Clock

File: Clock.kicad_sch

Program Counter

File: ProgramCounter.kicad_sch

Registers

File: Registers.kicad_sch

ALU

File: ALU.kicad_sch

Memory Peripherals

File: MemoryPeripheral.kicad_sch

Control Logic

File: ControlLogic.kicad_sch

Memory

File: Memory.kicad_sch

Transfer

File: Transfer.kicad_sch

Keyboard

File: Keyboard.kicad_sch

Input and Output

File: InputOutput.kicad_sch

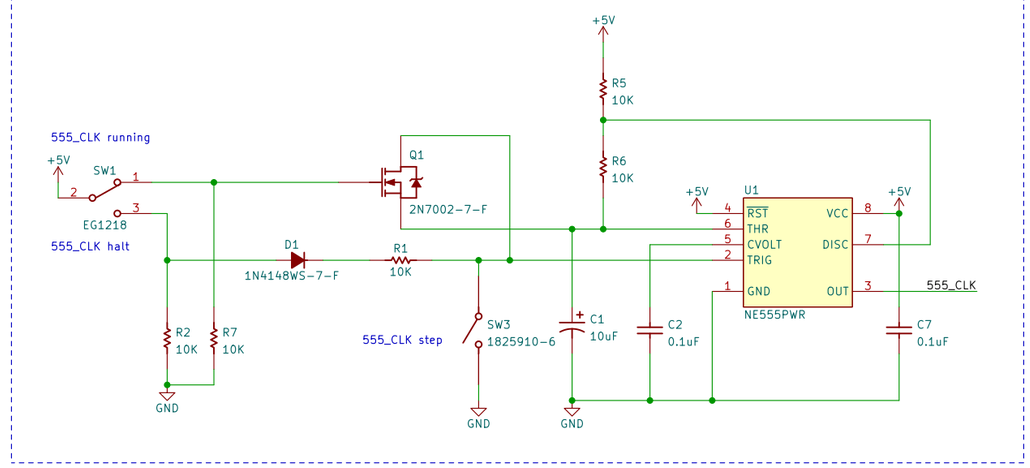
Riley Stuermer

Sheet: /
File: 8BitCPU.kicad_sch

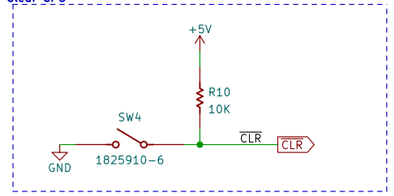
Title: 8-Bit CPU

Size: A3	Date: 2022-01-19	**Rev: V1.1**
KiCad E.D.A. kicad (6.0.0-0)		Id: 1/11

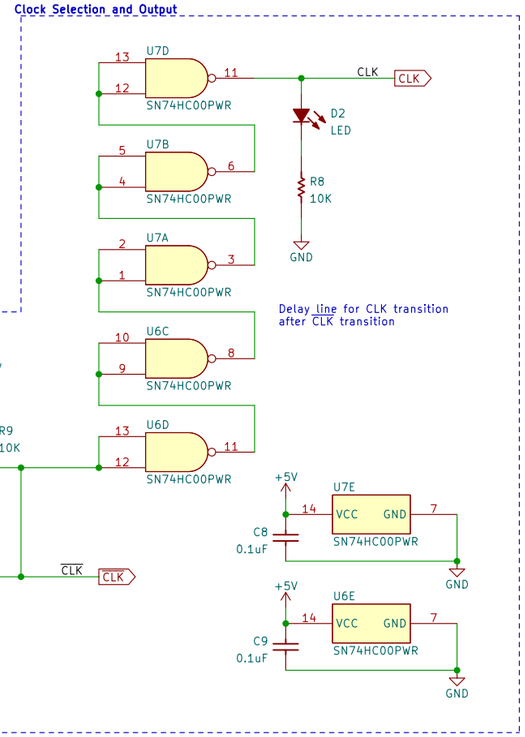
Low-Speed Controllable Clock



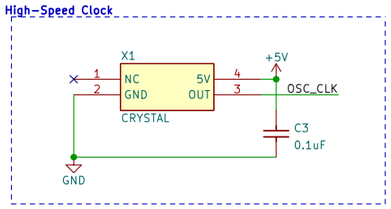
Clear CPU



Clock Selection and Output

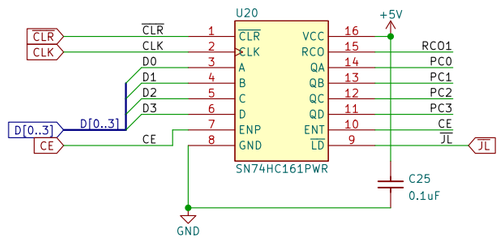


High-Speed Clock

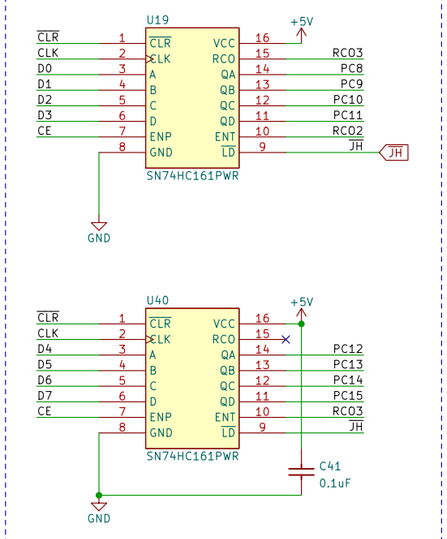


Riley Stuermer		
Sheet: /Clock/		
File: Clock.kicad_sch		
Title: Clock		
Size: A3	Date: 2022-01-19	**Rev: V1.1**
KiCad E.D.A. kicad (6.0.0-0)		Id: 2/11

