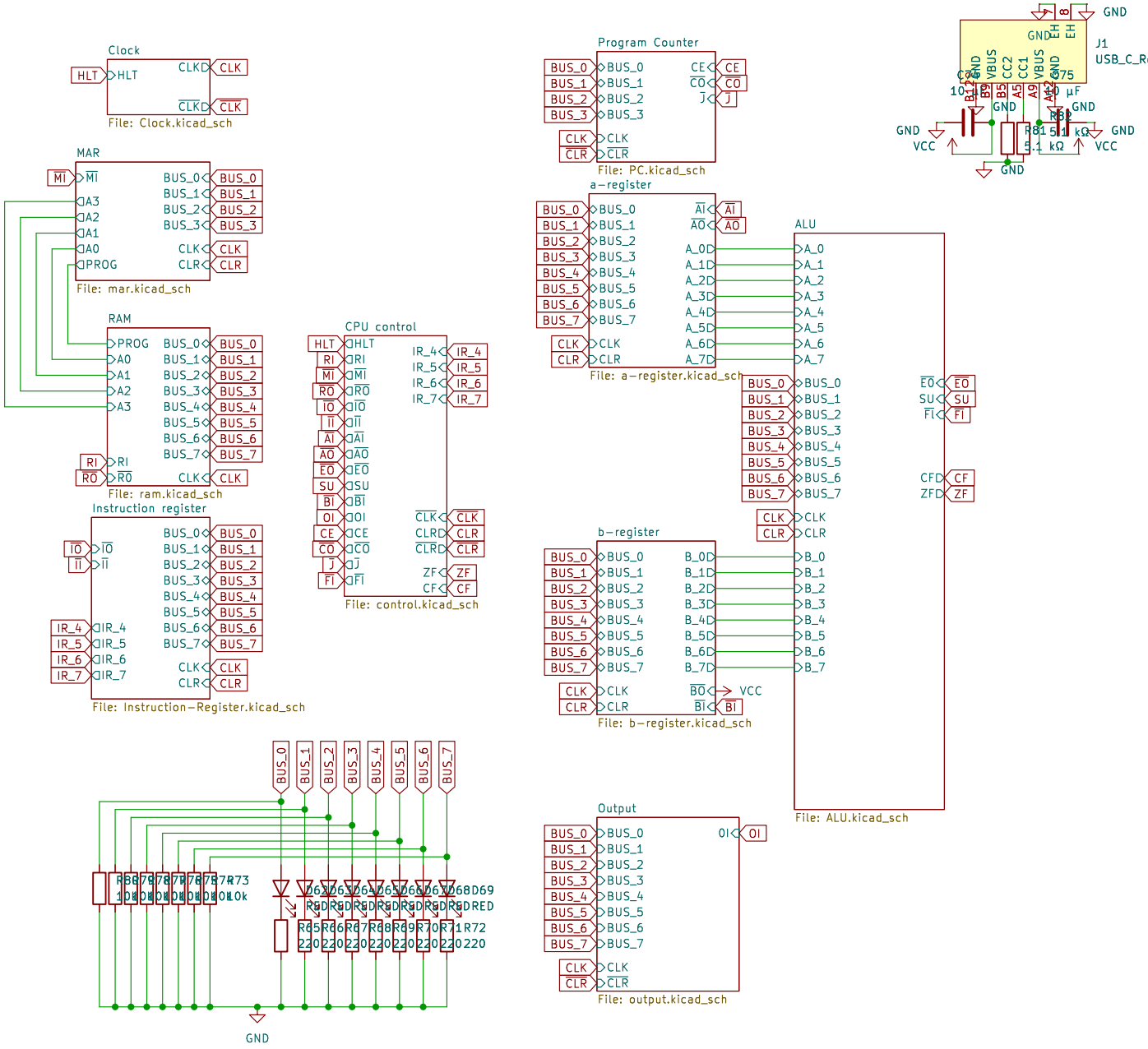
