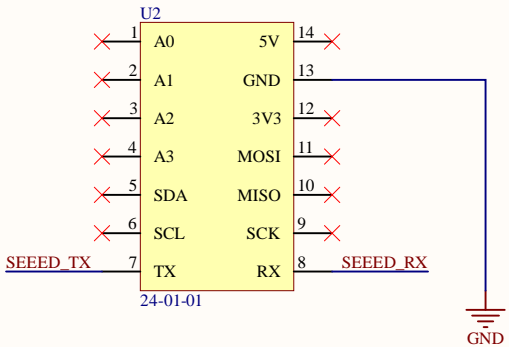
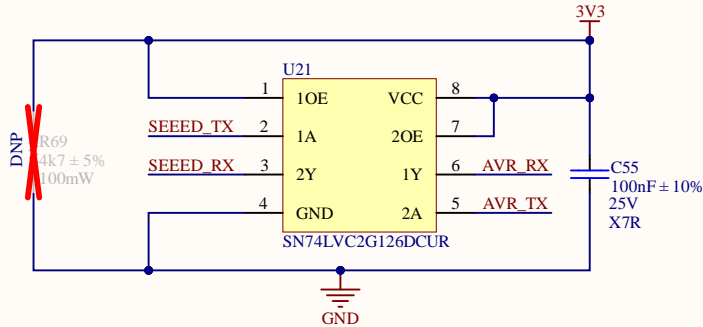


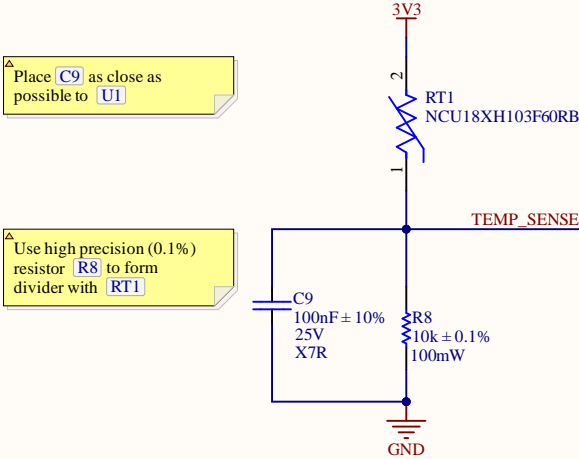
SEEDUINO



BUFFER

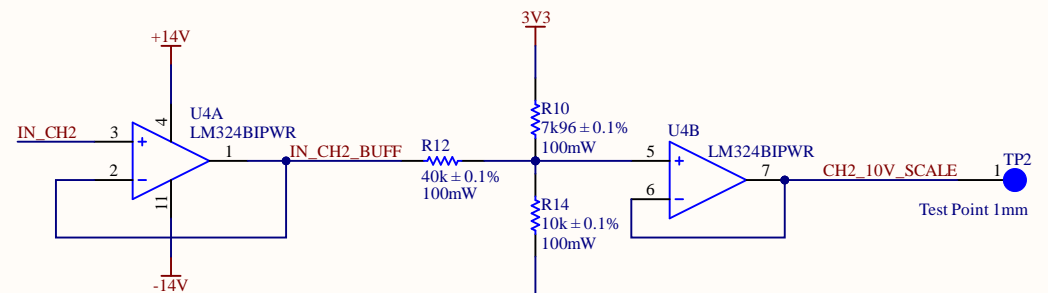
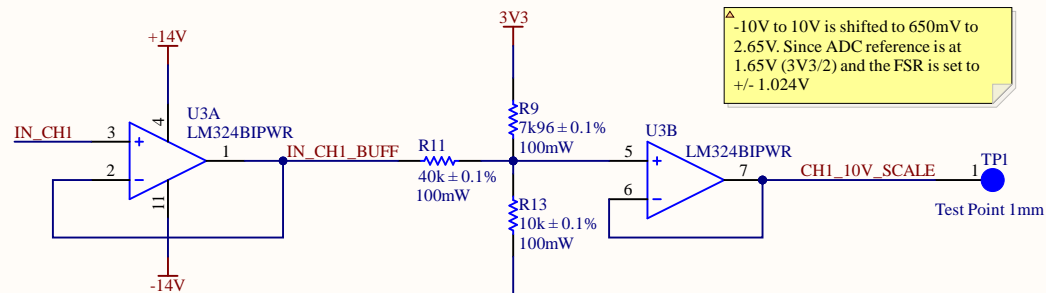