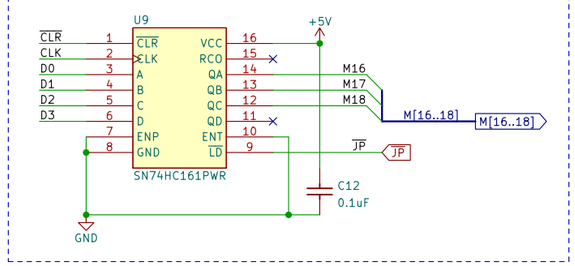
Low-Byte Component of Program Counter



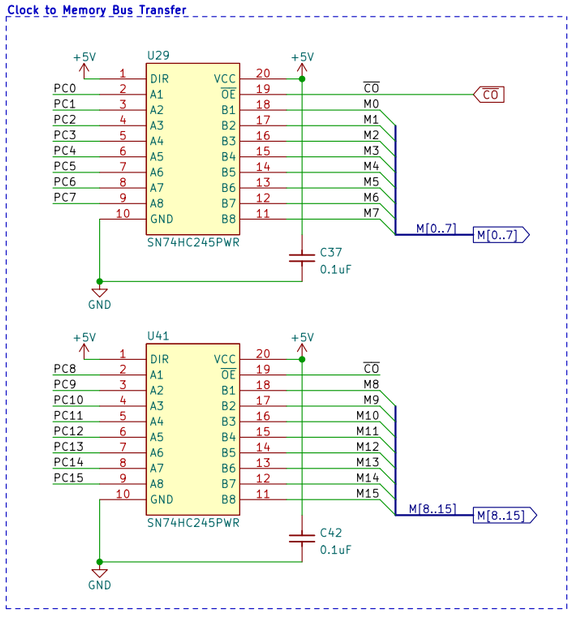
High-Byte Component of Program Counter



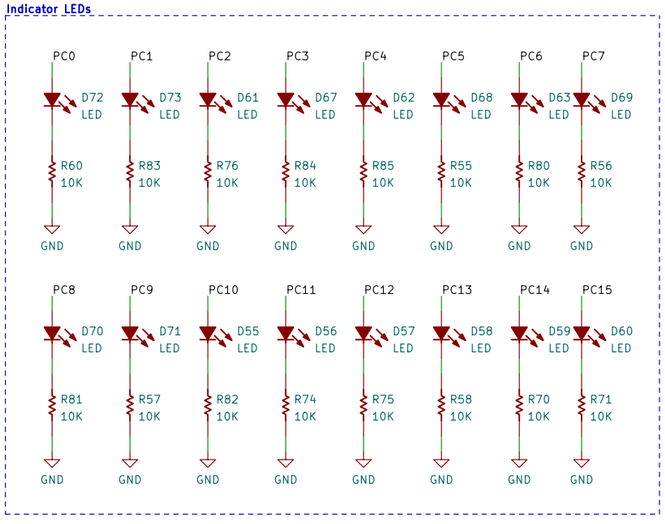
Page Component of Program Counter



Clock to Memory Bus Transfer



Indicator LEDs



Riley Stuermer

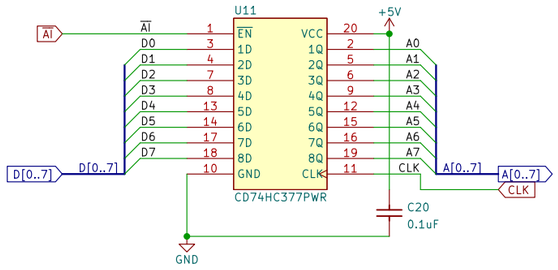
Sheet: /Program Counter/

File: ProgramCounter.kicad_sch

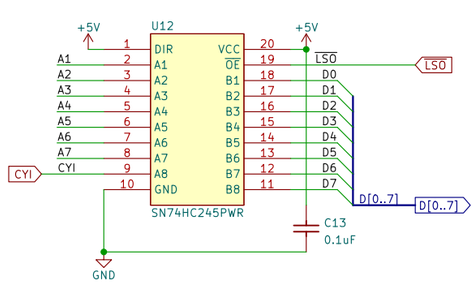
Title: Program Counter

Size: A3	Date: 2022-01-19	**Rev: V1.1**
KiCad E.D.A. kicad (6.0.0-0)		Id: 3/11

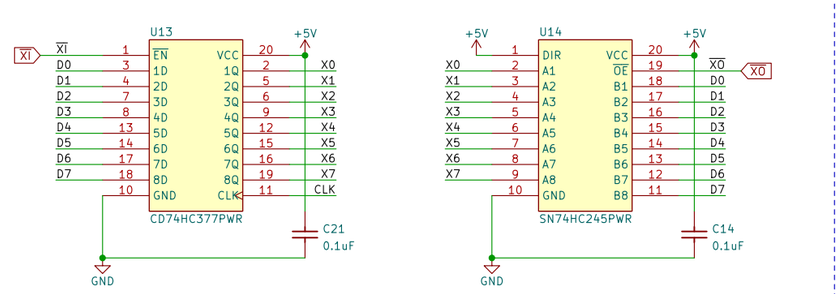
A Register