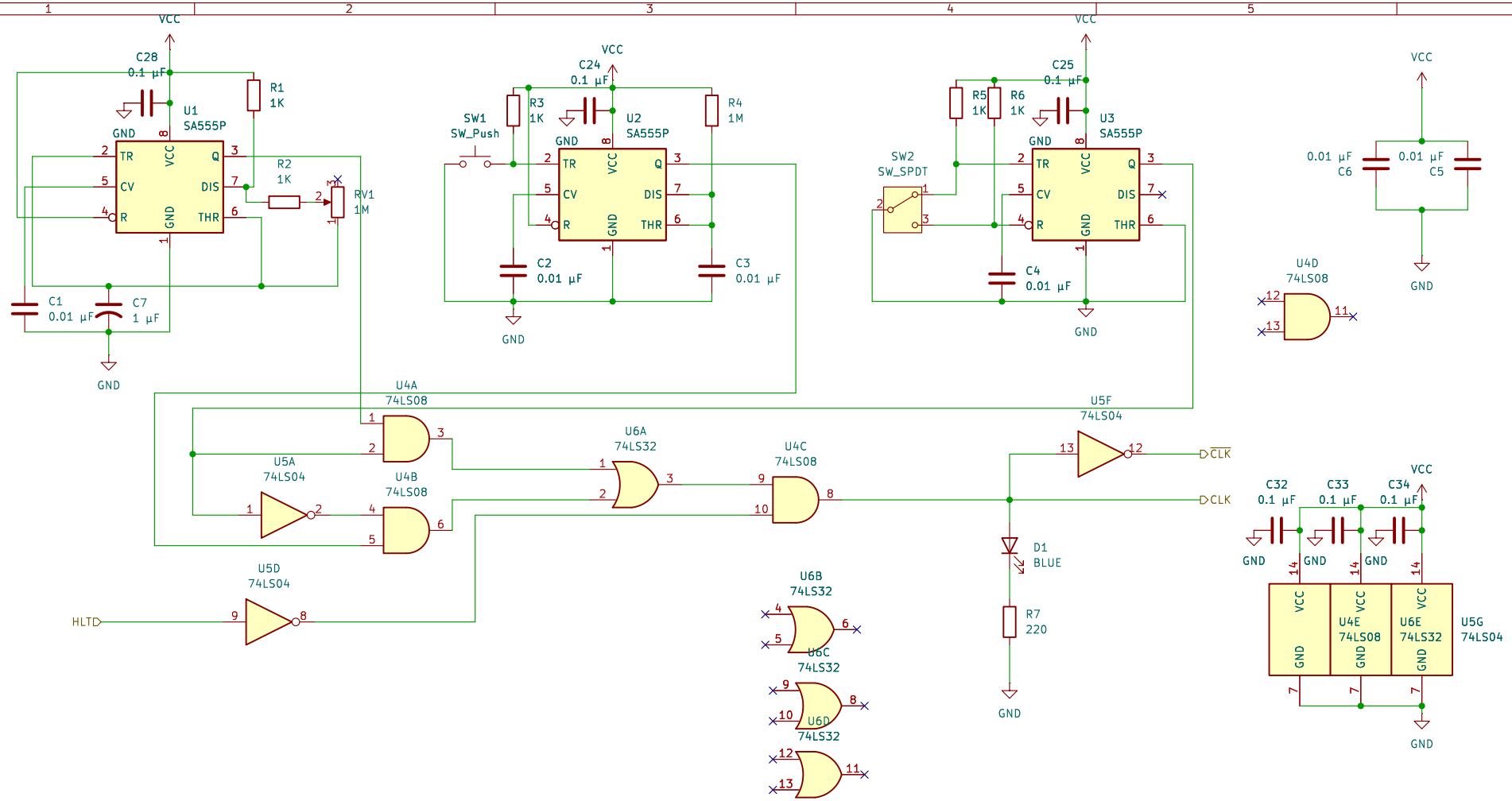
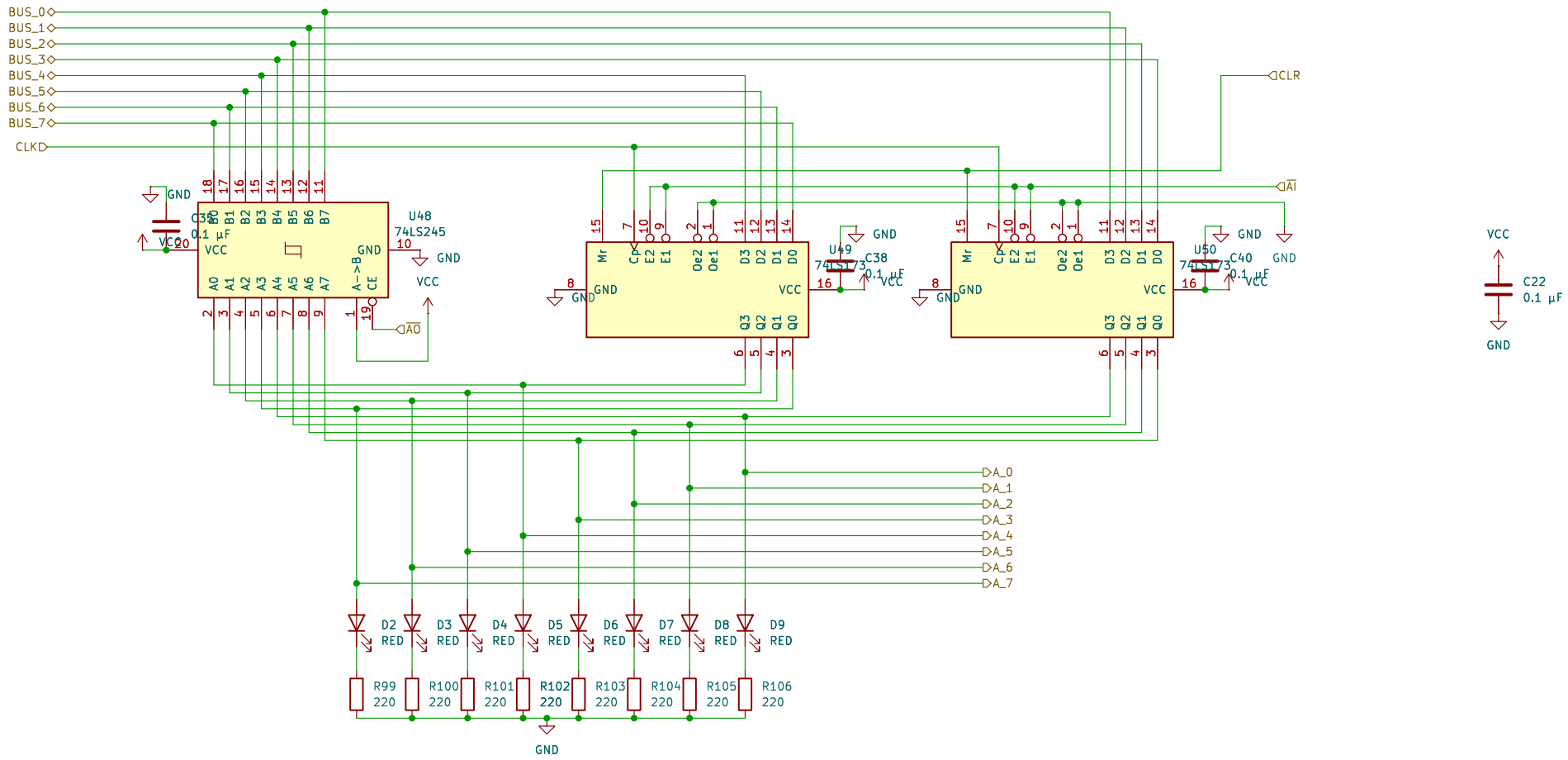