AMBIENT TEMP

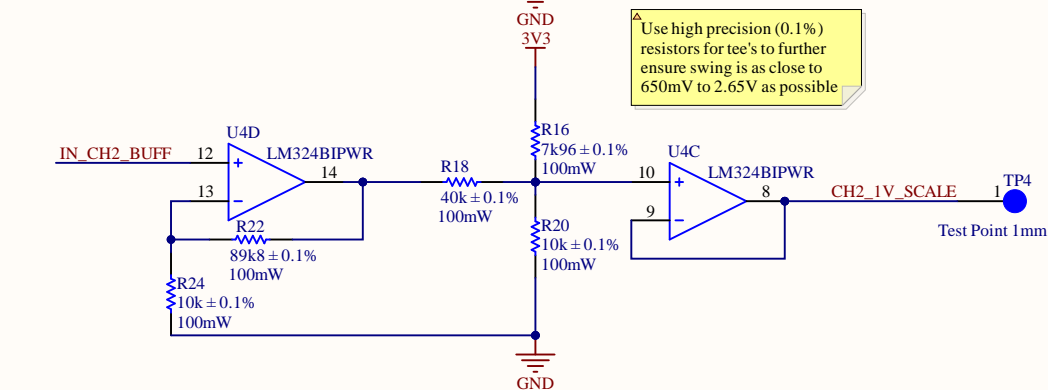
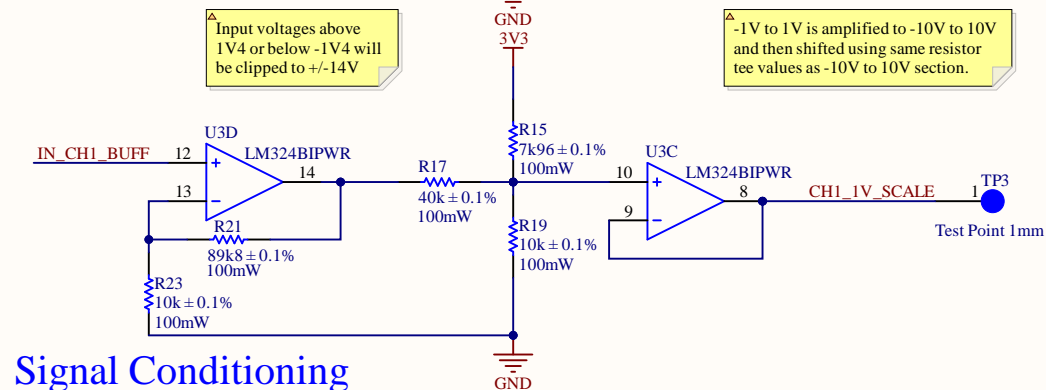


Title		
Seeeduino and Temp		
Size	Number	Revision
A4	2	1
Date:	5/22/2025	Sheet 2 of 11
File:	C:\Users\...\Seeeduino and Temp.SchDoc	Drawn By: Rhett Humphreys

A

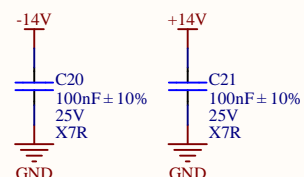
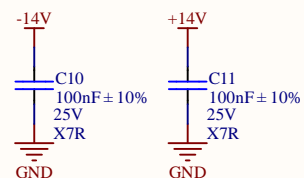


B

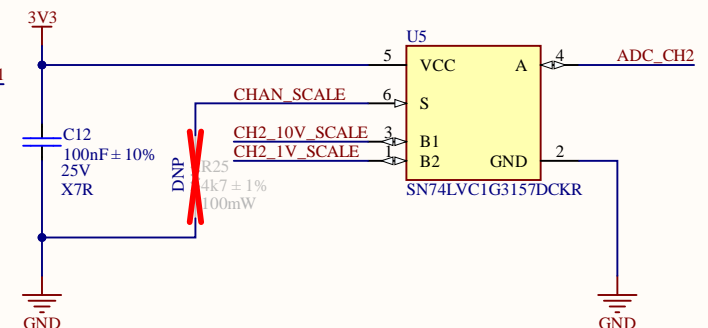
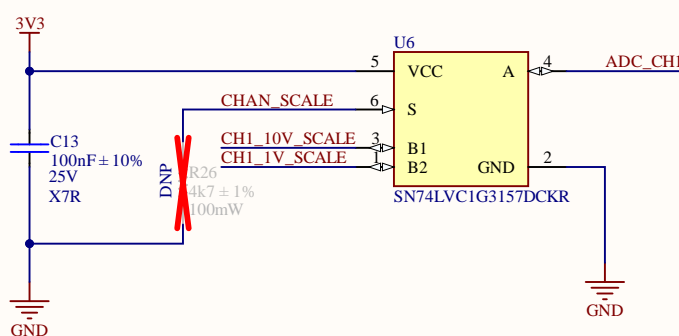