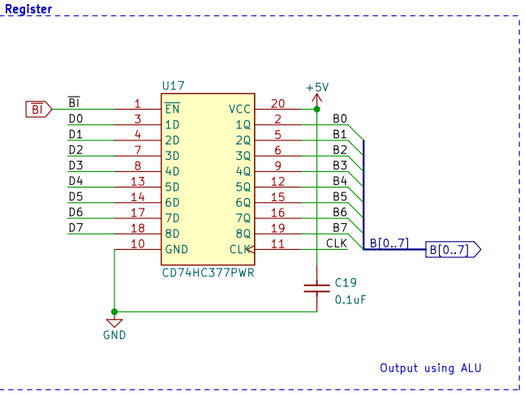
A Register Logical Shift Right



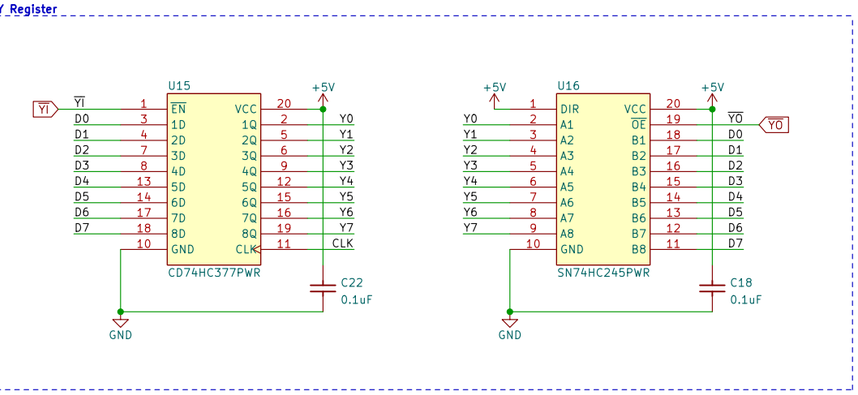
X Register



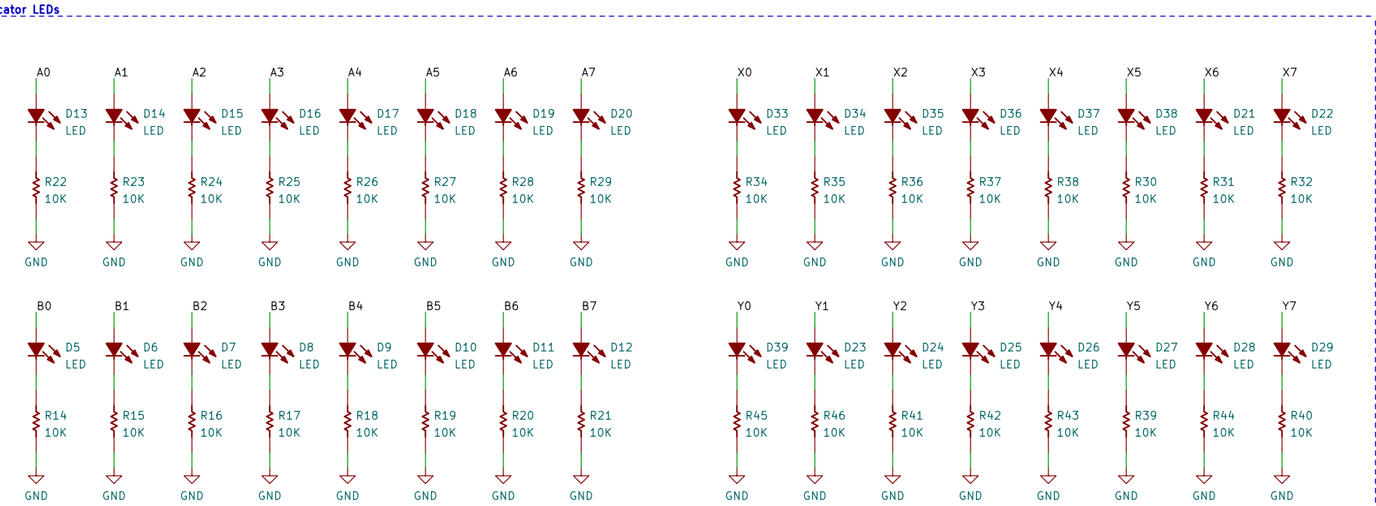
B Register



Y Register



Indicator LEDs



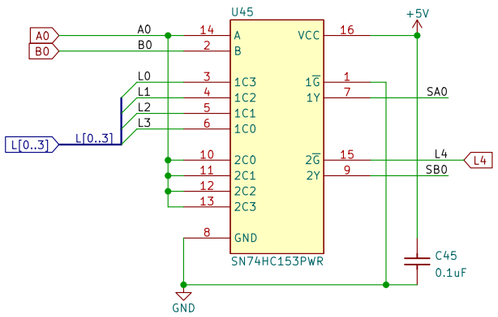
Riley Stuermer

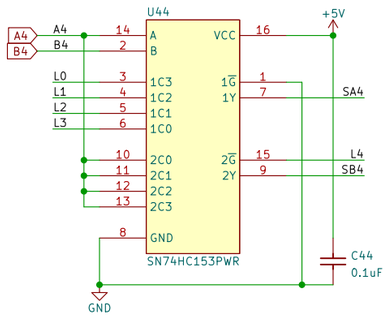
Sheet: /Registers/
File: Registers.kicad_sch

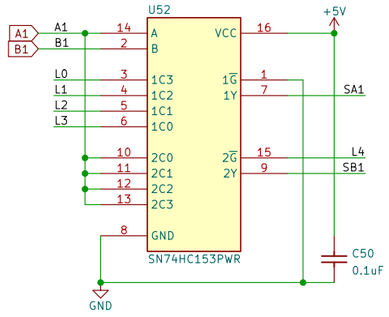
Title: Registers

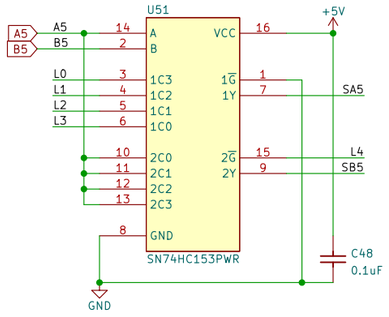
Size: A3	Date: 2022-01-19	**Rev: V1.1**
KiCad E.D.A. kicad (6.0.0-0)		Id: 4/11

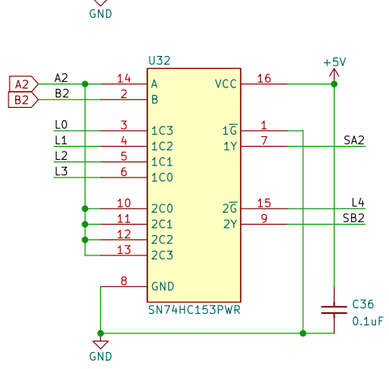
Arithmetic Logic Unit Operation Selection