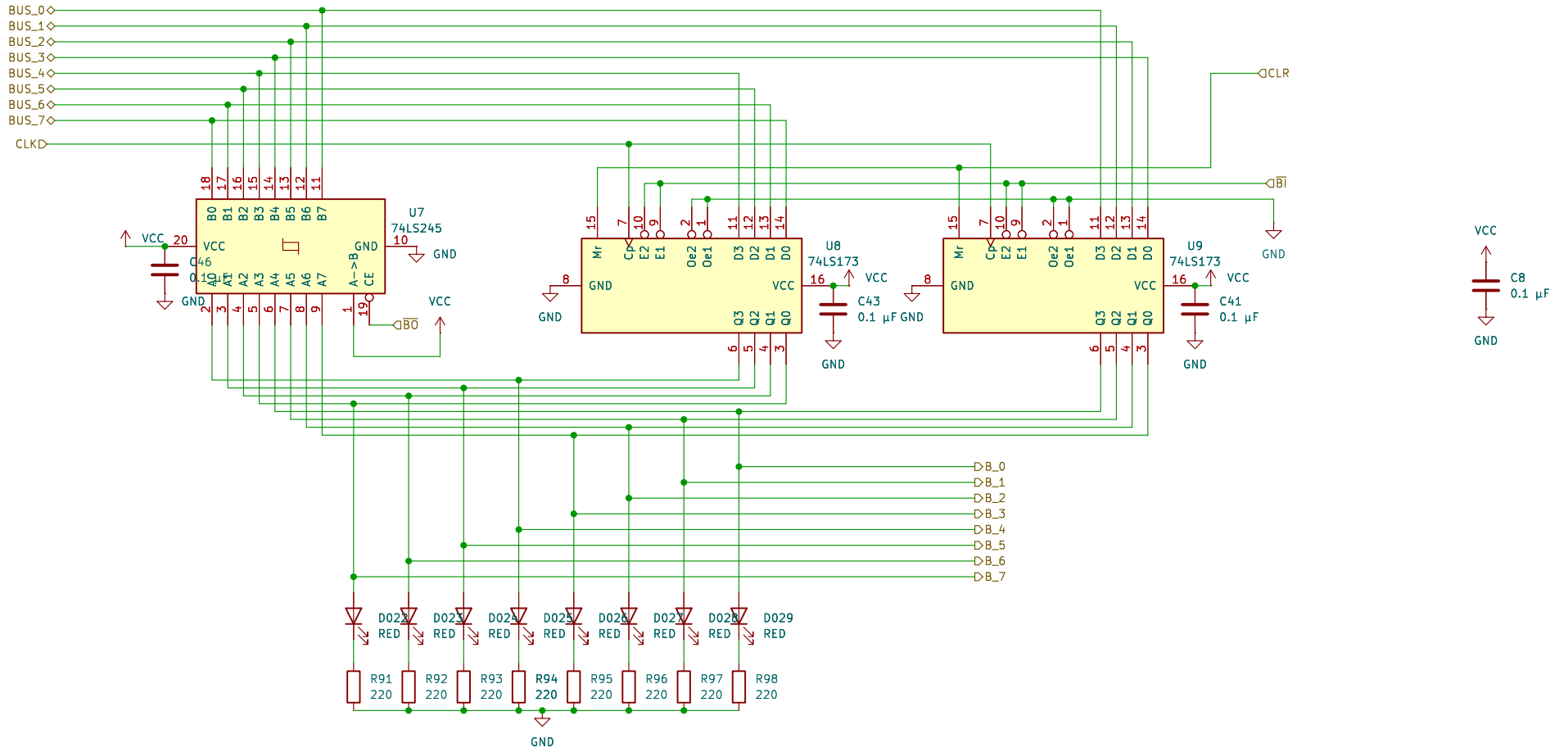

