Sheet: Power Control Module

File: PowerControl.sch

Sheet: Registers Module

File: Registers.sch

Sheet: ALU Module

File: ALU.sch

Sheet: Condition Flag Module

File: ConditionFlags.sch

Sheet: Clock Module

HALT_A
HALT_B
CLK
CLK

File: Clock.sch

Sheet: Program Counter Module

B0
B1
B2
B3
B4
B5
B6
B7
PC_INC
PC_IN
TR_HALT
CLK
PC_OUT
CLR

File: ProgramCounter.sch

Sheet: Memory Module

B0
B1
B2
B3
B4
B5
B6
B7
MEM_IN
MEM_OUT
MAR_IN
TR_HALT
RST
CLK
INTERRUPT
I0
I1
I2
I3
I4
I5
I6
I7
I8
I9
I10
I11
I12
I13
I14
I15

File: Memory.sch

Sheet: Control Unit Module

File: ControlUnit.sch

Sheet: /
File: Breadboard_CPU.sch

Title:

Size: A3	Date:	**Rev:**
KiCad E.D.A. kicad (5.1.5)-3		Id: 1/9

U20 74HC574 — C20 0.1u
U29A 74HC27
U9C 74HC32
U24 74HC574 — C24 0.1u
U30C 74HC27
U9B 74HC32
U22 74HC574 — C22 0.1u
U31A 74HC27
U9A 74HC32
U8 74HC138 — C31 0.1u
U21 74HC574 — C21 0.1u
U29B 74HC27
U9D 74HC32
U25 74HC574 — C25 0.1u
U30B 74HC27
U5D 74HC32
U26 74HC574 — C26 0.1u
U31B 74HC27
U5C 74HC32
U23 74HC574 — C23 0.1u
U29C 74HC27
U5B 74HC32
U27 74HC574 — C27 0.1u
U30A 74HC27
U5A 74HC32
U29D 74HC27 — C32 0.1u
U30D 74HC27 — C33 0.1u
U31D 74HC27 — C34 0.1u
U9E 74HC32 — C35 0.1u
U5E 74HC32 — C36 0.1u
VCC
GND
B0 B1 B2 B3 B4 B5 B6 B7
CLK
REG_IN
REG_OUT
RS0 RS1 RS2