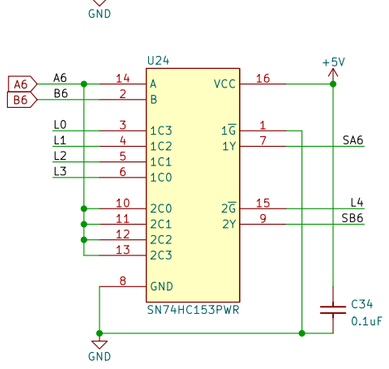


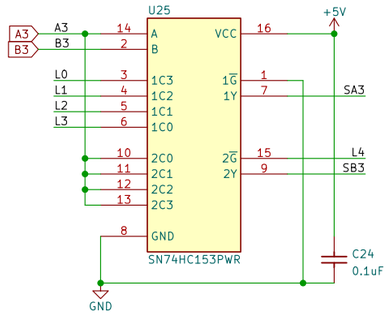


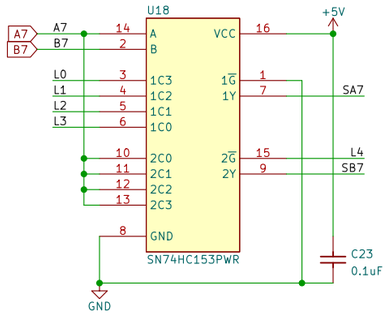




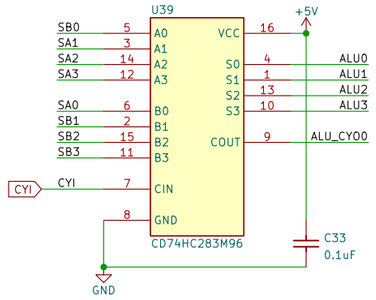


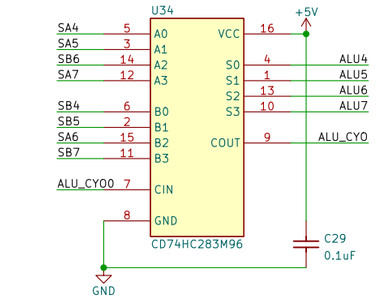




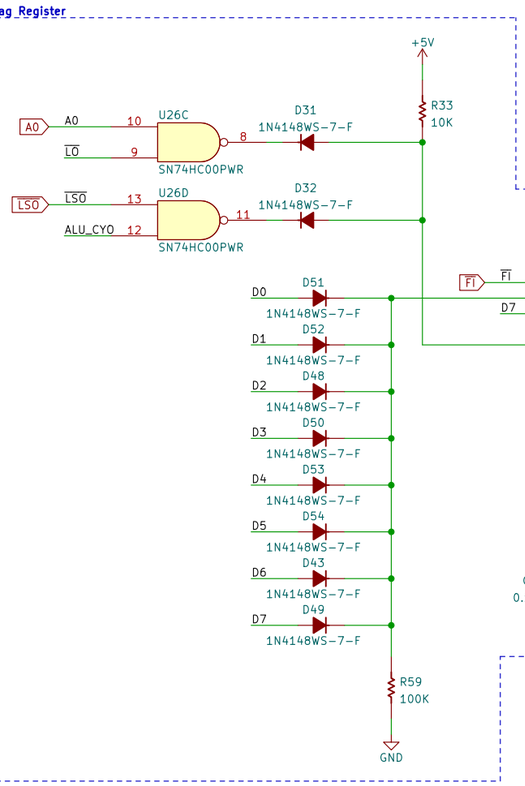


Arithmetic Logic Unit Adder

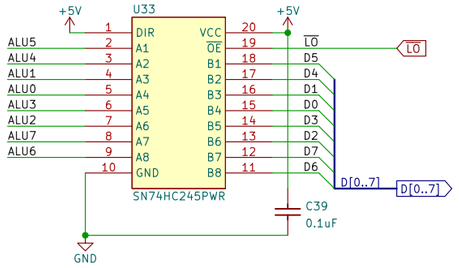




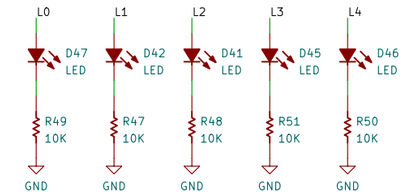
Flag Register

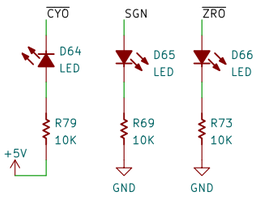


Arithmetic Logic Unit Results Output



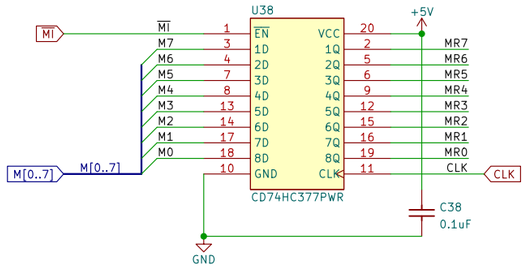
Indicator LEDs



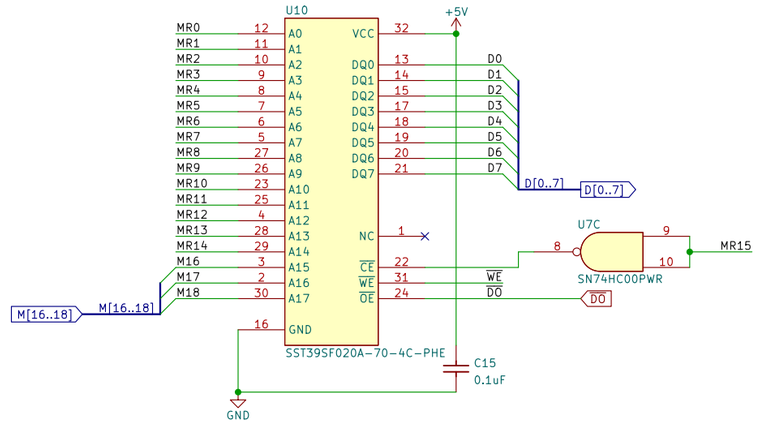


Riley Stuermer		
Sheet: /ALU/		
File: ALU.kicad_sch		
Title: Arithmetic Logic Unit		
Size: A3	Date: 2022-01-19	**Rev: V1.1**
KiCad E.D.A. kicad (6.0.0-0)		Id: 5/11

