

Date: 10/15/22 Revision: 9.1



Important Notes about this Schematic:

DESIGN NOTE:
Design notes in gray text boxes give information about design requirements and decisions.

LAYOUT NOTE:
Layout notes in red text boxes give information regarding layout requirements.

Bucky Humbuckers - Group 3

Bucky's Guitar Hero

Arian Noori | Megan Choy |
Aaron Cohen | Thomas Nowak

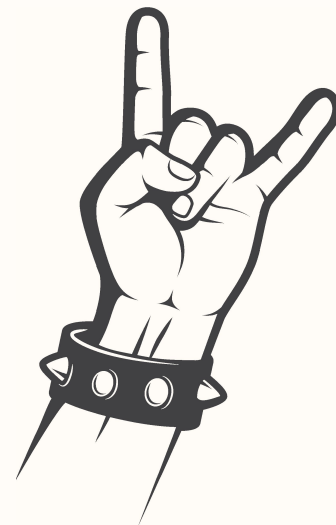
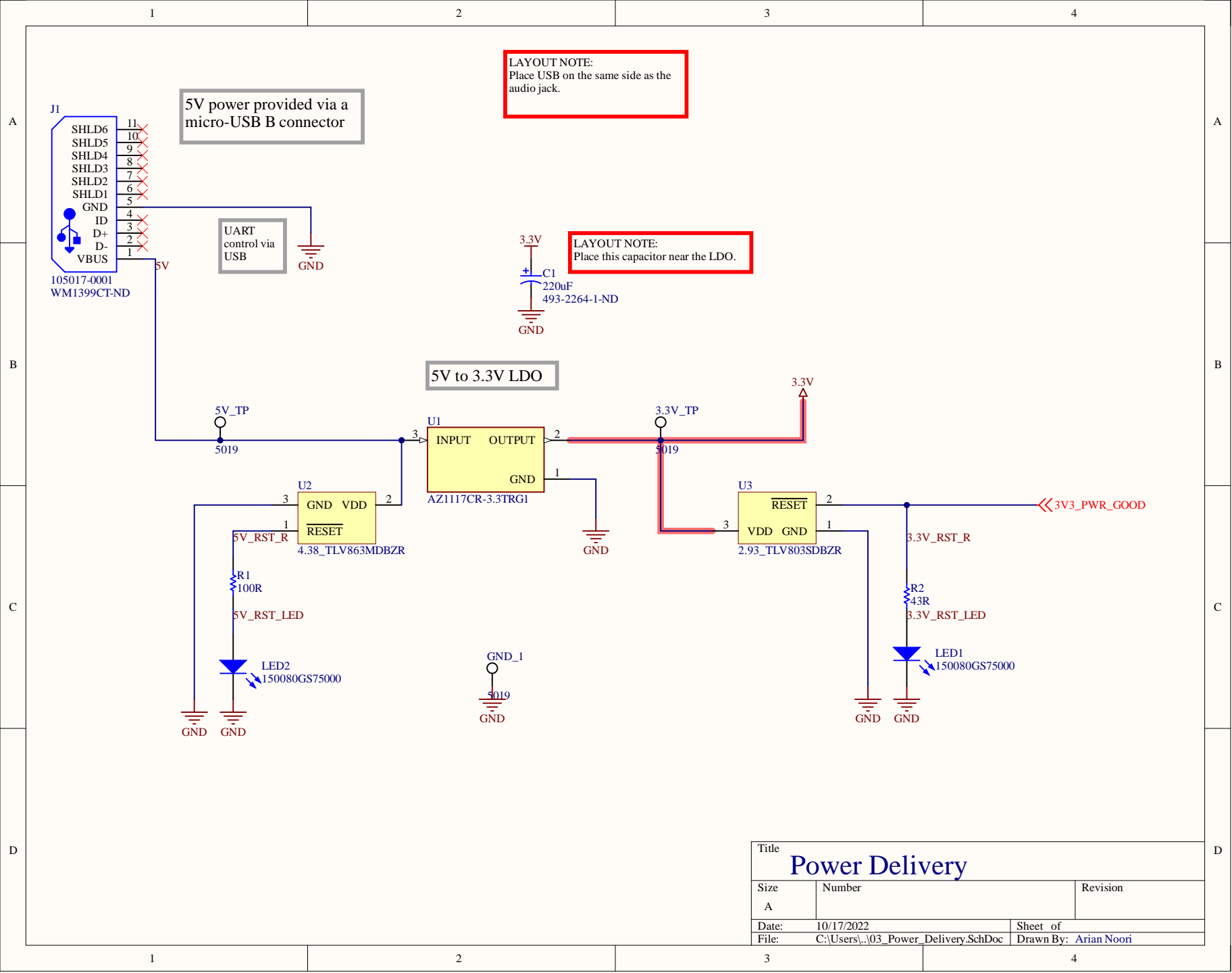