Signal Conditioning

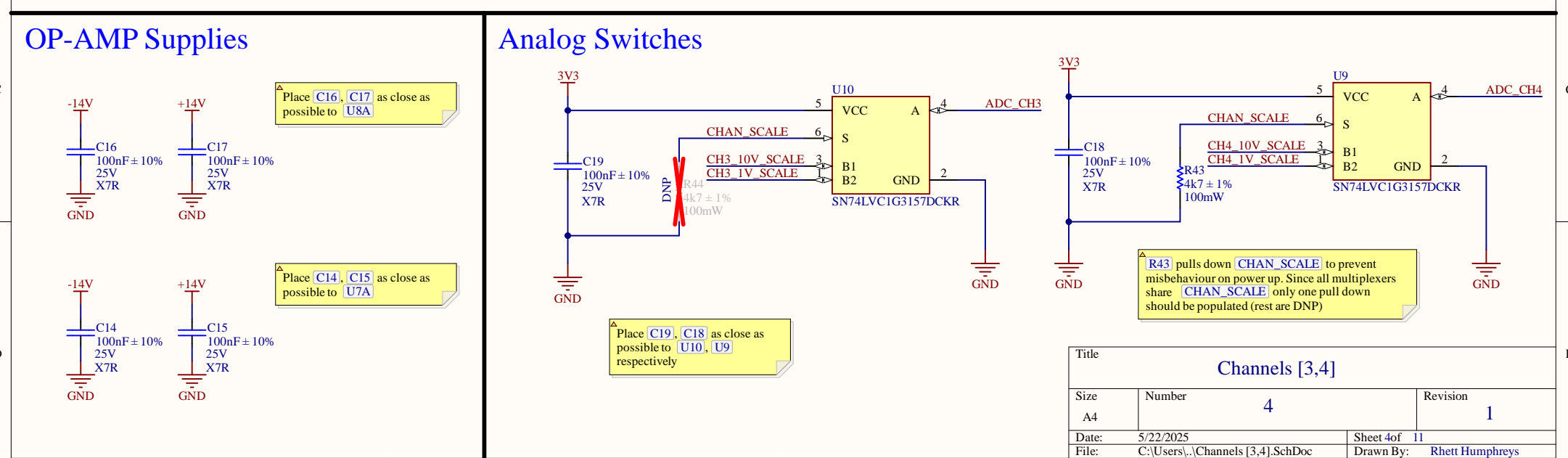
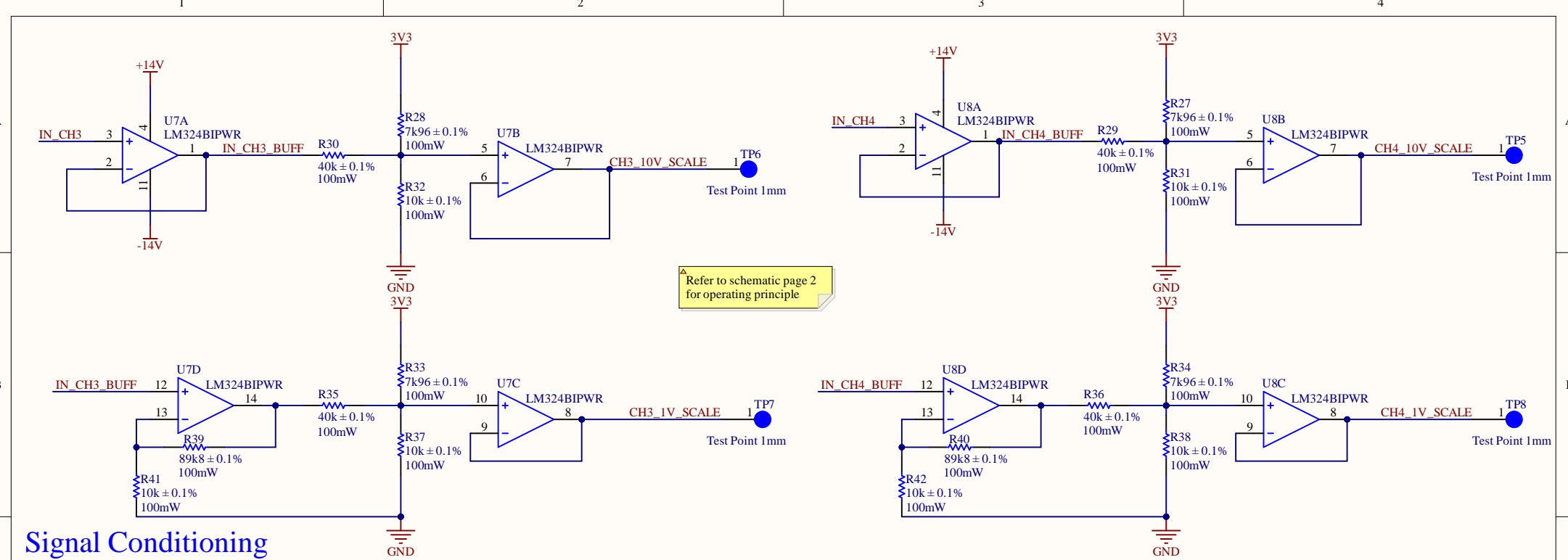
OP-AMP Decoupling