Clock
HLT
CLKD
CLK
File: Clock.kicad_sch
MAR
MI
A3
A2
A1
A0
PROG
BUS_0
BUS_1
BUS_2
BUS_3
CLR
File: mar.kicad_sch
RAM
RI
RO
File: ram.kicad_sch
Instruction register
IO
II
IR_4
IR_5
IR_6
IR_7
File: Instruction−Register.kicad_sch
CPU control
AI
AO
EO
SU
BI
OI
CE
CO
J
FI
ZF
CF
File: control.kicad_sch
Program Counter
File: PC.kicad_sch
a−register
File: a−register.kicad_sch
ALU
b−register
File: b−register.kicad_sch
Output
File: output.kicad_sch
J1
USB_C_Receptacle_Po
GND
VCC
5.1 kΩ
10 µF
Sheet: /
File: 8−Bit−PC.kicad_sch
Title: 8 bit PC
Size: A4
Date: 2025−10−14
Rev: 1
KiCad E.D.A. 9.0.6
Id: 1/11



Sheet: /Clock/		
File: Clock.kicad_sch		
Title: 8 bit PC		
Size: A4	Date: 2025-10-14	**Rev: 1**
KiCad E.D.A. 9.0.6		Id: 2/11



Sheet: /a-register/		
File: a-register.kicad_sch		
Title: 8 bit PC		
Size: A4	Date: 2025-10-14	**Rev: 1**
KiCad E.D.A. 9.0.6		Id: 3/11



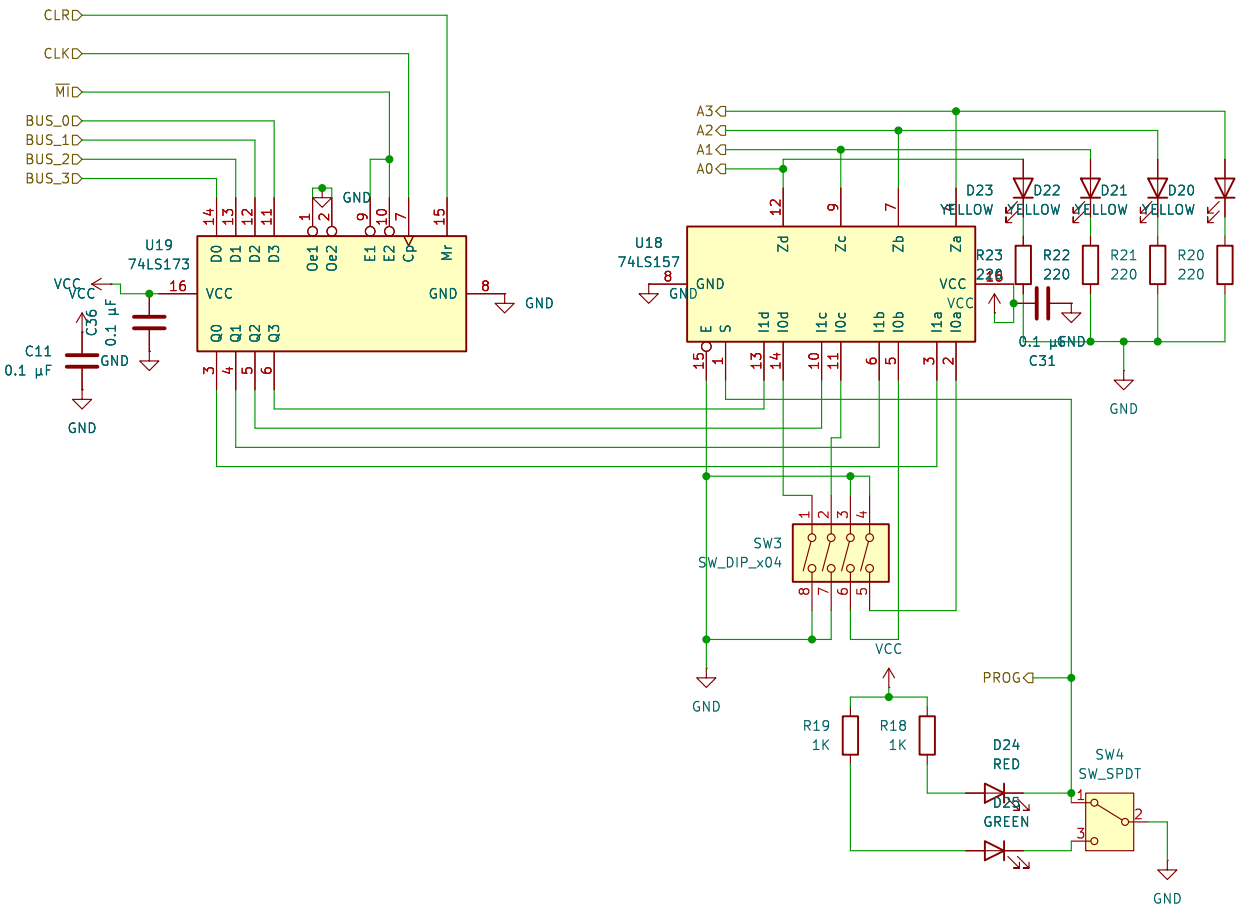
Sheet: /b-register/		
File: b-register.kicad_sch		
Title: 8 bit PC		
Size: A4	Date: 2025-10-14	**Rev: 1**
KiCad E.D.A. 9.0.6		Id: 4/11