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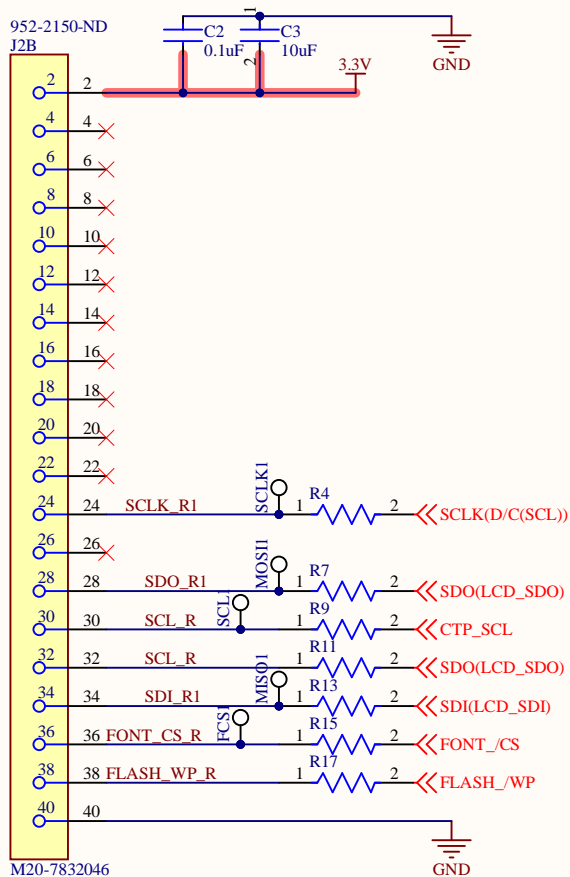
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Page 2: Digital & PSOC6
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Page 5: Analog Signal Processing



Title		
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Date:	10/17/2022	Sheet of
File:	C:\Users\...\01-Title_Page.SchDoc	Drawn By: Arian Noori

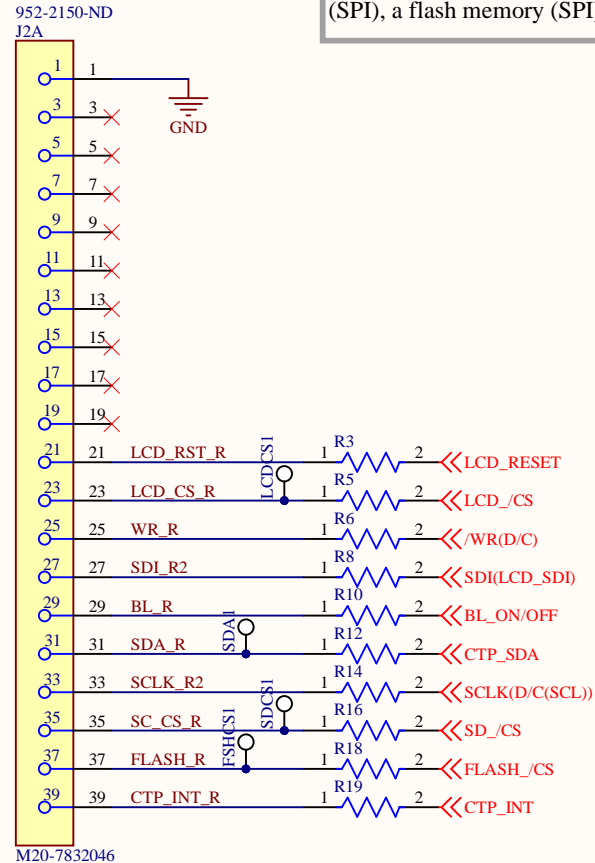


LAYOUT NOTE:
Caps should be within 200mil of pin 1 and 2. Consider placing on the back.



LAYOUT NOTE:
All jumpers for these LCD pins should be on the BACK side of the board to free up room on the top. Consider also placing some of the test points on the rear as well.

LAYOUT NOTE:
This connector will be placed on the BOTTOM layer of the board, but soldered on the top. This will ensure the LCD pins line up with the header.



DESIGN NOTE:
This 40-pin header will interface with the ER-TFTM032-3 240x320 display. The display (SPI) has capacitive touch (I2C), an SD card (SPI), a font chip (SPI), a flash memory (SPI).

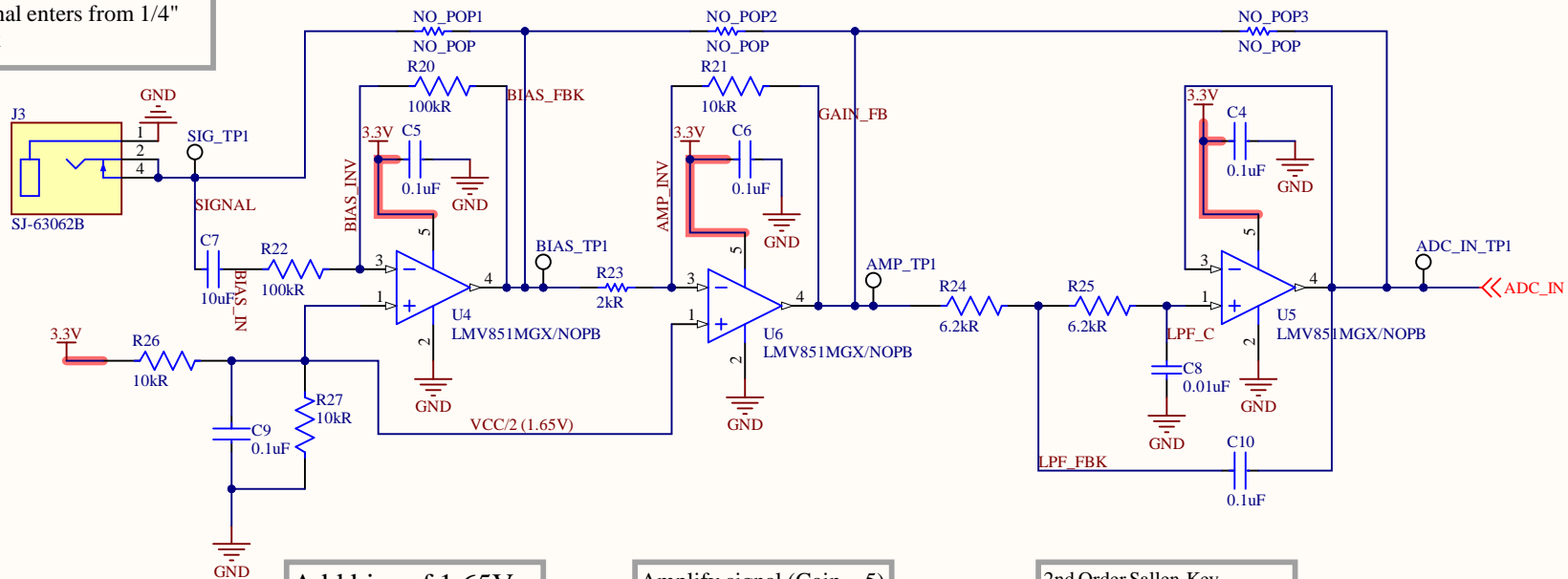
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LCD		
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File:	C:\Users\...\04_LCD.SchDoc	Drawn By: Arian Noori

LAYOUT NOTE:
The NO_POPs can go anywhere.

NO_POPs are to bypass parts of the
analog design if need be. It also
allows for signal re-routing.

LAYOUT NOTE:
Place the components of the
respective blocks (bias/gain/filter)
near the op amp. The op amps don't
need to be close to each other, just
the components of each op amp.

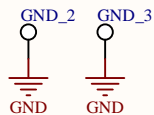
Signal enters from 1/4"
jack



Add bias of 1.65V

Amplify signal (Gain = 5)

2nd Order Sallen-Key
low-pass filter (Fc=2500Hz)



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Analog Signal Processing		
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File: C:\Users\...\05_Analog_SchDoc		Drawn By: Arian Noori