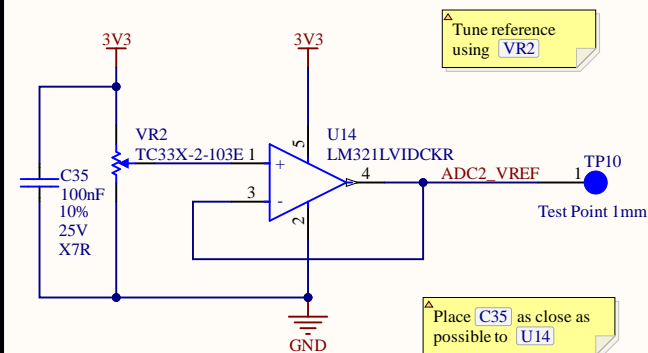
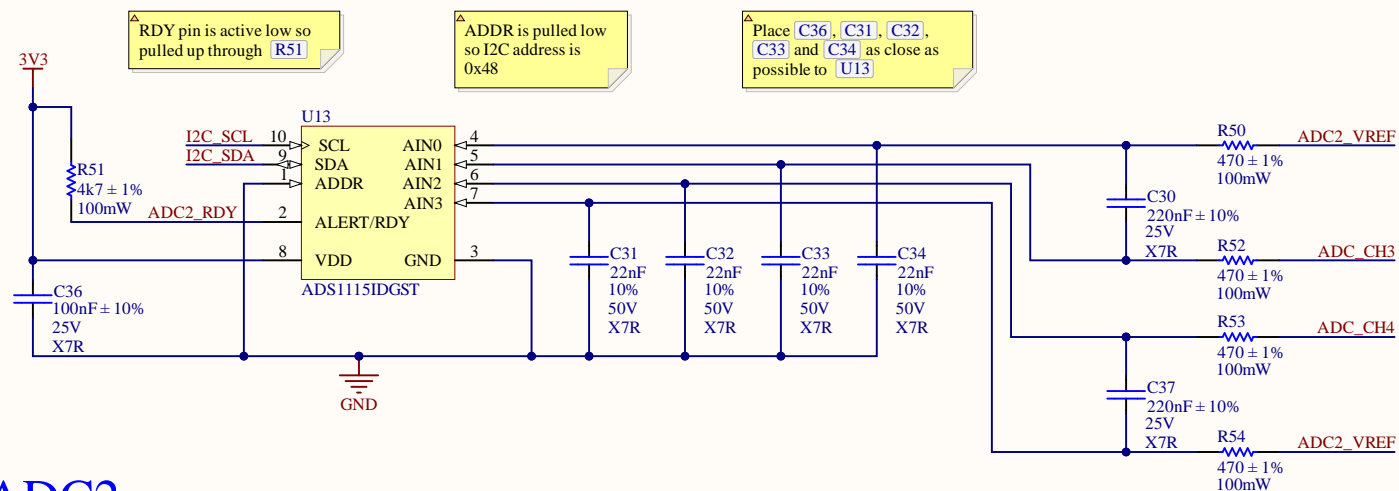
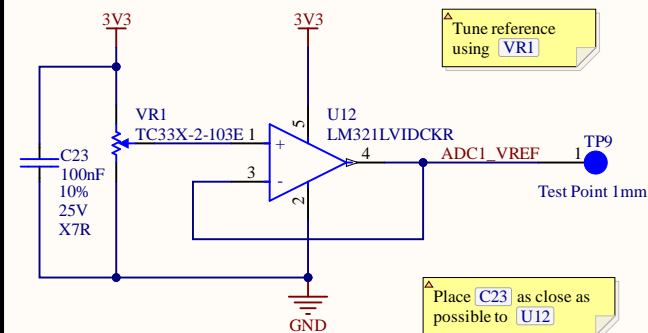
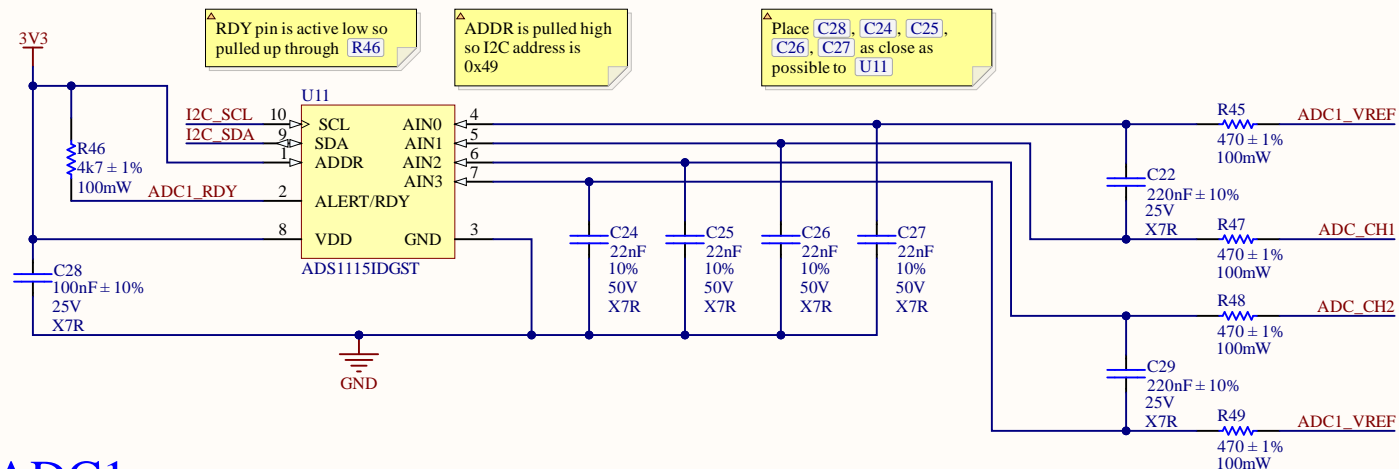