U10D
74LS08
VCC
GND
0.1 µF
C26
74LS86
U15E
C23
U16E
U11E
C27
74LS02
C29
U10E
C10
C9
U15C
U15D
U15A
U15B
U16C
U16D
U16A
U16B
U13
74LS283
U14
C52
U17
74LS245
C30
U12
74LS173
C54
U11A
U11B
U11C
U11D
U10A
U10B
U10C
RED
GREEN
D10
D11
D12
D13
D15
D16
D17
D18
D19
R8
R9
R10
R11
R12
R13
R14
R15
R16
R17
220
EOD
SUD
B_7
B_6
B_5
B_4
B_3
B_2
B_1
B_0
A_7
A_6
A_5
A_4
A_3
A_2
A_1
A_0
BUS_0
BUS_1
BUS_2
BUS_3
BUS_4
BUS_5
BUS_6
BUS_7
CF
ZF
FI
CLK
CLR

Sheet: /ALU/
File: ALU.kicad_sch

Title: 8 bit PC

Size: A3 | Date: 2025-10-14 | **Rev: 1**
KiCad E.D.A. 9.0.6 | Id: 5/11



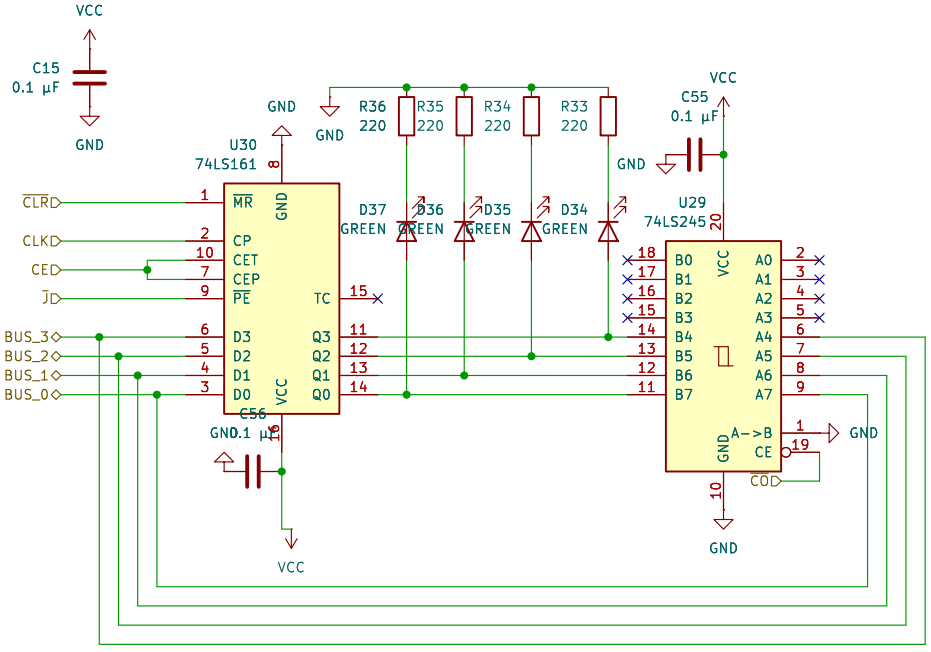
Sheet: /MAR/		
File: mar.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. 9.0.6		Id: 6/11

U21
74F189SC
U23
74F189SC
U5B
74LS04
U22A
74LS04
U5C
74LS04
U20D
74LS04
U20C
74LS04
U20B
74LS04
U22E
74LS04
U20F
74LS04
U22B
74LS04
U22C
74LS04
U22D
74LS04
U22F
74LS04
U20A
74LS04
U51
74LS158
U52
74LS158
U24
74LS158
U27A
74LS04
U27B
74LS04
U27C
74LS04
U27D
74LS04
U27E
74LS04
U27F
74LS04
U28A
74LS04
U28B
74LS04
U25
74LS245
U26A
74LS00
U26E
74LS00
U28G
74LS04
U20G
74LS04
U22G
74LS04
SW6
SW_Push
SW5
SW_DIP_x08
D26
RED
D27
RED
D28
RED
D29
RED
D30
RED
D31
RED
D32
RED
D33
RED
R24
220
R25
220
R26
220
R27
220
R28
220
R29
220
R30
220
R31
220
R32
1K
C14
0.01 µF
C37
0.1 µF
C39
0.1 µF
C42
0.1 µF
C44
0.1 µF
C45
0.1 µF
C48
0.1 µF
C50
0.1 µF
C51
0.1 µF
C52
0.1 µF
C53
0.1 µF
C12
0.1 µF
C13
0.1 µF
VCC
GND
A0
A1
A2
A3
*CS
*WE
D0
*O0
D1
*O1
*O2
*O3
PROG
CLK
RI
RD
A->B
CE
BUS_7
BUS_6
BUS_5
BUS_4
BUS_3
BUS_2
BUS_1
BUS_0