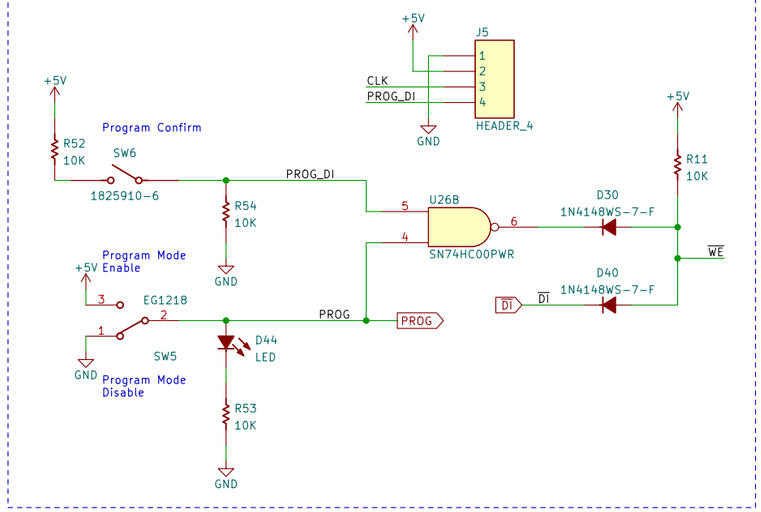
Memory Register



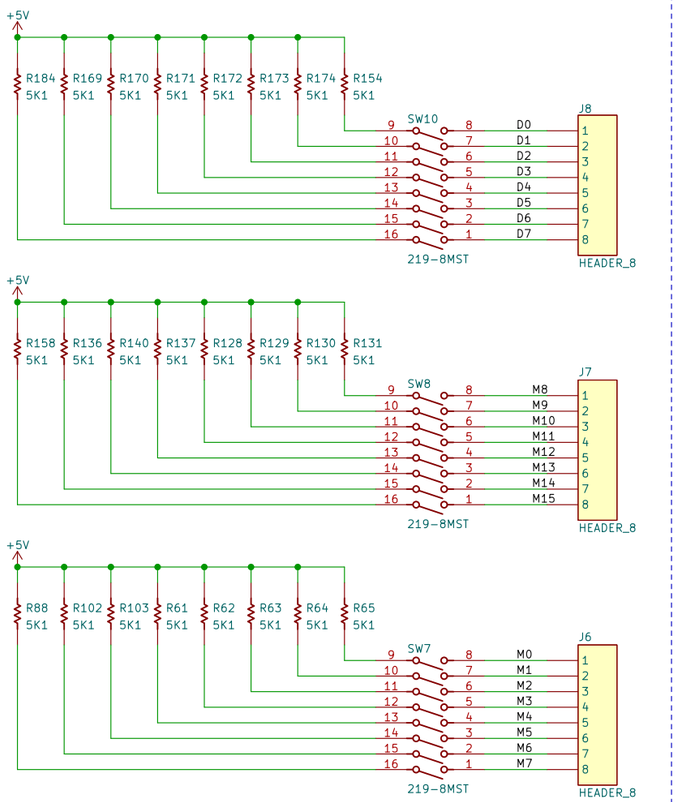
Read Only Memory



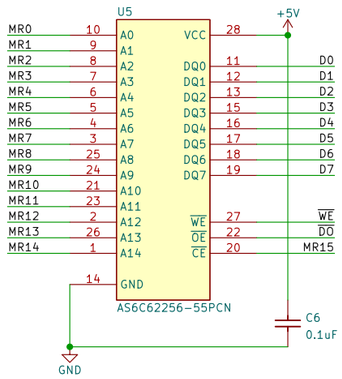
Manual Programming Selection



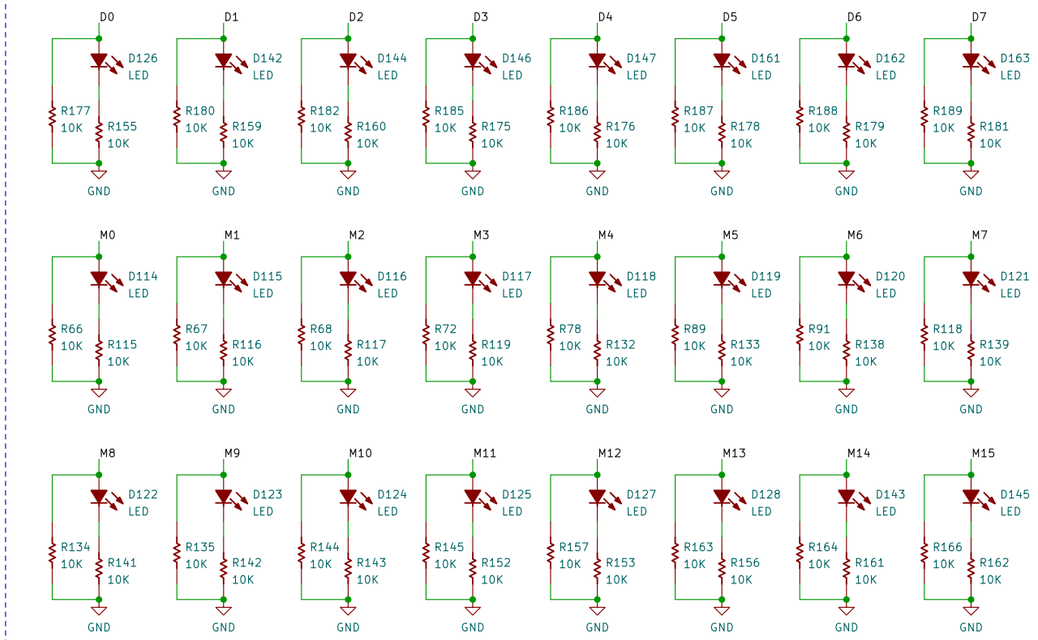
Manual Programming Inputs



Random Access Memory

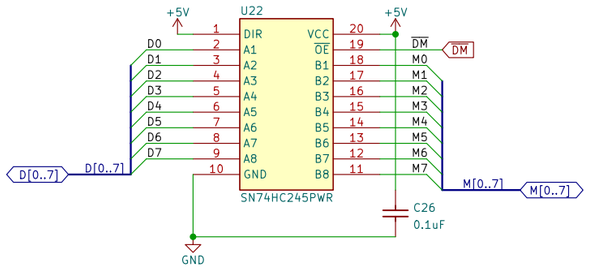


Indicator LEDs

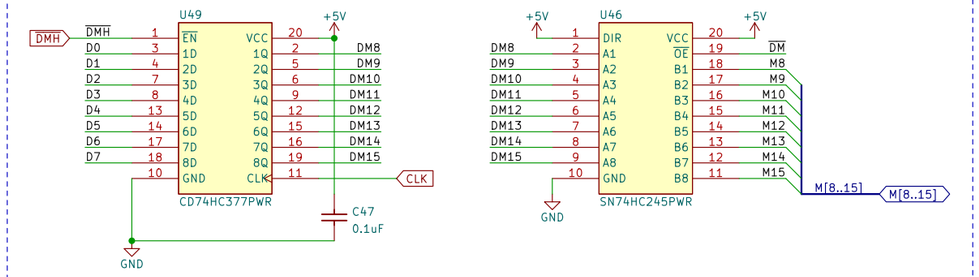


Riley Stuermer		
Sheet: /Memory/		
File: Memory.kicad_sch		
Title: Memory		
Size: A3	Date: 2022-01-19	**Rev: V1.1**
KiCad E.D.A. kicad (6.0.0-0)		Id: 6/11