Analog Switches

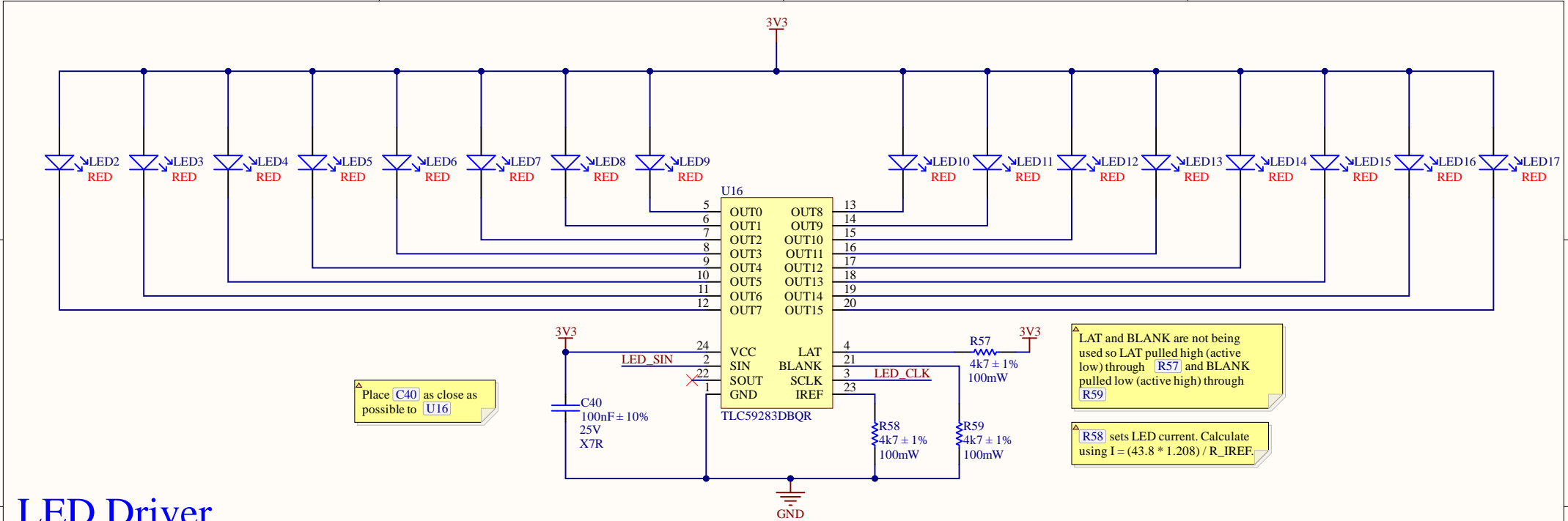


Title		
Channels [1,2]		
Size	Number	Revision
A4	3	1
Date:	5/22/2025	Sheet 3 of 11
File:	C:\Users\...\Channels [1,2].SchDoc	Drawn By: Rhett Humphreys



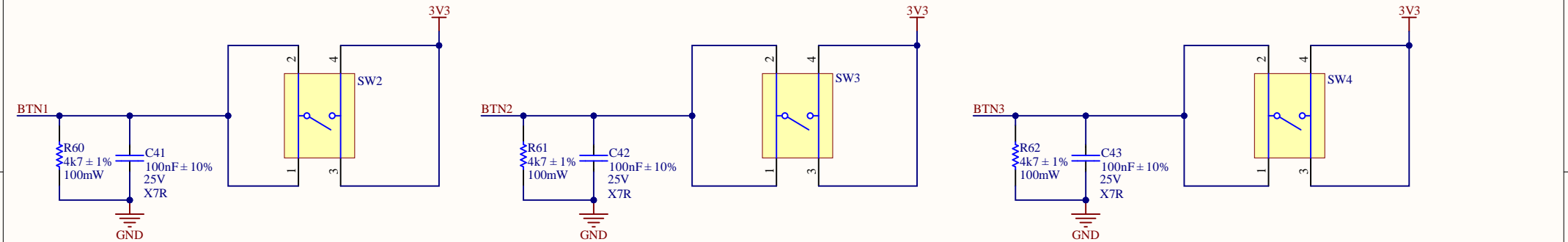


Title				ADC			
Size		Number				Revision	
A4		5				1	
Date:		5/22/2025			Sheet 5 of		11
File:		C:\Users\...\ADC.SchDoc			Drawn By:		Rhett Humphreys



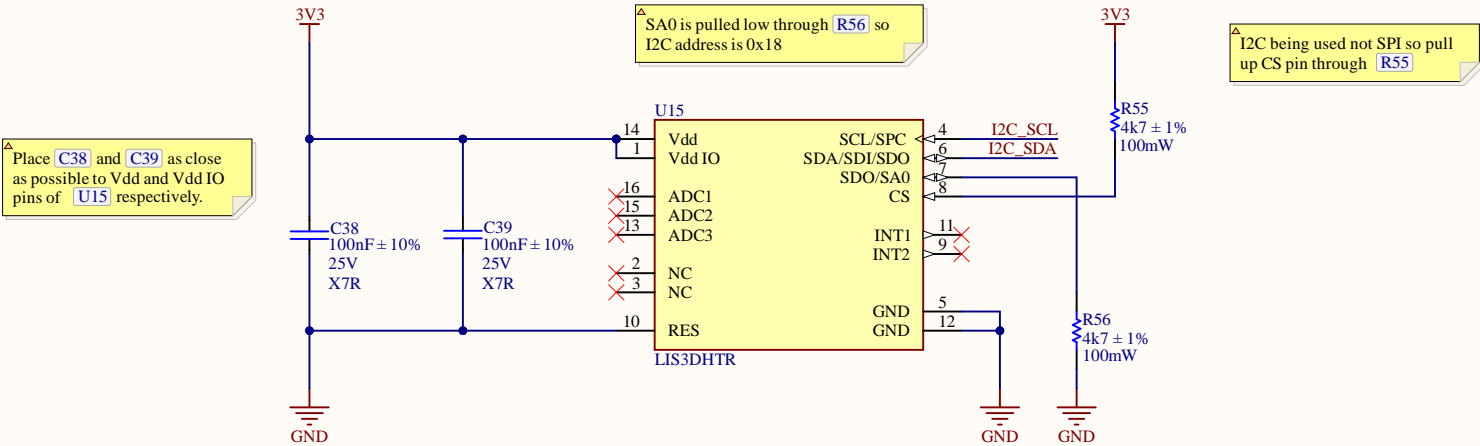
LED Driver

Buttons



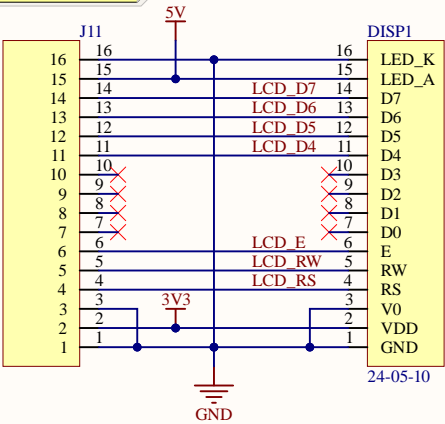
Place C41, C42 and C43 as close as possible to GPIO pins used for buttons of U1

Title		
Alarms and Buttons		
Size	Number	Revision
A4	6	1
Date:	5/22/2025	Sheet 6 of 11
File:	C:\Users\...\Alarms and Buttons.SchDoc	Drawn By: Rhett Humphreys



Title			Accelerometer	
Size	Number	Revision		
A4	7	1		
Date:	5/22/2025	Sheet 7 of	11	
File:	C:\Users\...\Accelerometer.SchDoc	Drawn By:	Rhett Humphreys	

▲ J11 is male to male header soldered to DISP1 PCB.