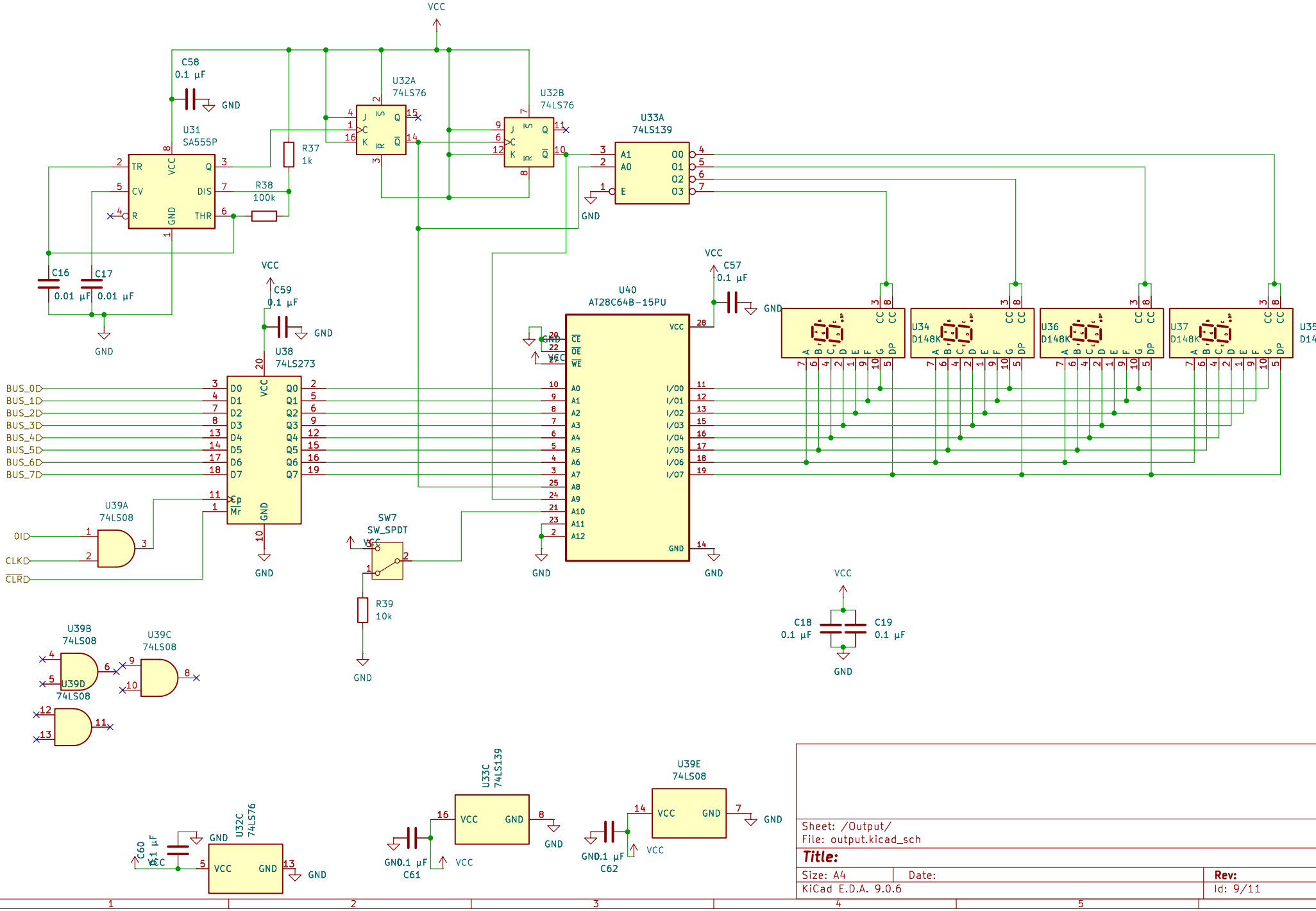
Sheet: /RAM/