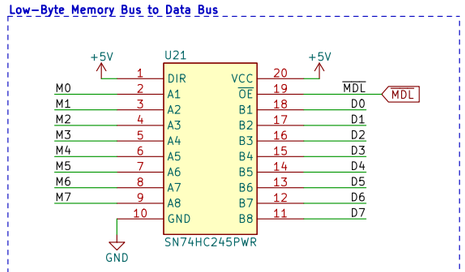
Data Bus to Low-Byte Memory Bus



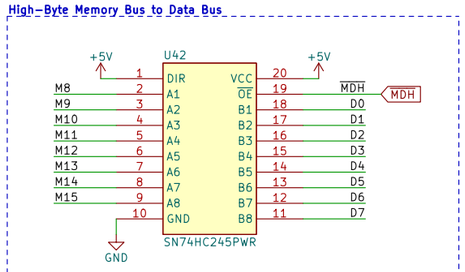
Data Bus to High-Byte Memory Bus



Low-Byte Memory Bus to Data Bus



High-Byte Memory Bus to Data Bus



Riley Stuermer

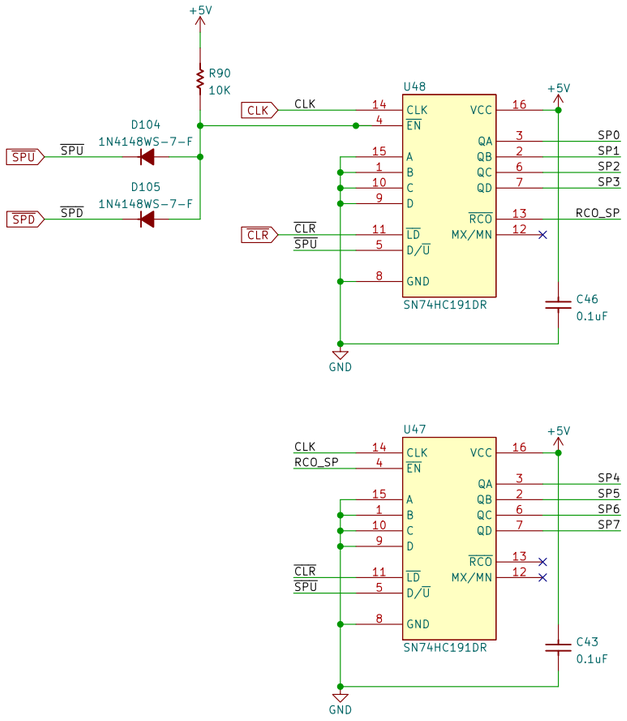
Sheet: /Transfer/

File: Transfer.kicad_sch

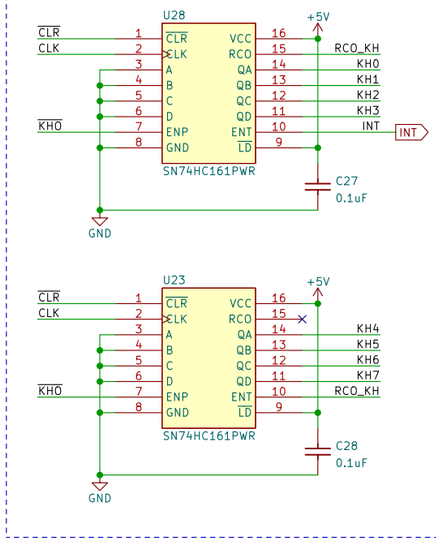
Title: Transfer

Size: A3	Date: 2022-01-19	**Rev: V1.1**
KiCad E.D.A. kicad (6.0.0-0)		Id: 7/11

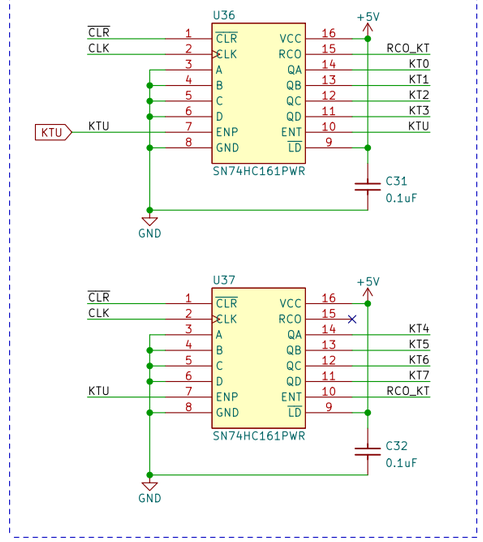
Stack Pointer Counter



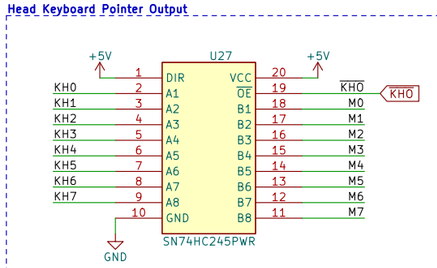
Head Keyboard Pointer Counter



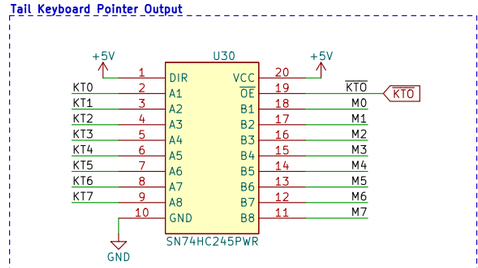
Tail Keyboard Pointer Counter



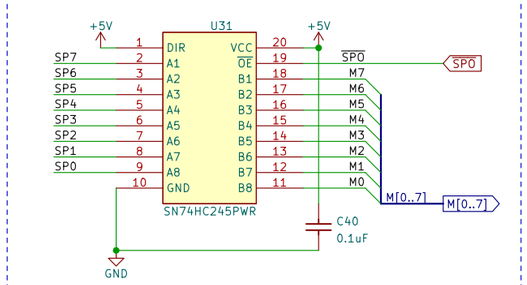
Head Keyboard Pointer Output



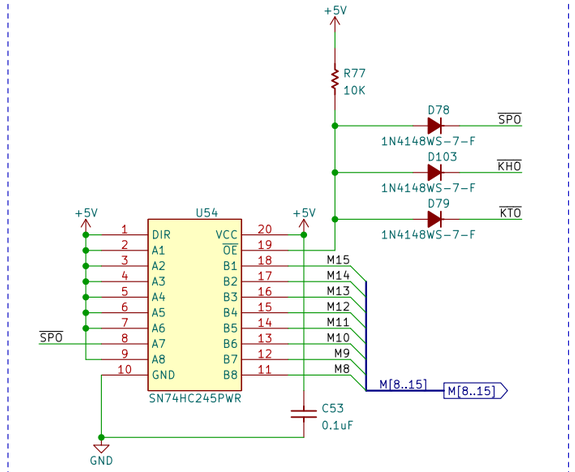
Tail Keyboard Pointer Output



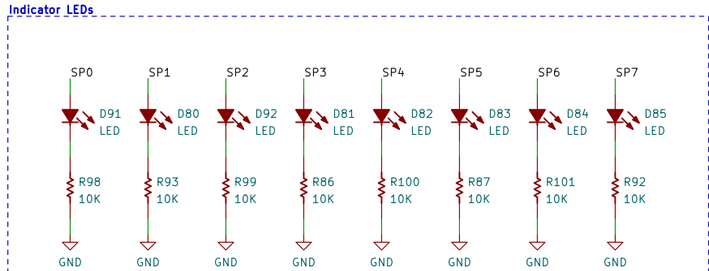
Stack Pointer Output



High-Byte Output for Stack Pointer and Keyboard Pointer



Indicator LEDs



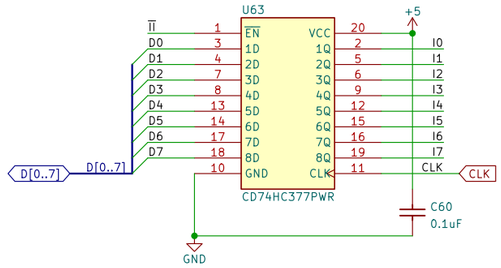
Riley Stuermer

Sheet: /Memory Peripherals/
File: MemoryPeripheral.kicad_sch

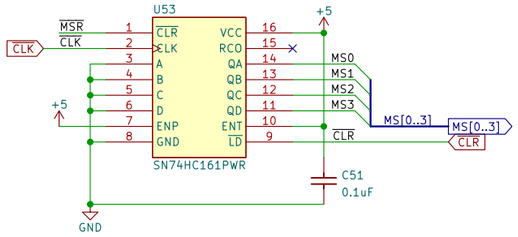
Title: Memory Peripherals

Size: A3	Date: 2022-01-19	**Rev: V1.1**
KiCad E.D.A. kicad (6.0.0-0)		Id: 8/11

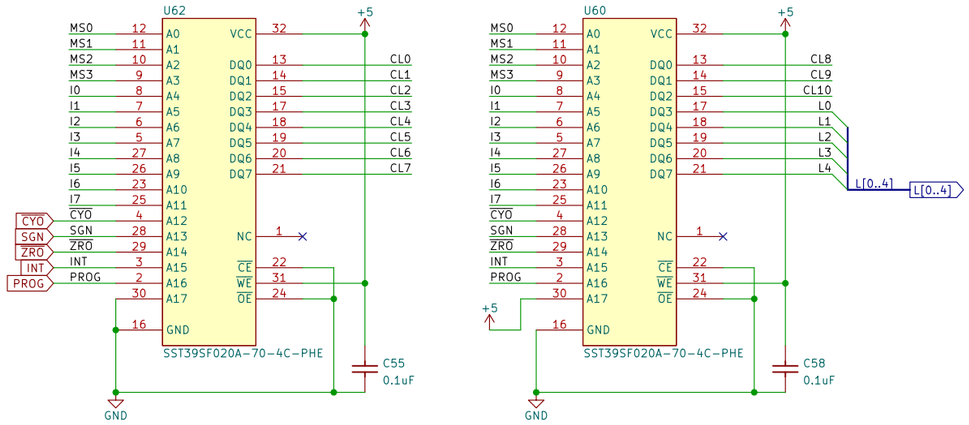
Instruction Register



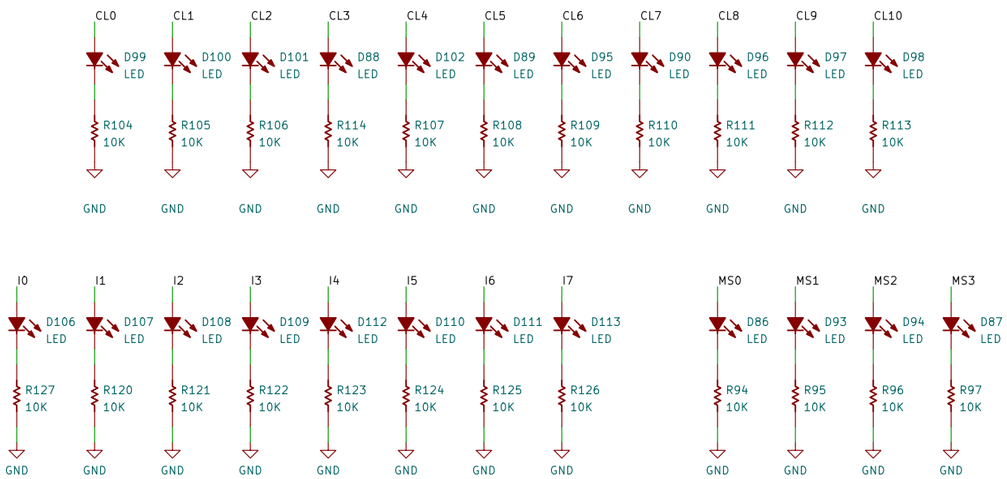
Microstep Counter



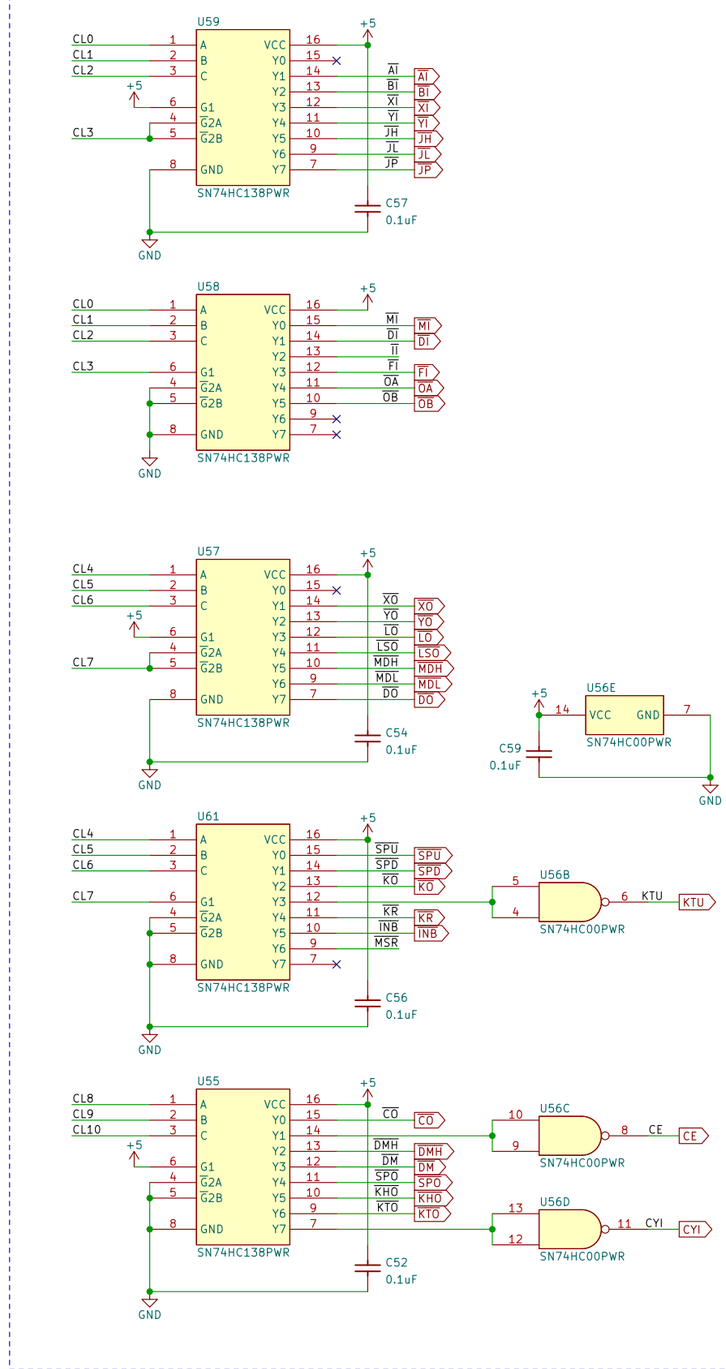
Control ROM



Indicator LEDs



Control ROM Decoding



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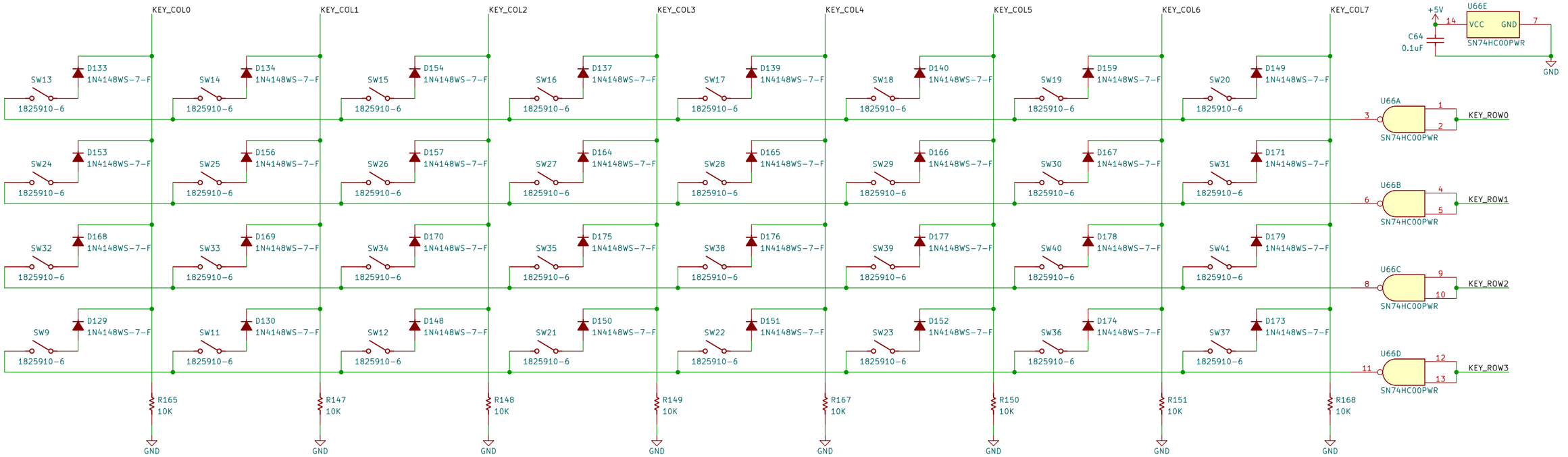
Sheet: /Control Logic/
File: ControlLogic.kicad_sch

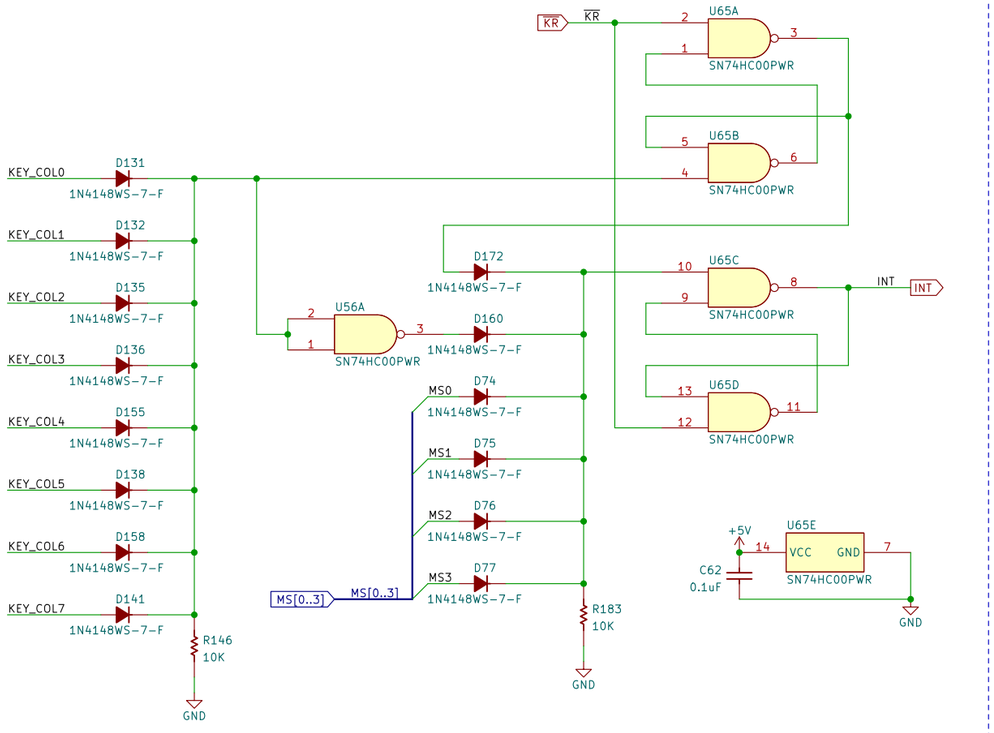
Title: Control Logic

Size: A3	Date: 2022-01-19	**Rev: V1.1**
KiCad E.D.A. kicad (6.0.0-0)		Id: 9/11

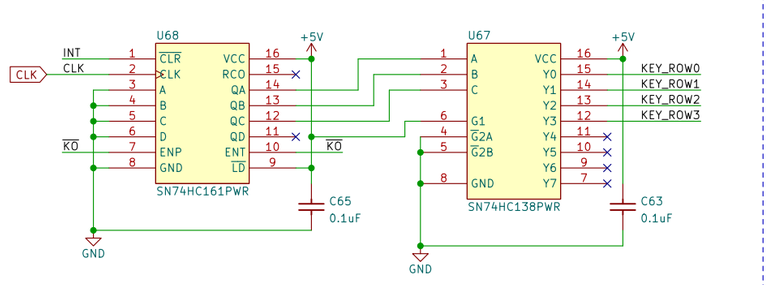
Keyboard



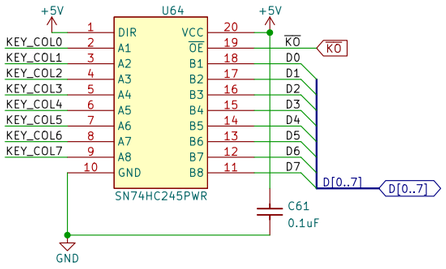
Keyboard Interrupt



Keyboard Row Select



Keyboard Output



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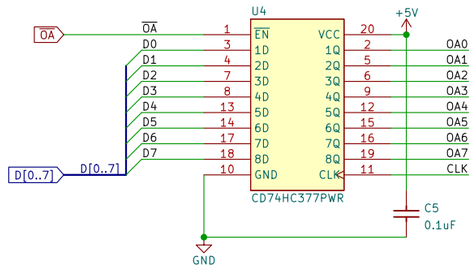
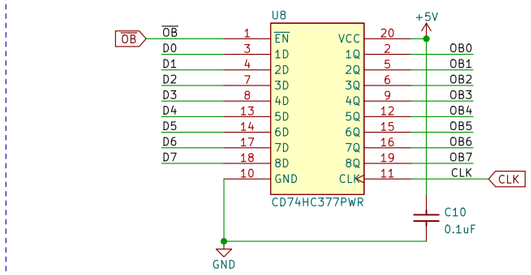
Sheet: /Keyboard/	
File: Keyboard.kicad_sch	
Title: Keyboard	
Size: A3	Date: 2022-01-19
KiCad E.D.A. kicad (6.0.0-0)	Rev: V1.1
	Id: 10/11

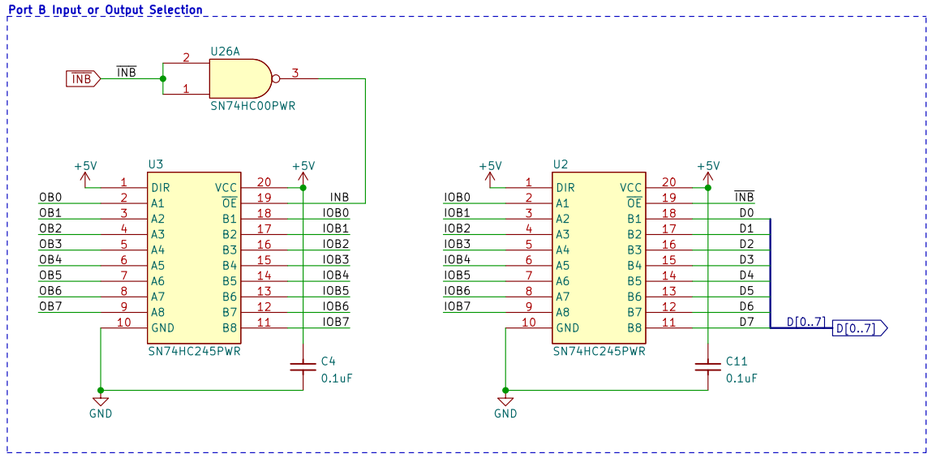
Port A Output Register



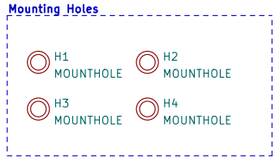
Port B Output Register



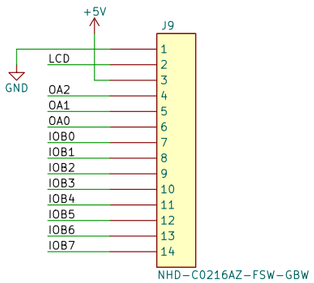
Port B Input or Output Selection



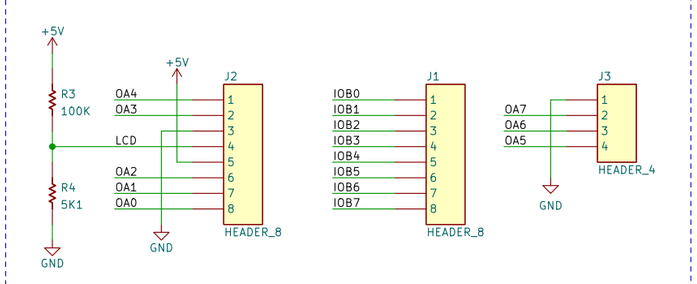
Mounting Holes



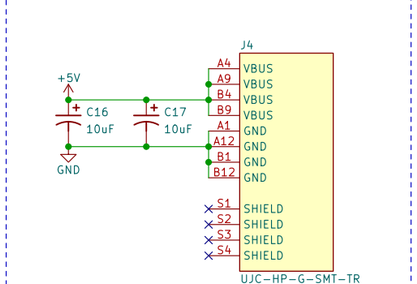
Display Connection 1



Digital Input/Output and Display Connection 2



USB-C Power Supply



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Sheet: /Input and Output/
File: InputOutput.kicad_sch

Title: Input and Output

Size: A3	Date: 2022-01-19	**Rev: V1.1**
KiCad E.D.A. kicad (6.0.0-0)		Id: 11/11