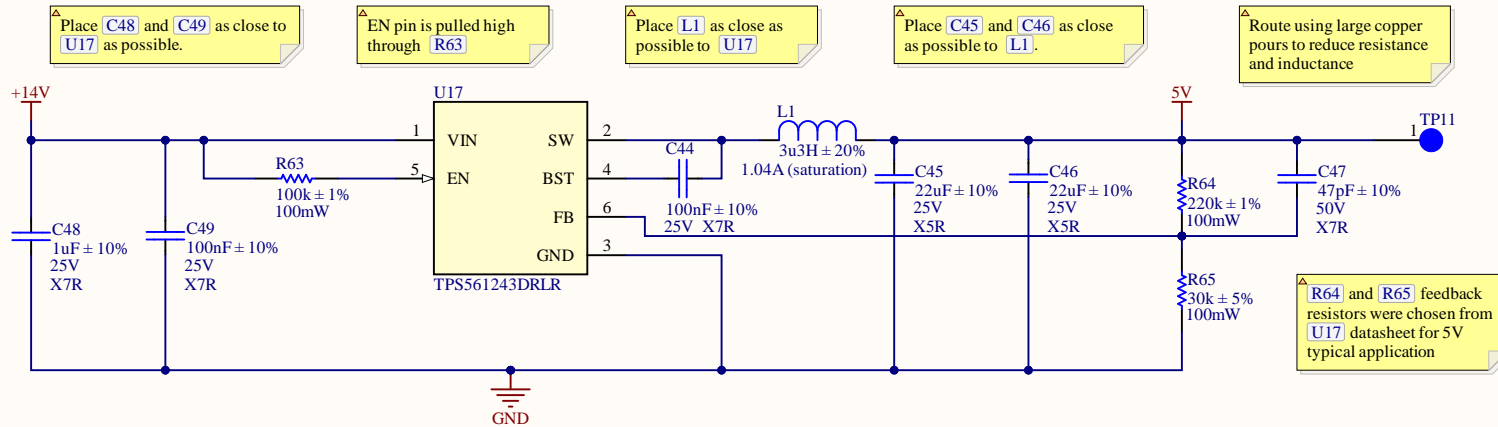


▲ LCD module has on-board decoupling so no extra capacitors needed

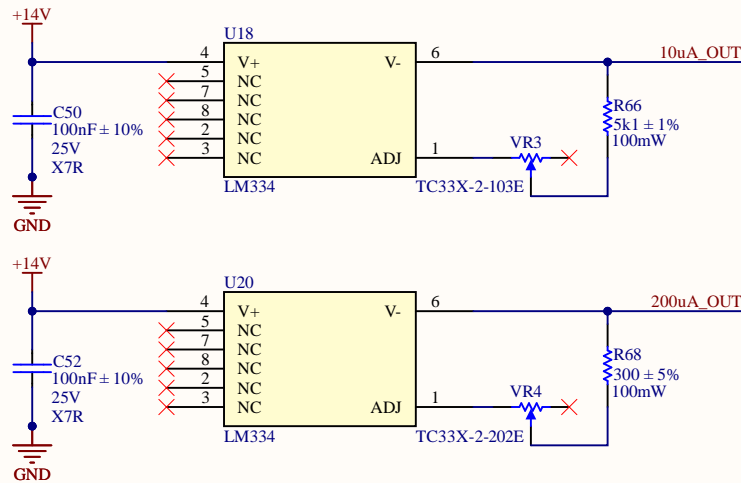
▲ LCD being used in 4-bit mode so D0 to D3 are NC

▲ LCD board has current limiting resistor for backlight

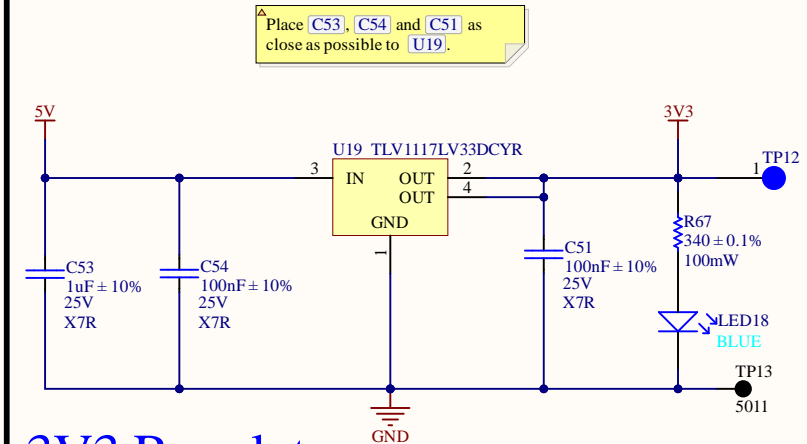
Title			LCD
Size	Number	Revision	
A4	8	1	
Date:	5/22/2025	Sheet 8 of	11
File:	C:\Users\...\LCD.SchDoc	Drawn By:	Rhett Humphreys