These bottom two probably aren't required

Sheet: /Registers Module/
File: Registers.sch
Title:
Size: A3 | Date: | Rev:
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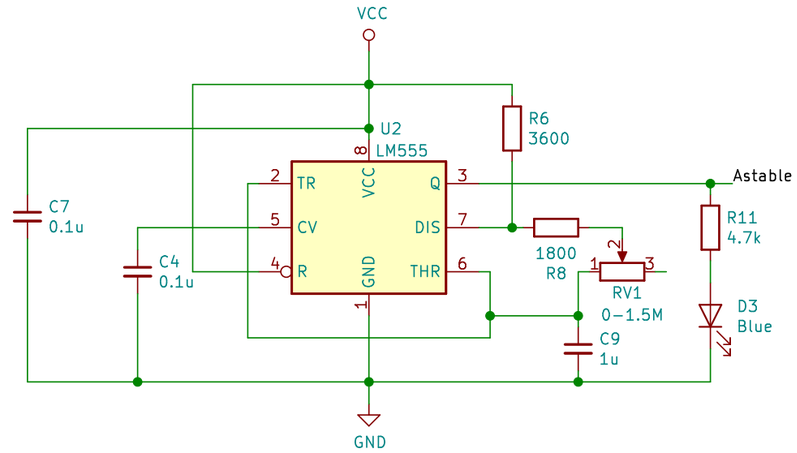
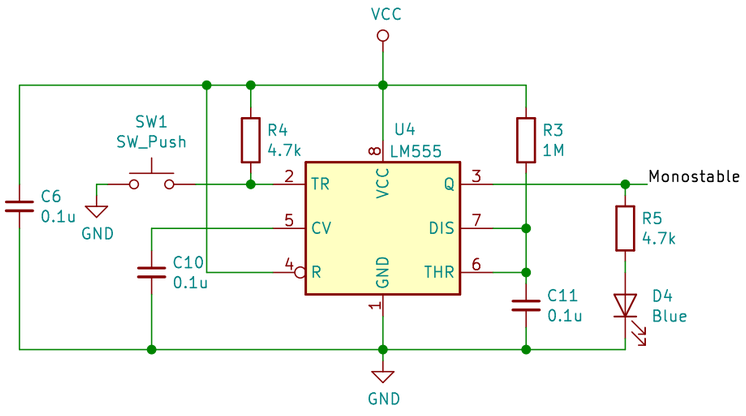
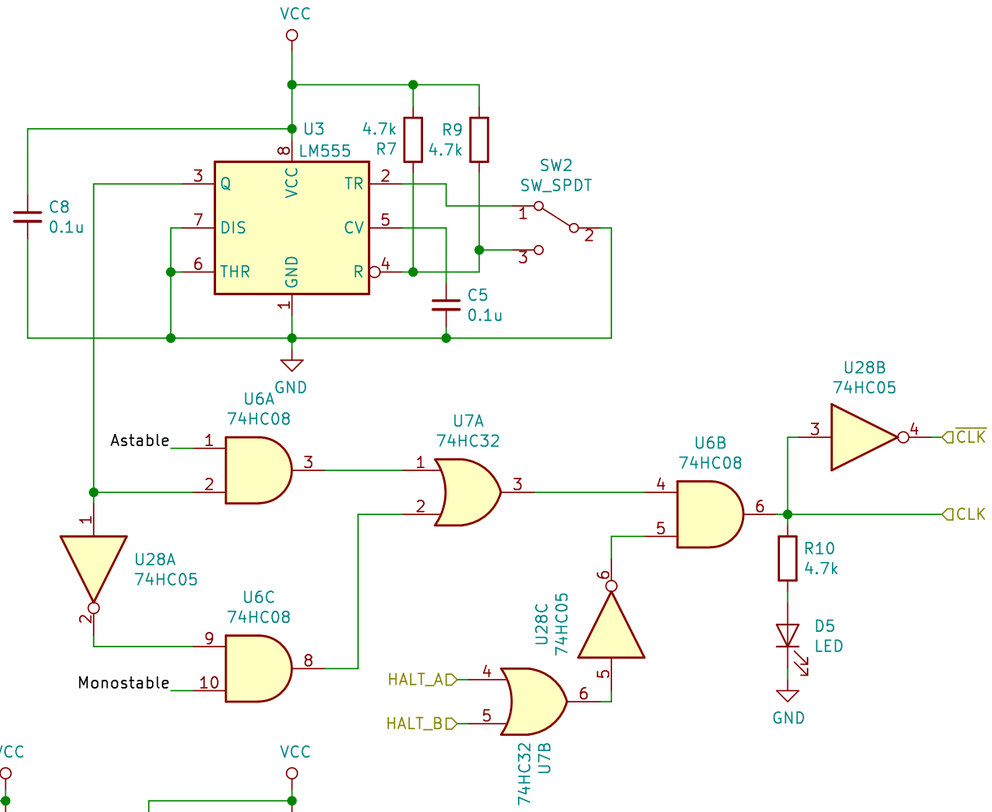
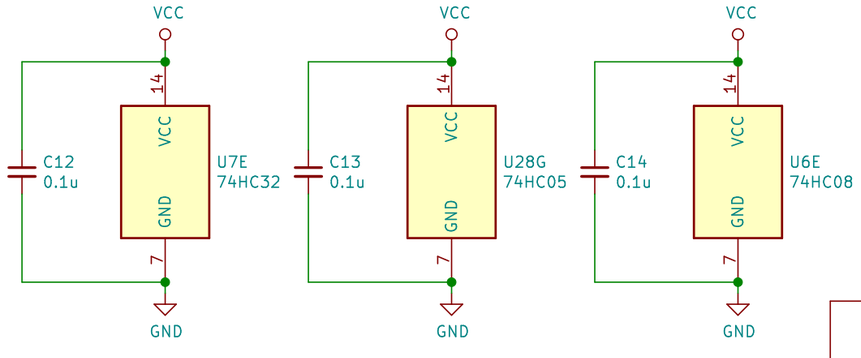
Sheet: /ALU Module/	
File: ALU.sch	
Title:	
Size: A4	Date:
KiCad E.D.A. kicad (5.1.5)-3	Id: 3/9

Sheet: /Condition Flag Module/	
File: ConditionFlags.sch	
Title:	
Size: A4	Date:
KiCad E.D.A. kicad (5.1.5)-3	Id: 4/9

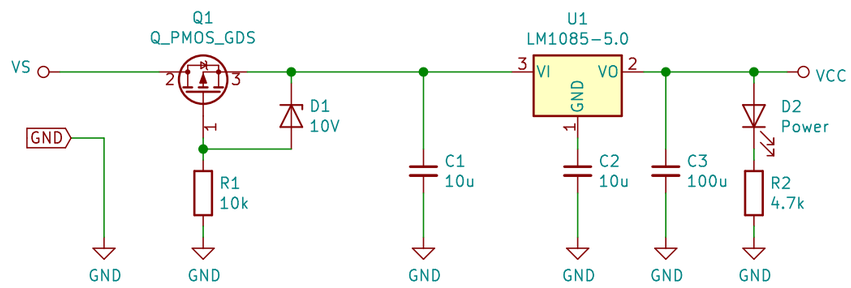








Sheet: /Clock Module/		
File: Clock.sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad (5.1.5)-3		Id: 5/9