File: ram.kicad_sch

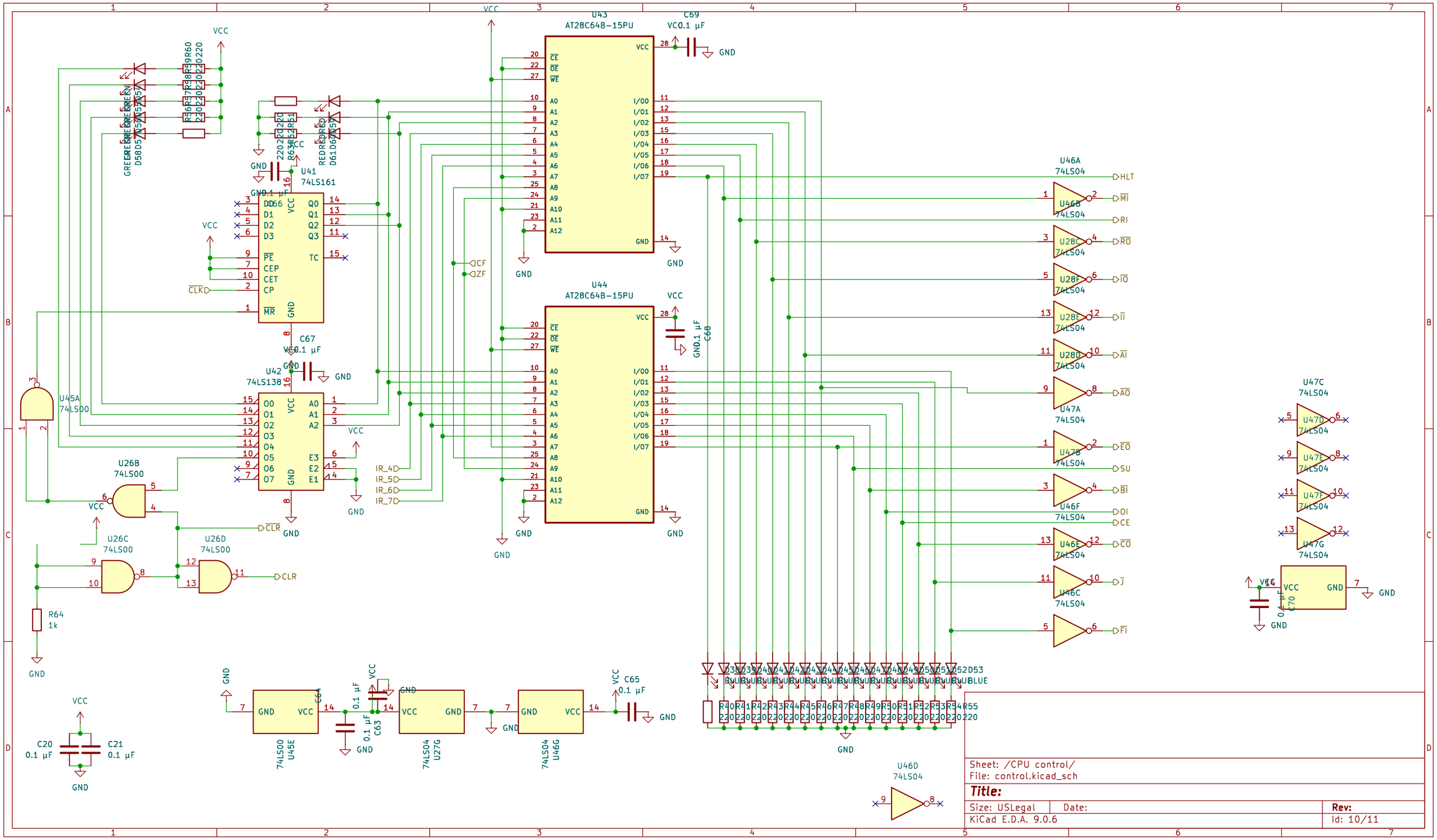
Title:

