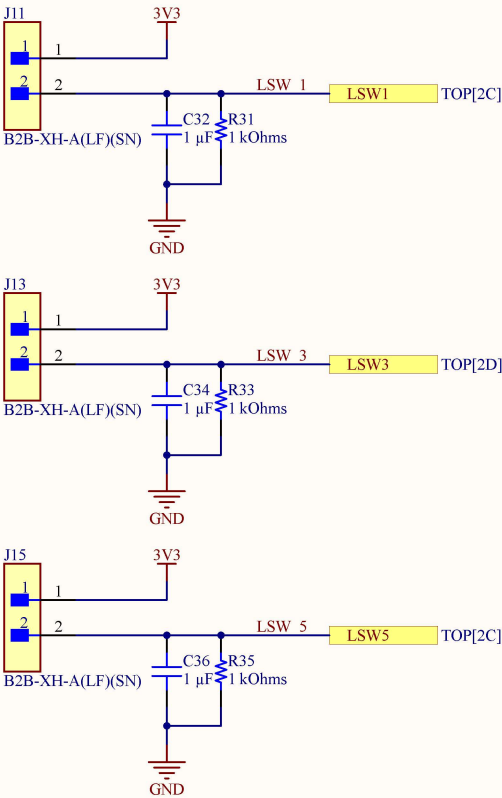
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Size: A4	Number: 7	Revision: *****	
Date: 1/10/2025	Time: 5:50:24 PM	Sheet 7 of 9	
License:			
Email: JacobChisholm1010@gmail.com		Website: https://jchisholm204.github.io	
File: C:\Users\Jacob\Documents\GitHub\robocopyright\Arm_Control_Board\CAN.SchDoc			



Limit Switches

LSW_n are limit switches that just need to go to Digital GPIO

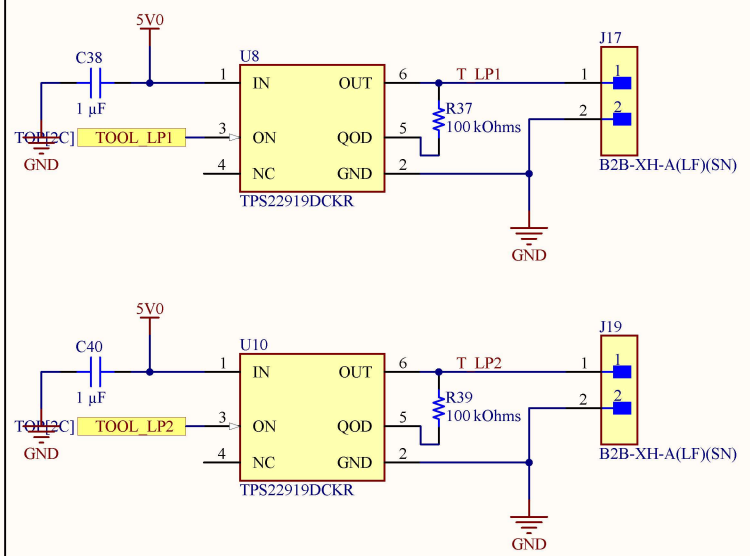
SPDT Rollers operated as SPST switches
Switch Wiring:
Pin 1: NO
Pin 2: Common



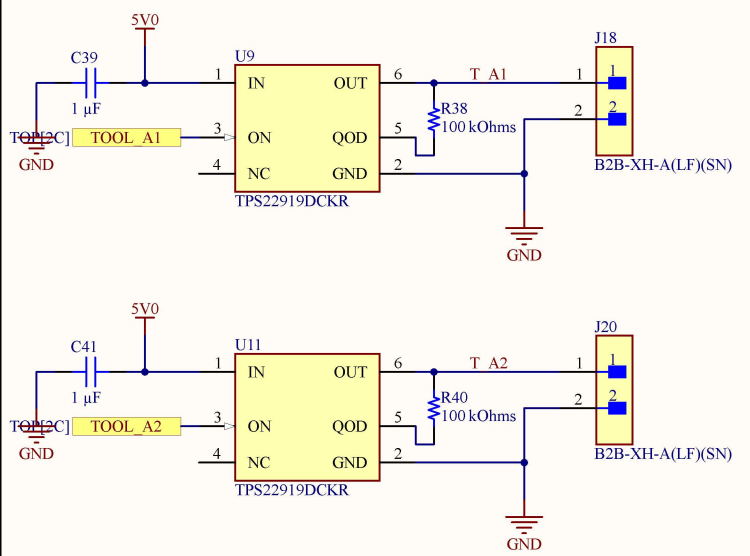
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Page Contents: ARM_LIMIT_SW.SchDoc			
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Date: 1/10/2025	Time: 5:50:24 PM	Sheet 8 of 9	
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Email: JacobChisholm1010@gmail.com		Website: https://jchisholm204.github.io	
File: C:\Users\Jacob\Documents\GitHub\robocopyright\Arm_Control_Board\ARM_LIMIT_SW.SchDoc			



Wrist Laser Pointers



Additional



Title: ARM Control Board			
Page Contents: ARM_TOOLING.SchDoc			
Drawn By: Jacob Chisholm		Checked By: None	
Size: A4	Number: 9	Revision: *****	
Date: 1/10/2025	Time: 5:50:25 PM	Sheet 9 of 9	
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Email: JacobChisholm1010@gmail.com		Website: https://jchisholm204.github.io	
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