5V Regulator

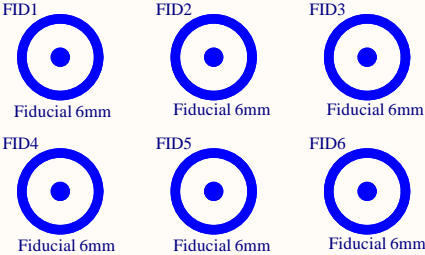


Current Sources



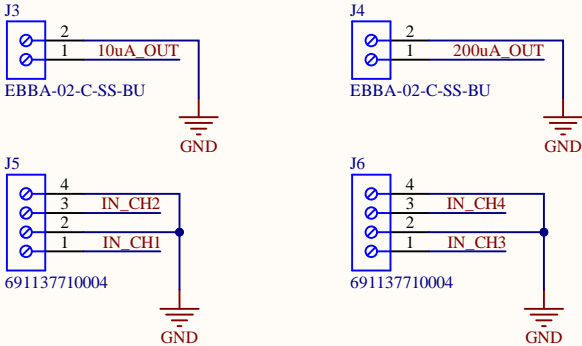
3V3 Regulator

Title		
Power		
Size	Number	Revision
A4	9	1
Date:	5/22/2025	Sheet 9 of 11
File:	C:\Users\...\Power.SchDoc	Drawn By: Rhett Humphreys



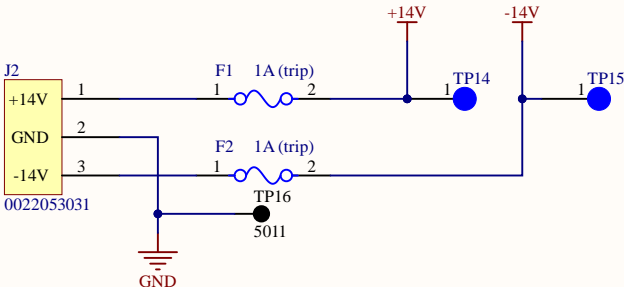
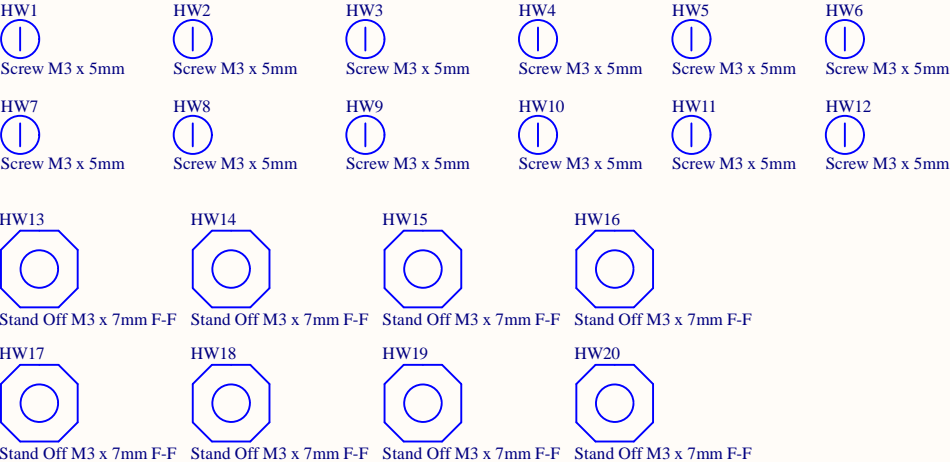
Fiducials

Mounting Holes



Place J3 and J4 relatively close to J5 and J6.

Screw Terminals



Power Connector

Title		
Hardware		
Size	Number	Revision
A4	10	1
Date:	5/22/2025	Sheet 1 of 11
File:	C:\Users\...\Hardware.SchDoc	Drawn By: Rhett Humphreys