Sheet: /Power Control Module/
File: PowerControl.sch

Title:

Size: A4	Date:	**Rev:**
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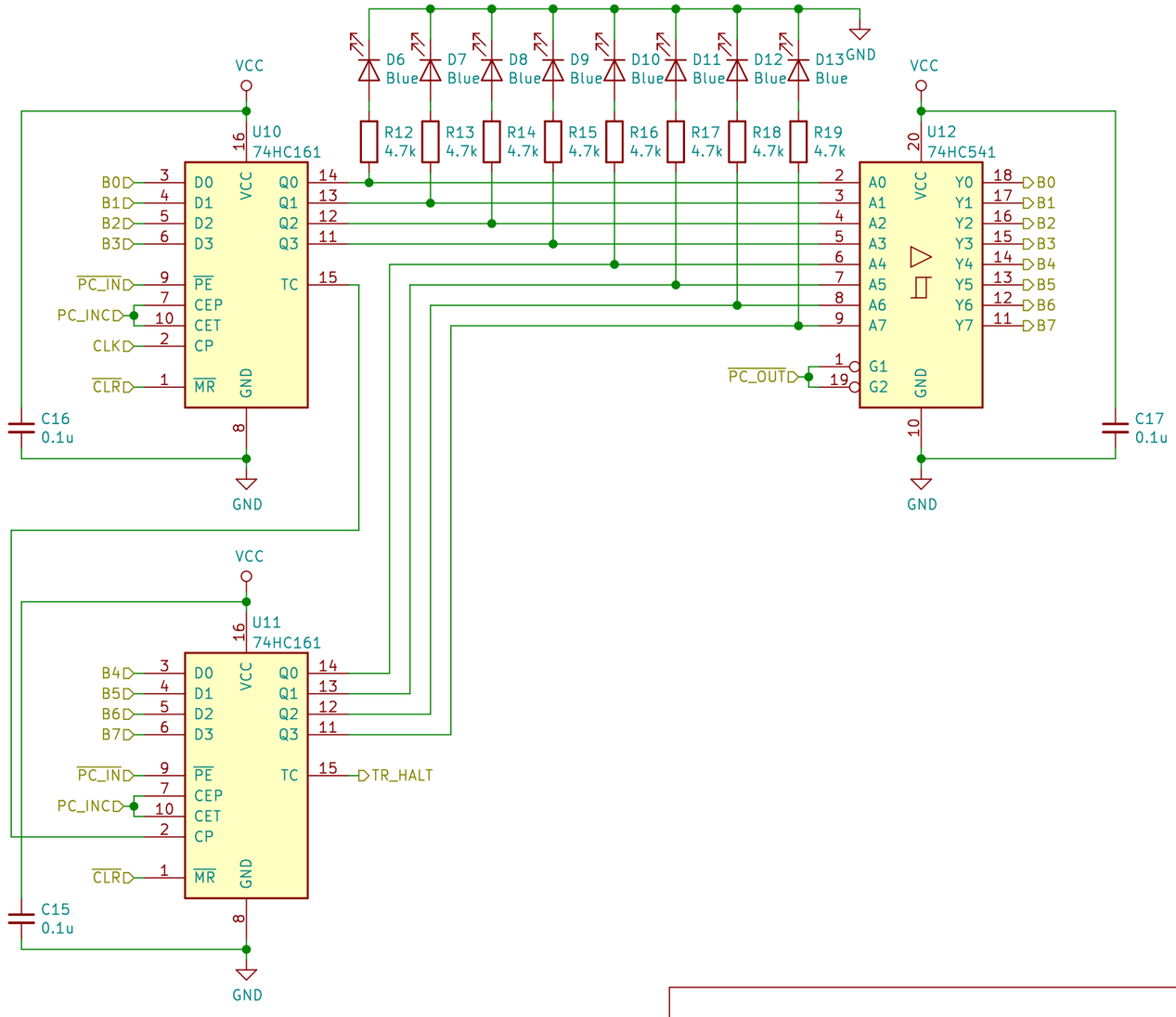

The carry out from the above counter is fed into CP, which is Clock Pulse. PC_INC will be set on the falling edge by the uCode EEPROMS. CP will be an output from the previous counter. No CLK necessary since we never want to count this with the CLK, only as a carryout.