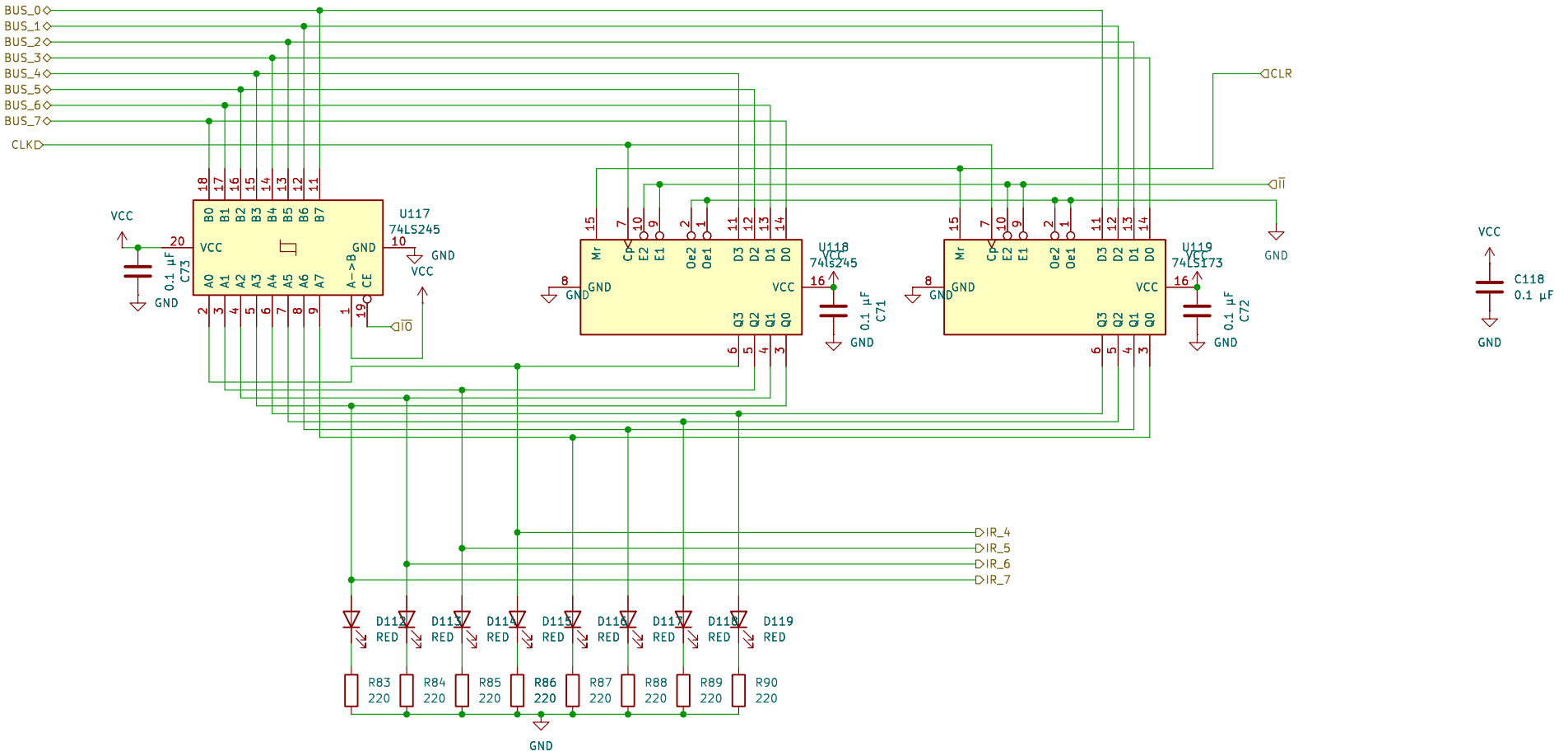
Size: A3 | Date: | **Rev:**
KiCad E.D.A. 9.0.6 | Id: 7/11



Sheet: /Program Counter/		
File: PC.kicad_sch		
Title:		
Size: A5	Date:	**Rev:**
KiCad E.D.A. 9.0.6		Id: 8/11


VCC
C58
0.1 µF
GND
U31
SA555P
TR
CV
R
VCC
GND
Q
DIS
THR
R37
1k
R38
100k
U32A
74LS76
U32B
74LS76
U33A
74LS139
A1
A0
E
O0
O1
O2
O3
C16
0.01 µF
C17
0.01 µF
C59
0.1 µF
U38
74LS273
D0
D1
D2
D3
D4
D5
D6
D7
Q0
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Cp
Mr
BUS_0
BUS_1
BUS_2
BUS_3
BUS_4
BUS_5
BUS_6
BUS_7
U40
AT28C64B-15PU
CE
OE
WE
A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
A11
A12
I/O0
I/O1
I/O2
I/O3
I/O4
I/O5
I/O6
I/O7
C57
0.1 µF
U34
D148K
U36
D148K
U37
D148K
U35
D148K
U39A
74LS08
OI
CLK
CLR
SW7
SW_SPDT
R39
10k
U39B
74LS08
U39C
74LS08
U39D
74LS08
C18
0.1 µF
C19
0.1 µF
U32C
74LS576
C60
0.1 µF
U33C
74LS139
C61
0.1 µF
U39E
74LS08
C62
0.1 µF
Sheet: /Output/
File: output.kicad_sch
Title:
Size: A4
Date:
Rev:
KiCad E.D.A. 9.0.6
Id: 9/11


U43
AT28C64B-15PU
U44
AT28C64B-15PU
U41
74LS161
U42
74LS138
U45A
74LS00
U26B
74LS00
U26C
74LS00
U26D
74LS00
U46A
74LS04
U46B
74LS04
U28C
74LS04
U28F
74LS04
U28E
74LS04
U28D
74LS04
U47A
74LS04
U47B
74LS04
U46F
74LS04
U46E
74LS04
U46C
74LS04
U46D
74LS04
U47C
74LS04
U47D
74LS04
U47E
74LS04
U47F
74LS04
U47G
74LS04
C67
0.1 µF
C68
0.1 µF
C69
0.1 µF
C65
0.1 µF
C64
0.1 µF
C63
0.1 µF
C20
0.1 µF
C21
0.1 µF
C70
0.1 µF
R64
1k
VCC
GND
CLK
CLR
CF
ZF
IR_4
IR_5
IR_6
IR_7
HLT
MI
RI
RO
II
AI
AO
EO
SU
BI
OI
CE
CO
J
FI
Sheet: /CPU control/
File: control.kicad_sch
Title:
Size: USLegal
Date:
Rev:
KiCad E.D.A. 9.0.6
Id: 10/11



Sheet: /Instruction register/		
File: Instruction-Register.kicad_sch		
Title: 8 bit PC		
Size: A4	Date: 2025-10-14	**Rev: 1**
KiCad E.D.A. 9.0.6		Id: 11/11