Wires

W1 should be used for +14V connection, W2 for GND and W3 for -14V

- W1

22-03-03
24AWG, multistrand, 1000mm RED
- W2

22-03-06
24AWG, multistrand, 1000mm GREEN
- W3

22-03-01
24AWG, multistrand, 1000mm BLACK

Connector Housing

J8

0022013037
Molex female housing 2.54mm 3 pos

Crimps

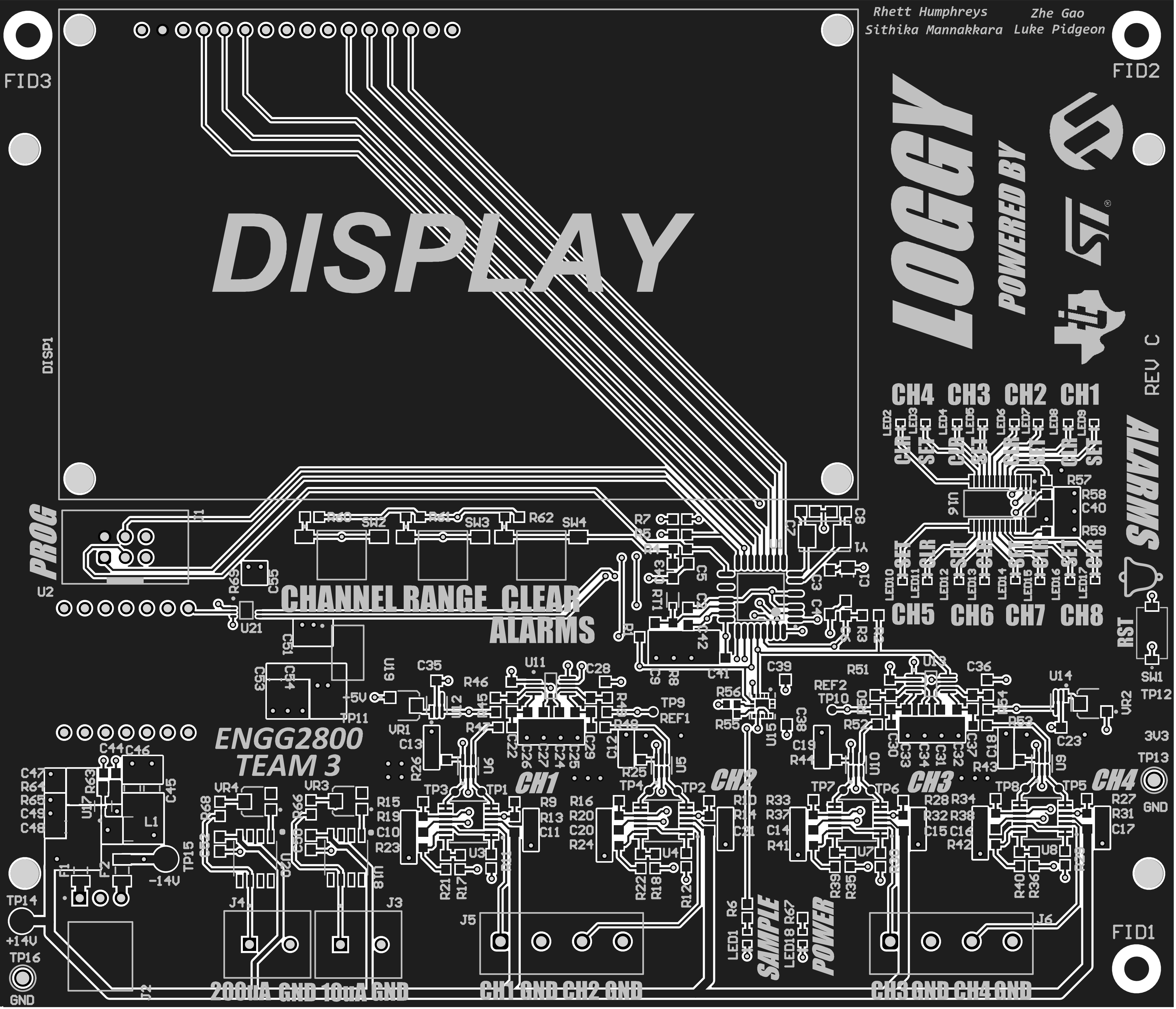
- J7

0008550102
Molex crimp gold 22-30 AWG
- J9

0008550102
Molex crimp gold 22-30 AWG
- J10

0008550102
Molex crimp gold 22-30 AWG

Title			Cables	
Size	Number		Revision	
A4	11		1	
Date:	5/22/2025		Sheet11 of 11	
File:	C:\Users\...\Cables.SchDoc		Drawn By: Rhett Humphreys	



Rhett Humphreys Zhe Gao
Sithika Mannakkara Luke Pidgeon

FID2

FID3

DISPLAY

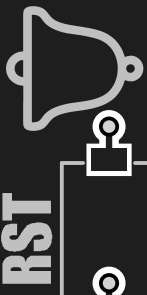
LOGGY

POWERED BY



REV C

ALARMS



RST

3V3

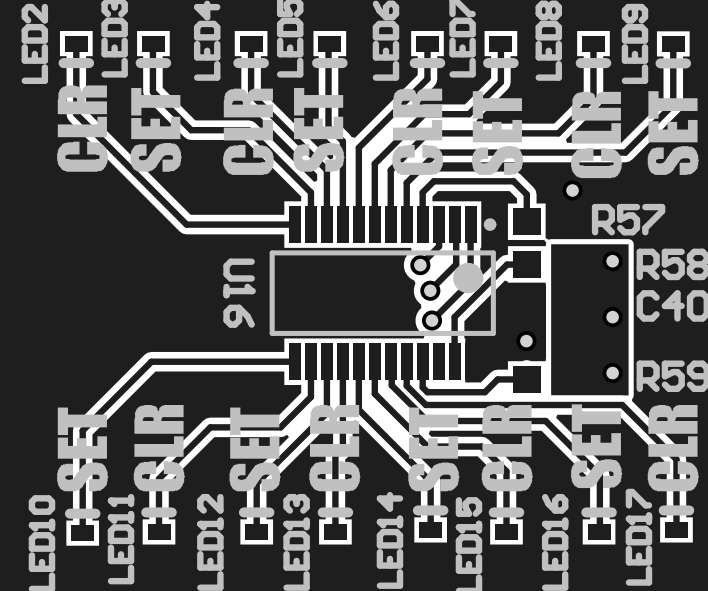
TP13

GND

FID1



CH4 CH3 CH2 CH1



CH5 CH6 CH7 CH8

CHANNEL RANGE CLEAR
ALARMS

ENG2800
TEAM 3

CH1

CH2

CH3

CH4

SAMPLE

POWER

200uA GND 10uA GND

CH1 GND CH2 GND

CH3 GND CH4 GND

PROG

U2

DISP1

+14V

TP16

GND

TP14

-14V

F1

F2

U17

R63

R64

R65

C49

C48

C44

C46

C45

L1

U3

U4

U5

U6

U7

U8

U9

U10

U11

U12

U13

U14

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