Sheet: /Program Counter Module/		
File: ProgramCounter.sch		
Title:		
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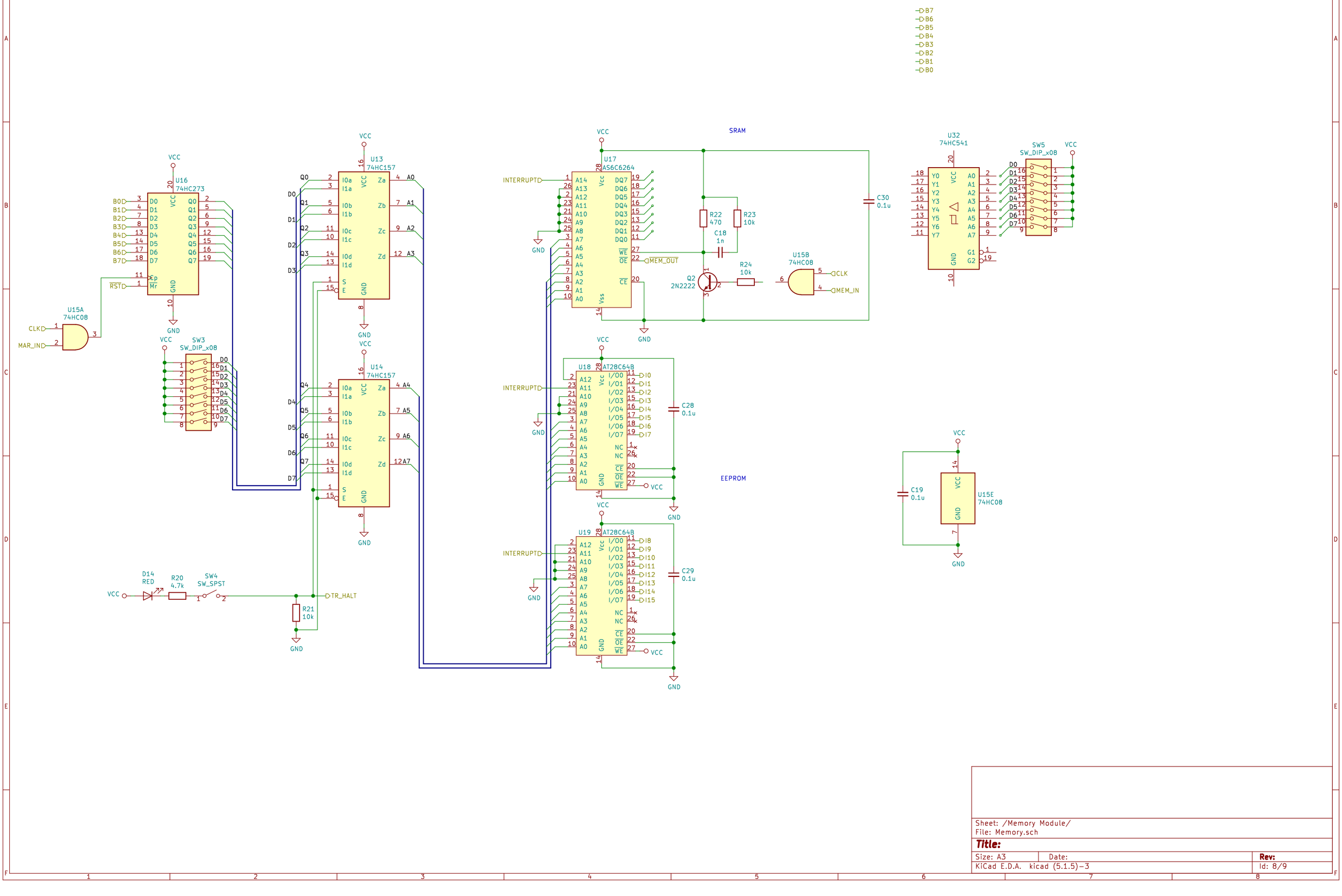
B7
B6
B5
B4
B3
B2
B1
B0
SRAM
U17
AS6C6264
INTERRUPT
GND
VCC
C30
0.1u
R22
470
R23
10k
C18
1n
R24
10k
Q2
2N2222
U15B
74HC08
CLK
MEM_IN
MEM_OUT
U32
74HC541
SW5
SW_DIP_x08
U18
AT28C64B
C28
0.1u
U19
C29
0.1u
EEPROM
U15E
74HC08
C19
0.1u
U16
74HC273
U15A
74HC08
CLK
MAR_IN
RST
SW3
SW_DIP_x08
U13
74HC157
U14
74HC157
D14
RED
R20
4.7k
SW4
SW_SPST
R21
10k
TR_HALT
Sheet: /Memory Module/
File: Memory.sch
Title:
Size: A3
Date:
Rev:
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Sheet: /Control Unit Module/	
File: ControlUnit.sch	
Title:	
Size: A4	Date:
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Rev: